



**BACHELOR OF LIBRARY AND INFORMATION
SCIENCE**

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**KNOWLEDGE ORGANISATION
AND INFORMATION PROCESSING: THEORY
(PART-II LIBRARY CATALOGUING)**

UNIT NO. 2

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UNIT No. 2

- 2.1 : Concept of Library Catalogue - Definition, Need, Purpose and Functions
- 2.2 : Types and Forms of Library Catalogues - Dictionary, Classified, Alphabetic-Classified Catalogue Cards, Microfiche, Computerised and Online (OPAC) Catalogues
- 2.3 : Filing of Entries : Arrangement of Entries of Dictionary and Classified Catalogue
- 2.4 : Descriptive Cataloguing : Current trends in Standardization, Description and Exchange (ISBD, MARC, CCF)
- 2.5 : Standard Codes of Cataloguing : AACR and CCC
- 2.6 : Canons and Principles of Cataloguing
- 2.7 : Subject Cataloguing and Indexing
- 2.8 : Developments and Recent Trends in Cataloguing

Lesson No. 2.1

Concept of Library Catalogue : Definition, Need, Purpose and Functions

Structure

- 2.1.0 Objectives
- 2.1.1 Introduction
- 2.1.2 Library Catalogue
 - 2.1.2.1. Definition
 - 2.1.2.2. Difference between Catalogue and Bibliography
 - 2.1.2.3 Need
 - 2.1.2.4 Purpose
 - 2.1.2.5 Functions
- 2.1.3 Use and Importance of Library Catalogue
- 2.1.4 Implications of Laws of Library Science on Library Catalogue
- 2.1.5 Symbiosis between Library Catalogue and Library Classification
- 2.1.6 Cataloguing Process
- 2.1.7 Summary
- 2.1.8 Keywords
- 2.1.9 Model answers to self check exercises
- 2.1.10 Suggested readings

2.1.0 Objectives

This lesson attempts to introduce you to the basic concept of catalogue and cataloguing and its significance in the library.

After studying this lesson, you would be able to :

- * define and describe library catalogue
- * explain need, purpose and functions of the library catalogue
- * express implications of Laws of Library Science on Library Catalogue
- * Understand mutual relationship between catalogue & classification.

2.1.1 Introduction

Library Catalogue is the most basic tool which introduces collection of the Library to its users. It is an essential instrument equipped to deal with several principle channels of enquiry. Readers approach books from many angles - such as subject, author, title, collaborator, series, etc., and the Catalogue should be able to satisfy all such approaches. Without such a tool, literature search in a library would be a time consuming and arduous task especially as

the book stock grows. This lesson discusses basic ideas relating to library catalogue and cataloguing. The ultimate aim to maintain the library catalogue is to assist the users in identifying the specific documents in the library. Cataloguing is a technique which educate the library staff for preparing catalogue cards in a systematic way in accordance with principles and laws etc. Catalogue on the other hand is a systematic arrangement of catalogue cards of different documents organised to form a retrievable file.

Library Catalogue functions as a finding tool to know what a library has. It helps users to know if the library has a document of which the author, or the exact title, or the subject is known. It also provides information regarding all the books written by an author or all the books on a particular subject.

Library catalogue differs from publisher's catalogue, bibliography and books seller's list as far as its purpose and functions are concerned.

Classification and cataloguing are altogether different techniques devised for different purposes, but help each other as far as location and retrieval of documents in library are concerned. While catalogue identifies the availability of documents in the library, classification fixes it's position in the library for easy location and retrieval.

2.1.2 Library Catalogue

2.1.2.1 Definition

The word "Catalogue" has been derived from a Greek Phrase "KATA LOGUS". Kata means "by" or "according to", and Logus means "reason' or "order". Thus a catalogue can be explained as a work in which the arrangement of the contents is according to some definite plan or recognised order in a reasonable manner. In broad sense a library catalogue is a list of books and other documents of a library, arranged in a specific order, with a definite plan for location and identification of material in the library.

In the words of C.A. Cutter a catalogue is "a list of books which is arranged in some definite plan. As distinguished from a bibliography, it is a list of books in some library or collection". In the words of Margarate Mann "A Catalogue is a record of the material in a library". According to Margaret S. Taylor "A Catalogue is also a list of books which is arranged on some definite plan." D.M. Norris defines a catalogue as "a list of books and other materials in a particular library or collection, arranged in a recognized order and containing specified items of bibliographical information present in a given form".

Dr. S.R. Ranganathan states library catalogue as a "methodically arranged record of information about its bibliographical resources." In the eyes of S. Akers "a Catalogue is a record of material in a library."

The essence of various definitions propounded by eminent librarians and

experts of library science is that a catalogue is a list of a particular library collection arranged in some definite order, so as to facilitate the use of that collection and act as a guide to the scope and contents of that particular library.

2.1.2.2 Difference between Catalogue and Bibliography

The Library Catalogue is a list of documents in the holdings of a library or group of libraries. A library catalogue can serve as a bibliography to a limited extent but the reverse is not true. For instance, the catalogue of a special collection of a given library can serve as a subject bibliography in particular field of specialization.

A bibliography is an organised list of documents which is not limited to a particular collection.

According to V.W. Clapp there is no fundamental difference between bibliography and library catalogue.

- (i) A catalogue is concerned with contents of a single library or group of libraries and describes only the copies of books to be found therein, while a bibliography is not so confined, either as to location of the material it records or to the description of a particular copy of each work available in the library.
- (ii) A bibliography is concerned with vast product of human resource output on paper. It helps the user to know contents of vast literature available on the topic or subject. In few words we may say that, a bibliography is an organised list of reading material on one author or subject and is not limited to a particular collection. A catalogue, on the other hand enlists, describes, records and indexes the bibliographic resources of a particular collection only.

2.1.2.3 Need

The catalogue has to serve the needs of the users by giving them a comprehensive view of the collection of books and other documents, so that they may select particular book or books according to their requirement.

A good catalogue is designed to meet the multiple needs of its users. A reader wants to know what books a library has on or by a particular author. Reader also some time want to know about a particular edition of the book and some other reader may like to know all the books on a particular subject for the purpose of research.

So to meet the diverse information needs of users and for location of documents, library catalogue is an essential tool.

2.1.2.4 Purpose

Library acquires documents to serve users. Library Catalogue is supposed to be up-to-date to provide key to the holding of the library.

The library catalogue provides access to the collection by providing a multiple sequence of entries. The library catalogue should be an instrument equipped to deal with several channels of enquiry of users applied for successful identification and retrieval of books and documents, no matter what pattern of arrangement is applied to the materials on the shelves.

The catalogue is a "finding list" which helps to identify, to trace and to locate a book or other reading material in a library.

The purpose of a catalogue, as expressed by C.A. Cutter in 1876 remains substantially valid even today. Cutter defined the purpose of the Catalogue in his rules as :

1. To enable a person to find a book of which either (a) "the author is known, or (b) the title is known and (c) the subject is known".

This objective demands that library Catalogue should serve as a finding list for specific documents. This desired that the library catalogue should have entries providing approach through author, title and subject

2. To Show what the library has,
 - (d) "by a given author,
 - (e) on a given subject.
 - (f) in a given kind of literature".

This objective desires that the library Catalogue should serve as a finding list for groups of documents. Hence it requires provision for a uniform entry for each group.

3. To assist the choice of a book

- (g) "as to its edition (bibliographically),
- (h) as to its character (literary or topical)."

This objective desires that the document description provided in the entries of the catalogue should enable the users to distinguish between different editions of a given book. It should also assist in the choice of a book by providing enough information about the distinctive features.

The purpose of a library Catalogue is therefore to act as a finding list which identifies, traces and locates documents.

In short we may say that main purpose of the library catalogue is to help the reader and staff to find out the desired reading material without loss of time.

2.1.2.5 Functions

The library catalogue should serve the following functions :

- (i) **Author approach** : A catalogue should arrange entries in such a manner that all works of a given author may be found together under one and the same name.

- (ii) **Channels of enquiries** : In order to satisfy various channels of enquiry, which a reader may apply to seek information in the library, the catalogue should provide entries for each book by author, title, illustrator, translator, editor, compiler, series or any other person or body under which a reader may look for it.
- (iii) **Subject approach** : The catalogue should provide for subject entries and the same should be arranged in such a way that related subjects may be co-related and similar subjects may come together. This may be achieved with the help of see, see also and cross reference entries.
- (iv) **Location of Documents** : Catalogue should provide bibliographical information and Call Number of the book for location and individualisation of books in the library.
- (v) **Availability of Document** : The catalogue should reveal whether a particular document is available in the library or not.
- (vi) **Communication function** : It is instrument of communication. It communicates information about the book to the readers.
- (vii) **Bibliographic Information** : It satisfy the reader by giving all bibliographical information about the book.
- (viii) **Reference tool** : It works as a reference tool for a particular library collection.
- (ix) **Book Selection tool** : It helps users to select a book out of many books on the subject.

2.1.3 Use and Importance of Library Catalogue

A good catalogue is a necessity for a good library. It serves as a key and enhances number of users. It saves the time of readers as well as staff.

Few uses of catalogue may be discussed as follows :

- (i) Many readers may be interested in getting all the works of a particular author collaborator, series, etc. (which might have been scattered on shelves according to their subject matter), while in the catalogue, one may find all such entries at one place.
- (ii) The most notable use of the Catalogue is that it immediately tells whether a particular book by a particular author is available in the library.
- (iii) The catalogue of the library may be consulted more conveniently than documents on the shelves. It saves the time of the user and some time even helps the books to find their readers.
- (iv) Printed Catalogue of a particular library may be consulted even beyond the four walls of the library.
- (v) The Catalogue is an indispensable tool for book selection particularly for checking duplication etc.

2.1.4 Implications of Laws of Library Science on Library Catalogue

The five laws of Library Science provide enough guidance for production and upkeep of Library Catalogue.

The first Law states "Books are for use". One can easily realise that use of books is only possible when the users are able to know whether the particular book or books desired by respective users are available in the library. Catalogue of a large library acts as primary source which helps users to know whether their desired books are available in the library, and if yes; then where these are located ?

So the first law demands that the library should maintain up-to-date catalogue to unfold entire collection of the library to the users. Both the physical form of the library Catalogue as well as the internal organisation of entries should be neat and orderly. Obviously without this essential and indispensable tool, users would find it difficult to use the collection.

The Second Law "Every reader his book" and Third Law "Every book its reader" imply that keeping in view the composite and complex nature of books, their hidden contents should be brought out by subject analytical entries. Library Catalogue should also provide access to the documents of the library so as to meet the requirements of users, such as children, specialist users, physically handicapped persons etc.

The Fourth Law "Save the Time of users" not only demands subject analytical entries but also a bipartite catalogue having alphabetical and classified parts arranged separately. Alternatively we may say that every approach to locate a document such as author, title, subject, series, etc. should be fulfilled by the Catalogue, so as to save the time of users. The amount of time spent in providing cross reference entries by staff would be able to save the time of users in locating the documents.

The Fifth Law "Library is a growing organism" warrants adoption of standard Catalogue code of international applicability and proper choice of the Physical form of the Catalogue capable of keeping the catalogue current and up-to-date.

2.1.5 Symbiosis between Library Catalogue and Library Classification

When a reader wants to know quality and quantity of books on a particular subject, his requirement will be better served if the catalogue is capable to display all the material on his specific subject and its subdivisions. This is accomplished by maintaining a classified catalogue. The reader will find in a filiation sequence all the entries on his specific subject and will also be able to know related documents on either side of his subject of interest. This is according to Ranganathan, the deeper function of the Catalogue.

The method of giving code numbers to mechanise the arrangement of books is done with classification. Readers may not be expected to know this artificial language of classification and there must be some means to indicate the existence of publication in natural language. Catalogue does this job.

How so ever best may be a classification scheme, it will be of no avail to the readers, if it is not backed by a Catalogue.

Ranganathan opines that it is helpful if classified arrangement of books on shelves is paralleled by classified catalogue.

Classification and Cataloguing serve as complement to each other. These are the twin disciplines for organising the documents in the library. It is not proper to organise books by following only one technique. Holistic symbiosis between classification and cataloguing should be followed.

In order to testify indispensability of classification and cataloguing, Ranganathan formulated chain procedure. It is a mechanical device to derive subject headings from the artificial language of classification to match headings prepared in the natural language for the library catalogue.

Sharp states that "Catalogue is complement of classification and not the vice versa." There is nothing that a shelf classification does and that what a catalogue cannot do equally well. On the other hand there is a good deal that a catalogue can do which no classification can do at all.

When a book is classified it will be located only at one place, even though it may cover many aspects. The catalogue on the other hand indexes a work under many heads and provides for all aspects of a subject. The catalogue has come to the aid of classification and carry on from the point of which the classification has had to leave off for reasons of physical form of books.

For books of composite nature, analytical entries are required to be provided. It is another case in which the Catalogue carries on the work of classification further.

In a sense, classification is probably more important than catalogue, especially in open-access libraries where people prefer to go the shelves directly without consulting to catalogue. However, it is so easy to misplace book in open access to put the other readers to utter disadvantage.

For the reasons explained earlier that classification can put books only in one place and that the catalogue has to be there for projecting different aspects of the book, it is not possible to entirely rely on classification and to dispense with the catalogue. The catalogue has to be there as a complement to classification.

2.1.6 Cataloguing Process

Cataloguing is the art of making and arranging catalogue cards of

documents in a library, so as to make them quickly identified and located by the users. In other words we may say that operations and procedures involved in preparation of entries for library catalogue are known as cataloguing or cataloguing process. Keeping in view the diversity and complexities in rendering names of authors, titles, series and subjects of documents, cataloguing process essentially needs to be based on some rules, principles and laws etc. A number of codes have been prepared, over the years, to provide rules for systematic presentation of bibliographic information in library catalogues.

Anglo American code of 1908 was the first significant attempt to provide rules for cataloguing. After this American Library Association's (ALA) codes of 1941 and 1949, classified catalogue (CCC) of Dr. S.R. Ranganathan, Anglo-American Cataloguing Rules (AACR) edition 1 and edition 2 have provided rules for cataloguing.

Catalogue codes enumerated above and few other codes have been able to provide guiding principles for the preparation of entries for a library catalogue. Certainly standardization can only be achieved by following a code.

Self Check exercises

1. State definition of library catalogue as given by C.A. Cutter.
2. Fill in the blanks
 - a) AACR stands for
 - b) "ais a record of material in a library" S. Akers.
 - c) Every book its reader islaw of Library Science.
 - d) Sharp states that "Catalogue is complement ofand not the"
 - e) The purpose of library catalogue is to act aslist.

2.1.7 Summary

Catalogue is known as mirror of the library. In this lesson we have tried to give a fair idea of catalogue and cataloguing. The definition, need, purpose and functions have been explained, keeping in view the approaches of readers while using collections of libraries. Implications of laws of library science on library catalogue have also been discussed briefly. Complimentary and supplementary relationship between library catalogue and library classification has also been explained.

2.1.8 Keywords

- | | |
|----------------------|---|
| Analytical entries : | An entry for a part of an item for which a comprehensive entry is also made. |
| Filiatory Sequence : | Sequence of the pseudo-entities and the entities resulting from a complete assortment of a completely amplified universe. |

Symbiosis : Companionship
 Collaborator : One who works with one or more associates to produce a work.

2.1.9 Model Answers to self check exercises

1. A list of books which is arranged in some definite plan.
2. (a) Anglo-American Cataloguing Rules.
 (b) Catalogue
 (c) third
 (d) Classification, vice versa
 (e) finding

2.1.10 Suggested Readings

1. Girja Kumar and Krishan Kumar : Theory of Cataloguing. 5th rev. ed. Delhi : Vikas Publishing House, 2006.
2. Hunter, Eric, J. and Bakewell, K.G.B. Cataloguing. 3rd rev. ed. London Library Association, 1991.
3. Bidyut Mal : Cataloguing: The Changing Scenario. Shree Pub. 2006.
4. Krishan Kumar : Cataloguing, Haranand Pub. 2010.
5. Renu Verma : Cataloguing : Theory & Practice, Swastik Pub. 2011.

Lesson No. 2.2

Types and Forms of Library Catalogues

Structure

2.2.0 Objectives

2.2.1 Introduction

2.2.2 Inner Forms of Library Catalogue

2.2.2.1 Alphabetical Catalogues

2.2.2.1.1 Author Catalogue

2.2.2.1.2 Name Catalogue

2.2.2.1.3 Title Catalogue

2.2.2.1.4 Subject Catalogue

2.2.2.1.5 Dictionary Catalogue

2.2.2.2 Classified Catalogue

2.2.2.2.1 Classified Part

2.2.2.2.2 Alphabetical Part

2.2.2.3 Alphabetic-Classified Catalogue

2.2.2.4 Divided Catalogue

2.2.2.5 Shelf List

2.2.3 Comparative study of Dictionary and Classified Catalogues

2.2.4 Physical Forms of Library Catalogues

2.2.4.1 Conventional or Traditional Forms

2.2.4.1.1 Printed Book Catalogue

2.2.4.1.2 The Card Catalogue

2.2.4.1.3 The Sheaf Catalogue

2.2.4.1.4 The Guard Book Catalogue

2.2.4.2 Non Conventional or Modern Computerised Form of Catalogue

2.2.4.2.1 Visible Index Form Catalogues

2.2.4.2.2 Microform Catalogues

2.2.4.2.2.1 Microfilm

2.2.4.2.2.2 Microfiche

2.2.4.2.3 Computer-Output Microform (COM)

2.2.4.2.4 Machine Readable Catalogue (MARC)

2.2.4.2.5 On-line Catalogue

2.2.4.2.5.1 Online Public Access Catalogues (OPAC)

2.2.4.2.5.2 CD-ROM Catalogue

2.2.5 Features of Physical Forms of Catalogues**2.2.6 Summary****2.2.7 Key Words**

2.2.8 Model Answers to Self Check Exercises

2.2.9 Further Readings

2.2.0 Objectives

(You have learnt about the definition, objectives and functions of a library catalogue in lesson 9). In this lesson you will learn various types popularly known as Inner Forms of Library Catalogue and various Physical Forms of Catalogue.

After studying this lesson you would be able to :

- * list different types and forms of a library catalogue.
- * compare their relative advantages and disadvantages.
- * describe their distinctive features.
- * distinguish the relative advantages and limitations of dictionary and classified catalogues.

2.2.1 Introduction

In lesson 9 you have learnt the definition, objective and functions of library catalogue. In this lesson you will learn about types popularly known as Inner Forms of Catalogue and forms popularly known as Physical Forms of Catalogue.

Inner forms of catalogue comprise various ways of arranging catalogue entries to fall into a helpful sequence. Alphabetical and classified arrangement are most prominent inner forms or types of catalogue. Alphabetical catalogue may further be separated for author, titles, names (works of or an authors) subject or in a single alphabetical form of authors, titles, subjects (all taken together) known as Dictionary Catalogue.

Classified catalogue displays entries by the class number of documents, provided by a scheme of classification used in that particular library. Classified catalogue usually has two parts - first being the classified part which is arranged in the systematic order of class numbers and the second one is Alphabetical Index.

We shall also study changing physical forms of catalogue under the headings conventional and non-conventional forms of catalogue. Machine readable catalogue has become popular because of it's instant capability to achieve bibliographic control of ever growing universe of documents. A librarian is supposed to be well versed with such Physical Forms of catalogue.

2.2.2 Inner Forms of Library Catalogue

We shall now discuss various recognised inner forms of a library catalogue. The recognised order of arrangement determines the inner forms of the library catalogue. Of course these internal forms, keeping pace with changes in the concept of service to users have undergone many changes.

Based on inner forms of catalogue, the types of varieties or kinds of catalogues are as mentioned below :

- 2.2.2.1 The Alphabetical Catalogue
 - 2.2.2.1.1 Author Catalogue
 - 2.2.2.1.2 Name Catalogue
 - 2.2.2.1.3 Title Catalogue
 - 2.2.2.1.4 Subject Catalogue
 - 2.2.2.1.5 Dictionary Catalogue
- 2.2.2.2 Classified Catalogue
- 2.2.2.3 Alphabetic-classed Catalogue

2.2.2.1 The Alphabetical Catalogue

Alphabetical Catalogue arranges entries alphabetically. These can be produced in several ways such as by authors, by titles, or by specific subject. It's various forms such as Author Catalogues, name Catalogues, title catalogues subject Catalogues and Dictionary Catalogues have been discussed in the following pages.

2.2.2.1.1 Author Catalogue

It consists of author entries arranged alphabetically. By author entry we mean an entry in which name of author figures on the first, opening or leading line. Author Catalogue is considered to be the primary catalogue and is supreme in its name and importance. It is the oldest and most important type. An author catalogue identifies book by it's author. Author is "the maker of the work or the person or body immediately responsible for its existence". It is a comprehensive term which also includes editor, compiler, translator, illustrator, corporate body etc. as the case may be who is/are responsible for the existence of that document. Possibly it is not feasible to dispense with the author catalogue in the library.

Advantages

Author catalogue reveals what works of a given author are possessed by the library and also whether the library has a particular work of a given author. It tries to bring together all works of an author at one place instead of scattering theme throughout the catalogue according to their subject, title or form.

Disadvantages

The disadvantage of this catalogue is that in order to find a particular book by an author the reader must know the correct name of the author. Further,

some authors are known by different forms of name or pseudonym of which the readers may be ignorant. Some readers may not be aware of the forms of name of the author under which the entries are recorded. This problem may be solved to some extent by providing cross reference entries.

2.2.2.1.2 Name Catalogue

It is a mixed form of author catalogue and consists of author entries and few subject entries mixed in one sequence arranged alphabetically. The subject entries are restricted to the names of persons occurring as subject of books (e.g. criticism, biographies, diaries etc.) i.e. the subject entries are limited to those of proper names of persons and corporate bodies. A name catalogue will contain entries for works on an author and for books written on/or about that author (as a subject).

Example : The entry headings in a name catalogue may be arranged as :

Chaucer, Geoffrey

Shakespeare, William - As you like it.

Shakespeare, William - Othello

SHAKESPEARE, WILLIAM (Person as subject)

Name catalogue is more useful for collections specially pertaining to literary memoirs and autobiographies. To avoid confusion, the distinction between the person as author heading and the same person as subject can be maintained by using different typographic disposition.

Name catalogue helps to see at a glance what works by a particular author are in the collection of the library.

2.2.2.1.3 Title Catalogue

Titles of books in title catalogue are rendered as headings of entries and arranged in alphabetical sequence. The proper title of the book is assigned as heading. Title catalogue is essential in case of reference books, classics and books relating to poetry, drama and fiction etc.

The title catalogue helps to find out the book with the help of its specific title.

2.2.2.1.4 Subject catalogue : (Alphabetical)

Subject catalogue provides entries made under the specific subject of the books. These headings represent the coverage of a specific subject matter of books in words, terms or phrases and these are arranged in alphabetical order. This catalogue primarily reveals which books on a specific subject are available in the library.

This satisfies the approach of the reader from any subject aspect dealt in the document.

Advantages

It brings together all books on a specific topic and provides an opportunity to select the relevant books. It is a boon for the readers who want to scan all possible literature, available on a topic in the library. This catalogue more useful in Research libraries where the readers generally demand books on specific subjects. Further, this catalogue serves the purpose of the subject bibliography.

Disadvantages

Related subjects and their parts cannot be brought together in logical sequence as they are scattered throughout the catalogue due to alphabetical order. Headings for specific subjects cannot be easily determined unless there is already any recognised term given for it by experts and these terms may become obsolete after some time. When there are more than one terms in use for the same subject, it will be a problem, as to which one should be used.

11.21.5 Dictionary Catalogue

The dictionary catalogue is a catalogue in which all the entries are in words and phrases, rendered under headings of author's names, titles, specific subjects, series and connective references and arranged together in one general alphabet. Anglo-American Cataloguing Rules defines it as "a catalogue in which all entries (author, title, subject, series etc.) and their related references are arranged together in one general alphabet. The sub-arrangement frequently varies from strictly alphabetical". Such a catalogue is known as a dictionary catalogue as it may be used easily like dictionary.

As average person using the dictionary catalogue can get the desired information easily. The Dictionary catalogue which has originated in American Libraries towards the end of the 19th century is the most common catalogue and gained popularity on account of its simplicity.

The Dictionary catalogue is not as simple as it appears. The alphabetical distribution of topics makes it impossible to put entries of logically related material at one place. Cutter is of the view of that the Dictionary Catalogue is not a simple index with no consideration for the grouping of like subjects. But the success of the dictionary catalogue, however, ultimately depends upon an elaborate scheme of cross references, which tend to correlate and unify the entries.

In view of above we may say that dictionary catalogue is a combination of two distinct and different approaches (i) the author and title approach for the reader who knows exact name of the author or title of the desired book and (ii) the subject approach for the reader who wants the material on some particular subject.

Advantages

- 1) Dictionary arrangement being popular and simple, is easy to the readers for consultation.
- 2) It provides a direct approach to those who approach through specific subject. Further the specific headings provide quick reference.
- 3) It takes care of all possible alphabetical approaches a reader is likely to follow to find relevant material of his choice.

Disadvantages

- 1) It is not possible to bring together related topics in a logical sequence as the subject entries get scattered due to natural order of alphabets.
- 2) A user would find it difficult to know about the material on all aspects of a given specific subject due to scattering created by alphabetical ordering of subjects.
- 3) Consultation of reference entries of a subject may often prove to be tiresome and there is always a possibility of missing one or more vital headings.
- 4) The verbal terms used to denote certain specific subject headings may gradually become obsolete and when there are two terms representing the same subject, it is a problem to the cataloguer as to which of the terms should be assigned as heading.

Despite various shortcomings, the use of the dictionary catalogue is the most common in the libraries of the United States of America and many other parts of the world including India.

2.2.2.2 Classified Catalogue

It is a catalogue, in which subject entries are arranged, according to some scheme of classification. There are two forms of displaying the subject catalogue - one form by making use of notation of the scheme of classification employed called classified part which is the principal component of this catalogue ; and the second form by means of words, terms or phrases chosen to represent different subjects, called alphabetical (subject) catalogue which is arranged alphabetically.

According to Ranganathan, a classified catalogue is one which has two parts (bipartite), one containing call number entries and the other containing words entries called classified part and alphabetical part respectively.

- i) Classified part (in which entries are made under the class symbol of the subjects of the books), will contain main entries and cross reference entries, arranged according to a scheme of classification.
- ii) The alphabetical part (in which entries are in words, terms or phrases) will contain added (secondary) entries arranged

alphabetically) like a dictionary catalogue). As discussed earlier this alphabetical part consists of headings under author, title, editor, translator, series and specific subjects etc.

Advantages

- 1) This catalogue brings together in one place all the available materials on a particular subject as well as those areas of subjects closely related to that subject. It stimulates use of additional materials. Alphabetical subject catalogue satisfies conscious needs of readers but classified catalogue stimulates hitherto unrealised needs. This is a great advantage for a research worker.
- 2) The notational system which is the basis for this catalogue, is independent of natural language.
- 3) This helps in easy compilation of subject bibliographies through reproduction of specialised sections (groups or classes) of the catalogue.
- 4) This enables to overcome language barrier through the use of an arrangement that depends for its effectiveness upon logical relationship rather than linguistic association.
- 5) For exhaustive literature searching on a particular subject the classified catalogue offers potential search strategy. Display of logically related fields facilitate checking all approaches.
- 6) Strength and weakness of subjects many be easily evaluated with the help of classified catalogue.

Disadvantages

- 1) The notation by which the entries are arranged is not so commonly understood by the users.
- 2) The use of classified catalogue by users is limited as the general users fail to understand the meaning of notational system provided by librarians to represent various subjects.
- 3) In practice, a classified catalogue is not sufficient by itself because it fails to satisfy author, title and subject approach of users.
- 4) Its total dependence on the classification system for the arrangement of entries in the main body of the catalogue, some times limits the autonomy of the cataloguer as he cannot provide any more subsidiary entries to suite the need than the classification system would permit.

Although the classified catalogue has received attention in the last decades or so, it is still uncommon in the United States. But quite definitely it does not belong to a general library. In other words, the public libraries, and

school libraries find the dictionary catalogue more suitable and the research libraries and special libraries prefer the classified catalogue. However, in practice, a majority of libraries use the dictionary catalogue.

2.2.2.3 Alphabetic-classed catalogue

It is a kind of subject catalogue which attempts to incorporate the advantages of both Dictionary Catalogue and classified catalogue. It has been introduced in some American Libraries as an alternative form of the classified catalogue. But it could not gain popularity as it could neither satisfy the readers in favour of classified catalogue nor those in favour of dictionary catalogue.

In it, either the major subject divisions are arranged in a classified order and subordinate subjects within major division in the alphabetical order or the major subject divisions are put in alphabetical order with subordinate subjects arranged in classified sequence.

For example, if major divisions like Physics, Chemistry, Botany, Economics are arranged in a classified pattern, within each major division, its subordinate divisions will be arranged alphabetically i.e. within the major subject like Physics, its subordinate divisions (subjects) like Dynamics, Electricity, Gases, Heat, light, Magnetism etc. will be arranged alphabetically. Like this the other pattern will be vice-versa to the above arrangement.

In this catalogue one can get all the related material in a collection in a logical manner. This catalogue has not been experimented fully and therefore much cannot be said about this form.

2.2.2.4 Divided catalogue

A dictionary catalogue may be divided into two parts, an author and subject catalogue. Some academic and large libraries in USA have divided the dictionary catalogue into two separate sequences consisting of (i) author /title, and (ii) alphabetic subject entries, which may be termed as DIVIDED CATALOGUE. This is intended a) to increase ease of consultation, b) to reduce complexities in the filing of entries, and c) to improve the physical layout of the library catalogue. However, it is said that this catalogue does not possess any distinct advantages over a dictionary catalogue.

2.2.2.5 SHELF LIST

It is also a catalogue of books which is arranged in the order in which they stand on the shelves i.e. it reflects the arrangement of books on the shelves. It is compiled with cards of each book giving the author, title, edition, number of volumes (if more than one), number of copies, call number and other essential items are deemed necessary for a particular library. The entries in a shelf list are in brief form. The call number or the distinctive symbol which stands for a book determines the arrangement of the cards in the shelf list in the exact

order of the arrangement of books in the shelves.

It serves as an inventory of the stock of books in the library. It also facilitates the annual stock verification. It is a very important record of the location of all the copies. Some libraries use cards of slightly variant size (generally smaller size than the original catalogue cards) for the shelf list.

2.2.3 Comparative study of Dictionary and classified Catalogue

Dictionary catalogue and classified catalogue are two widely used and popular inner forms of catalogue. Usefulness and capability of Dictionary Catalogue has increased manifold than other alphabetical catalogues as it has developed elaborate arrangement for cross references to match diverse approaches of users to find their required documents. Classified catalogue, on the other hand, giving natural view of the subjects also incorporate various

No.	Features/Aspects	Dictionary Catalogue	Classified Catalogue
1.	Arrangement	Unified alphabetical sequence of authors, titles, collaborators, subjects, etc.	Bipartite : a) classified part arranged according to class numbers, and (b) Alphabetical index.
2.	Subject Collocation	Subjects and their sub groups got scattered due to alphabetical sequence ; can be collocated by a system of cross references	Presents perfect subject Collocation.
3.	Author Collocation	Collocates works of authors	Alphabetical part collocates works of authors
4.	Devices to achieve collocation	'See' and 'See' also' devices help achieve collocation	Various devices to achieve collocation in classified and alphabetical parts.
5.	Ease of use	Simple and easy to use. A single search helps to find desired information	Only skilled users can consult classified part easily, while
6.	Bibliographic Compilations	Subject bibliographies and reading lists can not be conveniently prepared	alphabetical part is easy to use. Subject bibliographies can be very
7.	Collection evaluation	Strength and weakness of a particular subject is difficult to evaluate	conveniently prepared Collection strength or weakness of a subject can be easily evaluated.

features of a dictionary catalogue in its alphabetical part.

A comparative study depicting various features of strength and weakness of both the codes has been given in the following tabular form :

Self Check exercise

1. List different types of Inner forms of a library catalogue. (Write your answer and compare it with model answer provided in the end of this lesson).

2.2.4 Physical Forms of Library Catalogues

The bibliographic records of a library collection are generally recorded in a Catalogue. The catalogue serves the purpose of communicating briefly the facts about the documents in the collection. These essential facts include bibliographic description giving the identification of class number, Author, title, editions and imprint information. It also provides physical characteristics of the document. The information provided in the catalogue allows a user to identify particular items in the collection or to select relevant items for specific purposes.

The manner in which the library Catalogue can be made available for use by the readers has produced a number of physical forms of presentation.

The physical forms of Catalogue from distant past to the present, may be broadly arranged in the following categories :

12.41 Conventional or Traditional Forms

12.42 Non-conventional or Modern forms

We may study them in detail as follows :

2.2.4.1 Conventional or Traditional Forms

The predominant types of physical forms of Catalogue falling in this category are :

2.2.4.1.1 Printed Book Catalogue

2.2.4.2.2 The Card Catalogue

2.2.4.2.3 The Sheaf Catalogue

2.2.4.2.4 The Guard Book Catalogue

2.2.4.1.1 Printed Book Catalogue

This kind of Catalogue has been a traditional form adopted in many large libraries which used to publish a general printed catalogue of their collections upto a particular date and then issue periodical supplements to keep the original volume up-to-date. In other words a book Catalogue is a list of the holdings of a particular library collection or a group of collections in form of a book. This is the oldest form of library catalogue.

The items may be recorded by writing with hand as in a manuscript catalogue ; by a printing process ; or, by typing. The book-form of the catalogue was the predominant form of library catalogue until the late nineteenth century,

when the idea of the card catalogue began to spread.

The Catalogue in printed form was first published in America in 1723. It was known as "Harward Catalogue" and later Yale Book Catalogue was issued in 1745.

As the libraries developed, it became more and more difficult to keep the printed book catalogue up-to-date. Consequently it was replaced by much better forms such as Sheaf and Card forms. Henceforth use of the formal printed book Catalogue was confined to static collections such as those of reference libraries.

The Catalogues at British Museum, Library of Congress and the Author Catalogue of Printed Book in the National Library, Calcutta are but a few examples of Printed Book Catalogue.

Advantages

- 1) This type of Catalogue occupies much less space than Card Catalogue.
- 2) The book catalogue is portable and is easy to consult in any part of the library as well as outside the library.
- 3) Many entries can be seen on a single page at a glance.
- 4) Printed book catalogues of National Libraries or large special libraries are of great value to smaller libraries both as bibliographical tools as well as cataloguing aids.
- 5) Multiple copies can be placed at the disposal of users for easy consultation.

Disadvantages

- 1) In printed book catalogue, it is generally not possible to add or insert entries under the same heading at later stage after its final publication.
- 2) It is expensive to produce.
- 3) This form of Catalogue can never be kept up-to-date and in many cases it does not reveal the exact collection of the library. Supplements are therefore issued to keep it up-to-date. Such supplements however, make browsing difficult as one has to brows a number of supplements to locate an entry.
- 4) Once the entries in this form of catalogue are printed and bound into a volume, it becomes a closed record and no new entry can be added to it.
- 5) The pages on which entries are printed are less durable than cards.

2.2.4.1.2 Card Catalogue

The Card Catalogue is a much familiar form in present day libraries. During the eighteenth century, libraries in Finance had adopted cards for

Catalogues. Soon this form of catalogue took shape and attained popularity from the beginning of twentieth century. The introduction of printed Card Service by library of Congress in 1901, contributed the wide spread use of Card Catalogue.

In this form cards of uniform size (5" x 3" or 12.5 cm x 7.5 cm) are used for each entry, which are then arranged in any desired order in cabinet drawers specifically made for this purpose. A hole in the middle of the bottom edge of each card is meant for a locking rod. Each entry, in it, is a unit which can easily be manipulated.

Advantages

- 1) The Card Catalogue can be kept up-to-date with maximum ease by inserting new entries.
- 2) It is easier to consult the Card Catalogue as all entries are arranged in a systematic way.
- 3) The greatest advantages of the card is that it is single, self-contained flexible unit that is capable of manipulation.
- 4) The card can be changed or replaced by new cards, to keep pace with changes, if desired.
- 5) It is possible to group all entries with the same heading in card catalogue.
- 6) This type of Catalogue is durable, as cards are strong enough to stand wear and tear.

Disadvantages

- 1) Because the Card Catalogue is not portable, it has to be consulted where it is located in the library.
- 2) While consulting Card Catalogue, a reader may occupy a number of drawers.
- 3) As the size of Card Catalogue grows it occupies a considerable amount of space thereby creating space problem.
- 4) It is costly to maintain, as the cost of Cards and cabinets is high.
- 5) The Cards can be removed or even mutilated by errant readers.

2.2.4.1.3 The Sheaf Catalogue

In this form each entry is recorded on separate paper slips of a uniform size generally 6"x4" size notched at the left edge and protected by board on front and back. These slips are filed in a specially made loos leaf binder secured by mechanical clasp or metal fastener. Such a binder contains about 500 to 600 slips each. These binders are kept in specially constructed pigeon holes of a catalogue cabinet.

Entries can be arranged in any order. They can easily be inserted or

withdrawn without affecting the arrangement of entries.

Advantages

- 1) It does not occupy much space.
- 2) It is relatively cheaper to maintain.
- 3) It has flexibility of insertion and withdrawal of entries.
- 4) Open person using the Catalogue does not prevent others from using other binder.

Disadvantages

- 1) The slips are not as durable as Cards.
- 2) A reader could deliberately remove a slip.
- 3) While recording one book on one sheaf, there is wastage of space because the sheafs are bigger in size than the cards. If more entries are made on the slip, then the insertion or withdrawal of entries will be difficult.

2.2.4.1.4 The Guard-Book Catalogue

In this form of Catalogue entries are made on slips of paper and mounted in the required sequence on the blank leaves of large guard-books. The entries have to be kept as widely spaced as possible to allow for additional insertions. In case of filling up of a page the entries are cut from the particular page of the Guard-book and further dispersed over an increased number of leaves.

Advantages

- 1) Retains the format of the book-catalogue, though it is much less compact.
- 2) It permits insertion of entries, though some additional effort has to be made for this job.
- 3) Updating of sequence is possible.

Disadvantages

- 1) The size, number and bulk of the guard-book increases with the passage of time.
- 2) It is difficult to maintain strict order of entries in Guard-Book.
- 3) Lot of time is wasted when already mounted entries are cut and remounted on new pages of Guard-Book.
- 4) The constant withdrawals required by most libraries may make this form impracticable.

2.2.4.2 Non-conventional or Modern computerized Forms of Catalogue

The change in form of documents from book to non-book material such as microfilms, microfiche and more recently CD-ROM and multi-media interactive computer works and text files on internet has influenced the traditional forms of Catalogue. Physical forms of catalogue have undergone a

drastic change. With the result various non-conventional or modern and sophisticated forms of physical forms of catalogue have been developed to make the work of information revival Exhaustive and Expeditious.

Some of the non-conventional physical forms of catalogue are as follows:

- 12.42.1 VisualIndex form Catalogue
- 11.42.2 Microform Catalogues
- 11.42.3 Computer-output Microform (COM)
- 11.42.4 Machine Readable Catalogue (MARC)
- 11.42.5 Online Catalogue
- 11.42.6 Online Public Access Catalogue (OPAC)
- 11.42.7 CD-ROM Catalogue

2.2.4.2.1 Visible Index form of Catalogue

Visible Index form of Catalogue is extensively used in libraries attached to business and industrial houses. This form of Catalogue is also used in academic libraries specially university libraries for maintenance of records of current periodicals.

The cards used in this form of Catalogue are usually 12.5 cm x 20 cm. The card is inserted into a hinged kraft pocket exposing the top portion. These pockets are held in a specially prepared steel cabinets.

Such steel cabinets are available in India under the trade name Kardex. Generally, Kardex is used in Indian libraries for maintaining records of current journals and periodicals.

'Chainindex' and 'Stripdex' are other two names under which visible Index form Catalogues are commercially available. However, those are rarely used in Indian libraries. Kardex is quite popular in Indian libraries for maintaining periodicals records.

2.2.4.2.2 Microform Catalogues

A microform catalogue contains cataloguing records in micro image and requires the use of a microform reader for viewing.

There are various media for microform catalogue, such as microfilm (continuous negative), microcard (positive), and microfiche (negative) film.

Microform catalogue is the better substitute of the book form catalogue as far as economy in duplication is concerned. Once a microform catalogue is produced, it is much cheaper to duplicate than a book catalogue.

A microform catalogue may be produced by photographing book catalogues. Entries in microform catalogues are greatly reduced and printed upon a film or fiche. The microforms cannot be read by naked eyes. A suitable microform reader, which magnifies the reduced images on the film or fiche and projects them on a screen is necessary for consulting microform catalogues.

As stated earlier microform catalogues may either be in the form of a microfilm or in the form of a microfiche.

2.2.4.2.2.1 Microfilm

Microfilm can be on a single reel, but generally it is rolled in a cassette containing the reels so that the film can be wound forwards or backwards within the container at the time of consultation.

2.2.4.2.2.2 Microfiche

Microfiche is a transparent card type format and generally give 200 frames per card. Microfiche has the advantages of a direct access to a particular frame whereas a microfilm requires a serial search through the film to locate a required entry, which is a time consuming process compared to direct access method afforded by microfiche.

Microfiche provides simpler and quicker access to a required group of frames, eliminating the irritating task of running through the microfilm roll. The user selects the appropriate fiche, which is inserted into the reader, and he can locate the frame containing the needed information. It consumes the user's time before and after locating the page or information continuing the data desired.

Advantages

- 1) Microform catalogues are easy to use and maintain.
- 2) These are compact and occupy less space in the library.
- 3) They are portable and accessible to users depending upon number of copies of catalogues and machines available.
- 4) Multiple copies of these catalogues can be prepared easily at least cost.

Disadvantages

- 1) These can not be used without microform readers.
- 2) These require special care and protection from heat, light and sun.

2.2.4.2.3 Computer-Output Microform (COM)

Computer output microform (COM) is a more recent method of produce a microform catalogue directly from machine-readable records.

The COM device converts the digital information contained on the computer-generated magnetic tape into print displayed on microform. Thus, the recent advances in micrographics have been combined with the technology of the computer in catalogue production, resulting in lower costs and more efficient updating.

The COM format is getting popularity. Special readers are required for the magnified display of COM generated image printers, which can be used to create paper copies. Several book jobbers and vendors, around the world have

developed software capable of producing COM catalogue from library supplied bibliographic data.

Advantages

- 1) COM catalogues is inexpensive to reproduce and can be placed in various locations inside and outside library.
- 2) There can be separate films for author entries, title entries and subject entries.
- 3) Several records can be viewed at a time.
- 4) Entries can be easily printed if printer is available.
- 5) Equipment is relatively inexpensive.

Disadvantages

- 1) Deleted materials remain in the file until the next update.
- 2) Microforms are not often very readable as compared to print.

In recent years COM catalogue is becoming perhaps the most practical alternative.

2.2.4.2.4 Machine-Readable Catalogue (MARC)

The history of MARC format goes back to the late 1960s, when the library of Congress and other research libraries recognised that computer processing of bibliographic information had to be employed in order to solve problems such as cataloguing backlogs, and to provide better services to readers. This led to adoption of the MARC-I communications format for exchange of bibliographic data among libraries.

Librarian were not unanimous regarding type of access points required to take full advantage of an automated cataloguing system. The format MARC-II was a considerably improved version in the light of experiences and opinions of important libraries and a specific survey carried out for studying the requirements of the users.

MARC Format

The MARC format is identified by (1) its structure, (2) content designators and (3) contents of the record.

Structure of MARC Format

The structure of US-MARC is given below :-

Leader	Directory	Control Fields	Variable data fields
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Leader : Leader is the first twenty four characters of a MARC record. The purpose of the leader is to provide information such as length of the record, status, the type of bibliographic item and bibliographic level of record etc., which is necessary to initiate processing of the record. A leader looks like this : 00334 nam bb 22001691 bb 4500.

The length of the record is given by the first five character - 00334, and

the length of the leader and record directory is given by the characters 00169. b in the example above represents a blank.

Record Directory : The record directory is an index to the location of variable length fields within the record. The number of fields in the directory will be equal to the number of fields in the record. It consists of a variable number of fixed-length entries.

Each of these entries is made up of three elements : a three character field tag, a four character field length and a five character starting character position as shown in the figure below :

Items in Record Directory

Tag	Field length	Starting character Position
008	0041	00006

Directory enables the location of those parts of the record which are required in the processing of information. It is automatically generated by the computer programme.

Control Fields : Directory is followed by the control fields which are data fields consisting of information such as LC Card Number, date of entry on the file, data of publication, language of the text, country of publication, etc.

Control fields, that is, those fields whose tag numbers start with 00-proceed other fields.

Variable data fields : These are made up of single as well as groups of data elements. Each variable data field consists of indicators, subfield codes, data elements and field terminator. A tag is attached to each variable data field and that tag is stored in the directory. For example 100 is tag for personal name in main entry, 110 for corporate name in main entry and 130 for uniform title heading etc.

The MARC bibliographic format is a family of bibliographic formats. The first difference in the MARC format is based on the country of adoption, such as US MARC, UK MARC and CAN MARC indicating that these formats are accepted in United States, United Kingdom and Canada respectively. Many other countries such as Australia, Denmark, France, Germany, Italy, Japan, Norway and Sweden have developed their own MARC formats. The various MARC formats developed by different countries have variations in respect of content and content designators. An effort has been made through adoption of ISO 2709 to

standardise these national formats. IFLA has developed UNIMARC to provide standard MARC format to achieve bibliographic control at international level.

Another difference in the MARC format is based on the type of bibliographic information they contain. There are currently MARC formats for books, films, serials, archival and Manuscripts Control, computer fields, maps, music, and visual materials.

The Machine Readable Bibliographic information Committee (MARBI) of the American Library Association recently initiated the process of integrating these multiple formats into one integrated format.

2.2.4.2.5 Online Catalogue

Online catalogue is a organised, machine-readable accumulation of records which are maintained on disks or other direct-access computer storage media for retrieval by library users and staff members working at interactive terminals.

Online systems are linked directly with the computer which can be used immediately for processing and searching. Results are displayed on a screen or visual display unit and printed in Hard Copy through a printer.

2.2.4.2.5.1 Online Public Access Catalogue (OPAC)

The "Online Public Access Catalogue" (OPAC) is the newest and most sophisticated catalogue format. It is pertinent to mention here that all online catalogues are Public Access Catalogues. OPAC has overshadowed all other events in the history of cataloguing during the past decade. OPAC can be accessed via a computer terminal. Such catalogues allow any person to browse the catalogue database to know whether library has got specific title of document, and if library is using an integrated library software package. The enquirer may also know whether the book is available with the library or issued out. Even it is easy to know the person holding the book. Hence reminders or reservations can be effected.

OPAC is the newest and most sophisticated Catalogue format. Online catalogues are known as realtime interactive retrieval systems. In other words in OPAC user is connected directly to the information source i.e. catalogue.

Advantages

- 1) Online computer catalogue can be easily updated and can also provide "See" and "See also" references easily.
- 2) CRT terminals can be provided at many places.
- 3) New access points and search capabilities can be added at any time.

Disadvantages

- 1) Systems failure hinders access to the catalogue and hence the collection.
- 2) Safety of cataloguing Data on the hard Disc (H.D.) is a problem.

2.2.4.2.5.2 CD-ROM Catalogue

CD-ROM (Compact Disc Read Only Memory) is latest MARC format. A CD-ROM catalogue provides excellent search facilities.

It is advantageous to transport CD-ROM catalogue from one place to another even by post. CD-ROM with accompanying software performs some or all of the following functions :

- (a) Local-public access Catalogue.
- (b) Union Catalogue in support of Interlibrary loan.
- (c) Reference database of bibliographic information.
- (d) Resource data file for extraction of records to be used in retrospective conversion, card production, and on going additions to a local online database.

It is wrong to compare CD-ROM to microform. The microform search is similar to manual catalogues whereas CD-ROM offers the same facilities as online searching as it provides a better user interface. Graphics and sound can also be provided through interface. Although CD-ROM is slow in comparison of online retrieval, it does not cause any problem in a library catalogue situations.

2.2.5 Features of Physical Forms of Catalogues

We have studied various physical forms of Catalogues. It is pertinent here to devise some technique to judge which type of physical form of catalogue should be used for a particular type of library.

Selection of Physical form of catalogue should be based on the following features :

- (1) **Browsing** : It should be able to help in browsing and scanning of number of entries at a time.
- (2) **Use** : It must be easy to use.
- (3) **Up-to-dateness** : It must be easy to keep it up-to-date.
- (4) **Multiple Copies** : It must be able to produce multiple copies easily.
- (5) **Size** : It's size should be so compact that it should occupy as little space as possible.
- (6) **Access Points** : It should provide multiple access points so that users may be able to consult it from different angles.

Self Check exercise

2. List the physical forms of library catalogue (Write your answer and compare the same with the model answer given at the end of the lesson).

2.2.6 Summary

We have discussed various types and forms of library catalogue in this lesson. Inner forms are broadly grouped into alphabetical and classified forms while physical forms are broadly grouped into Conventional or Traditional and

Non-conventional or Modern Computerised forms of catalogue. While carefully studying the lesson you will be able to grasp the concept and merits and demerits of various forms. You will also be able to form a picture in your mind about which form of catalogue can be suitable for a particular library.

2.2.7 Key Words

Bibliographic record format : The layout of Bibliographical data of a document in a machine - readable form or in machine printout.

Database - Information stored in computer files and accessible via a remote terminal and telecommunication link.

Extension - Breadth and width of coverage of a subject.

Intention - Depth of coverage of a subject.

Microform - A generic term indicating any form of document in a reduced form whether on flat or on roll film or on other material.

Sheaf - Slip of paper

2.2.8 Model Answers to Self Check Exercises

1. **1. Alphabetical Catalogue**
 - 1.1 Author Catalogue
 - 1.2 Name Catalogue
 - 1.3 Title Catalogue
 - 1.4 Subject Catalogue
 - 1.5 Dictionary Catalogue
- 2. Classified Catalogue**
- 3. Alphabetic-Classed Catalogue**
2. **1. Conventional or Traditional Forms**
 - 1.1 Printed Book Catalogue
 - 1.2 The Card Catalogue
 - 1.3 The Sheaf Catalogue
 - 1.4 The Guard Book Catalogue
- 2. Non-Conventional or Modern Forms**
 - 2.1 Visible Index Form Catalogue
 - 2.2 Microform Catalogues
 - 2.3 Computer Output Microform (COM)
 - 2.4 Machine Readable Catalogue (MARC)
 - 2.5 Online Catalogue
 - 2.6 Online Public Access Catalogue
 - 2.7 CD-ROM Catalogue

2.2.9 Further Readings

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Lesson No. 2.3

**Filing of Entries : Arrangement of Entries of Dictionary
and Classified Catalogue**

Structure

- 2.3.0 Objectives
- 2.3.1 Introduction
- 2.3.2 Filing
 - 2.3.2.1 Filing-Meaning and Purposes
 - 2.3.2.2 Brief History of Filing Rules
- 2.3.3 Problems in Filing Entries
- 2.3.3 Entries Beginning with the same word or words
 - 2.3.3.2 Initials and Acronyms
 - 2.3.3.3 Numerals
 - 2.3.3.4 Diacritical Marks
 - 2.3.3.5 Abbreviations
 - 2.3.3.6 Signs and Symbols
 - 2.3.3.7 Subject Headings
 - 2.3.3.8 Initial Articles
- 2.3.4 Principle Methods of Filing Entries
 - 2.3.4.1 Alphabetic Filing
 - 2.3.4.1.1 Letter by Letter Arrangement
 - 2.3.4.1.2 Word by Word Method
 - 2.3.4.1.2 Ranganathan's Alphabetization Principles
 - 2.3.4.1.2.1 Gestalt Principle of Alphabetization
 - 2.3.4.1.2.2 Classified Filing
 - 2.3.4.2.1 Class Numer Arrangement
 - 2.3.4.2.2 Shelf List Filing
- 2.3.5 ALA Filing Rules
- 2.3.6 Summary
- 2.3.7 Key Words
- 2.3.8 Model Answers
- 2.3.9 Further Readings

2.3.0 Objectives

This lesson on deals with arrangement of entries in an alphabetical order and in a classified order. The study of this lesson will help you in familiarising

with principles of filing alphabetical and classified entries. You will also be learning some rules and principles developed by Ranganathan and few other authors for filing of entries.

2.3.1 Introduction

Arrangement of entries is very essential and important part of catalogue. Filing of entries alphabetically or in a classified order may appear simple and straight forward at first glance, but in reality; many problems arise in filing, which must be attended and resolved. The problems multiply as the number of entries in a catalogue increase.

Dr. Ranganathan stressed on systematic arrangement i.e. classified or dictionary. Alphabetisation is used in dictionary catalogue. It is also used in the alphabetical part of a classified catalogue. In classified catalogue the main entry cards are arranged according to class number provided by notational system of a classification scheme adopted by the library. In the case of a dictionary catalogue the entries are arranged in alphabetical order.

Filing of entries is a mechanical work. Any wrong filing may cause loss of time to users and will be of no use. Consistency should be followed throughout filing of entry cards. In modern libraries the catalogue is used as the primary tool for the location and retrieval of books and other documents. Therefore, whatever policies are adopted and whatever method is used, entries must be filed in the catalogue in an order or sequence provided by some standard catalogue code.

2.3.2 Filing - Disorder leads to dislocation and to avoid such a situation everything should be put in its place. If we make a heap of things together due to one or the other reason, then it will create utter chaos and confusion. Hence there is need to put the things in proper places.

2.3.2.1 Filing- Meaning and Purpose

Filing means arranging things in an orderly manner. Once the entries are ready these should be filed in some order into the catalogue.

The main purpose of filing or entries in a library catalogue is to arrange them in a systematic order - alphabetical or classified, so as to help users find documents at the earliest possible time. In other words we may say that systematic filing of entries helps users to save their precious time.

2.3.2.2 Brief History of Filing Rules

Over the years a number of filing codes have been developed. Few significant filing codes have been discussed in the following pages :

2.3.2.2.1 Cutter : "Rules for Dictionary Catalogue" by Charles Ammi Cutter also provides rules for filing. These rules were developed in concurrence with his ideas of Dictionary Catalogue. The basic principle of arrangement is the

alphabetical sequence and the interfiling of author, title and subject entries. Certain features of classified grouping were introduced, resulting in departures from the strictly alphabetical order.

2.3.2.2.2 Berghoffer : Professor Christian W. Berghoeffter introduced an interesting filing system for Frankfurter Sammelkatalog towards the end of the nineteenth century. He divided the catalogue into three sections - a personal section, a geographical section and a title section.

In the personal section initials and fore names of authors are ignored, and all titles are arranged in one alphabetical sequence under each surname. The Bergheoffer system is particularly useful for union catalogues as it claims to save filing and searching time.

2.3.2.2.3 ALA (1942) : Summary of various acceptable methods of filling in contemporary American Libraries was represented in "ALA rules for filing catalogue cards". As there was no real concensus, alternatives were given in 60 percent of the rules. Many of the rules provide classified subgroupings within the alphabetical sequence.

2.3.2.2.4 BSI (1951) : British Standard Institute (BS 1749 : 1951) provides rules for Alphabetic Arrangement of Entries in Catalogue."

2.3.2.2.5 ISI (1959) : Indian Standard Institute (ISI) developed "Rules for making alphabetical Index" in 1959.

2.3.2.2.6 LC (1956) : Library of Congress developed "Filing Rules for the Dictionary Catalogue" for the Library of Congress in 1956. These rules show considerable departure from the strictly alphabetical order particularly in the interfiling of different kinds of entries.

2.3.2.2.7 CCC (1964) : "Classified catalogue code (CCC)" by Dr. S.R. Ranganathan provides rules for arranging main entries according to call number notation given by classification system and also rules for Alphabetical part. Ranganathan has tried to achieve mechanization of the arrangement of entries by specifying the rules of alphabetical and rules for writing in an integrated manner. These rules shall be discussed at appropriate places in this lesson.

2.3.2.2.8 ALA (1968) : Keeping in view the new developments in cataloguing rules in the 1960s and constant pleas from librarians for a simplified filing code, a second edition of "the ALA Rules for Filing Catalogue Cards" was issued. This edition stresses the importance of correlation between the formation of headings and the filing order. The basic principle is the straight alphabetical order (disregarding punctuation) with only a few exceptions. The major exception is that personal surname entries are grouped together and filed before other entries bearing the same word or combination of words.

These rules shall be further discussed in this lesson at an appropriate

place.

2.3.2.2.9 ALA Abridged (1968) : This is an abridged edition of the preceding code. It contains the same basic rules as the full version, but with most of the specialized and explanatory material omitted. It was designed for the catalogs of small and medium-sized general libraries.

2.3.2.2.10 LC (1971) : Because the 1956 rules were developed specially for card catalogues and are not amenable to computer filing, a new set of filing rules was developed at the Library of Congress by John C. Ratter to make the new code hospitable to various kinds of users ; searching for a known item with perfect information ; searching for an item with incomplete or inexact information ; and browsing. A provisional version was issued in 1971. The basic principles underlying this code are : (1) elements in a heading should be taken in exactly the form and order in which they appear ; (2) related entries should be kept together if they would be difficult to find when a user did not know their precise form ; and (3) a standard set of fields should be established for each major type of filing entry. This code is currently being used at the Library of Congress in a number of its computer-produced files and catalogues, e.g. Library of Congress Subject Heading and Library of Congress Catalogs : Film and other Materials for Projection.

2.3.2.2.11 Computer filing rules : Laborious work of filing of entries can be successfully handled with the help of computers. Computers are now being used in various library operations and in bibliographic control. Although computer can provide efficiency to the work filing but still there are some drawbacks in computer filing. Computers can not think like human being. Suppose you give instructions to the computer saying ignore the initial articles like 'A', 'An' and 'The' while filing. Then for a title like 'ABC of Indian policies" the computer will file the entry as "BC of Indian Policies", which is quite unhelpful arrangement. However, with proper programming instructions some of the problems can be solved. The first code to deal specifically with. Computer filing was published in 1966 under the title "Computer filing of Index, Bibliographic and Catalogue Records" by Therefore, C. Hines and Jessica L.

2.3.2.2.12 BLAISE Filing Rules : BLAISE stands for British Library Automated Information Services. The BLAISE filing rules is based on the Report of a working party on computer filing set up by the Library Association, Cataloguing and Indexing group.

These rules were drafted keeping in view the principles developed by the International Organisation for Standardization (ISO). They are presented in four sections : (1) order of characters (2) Exceptional treatment of certain combinations of characters, (3) Filing and non-filing elements in headings and

uniform titles, and (4) order of entries. Blaise rules do not contain an index, which limits its use.

2.3.3 Problems in Filing entries

The alphabetical sequence is not as simple as it looks. In many situations the arrangement of catalogue entries need modifications of the basic principle in order to make the catalogue useful. Non alphabetical characters also appear in the headings and can not be handled by the simple instruction of alphabetical arrangement. Few major problems in filing have been discussed here. Each code mentioned above seeks to resolve these problem in their own ways.

2.3.3.1 Entries Beginning with the Same Word or Words

Generally headings representing different kinds of entries (author, title, subject, cross-references) begin with the same word or words. For example, the words "London", "Rose", "Love", etc., may appear as the entry word of any of the three kinds of entry. In such a case, the question is whether it would be useful from the user's point of view to file them in a strictly alphabetical order, or whether it might be more useful to group them by kind of entry first and then alphabetize within each group.

2.3.3.2 Initials and Acronyms

How to file initials and acronyms ? Initials generally filed as separate one-letter words. Acronyms, on the other hand, are often filed as words rather than initials. The problems arises when, in some cases, it is not exactly clear whether a group of letters written together are meant to be initials or an acronym.

2.3.3.3 Numerals

These may be filed numerically in a separate sequence from the alphabetical file or filed as if spelled out (normally in the language of the entry), i.e., 1,500 as fifteen hundred and 4,002 as Four thousand two. The latter is a more common practice. However, exceptions must be made in some cases : e.g. Henry II and Henry V are filed as Henry 2 and Henry 5 instead of "Henry the Second" and "Henry the Fifth".

2.3.3.4 Diacritical Marks

The treatment of diacritical marks such as umlauts, accents, diereses, etc., varies. They are disregarded in most cases. In some cases, they may have a filing value. For example, ü may be filed as u or ue.

2.3.3.5 Abbreviations

Another problem in alphabetic filling is how to treat the abbreviations. Irish and Scottish names usually use prefixes like M, Mc, Mc and Mac. ALA, LC and CCC provide for filing them according to their apparent alphabetical make up, as provided by the author. But BLAISE rules prefer filing such prefixes under Mac.

2.3.3.6 Signs and Symbols

Non-alphabetical and non-numerical signs, including punctuation marks, must be taken into consideration. A decision must be made with regard to how they should be filed. The codes again vary in their treatment.

2.3.3.7 Subject Headings

Methods of interfiling subject headings beginning with the same word also vary. The following headings taken from LC Catalogs : Subject Catalog.

Cookery - History
 Cookery - Periodicals
 Cookery - (Horse meat)
 Cookery, American
 Cookery, French
 Cookery for diabetics

are not filed in a strictly alphabetical order. The same headings, according to the ALA rules, are arranged in the following order :

Cookery, American
 Cookery for diabetics
 Cookery, French
 Cookery - History
 Cookery (Horse meat)
 Cookery - Periodicals

2.3.3.8 Initials articles

Few titles of books begin with articles 'A', 'An' or 'The'. So while filing of initial article is taken into consideration them "A Bibliography of the Panjab" will be filed under letter A, but if the initial article is ignored the same title will be filed under 'B'. It may be pointed out here that in many cases the users may look for "Bibliography of Punjab" and not "A Bibliography of Punjab".

2.3.4 Principle Methods of filing entries

Two principles methods of filing entries in the catalogue have been developed over a period of time.

12.4.1 Alphabetic Filing
 12.4.2 Classified Filing

2.3.4.1 Alphabetic Filing

The alphabetic system of filing entries in the Catalogue uses three methods of alphabetisation.

12.4.11 Letter by Letter ;
 12.4.12 Word by Word ; and
 12.4.13 Ranganathan's Alphabetization Principles

2.3.4.1.1 Letter by Letter Arrangement : This type of filing is also known as

"all through alphabetization' or "Solid System". Although alphabetization is simple and may be followed by semi-literate or even a layman.

In this method of filing each letter is considered in determining the sequence. In other words we may say that although arrangement is the arrangement of letters from first letter of the entry element to the last letter without making any differences in any word element. This is the easiest method to apply in libraries.

Example : The following items have been arranged letter by letter :

New
New Amsterdam
Newark
New Castles
New Delhi
Newman
North
North Delhi
Northern
North India

Letter by letter arrangement ignores presence of space, punctuation marks, accounts, apostrophes, brackets, difference in style of writing and printing of letter, etc. Although letter by letter method is easy to follow but to make it effective it needs some special rules for - (a) abbreviations, (b) symbols and signs, (c) weights, (d) mathematical symbols and numerals, etc.

2.3.4.1.2 Word by Word Method : It is also known as nothing before something method. In this method each word is considered to be a unit. Space left between one word and the following word is treated as nothing. So "something" should follow only after "nothing" is filed.

Example : Filing of following items illustrates word by word arrangement.

New
New Amesterdam
New Castles
Newark
Newman
North
North Delhi
North India
North Pole
Northern

The difference between "although" and "nothing before something"

arrangement merely rest with giving consideration to vacant space left between successive words. While "letter by letter" arrangement ignores vacant space ; word by word arrangement treats vacant space as "nothing". So in word by word method due consideration is given to see that next word should be filed only after "nothing" is filed.

Libraries in most of western countries prefer word by word arrangement. The space between words is regarded as nothing. Hence the word "New" which has nothing after it comes before New Amsterdam which has nothing between New and Amsterdam.

2.3.4.1.3 Ranganathan's Alphabetization Principles

Ranganathan in his classified catalogue code (CCC) has given separate rules of arrangement of entries in alphabetical part in Chapter E.H. It has mentioned that :

1. **By alphabet** : The entries in the alphabetical part are to be arranged strictly by alphabet, as in dictionary.
2. **Initial Articles** : Initial articles such as 'A', 'An' and 'The' are to be omitted while filing alphabetically (Rule EH 2)
3. **Umlaut** : German words spelt with the vowels a, o, u are to be arranged as if they were spelt a, o and u respectively. Such vowels are known as umlauts and written as ä, ö and ü (Rule EH 31)
4. **Scotish names** : Scotish names with the prefix "Mac and its abbreviated forms such as Mc and M' are to be arranged according to their apparent alphabetical make up". (Rule EH 4)
5. **Saint and its Variants** : Names beginning with 'St and Ste are to be treated according to their apparent make up like scottish names". (Rules EH 5)
6. **Superior Comma** : "The superior comma in Scotish or Irish name or in a possessive case is to be ignored" (Rule EH 6)

2.3.4.1.3.1 Gestalt Principle of Alphabetisation

Ranganathan has propounded the gestalt theory of alphabetisation for filing entries in alphabetical part of the classified catalogue in his CCC.

He prefers giving ascending scale of ordinal values to the numerals, letters and symbols.

Rule EH 70 in Chapter EH of CCC reads as "The following ascending scale of ordinal values is to be borne in mind in arranging entries in the Alphabetical Part :

1. Section Space ;
2. Full stop ;
3. Comma ;

4. Numerals in their natural sequence ;
5. Bracket ;
6. Words in Roman ;
7. Words in Italics or underlined words ;
8. The word 'and ' or its substitute semicolon ; and
9. Etc. "

Ranganathan is not for the rule 'nothing before something'. He is for all through alphabetisation but with the difference that the arrangement to be guided by what is visible. For example 'Mac' and 'Mc' are not to be equated at all.

2.3.4.2 Classified Filing

All such entries which begin with class number or Call Number are known as notation entries and the arrangement of all such entries in a Catalogue is known as classified arrangement. In other words this arrangement is by subjects in a logical sequence designated by numbers or other symbols.

Classified Catalogue Code (CCC) by S.R. Ranganathan provides for rules for arranging entries in classified sequence in "Chapter EG", according to which guidance for filing entries in classified sequence may be sought as below :

- (i) Rule EG1 states that "entries in the classified part are to be arranged according to Class Numbers provide in their respective leading sections".
- (ii) Rule EG21 states that "Among the entries with the same Class Number in their respective leading sections, those with one or more book numbers are to have precedence over those without them."
- (iii) "Entries with Book Numbers in their respective leading sections are to be arranged among themselves by the book Numbers" states rule EG22.
- (iv) "Entries with the same Class Numbers as well as Book Numbers in their respective leading sections will be a sequence of "continued" entries and they are to be arranged among themselves in numerical sequence", states rules EG24.
- (v) Rule EG31 states that "Entries with the same Class Number and without Book Numbers in their respective leading sections are to be arranged among themselves by the Book Numbers, if any, in their respective third sections".
- (vi) Rule EG32 guides that "Such of the entries coming under rule EG31 of this chapter as have the same Book Numbers in their respective third sections, are to be arranged among themselves by the Class Numbers occurring in their respective Third Sections."

2.3.4.2.1 Class Number Arrangement

The entries in a classified part are arranged by means of Class Numbers given in their leading sections. In other words, this is an arrangement of entries according to the Class Number or Call Number symbol assigned to each entry.

In the Seventh edition of Colon Classification following ascending value has been assigned to the digits :

* - " & . : ; - a b - .. z 1 2 - - 9 AZ

Example : The following Class Number arrangement describes the precedence of entries in classified order :

C*Z
C - E
C"a
C
C & E
C ' Poo
C.73
C:2
C;5
C,5
C-K
C=9R

2.3.4.2.2 Shelf List Filing

Shelf list is a catalogue of books in the order in which they are located on the shelves. It is a useful and important record of the location of all the copies. In a library it can also serve some of the functions of an accession register.

Shelf list reflects arrangements of documents in the library. In other words we may say, the classificatory arrangement of the documents in the library can be understood through the entries in the shelf list. Entries in the shelf list are therefore class Number and Call Number entries.

Example of filing shelf list entries, when Dewey Decimal Classification (DDC) scheme is used, is given below :

Example :

DDC Class Number order

332	Financial Economics
332.1	Banks and Banking
332.113	Relation to Private Banks
332.15	International Banks and Banking
332.175	General Banking Services

Two or more books bearing same Class Number are individualized with the help of Books Numbers assigned to them. It is needless to explain here that Class Number and Book Number form Call Number. Book Numbers are constructed through various methods such as - Cutter two or three figure alphanumeric tables, Cutter Senborn tables, etc.

2.3.5 ALA Filing Rules

Historical development of ALA filing rules has been given in sections 2.3, 2.8 and 2.9 of this lesson. As these rules are used for filing of entries in majority of libraries throughout the world, a brief summary of significant filing rules of ALA is given here. Students may consult 2nd ed. (1968) of "ALA filing rules" for detailed study.

2.3.5.1 "The basic order is alphabetical, word by word, except in certain areas where a numerical or chronological arrangement is preferable" (Rule 1)

2.3.5.2 When the same word or combination of words, is used as the heading of different kinds of entries, the entries are arranged alphabetically word-by-word, disregarding kind of entry, form of heading, and punctuation, except that personal surname entries are arranged before other entries beginning with the same word or combination of words.

2.3.5.3 Articles : ALA rule 4.1 states that "Disregard an initial article in all languages and file by the word following it. However an exception to this rule is certain foreign proper names beginning with an article..."

2.3.5.4 Initials

Initials are regarded as one letter word. ALA (Rule 5) prefers groups of initials to file before longer words beginning with the same initials letter.

Example	A
	A.A
	A.D.I.
	A.L.A.
	A.M.A.
	A.S.M.
	A.S.T.M.
	Abstracts
	American
	Armer

2.3.5.5 Abbreviations : ALA (rule 6) states that (a) "file abbreviations as if spelled in full in the language of the entry, apart from. "Mrs" which is filed as written. It further states that (b) "Arrange initials and other abbreviations for geographical names...as if written in full" and, (c) "If subject subdivisions are abbreviated in subject headings as they commonly are in the tracing, arrange them as if written

in full."

2.3.5.6 Numerals : "Numerals in titles should be arranged as if spelled out in the language of the entry" (ALA Rule 9)

2.3.5.7 Signs and Symbols : ALA rule 8 states that (a) "disregard signs such as ...or - at the beginning or within title", (b) "arrange the ampersand (&) as 'and', 'et', 'and' according to the language in which it is used, and (c) "arrange signs and symbols that are ordinarily spoken as words as if they were written out."

Example : Gandhi and Andrews
 Gandhi & Secularism
 Gandhi and Social Work
 Rs. 10/- per head (Ten Rupees per head)
 Rs. and Ps. (Rupees and Paisas).

2.3.5.8 Hyphenated Words : ALA (Rule 11) treats hyphenated words as separate words unless (a) "they sometime appear in the Catalogue without hyphen (e.g. Pressmark and Press-mark), or (b) the first part of the hyphenated word cannot stand alone with the same meaning as it has in the compound word (e.g. Anti-freeze)

2.3.5.9 Different Spellings : Revised edition of ALA advocates the use of one form only with a "see" reference from the others.

2.3.5.10 Arrangement of Surnames : ALA (Rule 24) in its move towards simplicity, adopts the following arrangement :

1. Surname alone,
2. Surname alone followed by dates,
3. Surname followed by initials
4. Surname followed by designations or forenames, in one alphabetical sequence.

Example : Johnson
 Johnson, A. 1500
 Johnson, Adam
 Johnson, J
 Johnson, James, 1805-1881
 Johnson, James , 1900-
 Johnson, Major-General.

2.3.5.11 Subject arrangement : ALA (Rule 32C) shows a trend towards simplification and greater use of straight forward alphabetical order, as given below :

1. Subject without subdivision,
2. Period divisions, arranged chronologically,

3. Alphabetical extension of the main subject heading (Form, subject and geographical) divisions, inverted subject headings, subject followed by parenthetical term, and phrase subject heading), interfiled word by word in one alphabet with titles and other headings beginning with the same word, disregarding punctuation.

Example :

- CHILDREN
- CHILDREN - 19th Century
- CHILDREN, Abnormal
- CHILDREN - Bibliography
- CHILDREN - Illegitimate
- CHILDREN IN LITERATURE
- CHILDREN (INTERNATIONAL LAW)
- CHILDREN - Poetry

2.3.5.1.2 Place Entry : Where there are different kinds of entries under the same Geographic Heading (Authors, titles, subjects) order shall be - author without subheading, subject without subdivision and heading for Subject Divisions.

Self-Check Exercise

(Compare your answers with model answers given in the end of this lesson)

1. Enumerate the major systems of filing.
2. Arrange the following words by "Letter by Letter" Love, Lacklustre, Ludhiana, London, Law, Lova, Local, List, Listing.
3. Arrange the following colon classification Numbers :
X:51
X,44
X'N47
Xa
X:51.42
X
4. Arrange the following words by "Word by Word" God, Good, Goodness, Government, Girl, Green, Greenland, Gift, Gift Pack.

2.3.6 Summary

Filing means arranging things in an orderly manner. Catalogue entries are filed in a helpful sequence on the basis of entry elements given on the catalogue cards to meet the user approaches. The main purpose of filing of entries in a library catalogue is to arrange them in a systematic order - alphabetical or classified. It also discusses brief historical development of filing rules.

This lesson discusses various linguistic problems coming in way while

filing alphabetically and the possible solutions to solve such problems. It also discusses shelf list arrangement and Ranganathan's principles regarding classified arrangement of filing. Rules for computer filing of entries have also come into existence.

2.3.7 Key Words

Acronym : A word formed from the initial letter or letter of each of the successive parts or major parts of a compound term.

Mixed Notation : A notation formed by combining two or more species of symbols such as combination of letters, symbols and numerals.

Pure Notation : A notation that uses consistently only one type of symbols throughout (i.e. either only letters or only numerals).

Shelf List : A record of processed documents in a library arranged in the order of the items in the shelves.

2.3.8 Model Answers

1. The Major systems of filing are :
 - a) Berghoefffer System, b) ALA Filing Rules, c) Library of Congress Filing Rules, d) Computer Filing, e) BLAISE Filing Rules, and f) Ranganathan's Principles.
2. Letter by Letter
Lackluster
Law
List
Listing
Local
London
Lova
Love
Ludhiana
3. Xa
X
X'N47
X.44
X:51
X:51.42
4. Word by Word
Gift
Girl
God
Good

Good
Goodness
Government
Green
Greenland

2.3.9 Further Readings

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Lesson No. 2.4

Descriptive Cataloguing : Current Trends is Standardization, Description and Exchange (ISBD, MARC, CCF)

Structure

- 2.4.0 Objectives
- 2.4.1 Introduction
- 2.4.2 ISBD
 - 2.4.2.1. Historical Development
 - 2.4.2.2. Objectives of ISBD
 - 2.4.2.3 Scope of ISBD
 - 2.4.2.4 ISBD and How it Works
 - 2.4.2.5 ISBD's uses to ordinary non-professional library patrons
 - 2.4.2.6 Structure of IBSD
 - 2.4.2.7 Punctuation of ISBD
- 2.4.3. ISBD and AACR 2
 - 2.4.3.1 Arrangement of Bibliographic Information
 - 2.4.3.2 Levels of Description
 - 2.4.3.3 Punctuations
 - 2.4.3.4 Sources of Information
- 2.4.4 MARC
 - 2.4.4.1 What is MARC ?
 - 2.4.4.2 MARC I & II
 - 2.4.4.2.1 Genesis and Development of MARC
 - 2.4.4.2.2 UNIMARC
 - 2.4.4.2.3 MARC-21
 - 2.4.4.3 MARC Structure
 - 2.4.4.4 Main MARC 21 Fields
 - 2.4.4.5 Features of MARC
- 2.4.5 Common Communication Format (CCF)
 - 2.3.5.1 Historical Development
 - 2.3.5.2 Objective of CCF
 - 2.3.5.3 Scope and Use of CCF
 - 2.3.5.4 Structure
 - 2.3.5.5 Features of CCF
- 2.4.6 Summary

2.4.7 Glossary

2.4.8 References

2.4.9 Self Check Exercise

2.4.10 Answers to Self Check Exercise

2.4.0 Objectives

This lesson will make the learner familiar with the following :

- a. the concept and purposes of descriptive cataloguing.
- b. current trends in standardization, description and exchange viz. ISBD, MARC and CCF
- c. development and structure of ISBD, MARC and CCF

2.4.1 Introduction

Descriptive cataloguing is connected with the information shown in the body of the entry as distinct from the heading. ALA Glossary of Library terms defines descriptive cataloguing as "that phase of the process of cataloguing which concerns itself with the identification and description of books".

On the basis of this definition, three major purposes of descriptive cataloguing can be pointed out :

- i. To assist in the choice of a document by stating its subject, level of the contents etc.
- ii. To assist in the choice of a document by stating its edition and other features that may identify the books as a separate and independent book.
- iii. To place or arrange the entry of books in the most useful place.

Following two factors play an important role in descriptive cataloguing

:

- What should be the subject of description and their order ; and
- What should be the extent of description.

Codes of cataloguing carry rules on these two issues. Major sources of information of description is title page of a document but the basic problem is to decide which elements should be included and what should be the order of these elements. These elements usually consist of title, subtitle, alternative title, author statement, edition, imprint, collation, series, notes and annotation. These elements are usually given in the order given as above. The basic idea behind the order is to place the most important element first.

There has always been close relationship between the descriptive cataloguing rules and the emerging formats for machine readable cataloguing records. That relationship has become so close that periodically we hear suggestions that the cataloguing rules be rewritten in MARC tags or that a single standard should govern both the coding and the content of MAR records.

Today, descriptive cataloguing is largely governed by a jointly developed cataloguing code Anglo-American Cataloguing Rules, 2nd edition (AACR 2) which conforms to International Standard Bibliographic Description (ISBD). Before we discuss standard description of an item according to AACR 2, it is essential to discuss ISBD first.

2.4.2 ISBD

2.4.2.1 Historical Development

The concept of ISBD evolved initially from a study of eight national bibliographies prepared during 1966-67 by Michael Gorman of British Library. This study was made on behalf of IFLA. The international meeting of cataloguing experts held at Copenhagen in 1969 discussed it and set up a Working Group to work on it. The Working Group published its final recommendations in 1971 under the title International Standard Bibliographic Description. In the following years, this format was accepted and adopted by many national bibliographies. In the course of its applications, many ambiguities were brought out. These were discussed at the IFLA Conference held in Gzenoble in 1973. As a result of this conference, two documents were published in 1974, the first standard edition of ISBD (M) and a set of recommendations for ISBD (S) which was finally published in 1977.

Due to wide acceptance of ISBD (M), it was considered desirable to develop a general ISBD that could serve as the framework for specific ISBDs. ISBD (G) was published in 1977. Since then, other ISBDs have also been developed, including those for cartographic materials, non-book materials, printed music, antiquarian materials, component parts and computer files.

2.4.2.2 Objectives of ISBD

The objectives of ISBD are threefold :

1. To facilitate records from various sources to be interchangeable.
2. To assist in the interpretation of records across language barriers.
3. To assist in the conversion of bibliographic records in machine readable.

2.4.2.3 Scope of ISBD

ISBD prescribes the type, order and composition of all information records with exception of points of access, suggested classification and certain codes on the card by a national or local cataloging agency. The type, quantity and shape of the subheading, unit card entry and additional entries are not governed by ISBD. The choice and provision of suggested classification is left to the cataloguing agency. The result of these exclusions is that ISBD is free of any features of bibliographic scheme that are not generally agreed upon or that are likely to change with different applications of bibliographic record.

What is covered by ISBD is what is commonly known as the body of the entry plus collation notes and the data connected to the International Standard Book Number.

2.4.2.4 ISBD and How it Works

ISBD is prescription for the generation and arrangement of bibliographic information in single and multiple volume monographic publications. It provides generalized directions to the cataloguer, and is to be supplemented by national cataloguing codes either in preparation or in use. These codes fill in many details left unspecified in the ISBD prescription. The prescription follows very closely the types of data normally considered to be essential to a complete bibliographic description of a work. ISBD having world wide acceptance will help in international exchange of bibliographic information.

Two principal benefits will flow from the adoption of ISBD. First, cataloguing data generated in one country may be used in the national bibliographies of any number of other countries with little or no modification. The second benefit will accrue to users, whether librarians or library patrons. As the straight forward ISBD format becomes widely known, catalogue consultation will become simpler.

2.4.2.5 ISBD's Uses to Ordinary Non-professional Library Patrons

1. It divides all bibliographic data into areas of information within the record.
2. It specifies the order to elements of data within each area.
3. It provides signals that delimit each area and each element within that area.

2.4.2.6 Structure of ISBD

ISBD divides the data in a bibliographic description into seven areas of information. Each area of information is itself divided into one or more elements of information. While the order and punctuation of each element is fixed, its presence is of course dependent upon the material being catalogued. The elements of each area are :

1. Title and statement of authorship area :
 1. title proper
 2. parallel titles
 3. other titles
 4. title information
 5. statement of authorship
2. Edition area :
 6. edition statement
 7. statements of authorship relating to the edition.

3. Imprint area :
 8. place of publication
 9. name of publisher
 10. date of publication
 11. place of printing
 12. name of printer
4. Collation area :
 13. number of volumes and/or number of pages
 14. illustrations
 15. physical size
 16. accompanying materials
5. Series area :
 17. series statements
6. Notes area :
 18. notes as appropriate
7. ISBN, binding and price area :
 19. International Standard Book Number
 20. binding
 21. price

There are twenty-one different elements of information to be dealt with in the seven areas of information. It is important to remember that not all will occur on every book being catalogued, and that some may occur in more than one form, as in the case of notes.

2.4.2.7 Punctuations of ISBD

Each elements has been recommended to be indicated by prescribed punctuation marks. These marks will be very helpful in recognizing the beginning for termination of each field or area in the record, specifically in the context of mechanized handling of bibliographical data. The punctuation marks used in ISBD are as follows :

- Title proper [no signal precedes Title Area]
- = parallel title
 - : other title
 - / statement of authorship
 - . - edition statement [device signals beginning of Edition Area]
 - / statement of authorship relating to the edition
 - . - place of publication [device signals beginning of Imprint Area]
 - ; other places of publication after initial place
 - : name of publisher
 - , date

- (place of printing
- : name of printer)
- . - pagination [device signals beginning of Collation Area]
- : illustration statement
- ; size
- & accompanying material
- . - (series statement [device signals beginning of Series Area ; open parenthesis signals the beginning of a separate series statement])
- : subseries
- ; number attached to a series or subseries statement
-) [a close parenthesis delimits the end of each separate series statement]

Note [no device is used to signal beginning of Notes Area because it starts on a separate line]

- . - second note [signal placed at end of first note on line above]
- . - late note. [period closes Notes Area in ISBN, binding, price Area begins on a separate line from Notes Area]

ISBN [no device signal is used as ISBN, binding, price Area begins on a separate line from Notes Area]

- . - ISBN [device signals beginning of ISBN, binding, price Area is placed directly after Collation area on a noteless record]

binding [space between ISBN and binding]

: price

Any of the element listed may be either present or absent in any given record. As long as the appropriate punctuation is placed in front of the appropriate element, or that element is placed on a separate line, no trouble will result. For the scheme to work, the order of elements must not be altered in any way. A missing element is treated as an empty class :

Title proper = parallel title; other title/statement of authorship. -

Title proper : other title/ statement of authorship. -

Title proper/ statement of authorship. -

Title proper. - edition statement

2.4.3 ISBD and AACR 2

In AACR 2, ISBD (M) serves as the basis for the rules of descriptive information for monographic materials (books and non-serial items) and ISBD (G) for the description of all types of publications in all types of media.

AACR 2, chapter 1 gives the general rules for describing all materials, chapters 2-12 give the rules in greater detail for specific types of materials and chapter 13 gives special rules for preparing bibliographic entries for part of a

larger work.

2.4.3.1 Arrangement of Bibliographic Information

AACR 2 groups the physical description of a work into the following eight areas :

1. Title and statement of responsibility
2. Edition
3. Material specific
4. Publication, distribution
5. Physical description
6. Series
7. Note
8. Standard number and terms of availability

2.4.3.2 Levels of Description

Rule 1.0D contains specifications for the following three levels of description :

First Level of Description

Title Proper / first statement of responsibility, if different from main entry heading in form or number or if there is no main entry heading. - Edition statement. - Material (or type of publication) specific details.- First publisher, etc., date of publication etc. - Extent of item. - Note (s). - Standard Number.

Second Level of Description :

Title proper [general material designation] = Parallel title : other title information / first statement of responsibility ; each subsequent statement of responsibility. - Edition statement / first statement of responsibility relating to the edition. - Material (or type of publication) specific details. - First place of publication, etc. : First publisher etc., date of publication, etc. - Extent of item; other physical details ; dimensions. - (Title proper of series / statement of responsibility relating to series, ISSN of series ; numbering within the series. Title of subseries, ISSN of subseries; numbering within subseries). - Note(s). - Standard Number.

Third Level of Description

The third level of description will be in accordance with the rules that are applicable to the item being described.

It may be noted that the level of description to be followed is essentially a policy matter of the library. It is usually based on the size, type and the need of the library. The libraries commonly adopt the second level of description.

Catalogue Card Skelton

The elements to be included under the second level of description can

be represented in the following standard card.

Call No

Title proper [general material designation] = parallel title :
 other title information / first statement of responsibility ; each
 Subsequent statement or responsibility. - Edition Statement /
 first statement of responsibility relating to the edition. - First
 place of publication ; etc : first publisher, etc. date of publication etc.
 Extent of item : other physical details ; dimension. - (Title
 proper of series / statement of responsibility relating to series
 ISSN of series ; numbering within the series).

Note (s)

Standard No.

2.4.3.3 Punctuations

While writing description in the entry, the following points should strictly be observed with regard to punctuation marks :

Title and Statement of Responsibility Area

- a. The general material designation shall be enclosed in square brackets "[]"
- b. Each parallel title shall be preceded by an equal sign. "="
- c. Each unit of other title information, like subtitle, explanatory title etc. shall be preceded by a colon. ":"
- d. The first statement of responsibility shall be preceded by diagonal slash "/"
- e. Each subsequent statement of responsibility shall be preceded by a semicolon, ";"
 e.g. War and peace ; a novel / Leo Tolstoy ; translated
 from the Russian by Constance Garnett.
 SchiffsmodeLLbau = Ship model building / Von Pieter Hennings.

Edition Area

- a. The edition area will be preceded by a full stop, space, dash, space ".-"
- b. The subsequent edition statement will be preceded by a comma ","
- c. The first statement of responsibility following an edition or subsequent edition will be preceded by a diagonal slash. "/"
- d. Each subsequent statement of responsibility relating to an edition shall be preceded by a semicolon. ";"
 e.g. .- 5th ed. /by C. Ellis.

Publication, Distribution Area

- a. The publication, distribution area shall be preceded by a full stop, space, dash, space. "._"
- b. The second or subsequent named place of publication, distribution etc. shall be preceded by a semicolon. ";"
- c. The name of a publisher, distribution, etc. shall be preceded by a colon. ":"
- d. The supplied statement of function of a publisher, distribution, etc. shall be enclosed in square brackets. "[]"
- e. The date of publication, distribution etc. shall be preceded by a comma. ","
e.g. . - London : Smith, 1992.

Physical Description Area

Start the physical description area from a new paragraph; i.e. beginning from the second indentation.

- a. Other physical details (other than dimension) shall be preceded by a colon. ":"
- b. The dimensions shall be preceded by a semicolon. ";"
- c. The statement of accompanying material shall be preceded by a plus sign "+"
- d. The physical details of accompanying material shall be enclosed within parenthesis. "()"
e.g. 271 p. : ill. ; 23 cm + atlas

Series Area

- a. The series area shall be preceded by a full stop, space, dash, space "._"
- b. Each series statement shall be enclosed in parenthesis. "()"
- c. Parallel titles of series or subseries shall be preceded by an equal sign "="
- d. Other title information related to series or subseries shall be preceded by a colon. ":"
- e. The first statement of responsibility relating to a series or subseries shall be preceded by a diagonal slash. "/"
- f. The subsequent a statement of responsibility relating to a series or subseries shall be preceded by a semicolon. ";"
- g. The numbering within a series or subseries shall be preceded by a semicolon. ";"
e.g. - (Publication series / Madras Library Association; no. 24).

Note Area

Start the note area from a new paragraph, i.e. beginning from the second indentation. Each type of note shall be started from the new paragraph.

e.g. Bibliography : p. 320 - 410.

Library has v. 1, 3-5 and 8 only

ISBN

The ISBN is preceded by the letters ISBN and is given with the approved segmentations or with hyphen between the parts of the number.

e.g. ISBN O-7131-1646-3

Additions to the ISBN are made in parenthesis.

e.g. ISBN O -7131-1646-3 (vol. 1)

Binding : The inclusion of binding is optional. The binding when given follows the ISBN to which it is related.

e.g. ISBN O-901727-88-1 Paperback.

Price :The inclusion of price is optional. It is given after the ISBN and binding to which it is related.

e.g. O-85163-001-4 Paperback : £ 0.50.

Addition to price are made in parenthesis.

e.g. : £ 3.00 (£ 2.50 to members)

General Punctuations

- a The omission of part of an element shall be depicted by mark of omission. "..."
- b The Conjectural interpolation shall be indicated by a question mark within the square brackets "[?]"

Spacing

While writing description in the entry, the following points should strictly be observed with regard to spacing before and after the prescribed rules.

- a. Each mark of punctuation shall be preceded by a space and also followed by a space except in case of comma, full stop, hyphen and opening and closing parenthesis and square brackets.
- b. Do not preceded a comma, full stop, hyphen and closing parenthesis and square brackets by a space.
- c. Do not give space after the hyphen and opening parenthesis and square brackets.
- d. The mark of omission shall be preceded and followed by a space.

2.4.3.4 Sources of Information

Rule 1.0A1 States to prefer information found in the chief source to information found elsewhere. The information taken from outside the prescribed

source(s) is to be enclosed in square brackets. Rule 2.0B2 prescribes the following sources of information for various areas.

Area	Prescribed source of information
Title and statement of responsibility	Title page
Edition	Title page, other preliminaries, and the colophon
Publication, distribution etc. area	Title page, other preliminaries, and the colophon
Physical description area	The whole publication
Series	The whole publication
Notes	Any source

13.4 MARC

2.4.4.1 What is MARC ?

MARC stands for machine readable cataloguing. It is neither a catalogue in itself nor a method of cataloguing, but a group of formats employing a particular set of conventions for the identifications and arrangement of bibliographic data for handling by computer.

2.4.4.2 MARC I & II

2.4.4.2.1 Genesis and Development of MARC

Library of Congress (LC) was the first to design and experiment on a machine readable catalogue (MARC) record format. It started MARC 1 project in 1966. The main aim of this project was to distribute Library of Congress cataloguing data in a machine readable form to various libraries for the reading materials received by them so as to facilitate them to meet the explosion of knowledge and the increasing demand for easy and quick provision of required information. Similar work was in progress in the United Kingdom by Council of the British National Bibliography. It had set up BNB MARC project producing machine readable data in the printed British National Bibliography (BNB)

These parallel development led to Anglo-American co-operation on MARC project which was initiated in 1968 and was instrumental in developing the concept of MARC as a communication format. In spite of the cooperation there were two versions of MARC i.e. LCMARC II and BNB MARC II later known as US MARC and UK MARC.

2.4.4.2.2. UNIMARC

Since the development of LCMARC II and BNB MARC II, a number of

national formats such as CANMARC (Canada), AUSMAR (Australia), MABI (Germany), ANNAMARC (Italy), DANMARC (Danish), IBERMARC (Spain), SWEMWRC (Sweden) appeared. Though all of these formats adhere to ISO 2709 record structure or its equivalent national standard, they showed wide variation in respect of concept and content designators. These differences necessitated suitable programmes to be written for one agency to use the records of another. Within the LCMARC itself the variety of materials added to the complexity of interchange of records. In August 1971, a recommendation was made to IFLA that they assume the responsibility for establishing an international standard for content designators. In August 1972, at IFLA General Conference in Budapest, the IFLA Committee on Cataloguing and IFLA Committee on Mechanization jointly sponsored the IFLA Working Group on content designators. In 1973, the Group recommended a SUPERMARC, which was based on ISBD. This was later called as MARC International Format (MIF) from which the UNIMARC was developed in 1977. The development of UNIMARC solved the problem of incompatibility as it was so designed to accept records created in any MARC Format. Records in one MARC format could be converted into UNIMARC and then be converted into another MARC format. It requires only two programmes - one to convert into UNIMARC and another to convert from UNIMARC - instead of having to write a separate programme for each MARC format.

The primary purpose of UNIMARC is to facilitate the international exchange of data in machine-readable form between national bibliographic agencies towards the standardization of bibliographical information reflected in the International Standard Bibliographic Description (ISBDs).

A second edition of UNIMARC was published by IFLA International Office for UBC with a handbook with the intention of guiding the users in its application.

2.4.4.2.3.MARC-21

The library of Congress and the National Library of Canada harmonized the USMARC and CAN/MARC formats in a single edition in early 1999 under a new name MARC-21. The Network Development and MARC Standards Office at the National Library of Congress and the Standards and Support Office at the National Library of Canada maintain the MARC 21.

MARC 21 format is a set of codes and content designators for encoding machine readable records. Formats are defines for the following five types of data :

- MARC 21 Format for Bibliographic Data : contains format specifications for encoding data elements needed to describe, retrieve and control various forms of bibliographic material including books, serials, computer files, maps, music, visual materials and mixed materials.
- MARC 21 Formats for Holding Data : contains format specifications for encoding data elements pertinent to holdings and location information for all forms of material.
- MARC 21 Format for Authority Data : contains format specifications for encoding data elements relating to bibliographic records that may be subject to authority control.
- MARC 21 Format for Classification Data : contains format specifications for encoding data elements relating to classification numbers and the associated captions.
- MARC 21 Format for Community Information : provides format specifications for records containing information about events, programs, services, and so on, so that this information can be integrated into the same OPAC as data in other record types.

2.4.4.3 MARC Structure

The format of MARC structure includes :

- Leader
- Record directory
- Variable fields

Leader

Leader provides information about the ensuing records such as the total length of the record code and the bibliographic level. It consists of first 24 characters with position counted from 0-23.

Character position

0-4	Logical record length
5	Record status
6	Type of record
7	Bibliographic level
8-9	Blank
10-11	Indicator count and subfield code count
12-17	Base address
17-19	Implementation defined positions
20-22	Entry map
23	Undefined and set to 0

They are used to indicate nine types of data such as length, status, type

of record, bibliographic level of record, blank characters, subfield code, base address, defined position of records and entry position.

Record Directory

Immediately following the leader, the directory begins. Directory tells what variable fields are in the record and where they are placed. There is a 12 character record directory for each variable field. The record directory helps in the retrieval of the select field from the record. A field terminator is used to mark the end.

Variable Fields

The data content of the record is divided into variable fields each designated by a three-character tag. The MARC 21 format distinguishes two types of variable fields :

- Variable control fields
- Variable data fields

Variable control fields consist of data and a field terminator. The OOX fields (007-009) in the MARC 21 format are variable control fields.

Variable data fields contain the textual information that describes the bibliographic items being catalogued. All fields except OOX are variable data fields.

2.4.4.4 Main MARC 21 Fields

The principal fields in MARC 21 record are as under :

- 100 Main entry heading : personal author
- 110 Main entry heading : corporate body
- 111 Main entry heading : conference
- 130 Main entry heading : uniform title
- 240 Uniform title
- 243 Collective title
- 245 Title and statement of responsibility
- 250 Edition
- 260 Publication, etc.
- 300 Physical description
- 440 Series in added entry form
- 490 Series not in added entry form
- 5- Notes
- 700 Added entry : person
- 710 Added entry : corporate body
- 711 Added entry : conference
- 8- Added entry : series

2.4.4.5 Features of MARC

The main features of MARC are :

1. The MARC format offers better resource sharing opportunities for libraries.
2. It is suitable for download and derives bibliographic records from a wider range of sources, particularly from Internet.
3. It gives superior coverage of non-book material and separate format for bibliographic data.
4. MARC 21 includes more effective route to adopt new standards for the future, in particular, metadata standards for digital material disseminated on electronic media.

2.4.5 Common Communication Format (CCF)

2.4.5.1 Historical Development

The rapid growth of the international bibliographic exchange formats on the one hand and lack of compatibility amongst them on the other led to the convening of International Symposium on Bibliographic Exchange Formats in Sicily in April 1978 to study the desirability and feasibility of establishing maximum compatibility among existing bibliographic exchange formats. The symposium was organized by UNISIST International Centre for Bibliographic Description in collaboration with International Organization for Standardization (ISO). As a result of this symposium an adhoc Group was constituted for developing the Common Communication Format (CCF). After prolonged deliberations and discussions by the experts, the Group decided to follow certain principles.

1. The structure of the new format would conform to ISO-2709.
2. The core record would consist of a small number of mandatory data elements essential to bibliographic description, identified in a standard manner.
3. The core record would be larger in number by adding optional data elements, identified in a standard manner.
4. A standard technique would be developed for accommodating levels, relationships, and links between bibliographic entities.

Besides it was also resolved that CCF would provide a bridge between the existing major international exchange formats, while taking into account the International Standard Bibliographic Description (ISBD) developed by IFLA.

The Group duly considered and compared all of the data elements in the Reference Manual, UNIMARC, Guidelines for ISDS, MEKOF - 2, ASIDIC / EUSIDIC / ICSU-AB/NFAIS Interchange specifications and the USSR-US Common Communication Format. Basing on the above six standard formats as a basic guide, the Group identified a small number of data elements which were used

virtually by all information handling communities, including both the libraries and the abstracting and indexing organizations. These commonly used data elements form the core of the CCF. The Group also developed a technique to establish relationship between bibliographic records and between elements within bibliographic records. The concept of the record segment and a method for designating relationships between records, segments and fields were also developed.

The first edition of CCF was published in 1984 and the second in 1988 and subsequently it was decided that the scope of CCF would be extended to incorporate provisions for data elements for recording factual information that are used often for referral purposes. As a result, the third edition of CCF was divided into two volumes : CCF / B for holding bibliographic information and CCF / F for factual information. CCF (B and F, taken together) has been designed to provide a standard format.

2.4.5.2 Objectives of CCF

The main objective of CCF is to provide a detailed and structured method for recording a number of mandatory and optional data elements in a computer readable bibliographic record for exchange purpose between two and more computerized systems.

2.4.5.3 Scope and Use of CCF

The CCF is designed to provide a standard format for three major purposes.

1. To permit the exchange of bibliographic records between the groups of libraries and the abstracting and indexing services.
2. To permit a bibliographic agency to use a single act of computer programs to manipulate bibliographic records received from both the libraries and the abstracting and indexing services.
3. To serve as the basis of a format for an agency's own bibliographic database, by providing a list of useful data elements.

To assist the development of individual systems, UNESCO has published 'Implementation Notes' for users of the Common Communication Format (CCF). The above purposes have been achieved :

1. By specifying a small number of mandatory data elements which are recognized by all sectors of the information community as essential in order to identify an item.
2. By providing mandatory data elements that are sufficiently flexible to accommodate varying descriptive practices. A section entitled 'USE' for each field and subfield indicates whether the use of that data element is mandatory or optional.
3. By providing a number of optional elements which may be useful

- to describe an item according to the practices of the agency which creates the records.
4. By permitting the originating agency to include non-standard elements which are considered useful within its system even though they are not used by other agencies.
 5. By providing a mechanism for linking records and segments of records without imposing on the originating agency any uniform practice regarding the treatment of related groups of records or data elements.

2.4.5.4 Structure

The record structure of the Common Communication Format comprises a specific implementation of the international standard ISO 2709. Each CCF consists of four parts :

- a. Record Label
- b. Directory
- c. Datafields
- d. Record Separator

Record Label : Each CCF record begins with a record label of 24 characters. The contents of the characters are described below.

- | | |
|----------|--|
| 0 to 4 | Record length. It includes the length of the label, directory, data fields, and field separator. A record can have a maximum length of 99999 characters. |
| 5 | Record status. It indicates with a code whether the record is new, replaced one, deleted one, etc. e.g. a = New Record. |
| 6 | Blank |
| 7 | Bibliographic level. It is indicated with a code e.g., m = monograph |
| 8 | Blank |
| 9 | Blank |
| 10 | '2'. The indicator length. Many fields are provided with indicators, and indicator requires 2 characters positions, e.g., 01. |
| 11 | '2'. The subfield identifier length. Here, 2 indicates the two characters used as subfield identifier, e.g., @A |
| 12 to 16 | Base address of data. It indicates the location of the first character of the first datafield within a record. It is to be noted that first datafield begins after the last directory in a record. |
| 17 to 19 | Blank |
| 20 | '4' The 'length of datafield'. Here '4' indicates that a data field is of four character length. Hence, the maximum length of a datafield can be of 9999 characters. |

21 '5' . The length of 'starting character position' in the directory. Here '5' indicates that the starting character position is represented by 5 digits.

22 '2'. The length of implementation - defined selection of each entry in the directory. Of the two characters indicated in this position by '2', one character indicates the segment identifier, and the other the occurrence identifier.

2.3 Blank

Directory : Directory comprises of five parts and is of 14 character length. The five parts are :

- i. Tag
- ii. Length of data field
- iii. Starting character position
- iv. Segmented identifier
- v. Occurrence identifier

Tag : It is a character numerical code representing the datafield which corresponds to the directory entry e.g., 010.

Length of datafield : It indicates the length of datafield with 4 digits e.g., 0034. The length of datafield indicates the length of the indicators, subfield identifies, data, and field separator, all in terms of characters.

Starting character : It indicates with a five-digit number, the position of the first position character of a datafield counted from the base address of data.

Segmented identifier :It is a single character chosen from numerals (0 to 9) and / or capital letters (A to Z) which designates the datafield as being the constituent of a particular segment.

Occurrence identifier: It is a single character chosen from numerals (0 to 9) and / or capital letters (A to Z). It is used to differentiate multiple occurrences of datafields within the same record segment.

A directory entry looks like the following 3000140021702 in which

300 indicates tag number

0041 indicates length of datafield

00217 indicates that the data field begins two hundred seventeen characters after the base address of data.

0 indicates the first segment.

2 indicates the third occurrence.

Datafields : A datafield comprises of four basic components

- i. Indicators
- ii. Subfield identifier
- iii. Subfield
- iv. Field separator

Subfields can be more than one within the same datafiled. Every subfield is preceded by a subfield identifier.

Indicator	Provision of indicators has been made in many datafields of CCF. Indicators are two digits, each of which may convey a distinct meaning. For example, in the field 021-Completeness of Record, the indicator 12 mean that the record contains only standard data elements (indicator 1) obtained from a CIP record (indicator 2)
Subfield identifier	It consists of two characters, of which one is @, and the other one is capital letter (A to Z).
Subfield	It is a separately identified constituent of a datafield, and contains data element. A subfield is followed by either another subfield identifier or a data field separator.
Datafield separator	It constitutes the final character of every datafield.

Given below is an example of a datafield :

11@ATagore@BR.N.@D1861-1941@070 ■

The tag for this data is 300, which appears in the directory corresponding to this datafield. In this datafield the characters represent the following :

1 (1st character)	indicates that the person has primary responsibility for the contents of the item described in this segment of the record.
1 (2nd character)	the form of the name of the person comes from the authority file of the agency.
@A	The first subfield identifier.
Tagore	The data elements of the first subfield, which is the surname of the person.
@B	The second subfield identifier.
R.N.	The data element of the second subfield, which are the initials of the forename of the author.
@D	The third subfield identifier. The subfield indicates the years 1861-1941 of birth and death of the person.
1861-1941	Data element of the third subfield.
@E	The fourth subfield identifier. It shows that the person's

role is that of the author.

070

Data element of the fourth subfield.

■

Datafield separator.

Record Separator

The record separator (Character 1/13 of ISO 646) is the final character of the record. It follows the field separator of the field datafield of the record.

2.4.5.5 Features of CCF

The unique features of CCF are :

1. It can be used too produce catalogue cards as all the necessary data elements are incorporated.
2. It is user friendly and rather catalogue friendly as no cataloguing rules are imposed.
3. It is flexible and very popular format among UN organizations and international bodies. Many developing countries are adopting it for the creation of bibliographic records in machine readable form. Bibliographic agencies following AACR 2 can be conveniently converted to CCF format.
4. It provides basic data elements and has facility for optional elements and private fields thus enabling an agency to incorporate new standard elements considered important.
5. It facilitates a library and bibliographic agency to use a single set of computer programme for the exchange of data.
6. Some of the mandatory data elements are flexible and can accommodate verifying descriptive practices.

2.4.6 Summary

This lesson discusses the current trends in standardization, description and exchange of bibliographic records. In this lesson, various bibliographical record formats such as ISBD, MARC and CCF have been discussed in great detail. The relation between ISBD and AACR 2 has also been highlighted.

2.4.7 Glossary

Antiquarian	:	It refers to old and rare books.
Data	:	It refers to facts or information. Each record contains data which refers to a separate entity recognized by the system e.g. books, journals etc.
Field	:	Field is a part of record which contains data referring to one characteristic of the entity or unit represented by the record.
Record	:	A record is a group of related data elements treated as a unit.
Subfield	:	It is a part of a field which cannot stand completely in isolation from the data in the field.

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2.4.9 Self Check Exercise

Note : Write the answers in the space given below each question and check your answers with the answers given at the end.

1. State the objectives of ISBD

2. List main fields of MARC 21

3. What is the scope of CCF ? Discuss.

4. State main features of CCF.

2.4.10 Answers to Self Check Exercise

1. The objectives of ISBD are as under :
 1. To facilitate records from various sources to be interchangeable.
 2. To assist in the interpretation of records across language barriers.
 3. To assist in the conversion of bibliographic records in machine readable form.
2. The main fields in MARC 21 record are as under :
 - 100 Main entry heading : personal author
 - 110 Main entry heading : corporate body
 - 111 Main entry heading : conference
 - 130 Main entry heading : uniform title
 - 240 Uniform title
 - 243 Collective title
 - 245 Title and statement of responsibility
 - 250 Edition
 - 260 Publication, etc.
 - 300 Physical description
 - 440 Series in added entry form
 - 490 Series not in added entry form
 - 5- Notes
 - 700 Added entry : person
 - 710 Added entry : corporate body

- 711 Added entry : conference
- 8- Added entry : series

3. The CCF is designed to provide a standard format for three major purposes :
 1. To permit the exchange of bibliographic records between the groups of libraries and the abstracting and indexing services.
 2. To permit a bibliographic agency to use a single set of computer programs to manipulate bibliographic records received from both the libraries and the abstracting and indexing services.
 3. To serve as the basis of a format for an agency's own bibliographic database, by providing a list of useful data elements.
4. The main features of CCF are :
 1. It can be used to produce catalogue cards as all the necessary data elements are incorporated.
 2. It is used friendly and rather catalogue friendly for no cataloguing rules are imposed.
 3. It is flexible and very popular format among UN organizations and international bodies. Many developing countries are adopting it for the creation of bibliographic records in machine readable form. Bibliographic agencies following AACR 2 can be conveniently converted to CCF format.
 4. It provides basic data elements and has facility for optional elements and private fields thus enabling an agency to incorporate new standard elements considered important.
 5. It facilitates a library and bibliographic agency to use a single set of computer programme for the exchange of data.
 6. Some of the mandatory data elements are flexible and can accommodate varying descriptive practices.

STANDARD CODES OF CATALOGUING : AACR AND CCC

Structure

- 2.5.0 Objectives
- 2.5.1 Introduction
- 2.5.2 Anglo-American Cataloguing Rules (AACR)
 - 2.5.2.1 AACR 1 (1967)
 - 2.5.2.1.1 Structure of AACR 1
 - 2.5.2.2 AACR 2 (1978)
 - 14.2.2.1 Options
 - 14.2.2.2 Structure of AACR 2
 - 2.5.2.3 AACR 2, 1988 Revision
 - 2.5.2.3.1 Structure of the Rules 1988 Revision
 - 2.5.2.3.2 Comments
- 2.5.3 Classified Catalogue Code (CCC)
 - 2.5.3.1 Genesis and Development
 - 2.5.3.2 Successive Editions
 - 2.5.3.3 Structure of CCC
 - 2.5.3.4 Features of CCC
 - 2.5.3.5 Comments
- 2.5.4 Summary
- 2.5.5 Glossary
- 2.5.6 References
- 2.5.7 Self Check Exercise
- 2.5.8 Answers to Self Check Exercise

2.5.0 Objectives

The objectives of this lesson are to make the learner familiar with:

- i. The emergence and development of AACR and CCC
- ii. The salient features of AACR and CCC

2.5.1 Introduction

The catalogue code means a set of rules with defined terminology designed for cataloguing purposes and rule means a single provision to carry out cataloguing. The catalogue codes and rules guide the cataloguer as to how the entries for books are to be prepared so that one and the same system and pattern might exist for ever who so ever has done it.

Since the middle of the nineteenth century, a series of cataloguing codes has been developed. Each new code sought to improve on the preceding ones. Most of the earlier codes represent the efforts of individuals, and the later ones result from corporate undertakings. In this lesson, the discussion will be confined to two important codes i.e. AACR and CCC

2.5.2 ANGLO-AMERICAN CATALOGUING RULES (AACR)

Background

The seeds of AACR were sown in 1908 with the development of ALA Code. The code was the result of joint efforts of American Library Association (ALA) and Library Association (LA). By the 1920's, AA code was under criticism. The need for revision was repeatedly expressed. In the 1930's, the committees of ALA and LA began revision. The LA dropped out at the outbreak of the II World War. The ALA continued along producing a draft code in 1941. The final version appeared in 1949 covering author and title heading, the rules for description being separately published by Library of Congress under the title "Rules for Descriptive Cataloguing."

ALA 1949 and LC 1949 served as the standards for descriptive cataloguing for American libraries until the appearance of the Anglo-American Cataloguing Rules in 1967.

2.5.2.1 AACR 1 (1967)

"Anglo American Cataloguing Rules, Northern American Text, Chicago, 1967."

"British Text, London, Library Association, 1967."

Due to dissatisfaction with the 1949 code, Samuel Lubetzky, the then bibliographic consultant of Library of Congress was asked by the Board of Cataloguing Practice and Research of ALA to make a detailed analysis of 1949 code. His findings were published in a pamphlet entitled "Cataloguing Rules and Principles: a critique of the ALA rules for entry and proposed design for their revision, 1953". Later on in 1956, he was invited by ALA to add a revision of 1949 code and the result was Code of Cataloguing Rules, Author and Title Entry: an unfold draft 1960.

In 1961, International Conference on Cataloguing Principles (ICCP) was held in Paris. The influence of Lubetzky is closely to be seen in ICCP principles. Lubetzky edited AACR from 1956-64. But later on due to differences of opinion on rules of institutions, he resigned and C. Summer Spalding completed the work from 1964-66. The new code was published in 1967 in two editions - the North American edition and the British edition. The code was prepared by the ALA, the LC, the LA and the Canadian LA. Both the editions are essentially based on the same principles but with a few alternative rules for choice and rendering of headings.

The salient features of AACR1 are given below:

1. The rules in AACR1 are based on 'Statement of Principles' adopted by ICCP in 1961. These rules depart very little from the Paris Principles.
2. The code includes rules for author/title main entry headings, added entry

headings and references, uniform titles for both title and author entry, description and all these in relation to any type of material. The code covers books, book-like and non-book materials.

3. Sufficient number of entries and references for documents catalogued have been prescribed to provide for meeting various approaches which can be anticipated reasonably from the users. All the entries for particular persons or corporate bodies are supposed to be given under a uniform heading or are to be related by means of references, thereby meeting the requirements of multiple entry alphabetical catalogues.

2.5.2.1.1 Structure of AACR 1

AACR 1 contains 15 chapters arranged in three dimensions:

Part 1: Entry and Heading

Part 2: Description

Part 3: Covers entry and description of non-book material

Then there are six appendices which provide a glossary of cataloguing terms, rules for capitalization, abbreviations, punctuations and diacritics, rules for entry and heading that differ in the British text.

2.5.2.2 AACR 2 (1978)

Since the publication of AACR 1 in 1967, certain significant developments pointed to the desirability of complete overhauling of the code. The factors which necessitated the development of AACR 2 are as under:

- i) The formulation of international standards for the description of monographs, serials and other media indicated the need to redraft the AACR provisions for bibliographic description so that the code would facilitate the effort to promote international exchange of bibliographic data.
- ii) Rules for non-book materials in AACR (1967) had been considered inadequate from the beginning, a situation which resulted in the proliferation of various cataloguing codes for non-book materials.
- iii) The points of divergence between the separate North American and British text of AACR had been gradually reconciled, leading to the prospects of a unified code.
- iv) There had been numerous piecemeal revisions and changes in the rules since 1969 (revision of chapters 6, 12 and 14) which rendered the code rather inconvenient to use.
- v) Increasing mechanization, the growth of centralized and cooperative bibliographic services and networks, introduction of number of new media necessitated to make a code in tune with the computer possibilities.

In order to respond to all these problems, changes and developments, the second edition of Anglo-American Catalogue Rules (AACR 2) was brought out in 1978. It was prepared by the American Library Association, the British Library, the Canadian

Committee on Cataloguing, the Library Association and the Library of Congress.

AACR 2 represents a more radical break with the past practice. This is quite evident from the following objectives established at the meeting of Joint Steering Committee for revision of AACR 1 in 1974:

- i) To reflect developments in machine processing of bibliographic record.
- ii) To reconcile in a single text the North American and British Text, including official changes since 1967.
- iii) To consider for inclusion of amendments and changes and work currently in progress, with attention paid to international interests.
- iv) To maintain general conformity with the Paris Principles of 1961, and the ISBD as a basis for the bibliographic description of monographs and to the principle of standardization in the bibliographic description of all types of material.

2.5.2.2.1 Options

AACR 2 contains a number of options indicated by 'Optional addition', 'Alternative rule', or 'Optionally'. These allow individual libraries or cataloguing agencies to make decisions based on individual considerations in cases where more than one provisions are equally valid.

2.5.2.2.2 Structure of AACR 2

AACR 2 consists of two parts. Part 1 covers rules for a standard description of all kinds of library material. This part is closely based on International Standard Bibliographic Description (ISBD) for general materials and those for special types of material. Part II deals with the determination and establishment of headings, or access points in the catalogue, under which the descriptive information is to be presented to catalogue users and with the making of references to those headings. This part contain rules for choice of main and added entries (Chapter 21), form of headings and uniform titles (chapters 22-25) and references (chapter 26).

The above division is based on ISBD approach. ISBDs make a distinction between bibliographic description and access points. AACR 2 has taken into consideration, the present day requirements. It is based on the assumption that bibliographic records are meant to be put to multiple uses. In the application of rules of AACR 2, first of all a cataloguer is expected to establish in a standard form a set of descriptive data relating to physical object being catalogued at a particular time. Next he is supposed to provide name and title access points by means of headings and uniform titles to enable the user of a catalogue to find standard description of the concerned physical objects.

2.5.2.3 AACR 2, 1988 Revision

The implementation of AACR 2 disclosed certain inconsistencies in the rules. This led to further clarification and modification in the rules. As a result, Joint Steering Committee (JSC) was constituted by the Library of Congress, ALA, LA, Canadian LA and Australian LA to take further steps for revision and improvements. As a result, three

sets of revisions of AACR 2 comprising of Geographical corrections, Textual amendments, and altered and additional rules were issued in 1982, 1984 and 1986. A draft revision of chapter 9 for computer files was also prepared and published in 1986 in response to the ever-changing nature of computer files. With these changes, it was considered appropriate to issue a revised edition of AACR 2. The JSC decided to call the new edition Second Edition 1988 Revision instead of the 'third edition' due to the fact that the rules have not been radically recast.

The revision, therefore did not result either in the change of basic concept, principles or structure. The changes in AACR, 1988 revision include revisions of rules approved since the publication of AACR 2 (1978); incorporation of the revised chapter on computer files; revision of a number of rules regarding music; rethinking of the concept of separate bibliographic identities, the treatment of titles, author headings, geographic names, and corporate bodies; and provisions for describing material for the blind and otherwise visually impaired. In addition, many existing rules and examples were corrected or clarified.

2.5.2.3.1 Structure of the Rules 1988 Revision

The structure of the rules is same as that of AACR 2 (1978). The code is divided into two parts:

Part 1: Description

Part 2: Headings, Uniform Titles and References

Part 1 consists of 13 chapters. Chapter 1 gives the general rules describing all materials. Chapters 2-12 give the rules in greater detail for specific types of materials and chapter 13 gives special rules for preparing analytical entries and multi-level description. These are as follows:

- Chapter 1: General rules for description
- Chapter 2: Books, pamphlets and monographs
- Chapter 3: Cartographic material
- Chapter 4: Manuscripts
- Chapter 5: Music
- Chapter 6: Sound recordings
- Chapter 7: Motion pictures and video recordings
- Chapter 8: Graphic materials
- Chapter 9: Computer files
- Chapter 10: Three-dimensional artifacts and realia
- Chapter 11: Microforms
- Chapter 12: Serials
- Chapter 13: Analysis

Part 2 consists of 6 chapters as follows :

- Chapter 21: Choice of access points
- Chapter 22: Headings of persons

Chapter 23: Geographic names

Chapter 24: Headings for corporate bodies

Chapter 25: Uniform titles

Chapter 26: References

It also provides four appendices i.e. A. Capitalization, B. Abbreviations, C. Numerals, D. Glossary, and an Index.

In both the parts, the rules proceed from the general to the specific. In part 1 the specificity relates to the physical medium of the items being catalogued, to the level of the detail required for each element of the description and to the analysis of an item containing separate parts. The code also has the provision for optional and alternative rules enabling the libraries to choose the appropriate option as per their requirements.

Comments

Though AACR 2, 1988 is a big step towards the idea of international bibliographic exchange of cataloguing data and the framers of the code have tried their best to provide detailed rules for the new emerging media, yet it has not succeeded fully to take into account the advances in library automation. This is so because the rules cannot be static. These must respond to the changing needs. This means that fast developments in the field of cataloguing due to technological advances demand that there must be continuous revision of the code to keep it responsive to the demands of the libraries.

2.5.3 Classified Catalogue Code (CCC)

2.5.3.1 Genesis and Development

The Classified Catalogue Code owes itself to the sense of revolt induced in the mind of Ranganathan while learning cataloguing (AA Code of 1908) in 1924-25 at the School of Librarianship of the University College in London. He realised some drawbacks in it and was not satisfied with the prevailing cataloguing systems. After returning to India, he classified and catalogued 70,000 books single handed and taught cataloguing from 1929-38. He also spent a considerable time on forum duty in his library and observed the cataloguing approaches of the readers. He tried his best to provide a scientific basis to cataloguing procedure. The first edition of the code appeared in 1934. It was not based on any scientific method or canons. The first application of scientific method to cataloguing and catalogue code was made in 1938. Between 1934-38, some of the rules of CCC came out for critical examination from time to time both in class room discussion and in staff meetings to consider the problem books in cataloguing. At these discussions certain normative principles of cataloguing took shape. These normative principles were called canons of cataloguing which were applied to the rules of cataloguing in the successive editions.

2.5.3.2 Successive Editions

The second edition of CCC was published in 1945. It reflected symbiosis between classification and cataloguing. The method of chain procedure was evolved to derive Class Index Entries from Class Number. It also incorporated rules for the style of writing,

alphabetization, Gestalt theory of alphabetization. The third edition appeared in 1951. It included rules for union catalogue of periodical publications and rules for an abstracting periodical. This edition also provided an English-Sanskrit Glossary of Cataloguing Terms to form the basis of cognate terminology in the several Indian languages.

The fourth edition came out in 1955. It implemented the layout for cataloguing code recommended in the book 'Heading and Canons'. It added the supplementary rules needed in the building of a national bibliography; separated the problems of the determination of the authorship of a document, the choice of heading, and its rendering, and prescribed the rules for them in independent chapters. It made some changes in the style of writing and corresponding changes in the Rules for Alphabetization. The necessary alternative rules for a Dictionary Catalogue Code were given in appropriate places in the Classified Catalogue Code itself thus eliminating the need for a separate Dictionary Catalogue Code.

Edition fifth which appeared in 1964 included the following new chapters and part:

- Chapter CD: Law of Symmetry
- Chapter DD: Physical form
- Chapter DE: Centralized Cataloguing
- Chapter KK: Homonym in class index headings
- Chapter KL: Feature heading
- Part V: Non-conventional documents

2.5.3.3 Structure of CCC

The structure of the code is well laid. The first nine parts (A to H and J) form the approach. Many important issues such as canons, normative principles, evolution of the catalogue, recording, terminology, conflict of authorship, names of persons and rendering of names are dealt with. The next eleven parts (K to N, P to V) give the substantive rules for cataloguing such as rules for different kinds of entries i.e. main, class index, book index, cross reference index and cross reference entries of books and periodicals, rules for compilation of union catalogues of books and periodicals; national bibliography; indexing periodical; abstracting periodical; and cataloguing of incunabula and non-book materials. The last part W contains the end matter i.e. glossary of terms; bibliographical references and index.

2.5.3.4 Features of CCC

The distinctive features of CCC are following:

1. The code is based on canons and normative principles evolved by Ranganathan, and perhaps is the only code in English language providing rules for constructing a classified catalogue.
2. It has provision of rules for compilation of union catalogue of books and periodical publications, national bibliographies, indexing and abstracting

periodicals.

3. The chain procedure is the unique device in CCC which is a most important contribution of Dr. Ranganathan to the art of cataloguing. This is a mechanical device to derive the subject headings from class number either for class index or for subject headings to be used for a dictionary catalogue.
4. CCC attaches much importance to the title page and its overflow pages in order to get details to be incorporated in catalogue entries.
5. The code lays stress on economy. It does not allow the use of imprint and collation in the catalogue entry which are considered to be part and facet of an entry for identification of the document. The book number contributed in accordance with colon classification of Dr. Ranganathan indicates the years of publication of the document. Additional information to the title statement of the entry in CCC is the edition of the books.
6. The code is free from the restriction of language. It takes into consideration (i) language of the library (ii) scale of language in which the language of the library comes first and the others come in the descending sequence of favouredness. This also implies the concept of 'script of the library' and of 'favoured script'.
7. It is though very much Indian in character but meant for union application.

2.5.3.5 Comments

Though CCC is only complete cataloguing code and is also consistent in many respects, yet it lacks in certain areas of rules for cataloguing. It lacks in providing complete bibliographical information which sometimes causes confusion and difficulties. No rules for cataloguing of non-book materials have been provided that are essential for cataloguing purposes of such materials.

It needs revision so as to respond to the changes that have taken place since 1964.

2.5.4 Summary

This lesson discusses the development of two important codes i.e. Anglo American Catalogue Rules (AACR) and Classified Catalogue Code (CCC). Also describes in detail the salient features of both AACR and CCC.

2.5.5 Glossary

Gesalt alphabetization	:	In Gesalt alphabetization, ordinal values are given to "word space", "sentence space" and "paragraph space". Different values are also given to "capital letters" "small letters" and "letters in italics".
ICCP	:	It stands for International Conference on Cataloguing Principles. It was held in Paris in 1961.
ISBD	:	It stands for International Standard Bibliographic Description.

2.5.6 References :

1. Anglo American Cataloguing Rules (1978) 2nd ed. London: Library Association.
2. Chan, Lois Mai (1994). Cataloguing and Classification: An introduction. 2nd ed. New York: McGraw Hill.
3. Hanson, ER and Daily, JE (1974). Catalogs and Cataloging. In Encyclopaedia of library and Information Science. Vol. 4. London: Marcel Dekker, pp. 242-305.
4. Krishan Kumar & Girja Kumar : Theory of Cataloguing. 5th rev. edition, New Delhi: Vikas,2006.
5. Ranganathan, SR (1964). Classified Catalogue Code with Additional Rules for Dictionary Catalogue Code. Bombay: Asia Publishing House.
6. Tripathi, SM and Shokeen, SN: Fundamental of Library Cataloguing : YK Pub. Agra, 1999.

2.5.7 Self Check Exercise

Note: Write the answers in the space given below each question and check your answers with the answers given at the end.

1. Define a library catalogue code.

2. Discuss briefly structure of ACCR2.

3. Describe briefly structure of CCC.

2.5.8 Answers to Self Check Exercise

1. The catalogue code means a set of rules with defined terminology designed for cataloguing purposes and rule means a single provision to carry out cataloguing. The catalogue codes and rules guide the cataloguer as to how the entries for books are to be prepared so that one and the same system

and pattern might exist for ever who so ever has done it.

2. AACR 2 consists of two parts. Part 1 covers rules for a standard description of all kinds of library material. This part is closely based on International Standard Bibliographic Description (ISBD) for general materials and those for special types of material. Part II deals with the determination and establishment of headings, or access points in the catalogue, under which the descriptive information is to be presented to catalogue users and with the making of references to those headings. This part contain rules for choice of main and added entries (Chapter 21), form of headings and uniform titles (chapters 22-25) and references (chapter 26).
3. The structure of CCC is as follows :
The first nine parts (A to H and J) form the approach. Many important issues such as canons, normative principles, evolution of the catalogue, recording, terminology, conflict of authorship, names of persons and rendering of names are dealt with. The next eleven parts (K to N, P to V) give the substantive rules for cataloguing such as rules for different kinds of entries i.e. main, class index, book index, cross reference index and cross reference entries of books and periodicals, rules for compilation of union catalogues of books and periodicals; national bibliography; indexing periodical; abstracting periodical; and cataloguing of incunabula and non-book materials. The last part W contains the end matter i.e. glossary of terms; bibliographical references and index.

CANONS AND PRINCIPLES OF CATALOGUING

Structure

- 2.6.0 Objectives
- 2.6.1 Introduction
- 2.6.2 Canons of Cataloguing
 - 2.6.2.1 Canon of Ascertainability
 - 2.6.2.1.1 Purpose
 - 2.6.2.1.2 Comments
 - 2.6.2.2 Canon of Prepotence
 - 2.6.2.2.1 Purpose
 - 2.6.2.2.2 Comments
 - 2.6.2.3 Canon of Individualization
 - 2.6.2.3.1 Homonyms
 - 2.6.2.4 Canon of Sought Heading
 - 2.6.2.4.1 Purpose
 - 2.6.2.4.2 Implication
 - 2.6.2.4.3 Subject Headings and Chain Procedure
 - 2.6.2.5 Canon of Context
 - 2.6.2.5.1 Mode of Book Production
 - 2.6.2.5.2 Context of Open Access
 - 2.6.2.5.3 Effect of National and International Bibliographies
 - 2.6.2.5.4 Change in Context
 - 2.6.2.6 Canon of Permanence
 - 2.6.2.6.1 Purpose
 - 2.6.2.6.2 Implication
 - 2.6.2.7 Canon of Currency
 - 2.6.2.7.1 Purpose
 - 2.6.2.7.2. Current among whom, a dilemma
 - 2.6.2.8 Canon of Consistence
 - 2.6.2.8.1 Implication
 - 2.6.2.9 Canon of Recall Value
 - 2.6.2.9.1 Application
 - 2.6.2.9.2 Comments
- 2.6.3 General Normative Principles
 - 2.6.3.1 Five Laws of Library Science
 - 2.6.3.2 Laws of Interpretation
 - 2.6.3.3 Law of Impartiality
 - 2.6.3.4 Law of Symmetry
 - 2.6.3.5 Law of Parsimony
 - 2.6.3.6 Principle of Local Variation
 - 2.6.3.7 Principle of Osmosis

2.6.4 Summary

2.6.5 Glossary

2.6.6 References

2.6.7 Self Check Exercise

2.6.8 Answers to Self Check Exercise

2.6.0 Objectives

The objective of this lesson is to make the learner familiar with the canons and principles of cataloguing propounded by Dr. Ranganathan.

2.6.1 Introduction

Dr. Ranganathan wanted to provide scientific basis to cataloguing. After great devotion, experimentation and observation, he succeeded in making cataloguing a science by establishing his normative principles and canons of cataloguing. For the first time these appear in his book 'Theory of Library Catalogue' published in 1938. It contained five laws of library science, six canons of cataloguing and Law of Parsimony. Over the time, these have been revised and elaborated. The 5th ed. of Classified Catalogue Code (CCC) (1964) contained eight canons of cataloguing, five basic laws and two principles. In Dec. 1969, in Slant to Documentation, the Canon of Recall Value was added. In total, there are nine canons, five laws of library science, four basic laws and two principles.

2.6.2 Canons of Cataloguing

Canons of Cataloguing means the application of specific normative principles to cataloguing. These are those guiding principles which provide the basis for drafting catalogue codes and guide the cataloguers in their day to day work of cataloguing to achieve uniformity, consistency and accuracy. These are as under:

1. Canon of Ascertainability
2. Canon of Prepotence
3. Canon of Individualization
4. Canon of Sought Heading
5. Canon of Context
6. Canon of Permanence
7. Canon of Currency
8. Canon of Consistency
9. Canon of Recall Value

2.6.2.1 Canon of Ascertainability

Ascertainability means something which is not fictitious but ascertainable. Similarly, the Canon of Ascertainability prescribes that the information found on the title page of a document and its overflow pages should determine the choice and rendering of various sections. However the following are the exceptions:

1. Extract note, extraction note and related book note of the main entry are not given in the book itself, the information is included from the cataloguer's side.
2. The leading section and directing section of cross reference entry in a classified code and subject analytical in a dictionary catalogue are not given on the title page.
3. Book index entries derived from the extract, extraction related book note, are also be based on imaginary information outside sources.
4. The heading and directing section of the class index entry is not given in the book.
5. Directing section in the cross reference index entry other than the name entry is not given on the title page.

2.6.2.1.1 Purpose of Canon of Ascertainability

Its purpose is to achieve consistency and conformity in the heading. The cataloguer need not to search out the information from the outside sources. To achieve this objective, an international standard for the title page and its overflow pages should be adopted.

2.6.2.1.2 Comments on Canon of Ascertainability

It is essential to know how this canon is satisfied by AACR II and CCC and how it is disregarded by both the codes.

AACR II respects this canon to a good extent vide rule no.21.OB. It states that the title page is the chief source of information for a printed book.

Rule 21.6.B1 indicates to enter a work of shared authorship under the person or corporate body, if any to whom principle responsibility is attributed by wording or the layout of the chief source of information.

Thus AACR II accepts the directions of the canon to a great extent. But it violates the canon also. In many places, it prescribes the use of information appearing in the text of a book or appearing outside the book when the statements appearing in the chief source of information are ambiguous or insufficient.

CCC fully regards this canon. Chapter MA 1 prescribes title as the source for the preparation of main entry. At one or two places, there is purposeful violation of this canon e.g. Rule MD 4 states, if the title page gives only a pseudonym in the place of the author's name the pseudonym is to be used as heading and if the real name is not given on title page but is to be found from outside the sources, it is to be added in the square brackets. Then it is violated vide rule no. JG 3 which states if the name of a series does not occur anywhere in the book but occurs in some other book of the series, it is to be taken from that book.

2.6.2.2 Canon of Prepotence

Canon of Prepotence is for the arrangement of entries in a catalogue. It states that potency to decide the position of an entry among the various entries in a catalogue, if

possible be concentrated totally in the leading section. Within the leading section, as far as possible it should be concentrated in the entry element. If total concentration in the leading section is not possible, then minimum possible potency should be allowed to overflow beyond it to later sections, and even this spillover should be distributed in the later sections in a decreasing sequence of intensity.

2.6.2.2.1 Purpose

The success of library catalogue depends on the arrangement of entries and any mistake in the order of arrangement will make the catalogue ineffective. The objective of this canon is to guide the cataloguer in the arrangement of entries.

2.6.2.2.2 Comments: How the main entry of CCC and AACR II is following the canon of Potency?

The Canon of Prepotence has its full say in the call number entry of the classified catalogue. In it, the leading section is occupied by a call number. The filer need not look beyond the leading section. But in case of AACR, the potency of arrangement with regard to main entry outflows to title section. Because the same author might have written more than one document, therefore the filer will have to look beyond to first section to file the cards in the catalogue. Same is true of other entries in the dictionary catalogue.

2.6.2.3 Canon of Individualization

The canon states that the name of an entity-be it of a person, geographical entity, a corporate body, a series, a subject used as a heading of a catalogue entry should be made to denote one and only one entity, by adding to it the necessary and sufficient number of individualizing elements.

2.6.2.3.1 Homonyms

If the name of an entity used as heading is not individualized, this will cause homonyms. This will in turn mislead readers as well as librarians. Both the codes CCC and AACR II have prescribed the additions of individualizing elements to avoid this problem.

How the homonym has been resolved in CCC and AACR II

CCC prescribes the year of birth as an individualizing element after the name of a person vide Rule JA5 e.g. RANGANATHAN (SR) (1892-1972).

Rule JB31 prescribes the name of country as an individualizing element after the name of a geographical entity having the same name but belonging to different countries e.g.

PUNJAB (India)

PUNJAB (Pakistan)

Similarly individualizing elements have been prescribed for names of a corporate body.

Rule JC4 states that the name of the head of a government is to be provided with the name of the occupant of that office as an individualizing element.

e.g. INDIA, PRESIDENT (Rajendra Prasad).

Rule No. JE2 states that the place of a conference and its year are to be added as individualizing elements to the name of conference.

e.g. CATALOGUING (International Conference on - principles) (Paris) (1961)

In AACR II also the individualizing elements have been prescribed to resolve homonym.

In order to resolve homonym in the personal names, Rule No. 22.18 prescribes to add the date of birth and death of a person. e.g. Ranganathan, S.R., 1892-1972.

Rule 24.4 prescribes the following order of preference to distinguish bodies with the same name. Rule 24.4 C states to add the name of the place in which the body is located if the same name has been used by another body in a different location e.g.

Panjab University, India;

Panjab University, Pakistan.

Rule 24.4C2 states to add the name of the country, state, province etc. in parentheses instead of the local place name if the name has been used by different bodies that have a character that is national, state, provincial etc.

e.g. Labour Party (Gt. Brit.)

Labour Party (New Zealand)

2.6.2.4 Canon of Sought Heading

This canon prescribes that the decision regarding the choice and rendering of the heading for main and added entries should be based on the fact whether a reader or library staff is likely to look for a document under it or not.

2.6.2.4.1 Purpose

This canon takes into consideration the sought approaches of the users. It avoids unnecessary overloading of the catalogue by eliminating the entries which are not going to be sought.

2.6.2.4.2 Implication

The decision whether any of the users may or may not make an approach for a particular heading will be based on the judgement of the cataloguer. The judgement should be based on the experience of seeing the reader on reference counter. It is further based on the obligation of the reference section to give a reader alternative to a document when the one actually sought is not in the library. The alternative may be essentially the same as the one sought. This approach can be satisfied by providing notes on the main entry such as 'Extract' from or 'A portion printed as' e.g. Dr. Ranganathan published a book 'Five Laws of Library Science'. After a few years, he published 'Union Library Act' which is infact the chapter of Five Laws of Library Science. A reader coming to library may demand Union Library Act but the library does not have it. It has only Five Laws of Library Science. The reader's need can be satisfied by Five Laws of Library Science.

2.6.2.4.3 Subject Headings and Chain Procedure

With the implication of this canon, rules of chain procedure were revised. Now

only sought headings are chosen for the provision of class index entries. This has led to the reduction in the number of entries.

2.6.2.5 Canon of Context

The canon prescribes that the rules of a catalogue should be formulated in the context of :

- I. The prevalent nature of the cataloguing features of the book in relation to mode of book production.
- II. The nature of the organization of libraries prevalent in regard to the mode and quality of library services and
- III. The coming into existence of published bibliographies particularly bibliographical periodicals

The rules should be amended from time to time to keep pace with changes in the context.

2.6.2.5.1 Mode of Book Production

In earlier days when manuscripts were loosely assembled sheets, a detailed description regarding collation and peculiarities of individual leaves was essential but with the invention of printing and increase in the annual output of the printed books full cataloguing became very costly. It was realized that there was no need to give full details regarding physical aspects in the catalogue of a service library.

2.6.2.5.2 Context of Open Access

A change has occurred in the context by the introduction of open access system. Now the barrier between the reader and the book collection has been removed. In an open access library, many of the details including annotations can be left out.

2.6.2.5.3 Effect of National and International Bibliographies

Subject analyticals should not be provided for documents which have been analyzed in national and international bibliographies.

2.6.2.5.4 Change in context

The world of books is not static. The context is ever changing. The nature of books, readers, and libraries also keeps changing. The canon of context demands that cataloguing practices should also be changed to keep pace with changes. It means that the rules in the catalogue code should also be revised keeping in view the above changes. Due to application of information technologies in the libraries and demand for uniform cataloguing practices ISBDs have been brought out by IFLA. These have been designed mainly to facilitate conversion of records to machine readable form and to serve as a means for communication of bibliographical information. In order to keep pace with the developments and change in context, AACR I has been revised to incorporate the provisions of these standards.

2.6.2.6 Canon of Permanence

The principle prescribes that no element in an entry, the heading in particular should be subjected to change by the rules of a catalogue code, except when the rules

themselves are changed in response to the canon of context. Canon of recall value is the outcome of canon of context and according to this we can change heading. It is not violation of canon of permanence.

2.6.2.6.1 Purpose

The purpose of canon of permanence is to achieve stability and uniformity in the headings.

2.6.2.6.2 Implication

The application of the canon leads to more or less permanence of the heading as well as other sections of an entry. If there is any change in the name of a person or corporate body then according to the directions of CCC, the heading of existing entries of the concerned document is not changed but cross reference index entry is prepared to satisfy the approach of the user for the new name.

2.6.2.7 Canon of Currency

The principle states that the term used to denote a subject in a class index entry of a classified catalogue and in a subject entry of a dictionary catalogue should be the one in current usage.

2.6.2.7.1 Purpose

The purpose of this canon is to serve every reader with a subject under the heading best known by the majority of the users. Terms used to denote a subject keep on changing with time. It is essential that terms in current usage should be used because users are likely to be more familiar with the current terms.

2.6.2.7.2. Current among whom, a dilemma.

When a current term is used to denote a subject then the question arises: current among whom? Should the term be current among specialists or non-specialists? In a special library, technical terminology should be preferred. But in other libraries, common name may be preferred to special terminology e.g. the term 'Child Medicine' is to be preferred to 'Pediatrics', because a specialist knows the common name as well as the technical name of a subject. The non-specialist reader knows only the common name. Therefore, to serve every reader without exception i.e. to satisfy Second Law of Library Science, common name should be preferred to special terminology in subject heading.

2.6.2.8 Canon of Consistence

The canon says that :

1. The rules of a catalogue should provide for all the added entries of a document to be consistent with its main entry, and
2. The entries of all documents should be consistent with one another in certain essentials such as choice, rendering and style of writing the heading and other sections

2.6.2.8.1 Implication

This canon implies that the main entry of documents should be of the same

species. For the heading of one and same entry, mixed species of main heading and sub-heading such as author heading and subject sub-heading should not be prescribed e.g. in a dictionary catalogue, the main entry should be an author entry in all cases. It should not be a subject entry.

In CCC, this canon has been followed, but in AACR I, there are several violations to this canon. Under Rules 20-25 of AACR I, the use of subject headings as sub-headings for main entries has been prescribed for corporate authorship of government publications and accordingly the headings will be

India. Constitution

India. Laws, Statutes etc.

In AACR 2 mixed species of main heading and sub-heading have been avoided.

2.6.2.9 Canon of Recall Value

Canon of recall value was propounded by Dr. Ranganathan in 1969. This canon states that in the multi-worded name of a person, a government, an institution, a conference, an organ of government, or institution, or conference and in the multi-worded title of a document, the entry element is to consist of the word or the word group with the highest recall value.

The term 'Recall Value' refers to the quality of being called back to memory. The canon directs that the entry element to be chosen should be the one having highest probability of being called back to memory by a majority of the readers.

2.6.2.9.1 Application of Canon of Recall Value

Name of Persons

A name of person is usually multi-worded. In case of multi-worded name of an author of western countries, the surname is of the highest recall value. e.g. TWAIN (Mark). In South India, on the other hand, the given name has the highest recall value e.g. RANGANATHAN (SR).

Rendering of Government

If a government of a country as a whole is the author of any document, the name of its territory is used for the heading of the main entry, for the name of the country has the highest recall value. e.g. Government of India is rendered as 'India'

Organ of Government

The name of an organ of a government is usually multi-worded. One of the groups of words denotes the subject or sphere of work of the organ. The other words may be descriptive or restrictive e.g. in the name 'Ministry of Education' 'Education' is the potent word which is to be taken as entry element.

Name of Institution

In rendering the name of institution, the potent word or word group which is going to be remembered by the majority of the readers is to be taken as the entry element e.g.

LIBRARY (Indian - Association)
STANDARDS (British - Institution)

Name of Conference

In the name of a conference, the entry element is to consist of the word or word group denoting the subject, a class of persons deliberating in the conference, or any other specialty e.g.

ECONOMICS (International - Conference) (Paris) (1952)

LIBRARY (All India - Conference) (Varanasi) (1938)

Title Heading

The canon of recall value is applicable to titles of anonymous works, fanciful titles as well as to periodicals. In case of fanciful titles, CCC prescribes added entry for the title in accordance with rule MK 1 (22).

2.6.2.9.2 Comments

The canon of recall value is an extremely important one. This canon has been regarded as the master canon which Dr. Ranganathan has evolved to settle down the problems of cataloguing created by the multiple proliferation in the number of learned bodies with their peculiar nomenclature. In evolving this canon Dr. Ranganathan has envisaged a new angle of approach to the cataloguing system which is likely to lead to a marked deviation from the established traditions.

2.6.3 General Normative Principles

The general normative principles as propounded by Dr. Ranganathan are:

Five Laws of Library Science

Laws of Interpretation

Law of Impartiality

Law of symmetry

Law of Parsimony

Principle of Local Variation

Principle of Osmosis

2.6.3.1 Five Laws of Library Science

Five Laws are fundamental laws of library science. The canons of cataloguing are the implications of the five laws. These canons are specific to the field of cataloguing. In case of a conflict between the canons, an appeal is made to the five laws of library science to resolve the conflict. These five laws serve as a higher court.

2.6.3.2 Laws of Interpretation

Due to diversities in nature of publication of documents and various entry elements, there may arise some conflict in presenting entries. Sometimes there may arise conflict between one rule and another. Such conflicts and differences can be resolved with the help of the laws of interpretation. A catalogue code is like a legal document. Therefore its rules should be interpreted to settle the disputes. Dr.

Ranganathan refers to 1008 principles of interpretation listed in the Nyaya-kosa. Any conflict arising between the law of parsimony, laws of library science and canons of cataloguing should be settled with the aid of laws of interpretation.

2.6.3.3 Law of Impartiality

The law of impartiality states that if there are two or more claimants for use as heading, the preference should be made only on sufficient grounds, and not arbitrarily e.g.- in case of joint authorship, the law recommends equal right to the names of all the authors for choice as heading. Similarly in case of multiple series, the law recommends that every series should have a note as well as choice of heading for a book index entry of its own.

2.6.3.4 Law of Symmetry

The Law of Symmetry prescribes that if two entities or situations being considered symmetrical counterparts of one another then both the entities should be given corresponding weights e.g. in case of joint authorship, in the heading of the main entry, the names of the two authors are written in the sequence they occur on the title page. The same sequence is observed while preparing the book index entry. But the law of symmetry demands that another book index entry should be prepared using the names of two authors in the reverse sequence.

2.6.3.5 Law of Parsimony

The law directs that between two or more possible alternative rules bearing on a particular phenomenon, the one leading to overall economy of man-power, material, money, and time considered together with proper weightage is to be preferred.

The application of canon of sought heading to chain procedure, cross reference index entries and book index entries reduces the number of entries; thus leading to the satisfaction of law.

2.6.3.6 Principle of Local Variation

This canon stresses that the international catalogue code should clearly indicate the factors which each national catalogue code should tackle. Likewise, a national catalogue code should mark out those factors which concern much with each linguistic catalogue code in multilingual country like ours and the national catalogue code or linguistic catalogue code should leave those factors to the local catalogue code of each individual library which only concern with local libraries. But consistency should always be there in the hierarchical line with one another without any mutual contradiction and each lower link should be a supplement to the upper links in the hierarchical line. The principle recognizes four categories of codes - international catalogue code, national catalogue code, linguistic catalogue code, and local catalogue code.

2.6.3.7 Principle of Osmosis

The principle states that owing to the canon of context, when a change in the catalogue code or in the scheme of classification becomes essential - then from particular date, all the new accessions be classified and catalogued according to the new scheme

of classification and the new catalogue code. Books of old collection which are in much demand be re-classified and re-catalogued and these books should be kept separately in new collection and their catalogue should also be kept separately. The rest of old books should be stocked separately as old collection along with their old catalogue. Reader's attention be invited by the Reference Librarian to the existence of the two collections; and if any book is taken out from the old collection, on its return, it be re-classified and re-catalogued and transformed to the new collection.

Owing to the principle of osmosis, reclassification and re-cataloguing of the entire collection is not recommended because of its enormous cost.

2.6.4 Summary

Dr. Ranganathan provided scientific basis to cataloguing by establishing his normative principles and canons of cataloguing. In total there are nine canons, five laws of library science, four basic laws and two principles. These guide the cataloguers in their day to day work of cataloguing to achieve uniformity, consistency and accuracy.

2.6.5 Glossary

Homonym	:	An identical name (surname and forename) for two or more people.
Osmosis, principle of	:	The cataloguing/classification by a code/scheme of all literature received after a given date, and the re-cataloguing and re-classification of the older literature in stock, as and when able to do so.
Parsimony, law of	:	It indicates that between two alternative rules, one leading to overall economy should be preferred.

2.6.6 References

1. Girja Kumar and Krishan Kumar : Theory of cataloguing. 5th rev. ed. New Delhi: Vikas. 2006.
2. Ranganathan, S.R. (1964). Classified catalogue code with additional rules for a dictionary catalogue code. 5th ed. Bombay: Asia Publishing House.
3. Ranganathan, S.R. (1969). Recall value and entry word in heading. Library Science with a Slant to Documentation. 6.
4. Hunter, Eric J & Bakerwell, KGB : Cataloguing. 3rd ed. London Library Association, 1991.

2.6.7 Self Check Exercise

Note: Write the answers in the space given below each question and check your answers with the answers given at the end.

1. Name the Canons of Cataloguing.

2. Describe briefly Canon of Ascertainability.

3. Discuss Principle of Osmosis in ten lines

4. Discuss briefly implications of Canon of Recall Value.

2.6.8 Answers to Self Check Exercise

1. The canons of cataloguing are:
 1. Canon of Ascertainability
 2. Canon of Prepotence
 3. Canon of Individualization
 4. Canon of Sought Heading
 5. Canon of Context
 6. Canon of Permanence
 7. Canon of Currency
 8. Canon of Consistency
 9. Canon of Recall Value
2. The Canon of Ascertainability prescribes that the information found on the title page of a document and its overflow pages should determine the choice and rendering of various sections. However the following are the exceptions:
 1. Extract note, extraction note and related book note of the main entry are not given in the book itself, the information is included from the cataloguer's side.
 2. The leading section and directing section of cross reference entry in a

classified code and subject analytical in a dictionary catalogue are not given on the title page.

3. Book index entries derived from the extract, extraction related book note, are also be based on imaginary information outside sources.
4. The heading and directing section of the class index entry is not given in the book.
5. Directing section in the cross reference index entry other than the name entry is not given on the title page.

Its purpose is to achieve consistency and conformity in the headings. The cataloguer need not to search out the information from the outside sources. To achieve this objective, an international standard for the title page and its overflow pages should be adopted.

3. The principle states that owing to the canon of context, when a change in the catalogue code or in the scheme of classification becomes essential - then from particular date, all the new accessions be classified and catalogued according to the new scheme of classification and the new catalogue code. Books of old collection which are in much demand be re-classified and re-catalogued and these books should be kept separately in new collection and their catalogue should also be kept separately. The rest of old books should be stocked separately as old collection along with their old catalogue. Reader's attention be invited by the Reference Librarian to the existence of the two collections; and if any book is taken out from the old collection, on its return, it be reclassified and re-catalogued and transformed to the new collection.

Owing to the principle of osmosis, re-classification and re-cataloguing of the entire collection is not recommended because of its enormous cost.

4. Canon of recall value was propounded by Dr. Ranganathan in 1969. This canon states that in the multi-worded name of a person, a government, an institution, a conference, an organ of government, or institution, or conference and in the multi-worded title of a document, the entry element is to consist of the word or the word group with the highest recall value.

Name of persons e.g. Mark Twain is rendered as TWAIN (Mark).

Name of government e.g. Government of India is rendered as 'India'.

Organ of government e.g. Ministry of Education is rendered as EDUCATION (Ministry of -).

Name of Institution e.g. Indian Library Association is rendered as LIBRARY (Indian-Association).

Name of Conference e.g. All India Library Conference, Varanasi, 1938 is rendered as LIBRARY (All India-Conference) (Varanasi) (1938).

BACHELOR OF LIBRARY & INFORMATION SCIENCE

Paper - DELB1102T

Knowledge Organisation & Information Processing

LESSON NO. 2.7

AUTHOR: DR. AMRITPAL KAUR

SUBJECT CATALOGUING AND INDEXING

Structure

91

- 2.7.0 Objectives
- 2.7.1 Introduction
- 2.7.2 Subject Cataloguing
 - 2.7.2.1 Definitions of Subject Cataloguing
 - 2.7.2.2 Evolution of Subject Cataloguing
 - 2.7.2.3 Aims and Objectives of Subject Cataloguing
- 2.7.3 Principles of Subject Cataloguing
- 2.7.4 Subject Heading Lists
- 2.7.5 Sears List of Subject Headings
 - 2.7.5.1 Introduction
 - 2.7.5.2 Structure
 - 2.7.5.3 Selection and Assignment of Subject Headings
 - 2.7.5.4 Formation of Subject Headings
 - 2.7.5.5 Entry Format
 - 2.7.5.6 Cross References
 - 2.7.5.7 Comments on Sears List
- 2.7.6 Library of Congress List of Subject Headings
 - 2.7.6.1 Background
 - 2.7.6.2 Format of Headings
 - 2.7.6.3 Formation of Subject Headings
 - 2.7.6.4 Cross References
 - 2.7.6.5 Subject Headings for Special Types of Materials
 - 2.7.6.6 Comments on LC List of Subject Headings
- 2.7.7 Summary
- 2.7.8 Glossary
- 2.7.9 References
- 2.7.10 Self Check Exercise
- 2.7.11 Answers to Self Check Exercise

2.7.0 Objectives

This lesson will make the learner familiar with the following:

- The concept of subject cataloguing
- Principles of subject cataloguing
- Main features of Sears List of Subject Headings
- Main features of Library of Congress List of Subject Headings

2.7.1 Introduction

The most interesting and perhaps the most intelligent part of the cataloguing is subject cataloguing. The cataloguer brings out the various subjects treated in the books in such a manner that no significant part of it remains unnoticed by the users of the catalogue.

2.7.2 Subject Cataloguing

2.7.2.1 Definitions of Subject Catalogue

Encyclopaedia of Librarianship defines subject catalogue as:

"A catalogue consisting of subject entries only" and further states "A loose term designating any catalogue arranged by subject whether alphabetical or classified."

Mini Earl Sears defines it as "the subject catalogue tries to list under one form of heading all the books on a given subject that the library possesses."

ALA Glossary of Library Terms defines it as:

"That phase of the process of cataloguing which concerns itself with the subject matter of books, hence includes classification and determination of subject heading."

2.7.2.2 Evolution of Subject Cataloguing

From various studies in subject cataloguing i.e. of Norris, Julia Pettee, Hopkins, Frarey, etc., it appears that alphabetical subject cataloguing is of very recent origin probably beginning from the middle of the 19th century. In the early catalogues, entries were prepared under the significant nouns in the document known in cataloguing terminology as catch word entries. These catchword entries have contributed to the development of subject catalogue e.g. 'Guide of Insects' was entered as 'Insects, Guide of'.

Since World War II, due to growth of scientific and technical literature, the need for subject cataloguing has been gaining momentum and the catalogue has been made to perform a very complex function to display before the readers all the documents on a subject and all its collateral subdivisions.

2.7.2.3 Aims and Objectives of Subject Cataloguing

The basic purpose of subject cataloguing is to provide a direct and prompt approach to finding a document or group of documents on a given subject. Cutter was the first to recognize the need of subject catalogue. He included 18 rules in his Rules for Dictionary Catalogue for the preparation of subject catalogue (Rules from 161 to 188). In his definition of catalogue also, he has emphasized the subject catalogue in the following words :

1. To enable a person to find a book of which
(c) subject is known
2. To show what the library has
(c) on a given subject.

S.R. Ranganathan was also a staunch supporter of subject cataloguing. According to him, the purpose of subject cataloguing should be to disclose to a reader if he knows his specific subject:

1. Books exclusively devoted to his specific subject
2. Books of greater extension but having substantial portion devoted to it.
3. Books of smaller extension but dealing with some parts or aspects of it.
4. Books of collateral subject which contains some information though indirectly on his specific subject.

Vatican's rules narrate the purpose of subject catalogue in rule no.370 in the following words:

'The subject catalogue is intended to be a tool that permits the direct and rapid finding of any publication or group of publications by means of the subject treated.'

According to Shera and Egan, subject catalogue points out "...what material the library contains upon a given subject and where they may be found."

Summarizing, the purpose of subject catalogue is to enable the users to find the greatest amount of materials on a subject in least amount of time. Besides finding his document, it is a device which enables an enquirer to find out which document in a collection or list contains information on a particular required subject.

2.7.3 Principles of Subject Cataloguing:

The rules for subject cataloguing in a dictionary catalogue were given by Charles Ammi Cutter in his Rules for a Dictionary Catalogue. These rules formed the basis of subject headings in American libraries for years to come and are a strong force even today. Cutter stated two objectives of subject cataloguing:

- a. To enable a person to find a book of which the subject is known, and
- b. To show what the library has on a given subject

The first objective emphasizes the need to locate individual items and the second, the need to collocate materials on the same subject. It was on the basis of these needs that Cutter set forth his basic principles of subject entry. They are important because impact of his principles on subject headings construction and maintenance is still visible today. The general principles that guide the indexers in the choice and rendering of subject headings are described below:

Uniform Headings

The principle of uniform headings must be adopted to show what collection is there on a given subject i.e. it must bring under one heading all the materials dealing exclusively with that particular subject. If there are several synonyms, then one uniform term must be selected out of these and it must be applied consistently for the same topic e.g. China, Chinawork, and Porcelain are all entered under Porcelain. Heading chosen must be unambiguous. If several meanings are attached to one word that word must be qualified e.g. Masks (Facial); Masks (Plays); Masks (Sculpture). When variant spellings are in use, one must be selected and uniformly applied. Rhyme, not Rime.

Specific and Direct Entry

The principle states that an item should be entered under the most specific term i.e. subject heading, which accurately and precisely represents its contents. If the

document is on bridges then it must be under 'Bridges' and not under the large topic 'Engineering' or even the most restricted field 'Civil Engineering'.

Common Usage

The principle requires that the word or words used to express a subject must represent common usage. In American libraries this means current American spelling and terminology : labor not labour; color not colour. In British libraries, these words would be reversed. In India, we adopt British spellings.

A general rule is to use a popular or common, rather than a scientific or technical name when there is a choice. Subject headings are chosen to fit the need of the people who are likely to use the catalogue. A reader in a small public library will look under birds, not ornithology. In a scientific library ornithology might be more appropriate. After deciding on the common name as the entry word, the cataloguer should make a reference from the scientific name to the form used.

Consistent and Current Terminology:

This principle states that the terminology in headings should be both consistent and current. Some terms become obsolete with the passage of time and these must be replaced by the new terms e.g. when computers first appeared, the Library of Congress Subject heading chosen for them was 'Electronic Calculating Machines'; this was later changed to computers. However updating obsolete vocabulary in catalogue entries poses a problem in workload because of the large number of items listed under existing subject headings. But in online catalogues and databases where the bibliographic and authority files are linked, updation is easier; once a heading is changed, every record that was linked to the old heading can be linked to the new.

Form Headings

Sometimes entry will be required under form instead of subject. Cutter also recommended form entry for single literary work as well as collections, for encyclopaedias, indexes and periodicals.

It is important to remember that a form heading can also be a subject heading; there will be works on English drama as well as works of English drama, books about encyclopaedias as well as encyclopaedias. A number of devices given below can be used for distinguishing between subject and form headings,

- 1) Using singular (e.g. Encyclopaedia) for the subject and plural (encyclopaedias) for the form;
- 2) Adding the form subheading "collection" for works of literary form e.g. ENGLISH DRAMA - Collections.
- 3) Distinguishing form by the addition of a place subheading e.g. PERIODICALS AND NEWSPAPERS - United States

References

References are an essential part of an alphabetical subject catalogue if it is to fulfil Cutter's objective 2 and reveal everything which the library has on a subject.

Three types of cross references are used in the subject headings structure:

1. See (or USE) references
2. See also (including BT, NT, and RT) references
3. General references

1. See (or USE) references

These references guide users from terms that are not used as headings to the authorized headings. See or USE references ensure that users who happen to consult the catalogue under different names for a given subject are able to locate material on it.

2. See also (including BT, NT, and RT) references

These references connect headings that are related either hierarchically or otherwise. By connecting related headings, the see also (RT for related term) reference calls the user's attention to material related to his or her interests. By linking hierarchically related headings, see also (BT, for broader term, and NT, for narrower term) references guide the user to specific branches or aspects of a subject. By linking headings related non-hierarchically, see also references provide users with additional access points for the subject being sought.

3. General references

General references direct the user to a group or category of headings. It is sometimes called a 'blanket reference' e.g. at flowers, rather than a specific see also reference to Day lilies, Poppies, Roses, etc., there is a general reference 'see also type of flowers'. The provision of general references obviate the need to make long lists of specific references and hence leads to economy of space.

2.7.4 Subject Heading Lists

Subject heading lists are lists of index terms, normally arranged in alphabetical order, which can be used to determine the terms to be used in an index, catalogue or database for describing subjects. Such a list seeks to negotiate the problems of the alphabetical subject approach.

The basic functions of a subject heading list are as given below:

- 1) It records terms which shall be used in a catalogue, index or database and indicates the form in which they shall be shown, and thus acts as an authority list for index terms and their form.
- 2) It makes recommendations about the use of references for the display of relationships in a catalogue, index or database, in order to guide users between connected or associated terms.

Thus a subject heading list is primarily a guide to the indexer or cataloguer in the creation of index records.

Subject heading lists are normally generated for a particular purpose. There are some published lists of subject headings which are plainly intended for a special purpose. Amongst these are: School Library Association's List of Subject Headings, Medical Subject Headings from the National Library of Medicine (US), and Subject Headings for

Engineering used in Engineering Index. Nevertheless, the traditional subject heading lists: Sears List of Subject Headings and Library of Congress List of Subject Headings have formed the basis of indexing practice, theory and discussion in respect of alphabetical subject catalogues.

2.7.5 Sears List of Subject Headings

2.7.5.1 Introduction

Sears List of Subject Headings was first written by Minnie Earl Sears and published in 1923. It was designed as a list of subject headings for use in the dictionary catalogues of small and medium-sized libraries and is still widely used in and outside USA by small and medium sized libraries. Its overall structure and principles are similar to those of the Library of Congress List of Subject Headings, except in respect of the differences that arise from Sears being designed for smaller libraries. On the basis of experience and practices of several libraries, it has been revised from time to time. Presently, it is in the 18th edition (2004).

2.7.5.2 Structure

The list follows traditional method of black face type in depicting the subject headings. The subject headings are provided with DC class numbers. This way, the list provides help in classification in those libraries where DC practice is followed.

2.7.5.3 Selection and Assignment of Subject Headings:

The following principles are employed in the selection and assignment of subject headings:

Specific Entry

The list recommends to enter a book under its specific subject. If a work is about Penguins, it should be entered under Penguins and not under Birds or even under Water Birds.

However in practice, the list very often provides broader headings so as to meet the requirements of smaller libraries, thus sacrificing the principle of specific entry. But at the same time instructions are added to add the specific heading with a broader heading in singular form as and when required e.g. in assigning subject headings to a work discussing elm and ash trees, the cataloguer would find neither Elm nor Ash listed. However, under the broader subject Trees; the following directions are given "types of trees are to be added as needed in singular form".

Common Usage

Headings are selected for inclusion in Sears list on the basis of common usage. Thus popular or common names of subjects are included in preference to technical or specialist jargon. However, the headings often correspond to current American usage in both use of terms and spellings and for the non-American user, these often need amendment to make them consistent with local usage.

Uniformity and Consistency

Uniformity and consistency in application of subject headings is important. An

attempt is made to offer one heading for each concept and the indexer should try to adhere to this consistently.

2.7.5.4 Formation of Subject Headings

Subject headings are constructed in Sears list in a variety of ways ranging from single noun heading to complex and compound subjects. Various forms of headings which have been used in the list are described below:

Single Noun Headings : The simplest form of subject headings consists of a single noun and is the ideal type when the language supplies it. Most of the large fields of knowledge can be expressed by single term e.g. Agriculture, Education, Science, Religion, etc. Abstract ideas are usually stated in singular e.g. Credit, whereas concrete objects and things are rendered in plural e.g. Theatres. Sometimes both singular and plural forms of headings are used but they carry different meanings e.g. Short Story (the technique); Short Stories (the works).

Compound Headings : Compound Headings consist of two nouns connected by the word 'and'. They are mainly used for the following purposes:

- I. To connect topics or concepts which are usually treated together in books e.g. Boats and Boating; Cities and Towns.
- II. To connect opposite subjects that are usually treated together in books e.g. Good and Evil; Joy and Sorrow.
- III. To express a relationship between two concepts e.g. Religion and Science; Television and Children.

Adjectival Headings: Adjectival Headings are used when a subject or concept cannot be properly expressed by a single noun. The most common type of adjectival heading consists of a noun or noun phrase with one or more adjectival modifiers e.g. English Language, American Literature, Indian Art, etc. In many cases the heading is inverted in order to bring the noun forward as the entry element e.g.

Art, American

Art, Indian

Phrase Headings: Some concepts which involve two areas of knowledge can be expressed only by more or less complex phrases e.g.

Information storage and retrieval system

Freedom of expression

Use of Subdivisions

In the Sears list, many general subjects are subdivided to indicate their specific aspects or to provide a sub-arrangement for a large number of works on the same subject. There are several types of subdivisions: subject or topical, form, period or chronological and place.

Subject or Topical Subdivisions

A subject or topical subdivision added to a main heading brings out a specific aspect of the general subject.

Examples of topical subdivisions are:

- English language - Dialects
- Education - Curricula

Form Subdivisions

Examples of form subdivisions are:

- Chemistry - Dictionaries
- Medicine - Study and teaching
- Science - Philosophy
- Television - Censorship

Period or Chronological Subdivisions

Examples of period or Chronological subdivisions are:

- United States - History - 1600 - 1775, Colonial Period
- United States - History - 1775 - 1783, Revolution
- United States - History - 1861 - 1865, Civil War

Geographic Subdivisions

Examples of geographic subdivisions are:

- Airports - Hawaii
- Defence Industry - India
- Games - India

Subject Headings for Special Types of Materials

Detailed rules have been provided for biography, language and literature.

Examples:

- Ranganathan, S.R., 1892 - 1972 - Biography
- Librarians - Biography
- English Language - Pronunciation
- English Language - Collection
- English Literature - History and Criticism

2.7.5.5 Entry Format

From the 17th edition, the Sears list has adopted the thesaurus format to help the cataloguers to distinguish relationships among terms and for establishing appropriate references in the catalogue. Every term in the list that may be used as a subject heading is printed in boldface type whether it is a main term; a term in USE reference, a broader, narrower or related term or an example in a scope note or general reference. If a term is not printed in a boldface type, it is not used as a heading. The main term is provided with D.D.C. class number. The general format of an entry in Sears list is as follows :

Subject heading in bold face
with DDC class number

Trees (May subdiv. geog.) 582.16;635.9

Scope note

Names of nuts and tree fruits may be used
for either the nut or fruit or the tree

Bachelor of Library & Information Science	101	Paper-DELB1102T
Use references	UF	Arboriculture Timber
General references		SA types of tress e.g. Oak [to be added as needed], in the singular form
Broader Topic	BT	Plants
Narrower Topic	NT	Christmas trees Dwarf trees Evergreens Oak Wood
Related Topic	RT	Forest and forestry Landscape gardening Tree planting

Note: UF - See References, SA - See Also, BT - Broader Topic, NT - Narrower Topic, RT - Related Topic

2.7.5.6 Cross References

From the 17th edition in 1994 'see' and 'see also' references and the complementary 'x' and 'xx' were replaced by the thesaurus symbols UF, BT, NT, RT and SA. Three types of cross references are used in Sears list. They are:

Specific 'see' References

The symbol 'UF' stands for 'Used for' and it symbolises those preferred terms from which see references are to be prepared.

The following are some types of preferred terms that might be used as see references in a catalogue

Synonyms or near synonyms e.g. Timber see Trees

Inverted form of a heading to normal order e.g. Art, India see Indian Art.

Variant spellings e.g. Colour see Color

Compound headings e.g. Science and the Bible see Bible and Science

Opposite of a term e.g. Inequality see Equality.

Older Term (which has currency) to new term e.g. Negroes see Blacks

Specific See also References

See also references direct the user from one established heading to another established heading. BT symbol stands for Broader term from which see also references are prepared.

e.g. Plants
see also Trees

See also references are also prepared from narrower terms represented by NT

e.g. Christmas Trees Wood
see also see also
Trees Trees

See also references are also prepared from related terms represented by RT e.g.

Forest and forestry

See also

Trees

General References

Under many headings in Sears list, following the SA [see also] label, there is a general reference to general group or category of things that may be established as heading as needed e.g. in the example of trees the symbol 'SA' introduces the general reference to 'types of trees to be added as needed'.

2.7.5.7 Comments on Sears List

Sears list has been criticised on the following counts.

1. Headings tend to be broad and cannot represent complex or specific subjects accurately.
2. References are not always constituted systematically. At places, where references seem to be appropriate have not been recommended and at some other places too many references have been recommended which make the search tedious.
3. Sometimes the list equates non-synonymous subjects
e.g. Religious history
Use Church history

An Indian librarian would find choice of church history as a heading to be wrong one. Because it may have hardly any book dealing with church history and it may have many books on religious history.

4. The list is biased to America. Subject headings of importance and special interest to American libraries have been provided in great detail. Moreover, the terminology used is also American

2.7.6 Library of Congress List of Subject Headings (LCSH)

2.7.6.1 Background

Library of Congress List of Subject Headings which is now running in its 20th ed. (1997) was first published in 1914 by Library of Congress (LC) under the title: Subject Headings used in Dictionary Catalogue of the Library of Congress. Since then, it has become the standard list used by most large general libraries, special libraries and some smaller libraries in the United States and abroad. It is now available in three formats: print, machine readable and microfiche. The machine readable version is also available in CD-Rom, called CDMARC subjects. The list is revised weekly and the CD-Rom versions quarterly.

2.7.6.2 Format of Headings

In the List, authorised headings appear in boldface e.g. Books, Book Binding, Reference books, etc. Each valid heading is followed by scope notes, cross references, and the subdivisions, if any.

Entries printed in light face roman type are not to be used as subject headings. The general format of an entry in the list is as under:

Reference books

[Z 7 1 1]

UF Bibliography - Reference books

Books, Reference

Libraries - Reference books

Reference books - English

BT Bibliography

Books and reading

NT Bibliography - Best books

Children's reference books

Encyclopedia's and dictionaries

2.7.6.3 Formation of Subject Headings

In LCSH, subject headings are constructed in a variety of ways ranging from single noun headings to complex and compound headings. Various forms of headings which have been used in the list are described below:

Single noun headings : The simplest form of main heading consists of a single noun e.g. Agriculture, Botany, Cataloging.

Abstract ideas are usually stated in singular e.g. Liberty, Love where as concrete objects and things are rendered in plural e.g. Short Stories, Doctors.

Phrase Headings : When a subject or concept cannot be properly expressed by a single noun, a phrase is used. There are several patterns of phrase headings which are discussed below;

Adjectival Phrase Headings: The most common type of adjectival heading consists of a noun or noun phrase with one or more adjectival modifiers e.g. Russian Art, English Drama, Higher Education etc.

Conjunctive Phrase Headings: The headings consist of two or more nouns, noun phrases or both, with or without modifiers, connected by the word 'and'. They are mainly used for the following purposes:

- I To connect topics or concepts which are usually treated together in books e.g. Emigration and immigration.
- II To connect opposite subjects that are usually treated together in books e.g. Open and closed shelves
- III To express a relationship between two concepts e.g. Literature and science, Libraries and schools

Prepositional Phrase Headings : These headings consist of nouns, noun phrases or both, with or without modifiers, connected by a preposition e.g. Photography of children, Divine rights of kings.

Inverted Phrase Headings : In many cases, a phrase heading is inverted in

order to bring a significant word in a prominent position as the entry element e.g. Art, Medieval; Chemistry, Organic.

Subdivisions

In LCSH, four kinds of subdivisions i.e. form, topical, period and geographic are recognised. Each form is discussed below.

Form Subdivisions

Form Subdivisions are used to indicate the form in which the material on a subject is organised and presented e.g. Economics - Periodicals; Chemistry - Dictionaries.

Topical Subdivisions

Topical Subdivisions are used under main headings or other subdivisions to limit the concept expressed by a main heading to a special subtopic e.g. the heading Agriculture - Accounting means accounting as applied to the field of agriculture and does not mean accounting as a kind or a division of the subject agriculture.

Geographic Subdivisions

A geographic subdivision indicates the origin or the locality of the main subject. Heading that may be subdivided by place carry the designation (May Subd. Geog.) immediately after their listing in the list. Geographic Subdivisions are added to the subject heading either directly or indirectly, depending on the place in question.

Direct geographic subdivisions

Forticulture - Zeneva

Art - India

Indirect Geographic Subdivisions

Forticulture - Switzerland - Zeneva

Charities - Italy - Florence

Period Subdivisions

In LCSH, we can add the time divisions by five different ways:

1. Noun Adjective Heading: Ancient, Medieval, Renaissance
2. Phrase or Historical Events without any date e.g. Colonial Period, Revolution.
3. Historical period followed by a date:
 - Middle English (1100-1500)
 - Early Modern (To 1700)
4. In the form of century: English Fiction - 19th century
5. Subdivisions constructed with the preposition 'to'
 - U.S. History - to 1455.

Free - floating Subdivisions

Free - floating subdivisions are listed either separately or under representative main headings called 'pattern headings', with the intention that they may be combined with appropriate main headings at the time of application. There are four categories of free - floating subdivisions. These are:

Free - floating subdivisions of general application

These subdivisions are applicable to a large number of headings. A list of these subdivisions appears in Subject Cataloguing Manual: Subject Headings. Following are some examples of free - floating subdivisions

- Abstracts
- Library resources
- Lighting
- Software
- Study and teaching

Under each subdivision in this list, instruction is given as to the types of headings to which the particular subdivision is applicable e.g. the subdivision-Lighting is applicable only under main headings representing vehicles, buildings, rooms, installations etc.

Free-floating subdivisions under specific types of headings

These subdivisions are used with the following categories of main headings:

- Classes of persons
- Ethnic groups
- Names of corporate bodies
- Names of persons
- Names of places
- Names of bodies of water, streams, etc.

Examples

Asian - Americans - Race identity

American Library Association - Employees

Milton, John 1608-1674 - Political social views

Free-floating subdivisions controlled by pattern headings

Some form or topical subdivisions are common in a particular field. Instead of authorising them heading by heading and repeating them under each heading within the category, they are listed under a chosen heading in the category. This chosen heading then serves as a pattern heading of subdivisions for headings in that category. In LCSH the applicable subdivisions are displayed under the pattern heading. The subdivisions listed under a pattern heading may be transferred and used with another heading in the same category even though the combination does not appear in the list e.g. under English language, the pattern heading for languages, the subdivision-Phonology is listed. Therefore the combination Russian language-Phonology may be used, even though the combination does not appear in the list.

Free-floating subdivisions indicated by multiples

Certain subject headings carry multiple subdivisions e.g.

Vietnamese Conflict, 1961-1975-Foreign public opinion-British [German, Russian, etc.]

In this example, the terms given in square brackets serve as examples of similar

subdivisions that may be used without prior authorisation e.g. Vietnamese Conflict, 1961-1917-Foreign public opinion-French.

2.7.6.4 Cross References

From the 11th edition of LCSH in 1988 'see' and 'see also' references and the complementary 'x' and 'xx' were replaced by the thesaurus symbols UF, USE, BT, NT, RT and SA. In the LCSH, main types of relationships expressed by cross references are equivalence, hierarchy and association.

Equivalence Relationships: USE/UF (used for) references are made from the unauthorized or non-preferred terms to the authorised or preferred headings for the subject in question. USE/UF (used for) references are made for:

Synonyms

Booksellers' Catalogs

UF Books - Catalogs

Books - Catalogs

USE Booksellers' Catalogs

Variant spellings

Archeology

UF Archaeology

Archaeology

USE Archeology

Earlier form of headings

Online catalogs

UF Catalogs, Online

Catalogs, Online

USE Online catalogs

Abbreviations and acronyms

CAD

USE Computer - aided Design

Computer - aided Design

UF CAD

Opposite terms

School attendance

UF Absence from school

Absence from school

USE School attendance

Alternative endings

Theory of knowledge

UF Knowledge, Theory of

Knowledge, Theory of

USE Theory of knowledge

Hierarchical Relationship

Previously included under see also references hierarchical references indicate topics that are either broader or narrower in scope than the one in question. Two symbols BT (broader topics) and NT (narrower topics) are used for these purposes e.g.

Reference Books

BT Bibliography

Books and reading

NT Bibliography - Best books

Children's reference books

Encyclopedias and dictionaries

Associate Relationship:

The symbol RT (related topic) is used to link headings that are related in concept

but not in a hierarchical sense. RT references are provided under both terms involved. Such references are usually made for the following types of relationships:

- i Headings with meaning that overlap to some extent:
 - Aliens**
 - RT Citizenship
 - Immigrants
 - Nationalization
- ii Headings representing a discipline and the object studied:

Entomology	Insects
RT Insects	RT Entomology
- iii Headings representing persons and their field of endeavour

Medicine	Physicians
RT Physicians	RT Medicine

General References

General References are represented by the symbol SA (see also), which refer from one heading to a group of headings or to subdivisions used under other headings e.g.

Atlases

SA subdivisions Maps under names of countries, cities etc., and under topics

2.7.6.5 Subject Headings for Special Types of Materials

Detailed rules have been provided for literary works, biography and children's literature. Examples:

American drama - 20th century

Novelists, Russian - 19th century - Biography

United States - Biography

Physicists - Biography

Art - Biography

Twain, Mark, 1835-1910 - Biography

Children's Poetry, American

English language - Dictionaries, Juvenile

Mars (Planet) - Juvenile literature

2.7.6.6 Comments on LC List of Subject Headings:

LC List of Subject Headings is no doubt an authoritative list based on the experience and practice of a large national library, but it has certain drawbacks which are as under :

1. The list is useful for preparing the subject catalogue of libraries and not for documentation lists.
2. The list is not based on scientific principles but on arbitrary decisions. No attempt has been made to apply the latest theory of subject headings. Hence contains a large number of headings.

3. It does not solve all the difficulties of catalogue in the selection and use of subject headings. Headings are not specific enough for subjects covered by many documents especially when subjects are becoming increasingly complex.
4. References are not always constructed systematically.
5. Related subjects are scattered from Alphabets A to Z

2.7.7 Summary

Subject cataloguing is an important area of cataloguing. It attempts to bring out the subject content of a document being catalogued and satisfy user's subject approach to catalogue. This lesson describes the concept, aims and objectives of subject cataloguing. Discusses principles of subject cataloguing such as uniform headings, specific and direct entry, common usage, form headings and references. Also discusses the important features of Sears List of Subject Headings and Library of Congress List of Subject Headings.

2.7.8 Glossary

Adjectival Heading	:	It consists of a noun or noun phrase with one or more adjectival modifiers.
Antonyms	:	Words opposite in meaning.
Associate Relationship	:	It indicates headings that are related in concept.
Broader Term	:	The term denoting super-ordinate idea in a hierarchy.
Compound heading	:	It consists of two nouns connected by the word 'and'
Cross-reference	:	A direction from one heading or entry to another.
Equivalence Relationship	:	In this relation, two or more terms are regarded, for indexing purposes, as referring to the same concept.
Hierarchical Relationship	:	It indicates topics that are either broader or narrower in scope than the one in question.
Phrase Heading	:	It consists of group of words without a verb forming a short expression.
Synonyms	:	Words with the same meaning.

2.7.9 References

1. Bakewell, K.G.B. (1992). Manual of cataloguing practice. Oxford: Pergamon Press.
2. Chan, L.M. (1994). Cataloguing and classification: An introduction. 2nd ed. New York: McGraw Hill.
3. Girja Kumar and Krishan Kumar. Theory of cataloguing. 5th rev. ed. New Delhi: Vikas Publishing House, 2006.
4. Library of Congress (1997). Subject Headings. 20th ed. Washington D.C.: Library of Congress.
5. Rowley, J.E. (1987). Organising knowledge: An introduction to information retrieval. England: Gower.
6. Sears List of Subject Headings 2010. 20th ed. New York: H.W. Wilson.

2.7.10 Self Check Exercise

Note: Write the answers in the space given below each question and check your answers with the answers given at the end.

1. Discuss briefly the concept of subject cataloguing.

2. State the principles that guide the indexer in the choice and rendering of subject headings from the Standard List.

3. Give the various forms of headings used in Sears List of Subject Headings.

4. What are compound headings? Illustrate your answer with examples.

5. List various forms of headings used in Library of Congress List of Subject Headings.

2.7.11 Answers to Self Check Exercise

1. The most interesting and perhaps the most intelligent part of the cataloguing is subject cataloguing. The cataloguer brings out the various subjects treated in the books in such a manner that no significant part of it remains unnoticed by the users of the catalogue. The basic purpose of subject cataloguing is to provide a

direct and prompt approach to finding a document or group of documents on a given subject.

2. The general principles that guide the indexer in the choice and rendering of subject headings are given below:
 - a. **Uniform Headings:** The principle of uniform headings must be adopted to show what a collection has on a given subject i.e. it must bring under one heading all the materials dealing exclusively with that particular subject.
 - b. **Specific and Direct Entry:** The principle states that an item should be entered under the most specific term i.e. subject heading, which accurately and precisely represents its contents.
 - c. **Common Usage:** The principle requires that the word or words used to express a subject must represent common usage.
 - d. **Consistent and Current Terminology:** This principle states that the terminology in headings should be both consistent and current.
 - e. **Form Heading:** Form heading should be chosen for the work representing its physical, bibliographic, artistic or literary form.
 - f. **References:** Adequate references should be made to direct the user from unused headings to used headings, and from headings referring broader and related topics to the headings chosen to represent a given subject.
3. Various forms of headings which have been used in Sears List of Subject Headings are as under:
 - a. **Single Noun Headings:** e.g. Agriculture, Education, Science, Religion, etc.
 - b. **Compound Headings:** e.g. Religion and Science; Television and Children.
 - c. **Adjectival Headings:** e.g. English Language, American Literature, Indian Art, etc.
 - d. **Phrase Headings:** e.g. Information storage and retrieval system
4. Compound headings consist of two nouns connected by the word 'and'. They are mainly used for the following purposes:
 - I. To connect topics or concepts which are usually treated together in books e.g. Boats and Boating; Cities and Towns.
 - II. To connect opposite subjects that are usually treated together in books e.g. Good and Evil; Joy and Sorrow.
 - III. To express a relationship between two concepts e.g. Religion and Science; Television and Children.
5. Various forms of headings which have been used in the list are described below:

Single noun headings: The simplest form of main heading consists of a single noun e.g. Agriculture, Botany, Cataloging

Phrase Headings : When a subject or concept cannot be properly expressed by a single noun, a phrase is used. There are several patterns of phrase headings which are given below;

- a. Adjectival Phrase Headings e.g. English Drama
- b. Conjunctive Phrase Headings e.g. Literature and science
- c. Prepositional Phrase Headings e.g. Photography of children
- d. Inverted Phrase Headings e.g. Art, Medieval

BACHELOR OF LIBRARY & INFORMATION SCIENCE

Paper - DELB1102T

Knowledge Organisation & Information Processing

LESSON NO. 2.8

AUTHOR: DR. AMRITPAL KAUR

DEVELOPMENT AND RECENT TRENDS IN CATALOGUING

Structure

- 2.8.0 Objectives
- 2.8.1 Introduction
- 2.8.2 Attempts towards Universal Code of Cataloguing Rules
- 2.8.3 Standards for Cataloguing
 - 2.8.3.1 ISO 2709
 - 2.8.3.2 MARC
 - 2.8.3.3 CCF
 - 2.8.3.4 ISBD
 - 2.8.3.5 ISBN
- 2.8.4 Networks and Co-operative Automation Groups

- 2.8.4.1 OCLC
- 2.8.4.2 The BLAISE Cataloguing System
- 2.8.4.3 UTLAS
- 2.8.4.4 BLCMP
- 2.8.4.5 The Ballot Cataloguing System
- 2.8.5 OPACs
- 2.8.6 Cataloguing of Internet Resources
- 2.8.7 Cataloguing in the Digital Environment
- 2.8.8 Summary
- 2.8.9 Glossary
- 2.8.10 References
- 2.8.11 Self Check Exercise
- 2.8.12 Answers to Self Check Exercise

2.8.0 Objectives

This lesson discusses the developments in the field of cataloguing. After reading this lesson, the learner will become familiar with the following:

1. Development of International Code of Cataloguing Rules
2. Development of Standards in the field of cataloguing
3. Emergence of networks and co-operative automation groups in the field of cataloguing
4. Cataloguing of Internet and digital library resources

2.8.1 Introduction

The history of cataloguing is very fascinating one. It is one of the oldest library crafts. In the early days of library service, cataloguing was largely an individual activity for each library. Each library constructed its own catalogue in a way deemed most suitable for its purposes. Bibliographic records were presented in forms and styles that varied from library to library. Gradually, librarians realized the advantages of standardization of practice and cooperation among libraries. The need for codification of cataloguing practice became increasingly apparent, especially for cooperative or shared cataloguing.

Since the middle of the nineteenth century, a series of cataloguing codes has been developed. Each new code sought to improve on the preceding ones. Most of the earlier codes represent the efforts of the individuals and the later ones result from corporate undertakings. The technique of cataloguing has been uniformed to a large extent at least in the English speaking world. The old methods of cataloguing which depended on the flair of the individual cataloguers without any idea of sound canons and principles have been completely put aside. The recent developments in the literature has made the traditional catalogue system inadequate. Current research in cataloguing is directed towards applying existing computer technology in systems. Computer

technology holds promise to revolutionize many aspects of library operations in the near future. Some of the recent trends in cataloguing are as under:

2.8.2 Attempts towards Universal Code of Cataloguing Rules

Towards the beginning of the 20th century, attempts were made to devise a common code for the English speaking countries. As a result of co-operative efforts of the American Library Association (ALA) and Library Association (LA), AA Code 1908 was devised. In the 1930's the committees of ALA and LA began revision. The LA dropped out at the outbreak of the II world war. The ALA continued along producing a new code, the ALA rules in 1949. Due to dissatisfaction with the ALA code, Samuel Lubetzky, the then bibliographic consultant of Library of Congress was given the responsibility of making a detailed analysis of 1949 code. In 1960, Lubetzky's Code of Cataloguing Rules, Author and Title Entry: An Unfinished Draft appeared. In 1961, one of the most important events in the evolution of cataloguing codes took place. The International Conference on Cataloguing Principles was held in Paris. As a result of the conference, a statement of principles, which has become known as the 'Paris Statement' or 'Paris Principles' was issued. It drew heavily on Lubetzky's draft code of 1960. It formed the basis of Anglo-American Cataloguing Rules (AACR 1) published in 1967 in two texts - North American text and the British text.

The next step towards greater International agreement was taken at the International Meeting of Cataloguing Experts held at Copenhagen in 1969. At this meeting, an international working group was established with the purpose of developing a standard order and content for the description of monographic material. As a result, International Standard Bibliographic Description (ISBD) (M) was issued. It was followed by ISBD (G) in 1977. Since then a number of ISBDs have been developed. All this was incorporated into unified text known as AACR 2 to promote international exchange of bibliographic data.

The implementation of AACR2 disclosed certain inconsistencies in the rules which led to further clarification and modification in the rules and resulted in new edition called AACR2R.

AACR II with all its revisions is thus a big step towards the ideal of international bibliographic exchange of cataloguing data.

2.8.3 Standards for Cataloguing

2.8.3.1 ISO 2709

It is an international standard that specifies the requirements for a generalized machine format that will hold any type of bibliographic record. The universal acceptance of ISO 2709 on record structure as a basis for exchange formats (2nd ed. 1981) has enormously benefited the information community. It is accepted for the exchange of bibliographic data on magnetic tape, and also used for the formatting of bibliographic data sent online and stored on other media such as floppy disk and CD-Rom.

2.8.3.2 MARC

MARC which stands for machine readable cataloguing was started as a pilot project in 1966 at Library of Congress. The main aim of this project was to distribute Library of Congress cataloguing data in a machine readable form to various libraries for the reading material received by them so as to facilitate them to meet the explosion of knowledge and the increasing demand for easy and quick provision of required information. At that time, there were no established MARC formats available. Libraries had reached no consensus as to which access points were required to take full advantage of an automated cataloguing system. During Nov. 1966 to June 1967, sixteen libraries took part in developing early MARC format for English language monographs/books only on experimental basis.

MARC II : MARC II was started in 1968 with the development of a new format capable of transferring bibliographic data to the receiving libraries. The new format was intended to be hospitable to all kinds of library material sufficiently flexible for a variety of application in addition to catalogue production and usable in a range of different computer systems. There were two versions of MARC II i.e. LC MARC and BNB MARC.

MARC 21 : The Library of Congress and the National Library of Canada harmonized the USMARC and CAN/MARC formation in a single edition in early 1999 under a new name MARC-21. The British Library in 2001 decided to discontinue the UK MARC format and adopt MARC 21. MARC 21 format is a set of codes and content designators for encoding machine readable records.

UNIMARC : Since the early 1970, several versions of MARC formats emerged, whose paths diverged owing to different cataloguing practices and requirements. The differences in data content in these formats mean that editing is required before records can be exchanged. One solution to the incompatibility was to develop a Universal MARC format that would accept records created in any MARC format.

In 1977 IFLA brought out UNIMARC with the purpose of facilitating the international exchange of data in machine readable form between national bibliographic agencies. This was followed by a second edition in 1980 and a UNIMARC handbook in 1983.

2.8.3.3 CCF

The proliferation of the international bibliographic exchange formats on the one hand and the lack of compatibility amongst them on the other led to the convening of the International Symposium on Bibliographic Exchange Formats in 1978 by UNESCO, to study the desirability and flexibility of establishing maximum compatibility among existing formats. Following the deliberations of the symposium, UNESCO/PGI formed the Adhoc Group on the Establishment of a Common Communication Format (CCF). The first edition of the CCF was brought out in 1984, 2nd in 1988 and 3rd in 1992 with the following objectives:

- To permit the exchange of records between groups of information agencies, including libraries, abstracting and indexing services,

referral systems and other kinds of information agencies.

- To permit the use of a single set of computer programs to manipulate records received from various agencies regardless of their internal record creation practices.
- To serve as a basis of a format for an agency's own bibliographic or factual database by providing a list of useful data elements.

2.8.3.4 ISBD

In order to achieve successful and convenient international exchange of bibliographic information in written as well as in machine readable form, a need was felt for standardization. In view of this need, an International Working Group was set up by the International Meeting of Cataloguing Experts in Copenhagen in 1969 to study the possibilities for ISBD. The Working Group published its final recommendations in 1971 under the title International Standard Bibliographic Description. In the following years, this format was accepted and adopted by many national bibliographies. In the course of its applications many ambiguities were brought out. These were discussed at the IFLA Conference held in Gzenoble in 1973. As a result of this conference, two documents were published in 1974, the first standard edition of ISBD (M) and a set of recommendations for ISBD (S) which was finally published in 1977. The rules for description provided in Part 1 of AACR2 are based on the general framework for the description of library material (ISBD) (G) published in 1977. ISBD standards serve as a good example of an attempt towards uniform cataloguing practices.

2.8.3.5 International Standard Book Number (ISBN)

ISBN is a system of giving a unique and non-changeable number of every book, which identifies each of these. It facilitates machine handling of bibliographic information. Such a system is extremely useful for international exchange of bibliographic data.

The numeric code representing ISBN is based on Standard Book Numbering Agency's Standard book numbering.

ISBN is complemented by International Standard Serial Number (ISSN). ISSN is looked after by International Centre of International Serial Data System in Paris. It is a unique number which identifies a particular serial title.

2.8.4 Networks and Co-operative Automation Groups

2.8.4.1 OCLC (Online Computer Library Center)

OCLC was established in 1967 as the Ohio College Library Center to serve as an association of colleges, universities and other educational institutes within the state of Ohio. Its services were extended to any kind of library in any part of the country and finally to countries outside North America. It has emerged as the world's largest library information network. It now links 47,669 libraries in 84 countries and territories. Its services help libraries locate, acquire, catalogue, access and lend library materials. It is offering the following services:

WorldCat (The OCLC Online Union Catalog): It is the world's largest and most

comprehensive bibliographic database. It contains 55 million records in 458 languages with holding information. Libraries use the World Cat database and OCLC computerized telecommunication networks to process material and share information.

Open WorldCat pilot: In June 2003, OCLC started Open WorldCat pilot to determine the feasibility of providing a new service that would integrate the collection of OCLC member libraries into heavily used websites. The pilot service is now available from a variety of services on the web including Abebooks, Alibris, ABAA, BookPage and HCI Bibliography. Through this service, OCLC has made WorldCat's unique resources available from outside the library environment.

OCLC First Search Service: It provides flexible searching and subject access to over 70 databases for end users.

OCLC First Search Electronic Collections Online Service: it provides remote access to large collection of journals through the Web.

OCLC Access Services: These facilitate online and offline cataloguing, resource sharing, reference and selection services.

2.8.4.2 The BLAISE Cataloguing System

The British Library Automated Information Service (BLAISE) which was introduced in 1977 is now one of the world's largest commercial services. Using a combination of online and offline computers processing techniques, BLAISE has two major functions - providing automated information retrieval service, and facilitating general library house-keeping routines from catalogue production to bibliographic checking. Catalogue production is made through LOCAS (Local Catalogue Service) which is an integral part of BLAISE. BLAISE also contains the UK MARC files, current and retrospective. Together the files contain over two million records of books and serials. The subject coverage is comprehensive and broad based. All information is searchable online.

2.8.4.3 UTLAS

The University of Toronto Library Automation System (UTLAS-now UTLAS International Inc.) developed from a local academic into a worldwide system. From supplying its own large campus it expanded to serve other libraries and by the mid 1980s it held MARC records from Canada, United States, France, Great Britain and Japan, together with updated authority files of LC name and subject headings. It provides a variety of automated systems for both large and small libraries.

2.8.4.4 BLCMP

BLCMP Library services Ltd was begun experimentally in 1969 by the university of Birmingham, and the Birmingham City Libraries as the Birmingham Libraries Co-operative Mechanization project (BLCMP). It has been fully operational from 1973, and serves a variety of libraries. It makes use of BNB and LC MARC tapes and of locally generated records to produce a union catalogue database from which catalogues can be generated for each of the subscribing libraries in the form and frequency individually

chosen.

2.8.4.5 The Ballot Cataloguing System

The Bibliographic Automation of Large Library Operations using a Time-sharing System (BALLOTS) is an effective online system in the area of academic libraries. It was set up in 1972 as a fully integrated library system. The online file of MARC records is the main source of bibliographic data. The sharing of cataloguing records has been made easier in this system. BALLOTS has expanded much and various regional networks affiliated with this system are also sharing in the cataloguing programmes

2.8.5 OPACs

Online Public Access catalogues (OPACs) are the interfaces that help users communicate with the collection(s) of a library. Typically OPACs allow users to search the library's catalogue, and also provide some other facilities, such as checking borrower records, reserving reading materials, library news bulletins etc. Although OPACs were first used in the mid 1970s, it was only at the beginning of the next decade that a significant number of libraries switched from card catalogues to automated catalogues. However, those first catalogues were usually modules linked to the automated circulation system and had brief catalogue records and very limited functionality. Several changes have taken place and OPACs have improved significantly since then. The later breed of OPACs is much more like a bibliographic information system providing access to a range of databases and tools and information services of which the library catalogue may be one item as an introductory menu. In OPAC databases a user can use any one or more search parameters, such as the author, title, keywords, ISBN and so on to search the catalogue, and the complete catalogue entry may be displayed as a result of the search.

Modern day OPACs also include internet resources. Catalogue codes were not originally devised to deal with Internet resources, which have some characteristics that are unique and different from conventional information resources, so cataloguing of Internet resources has become an important issue these days.

2.8.6 Cataloguing of Internet Resources

Internet resources have some specific characteristics that call for some special rules for cataloguing. AACR 2 provides some guidelines for cataloguing computer files but they are not sufficient, for several reasons. Internet resources vary significantly in terms of their context (text, numeric, audio, image, video, etc.), file format, availability, URL (uniform resource locator) or the address of a web page. Realizing the need of developing new rules and guidelines for cataloguing internet resources, OCLC produced a manual for cataloguing internet resources in 2003. The guidelines follow the Anglo-American cataloguing rules, 2nd revised edition, as well as the International Standard Bibliographic Description for Electronic Resources ISBD (ER). In addition to the file type and format description internet resources need specific information for access. Some information is carried in special MARC fields. MARC field 856 has been developed

especially for electronic location and access.

2.8.7 Cataloguing in the Digital Environment.

A digital library provides access to different types of information sources in a variety of formats such as OPACs, electronic databases (online search services or CD-ROM databases), e-journals, web resources. These information resources may reside on a number of different servers - local as well as remote. There are many problems in cataloguing digital information resources. First, digital especially internet-resources are so huge in number and grow so rapidly that it is practically impossible for human cataloguers to cope with each and every item. Second, the characteristics of digital information resources demand that a different standard be followed for each major type of documents. Bibliographic formats such as the MARC family and others and catalogue codes such as AACR 2 are not adequate for representing all the useful characteristics of digital resources. Various metadata standards such as the Dublin Core Metadata Editors, Encoded Archival Description (EAD) have been developed over the past few years for representing different types of digital information resources. Dublin Core Metadata Standards are general in nature and can accommodate descriptive information about digital information resources of different types coming from different disciplines but EAD is specialized and apply to information in a specific discipline or domain.

In 1998, the International Federation of Library Associations and Institutions (IFLA) announced a proposal to streamline cataloguing and simplify resource discovery for library users the Functional Requirements for Bibliographic Records (FRBR)

FRBR is an "entity-relationship model" of metadata for information objects, rather than a single, flat record conceptualization underlying current cataloguing standards. It restructures catalogue databases based on particular works rather than on the various forms in which the works are expressed. It groups all versions of a given work together using a high-level record that links to numerous lower level records, thereby collapsing near-duplicate items into a single entry point.

FRBR algorithm developed by OCLC makes it possible for users to write computer programs to generate sets of records that can be grouped for display as single works, making it easier for information seekers to find what they are looking for.

The Joint Steering Committee for revision of AACR is actively working on incorporating the FRBR terminology and concepts into the next edition of AACR.

2.8.8 Summary

This lesson discusses the development of AACR 2, various standards for cataloguing such as MARC, CCF, ISBD, ISBN and the emergence of various networks and co-operative automation groups in the field of cataloguing.

Cataloguing of Internet/digital resources has become a big challenge these days. Several metadata standards such as Dublin-Core, EAD, FRBR have been developed since the past few years for representing different types of digital information resources.

2.8.9 Glossary

- BALLOTS** : It stands for Bibliographic Automation of Large library Operations using a Time-Sharing System. It was set up in 1972 as a fully integrated library system.
- BLAISE** : It stands for British Library Automated Information Service. It was introduced in 1977 for providing automated information retrieval service and facilitating general Library housekeeping routines from catalogue production to bibliographic checking.
- BLCMP** : It stands for Birmingham Libraries Co-operative Mechanization Project. It was started by the University of Birmingham in 1969.
- CCF** : It stands for Common Communication Format. It was brought out in 1984 by UNESCO to permit the use of a single set of computer programs to manipulate records received from various agencies regardless of their internal record creation practices.
- Digital Library** : It is a virtual library on the Internet having all the information available in the digital form.
- Dublin Core** : It stands for metadata standards developed in 1995 for accommodating descriptive information about digital information resources of various disciplines.
- EAD** : It stands for Encoded Archival Description. It was developed in 1998 for accommodating descriptive information about digital information resources in a specific discipline.
- FRBR** : It stands for Functional Requirement for Bibliographic Records. It is an 'entity-relationship model' of metadata for information objects. It has been developed by IFLA in 1998.
- Internet** : A network of networks. It is an amalgamation of interrelated computer networks allowing electronic communication on a global scale.
- ISO 2709** : It is an international standard that specifies the requirements for a generalized machine format that will hold any type of bibliographic record.
- ISBD** : It stands for International Standard Bibliographic Description.
- ISBN** : It stands for International Standard Book Number. It is a system of giving a unique and non-changeable number of every book.
- MARC** : It stands for Machine Readable cataloguing. It was primarily designed by Library of Congress in 1967 to serve the needs of libraries as convenient way of storing and exchanging bibliographic information.
- OCLC** : It stands for Online Computer Library Centre (originally Ohio College Library Center). It is world's largest information network

which links 47,669 libraries in 84 countries and territories. Its services help libraries locate, acquire, catalogue, access and lend library materials.

OPAC : It stands for Online Public Access Catalogue. It helps users to communicate with the collection of a library.

UTLAS : It stands for University of Toronto Library Automation System.

UNIMARC : It stands for Universal MARC. It was developed by IFLA in 1977 with the purpose of facilitating the international exchange of data in machine readable form.

2.8.10 References

1. Chowdhury, G.G. (2004). Introduction to modern information retrieval. 2nd ed. London: Facet Publishing.
2. Girja Kumar and Krishan Kumar : Theory of cataloguing 5th rev. ed. New Delhi: Vikas, 2006.
3. OCLC Newsletter Nos. 262, 2003 and 263, 2004.
4. Oddy, Pat. Future libraries and future catalogues. London: Library Association, 2010.

2.8.11 Self Check Exercise

Note: Write the answers in the space given below each question and check your answers with the answers given at the end.

1. Name important standards.

2. What is UNIMARC?

3. What is ISBD?

4. What are OPACs?

5. Name the services rendered by OCLC

6. Name the resources available in a digital library.

7. Name two metadata standards.

2.8.12 Answers to Self Check Exercise

1. The important standards related to cataloguing activities are:
 - ISO 2709
 - MARC
 - CCF
 - ISBD
 - Dublin Core

2. UNIMARC was brought out by IFLA in 1977 with the purpose of facilitating the international exchange of data in machine readable form between national bibliographic agencies. This was followed by a second edition in 1980 and a UNIMARC handbook in 1983.
 3. ISBD is a standard format for bibliographic description. In order to achieve successful and convenient international exchange of bibliographic information in written as well as in machine readable form, IFLA's Working Group published International Standard Bibliographic Description in 1971 which led to the convening of IFLA conference in 1973. As a result of this conference ISBD (M) was published in 1974 and ISBD (G) in 1977. ISBD (M) serves as the basis for the rules of descriptive information for monographic materials and ISBD (G) for the description of all types of publications in all types of media in AACR 2.
 4. Online Public Access Catalogues (OPACs) are the interfaces that help users communicate with the collection(s) of a library. Typically OPACs allow users to search the library's catalogue, and also provide some other facilities, such as checking borrower records, reserving reading materials, library news bulletins etc. Although OPACs were first used in the mid 1970s, it was only at the beginning of the next decade that a significant number of libraries switched from card catalogues to automated catalogues. However, those first catalogues were usually modules linked to the automated circulation system and had brief catalogue records and very limited functionality. Several changes have taken place and OPACs have improved significantly since then. The later breed of OPACs is much more like a bibliographic information system providing access to a range of databases and tools and information services of which the library catalogue may be one item as an introductory menu.
 5. The services rendered by OCLC are as under:
 - WorldCat (The OCLC Online Union Catalog):** It is the world's largest and most comprehensive bibliographic database. It contains 55 million records in 458 languages with holding information. Libraries use the World Cat database and OCLC computerized telecommunication networks to process material and share information.
 - Open WorldCat pilot:** In June 2003, OCLC started Open WorldCat pilot to determine the feasibility of providing a new service that would integrate the collection of OCLC member libraries into heavily used websites. The pilot service is now available from a variety of services on the web including Abebooks, Alibris, ABAA, BookPage and HCI Bibliography. Through this service, OCLC has made WorldCat's unique resources available from outside the library environment.
 - OCLC FirstSearch service:** It provides flexible searching and subject access to over 70 databases for end users.
 - OCLC FirstSearch Electronic Collections Online service:** it provides
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remote access to large collection of journals through the Web.

OCLC Access Services: These facilitate online and offline cataloguing, resource sharing, reference and selection services.

6. The resources available in a digital library are OPACs, electronic databases (Online searches or CD-Rom databases) e-journals and web resources.
7. The two important metadata standards are:
 1. Dublin Core Metadata Editors
 2. Encoded Archival Description (EAD)