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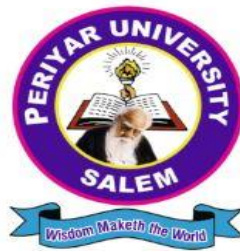
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CERTIFICATE COURSE IN LIBRARY AND INFORMATION SCIENCE

**25CLISC02: Information Processing–Classification and
Cataloguing - Theory**



CENTRE FOR DISTANCE AND ONLINE EDUCATION (CDOE)

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CERTIFICATE COURSE IN LIBRARY AND INFORMATION SCIENCE

**Information Processing–Classification and Cataloguing - Theory
(CC & DDC)**

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GENERAL CLASSIFICATION

Unit-I: General Classification–Definition– Need and Purpose–Schemes of Library Classification–Decimal Classification – Colon Classification.

Introduction

The idea of ‘Classification’ flourishes with the evolution of the ‘human being and it lies at the root of all human activities.’ Our daily life is very much dependent on the process of classification. You can surely recall a number of activities around you where classification plays its part. Each individual from childhood to old age, consciously or unconsciously implies classification in his daily functions. Take, for example, the organisation of contents in a railway time table, the display of items in a grocery, shop, the arrangement of things in a departmental store to facilitate the selection of goods by customers, the seating arrangement in a theatre or stadium, the allotment of registration numbers to aspirants of examination by the authority, or the sorting of letters by postmen by pin code and others for quick delivery of post. These are simple examples of how we use classification in our activities. The techniques of classification are inherent in mankind. Without classification, human progress would be impossible.

The word classification was derived from the Latin word ‘classes’ which means order or rank of mobility. Classification is a mental process where things are grouped or separated on the basis of common characteristics. For example, things grouped together on the basis of a common characteristic like writing material. In other words, classification is an attempt to identify a class for like things. We succeed in our attempt by applying a characteristic and isolating all like things on that basis from unlike things. Classification in essence means dividing into groups, grouping, sorting, arranging, ordering, ranking and relating one entity to the others. S.R. Ranganathan, in his Prolegomena to Library Classification (1967), elaborately discusses the meaning of classification. In the case of physical objects, division and assortment are the two results of classification. According to Ranganathan, while division implies sorting objects into two or more groups, assortment additionally denotes arrangement of these groups in a predetermined sequence. Further, in library classification, the sequence of objects, i.e., documents, is so mechanised by the use of notation that it is reflected in the notation when a document is withdrawn or added.

Meaning and Definition:

The ordinary classification deals with the arrangement of ideas or objects in a systematic order. In the Library classification the objects are documents. The term 'document' includes all forms of recorded knowledge such as books, periodical publications, non-book materials and so on. The term library classification has been defined by various library and information scientists. Few such definitions are as follows:

According to W.C Berwick Sayers "The arrangement of books on shelves, or description of them, in the manner which is most useful to those who read".

Arthur Maltby revises Sayers definition as "the systematic arrangement of books and other material on shelves or of catalogue and index entries in the manner which is most useful to those who read or who seek a definite piece of information".

According to H.E. Bliss "Classification is a series or system of classes arranged in some order according to some principle or conception, purpose or interest, or some combination of such".

Ranganathan is more elaborate in his definition. We will study his definition, therefore, in detail. According to Ranganathan, "it is the translation of the name of the subject of a book into the preferred artificial language of ordinal numbers, and the individualisation of several books dealing with the same specific subject by means of a further set of ordinal numbers which represent some features of the book other than their thought content".

Need for Library Classification

Classification in a library is very important because without it the work of the library is not able to run smoothly. Following is the requirement of library classification.

- 1. Unlimited expansion of books** - In the modern era, the number of books is numerous and it is increasing daily and classification is necessary to control it.
- 2. Subject complexity** - Currently, the complexity of subjects is increasing and classification becomes necessary to organize the subject with the subject concerned.
- 3. For the purpose of the library** - Classification is necessary to fulfil the purpose of the library. Because all the work in it becomes simple.

4. To increase the use of books - Classification is necessary for the use of books in the library. The reader easily reaches the book by **classification**. Hence classification is helpful in book usage.

5. For the configuration in auxiliary order - Classification is necessary to place the book in auxiliary order i.e. near the related book, Ranganathan has said - "**To configure books in auxiliary order**" is the main objective of classification.

6. Saving time - In today's time, the reader lacks time, so the reader wants to reach the relevant book in minimum time and this classification becomes necessary. In the absence of classification, it may take the reader a long time to reach the book.

The Purposes of Library Classification

Library classification plays a fundamental role in the organization and management of materials within libraries, ensuring that resources are categorized and stored systematically for easy access. Classification systems are crucial in libraries of all sizes, whether physical or digital, as they enable efficient management of vast collections of books, journals, multimedia, and other forms of information. This article explores the various purposes of library classification and its significance in modern library systems.

- 1. Improving Accessibility and Efficiency:** One of the primary purposes of library classification is to enhance accessibility. Libraries house various materials across various subjects and formats, and classification helps organize these materials so that users can easily locate the resources they need. The structured arrangement significantly reduces the time and effort required to find information, making it more accessible to all library users. This increases the overall efficiency of library systems and enhances user experience.
- 2. Organizing Resources Systematically:** Classification provides a structured approach that ensures materials are grouped according to shared characteristics, such as subject, format, or content. This methodical arrangement allows for better inventory management, efficient use of space, and improved resource tracking.
- 3. Encouraging Browsing and Discovery:** Another important purpose of library classification is to facilitate browsing and discovery. Libraries are not just about finding a specific item; they also serve as spaces for users to explore new ideas, topics, and

areas of interest. Classification systems make it easy for users to navigate through broad categories, discovering materials they may not have initially sought.

4. **Simplifying Library Management:** Library classification is not only helpful for users but also critical for the internal management of library collections. It streamlines processes such as cataloguing, inventory management, and resource tracking. Libraries often manage thousands of items, and a classification system ensures that materials are easily catalogued, stored, and retrieved.
5. **Facilitating Automation and Digital Libraries:** With the growing reliance on technology in modern libraries, classification systems play an important role in automation. Digital libraries and online catalogs depend on well-defined classification systems to index and retrieve information accurately. For instance, an online library catalogue allows users to search for materials by subject, author, or title, with classification systems ensuring that search results are relevant and well-organized. Digital resources such as e-books, journals, and multimedia files also need to be organized accordingly to ensure they are easily searchable and accessible.
6. **Supporting Interlibrary Loans and Resource Sharing:** Library classification also significantly facilitates interlibrary loans and resource sharing. When libraries use the same classification systems, it becomes easier for them to exchange resources and ensure that materials are accessible to a broader audience. Standardized classification systems like DDC allow libraries to align their collections, making it possible for patrons to access resources from different institutions.

Schemes of Library Classification

A library classification scheme is a system used to organize library materials by subject, assigning a unique call number to each item for shelf arrangement and cataloguing. These systems group similar subjects together to help users find related materials in one place, link catalogue records to physical items, and enable browsing. The prominent schemes for library classification are the Dewey Decimal Classification (DDC), the Library of Congress Classification (LCC), the Universal Decimal Classification (UDC), and Colon Classification (CC). These systems provide a structured way to organize library materials by subject, assign a shelf location to each item, and help users locate related materials in one place. DDC and

LCC are widely used in English-speaking countries, while UDC is a faceted system popular internationally, and CC is a scientifically designed system known for its facet analysis and postulational approach.

Colon Classification:

Dr. S.R. Ranganathan (1892-1972), father of the Indian library movement, was the most prolific and innovative library science author of his time. Colon Classification (CC) is the brain child of S.R. Ranganathan. It is one of the most systematic schemes of library classification once used by many libraries in India and abroad.

Colon Classification involves analysis and synthesis, which is why it is known as the 'Analytico-synthetic' classification scheme. It analyses the subject into various components and places them under five fundamental categories known as personality, matter, energy, space, and time (PMEST). He provided different connection symbols to connect or synthesize the various components of a subject. The number building makes the scheme somewhat complicated to work with, but once understood and followed, it works efficiently and effectively.

The Colon Classification is a general scheme that aims to classify by subject all kinds of documents- books, periodicals, reports, pamphlets, microforms, and electronic media in all kinds of libraries. CC is a landmark in modern classification thought and has greatly influenced modern classification research and developments.

A brief history of Colon Classification

The Colon Classification (CC), conceived and initially developed from 1924 to 1928, and initially applied in the Madras University Library, was first published in 1933 by the Madras Library Association (founded by Ranganathan in 1928). The latest seventh edition published in 1987 after the death of Ranganathan.

In 1924, the demonstration of a Meccano toy kit for making different toys by permutation and combination of the blocks, strips, nuts, and bolts triggered his mind to adopt a similar technique to design different class numbers from the same subject concepts. He visualized that all knowledge is comprised of some basic and discrete concepts which could be combined to construct class numbers suitable to document, instead of assigning ready-made class number.

Connecting symbols in the form of punctuation marks served as his nuts and bolts to string together discrete concepts.

Back home in 1925, he developed and applied his scheme at Madras University library, and experienced its applications and problems, including comments from the library's users and subsequently published first edition of CC in 1933. The second edition (1939) was important as it clearly laid down the theory and methods of CC as already published in his book *Prolegomena to library classification*. The third edition (1950) of CC came out when Ranganathan had moved to Delhi University where it was widely adopted.

In 1952 he came out with his famous theory of "five and only five fundamental categories" in the universe of knowledge named as personality, matter, energy, space, and time, popularly known as PMEST. The fifth edition (1957) was proposed as two volumes of basic and depth versions, but only the basic version was published.

By the time the sixth edition was published in 1960, CC had reached its pinnacle of glory, demonstrated and exclusively discussed his theories with wide approval. The sixth edition later issued with amendments, remains the most popular, used and stable edition. It is the one taught in all Indian library schools. The seventh edition (1987) which was published and edited by his long-time research assistant, Professor M.A. Gopinath was considered by many to be confused and inconsistent in structure and notation. On the whole, this edition has been discarded by the Indian library profession. Nevertheless, it brought many metamorphic changes to aspects such as basic subjects, categories, common isolates, notation, etc.

Different Editions of Colon Classification:

Editions	Year
1 st Edition	1933
2 nd Edition	1939
3 rd Edition	1950
4 th Edition	1952
5 th Edition	1957
6 th Edition	1960
7 th Edition	1987

Features of colon classification

The CC is a general scheme, which aims to classify by all subjects of a discipline and all forms of library documents — books, periodicals, reports, pamphlets, microforms, and electronic media — in all kinds of libraries. The scheme is described as an analytico-synthetic as opposed to an enumerative classification system. CC system lists concepts which are to be combined to construct a class number appropriate with the subject of the document.

Main Classes

The following are the main classes of CC, with some subclasses.

Z	Generalia	L	Medicine	NR	Music
1	Universe of Knowledge	LZ3	Pharmacology	O	Literature
2	Library_Science	I	Botany	P	Linguistics
3	Book science	J	Agriculture	Q	Religion
4	Journalism	JH	Horticulture	R	Philosophy
A	Natural science	K	Zoology	S	Psychology
B	Mathematics	KZ	Animal Husbandry	T	Education
B2	Algebra	LZ5	Pharmacopoeia	U	Geography
C	Physics	M	Useful arts	V	History
D	Engineering	M7	Textiles	W	Political science
E	Chemistry	Δ	Spiritual experience and mysticism	X	Economics
F	Technology	N	Fine arts	Y	Sociology
G	Biology	ND	Sculpture	YZ	Social Work
H	Geology	NN	Engraving	Z	Law
HX	Mining	NQ	Painting		

Planes of work

For designing a classification system, Ranganathan divided the whole work into three successive planes, named Idea, Verbal and Notational planes. The idea plane is the message, the verbal is its expression, and the notational plane is its visible representation in shorthand symbols.

- **Idea Plane:** Ideas in general term is basically thought or collection of thoughts that generate in the mind. Ideas are formed through judgement, discussions. An idea is just

a thought but when it fuses with mind it gets modified. It is the intellectual analysis of the subject; here, the characteristics are selected to break a subject into facets and ultimately into isolates arranged systematically into arrays and chains.

- **Verbal Plane:** Verbal plane is the 2nd step in any classification process. Its work is to express ideas in words or terms. It is naming of ideas in order to facilitate communication. The verbal plane gives standard technical names in an unambiguous language to the concepts arranged in arrays and chains in the idea plane.
- **Notational plane:** Notational plane is a plane of numbers, where words are represented by numbers with precise meaning. Ordinal numbers are often used as helpful symbols. The notation should translate the subject of a document into artificial language of ordinal digits or symbols which are helpful in arranging documents and resources.

Fundamental Categories:

Ranganathan has based his CC on many postulates. The postulate of fundamental categories is one of them. According to Ranganathan, there are five and only five fundamental categories- viz. Time, space, energy, matter, and personality (PMEST). These categories are extremely useful in library classification. Based on the fundamental categories, he developed the concept of facet analysis.

- **Personality:** Personality covers manifestations of wholeness, for example, chemical compounds, plants and animals and parts of them, languages religions, etc. Personality forms the basis, and without Personality, there can be no organ, attribute, action, reaction. The fundamental category, Personality, presents a great difficulty in its identification. As it is difficult to identify the personality, Ranganathan suggested the 'method of residues' for its identification.
- **Matter:** This fundamental category represented materials only. Later, two more manifestations of this category were identified, i.e. Matter Property and Matter Method. Library activities like classification, cataloguing, circulation, etc. for example, represent the property of the Personality of the library. So they belonged to the Matter facet. The fundamental category of the Matter Method mostly manifests in science and technology subjects.

- **Energy:** The fundamental category, Energy, represents action. The action may be among and by all kinds of entities- conceptual, intellectual, and intuitive. In the main class ‘library science,’ computerization, preservation, management, etc., are examples of the manifestation of Energy.
- **Space and Time:** The fundamental category ‘Space’ represents the geographical area, and ‘Time’ represents the period.

Facet analysis

Ranganathan introduced the term *facet analysis* to denote the technique of dividing a complex subject into its several parts by relating them to a set of five fundamental categories, which he called personality, energy, matter, space, and time.

Ranganathan defines Facet as “the totality of subclasses based on a single train of characteristics of a main class. Facet analysis as the mental process by which the possible trains of characteristics which can form the basis of classification of a subject are enumerated”. Facet analysis has applications in analyzing and identifying the facets of the subject, e.g., the subject of a document or the subject of a user’s query.

Facet formula

It is not necessary for the subject of a document to be composed of all five categories. It may encompass any number of categories from one to five. A category may manifest itself in more than one concept in micro subjects. Recurrence of a category is accounted for and accommodated by the Rounds and Levels. The PMEST formula is, in fact, comprised of many rounds and levels of facets. Thus, in a facet formula, facets of the same category may occur more than once. Ranganathan postulated that:

- Space and time occur only in the last round of the facet formula;
- Categories [P], [M], and [E] can occur in various rounds;
- Levels occur only within a round;
- Within a round [P] and [M] can also occur at many levels;
- Energy always completes a round and has no level, but only rounds.

To mechanise the arrangement of categories and their scattered facets, Ranganathan developed very handy facet formula where rounds of categories and within a round, levels are arranged

based on dependency. The numbers preceding a category indicate its round, while subscripted numbers following a category indicate its level. The general facet formula may be represented as follows: (BF), [1P₁], [1P₂], [1P₃], [1P₄]; [1M₁]; [1M₂]; [1M₃]: [E], [2P₁], [2P₂]; [2M₁]; [2E], [3P₁] ... :[3E]. [S₁]. [S₂]'[T₁]'[T₂]

Notational System:

The Notational System of Colon Classification used for assigning numbers to basic subjects consists of:

1. 23 Roman small letters (a...z excluding i, l, o)
2. 10 Indo Arabic numerals (0-9)
3. 26 Roman Capital letters (A–Z)
4. Bracketed numbers
5. Indicator digit * ” ←) & ‘ . ; , - = + → (

In addition, Z, 0 (zero), or 9 (nine) is used to represent an empty digit. T, V, X & Z are used as emptying digits and U, W, & Y as empty-emptying digits.

<u>Facet</u>	<u>Indicator digit used</u>
i. Personality	, (Comma)
ii. Matter	; (Semi-colon)
iii. Energy	: (Colon)
iv. Space	. (Dot)
v. Time	‘ (Single inverted comma)

Common Isolates:

There are two types of common isolates—Anteriorising common isolates and Posteriorising common isolates. Anteriorising common isolates are those which cannot be designated on the basis of fundamental categories. They are used for documents, which require to be arranged anterior to ordinary documents on the subject of concern. Posteriorising common isolates are used for documents, which do not require the need for anterior position. They are divided into common energy isolates, common matter property isolates and common personality isolates.

Kinds of phase relation

The general divisions also include phase relation digits and indicator digits. The six types of phase relations with their different levels and digits are as follows:

Intra-Array	Intra-facet	Subject	Phase relation
t	J	a	General
u	k	b	Bias
v	m	c	Comparison
w	n	d	Difference
x	p	e	Tool
y	r	g	Influencing

A complex subject is a two-phased subject depicting mostly interdisciplinary relations:

Type	Indicator digits	Example	Class number
General	a	Relation of political science with history	V&aW
Bias	b	Psychology for doctors	S&bL
Comparison	c	Physics compared with chemistry	C&cE
Difference	d	Difference between Christianity and Islam	Q,6&d7
Tool	e	Mathematical physics	C&eB
Influencing	g	Influence of Mahatma Gandhi on John Lennon	NR,56,NwN40&gzG

Rounds and Levels

Recurring manifestation of the fundamental categories is required for classifying subjects of greater intention. Recurrence of a category in more than one facet is accounted for by the postulate of rounds and levels.

- **Rounds:** According to this postulate, the fundamental category, Personality, Matter, and Energy, may manifest itself in one and the same subject more than once. Ordinarily, the fundamental categories, Space and Time, may manifest only once in the last round.
- **Levels:** According to this postulate, the fundamental category, Personality, and Matter may manifest itself more than once in one and the same round within a subject.

Arrays & Chains:

Once facets and their isolates are formed with the application of characteristics, the next set of canons is to arrange terms in arrays and chains. An array is a set of entities of equal rank arranged in a systematic order. Chain is a sequence of entities in a constantly decreasing order of their extension. For example: World--Asia--South Asia--India--North India--Delhi is a chain of classes.

Devices

The purpose of a device is to form a new isolate or to sharpen an existing isolate in an array. This method has considerably reduced the size of the scheme. The 4 major devices used in CC are: Chronological device, Geographical device, Subject device and Alphabetical device.

1. **Chronological device:** employing a chronological number from schedule of time isolates. All numbers of authors in Literature derived through this device. Example: The number for Rabindranath Tagore is O, 157, 1M61' (M61 is Year of birth i.e. 1861). Used in library science, mathematics, medicine, fine arts, psychology, education, economics, etc.
2. **Geographical device:** employing a geographical number from schedule of space isolates. Example: The formation of an isolate using this device is as follows: 152= d4437 means Rajasthani Hindi, where 152 is Hindi = is the connecting symbol d is the symbol for dialect 4437 is Rajasthan from the schedule of space isolates. Used in Library science, fine arts, religion, linguistics, history and several other classes.
3. **Subject device:** To form a facet by adding to it (facet) another class number elsewhere in the scheme. Part of the number derived by the subject device should be enclosed in parenthesis i.e., (). Example1: Medical college library is 2, J3 (L) where, 2, J3 is 'college libraries' from MS Library sci. & L is added from MS Medicine Example2: Hindu law is Z, (Q,2) where, Z is Law and (Q,2) is Hindu religion from MS Q Religion.
4. **Alphabetical device:** Taking the 1st or the 1st two or three letters of the names of persons, or objects, or products widely accepted as such. Examples: O, 157, 3M61, G Gora, a novel by Rabindranath Tagore D93CM Maruti motor car. D93C is for motor cars and M stands for Maruti.

Dewey Decimal Classification:

The first general library classification scheme that is being used by any library across the globe was designed by Melvil Dewey in 1876, which is now known as Dewey Decimal Classification (DDC). It is the most popular scheme in the world. The first edition of DDC had only 44 pages including a 12 page schedule or scheme of subjects. Dewey used Indo-Arabic numerals (i.e. numbers from 0 to 9) as notation for the scheme. It is the most popular scheme in the world. Since its first edition which was published in 1876, DDC has been regularly revised to keep it up to date. The 23rd edition of DDC has been published in May 2011. Its electronic version WebDewey 2.0 has also been released simultaneously.

Every class number in DDC consists of three digits (numbers). For an aid to eye after third digit, a dot is inserted and then fourth, fifth and more digits are written. In the beginning of schedule three summaries of class numbers are given. First summary consists of 10 main classes, second summary consists of 100 divisions where each main class is divided into 10 branches and third summary consists of 1000 sections where each division is further divided into 10 branches

History of Dewey Decimal Classification

Dewey Decimal Classification (DDC) was first formulated in 1873 and applied at the Amherst College library. The scheme was published in 1876 entitled "A Classification and Subject Index, for cataloguing and arranging the books and pamphlets of a library." The scheme has passed through different editions after revisions and modifications. The latest is 23rd edition. This edition has been edited by Joan S Mitchell and others and published by Forest Press, New York, in 2011.

The first edition (1876) of the DDC published anonymously was a thin pamphlet of 44 pages with 12 pages for introduction, 12 pages of schedules and 18 pages of index. The second edition (1885) was seven times as large as that. This obesity went on increasing. The unwieldy size of the 14th edition (1942) became a source of worry for all concerned. The 15th edition (1951), edited by Milton Ferguson, implemented the growing concept of the "standard edition", designed for the majority of general libraries but not attempting to satisfy the needs of the very largest or of special libraries. It also reduced the size of the Dewey system by over half, from

1,927 to 716 pages. To cope with the alarmingly increasing size and correct its uneven growth, the sixteenth edition (1958) was issued in two volumes under a new and capable Editor Benjamin A Custer (1912-1997). The second volume contained the form divisions, areas table and the index. The eighteenth edition (1971) was issued, for the first time, in three volumes. The 20th edition issued for the first volume in 4 volumes was edited by a new scholar editor Dr. John P Comariomi (1937-1991). The Twenty-third edition in four volumes, forming a total of 4,276 pages is Dewey Decimal Classification and the Relative Index edited by Joan S Mitchell. Dublin, Ohio: The OCLC, 2011, 4 volumes (V.1: Introduction & Tables V. 2 and 3: Schedules, and V.4: Relative Index). It has grown from 44 pages in its first edition to more than 4000 pages in its 23rd edition which was published in 2011.

The DDC has a manual on how to use DDC which was published in 1982. The DDC is published in abridged and unabridged forms. The abridged form of DDC was published in 1979; it contains 618 pages and 2,179 entries. The abridged version also shortens numbers used in notation and it is designed for use by schools and public libraries. DDC is currently translated in more than 30 languages such as Hindi, Danish, Portuguese, Turkish, Japanese, etc.

DDC Editions from 1876-2011

Editions	Year of Publication	Number of Pages	Editors
1st Edition	1876	44	Melvil Dewey
2 nd Edition	1885	314	Melvil Dewey & W.S. Biscoe
3 rd Edition	1888	416	Melvil Dewey & W.S. Biscoe
4 th Edition	1891	466	E. May Seymour
5 th Edition	1894	467	E. May Seymour
6 th Edition	1899	511	E. May Seymour
7 th Edition	1911	792	E. May Seymour
8 th Edition	1913	850	E. May Seymour
9 th Edition	1915	856	E. May Seymour
10 th Edition	1919	940	E. May Seymour
11 th Edition	1922	988	J. Dorkas Fellows
12 th Edition	1927	1243	J. Dorkas Fellows
13 th Edition	1932	1647	J. Dorkas Fellows & M.W. Getchell
14 th Edition	1942	1927	Constantin Mazney & M.W. Getchell
15 th Edition	1951	716	Milton J. Fergusom
16 th Edition	1958	2439	Benjamin A. Custer & D. Haykin

17 th Edition	1965	2153	Benjamin A. Custer & D. Haykin
18 th Edition	1971	2718	Benjamin A. Custer
19 th Edition	1979	3385	Benjamin A. Custer
20 th Edition	1989	3388	Benjamin A. Custer
21 st Edition	1996	4115	J.P. Comaromi
22 nd Edition	2003	4076	Joan S. Mitchell
23 rd Edition	2011	4276	Joan S. Mitchell

Features of Dewey Decimal Classification

The DDC is a general classification system which aims to classify documents of all kinds falling in any area of knowledge. The entire human knowledge has been divided into three disciplines based on the Francis Bacon's theory of the three faculties of the human mind, 1. Memory (History, etc.), 2. Imagination (Art and Literature), and 3. Reasoning (Sciences). These three great divisions are divided into nine main areas of knowledge that are themselves divided into disciplines or sub-disciplines.

The main features of DDC scheme are as follows,

1. Main Classes
2. Hierarchy and Notation
3. Tables
4. Mnemonic:
5. Adaptability of Notation
6. Revision
7. Computerisation of DDC

Main Classes

Melvil Dewey grouped knowledge into 10 main classes arranged by disciplines and represented by Arabic numbers. DDC is a hierarchical scheme that classifies materials from the general to the specific. The notation usually consists of three digits by adding zeroes for the number to become three. Thus, the full number of any main class is three, for example, class 3 is 300. 300-399 represent social sciences. The following are the 10 main classes of DDC scheme;

000–Computer science, Information and General works

- 100–Philosophy and Psychology
- 200–Religion
- 300–Social sciences
- 400–Language
- 500–Sciences
- 600–Technology
- 700–Arts and Recreation
- 800–Literature and Rhetoric
- 900–History, Biography, and Geography

Each class above represents a broader discipline. However, class 000-099 is not the same as the other class. Class 000 is a general class used for works that their disciplines are specific. General works include Encyclopaedias, Newspapers, periodicals, Bibliographies, Library and information science etc.

Class 100-199 covers philosophy and psychology

Class 200-299 dedicated to religion.

Class 300-399 covers the social sciences. This class includes sociology, anthropology, political science, economics, law, public administration, social problems and services, education, commerce, communications, transportation, and customs.

Class 400-499 comprises language, linguistics, and specific languages.

Class 500-599 is devoted to the natural sciences and mathematics

Class 600-699 is dedicated to technology and allied disciplines

Class 700-799 covers the arts: art in general, fine and decorative arts, music, and the performing arts.

Class 800-899 covers literature and includes rhetoric, poetry, drama, fiction, essay, etc.

Class 900-999 is devoted primarily to history and geography

Hierarchy and Notation

DDC is hierarchical in nature and it proceeds from general to specific. Books are arranged by disciplines and a specific subject can appear in any number of disciplines. However, the relative index brings together different aspects of a specific subject. DDC uses decimal fraction

notation for the arrangement of knowledge or books according to discipline and subject area on the library shelves. The scheme moves from the general to the specific. For example,

- 600 Technologies
- 630 Agriculture and related technologies
- 636 Animal husbandry
- 636.3 Sheep and goats
- 636.4 Swine
- 636.5 Poultry Chickens
- 636.6 Birds other than poultry
- 636.7 Dogs
- 636.8 Cats

In the above numbers, the first, second and third digits represent the main class. 600 for all general works in technology represent the main class, 630 is used for general works in Agriculture, 636 is used for animal husbandry. Sheep, Goats, Swine, Chickens, Dogs and Cats” are more specific than the umbrella term “Animal husbandry” because they are subdivisions of animal husbandry. “Animal husbandry” is in a superior category and less specific than Sheep, Goats, Swine, Chickens, Dogs and Cats.

These 10 classes can be divided into 10 divisions. Take class 300-399 for example covers social science discipline and is subdivided into;

- 300-309- Social science
- 310-319- Statistics
- 320-329- Political Sciences
- 330-339- Economics
- 340-349- Law
- 350-359- Public Administration and Military Science
- 360-369- Social Problems and Social Sciences
- 370-379- Education
- 380-389- Commerce, Communications and Transportation
- 390-399- Customer, Etiquette, Folklore

The above class division can be broken down or subdivided into 10 sections. For example, Education (370-379);

- 370- Education
- 371- School management; special education
- 372- Elementary education
- 373- Secondary education
- 374- Adult education
- 375- Curricula
- 376- Education of women
- 377- Schools & religion
- 378- Higher education
- 379- Government regulation, control, support

Each of the class division above can be further divided into more specific subjects using decimal point after the third digit as shown below. For example, 372 elementary education divided into,

- 372- Elementary Education
 - 372.1 Organisation and management of elementary schools; curriculums
 - 372.2 Levels of elementary education
 - 372.3 Technology, science, health
 - 372.4 Reading
 - 372.5 Creative and manual arts
 - 372.6 Language, literature, theatre
 - 372.7 Mathematics
 - 372.8 Other studies
 - 372.9 Historical, geographic, person's treatment of elementary education

Auxiliary Tables in DDC

The Dewey Decimal Classification is made up of seven (7) tables. These tables are;

Table 1: Standard Subdivision: Subdivisions are used to complete class number wherever necessary. They do not stand alone because they are preceded by a dash (-) and zero. However,

if the three digits of the main class number end with zero, it will not be necessary to add zero.

The several methods of treatment of a subject are shown below;

- 01 Philosophy and theory
- 02 Miscellany
- 03 Dictionaries, encyclopaedias, concordances
- 04 Special topics
- 05 Serial publications
- 06 Organizations and management
- 07 Education, research, related topics
- 08 History and description to kinds of persons
- 09 Historical, geographic, person treatment

For example, 526 Mathematical Geography; 526.07 represent study and teaching of Mathematical Geography. On the other hand, 530 represent (Physics) and -07 represent (study and teaching of Physics), the class mark, therefore, is 530.7 and not 530.07. Similarly, 512.03 is Dictionary of Algebra, and, 601.05 is for Journal of Philosophy and Theory, etc.

Table 2: Geographical Areas, Historical Periods, Biography: helps you to identify the time or period, region and place relating to the work or title of a book. It also represents the geographical area in the world. The methods of treatment of a subject are shown below;

- 1 Areas, regions, places in general; oceans and seas
- 2 Biography
- 3 Ancient world
- 4 Europe
- 5 Asia
- 6 Africa
- 7 North America
- 8 South America
- 9 Australasia, Pacific Ocean islands, Atlantic Ocean islands, Arctic islands, Antarctica, extra-terrestrial worlds

Like Table 1, notations from Table 2 are not used alone and they are preceded by a dash (-). Notations in table 2 are only used as directed by the DDC schedule or interpolation of 09 from table 1. For example, 630.96 for Agriculture in Africa (the number for “Agriculture” is 630, then add -09 to the base number 63 and find number for Africa in table 2 i.e. 6)

Table 3: Subdivisions for Arts, for Individual Literatures, for Specific Literary Forms:

This table lists different forms of literary works such as poetry, fiction, drama, etc. The notations of the table are;

- 1 Poetry
- 2 Drama
- 3 Fiction
- 4 Essays
- 5 Speeches
- 6 Letters
- 7 Humour and satire
- 8 miscellaneous writings

Table 4: Subdivisions of Individual Languages and Language Families: This type of notation is used to show language and they are used only when required. The notations of the table are;

- 1 Writing systems, phonology, phonetics of the standard form of the language
- 2 Etymology of the standard form of the language
- 3 Dictionaries of the standard form of the language
- 4 -
- 5 Grammar of the standard form of the language
- 6 -
- 7 Historical and geographic variations, modern nongeographic variations
- 8 Standard usage of the language (Prescriptive linguistics)

Table 5: Ethnic and National Groups: Table 5 is used in representing ethnic and nations. It is also used as instructed by the schedules and the other tables. Numbers can be added directly by an instruction. The notations of the table are;

- 1 North Americans
- 2 British, English, Anglo-Saxons
- 3 Germanic people
- 4 Modern Latin peoples
- 5 Italians, Romanians, related groups
- 6 Spanish and Portuguese
- 7 Other Italic peoples
- 8 Greeks and related groups
- 9 Other ethnic and national groups

Table 6: Languages: Table 6 provides numbers to be add whenever it is instructed in the schedules or other tables. This allows language to be added as a part of many subjects. The notations of the table are;

- 1 Indo-European language
- 2 English and Old English (Anglo-Saxon)
- 3 Germanic languages
- 4 Romance languages
- 5 Italian, Sardinian, Dalmatian, Romanian, Rhaeto-Romanic
- 6 Spanish and Portuguese
- 7 Italic languages
- 8 Hellenic languages
- 9 Other languages

Table 7: Persons: Notations in this table covers various categories of the person such as male, female, children, and adults etc. who may be part of the subject of the book.

- 01 Individual persons
- 02 Group of persons
- 03 Person of racial, ethnic, national background
- 04 Person by sex and kinship characteristics
- 08 Persons by physical and mental characteristics
- 09 Generalists and Novices

However, it is worthy to note that this table was deleted and replaced by the direct use of notation already available from the schedules.

Mnemonic

One of the important features of DDC is mnemonic quality. This is an important feature of DDC that serve as 'memory aids. There are many memory aids such as standard division table, area table, and language table which are used for subject synthesis. The use of consistent order in the subject division of different classes produces mnemonics.

Adaptability of Notation

DDC can be used for complex or broad classification as well as specific. The scheme can be used by all types of libraries both general and small libraries due to its abridged and unabridged edition.

Revision

The DDC scheme full and abridged editions are modified and revised through a publication known as decimal classification, additions, notes and decision.

Use of the Relative Index: The Relative Index has always been an integral part of the DDC system. In the DDC-23 it has 965 pages contained in the fourth volume. The Index is called relative as it reverses the main pattern of collocation of subjects in the schedules. It is relative as it also depicts the relation of one aspect of a subject to another and brings together the distributed relatives of the subject. It is an alphabetical index to every key term occurring in the schedules and all the tables. The Index is another enduring contribution of the DDC to the science of classification and indexing. Currently, Online Computer Library Centre (OCLC) as its division is taking care of DDC.

Electronic versions. DDC is not in only printed format but a web-based format. Through the web-based format, professionals can have access to an improved version of the DDC. In 1996, the DDC was made available on a CD-ROM called *Electronic Dewey*. Later it was named as *Dewey for Windows*. The annually updated Dewey for Windows on CD ceased publication in

2001. Since its 22nd edition its electronic versions are WebDewey (2003) and Abridged WebDewey (2004) now available only on the Internet to the licensed users and it is known as WebDewey 2.0. These versions are much more enhanced with data and have many features and facilities for keyword or systematic searching or browsing of the schedules, and number building facilities.

Computerization of DDC

The advent of information communication technology has brought about a computer-based editorial support organisation and database that is used to produce Dewey Decimal Classification 20 and 21 editions. DDC 21 edition is made up of print and electronic formats. The electronic format uses Windows, and Microsoft Windows TM based version; but currently, DDC is not in only printed format but a web-based format. Through the web-based format, professionals can have access to an improved version of the DDC database which is available through Web Dewey. Currently, DDC is being taken care of by the Online Computer Library Centre (OCLC) as it became a division of it.

Conclusion

Library is the only permanent and effective centre which maximizes the social utility of recorded knowledge and information. Thus, the library acquires, organizes and disseminates information to those who need it. Therefore, the basic and the most essential function of the libraries is to ensure maximum utilization of the accumulated recorded information. Library classification is a vital process in the organization and management of library collections, serving as a framework to arrange materials systematically based on their subject matter. In an era of rapidly growing information, libraries face the challenge of managing an ever-expanding array of resources, from books and journals to digital materials. Effective classification systems, such as the Dewey Decimal Classification, Library of Congress Classification, and Colon Classification, are crucial in making this information accessible to users. These systems allow for the logical grouping of materials, ensuring users can easily locate the necessary resources. By providing a structured approach to organizing knowledge, library classification enhances the efficiency of library operations and supports the discovery and retrieval of information, making it an indispensable aspect of modern library services. As the landscape of libraries continues to evolve with the rise of digital technologies, the importance

of classification will only grow, making it a critical element in the continued success of libraries worldwide.

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Unit – II: Colon Classification- Fundamental Categories – Postulates – Rounds and Levels - Notation in Classification – Qualities of Notation - Mnemonics in Classification -Types.

Introduction

Colon Classification is a library classification system developed in **1933** by S.R. Ranganathan, a prominent figure in library science. It is one of the earliest faceted classification systems, designed to organize information in a more flexible and scientific manner. The system is named “Colon Classification” because it uses colons (:) and other punctuation marks to separate different facets (categories) of a subject.

It is a faceted classification system, meaning it breaks down subjects into smaller, more manageable components or "facets". It analyses the subject in its various components and places them under five fundamental categories known as personality, matter, energy, space, and time. To connect or synthesize the various components of a subject, different connection symbols have been provided. Readymade class numbers are also available, but to build a class number, one has to analyse and pick up the possible isolates belonging to different fundamental categories, which are then put together with the help of appropriate connecting symbols.

Colon Classification involves analysis and synthesis, which is why it is known as the ‘Analytico-synthetic’ classification scheme. The Colon Classification is a general scheme that aims to classify by subject all kinds of documents- books, periodicals, reports, pamphlets, microforms, and electronic media in all kinds of libraries. CC is a landmark in modern classification thought and has greatly influenced modern classification research and developments.

Different Editions of Colon Classification:

Dr. S.R. Ranganathan developed and continuously refined the Colon Classification (CC) throughout his career. Several editions were published between 1933 and 1987, with each version incorporating improvements and expanding the system’s capabilities. Below is a summary of the different editions of Colon Classification and their key developments:

Edition	Year	Key Features and Changes
1st Edition	1933	<ul style="list-style-type: none"> • Introduced the faceted classification system with five fundamental categories (PMEST). • Used colons (:) to separate facets in class numbers. • Initially designed for Indian libraries but had global relevance.
2nd Edition	1939	<ul style="list-style-type: none"> • Improved notation and classification methods. • Enhanced rules for handling complex subjects.
3rd Edition	1950	<ul style="list-style-type: none"> • Expanded classification system with additional subjects. • Introduced new symbols for better subject representation.
4th Edition	1952	<ul style="list-style-type: none"> • Incorporated feedback from practical use in libraries. • Improved methods for number synthesis and notation.
5th Edition	1957	<ul style="list-style-type: none"> • Major revision with more detailed subject classification. • Expanded facets and isolates to cover emerging disciplines.
6th Edition	1960	<ul style="list-style-type: none"> • Considered the most refined version during Ranganathan's lifetime. • Further improved the classification notation and rules. • Introduced more auxiliary tables for complex subjects.
7th Edition	1987	<ul style="list-style-type: none"> • Revised and edited after Ranganathan's death. • Updated terminology and classification structures to reflect modern knowledge domains.

Significance of the Editions:

- The 1st edition (1933) laid the foundation for faceted classification, a revolutionary concept in library science.
- The 6th edition (1960) is often regarded as the most comprehensive and widely accepted version.
- The 7th edition (1987), published after Ranganathan's death, was an effort to modernize the system for contemporary information needs.

Fundamental categories

Ranganathan proposed a classification scheme based on fundamental categories. According to him, these categories would allow the classification of any universe of subjects. The fundamental categories are the first part of the classification of a universe of subjects. The

fundamental categories defined by Ranganathan are: Personality (P), Matter (M), Energy (E), Space (S), and Time (T), also known as PMEST. In the representation of subjects using the facet formula as proposed by him, each fundamental category corresponds to the connecting symbols i.e. comma (,) for personality; semicolon (;) for Matter; colon (:) for Energy; dot (.) for Space and single inverted comma (‘) for Time.

1. Personality: The category Personality is related to the “things” that the subject deals with. Personality represents the objects of study in a particular discipline that underlies its traditional division. In Medicine, Personality is the organs; in zoology, it is the animals; In Botany, it is the vegetables; in librarianship, it is the types of libraries, and so forth. Personality is of great difficult to identify and as a result Ranganathan suggested the ‘Method of Residue’. i.e. any entity, which is not a manifestation of “Time” nor of “Space” nor of “Energy” nor of “Matter”, should be a manifestation of “Personality”.

2. Matter: Matter as the name suggests it is the material facet. The category Matter refers to the notion of properties or characteristics of personality. Matter consists of all kinds of materials and substances of which the things are composed. Some examples, any substance such as wood, paper, iron, silver, gold, chemical, etc. is the manifestation of ‘Matter’.

The manifestation of this category includes: material and property of an object. The category Matter can be seen as the manifestation of materials in general, such as their property, and also as the material that compose all species. Accordingly, there are three variants of category [M].

1. Matter – Property [MP]
2. Matter – Method [MM]
3. Matter – Material [MMt]

3. Energy:

On the other hand, the category Energy is manifestation of action activities of all kinds such as actions, reactions, activities, operations, processes, techniques, and treatments present in the areas of knowledge. The activity could be mental or physical. Some of the examples of the category energy are; cataloguing, indexing, editing, dissemination, prevention, treatment, storing, cleaning, sorting, conservation, nursing, diagnosis, enrolment, teaching, admission, etc. These examples provided an idea of the nature of the energy category. It is still an important category.

4. Space: The categories Space and Time are identified through their usual meanings. The space is manifestation of geographical areas or population clusters. Any division of Earth such as; Oil Exporting Countries, English Speaking World, NATO, SAARC, are some examples, World-Asia, South-Asia, Bangladesh, North-West Bangladesh, Central Europe, London, Hilly Areas Valley, Disserts, Coastal Areas, are some of the examples of the space category in CC. Space is denoted by [S] in the Skelton facet formula; and in any class number [S] is preceded/indicated by dot, “ . ” e.g.,

5. Time: Out of the five fundamental categories, the ‘Time’ facet gives the latest difficulty in its identification. Obviously, it is the Chronological factor in a subject. 20th century poetry, medieval science, contemporary culture, all these subjects have time as a component. In CC, there is a provision to denote time more precisely and denote various kinds of time such as Solar, Lunar, Geological, Seasonal, Social, Meteorological, and so on. In the facet formula the time isolate is represented as [T] and in the class number the time isolate number is preceded by an apostrophe “ ’ ”.

Lancaster (1993) defined Ranganathan’s categories as: [...] the easiest way to describe Personality is as ‘the thing in itself’. Matter is the substance of which the thing is composed. Energy is the action performed in or by the thing. Space is where the action takes place, and Time is when it takes place.

Postulates

In Colon Classification (CC), postulates are foundational principles or assumptions that guide the organization of knowledge within the system. Postulates guide in the design of a scheme for classification and used in the work of classifying particularly in the idea, verbal, and notational planes. The postulates, along with laws and canons, guide the construction of class numbers for compound subjects.

Ranganathan's postulates provide a framework for analysing complex subjects into their constituent parts. By applying these postulates, librarians can break down a subject into its fundamental categories and then arrange them according to the prescribed order, creating a unique and consistent classification number. This approach making Colon Classification a powerful tool for knowledge organization. The postulates given by Ranganathan are,

a) Postulates for freely faceted classification b) Postulates for fundamental categories c) Postulates of basic facet d) Postulates of isolate facet e) Postulates of rounds and levels f) Postulates for facet sequence.

- **Postulate of Fundamental Categories:** This postulate identifies five fundamental categories: Personality, Matter, Energy, Space, and Time (PMEST). These categories are used to group concepts and determine the sequence of facets in compound subjects. For example, "Personality" can refer to the core subject, "Matter" to its components, "Energy" to actions, "Space" to location, and "Time" to period.
- **Postulate of Basic Facet:** This refers to the core or fundamental subject of a document. Once you determine the different fundamental categories, they are to be attached to a basic class in the order of PMEST.
- **Postulate of Isolate Facet:** This refers to the individual concepts or ideas that can be attached to a basic subject.
- **Postulate of Phase Relation:** This deals with the relationships between different subjects or isolates within a classification system.
- **Principle for Facet Sequence:** The postulates are helpful in determining the sequence of isolate ideas in a compound subject where each isolate is the presentation of different fundamental categories.
- **Rounds and Levels:** Ranganathan's postulates also address the concept of "rounds" and "levels" within a subject. A "round" refers to a complete cycle of the fundamental categories. Within a round, there can be multiple "levels," particularly for Personality and Matter. Energy, however, completes a round and does not have levels. Space and time are typically associated with the final round of a facet analysis.

Rounds and Levels

In Colon Classification, the concepts of "rounds" and "levels" are used to address the recurrence of fundamental categories within a subject analysis. A round represents a cyclic recurrence of categories in analysing a facet of a subject. Levels denote the recurrence of the same fundamental category within a round.

Rounds: A round signifies a complete cycle of analysis within a facet. For example, in a book about "Treatment of human diseases," both "Diseases" and "Treatment" could be considered manifestations of the first and second round of energy, respectively.

Levels: Within a round, a fundamental category (like Personality, Matter, Energy, Space, or Time) can appear multiple times at different levels. For instance, in literature, the "Personality" facet (P) might appear as "Language," "Form," "Author," and "Work," each at a different level within a round.

S.R. Ranganathan formulated the postulate of "rounds and levels" to account for the recurrence of categories in more than one facet.

Notation in CC

In Colon Classification, a mixed notation system is used, combining Roman capital letters, Arabic numerals, and Roman lowercase letters to represent subjects. The colon (:) serves as a connecting symbol between facets within a class number.

Here's a more detailed breakdown:

Components of the Notation:

- **Roman Capital Letters (A-Z):** Represent main classes or broad subject areas.
- **Arabic Numerals (0-9):** Used for various purposes, including time, space, and other facets.
- **Roman Lowercase Letters (a-z):** Employed within specific facets to further refine and subdivide subjects.
- **Colon (:):** Connects different facets together to form a complete class number.
- **Other Symbols:** Parentheses, brackets, and other symbols may be used for specific purposes, such as indicating variations or forms of a subject.

Example:

A book on "Library Science in India during the 20th century" might be represented by a class number like this:

- **2:** Main class for Library Science.
- **:N:** Time facet, representing the 20th century (N is a digit assigned to the 20th century).
- **:I:** Space facet, indicating India.

Qualities of a Good Notation

It is obvious from the use of a notation that the symbols standing for topics in the schedules should:

- **Notation should reflect order:** The Notation must indicate the order, which means the symbols used to represent the topic should indicate the position of that topic in the hierarchy of its main class or division.
- **Notation should be assembled as fetchable:** Simplicity of notation depends on the length of notation and the type of symbol used. The mixed notation may be slightly more complex than a pure notation of equal length.
- **Notation should be as brief as fetchable:** The notation is required to be written on many records, such as the spine of books and the catalogue cards. Therefore, the briefness in notation is desirable.
- **Notation should have flexibility:** The qualification of good notation is that it should be able to accommodate new topics. That means a notation must have provision for inserting a new topic into its relevant place in the schedules.
- **Notation should use the synthetic information:** Flexibility of notation is impracticable without synthesis in notation, and synthesis is a fetcher that all schemes use to a lesser or greater.
- **Hospitality:** The most important quality without which the 'Notation' is valueless for the purpose of efficient library classification is its hospitality. Since knowledge is dynamic and new subjects are constantly being created, schedules must be able to accommodate new concepts in the correct place. So, notation must be able to accommodate insertion at any point where it will be necessary.
- **Mnemonic:** By 'Mnemonic,' we mean a notation that always has the same significance whenever it appears in the classification. Mnemonics in notation are aids to memory.

Mnemonics:

Another desirable quality of notation is it being mnemonic. A mnemonical notation denotes same or similar recurring concepts by the same digits. The DDC and the CC are highly mnemonic systems. There are three types of mnemonics: alphabetical, scheduled and Seminal—latter are made use of by Ranganthan only.

Alphabetical mnemonics

In alphabetical mnemonics an entity is denoted by its name using its initial alphabet, e.g., J381B means Basmati Rice, while D5125H means Hero Bicycle, D5133M means Maruti motorcar. Library of Congress, (LCC) and UDC use alphabetical mnemonics to a large extent. In the LCC we have:

- A- General works
- AC- General Collections
- AE- General Encyclopaedias
- AS- General Societies

In the LCC we have literal mnemonics which are incidental: G-Geography, M-Music, and T-Technology

Scheduled mnemonics.

In the schedule denote recurring concepts and terms by the same digit. Here are self-evident examples from the DDC and the CC

Language	Literature	Linguistics	History
English	820	420	942
German	830	430	943
French	840	440	944
Hindi	891.43	491.43	–

English language, Literature and History are always denoted by “2” and German by “3”, so on. Similarly, take the case of CC:

Main class	Anatomy	Physiology	Diseases
G Biology	G :2	G :3	G : 4
I Botany	I : 2	I : 3	I : 4
K Zoology	K : 2	K : 3	K : 4
L Medicine	L : 2	L : 3	L : 4

Anatomy wherever it occurs has been denoted by “2” and disease by “4”. Ranganathan identifies three kinds of mnemonics, namely, alphabetical(literal), schedule and seminal. Schedule mnemonics have been explained above.

Seminal mnemonics

Ranganathan made a deep study of mnemonics and makes use of them in his CC:

The digit 1 is used as mnemonic for unity, God, world, the first in evolution or time, one dimension or line, solid state,

The digit 2 is used as mnemonic for two dimensions, plane, conics, form, structure, anatomy, morphology, sources of knowledge, physiography, constitution, physical anthropology

The digit 3 is used for mnemonic for three dimensions, space, cubic, analysis, function, physiology, syntax, method, social anthropology.

The digit 4 is used as mnemonic for heat pathology, disease, transport, interlinking, synthesis, and hybrid, salt

The digit 5 is used as mnemonic for energy, light, radiation, organic, , liquid, water, ocean, foreign land, alien, external, environment, ecology, public controlled plan, emotion, foliage, aesthetic, woman, sex, crime

The digit 6 is used as mnemonic dimensions, subtle, mysticism, money, finance, abnormal, phylogeny, evolution

The digit 7 is used as mnemonic for personality, ontology, integrated, holism, value, public finance,

The digit 8 is used as mnemonic for travel, organisation, and fitness.

As another form of root seminal mnemonics, seminally equivalent entities, e.g., feed, food, fuel, should be denoted by same digit wherever they occur. Repair of machines, treatment of diseases, and alleviation of social ills also get the same number in respective main classes. Mnemonics though they bring sort of symmetry in the classification yet at many places they may conflict with the helpful sequence. Do not distort a helpful sequence to make notation mnemonic. Nevertheless, mnemonics are only optional.

Unit – 3 Library Catalogue –Definition–Objectives–Functions–Library Catalogue and Bibliography – Difference between Library Catalogue and Bibliography.

A modern library provides a number of facilities to its readers for making use of its collection. One such facility is the catalogue of the library which facilitates the readers to know what documents the library has, where they are located on library shelves, and how to access them. In this section, we shall discuss the definition, objectives and functions of a library catalogue.

Definitions

The word 'catalogue' has been derived from the Greek expression 'kata logos'. It means a list, register or complete enumeration of something. It has now come to mean a list of somethings, systematically arranged in alphabetical or other order, often with brief description of items listed. For example: A catalogue of items of furniture for sale in an auction; a catalogue of different kinds of pumps manufactured by a particular company.

The New English Dictionary defines a catalogue as follows: 'A catalogue is usually distinguished from a mere list or enumeration by systematic or methodical arrangement, alphabetical or other order and often by the addition of brief particulars, descriptive or aiding identification, indicative of locality, position, date, price or the like'.

In the context of a library, a catalogue is a list of books and other documents of a particular library. This list is arranged according to a definite order, containing specific bibliographic data for the purpose of identification and location of the documents catalogued.

Objectives of a Library Catalogue

Charles Ami Cutter described the objectives of a library catalogue in 1876 when he published the first edition of his book Rules for a Dictionary Catalogue. His views on the subject are often quoted and are relevant even today.

According to him, a catalogue should:

- 1) enable a person to find a book of which
 - a. the author, or
 - b. the title, or
 - c. the subject is known

- 2) show what the library has
 - d. by a given author
 - e. on a given subject
 - f. in a given kind of literature
- 3) assist in the choice of a book
 - g. as to its edition (bibliographically)
 - h. as to its character (literary or topical).

All the above-mentioned objectives are valid even today. As a library today acquires various types of reading and reference materials, it may be necessary to replace the word 'book' by 'document' representing paper-print material as well as microforms and machine-readable forms.

The first objective of a library catalogue is to inform the availability/non availability of a particular reading material in the library. The readers may approach the catalogue through the name of an author or title. The author or title entry should provide the reader all the pertinent information. In case the entry is under some other name, a cross-reference entry should be provided.

The second objective is to show what a library has. The catalogue lists all the works of a particular author available in the library collection, all the documents available in a given subject or in a given kind of literature.

The third objective is known as descriptive cataloguing. According to the rules of descriptive cataloguing, the characteristics of the documents are fully described so that one document can be identified and isolated from amongst several similar documents. In brief, whatever may be the approach of a library user, the library catalogue should convey full information regarding the items of the person's specific interest.

Functions of library catalogue

A library catalogue's primary function is to facilitate access to information within a library's collection. It helps users find, identify, select, and obtain resources by author, title, subject, and other access points. Essentially, it serves as a roadmap, guiding users through the collection and enabling them to locate specific materials. According to Ranganathan catalogue is a 'tool for the fulfilment of the laws of library science. He has summarised the functions of library catalogue as:

- a. To disclose every reader his or her documents
- b. To secure for every document its reader
- c. To save the time of the reader, and for this purpose
- d. To save the time of the staff

In general, the library catalogue is expected to answer the following queries of the readers:

- a. Is a particular book in the library?
- b. Which books by a particular author are in the library collection?
- c. Is there a book in the library with such and such title?
- d. Is there a book in the library with such and such collaborator i.e. editor, translator, reviser, compiler, illustrator etc.
- e. Which are the books in the library with such and such series.
- f. The books on a given subject.
- g. To provide bibliographical information of a particular book i.e. author, title, series, edition, publisher, year of publication etc

Difference Between Library catalogue and Bibliography

The library catalogue and bibliography are foundational elements in academic and public research environments, each playing a distinct role in supporting information discovery and scholarly endeavours. Both library catalogues and bibliographies are essential tools for accessing and managing information, they differ significantly in purpose, structure, and use.

A library catalogue is a systematic and comprehensive listing of all the resources available within a library or a network of libraries designed to help users locate and access these resources efficiently. The library catalogue not only provides detailed bibliographic descriptions of the items, including author, title, publication data, and subject classifications, but also integrates functional features such as availability status, reservation options, and electronic resource access.

In contrast, a bibliography is a list of sources compiled to support academic writing or research, detailing references that either inform the work or are recommended for further reading on the subject. The main purpose of a bibliography is to document the sources that inform or complement a specific academic or research project. Unlike a library catalogue, a bibliography is not limited to the holdings of a single library. It encompasses a broader spectrum of sources that may span multiple libraries and information repositories.

Both catalogues and bibliographies serve as valuable tools in organizing and accessing information related to library resources. However, they have distinct characteristics and purposes. In this comparison, we will explore the difference between catalogue and bibliography, focusing on their purpose, scope, content, format, etc.

Aspect	Library Catalogue	Bibliography
Purpose	A library catalogue is designed to list all the materials available in a specific library or library system with a purpose of helping users to locate items within the library.	A bibliography is a list of sources (books, articles, documents, etc.) used or considered in preparing a particular work or recommended for further reading on a subject.
Scope	The scope is confined to collecting a particular library or library system. It includes only items that are accessible through that library.	The scope of a bibliography is not limited to a single collection or library. It can include sources from various libraries, publications relevant to the topic or research area.
Content	Catalogues typically provide detailed descriptions of each item, such as author, title, publication date, format, and subject headings.	Bibliographies provides bibliographic information to identify and locate cited or recommended works which includes author, title, and publication details. Annotations or brief descriptions may also be included
Organization	Library catalogues are usually organized according to a specific cataloguing standard and can be searched through various fields such as author, title, subject, and keywords.	Bibliographies are typically organized alphabetically by author or title depending on the nature of the publication.

Aspect	Library Catalogue	Bibliography
Access	Access is typically provided through library databases that can be searched within the library or online.	Access to the contents of a bibliography is through the publication in which it appears.
Functionality	A library catalogue often used to reserve items, check item availability, renew loans, and sometimes access linked electronic resources directly.	Bibliographies serve as a reference list and may sometimes direct the reader on where or how sources can be accessed.
Audience	The audience for a library catalogue is primarily library users from students and researchers to casual readers looking to find and borrow library materials.	The audience for a bibliography can be researchers, scholars, or readers with a specific interest in a subject area.
Creation and Maintenance	Catalogues are created and maintained by professional librarians. They will be updated continuously as new materials are acquired and old materials are weeded out.	Bibliographies are typically compiled by authors, researchers, or editors specific to each work or project. They are static once published and do not usually get updated.
Cataloguing Standards	Library catalogues adhere to specific cataloguing standards such as AACR2, MARC21, RDA, etc which help organize information universally.	While bibliographies may follow general guidelines for citation styles like APA, MLA, or Chicago, they allow more flexibility in how information is presented.

Conclusion:

Both catalogues and bibliographies serve as valuable tools in organizing and accessing information related to library resources. However, they have distinct characteristics and purposes. Catalogues focus on the items available in a particular library or group of libraries and include call numbers, subject headings, and other details to help users locate materials. On the other hand, bibliographies provide lists of resources related to a specific topic, often without call numbers, and may include annotations or brief summaries of the works. Understanding the differences between these two tools is essential for efficient resource management and research assistance in libraries.

Unit – 4: Normative Principles of Cataloguing – Canons, Laws, Principles and their Implications.

Normative principles in cataloguing are foundational rules that guide the creation of consistent, accurate, and clear bibliographic records. Ranganathan was the first person to enunciate, advocate, discuss, analyse and formulate normative principles of cataloguing. These special normative principles were called as canons of cataloguing. In the words of Ranganathan, the first application of scientific method to cataloguing and catalogue code was made in 1934.

S.R. Ranganathan has used 3 terms to denote his normative principles viz: Law, Canon and Principle which guide in the preparation of cataloguing codes, various types of entries, choice of headings and descriptions related to cataloguing of documents to ensure uniformity and consistency.

Law is the correct statement and is used in major disciplines such as Laws of Library Science, Newton's Law etc. Law tells what one has to do and what not to do. Canon means a general principle or standard by which judgements may be formed. It also means a body of writings which are accepted as genuine. Principle is a rule regulating the procedure or method necessary to be observed in the pursuit or study.

4.1. Canons of cataloguing

- **Canons of Cataloguing:**

The term canon was introduced by W.C.B. Sayers in 1915 which simply means rules, regulations, standard tests or criteria by which judgement may be formed. But Ranganathan was first to apply the scientific method of cataloguing by formulating various canons. There are 9 canons of cataloguing given by Ranganathan formulated in different stages.

- **Canon of Ascertainability:**

According to Ranganathan, the bibliographic descriptions provided in the entries of a catalogue must be ascertained and not imaginary. This ensures that information about a document's attributes, like the title and author, can be easily found and verified within the catalogue entry, typically on the title page. It specifies the use of title page and its overflow pages as the main source of cataloguing information.

- **Canon of Sought Heading:**

This canon helps in choosing heading for the catalogue entry. dictates that the catalogue should provide entries that readers are likely to search for, ensuring the user can easily find the desired information. It helps in choosing heading for the catalogue entry. It directs that main entry and added entries heading should be chosen based upon the possibilities of the users' approaches to the catalogue. For example: Mahatma Gandhi or M.K. Gandhi.

- **Canon of Individualization:**

This canon prescribes that the name of any entity whether is of a person, a corporate body, a geographical entity, a series, a subject or language used as the heading of a catalogue entry should be made to denote one and only one entity to avoid ambiguity. It helps in unique identification of the document in case of two identical data element (Homonyms).

- **Canon of Recall Value:**

This canon helps in selecting the most relevant and helpful words to use as headings, making the catalogue user-friendly. It directs that the entry element and rendering style to be chosen should be the one having highest recall value by a majority of the readers.

- **Canon of Prepotence:**

It helps in the arrangement of entries in a catalogue. It is used to decide the position of an entry among the various entries in a catalogue. According to this canon, maximum weightage is given to the leading section as a "potency" of an entry. For ex. the main author's name, in the leading section of the entry for easier identification.

- **Canon of Context**

According to Canon of Context, with the change in the mode of book production, the nature of the organization of libraries and the quality of library service, the rules should be amended from time to time.

The Canon of Recall value has emerged due to this change in the practice. Due to multiplicity of learned bodies and readers capacity to remember it, this canon was produced.

- **Canon of Consistency**

This canon helps in maintaining standardisation of bibliographic data elements in order to avoid adverse effect of variant usage. This canon states that the rules of a catalogue code should be framed in such a way that all the added entries of a document to be consistent with its main entry. In addition, the main entries of all documents should be consistent with one another in certain essential points such as choice of headings, and style of writing the headings and the other sections of the catalogue.

- **Canon of Permanence**

This canon deals with the formulation of cataloguing rules. It says that the entry elements should be permanent. According to this canon, no element in an entry particularly in heading, should be subjected to change by the rules of a catalogue code expect when the rules themselves are changed in response to the canon of context.

- **Canon of currency**

The principle 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. The purpose is to serve every reader with a subject entry under the heading or currently used term best known among the majority of the users and not obsolete term. In total this canon implies that current terminologies should be used to denote a subject of a catalogue entry. Example: Chennai, Not Madras. Kolkata, Not Calcutta. However, a Cross-reference index entry can be prepared for the variant names.

4.2. Laws of Cataloguing:

These are fundamental statements that guide cataloguing practices. They are applicable to the library science as a whole as well as all the branches of library science including cataloguing.

There are following general laws:

1. Laws of Interpretation
2. Law of Impartiality
3. Law of Symmetry
4. Law of Parsimony

1. Law of Interpretation

CCC define Laws of Interpretation as “the well-known principles of interpretation, such as the 1,008 principles of interpretation listed in the Nyaya-Kosa”.

Implications

A catalogue code is a like a legal document. Therefore, it should be interpreted like a legal text. This law prescribes that in the situation of conflict between two canons or rules it should be resolved with the help of this canon. This also prescribes that if a document cannot be catalogued under any existing rule, the solution may be sought after the fresh interpretation of rules or necessary amendment should be made in the code.

2. Law of Impartiality

This law prescribes „that between two or more claimants-say, for use as heading – the preference of any one should be made only on sufficient grounds, and not arbitrarily”.

Implications

For books written by two joint authors both the authors have an equal right for being chosen as a heading. For a book having alternative title, alternative title entry is prepared. In the same manner in case of multiple series, this law directs that all series should get equal right for being given as a series.

3. Law of Symmetry

This law prescribes “that if two entities or situations which admit of being regarded as symmetrical counterparts of each other, if one of the entities or the situations is given weight in any particular context, the other entity or situation should also be given a corresponding weight”.

Implications

For books of two joint authors both the names are used in heading section. As a result of this law two book index entries are to be prepared. In first book index entry first author will come first and second author will precede it. In second book index entry their names will be reversed.

4. Law of Parsimony

This Law prescribes “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”.

Implications

This law demands economy and saving in the library practices. This law stresses open access library as readers are free to refer the books personally without any assistance. It suggests of making difference between main entry and added entries, provision for cross Reference Index Entries, use of chain procedure to derive relevant subject headings

4.3. Principles of Cataloguing:

These are fundamental ideas that underpin the entire process of cataloguing. CCC has recognized following 4 principles of cataloguing:

1. Principle of Local Variation
2. Principle of Osmosis
3. Principle of Unity of Idea
4. Principle of Probability

1. Principle of Local Variation

The principle of local variation in cataloguing, as defined by Dr. S.R. Ranganathan, means that cataloguing rules should allow for deviations to accommodate specific user needs or local collection characteristics. The code of cataloguing should function by taking into account by:

- recognising that cataloguing needs vary based on the specific library, its user community, and the nature of its collection.
- allowing libraries to modify cataloguing rules or create special collections to better serve their unique user base or subject emphasis.
- Developing a user-centred approach, prioritizing the needs of the library's patrons over strict adherence to universal standards.

Essentially, the principle of local variation is a practical application of the broader concept of "every reader his/her book" in library science, ensuring that the catalogue effectively serves its intended users.

2. Principle of Osmosis

The principle of Osmosis means whenever the change in a catalogue code or in the scheme of classification or cataloguing becomes necessary that should be adopted and implemented. This approach minimizes disruption to library services and allows for a more manageable transition. According to this principle:

1. All the new acquisitions are classified and catalogued according to new systems.
2. Out of old collection, which are in much use, be reclassified and re-catalogued.
3. They should be kept separately and kept with new collection. Their cards also to be kept with new collection cards.
4. The rest of the collection be known as old collection. Similarly, their cards be kept separately.
5. Readers' attention to be invited towards new collection and old.
6. When any book is taken out from old collection, after return it should be reclassified and re-catalogued and kept with new collection.

3. Principle of Unity of Idea

Principle of Unity of Idea is a basic principle which should guide the work of formulation of rules in a code. Rules of catalogue code should guide in determining authorship, rendering and recording (place of writing and style of writing) based on unity of idea.

A catalogue code should deal with the following elements:

1. Definition of cataloguing terms;
2. Interpretation of cataloguing terms in deferent contexts;
3. Choice of information for a section of an entry;
4. Rendering of it; and
5. Style to record it.

4. Principle of Probability

The principle was introduced by Ranganathan in 1969. This principle prescribes that “making the word belonging to the more numerous groups of entry, increases the probability for satisfying the Canon of Prepotence”. Thus, this principle indicates that a word belonging to the more numerous groups, if used as entry element has a greater probability for satisfying the Canon of Prepotence.

This principle builds on the Canon of Prepotence by suggesting that if multiple potential entry points exist, the one that is more likely to be sought by users (due to its frequency or common usage) should be prioritized.

Conclusion

In the context of cataloguing normative principles are those rules, laws, canons and principles which govern the preparation of catalogue codes and various types of entries, choice of headings, rendering of headings, description and other things related with the cataloguing of documents. They are fundamental rules that ensure library catalogs are consistent, accurate, clear, and easily usable, facilitating resource discovery and access for users. They provide a scientific foundation for cataloguing practices, allowing for the creation of standardized records and headings through the use of authority control. They help in improving resource sharing, enables critical analysis of cataloguing schemes, and provides a theoretical basis for library science.

Unit – 5: Physical Forms of Library Catalogue – Advantages and Disadvantages of each form of Library Catalogue – Inner forms of Library Catalogue – Criteria for a good catalogue – Entries and arrangement of catalogues – AACR2.

Introduction

Over a period of time, library experts have tried to develop different physical forms of library catalogue, such as, bound register form, printed book form, sheaf form, card form and modern forms like visible index form, microform and machine-readable form.

Although some of the older forms like bound register, sheaf catalogue is slowly becoming obsolete, the card catalogue continues to be popular, particularly in countries like India.

Machine-readable catalogues with their versatility and efficiency are replacing the card catalogue. These catalogues have extended the scope of centralised cataloguing and library networks.

A comparative statement of the features of the different physical forms of library catalogue is given to provide an overview of the relative merits and demerits of these physical forms of library catalogue.

We have learnt that a library catalogue is an indispensable tool of a library and hence, its effectiveness in making its resources available to users must get the greatest attention. The physical or outer form of catalogue relates to its external shape, size, appearance of documents.

Physical forms of library catalogue

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The library catalogue is available in many physical forms. A large number of catalogues have emerged so far as their physical appearance is concerned, for example, punch form, rotadex, magnetic tape form, microfiche/microfilm form, book form, sheaf form, card form and now the electronic form. However, the book form, sheaf form, and card form registered the long-lasting popularity.

Let us learn about some popular physical forms of the catalogue. The physical forms of library catalogues can be broadly studied under two groups: Conventional and Non-conventional/Modern.

Conventional Forms

The conventional physical forms include:

i) Bound register / Ledger form

In this form, the entries of documents of a library are written by hand and pages are set apart for different letters of the alphabets. These alphabets are arranged alphabetically. Minimum information about the document such as author, title, edition, accession number and class number is given for each book. There may be a separate register for authors or titles or subjects.

Advantages

- It is cheaper and simple
- easy to handle or consult.
- One can find many entries on one page. Hence, few pages are required for this catalogue.
- Xerox copies of these catalogues can be placed at different locations in libraries.

Disadvantages

- It is not flexible.
- It is not up-to-date
- Pages in the register get torn due to constant handling
- Entries for new books added cannot be inserted at their proper places.
- Printed book form

ii) Printed Book Catalogue

As the name suggests, it resembles a book or a register in appearance. The entries are printed on separate sheets as per desired arrangement and the sheets are then bound together to form a book or register.

Advantages:

- It is easy to prepare, handle and consult,
- Does not occupy much space as it is portable
- It is free from any machinery fault.

Disadvantages:

- It is expensive
- Takes more time to prepare
- it lacks flexibility as entries for new books cannot be accommodated at proper places,
- As such it is not economical to keep it up-to-date.
- Only a single user can use it at a time.

iii) The Sheaf Catalogue

Sheaf form of library catalogue is also referred to as loose-leaf form. This form consists of separate sheets of paper on which a couple of entries are printed. Each entry is made on a separate slip and there may also be more than one entry on each slip or page. These slips of paper are put in a loose-leaf binder and bound by some mechanical device into a volume.

Advantages

- It is adjustable and portable
- It is flexible as it is convenient to insert or delete entries
- It is easy to update
- Its is more compact and require less space

Disadvantages

- Wastage of space on the slip, and loss of time and labour
- Cannot participate in any cooperative cataloguing
- Difficult to bring out multiple copies
- Loss of slips due to mishandling by readers

iv) The Card Catalogue

The catalogue in card form is most popular physical form and is widely used in libraries throughout the world including India. The bibliographical elements of each document are recorded on a single card. The cards with a punched hole are held together by the steel locking rod that prevent removing the cards from the tray and falling out of cards. are arranged as per the desired sequence in wooden trays. The universal size of the catalogue consists of 12.5x7.5 cm. These cabinets could be obtained readily from commercial vendors.

Advantages

- a) It is flexible in keeping it constantly updated.
- b) The users and the library staff can handle it with ease.

- c) The cards are single, self-contained units. This feature permits additional approach points and cross references in the catalogue.
- d) The libraries using the card catalogue can participate in central and cooperative cataloguing scheme. This reduces the burden of the staff.

Disadvantages

- a) The card catalogue occupies large space in libraries.
- b) The growth and complexity require greater maintenance cost.
- c) Monopoly in using considerable number of trays at a time by a single person.
- d) It is not portable and hence the user has to go to the library for consulting it.

Non-Conventional/Modern Forms

In many western countries, modern and sophisticated forms of library catalogue are slowly replacing the card catalogue. Some of these forms are:

- Visible index form
- Microform catalogue
- Machine-readable catalogue

Non-conventional library catalogue forms include visible index, microform, and machine-readable (like OPACs) formats, which leverage technology to offer advantages over traditional card and book catalogs.

Here's a breakdown:

1) Visible Index Form

Visible index catalogue consists of strips mounted on a frame or cards held flat, hinged and with edge of each card protruding so as to make the heading visible. The cards are usually of the size 12.5 x 20 cm. The card is inserted into a hinged kraft pocket and these pockets are held in a specially prepared steel cabinet. Such steel cabinets are available in India under the trade name Kardex. Kardex is used in Indian libraries for maintaining records pertaining to current periodicals.

2. Microform catalogue:

In microform catalogue, entries are greatly reduced and printed upon a microfilm or microfiche. A suitable microform reader, magnifies the reduced images on the film or fiche and projects

them on to a screen is necessary for consulting a microform catalogue. The microform cannot be read by naked eyes.

Advantages

- Microform catalogues are compact and occupy less space in libraries.
- They are portable and accessible to users.
- These catalogues are very easy to use and maintain.
- Multiple copies of these catalogues can be prepared easily and inexpensively.

Disadvantages

- they cannot be used without microform readers.
- They also require special care and protection.
- Useful only in very large libraries

3. Machine-Readable/Online Public Access Catalogue (OPAC):

In a machine-readable catalogue entries are prepared and stored digitally on magnetic tape or disk for manipulation in a computer and it can be accessed and searched online. Access to the catalogue entries may be 'off-line' or 'on-line'. The major aim of this catalogue is to construct bibliographic records in machine-readable form (MARC) using standardised format facilitating data exchange between libraries. As a matter of fact, OPAC (On line Public Access Catalogues) are nowadays available in libraries.

These non-conventional forms offer benefits such as easier searching, more compact storage, and simpler updating compared to traditional physical catalogs.

Inner forms of library catalogue

The form which refers to various varieties of construction and arrangement of the catalogue is known as Inner or Internal form. There are many inner forms of catalogue as given below:

1) Author catalogue:

In author catalogue, entries are arranged alphabetically. It tells about the works of a given author possessed by the library or whether library is having a particular work of the author. Author is a broad term which includes editor, compiler, translator, reviser etc.

2) Title catalogue:

It consists of entries for books under their title arranged alphabetically. It is useful for oriental works i.e. Sanskrit and Pali books as authors have given distinctive names to their works. However, title catalogue in its pure form is rare now-a-days.

3) A Subject Catalogue:

Subject Catalogue is a catalogue that organizes materials based on their subject matter, rather than by author or title. In a Subject Catalogue, materials such as books, journal articles, reports, and other resources are classified under subject headings or categories that represent their content. This method of organization provides several key benefits that enhance the user experience, saves time, identify the gaps in collection, improve the research process, and support academic and personal learning.

4) Dictionary catalogue:

It is called a dictionary catalogue because all the entries (author, title, subject series etc) and their related references are arranged together in a single alphabetical order, like a dictionary. According to S.R. Ranganathan, 'Catalogue in which all the entries are word entries, hence

- i. it consists of one part only,
- ii. entries are arranged alphabetically like dictionary, and
- iii. main entry begins with the name of author or substitute for it' is known as dictionary catalogue.

5) Classified Catalogue

S.R. Ranganathan defines classified catalogue as a 'Catalogue in which some entries are number entries and some are word entries'. Hence it is divided into two parts- (i) Classified and (ii) Alphabetical. Classified Part of Classified catalogue consists all its number entries (i.e. Main Entry, Cross Reference Entries), and Alphabetical part consists all the word entries (i.e. Book Index Entries, Class Index Entries and Cross Reference Index Entries).

6) Alphabetic classed Catalogue

Cutter has defined alphabetical classed catalogue as 'an alphabetic subject catalogue in which the subjects are grouped in broad classes with numerous alphabetic sub-divisions. It may also include author and title entries in the same alphabet'. It follows two methods of arrangement

(i) major subject divisions are arranged in a classified order and subordinate subjects within major division in the alphabetical order (ii) major subject divisions are put in alphabetical order with subordinate subjects are arranged in classified sequence.

7) Subject catalogue: The subject catalogue is a catalogue in which the headings on the entries designate the subject matter of the document and the entries are arranged systematically to enable subject identification and retrieval. If the headings are arranged alphabetically, the catalogue is an alphabetic subject catalogue. On the other hand, if the headings are classified symbols arranged according to a classification scheme, the catalogue is then known as a classified subject catalogue.

8) Shelf list catalogue: a formal catalogue with entries sorted in the same order as bibliographic items are shelved. This catalogue may also serve as the primary inventory for the library.

Criteria for a good catalogue

A good catalogue is user-friendly, accurate, and provides multiple access points for effective information retrieval. It should be easily navigable, searchable, and allow for browsing. Additionally, it needs to be up-to-date, consistent, and promote discovery of library resources. Some of the criteria for a good library catalogue:

- **User-friendly interface:** The catalogue should be easy to understand and navigate, with clear instructions and intuitive search functions.
- **Multiple access points:** Users should be able to search by author, title, subject, keywords, and other relevant fields.
- **Web-based and searchable:** Online catalogs are essential for accessibility and discovery, allowing users to search from anywhere and easily downloadable and printable.
- **Accurate bibliographic information:** The catalogue should contain precise and complete details about each item, including author, title, edition, publication details, etc.
- **Authority control:** Using established name and subject authority files helps ensure that terms are used consistently and that related materials are grouped together.

- **No duplication:** The catalogue should avoid having duplicate records for the same item.
- **Rich metadata:** Providing detailed metadata (information about the resource) is important for accurate searching and discovery.
- **Browsing capabilities:** The catalogue should allow users to browse through search results and explore related materials.
- **Up-to-date information:** The catalogue should be regularly updated with new acquisitions and changes in availability.
- **Space economy:** The physical size of the catalogue should be minimized, especially in the case of physical card catalogues.

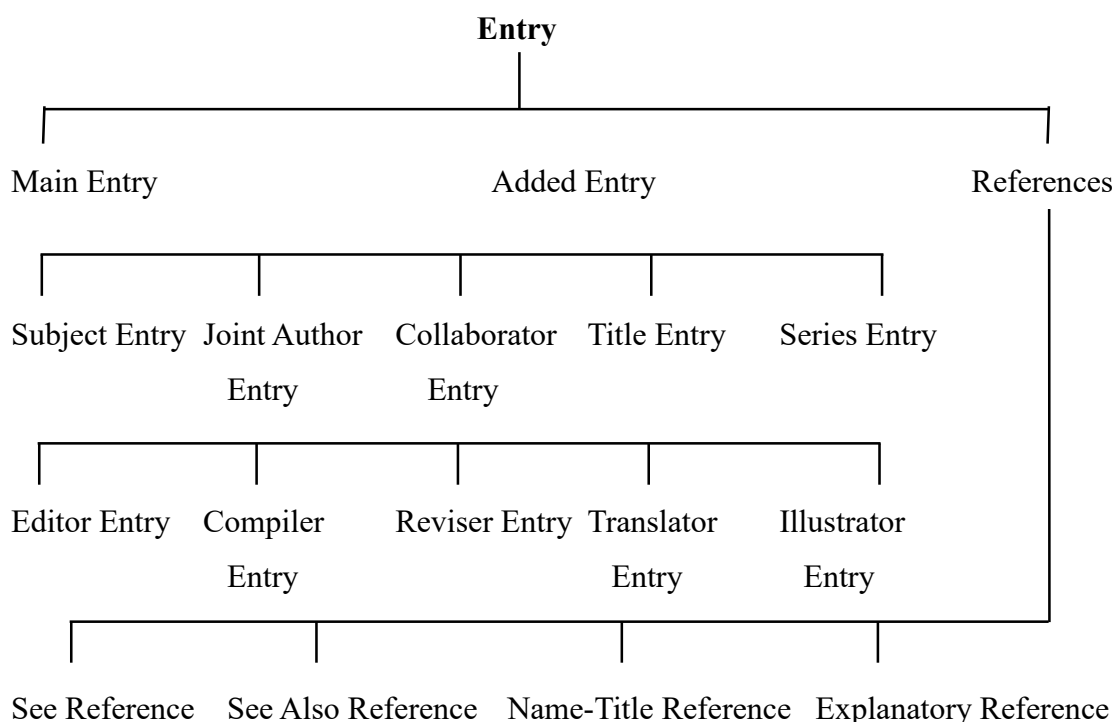
Entries and arrangement of catalogue

A library catalogue contains entries that provide detailed information about items in a library's collection. These entries are arranged in a specific order to allow users to easily find what they need. In AACR2 (Anglo-American Cataloguing Rules, 2nd edition), catalogue entries are structured into main entries and added entries, each with specific elements and arrangement. Main entries provide a comprehensive record of a document, while added entries offer alternative access points based on different user needs. The arrangement of entries within the catalogue depends on the type of catalogue: dictionary or classified and follows a specific order based on headings (e.g., author, title, subject).

AACR-2R recognizes following three types of entries:

1. Main entry
2. Added entries
3. References

The schematic illustration of these entries is given below:



Main Entry:

- The main entry is the primary record for a document and includes all the necessary bibliographical details.
- It is typically created using the author's name as the heading, but can also be created under the title if the author is not known or considered less important.
- The main entry serves as the foundation for other related entries in the catalogue.

Elements of a Main Entry (according to AACR2):

- **Call Number:** Used for physical location in the library.
- **Heading:** The primary access point (author, title, etc.).
- **Title and Statement of Responsibility:** Includes the title, subtitle, and information about the author and other contributors.
- **Edition Area:** Details about the edition of the work.
- **Material or Type of Publication Specific Details:** Information about the physical format or type of material.

- **Publication, Distribution, etc. Area:** Details about the publisher, date, and place of publication.
- **Physical Description:** Information about the physical characteristics of the item (e.g., number of pages, illustrations).
- **Series Statement:** Details about the series to which the item belongs.
- **Note Area:** Any additional information relevant to the item.
- **ISBN (International Standard Book Number):** The unique identifier for the item.
- **Accession Number:** The library's unique identifier for the item.
- **Tracing:** A record of all added entries made for the item.

Main Entry

1. Call No. section 155.4 BIT		
2. Heading	Bithell, Thomas C.	
3. Title with Imprint section 51291		The text book of child development: theory and practice/by Thomas C. Bithell and George Goldsmith; edited by James Elliot-3rd ed.-London: Prentice Hall, 1987.
7. Acc. No.		
4. Physical Description with Series note		xi, 217p.: ill.; 23 cm.- (Prentice Hall psychology series; no. 11)
5. Note section		Bibliography: p. 211-217.
6. ISBN section		ISBN 897 254 0889.
8. Tracing		1. Child Development. I. Goldsmith, George. II. Elliot, James. III. Title. IV. Series.

Added Entries:

Added entries provide alternative access points to the main entry, allowing users to find materials through different criteria.

- **Collaborator Entries:** These entries are created for individuals or entities who have contributed to the work in a secondary capacity, such as editors, illustrators, or translators.
- **Subject Entries:** These entries are created based on the subject matter of the document, allowing users to search for materials on specific topics.

- **Title Entries:** These entries are created based on the title of the document, allowing users to search by title.
- **Reference Entries:** These entries guide users from one form of a name or title to the preferred form, using "see" and "see also" references.

Reference entries

In AACR2, reference entries guide users from one access point in the catalogue to another. They include "see" references, which direct users from a term not used (e.g. pseudonym) as a heading to the established heading (e.g. the author's real name), and "see also" references, which link related headings, guiding users to other relevant entries in the catalogue. AACR2 also specifies rules for creating reference entries for pseudonyms, shared pseudonyms, and other situations where a work or author might be known by multiple names.

Arrangement of Entries:

The arrangement of entries depends on the type of catalogue (e.g., dictionary, classified, or name catalogue).

- **In a dictionary catalogue,** entries are arranged alphabetically by author, title, subject, and other access points. For example, entries under an author's name would be arranged alphabetically by the author's last name, or the chosen entry element. Subject entries would be arranged alphabetically by subject heading. Title entries would be arranged alphabetically by title.
- **In a classified Catalogue,** entries are arranged based on a classification system (e.g., Dewey Decimal or Library of Congress).
- **In name Catalogue,** entries are arranged alphabetically by the author's name, including works by the author and works about the author.

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