



Department of Distance Education

Punjabi University, Patiala

Class : Bachelor of Library and Information Science
Semester : 2
Paper : BLIS-107 (Information Sources and Services)
Medium : English **Unit : I**

Lesson No.

- 1.1 Reference and Information Sources**
- 1.2 Reference Sources and Information They Yield**
- 1.3 Documentary Sources of Information; Print and non Print**
- 1.4 Categories of Documentary Sources of Information**
- 1.5 Human and Institutional Sources**
- 1.6 Information And Reference Sources And Their Evaluation**
- 1.7 Bibliographical Sources**

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Sources of Reference and Information

Introduction

A librarian cannot be a subject-specialist in all the subjects constituting universe of knowledge. What is, however, expected from him is that he or she should know the source where the required information exists. His proficiency is measured from his knowledge of various reference and information sources. As such, this unit is quite important for you. The lessons are planned in such a way that you master their contents to become an efficient librarian.

In view of the subject, this unit has been organised into five lessons, each covering a particular aspect of this topic so that you become fully conversant with its contents.

Structure of the Lesson

- 1.1. Introduction
- 1.2. Reference and Information Sources—Why ?
- 1.3. Sources before Paper and Printing
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 - 1.6.2 A Good Reference Book
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- 1.8. References and Further Reading

1.1 Introduction

Reference Service is the personal help and assistance rendered to the users by the library staff in promoting the use of books and other sources of information towards providing the desired information. Reference Service involves reference staff, reference tools, and the users—the seekers of information.

An important element on which the efficiency of reference service depends is

the nature of the Reference collection available at the library. Need-based, up-to-date and balanced reference collection will go a long way to make the reference service a success. Conventional reference books from well-known publishers and of established standard should be available in the reference collection to serve as reference tools.

1.2. Reference and Information Sources—Why ?

The purpose of a library, in simple words, is to disseminate information, to communicate information and to answer queries. We remember many things and answer many questions out of our memory. But our memory does not help us to answer every question. We need an aid. It is enough to know from where that answer can be had or which aid has that answer. What we consult or refer to for getting information for dissemination or to answer a particular question can loosely be called source of information or source of reference. It can be anything, a stone, a clay tablet, a piece of skin, a piece of cloth, a book, a periodical, a microform, a computer readable, etc. that yield information or an answer to a query.

Information and reference sources can broadly be divided into two categories :

2.1 Sources before Paper and Printing

2.2 Sources after Paper and Printing

You will learn more about these two categories in the following paragraphs:

1.3. Before Paper and Printing

1.3.1 Stone and Clay

From the earliest time man has tried to preserve his thoughts for the coming generations. To begin with stone was used for this purpose. Samples of Egyptian pictographic writing, known as *hieroglyphics*, were found in building stones dating back to 3000 or 4000 B.C. Since writing on stone was arduous, it was replaced by clay. During the Sumerian-Babylonian-Assyrian civilisations, clay was used extensively for recording information. Writing on the wet clay was done by a stylus and then it was baked for permanance. This writing has been called as *cuneiform*. Clay tablets took time to prepare for use and their transportation was also difficult. Consequently, these were replaced by *papyrus*, a comparatively better communication media. Clay tablets remained a source of information for a long time.

1.3.2 Papyrus

Papyrus was made from the stem of a plant growing in the delta of the Nile river. Its stem was cut into strips which were further cut into sections. Two such sections were laid across each other with their fibre running at right angles. The fibres were immersed in water, laminated and then dried in the sun. The sheet was given a high polish. The writing on these sheets was done with a pigment. The pieces of papyrus were pasted together in one long strip and rolled into a volume. Sheets were also folded and stitched together with a binding cord. It was known as a *codex*. Writings on the papyrus were an important source of information in ancient times.

Self-Check Exercise

1. Before paper and printing what were the various media used to preserve and communicate thoughts ?

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2. What do you understand by the following terms :

Hieroglyphics.....
Cuneiform.....
Codex.....

1.3.3 Silk and Skin

The supply of papyrus plant was limited and it could be grown in certain geographical areas only. In the third century B.C., the Chinese started using cloth as material to write upon. Camel hair brush was used for writing purposes. Since cloth was too costly to be spared for writing, *parchment* and *vellum* replaced papyrus as the recording medium. *Parchment* or *vellum* is not leather as it is not tanned. They are prepared with lime which gives them smoother surface. Writing on silk and skin was a source of information for a long time, and their samples can be seen in the libraries of China and Arab countries even today.

Self-Check Exercise

1. Why silk and skin replaced papyrus ?

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1.3.4 Leaf and Bark of Trees

In South India, the leaf of the palmyra palm tree was used for writing purposes. In North India, the inner bark of the brick tree was used for this purpose. Amatl was the writing material used by the Mayas and Aztecs of America. Wooden strips were used by Chinese for writing.

1.4. Sources after Paper and Printing

Before the advent of paper, information was communicated through above media. Paper was invented in 105 A.D. by Ts'ai Lun. Since writing on the wooden strips was difficult and the use of cloth was expensive paper, a wonder writing upon material, was developed. The art of paper-making spread to Japan in 610, Egypt in 850, Spain in 1150, Italy in 1270, France in 1348, India in 1420, Russia in 1576 and to the United States in 1690 A.D.

1.4.1 Towards Document

In 1440 A.D., Gutenberg invented printing from movable type. This and the renaissance led to the increased demand for paper and consequently there was a steady growth of its production.

"The combination of paper and the printing press has probably done more to preserve man's accomplishments than any other single human achievement. Without doubt, it is largely responsible for the mountain of recorded information extant today."

In brief, paper and printing have joined hands together to provide us documents, the source of all information.

1.4.2 Document and its Importance

Knowledge per se is an abstract entity. Until or unless it is embodied in some physical carrier, it cannot easily be handled, preserved, and disseminated. Though the nature and physical shape of knowledge carriers, called documents, has changed *pari passu* with the technological advances of society, documents have remained a major means to record, preserve, and disseminate knowledge. This has been true since the invention of the alphabet and more so since the discovery of portable writing surfaces.

Information is power and it is contained in documents in the form of kinetic power. The documents contain the wisdom of sages, experiences of philosophers and the discoveries of scientists. They are source of all information. Further progress and development is possible only when information contained in documents is used judiciously and extensively. In view of the importance of documents, it is worthwhile to know more about them, and the information they yield.

1.4.3 Document as a Source of Information

Document is an embodied thought. It is a record of work on paper or other material for easy physical handling, transportation across space, and preservation through time.⁴ The thought-content of a document represents the information it carries. A document is an object that provides information. It is a source of information. It is the material carrier of knowledge and the memory of mankind. A book is a document. An article from a journal is a document. A thesis, a report, a standard, a pamphlet, a patent, etc. are all documents.

Though it is possible to obtain information from other sources—by asking an individual or an organisation, or by attending a meeting, or by visiting an exhibition, or by listening to a radio or television broadcast—yet these sources have themselves, for the most part, gathered their information from documents.

Most of the documents have been created by direct human intervention, but a few of them are directly recorded in some form through instruments. Ranganathan calls the latter as *meta-documents*. The documents which embody macro-thought are known as *macro-documents* and those embodying micro-thought are called *micro-documents*. A book is a macro-document, whereas an article from a journal is a micro-document.

Self-Check Exercise

1. Define the term document.
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2. Differentiate a document from a meta document.
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3. Distinguish between macro-documents and micro-documents.
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1.4.4 Types of Documents and the Information they Yield

Documents are available in various physical forms like books, periodicals and serials, government publications, reports, dissertations and theses, pamphlets, standards, patents, trade literature, maps and atlas, photographs and illustrations, microforms, audio-visuals, computer readable documents, etc. These are the important types of documents available today as sources of information. Anybody who is to develop a worthwhile library and information centre ought to know more about these documents, their characters and utility.

In this lesson you will learn about :

1. Books
 - 1.1 Single volume
 - 1.2 Multi volume
 - 1.3 Simple Book
 - 1.4 Composite Book
2. General Book
3. Text Book
4. Reference Books
 - 4.1 Dictionaries
 - 4.2 Encyclopedias
 - 4.3 Year Books
 - 4.4 Almanacs
 - 4.5 Biographical sources
 - 4.6 Geographical sources
 - 4.6.1 Gazetteer
 - 4.6.2 Map
 - 4.6.3 Guide Book
 - 4.7 Directories
 - 4.8 Sources for Current Information
 - 4.9 Sources for Statistics
 - 4.10 Hand books and Manuals
 - 4.11 Bibliographical tools
 - 4.11.1 Catalogues
 - 4.11.2 Bibliographies
 - 4.11.3 Indexing Services
 - 4.11.4 Abstracting Services

Each of these sources of information and the information they yield to the user is given in the following paras. Some of the popular books and reference books are also given here so that you may go to your library and examine them to enhance your understanding about these sources of information. You may also come across such sources that yield similar information but have not been given in this lesson.

1.5. Books

A book is a physically independent document other than a periodical

publication, that is, it has been completed or has been intended to be completed in a definite number of volumes. A book normally deals with a subject of great extension and less intension. It is thus a macro-document. As per the norms prescribed by UNESCO, a book should have at least 49 pages, 22 to 32 cm. height, and 1.5 to 4 cm. thickness.

A book may be a single-volume or multi-volume document. It may be a simple book or a composite one. Also it may be a general book or a text-book or a reference book.

1.5.1 Single-Volume Book : A book which is in a single volume.

1.5.2 Multi-Volume Book : A book which is in number of volumes. It usually has a common index. It also has the same sequence of pagination continued in all the volumes of the set.

1.5.3 Simple Book : A book, either by a single author or by two or more joint authors, that gives a continuous exposition of the subject is known as a *simple book*.

1.5.4 Composite Book : A book by more than one author, all contributions of which not forming a continuous exposition, but having its own title, distinct and independent, is a *composite book*. If a composite book has a single generic title to denote all the contributions collectively, it is an *ordinary composite book*, otherwise it is an artificial *composite book*.

1.5.5 General Book : A book is either a general book or a text-book or a reference book. A *general book* deals with the subject in a general way. A book giving general exposition of the subject, or a biography, or a fiction is a general book. Examples of some of the general books are : Ranganathan's *Five Laws of Library Science*, Girja Kumar's *Philosophy of User Education*, Satija's *Ranganathan : Method and Style*, Dhyaneswar's *Gita : the mother*.

1.5.6 Text-book : A *text-book* is one that supports a teaching programme. It deals with the fundamentals of the subject using the language and style that suit the students. Author's newly propounded theory is usually not contained in it. Different courses of study have different text-books to support them. Guha's *Documentation and Information*; Prasher's *Introduction to Reprography*; Vishwanathan's *Cataloguing—Theory and Practice*; Krishan Kumar's *Theory of Classification* are text-books on documentation, reprography, cataloguing and classification, respectively, meant for B.Lib. I. Sc. and M.Lib. I.Sc. courses.

1.6. Reference Book

Whereas a *general book* or a *text-book* belongs to the category of books which can be read through for information, education and inspiration, there is another class of books which are meant to be consulted or referred to for a definite piece of information. These are known as *reference books*. They provide everyday information readily. Dictionaries, encyclopedias, yearbooks, almanacs, directories, gazetteers, atlases, biographical dictionaries, etc. are all reference books. *The Oxford English Dictionary*; Harrod's *Librarian's Glossary of Terms*; *Encyclopedia Britannica*; McGraw-Hill *Encyclopedia of Science and Technology*; *India—A Reference Annual*; *Imperial Gazetteer of India*, Sen's *Dictionary of National Biography* are some of the examples of reference books.

A reference book is for reference only and disjunctive pieces of information are arranged in a convenient order for this purpose. Since it does not provide continuous exposition of any subject, it is consulted for specific information.

1.6.1 Purpose

Reference service means process of establishing contact between a reader and his documents in personal way. His documents means those sources of information which serve his information needs, which give answer to his questions. Even reference service has been categories as (i) Ready reference service and (ii) Long range reference service. The reference books mentioned above help a librarian to give ready reference service efficiently. For long range reference service, one is to use reference books, text-books and general books, and even non-book sources of information. To repeat once again, reference books help a librarian to provide ready reference service to his readers.

1.6.2 A Good Reference Source

The next question is whether a reference source is good or bad. Katz provides the answer in simplistic terms : (i) a good reference source is one that serves to answer questions; (ii) a bad reference source is one that fails to answer questions. A good reference source is accurate and trust worthy; produced by a reputed publisher, learned author or compiler; and is up-to-date. A broader definition of reference book is any book which you refer or use to answer questions of a reader to provide him his information. The long range reference service is not confined to conventional reference books, but requires the use of many books to answer complicated queries.

There are a number of reference sources in such category. Various categories of reference sources have been detailed in the next lesson. You will also learn the specific information which each category yields.

Self-Check Exercise

1. Differentiate the following :

(i) General Book and Text Book

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(II) General Book and Reference Book

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1.7. Summary

Reference service is the personal service provided to the users by the staff of a library to facilitate them in their use of the library and its resources. According to Ranganathan, "it is establishing of contact between a reader and book by personal service." Reference Service is categorized as Ready Reference Service or Long Range Reference Service, depending on the complexity of a query and the time required for answering it. Former can be rendered immediately or without delay, because the reference question involved is simple in nature and is easy to answer. The Long Range Reference Service, on the other hand, involves such queries as cannot be answered readily but require time to hunt the answer from various sources inside the library or from other libraries—national or foreign.

An important element of which the efficiency of reference service depends is the nature of the Reference collection available at the library. Need-based, up-to-date and balanced reference collection will go a long way to make the reference service a success. Conventional reference books from well-known publishers and of established standard, such as dictionaries, encyclopaedias, directories, yearbooks, maps & atlases, gazetteers, biographical dictionaries, bibliographies, indexes, abstracts, etc., should be available in the reference collection to serve as reference tools.

1.8. References and further Readings

1. Chakraborti, A.K., Reference Service, Hyderabad, A.P: Library Assoc., 1981.
2. Chakraborti, B. and Sengupta, B. Fundamentals Reference Service, Calcutta: World Press, 1986, 248 p.
3. Katz, William A., Introduction to Reference Work. 3rd ed., Vo.I, New York: McGraw Hill, 1978
4. Krishan Kumar, Reference Service, 5th ed. New Delhi: Vikas Pub., 1996. Reprint 2006.
5. Mukherjee, A.K., Reference Work and Its Tools, 2nd ed. Calcutta: World Press, 1971, 393 p.
6. Ranganathan, S.R., Reference Service, 2nd rev. ed. Bangalore: Sarada Ranganathan Endowment for Library Science, 1989, 432 p.
7. Sardana, J.L., Reference and Information Sources, New Delhi: Ess Ess Pub., 1984, 275 p.

Reference Sources and Information they yield**Structure of the Lesson**

- 2.1. Introduction
- 2.2. Reference Sources and Information they yield
 - 2.2.1 Dictionaries
 - (i) Language
 - (ii) Subject
 - 2.2.2 Encyclopedias
 - (i) General
 - (ii) Subject
 - 2.2.3 Year Books and Almanacs
 - 2.2.4 Biographical Sources
 - 2.2.5 Geographical Sources
 - (i) Gazetteer
 - (ii) Map
 - (iii) Guide-book
 - 2.2.6 Directories
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 - 2.2.9 Handbooks and Manuals
 - 2.2.10 Bibliographical Tools
 - (i) Catalogue
 - (ii) Bibliography
 - (iii) Indexing and Abstract Services
- 2.3. Importance of Reference Services
- 2.4. Important Reference Sources and Information they yield
- 2.5. Summary
- 2.6. References and Further Readings

2.1. Introduction

In Part one you have already learned reference and information sources of pre-paper and printing time and post-paper and printing time. Various forms of book, including reference book, were discussed there.

In this lesson you will be learning various categories of the reference books. They are dictionaries, encyclopedia, year books, biographical sources, geographical sources, directories, sources for current information, sources for statistics, hand books and manuals, and bibliographical tools. You will learn in this lesson :

- (1) Various types of reference books
- (2) Information each type yields
- (3) Names of popular and standard reference sources in each types.

2.2. Reference Sources and Information they Yield

As already stated, there are various types of reference books, each yielding a

specific type of information. Some of them are given below :

2.2.1 Dictionaries : Dictionaries are of two types : (a) Language dictionaries, and (b) Source dictionaries.

(i) **Language dictionary** contains the words of language, usually arranged alphabetically giving their meanings, pronunciation, spellings, syllabication, usage etc.

Funk and Wagnalls New Standard Dictionary of the English Language, Webster's New International Dictionary of the English Language, Oxford English Dictionary, Hindi Shabdhasagar of Nagri Pracharni Sabha, etc., are some of the language dictionaries.

(ii) **Subject dictionary** is an alphabetical list of the terms of the subject, briefly giving the meaning of each. Subject dictionaries are confined to specialised subject fields. Some of the subject dictionaries are the *Comprehensive Glossary of Technical Terms—Science*, Thewlis' *Concise Dictionary of Physics and Related Terms*, Hampel and Hawley's *Glossary of Chemical Terms*, Thompson's *ALA Glossary of Library Terms*, Harrod's *Librarian's Glossary of Terms*.

2.2.2 Encyclopaedias : Encyclopaedias are also of two types : (a) General encyclopaedia, and (b) Subject encyclopaedia.

(i) **General encyclopaedia** is a work containing information articles giving essential information on subject in various branches of knowledge, arranged alphabetically by subject and names. Some of the general encyclopedias are : Krishanvallabh Diwedi's *Hindi Viswa-Bharati : Janan-Vijnan ka Pramanik Kosa*; Nagri Prchami Sabh'a *Hindi Visvakosa*; *Encyclopedia Britannica*; *Encyclopedia Americana*; *Collier's Encyclopedia*, etc.

(ii) **Subject Encyclopaedia** is a work containing information articles giving essential general information limited to a special field of knowledge or area of interest arranged alphabetically by subject or names. It is an alphabetical collection of articles or write-ups on a particular subject. Some of the subject encyclopedias are : *Encyclopaedia Indica* by J.S. Sharma, Kent's *Encyclopedia of Library and Information Science*; Hasting's *Encyclopaedia of Religion and Ethics*; Sill's *International Encyclopedia of Social Sciences*; McGraw-Hill *Encyclopedia of Science and Technology*; Van Nostrand's *Scientific Encyclopedia*; CSIR's *Wealth of India*.

2.2.3 Yearbooks and Almanacs : A yearbook is an annual compendium of data and statistics. It records the year's activities by country, subject, etc. Almanac is also a compendium of useful data and statistics relating to countries, personalities, events, subjects and the like. The essential difference between a yearbook and an almanac is that the latter also includes considerable retrospective material.

Yearbooks and almanacs usually provide the following information :

- (i) Chronological list of important events of the year;
- (ii) Summaries of the political, social and cultural events of the year;
- (iii) Major developments and trends in various fields, including science and technology during the year;

- (iv) Short biographies of notable living persons and also obituaries of leading personalities.
- (v) Information about organisations;
- (vi) Statistical information about different fields, including important sports events, prizes, awards, population, etc.
- (vii) In short, relatively brief current information on a subject or organisation or event.

Some of the yearbooks and almanacs are : *India—A Reference Annual; Times of India Directory and Yearbook including Who's Who; Statesman's Yearbook; Europa Yearbook; Yearbook of the United Nations, Whitaker's Almanac and World Almanac and Book of Facts* are two important almanacs.

2.2.4 Biographical Sources : Among the biographical sources, biographical dictionary is more important. It is a compilation of life sketches of eminent and notable persons, arranged in an alphabetical or any other convenient order. The coverage is usually restricted either in a geographical area or a subject of specialisation. A biographical dictionary may contain the life-sketches of living persons or of those who have died. The former is called 'Who's Who' and latter 'Who was Who'.

Other sources of biographical information are almanacs, dictionaries, directories, encyclopedias, literary handbooks, newspapers, manuals, etc.

The information which these biographical sources yield is the name, date of birth (and date of death, if any), qualifications, positions held, contributions made, marital status, publications, and any other information about the biographee. Sometimes a photograph of the biographee is also added. An international biographical source is generally biased towards the country where it is published and provides more coverage to the nationals of that country. A national biographical source, however, covers more nationals and gives detailed and better information about them. A subject biographical source gives better information for the specialists of that discipline.

Some of the important biographical sources are : *Current Biography, Webster's Biographical Dictionary, Sen's Dictionary of National Biography, INFA's Who's Who, Sharma's National Biographical Dictionary of India; Prasher's Indians in News : An Annual Biographical Dictionary; Stephen's Dictionary of National Biography (U.K.); Who's Who; An Annual Biographical Dictionary (London); Dictionary of American Biography; Who's Who in America; Dictionary of American Scholars; Who's Who of Indian Writers; Dictionary of Scientific Biography; Mc-Graw-Hills Modern Men of Science.*

2.2.5 Geographical Sources : There are three main sources for geographical information. They are gazetteers, maps and atlases, and guide books. These are briefly discussed as follows :

(i) **Gazetteer** is a geographical dictionary which gives information about the names of towns, villages, rivers, mountains, lakes and other geographical features, population, longitude and latitude and in some cases, brief to rather long entries tracing the history and economic and political features of a particular place. Two international gazetteers are *the Columbia-Lippincot Gazetteer of the World* and *the Webster's New Geographical Dictionary*. Among the Indian gazetteers, the *Imperial Gazetteer of India* and the *Gazetteer of India; Indian Union* are important.

(ii) **Map** is representation of the outer boundaries of the earth on a flat surface. An *atlas* is a volume containing a collection of these maps. A *physical map* provides information about the various features of the land form, the rivers and the valleys, the mountains and hills. A *route map* gives information about the roads, railroads, bridges and the like. A political map normally limits itself to political boundaries (e.g. towns, cities, states) but may include topographical and route features. Maps may also provide information regarding the distribution of forests, rainfalls, population, etc. They may depict the production of various crops in different areas, location of the enemy, or any other information. The Survey of India issues Indian maps. Some of the important atlases are : *Brittanica Atlas*; *Hammond Medallion World Atlas*; *Rand McNally Commercial Atlas and Marketing Guide*; *Rand McNally New Cosmopolitan World Atlas*, *Times Atlas of the World*.

(iii) **Guide Books** or a *travel guide* is usually limited to a single area (town, city, state, nation) and provides all the necessary information useful to the tourists or travellers. It provides a brief historical background of the place and emphasizes routes and itineraries. It also gives information about hotels, motels, museums, buildings, places etc., which are of interest to the tourists. It informs a traveller as to what he should see, where he should stay, where he should take his food and how he should reach the place. Usually, the *Guidebooks* are brought out in series, such as American guide series, Fodor's modern guides, Tourist guide—India, *The Fodor's India* and Murray's *Handbook for Travellers in India, Pakistan, Burma, and Ceylon* are two well-known travel guides for tourists visiting India.

2.2.6 Directories : The *ALA Glossary of Library Terms* defines a *directory* as "a list of persons or organizations systematically arranged usually in alphabetic or classed order, giving addresses, affiliations, etc., for individuals and addresses, officers, functions and similar data for organizations." Sometimes, the lists of periodicals and newspapers are also called directories.

Some of the important directories are as follows : *Europa Year book*; *World of Learning*; *Yearbook of International Organisation*; *Times of India Directory and Yearbook*; *Bowker's Annual of Library and Booktrade Information*; *World Guide to Libraries*; *American Library Directory*; *INSDOC's Directory of Scientific Research Institutions in India*; *Commonwealth Universities Yearbook*; *American Universities and Colleges*; *Universities Handbook—India*; *Delhi Telephone Directory* and many others. These directories give information about the addresses of persons, organisations and their officials etc

2.2.7 Sources for Current Information : Sources for current information cover recent events, which other sources will take sometime to include them. Newspapers provide information about recent events. News summary of current events is provided by such sources as *Kessing's Contemporary Archives*, *Asian Recorder*, *Facts on File*, *Data India*, etc. The last gives information about India's economic and social developments.

2.2.8 Sources for Statistics : Statistical information is very important for research and development activities. In social sciences, when scientific methods are to

be applied, events or situations need to be quantified in term of statistics There are a number of sources which give statistical information. UN Statistical Office brings out the *Monthly Bulletin of Statistics*. India's Central Statistical Organisation brings out the *Monthly Abstract of Statistics* and an annual *Statistical Abstracts, India*. The Registrar General and Census Commissioner of India brings out the *National Sample Survey*. The statistical abstracts are brought out by most of the Indian States. For statistical information of U.S.A., the *Statistical Abstract of the United States* is useful. The *Demographic Yearbook* and the *Statistical Yearbook* of the U.N. Statistical Office are indispensable source books on statistical information at international level.

2.2.9 Handbooks and Manuals

(i) Handbook : A *handbook* is a compilation of information of various types in a compact and handy form. It contains data, tables, graphs, illustrations, formulae, factual information etc. The contents of a handbook are frequently required by a scientist, a technologist or a practitioner. Lange's *Handbook of Chemistry*, Tuma's *Engineering Mathematics Handbook*; Pouton's *Historians Handbook* are some of the examples of a handbook.

(ii) Manual is a book providing instructions or directions for performing a job or pursuing an occupation. It is instruction book informing as to how to perform a job or how to do something. Ranganathan's *Library Manual* and Fay's *Rockhound's Manual* can be cited as examples of a manual.

2.2.10 Bibliographical Tools : Catalogues, bibliographies, indexes and indexing services; and abstracts and abstracting services are all bibliographic tools which inform about the sources of information. They are indispensable for some sort of bibliographical control.

(i) Catalogue : A *catalogue* systematically lists the resources of a particular library or a group of libraries. It reveals to the user of the library what documents or sources of information are available in the library on a particular subject.

The Catalogue of Books Represented by Library of Congress Printed Cards, covering period from 1898 to 1942 and 167 volumes can be cited as an example of a catalogue.

(ii) Bibliography : A *bibliography* is a systematic list of documents irrespective of their availability in a library or a group of libraries. Both these tools cover macro-documents.

The handing down of cumulative knowledge or information to the later generations either by the word of mouth or in graphic form is of very great importance for further development. The very existence of the written records demands that they should be listed somewhere and thus their existence acknowledged. And if this listing is done in a systematic way, we can have some bibliographical control over the ever-expanding and multi-dimensional graphic knowledge or information and put it in use for further human development. A catalogue or a bibliography serves this purpose and facilitates the use of sources of information.

The Indian National Bibliography; Indian Books in Print; BEPI : A *Bibliography of English Publications in India; National Bibliography of Indian Literature, 1950-53*; Prasher's *Indian Books and Indian Library Literature* are some of the bibliographies published from India. There are national and international bibliographies as also there are current and retrospective bibliographies. There are trade bibliographies also.

(iii) **Indexing and Abstracting Services :** Whereas a bibliography mostly covers macro-documents, an *index* covers micro-documents. An *index* is a systematic list of micro-documents on a subject or by an author. It ensures systematic organisation of information about documents for their easy and quick retrieval. It is a guide to the literature on a subject. In addition to the bibliographical details of the document, if its summary is also given it becomes an abstract. When an *index* or *abstract* is issued after a regular interval it becomes an indexing or abstracting periodical. An indexing or abstracting periodical keeps a scientist or a researcher abreast with the latest developments in his subject continuously through its successive issues. An abstracting periodical provides brief information about the subject contents of each item included. This information may serve the needs of the user or it may help him to select the items relevant to his needs. This is current awareness function of an indexing or abstracting periodical. The other function of an indexing or abstracting periodical is to provide specific information of literature on the subject, as and when the need arises. It is its retrospective search function which is accomplished through its various cumulations.

2.3. Importance of Reference Sources

Reference sources available in the libraries contain very useful information compiled for use. Most of the questions or the information of day to day use can be quickly had from these. In fact, they yield ready made information for most of the queries. But unless a librarian is well-conversant with them and knows fully their contents, arrangement of contents, scope, etc. he will not be able to get best out of these. It is important for the librarian to know the reference sources, their contents, and the arrangement of these contents. This will help the librarian to access the information given in each with ease and without loss of time. Librarian should evaluate the reference sources available in the reference collection for knowing each one of these well so that these may be put to maximum use in the service of readers.

2.4. Important Reference Sources and Information they yield

To initiate you in the use of reference and information sources, two exercises have been given below. The first gives the type of questions and the reference sources from where answer to the question can be found.

First Exercise

Sr. No.	Nature of Questions	Reference and Information Source
1.	Concept of subject	Subject dictionary
2.	Pronunciation of a word	Language dictionary

3.	Short write up on Philosophy	General encyclopedia
4.	Addresses of Pakistan Universities	Directory, World of Learning
5.	Population of H.P.	Handbook of H.P.
6.	Scientific Research organisations in India	Directory of Scientific Research organisations by INSDOC
7.	Publishers of Delhi	Directory, Directory of Indian Publishers
8.	Places worth visiting in Delhi & Agra	Guide book
9.	Facts about India	Any Handbook on India
10.	Statistics about agriculture of the last year	Statistical year book

Second Exercise

Sr. No.	Reference Book	Information it Gives
1.	India, a Reference Annual	Information on various facets of India
2.	Murray's Guide or Handbook for Travellers in India and Pakistan	Information of tourists interest
3.	Pocket Compendium of India Statistics	Statistical information on India
4.	Oxford Dictionary of Quotations	Important Quotations
5.	Indians in News (Medallion Press)	Indians who were in news during the year
6.	International Who's Who	Biographical information of international figures
7.	Brittanica Official Handbook	Information on various facets of U.K.
8.	World of Learning	Information about the Universities of the World
9.	Universities Handbook of India	Information about the Indian Universities
10.	Fodor's Guide to India	Information of tourists' interest
11.	Encyclopedia Americana	General Encyclopedia. Gives detailed information on various topics
12.	Statistical Abstract of India	Statistical information on India
13.	Imperial Gazetteer of India	Geographical information on India
14.	American Annual	Gives current events of USA
15.	Britanica Book of the Year	Gives current events of USA
16.	Information Please Almanac	Misc. information about USA and other countries
17.	Statistical Year Book	Provides statistical data on the world
18.	Columbia Lippincott Gazetteer	Gives geographical information of the world
19.	Brittanica Atlas	Gives location of various places in the world

20. British National Bibliography

Gives information on current publications from UK

Self-Check Exercise

1. What information the following reference sources provide
 - (i) Guide Book
 - (ii) Gazetteer
 - (iii) Directory
 - (iv) Almanacs
 - (v) Who was who
 - (vi) Bibliographical sources
2. What reference book (category only) would you consult for the following information
 - (i) Computer
 - (ii) Gurdwaras of Punjab.....
 - (iii) History of Ludhiana
 - (iv) Sikhism
 - (v) Population of Haryana.....
 - (vi) Universities of India.....
3. Give any three qualities of a reference book
 - (i)
 - (ii)
 - (iii)

2.5. Summary

This lesson taught you about various reference sources. There are dictionaries which give you the meanings, spellings and pronunciation of words. Subject dictionaries give you the meaning of the terms and concepts of its subject. A general encyclopedia contains essays on important topics of general interest. A subject encyclopedia gives similar information on the topics of its subject. A yearbook is an annual compendium of data and statistics. An almanac gives useful data relating to countries, personalities, events, etc. Biographical sources give you information about the very important persons living, as also who are no more. A gazetteer is a geographical dictionary. A map gives you the location of a place. A guide book provides information useful to the tourists. Directories give you address of persons and organisations. Similarly, useful information is given by other reference sources. With the help of these a lot of information can be provided by the users without the loss of time. The only condition is that you are well conversant with the contents and their arrangement.

2.6. References and further Readings

1. Chakraborti, B. and Sengupta, B., Fundamentals of Reference Service. Calcutta: World Press, 1986, 248 p.
2. Katz, William, A., Introduction to Reference Work, 3rd ed., v.I. New York: McGraw

Hill, 1978.

3. Krishan Kumar, Reference Service, 5th ed. New Delhi. Vikas Pub: 1996.
4. Mukherjee, A.K., Reference Work and its Tools, 2nd ed. Calcutta: World Press, 1971, 393 p.
5. Ranganathan, S.R., Reference Service, 2nd rev. ed., Bangalore: Sarada, Ranganthan Endowment for Library Science, 1989. 393 p.
6. Sardana, J.L., Reference and Information Sources. New Delhi: Ess Ess Pub., 1984, 275 p.
7. Sewa Singh, Reference Service in Academic Libraries in India. New Delhi: Ess Ess Pub., 1986, 201 p.
8. Sharma, H.D., Indian Reference Sources : A Reference Guide to Indian Reference Books. Varanasi: Indian Bibliographic Centre, 1972, 313 p.
9. Sharma, Jagdish Saran and Grover, D.R., Reference Service and Sources of Information. New Delhi: Ess Ess Pub., 1987, 288 p.

LESSON NO. 1.3**AUTHOR : R.G. PRASHAR**

Documentary Sources of Information:Print and Non Print**Structure of the Lesson**

- 3.1 Introduction
- 3.2 Periodicals & Serials
- 3.3 Government Publications
- 3.4 Dissertations & Theses
- 3.5 Reports
- 3.6 Pamphlets
- 3.7 Standards and specifications
- 3.8 Patents
- 3.9 Trade Literature
- 3.10 Maps, Atlases and Globes
- 3.11 Photographs and illustrations
- 3.12 Microforms
 - 3.12.1 Microfilm
 - 3.12.2. Microfiche and ultrafiche
 - 3.12.3. Microcard
 - 3.12.4. Microprint, Readex
- 3.13. Computer Readables
- 3.14. Audio-Visuals
- 3.15. Summary
- 3.16. References and Further Readings

3.1. Introduction

In Lesson One and Lesson Two you have studied Reference and Information Sources in book form. These were conventional sources. In Lesson three, information sources in non-book form are discussed. These sources of information are getting more importance for giving information service to the researchers and scholars. They need nascent information of advanced nature and this is available in the information sources discussed below. The details regarding the information they give has also been given. With this almost all types of reference tools stand covered. You through knowledge about these sources of information, and the information they give, and the arrangement of their contents shall enable you to exploit these sources fully and serve the seekers of information efficiently. It will be in your own interest to evaluate important information sources available in your library and find out their weakness and strength. Unless you use these tools extensively in giving information service to users, you will not become a proficient information scientist.

3.2. Periodicals and Serials

A *periodical publication* is that which appears in parts or volumes at regular

intervals with the intention to continue its publication for ever. Besides the element of periodicity and the continuity, a periodical publication has a distinguishing number for each successive volume, known as its volume number. The *Annals of Library Science and Documentation*, *ILA Bulletin*, *IASLIC Bulletin*, *Journal of Library and Information Science* are some of the important Indian periodicals in library science. The periodicity of the first three is quarterly, and that of the last one is half-yearly. The *Annals of Library Science and Documentation* brought out its 36th volume in 1989, *ILA Bulletin* its 25th volume in 1990, *IASLIC Bulletin* its 35th volume during 1990, and the *Journal* its 15th volume during 1990.

Every subject has a number of periodicals to deal with its various facets. A periodical usually publishes original contributions and makes the latest information available on its subject. In fact, research and development work is not possible without periodicals. In scientific and technological research, the periodical literature is simply indispensable because they provide current and nascent information on the subject and keep the researchers abreast with the latest developments in their fields.

A *serial* is also a periodical publication but its each volume embodies more or less similar information, mainly relating to its year or period of coverage. *The Times of India Directory and Yearbook* is an example of a serial.

Self-Check Exercise

1. Differentiate between a book and a periodical
.....
.....
2. Give two important characteristics of a periodical
(a).....
(b).....
3. What type of information a periodical gives ?
.....
.....

3.3. Government Publications

Government publications are the official documents brought out at the government expenses under the authority of the government. They are the records of the activities of the (1) Executive, (2) Legislature, (3) Judiciary, and (4) Research organisations sponsored by the government. The authority under which these documents are brought out may vary from level to level, such as ministry, a department, a government undertaking, an institute or any authorised agency of either central or state government and this authority holds the responsibility for the contents of the documents.

Government documents are a class in themselves, different from general publications. In size, they range from pamphlets to voluminous books and in contents they vary from an article with a popular appeal to technical treatises of value to the scientists and academicians. These documents are generally divided into two categories : (1) Parliamentary documents and (2) Non-parliamentary documents. Parliamentary documents include proceedings, reports, etc., of legislative bodies, Acts of the Centre and States, bills and statutory instruments etc. Non-parliamentary documents include administrative reports, transactions, rules and regulations, codes,

gazetteers, budget estimates, reports of committees or commissions, statistical data, notes and reviews, research papers, bulletins, monographs, maps etc.

Government documents are an important source of information. They are the primary and authentic record of legislature, judiciary and government is useful both for current use and for long-term retention. Besides statistical data, a wealth of information is found in them on varied subjects.

3.4. Dissertations and Theses

Another important type of documents is the post-graduate dissertation and doctoral theses submitted to the universities for respective degrees. They are valuable primary sources which report original work in specific fields. Besides yielding invaluable unpublished information on a specific subject, place or person, these documents have extensive bibliographies and footnotes which are usually of immense value to the researchers. These documents often remain unpublished. Since they do not appear in any trade or national bibliography, their existence remains unknown. This creates difficulties in their selection and procurement, and information contained in them generally does not come to the notice of users.

3.5. Reports

Report literature is an important primary source of information, particularly, for research. This new medium for communication of information came into being during the World War II, when there was a scarcity of paper, restrictions in distribution, and delay in bringing out periodicals. Reports not only solved the problems then, but proved quite useful to be continued after the War.

Reports originate in various research organisations and government departments and appear in wide varieties. Most of them inform about research and development projects, in progress or completed. They may present a quick preliminary information about the work in progress; or they may give a complete information about the work just completed. In some subjects, such as nuclear science and aeronautics, a good amount of literature is available in the form of reports.

3.6. Pamphlets

A pamphlet is a document of a few printed pages, usually less than 49, and bound in paper. For the users, particularly the social scientists, pamphlets are indispensable because they deal with current topical subjects and the information contained in them may not be available in any other source. Many official libraries maintain their pamphlets and reprints collection separately with a view to facilitate their use.

Self-Check Exercise

1. State the importance of the following as source of information :
 - (a) Theses.....
 -
 - (b) Reports.....
 -
 - (c) Pamphlets.....
 -

3.7. Standards and Specifications

The documents which are formulated by agreement, authority or custom of

sponsors to define a product, material, process or procedure, equality, construction, operating characteristics, performance, nomenclature, and other like facts are called standards. Specifications, on the other hand, are documents that contain descriptions of technical requirements for a product, material, process, or service which are designed to meet purchaser's particular needs.

The purpose of standards and specifications is to simplify production and distribution, to promote standardization and quality control, to ensure uniformity and reliability, and to eliminate wasteful variety.

Since standards and specifications play a vital role in the manufacturing and commercial endeavours, these documents are indispensable for an industrial society. A library or an information unit serving such society must have these documents in its collection. No R&D unit of any industry can function effectively without these documents.

3.8. Patents

A patent is an agreement between a government and an inventor whereby the latter discloses his invention to the public in exchange of an exclusive right of exploitation for a fixed period. Each patent presents a detailed account of a new manufacturing process, or an improvement of an existing process, a new product, a new method of testing and control, etc. which may not be available in this form in other sources.

Every nation has a Patent Office. The Indian Patent Office at Nagpur and its sub-offices grant over 3,000 patents each year. The output of each developed nation is much more.

A comprehensive collection of national and foreign patents must be developed by all the special and research libraries because of the following advantages : 1) They give technological information which is not found in any other source; (2) In addition to the information on general utility of the invention, they inform about the practical application of invention in industry and also some background material; and (3) They reveal information on specific technological items more completely and earlier than other sources do.

Self-Check Exercise

1. How does a Patent differ from a Standard as a source of information

.....
.....
.....

3.9. Trade Literature

Trade literature consists of such documents which give information on the processes and materials involved in the manufacture of a product, various types of product catalogues, compilation of data, manuals, guides, house journals, etc. Trade literature is issued by the manufacturers and dealers and its basic purpose is product advertisement. These documents provide accurate technical information about products and materials that are offered for sale. This information is usually not available from any other source.

3.10. Maps, Atlases and Globes

A map is a representation of a part or the whole of the surface of the earth or of

a celestial body, delineated on a plane surface, each point in the drawing intended to correspond to a geographical or a celestial position. It may be for a country, state, city, village or of a still smaller area irrespective of the scale of the extent of area. Maps are of various types, such as physical maps, political maps, thematic maps (historical, statistical, ethnological, etc.). Indian maps are issued by the Survey of India, Dehradun.

An atlas is a volume consisting of collection of maps. It may also contain photographs and other supplementary material. *The Britannica Atlas*, *Hammond Medallion World Atlas* and *Times Atlas of the World* are three important examples of atlases.

A globe is a spherical representation of the earth.

Maps, atlases, and globes form important source of geographical information.

3.11. Photographs And Illustrations

Photographs and illustrations are the documents which provide a visual and pictorial representation of a person, place or situation that words fail to describe or find hard to depict. Words cannot tell what Pandit Nehru looked like, only his photograph can do that. *Kumbh Mela* in progress at Hardwar or the *Burning Ghats* of Banaras or the *Taj Mahal* of Agra cannot be described in words so accurately as their respective photographs will tell about them. Similarly, a complicated subject may be easily explained away by a simple illustration. Graphical representation is always helpful in making the readers to grasp the text easily. A radio or television set cannot be assembled without the help of its drawings. Neither can a building be constructed unless the architect's plan is made available to the engineer. These documents, therefore, form an important source of visual information.

3.12. Microforms

The microforms are those documents that embody thought in type form that cannot be read with the naked eye. They require some device for reading. They comprise of microfilms, microfiches, and micro-opaques. These documents are now an important source of information in the libraries. The reasons for their popularity are : (1) Microforms reduce the bulk of documents and help the libraries to save considerable space; (2) Out of print documents which are either not easily available or too expensive in original form can be easily acquired in microform; (3) Documents, in original, are too bulky to be transported rapidly. Microforms, greatly reduced in bulk, are more suitable for easy and quick transportation, as also for air-lifting; (4) A readable photocopy can be prepared from a microform easily.

Microforms are available in different varieties and dimensions. Their organisation and maintenance, however, requires special care.

In view of the advantages, Microforms are extensively used as the source of information in libraries and information centres.

There are many types of *microforms* but the following are more commonly used in the libraries :

1. Microfilms
2. Microfiche and ultrafiche
3. Microcard
4. Microprint

A brief description of the above microforms is given below :

3.12.1. Microfilm

It is a micro-transparency on cellulose acetate film in the form of a roll of different lengths. There are four standard widths; 16 mm, 35 mm, 70 mm and 105 mm, but the 35 mm is generally used in the libraries. Microfilm is either a continuous ribbon in a spool or in the form of strips of 22.5 cm length. The advantages of microfilm is that it gives a very bright image and can be conveniently used for making a paper enlargement. Moreover, it still remains to be the cheapest form of reproduction where a single copy is needed. But its limitations are :

1. It is prone to abrasions and scratches through handling without adequate care.
2. It must be run through a microfilm-reader to find out what it contains.
3. It is to be run to and from before the user locates the reference he needs.
4. Considerable length of the film is wasted as leader, and trailer.

Some of these disadvantages can be overcome if instead of using a reel microfilm, we make use of microfilm strips of 22.5 cm length.

3.12.2. Microfiche and Ultrafiche

Microfiche, like a microfilm, is a micro-transparency, but, unlike microfilm it is in sheet form having a number of rows of images. It is usually filed in the same way as index cards. Microfiche is available in different sizes : 75 x 125 mm, 90 x 120 mm, 105 x 148 mm, 105 x 150 mm, and 228 x 152 mm, and this naturally brings in difficulties for libraries. There is now a growing interest among librarians to standardise the size of all the microforms, including microfiche.

Except that it is as much susceptible to scratches as a microfilm is, the microfiche has the following advantages over the microfilm :

1. The title of the publication and sometime, even other bibliographical details are available on the top of the microfiche, and these can be read by naked eyes. This saves the reader the inconvenience of reading it in the reading machine as in the case of a microfilm. In fact a microfiche can be put to use immediately.
2. Since one microfiche contains about 60 pages of the text, one does not have to run 30 metres of film to find a particular reference, and neither are 30 metres of film tied up with one scholar, wanting only a particular reference.
3. The microfiche reader is a more simple and compact machine and it is easier to operate also.
4. Even a single copy reproduction can be had from a microfiche without any difficulty.

A microfiche with very high reduction ratio (150 x 200 times) is called *ultrafiche*. It contains about 3200 pages on 105 x 148 mm film. It is in fact a micro-photograph of micro-photograph. Ultrafiche is a very good medium for computer produced data services.

3.12.3. Microcard

It is photographically produced micro-opaque in 7.5 x 12.5 cm size. The microcard, like a microfiche, is easy to identify and handle. The access to information

is also as fast as in the case of a microfiche. But the limitation of the microcard is that the projected image is not very bright. The room should also be dark enough to show a readable image. Because the microcards are opaque, there is much loss of light and it results in the loss of sharpness and clarity. For this very reason an enlargement of a particular image of the microcard on paper cannot be easily made. But its advantages over the microfilm and microfiche are as follows :

1. Microcards can withstand much wear and tear.
2. They do not require the control of humidity and temperature as is required for microfilms and microfiches.
3. They are cheaper than microfiches because they are printed on paper.
4. They can be more easily handled for library processing and the mark of library ownership can be conveniently stamped at their back.

3.12.4. Microprint, Readex

Readex microprint is a registered trade-mark of Micro-Print Corporation of New York for photolithographically produced micro-documents. Microprint is produced not by copying process but by printing through a special offset process. Each microprint contains 100 pages of text arranged in rows of ten, both vertically and horizontally. Information about the contents is printed across the top and can be read with naked eyes. The reader equipment is very similar to the microcard reader. In fact, some opaque readers can be used both for the microcards and put on the shelves along with the books and they create no problem of handling and storage in libraries.

There is still another microform known as microlex. It is similar to microprint with the difference that it contains 200 pages of the text printed on both sides on 16.5 x 21.5 cm size.

Self-Check Exercise

1. What is the importance of Microform as a source of information ?
State their advantages briefly.

.....
.....
.....

3.13. Computer Readables

Computers are now being used for the processing, consolidating and repackaging of information in a big way. Through telecommunication, information is transmitted from one point to another by electronic media. Telecommunication networks are there to handle digital machine readable data and to use telephone lines, micro-waves and communication satellite to transmit such data. Instead of relying on standard telephone lines designed for voice, now library networks provide communication lines for online conferences and seminars through digital data.

The US scene is changing fast in the face of new challenges and in response to new demands. The advent of new technology and their application to LIS work and services is further accelerating the pace of this change. Total knowledge and information, which is presently available in the libraries in the form of books and other documents, can now be put on the World Wide Web (WWW), making the libraries

totally web-based. Knowledge and information of all types can then be accessed over the world telephone network from communication terminals. Through personal computers the web can be accessed, desired information can be seen and read, and printed, if so required. Book-like handled PCs are now available and these can be connected to the Internet through wireless devices. These PCs to a great extent are a replacement of the book, offering the convenience of use as that of an ordinary book. These technological advances have made it possible to provide library services and access to information even outside the library. A *library without walls* or *virtual library* is now becoming a reality.

Computers have tremendous memory and can store huge mass of information in their hard-disc. Information can be retrieved from there at a very fast speed. Besides, there are floppies, compact discs, DVDs to store and present information as and when it is needed. Another source of information, as has been mentioned above, is world wide web (www) or web. Information can be accessed and retrieved from the web on computer or PC.

Self-Check Exercise

1. Differentiate a DVD from a CD as a source of information.

.....
.....

3.14. Audio-Visuals

These documents consist of slides, gramophone records, phonotapes, cassettes, motion pictures, video-records, etc. Through the use of these documents one can hear the original voice or can see an incident as it had happened. A gramophone record or a phonotape when played can bring to us the chirping of birds, hissing of a cobra, roar of a lion or Rabindranath Tagore singing his own song. Similarly, a motion-picture or a video record brings back to us Mahatama Gandhi and his followers taking part in the Salt Satyagraha. One can also witness a cricket match sitting right in one's drawing-room. No other form of documents can make such miracle happen. These documents are being extensively used as teaching aids these days.

3.15. Summary

Through various languages and writing media, man tried to preserve his thought for coming generations. From the earliest times, the hand-written book was the major vehicle of information & communication throughout the Middle Ages. This method was slow and tedious. Between 1430 and 1440, Gutenberg developed printing from movable metal type and this improved the dissemination process. Books then became one of the major ways of transmitting information. But they too lacked speed and were not helpful in the dissemination of information as fast as was needed. As a way out, the scientists and researchers started using personal letters to communicate scientific information among each other and with the leaders of groups in particular subject areas. From these letters grew the first scientific periodical. Since 17th century, the periodical has been the major disseminating medium. In library collections, the position of periodicals and serials comes next only to the books, as source of information. Besides books and periodicals, theses, research reports, patents, standards, conference proceedings, trade literature are other primary sources of information. Then there are secondary and tertiary sources of information, as also

computer readable data bases. A seeker of information and information scientist should have a good knowledge of various sources of information and the information they yield so as to facilitate the communication of information.

3.16. References and further Readings

1. Chakraborti, B. and Sengupta B., Fundamentals of Reference Service. Calcutta: World Press, 1986, 248 p.
2. Katz, William, A., Introduction to Reference Work, 3rd ed., v.I. New York: McGraw Hill, 1978.
3. Krishan Kumar, Reference Service, 5th ed., New Delhi: Vikas Pub., 1996.
4. Mukherjee, A.K., Reference Work and its Tools, 2nd ed., Calcutta: World Press, 1971, 393 p.
5. Prasher, R.G., Information and Its Communication, 2nd ed., Ludhiana : Medallion Press, 2003, pp. 189-196.
6. Ranganathan, S.R., Reference Service, 2nd rev. ed., Bangalore: Sarada Ranganathan Endowment for Library Science, 1989, 432 p.
7. Sardana, J.L., Reference and Information Sources, New Delhi: Ess Ess Pub., 1984, 275 p.
8. Sewa Singh, Reference Service in Academic Libraries in India. New Delhi:Ess Ess Pub., 1986, 201 p.
9. Sharma, Jagdish Saran and Grover, D.R., Reference Service and Sources of Information. New Delhi: Ess Ess Pub., 1987, 288 p.

Categories of Documentary Sources of Information

Structure of the Lesson

- 4.1 Introduction
- 4.2 Categories of Documentary Sources
- 4.3 Primary Sources
 - 4.3.1 Periodicals
 - 4.3.2 Research Monographs
 - 4.3.3 Research Reports
 - 4.3.4 Dissertations/Thesis
 - 4.3.5 Conference Proceedings
 - 4.3.6 Patents
 - 4.3.7 Standards
 - 4.3.8 Trade Literature
 - 4.3.9 Unpublished Sources
 - 4.3.10 Pamphlets
 - 4.3.11 Government Publications
- 4.4 Secondary Sources
 - 4.4.1 Indexes and Abstracting of Journals
 - 4.4.2 Old Periodicals
 - 4.4.3 Encyclopaedias
 - 4.4.4 Reference Works
 - 4.4.5 Guides to the Literature
 - 4.4.6 Bibliographies
 - 4.4.7 Reviews (Survey Type)
 - 4.4.8 Treatises/Monographs
 - 4.4.9 Text Books
 - 4.4.10 Hand Books
 - 4.4.11 Translation

- 4.4.12 Current Awareness Service (CAS)
- 4.5 Tertiary Sources
 - 4.5.1 Bibliography of Bibliographies
 - 4.5.2 Yearbooks and Directories
 - 4.5.3 List of Accession
 - 4.5.4 Selective Dissemination of Information (SDI)
 - 4.5.5 Guides to Literature
- 4.6 Conclusions

4.1 Introduction:

Literature of a subject is its foundation. It represents a record of achievements of human race. Literature is diverse, complex and multi lingual in nature, it is becoming more and more inter disciplinary. It is growing fast. In social sciences, it is doubling at the rate of every six to eight years. In sciences, it is almost doubling itself in every three to four years. Literature serves the information needs of various kinds of users, therefore forms the SOURCE OF INFORMATION.

According to Lancaster communication in information technology can be two ways: *Formal* and *Informal*. Formal communication is mostly through documents in some type of printed and Non-printed forms, whereas, Informal communication is mostly communication through conversation. In another classification these are called documentary and non-documentary sources.

Traditionally speaking, information sources would include primarily books, periodicals/newspapers, patents, standards etc. However, the number and forms of sources are continuously increasing. Even unpublished sources are continuously increasing. In addition, unpublished sources are becoming increasingly important to scholars.

4.2 Categories of Documentary Sources:

The documentary sources could be catalogued as *Primary*, *Secondary* and *Tertiary* sources. The primary sources are the first to appear. Secondary sources come out next. The tertiary sources are the last to appear.

4.3 PRIMARY SOURCES

These are materials which are original in nature. Primary sources of information are the first published records of original research and development or description of new application or interpretation of an old theme or idea. There are original documents representing *unfiltered original ideas*. These constitute the latest available information.

A researcher producing new information can make it available to the particular community through the primary sources. Often, it may be the only source of information in existence.

Primary sources are unorganized sources, they have not passed through any filtering mechanism like condensation, interpretation or evaluation and are original work of author and very large in number and which are rather difficult to use by themselves. The secondary sources help us to use these.

These are important sources of information. A subject becomes a discipline in its own right when independent primary sources begin to be produced in that area. The rate of growth of a discipline to a large extent depends upon the amount of literature being produced in the form of primary sources reporting developments in the concerned field.

Uses of Primary Sources:

- (a) Keep up-to-date and well informed of the new developments;
- (b) Avoid duplication in research; and
- (c) Help others to build on this by means of further work and thus generate more information.

Primary sources are published in a variety of forms. Normally these take the form of a journal article, monograph, report, patent, dissertation etc. Some of these may be unpublished.

4.3.1 Periodicals

Periodicals include, journals, bulletins, transactions, proceedings or similar works, which appear regularly and continuously in numbered sequence. However, the newspapers and annuals are excluded. The bulk of primary source literature appears in the form of periodicals. There are many periodicals which are exclusively devoted to reporting original research. The periodical article is the main means of communication for the exchange of scientific information. The same can be said about many other areas of knowledge. It may be pointed out that an article in a journal would be considered a primary source if it contains information representing original thinking or a report on a new discovery of something. However, an article in the same journal would not be considered a primary source of information, if it were to contain summary of findings of others or reports produced by other persons.

Information contained in periodicals is almost invariably more up-to-date than that appearing in books. Periodicals usually report the results of recent researches more quickly than books. Information on new processes and discoveries can appear in

a periodical within weeks of their formulation. However, the same might take two to three years before the same can appear in book form.

4.3.2 Research Monographs:

Research monographs are separately published reports on original research, too long, too specialized or otherwise unsuitable for publication in standard journals. Monographs are short treatises. It differs from a treatise in the sense that it is a work done on a more limited scale. Otherwise both have the same features and serve same purposes. A research monograph presents results of original research.

4.3.3 Research Reports:

Research reports regarding research and development Projects. These are primary form of literature. In adequacies of periodicals, research reports issued as separate documents offer a successful alternative. These are often called "Unpublished" or "Semi published" literature.

4.3.4 Dissertations/Thesis :

Dissertations are submitted for a doctorate degree under supervision of guides. They are valuable primary sources which report original work in specific fields. Besides yielding invaluable unpublished information on a specific subject, place or person, these documents have extensive bibliographies and footnotes which are usually of immense value to the researchers. These documents often remain unpublished. Since they do not appear in any trade or national bibliography, their existence remains unknown. This creates difficulties in their selection and procurement, and information contained in them generally does not come to the notice of users.

4.3.5 Conference Proceedings:

Most of the papers presented at the conference carry research findings and are presented for the first time. Thus, they are primary publication. Some of the papers may present state-of-art reviews and thus of secondary nature.

4.3.6 Patents :

A patent is a government grant of Exclusive privilege which allows making use or selling of a new invention for the term of years. A patent takes the form of an official document having its seal of government attached to it, which confers an exclusive privilege or right over a period of time to the proceeds of an invention.

In India 'Indian Patent Office' at Nagpur is responsible for granting patents. At present almost 3000 patents are granted every year. So patents are regarded as a part of the primary sources because an invention has to be new, only then it can be patented.

4.3.7 Standards :

Standards means to simplification of production and distribution of products produced by a manufacturer. These ensure reliability for the consumers. As a result of standardisation, those items which do not follow prescribed standards get eliminated from the market.

A typical standard is a pamphlet, covering definitions, methods, properties, measurements, etc. It may be illustrated with tables and diagrams. In India "Bureau of Indian Standards is a major organization issuing standards. It brings out about 300 standards annually. Standards are also form of primary sources of information.

4.3.8 Trade Literature :

Trade Literature is an important source for getting information about particular products and their development. Trade Literature aims to describe and also illustrate equipment or goods or processes or services relating to manufacturers. The basic objective of such a literature is to sell products produced by a manufacturer or to advance the prestige. It is issued by manufacturers or dealers and is often very well produced. It is issued in a variety of forms such as technical bulletin, price lists, data sheets, etc. Trade Literature is also primary sources of information.

4.3.9 Unpublished Sources:

In literature, there are certain primary sources of information, which remains unpublished. They are consulted for historical interests. These includes: Survey notebooks, Diaries, Letters to or from, Organization files, Internal research reports, State papers, Portraits, Inscription on stories, Oral history etc.

4.3.10 Pamphlets :

A pamphlet is a document of a few printed pages, usually less than 49, and bound in paper. For the users, particularly the social scientists, pamphlets are indispensable because they deal with current topical subjects and the information contained in them may not be available in any other source. Many official libraries maintain their pamphlets and reprints collection separately with a view to facilitate their use.

4.3.11 Government Publications

Government publications are the official documents brought out at the government expenses under the authority of the government. They are the records of the activities of the (1) Executive, (2) Legislature, (3) Judiciary, and (4) Research organisations sponsored by the government. The authority under which these

documents are brought out may vary from level to level, such as ministry, a department, a government undertaking, an institute or any authorised agency of either central or state government and this authority holds the responsibility for the contents of the documents.

Government documents are a class in themselves, different from general publications. In size, they range from pamphlets to voluminous books and in contents they vary from an article with a popular appeal to technical treatises of value to the scientists and academicians. These documents are generally divided into two categories : (1) Parliamentary documents and (2) Non-parliamentary documents. Parliamentary documents include proceedings, reports, etc., of legislative bodies, Acts of the Centre and States, bills and statutory instruments etc. Non-parliamentary documents include administrative reports, transactions, rules and regulations, codes, gazetteers, budget estimates, reports of committees or commissions, statistical data, notes and reviews, research papers, bulletins, monographs, maps etc.

Government documents are an important source of information. They are the primary and authentic record of legislature, judiciary and government is useful both for current use and for long-term retention. Besides statistical data, a wealth of information is found in them on varied subjects.

4.4 SECONDARY SOURCES :

A secondary source is one that gives information about primary sources. These are based on primary publication but arranged in such a fashion that they are easy to consult.

Features of Secondary Sources

- (a) Either compiled from or refer to primary sources of information. These contains information regarding primary or original information;
- (b) Usually modified, selected or reorganized;
- (c) Arranged and organized on the basis of some definite plan;
- (d) These contain organized repackaged knowledge rather than; new knowledge. Information given in primary sources is made available in a more convenient form.
- (e) Easily and widely available than primary sources;
- (f) Bibliographical key to primary sources of information.

The primary sources are the first to appear, these are followed by secondary sources. It is difficult to find information from primary sources directly. Therefore, one should consult the secondary sources in the first instance, which will lead one to specific primary sources.

Main Types of Secondary Sources

4.4.1 Indexes and Abstracting of Journals :

The simplest way of providing access to the literature is an index. In an index the titles of publications are arranged in such a way, that the location becomes easy. Two aspects are most important with regard to indexes - The number of publications indexed; and secondly, the indexing system employed. These days indexes are produced mechanically by computers and photo-typesetting. By this way, indexes could be generated quickly.

Abstracting services are also produced mechanically, though mechanised abstracting has to go a long way in terms of perfection. Abstract and indexes arrange the entries under subject headings arranged alphabetically. Abstracts are generally lifted from the source journal which must have been prepared by the author himself. If the abstract is not available or when it needs improvement, help of subject specialists is taken.

4.4.2 Old Periodicals :

All periodicals do not report original work. There are a number of periodicals which specialise in interpreting and providing opinions on developments reported in primary sources of information. Such periodicals may be considered secondary sources.

4.4.3 Encyclopaedias:

Gives a comprehensive account of the subjects. The subjects are arranged alphabetically in order to enable quick location. The major problem with the publication of encyclopaedias is that the contents become outdated by the time the set is completely published. Further, new editions cannot be brought out quickly in view of the cost of publication. Encyclopaedias are kept up-to-date by bringing out yearbooks or supplements.

4.4.4 Reference Works:

Reference works, treatises or monographs have a distinct role and distinctive features. Compilation of these publications are complex and time consuming. The information contained in these documents is of secondary nature.

4.4.5 Guides to the Literature:

A scientist should be familiar with the bibliographical sources of the subject field of his interest. Guides will lead the user to the literature on a given or chosen discipline.

4.4.6 Bibliographies:

Publications in the form of lists of titles with or without notes. They are usually arranged systematically. The distinction between current bibliographies and abstract journals is not sharp, since many abstract journals also publish or contain bibliographies.

4.4.7 Reviews (Survey Type):

A review is a survey of the primary literature. It aims to digest and correlate and literature over a given period. It also indicates the developments and trends in the field concerned. It may appear as a collection of papers on regular basis (annual or quarterly or monthly) or in the form of an article in a periodical. A review provides background information to a new problem in a suitable form and serves as a key to literature.

4.4.8 Treatises/Monographs:

A treatise is a comprehensive compilation or summary of information on a subject. It provides essential knowledge for carrying out advance research. It also provides facts, along with discussion.

A monograph is a short treatise on a specific subject. A monograph and a treatise serve the same purposes with the difference that a monograph is an attempt on a limited scale. Very often, a monograph may be brought out as a part of a series.

4.4.9 Text Books:

A text book is a book of instruction. Its primary aim is not to impart information about a specific subject but to enable one to develop proper understanding of the subject. Presentation is extremely important and it is prepared to serve a particular level of readership. Text books are revised keeping in view new developments and changing methodology of teaching.

4.4.10 Hand Books:

A hand book is a compilation of miscellaneous information in a compact and handy form. It contains data, procedures, principles etc. Tables, graphs, diagrams and illustrations are provided. Scientists and technologists use handbooks in their fields rather frequently.

4.4.11 Translation:

Translations are an important part of secondary sources. Their characteristics are the same as those of primary secondary or Tertiary source from which these

translated. Many of the authors of research papers to cite original sources rather than translations.

4.4.12 Current Awareness Service (CAS) :

These services try to reduce the time lag between the publication of document and awareness of the users.

4.5 Tertiary Sources:

Tertiary sources of information contain information distilled and collected from primary and secondary sources. The primary function of tertiary sources of information is to aid the searcher of information. Most of these sources do not contain subject knowledge. Due to explosion of information and increase in volume, variety and value of documents, tertiary sources are becoming increasingly important. Out of various kinds of information sources, tertiary sources are last to appear.

Some regard bibliographies, guides to literature as Tertiary Publications, because they cover many a time the secondary publication. The other Tertiary Publications are: yearbooks and directories; Locations lists of Periodicals; lists of Abstracting and Indexing Services; Guide to Professional organizations; Location Lists of Periodicals; Lists of Research in Progress; Guides to Professional.

4.5.1 Bibliography of Bibliographies :

A bibliography of bibliographies lists bibliographies which direct readers to useful bibliographies through subject, name of an individual place, institution, etc. The bibliographies referred to may be in the form of a separately published book or part of the book or part of a periodical article or some other type of document. As the number of bibliographies published every year is large, therefore, bibliographies of bibliographies are highly selective in nature.

4.5.2 Yearbooks and Directories :

Yearbooks are invaluable for getting a comprehensive and up-to-date information. These works generally carry descriptive words like 'Advances', 'Progress', 'Survey', 'Review' etc.

Directories provide information on individuals, organizations, developments, etc. in a subject, etc. A directory is a list of names and addresses of persons, organizations, manufacturers; or periodicals. It may list information in a way which best serves the requirements of its users so as to enable them to get the required information readily.

Examples: 'Directories of Books in Print'; 'Directories of Organizations'; 'Directory of Members'; Directories of Research Projects', etc.

4.5.3 List of Accession:

These are also considered as a sort of current awareness. These lists provide new books and journals added to the library. These lists are generally indicative, bearing very few details like author, title, publisher, pages and of course the call number and accession number which are essential for location in the library. Of these are branch libraries, library symbol is also provided. In case of journals only the title of the journal is included.

4.5.4 Selective Dissemination of Information (SDI):

These services, unlike earlier systems are personalised one, where in, a profile or a list of words describing the specific interest of the user is run against the document profile (or the list of titles) in which process the computer (or the library personnel in case of manual system) will identify the documents of relevance to the specific user and post him with the information. In some cases, group profiling is also done SDI service is individual based and provides a deeper analysis literature.

4.5.5 Guides to Literature

A guide to literature assists a user to use literature of a specific subject. It helps to evaluate and introduce literature. It lays emphasis on literature rather than the content of a specific subject. It mainly covers secondary and tertiary sources.

4.6 Conclusions:

All these primary, secondary and tertiary sources are backbone for the research and development in field of literature. These information sources help the librarians and libraries in maintaining the information banks of literature. Categorization of documentary sources of information is useful. In searching for information, a researcher usually starts with secondary sources and tertiary sources and ends the search with primary sources. Secondary and tertiary sources contain information in organized form and these serve as guides or indicators to detailed contents of primary literature. With increasing amount of literature being produced, it is becoming almost impossible to use primary sources directly for searching of information. A scholar would also not be able to keep himself up-to-date and well informed in his field of specialization without the aid of secondary and tertiary sources.

Further Reading :

1. Krishan Kumar : Reference Service 5th revised edition, 1996, N.D. Vikas, Reprint 2006.
2. William A. Katz, Introduction to reference work, 4th ed., New York, McGraw-Hill, 1982, Vol.I.

Human and Institutional Sources

- 5.0 Learning Objectives
- 5.1. Introduction
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5.0 Learning Objectives:

The aim of this chapter is to help you

- Understand the concept of non-documentary sources of information.
- Familiarize with the general concept of internet and World wide web as a source of information.
- Understand the critical aspects of information found on the Internet and role of reference librarians in evaluating the same.

5.1. Introduction

In the previous chapters, you have studied about the variety of reference and information sources which are in the documentary form. But, the documents are not the only sources of information. We have various other sources like conferences, seminars, oral instructions and opinions from experts which help us to get the information required at a particular time. Talking to our colleagues face to face or on a telephone or while discussion with an expert in a particular subject or by participating in a debate on a particular issue serves as a good sources of informal information as well as learning. However, these above mentioned sources are called as non-documentary and they form an integral part of reference service. So, let's discuss in detail, about what are non-documentary sources and how are they classified. But, first take a quick recap of the documentary sources of information.

5.2. Sources of Information: Documentary

Documentary: Documentary sources are divided into three types:

- > Primary sources of information e.g. advances treatises, primary periodical publications.
- > Secondary sources of information: encyclopedias, handbooks, dictionaries, directories
- > Tertiary sources of information: e.g. Bibliographies, indexing and abstracting periodicals etc.

5.3. Sources of Information: Non-documentary

Non-documentary sources provide information which is not readily available in the documentary sources. These are again divided into two types: institutional sources and human sources.

> 5.3.1 Institutional sources: Institutional sources of information includes:

- ❖ Universities or higher education institutes
- ❖ Research organisations
- ❖ Government departments
- ❖ Societies
- Private enterprises and business organizations

Some of the examples of institutional sources of information are: Indian Institute of Science(IIS), Bhabha Atomic Research Centre(BARC), Indian National Scientific Documentation Centre(INSDOC), Indian Council for Social Science Research(ICSSR) and Tata Institute of Fundamental Research(TIFR).

These institutional sources present the information in variety of formats: their publications, on the web, handbooks, bulletins, reports etc. The institutional sources of information are highly accurate and kept up to date by the researches working in the respective institutions. These days institutions are forming information repositories also for quick access and retrieval. The conferences and projects of particular institutions in particular subject areas also become the source of information.

> 5.3.2 Informal: Human Sources

Human Sources of information includes conversations with colleagues, peers in professional meetings, seminars etc. These are the most convenient sources of information as while working on a project if you are looking for some information or clarifications you can consult it with your peers/colleagues. Normally the best human source of information is recognizing the experts and specialist in a particular subject on the basis of their education and experience and scholarly contributions. Such a specialist when consulted will be able to provide the information in his area of expertise, combined with his own level of experience. The human sources of information again could be national, international and local. In today's world e-mail and the internet have encouraged the use of human sources of information. People can communicate learning and exchange information. People can communicate learning and exchange information in a faster way. e.g. you can contact a particular specialist in your subject area and can clarify the doubts on e-mail etc.

Self-Check Exercise

Mention the two types of non-documentary sources?

When asking a solution of a particular problem from a professor, which source of information you are consulting?

5.4. The Internet/Web as a Source of Information

Before we discuss as to how the Internet/Web acts as a source of information, just have a glimpse of what the Internet/World Wide Web popularly known as WWW is.

5.4.1 The Internet

The Internet is a network of networks that are connected to each other across the world. Internet helps in information retrieval and worldwide communication. Internet helps in finding, managing and sharing information instantly and immediately. It is interactive a nature (e.g. chat rooms) and helps in faster and cheaper communication across the world(e.g. e-mai and news-groups).

The Internet originated from ARPANET (Advanced Research Projects Agency) in 1969 at the time of cold war to provide a communication network. During late 1960s universities and libraries started using Internet and networking their catalogs. However the first users of Internet were computer experts, engineers, scientists and librarians.

Internet offers the following services :

- > Electronic mail (e-mail): to send and receive messages.
- > Electronic discussions in the form of chat, discussion groups etc.
- > Remote login: to log in to another computer from a distance.
- > FTP: Allows your computer to retrieve files from a remote computer and view or save them on your computer.
- > Video-conferencing, and
- > World Wide Web

5.4.2 What is World Wide Web ?

World Wide Web came into existence in 1991. Time Berners Lee developed the web. The World Wide Web is a multimedia information system that makes documents that are stored on the Internet(texts, images, sound, or software) available. It is a large subset of the Internet consisting of hypertext and hypermedia documents. Now the question arises as how you get information from WWW. There are two ways:

- > Either enter the address of a specific site e.g. you want to read the newspaper. The Tribune and you know the web address that is <http://www.tribuneindia.com>, so you put the address in the address bar of your browser window and you reach the homepage of The Tribune.
- > Secondly, you don't know as such the address of the site or you search for specific information but you don't know the address of the site where you will get that particular information, then what do you do? The answer is you search with the help of search tools.

There are many search tools available on the Internet like search engines, search directories etc. You must be most familiar with the popular

search engine goggle or the popular search engine Yahoo. In the search tools, like search engines or directories etc. you can enter your search/query in the form of keywords, phrases etc. and you can get the listing of WebPages which contains your specified information. You can choose your appropriate web page which matches your requirement.

Self-Check Exercise

The Internet originated fromin.....

What is World Wide Web ?

Mention any three services provided by the Internet

5.4.3 Information on the Internet/WWW

The information is stored in the form of WebPages on the Internet. Web Pages may contain text, graphic images, and digitized sound and video files. Every web page has an address called URL (Uniform Resource Locator). URL is the location of the document which appears in the address bar.

The Internet/WWW includes traditional types of reference sources like dictionaries, encyclopedias as well as new types of reference sources like online catalogs, databases etc. The Internet provides a timely, quick, convenient and direct way to get the required information.

Now, let's look at the various resources of information on the web :

1. Electronic Journals e.g.
 - > Libres: Library & Information Science Research Electronic Journal available at <http://libres.curtin.edu.au/>
 - > Journal of Digital Information available at <http://jodi.ecs.soton.ac.uk/>
2. Articles: e.g. Findarticles.com offers free access to the full-text of articles published in over 300 magazines and journals dating from 1998.
 - > <http://www.findarticles.com>
3. Online Dictionaries: Various dictionaries on various subjects, languages etc. are now available online e.g.
 - > Oxford English Dictionary: <http://www.eod.com>
 - > Random House Dictionary available on <http://www.answers.com/reference.cgi>
 - > Free Online Dictionary of Computing: <http://wagner.Princeton.EDU/Foldoc>

4. Online Encyclopedias: Reference encyclopedia are now also accessible through the Internet e.g.
 - > The electronic version of Encyclopedia Britannica is <http://www.eb.com>
 - > McGraw Hill Encyclopaedia of Science and Technology available at <http://www.mhreference.com/EST/est.htm>
 - > Grolier Encyclopedia Online : <http://www.grolier.com>.
5. Directories: are collections to links to web sites by categories usually by subject. They act as catalogue of the web sites in a particular subject. Web directories are organized by people e.g.
 - > The most popular one is of Yahoo www.yahoo.com
 - > Librarians Index to the Internet www.lii.org
 - > www.about.com
6. Virtual Libraries e.g.
 - > The WWW Virtual Library: <http://www.vlib.org/>
 - > Virtual Library-Reference: <http://www.itools.com>
7. Online Library Services e.g.
 - > SOSIG (Social Sciences Information Gateway): <http://www.sosig.ac.uk/>
8. Library Catalogs: you can access complete library catalog on the library's web site via internet e.g.
 - > CATNYP, The Research Libraries of the New York Public Library <http://catnyp.nypl.org/>
 - > Oxford University's Online Union Library Catalogue (OLIS) <http://www.lib.ox.ac.uk/oils/>
9. Databases: are usually collections of information designed for quick retrieval. They are in computerized format and when they are available on the Internet, they are called as Online Databases. They are created by publishers, businesses, government agencies, professional and scholarly groups. Information in the databases is organized, authentic and much more reliable in comparison to the information found on general web pages of WWW. Databases can be categorized into:
 - > Bibliographic: databases that provide bibliographic information. The item is not provided in the database but its reference like author, title, subject etc. is provided. These databases contain references to literature, abstracts, or a link to the full document. e.g. GALILEO database Social Sciences Abstracts, National Bibliographies database: <http://portico.bl.uk/gabriel/index.html>.
 - > Full Text: a full text database provides full text of the document e.g. ABI/INFORM. We also have databases classified as :
 - > **Directories:** When the databases provide factual pieces of information about organizations, companies, products, individuals, or materials e.g. phone book, address book, etc.
 - > **Numeric:** When databases provides statistical information e.g. census bureau data.

- > **Multimedia:** When databases combine text, graphics, photos, video and sound, etc.
- 10. Online Bibliographies : Bibliographies available on the Internet are called Online Bibliographies e.g.
 - > Bibliography on Journalism : Journalism : A Research Guide (University of Delaware Library) available at <http://www2/lib.udel.edu/subi/writing/resguide/journalm.htm>
 - > ACM SIGGRAPH Online Computer Science Bibliography, available at <http://www.csse.monash.edu.au/mirrors/bibliography/Graphics/siggraph/index.html>
- 11. Newspapers: Now-a-days newspaper could also be read online e.g.
 - > The Tribune : www.tribuneindia.com
 - > The Times of India : www.timesofindia.com.
 - > Observer : <http://www.observer.co.uk>.
- 12. Maps and Geographical Information: You can view complete maps and get all the geographical information from the web-sites relating to geographical sources e.g.
 - > "Atlapedia Online" contains coloured physical, political maps alongwith key facts and statistics on countries of the world: <http://www.atlapedia.com/>
 - > <http://www.multimap.com/>
- 13. Other Libraries and Reference Sources: Libraries are also actively involved in developing web-based resources to be used by their staff, users and other librarians all over the world. These resources provides information about the library, its services and other reference and information tools available on the web that can help in finding the information quickly e.g.
 - > ALA (American Library Association)
 - > List of reference sources along with the facility where you can also ask questions to a live librarian. www.ipl.org
 - > Library Resource List: it includes links to other sites arranged in the various categories like reference sources, New sites, Professional information, libraries, etc. www.state.wi.us/agencies/dpi/www/lib.res.html
 - > Alphabetical listing of full text ready reference resources available at <http://k12.oit.umass.edu/rref.html>
- 14. Others: The Internet also makes it possible to organize electronic conferences and informal discussion groups. Yellow pages, photographs, audio and video files etc. which can be accessed from the Internet.

Self-Check Exercise

Mention any 5 sources of Information found on WWW?

What are Databases ?

5.4.4 Searching Information on WWW

We search the information on the web, when the location of information is unknown to us. For this purpose, we use variety of search tools. The most common of the search tools are search engines and subject directories. Search engines provide results to the queries by indexing terms or words that are significant or repeated several times in a document e.g. Google, Alta Vista, and Hotbot etc. Subject Directories provide you listing of web sites related to particular information e.g. Yahoo.

You can enter your query in the search tools either by keywords or by phrase.

Keyword searching however provides you with too many web pages. To specify your keyword search you can apply Boolean Operators (And,OR and NOT) in your search.

AND operator helps you to narrow the keyword search e.g. Software AND Hardware. Search tool will retrieve results either containing software or hardware or both.

NOT operator helps you to exclude certain terms from your keyword search.

You can also search by phrase like " role of libraries in society". The results you will receive will be containing only the phrase " role of libraries in society."

5.4.5 Strengths and Weakness of World Wide Web

The Internet has now become an important source of information. Almost all of us are using Internet for communication and information, it has become the most popular and convenient source of information. But the question arises is, being such a large source of information, is all the information available useful? No, world wide web though such a large resource also has many weaknesses and shortcomings as an authentic information resource.

Strengths

1. The Internet is the biggest source of information.
2. You can access information sitting at any corner of the world provided you have computer and an internet connection with you at any time i.e. Information access is available without any geographical or time constraints.
3. It is an inexpensive medium to publish information which could be distributed worldwide.
4. It is the fastest way to get access to the new information.

5. It helps in locating and getting information which is not easily found in published sources.

Weaknesses

1. First, the information is not well organized on the internet. There is no proper cataloging or classification scheme found on the internet to locate the web pages. Though many web sites have tried to make directory listings but how successful they are is still unknown.
2. Secondly, there is no standard vocabulary being used on the Internet. People use their own vocabulary while posting information on the Internet and the difficulty comes when you are actually searching for the information e.g. there comes difference of spellings like colour, etc.
3. When you look out for a particular information through a search engine let's say a search tool, you get hundreds of website listing. Trying to find out which one is the most appropriate link requires time, effort and bandwidth.
4. There is no editorialship on the Internet, so the reliability and authenticity of the material is always under question especially in the matters of academic, scientific and technical materials. Anyone can publish anything on the Internet and there is no one to check the authenticity of the content. So, your chances to come across unreliable information are higher. That's why you must carefully evaluate before using or providing that information to the users at the reference desk.
5. Cost of Internet service and the hardware and software to use the information service is higher. This kind of cost is not associated with print resources. Also, the internet resources which were previously available free of cost on the Internet are now becoming paid.
6. The information on the Internet is highly unstable. What information is available today may not be available tomorrow.

Self-Check Exercise

Give two Strengths and two Weaknesses of the Information found on WWW?

5.4.6 Evaluation of the Internet/WWW Information Sources

As we have already seen that the Internet is a rich source of information but before putting that information to use, it has to be carefully evaluated. The major points which have to be kept in mind while evaluating the sources

of information from WWW/Internet are:

1. Check the content of the resource. Evaluate it critically. As you know that anybody can publish anything on the Internet so make sure that the information should not represent anybody's personal opinions. The information provided should be factual, comprehensive and sources of information must be clearly mentioned.
2. Check whether the information is accurate. You can check this by referring to sources of information available/mentioned in the resource and also by verifying it from the author who has put the information there. Author's position, institutional affiliation is good way to find out that the information posted could be relied upon.
3. Check the currency of the information: how frequently is it updated? You can check this by viewing the "Last updated:" copyright date, date of publication usually at bottom of the page of the web site. Timeliness of the information is very important as on the Internet the information disappears as quickly as it appears.
4. Check whether the information has been provided by somebody who is an authority on that particular subject, an expert or an organization? Check whether the organization is recognized in that particular field of study. It will help you in deciding the validity of the information. Also look for any clues which shows that the information is biased or denotes the opinions of a particular person or group.
5. Check the purpose of the information and for whom (audience) the information intended. That could be determined by its content, tone and style. The purpose will also provide you the information about the level of the resource that is whether it is meant for students, academicians, etc.
6. Also check the user-friendliness of the information like the organization of the information, writing style, readability, and search facilities.

5.5. Conclusion

In this chapter, you have studied the human/institutional and the Internet as sources of information. No one source of information is complete in itself. Every source has its own advantages and drawbacks and therefore it depends upon the information required at a particular time which determines the source of information to be used.

Also, you cannot depend upon Internet as the only source of information. However, there had been debates about whether Internet is superior than libraries or Internet has taken the place of libraries but all these doubts have been proved as myths. Libraries are still the most authoritative, reliable, useful

and up-to-date sources of information and Internet assist the librarians to serve the information needs of library users in a speedily manner.

5.6. Glossary of Selected Terms

Bandwidth

The bandwidth is the amount of data that could be transmitted in a particular time. It is usually expressed in bits per second(bps) or bytes per second.

Browser

A browser is a software program which allows you to view WWW documents. They translate HTML files into text, image, sound and other WWW applications, e.g. Microsoft Internet Explorer, Netscape Navigator, Mosiac etc.

Discussion List

Discussion list enables to discuss a subject with many people at the same time via e-mail. To participate in the discussion list, you have to register and become a member.

FTP

File Transfer Protocol, makes it possible to quickly send complete files from one computer to the other.

Subject Directory

Subject Directories provide an overview of Internet resources categorized by subject. Subject directories are smaller than databases, because it consists of quality documents selected by experts.

Virtual Libraries

Virtual Library site provides access to a large number of library resources and services as digital files via computer.

Web Site

The total amount of information placed on a particular place on the Web by a person/organization/institution/business corporation etc. The website consists of many web pages joined together.

5.7. References & Reading List

1. A Primer on Databases and Catalogs: The nitty gritty on finding things in an electronic format. Online library learning centre. A project of the Board of Regents University System of Georgia Unit 4, p.1-2 [http://www.usg.edu/galileo/skills/unit 04/](http://www.usg.edu/galileo/skills/unit%2004/)
2. Banekr, Joe. Glossary of Internet & Web Jargon. Finding Information on the Internet: Tutorial. UC Berkeley- Teaching Library Internet workshops. [http:// www.lib.berkeley.edu/by](http://www.lib.berkeley.edu/by)
3. Bhattacharya, G. Project on study of subjects. Teaching in library science series. 22. Library science v.12, no.3 September 1975; paper G,p.G69-70.
4. Evaluating Information Found on the Internet. Research Help. John Hopkins University. <http://www.library.jhu.edu/>
5. Evaluating Internet Resources. Internet Tutorials. University at Albany. <http://library.albany.edu>.
6. Habraken, Anja, Schmitz, Roger, Tilburg, Peter Van. Searching the World Wide Web. Tilburg University Library. <http://www.tilburguniversity.nl/service/library/instruction/www/onlinecourse/>
7. Harbo, Ole. Information services, libraries and archives. Communication, Information and Informatics Sector. World Communication and Information Report 1999-2000 p. 104-105.
8. Howe, Walt. A brief history of the Internet: An anecdotal history of the people and communities that brought about the Internet and

- the Web. <http://www.waltowe.com/navnet/history.html>
9. Khan, Ratan Kumar, Charabarti, Bhubaneshwar and Banerjee, Swapna. Reforming Reference: Guidelines for Librarian. New Delhi: Mittal Publications, 2004 . p. 93-105.
 10. Krishan Kumar. Reference service. 5th revised edition. New Delhi: Vikas Publications, 1998. page 127.
 11. Nair, Raman R. Accessing Information through Internet. New Delhi: Ess Ess Publications, 2002 p.268-305
 12. Sharma, Meenu. Web Search Strategy/Behavior. Mapping Technology on Libraries and People: papers presented at the first international CALIBER-2003 (Ahmedabad, 13-15 February, 2003). Gujarat: INFLIBNET, 2003 p.648-654.
 13. Smith, Alstair. Criteria for evaluation of Internet Information Resources. http://www.vuw.ac.nz/staff/alastair_smith/evaln/
 14. University of Illinois Library Gateway: <http://www.library.uiuc.edu/>
 15. Welcome to Cyberspace: The Internet and the World Wide Web. Internet Explorer 5.0.Chapter-I.

INFORMATION AND REFERENCE SOURCES AND THEIR EVALUATION

Structure

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6.0. Objectives

After reading this lesson, students, will be able to :

- Know the meaning and types of various types of reference sources and ready reference sources.
- Assess the value of dictionaries and encyclopaedias.
- Distinguish between general and subject encyclopaedias and dictionaries.
- Distinguish between various types of ready reference sources.

- Evaluate any one of them.
- Understood the importances of statistics and its use.
- Identity various types of geographical sources.
- Know the meaning of biographical information sources.
- Elaborate various characteristics for evaluating biographical sources.
- Describe different types of reference sources for current information.

6.1. INTRODUCTION

After discussing about print and non-print sources of information, and their three categories, viz., primary, secondary, and tertiary we are taking up reference sources and their types. Reference sources, also referred to as reference tools/ books have undergone certain major developments since the first known reference sources. Today's reference sources are more authoritative with carefully outlined scope, more accurate, objective, readable in treatment, with better arrangement, appealing format and useful in their overall approach.

These reference sources are quite effective in locating the required information efficiently. Therefore, the references collection of a research library must have adequate variety and number to meet the various information needs of the users.

6.2. TYPES OF REFERENCE SOURCES

We will here take up the various types of documentary reference sources. These are identified as under :-

- | | | |
|---|---|-------------------------|
| <ol style="list-style-type: none"> 1. Encyclopedias 2. Dictionaries 3. Biographical sources 4. Geographical sources 5. Year books and Almanacs 6. Directories 7. Handbooks and Manuals 8. Statistical sources 9. References sources for current Events | } | Ready Reference sources |
|---|---|-------------------------|

A brief overview and criteria for evaluation of each of these above mentioned types of references sources is given below.

6.2.1. Encyclopaedias

6.2.1.1 Meaning

An encyclopaedia is summary of knowledge considered significant to the society, and arranged in systematic usually

alphabetical -order. According to katz, it makes efforts to gather information either from all branches of knowledge or from a single subject area.

Harrod's librarian's Glossary of Terms used in Librarianship.....

defines encyclopaedia as "A work containing information on all subjects, or limited to a specific field or subject, arranged in systematic (usually alphabetical) order.

According to **Oxford English Dictionary**, an encyclopaedia is "a literary work containing extensive information on all branches of knowledge, usually arranged in alphabetical order."

6.2.1.2. Brief History

Encyclopaedia is a Greek term which means "instruction in the circle of knowledge." It was in this context that Pliny the Elder (23-79 A.D.) applied it while writing **Natural History**. Another example of one of the earliest encyclopaedias is the **Etymologies**, prepared by Isidore of Seville (560-636 A.D.), in which he gathered all human knowledge in 20 volumes. However, the first encyclopaedia to be published in English language in 1704 was *Laxion Technicum* by John Harris. Encyclopaedias were then compiled in subsequent time periods from eighteenth to twentieth centuries.

6.2.1.3 Types

There has been a lot of growth in the number and types of encyclopaedias. However, there are two major types of encyclopaedias as mentioned below :

6.2.1.3.1 General Encyclopaedias

A General encyclopaedia usually contains a collection of articles giving essential general information on subjects in various branches of knowledge. They are generally arranged in alphabetical order by subjects. These encyclopaedias are designed for general readers, and therefore very useful for comprehensive coverage of various topics. The most popular general encyclopaedias are remembered as the ABC - that is **Americana Britannica** and **Collier**. These could be single volume or multi-volume sets.

Examples

1. **Encyclopaedia Americana**, Danbury, CT: Grolier Incorporated, 1994 to date, 30 volumes first published 1829-1933.
2. **The New Encyclopaedia Britannica**, 15th Edition, Chicago : Encyclopaedia Britannica Inc., 2003 to date, 32 volumes. First

published 1768-71 as **Encyclopaedia Britannica**.

6.2.1.3.2. Subject Encyclopaedias

Growth of knowledge in different subjects has resulted in publication of subject encyclopaedias. They contain articles limited to specific field, written by subject experts. They are compiled to satisfy the needs of the specialist in a particular subject. The articles generally include a brief bibliography on the topic discussed. These could be single volume or multi-volume sets.

Examples

1. **Encyclopaedia "of Library and Information Science**, New York : Marcel Dekker, 1968-83, 35 volumes, Supplements 1-4/36.
2. **International Encyclopaedia of Social Science**, New York : The Macmillan Company, 1968-1980, 81 volumes. (Reprinted by collier-Macmillan, 1997, in 8 Volumes).
3. **McGraw-Hill Encyclopaedia of Science and Technology**, 9th-Edition, New York ; Mc Graw-Hill Book Company, 2002, 20 volumes. First published 1960.

6.2.1.4. Purpose, Function and Scope

An encyclopaedia will usually include detailed articles in certain fields or area giving all significant information. It provides an overview for various topic giving explanatory material in short, and brief information data such as birth and death date of famous person, geographical locations, and historical events, It is quite useful for background information. This scope according to Katz "makes the encyclopaedia ideal for reference work", The essential purpose is to capsulize and organise the world's accumulated knowledge. The bibliographies at the end of articles may help the reader to find material in a given subject area. It may, however be mentioned that general encyclopedias are not the proper sources for research ; they are just the springboard.

6.2.2. Evaluation

A good collection of general and subject encyclopaedias forms the backbone for the reference service in any library. A strong collection ensures efficient reference service in a library. Since encyclopaedias are quite expensive, we discuss some checkpoints which can help the librarians in their selection and acquisition.

6.2.2.1 Authority

The authority can be judged by the reputation of the editor/s, experts, scholars who have written articles and are responsible for producing encyclopaedia. The academic qualifications, experience, reputation of publishers, editorial staff, reliability of information, long standing excellence, etc. all contribute to the authority of an encyclopaedic set.

6.2.2.2 Scope and Purpose

The scope and purpose are generally stated by the editors. However, the scope of a subject encyclopaedia is clear in its title, which it is not so, in a general encyclopaedia. It generally includes the range of coverage of topics, a definite plan regarding the length and content, the selection of topics, the age level of the target readers.

6.2.2.3 Treatment

It depends on the following points :

- i. **Readability** : The information included in the topic covered should be readable and easily understandable. The standard and quality should be according to reader needs.
- ii. **Objective** : There should not be any national, political, or religious bias in the articles included.
- iii. **Style** : Style of writing and presentation should be according to the policy of the encyclopaedia and its readership.

6.2.2.4. Recovery

The constant revision and updating of an encyclopaedia set speaks of its recovery. There are different methods of revision followed :

- i. **Supplementary volume** : by bringing a supplement every year, an encyclopaedia can be updated
- ii. **Periodical Revision** : Many encyclopaedias are revised and reset after a specific time interval to update the material.
- iii. **Continuous Revision Policy** : Some encyclopaedia are revised each year about ten percent of the material to make them recent. However, with the availability of new technology, there is possible solution of a rapid revision of an encyclopaedia; and this is the online encyclopaedia.

6.2.2.5 Arrangement

The arrangement of articles in an encyclopedia is usually alphabetical as it is more familiar to average user. This arrangement can be

supported with cross reference whenever required. It should be further supplemented by an index. Another type of arrangement is classified order depending upon the nature and size of articles, and plan of editors.

6.2.2.6 Format

A good format of an encyclopaedia depends upon the physical make up which takes into account presentation of articles, illustrations, diagrams, maps, tables, typeface, quality of paper, page make-up, binding, size, etc.

6.2.2.7 Index

Even if the cross-references are given in the text, the need for an index still remains as a single article may contain dozens of events, names, concepts, which cannot be located without a detailed index.

6.2.2.8 Price

The price of encyclopaedia from set to set depending upon various factors. The librarian has to make a choice depending upon the needs of his users, institution and the budget available.

6.2.2.9 Special Features

In the end, it should be assessed as to what are the distinguishing features of the work. Does it include appendices? Are the bibliographies update and useful? Does it have guidelines for using the set ? etc.

6.2.3 Dictionaries

6.2.3.1 Definition

A dictionary is a well known reference source in library as well as personal collection. According to **Harrod's librarians' Glossary of Term words in Librarianship.....**, a dictionary is " A book explaining the words of a language, the words being arranged in alphabetical order; it usually given the orthography, pronunciation and meaning of each word." It is one of the most common reference source referred to by the people all through their lives.

6.2.3.2 Alternative Names

A dictionary is also alternatively known as :

- i. Glossary (a list of terms alongwith some explanation in a special field).

- ii. Thesaurus (a treasury of words with synonyms).
- iii. Lexicon (a dictionary in some foreign languages.)
- iv. Vocabulary (a stock of words and phrases)

6.2.3.3 **Types**

These days, a wide variety and some range of dictionaries is available. These can be categorised, according to their nature and scope, into following four groups :

- i. General language dictionaries. For example,
 - 1. **The Oxford English Dictionary**, 2nd ed. Oxford : Clarendon Press, 1989.
 - 2. Webster's Third New International Dictionary of English Language Chicago : Encyclopedia Britannica inc. 1961. 3 vol.
 - 3. Roget's International Thesaurers. Ed 3, 1968.
 - 4. PSUTB English-Punjabi Dictionary Chandigarh. Punjab State University Text Book Board.
- ii. Special dictionaries, which deal with each aspect of word as synonyms antonyms, quotation, abbreviations, slang, dialect, punctuation, etc. For example , Punctuate it right, New York : Barnes & Nobel, 1963.
- iii. Subject dictionaries, devoted to specific subject fields, occupation, professions. For example, McGraw Hill, Dictionary of Modern Economics, New York : McGraw Hill, 1983.
- iv. Dictionaries for translation, with meaning of a word of one language into more than one languages, i.e. bilingual and multilingual dictionaries, For example, **Sanskrit-English Dictionary**, Oxford : Clarendon Press, 1999.

6.2.3.4 **Uses**

A dictionary serves very useful purpose, hence every library must have a good collection of dictionaries, some of its uses are :

- i. To find the meaning of words and terms ;
- ii. To check the pronunciation and verify spellings and syllabication of words ;
- iii. To trace the origin, derivation and history of a word;
- iv. To indicate the dialect and correct usage of word;
- v. To determine abbreviations, acronyms, signs, symbols, synonyms, antonyms etc.

6.2.3.5 Evaluation

A librarian cannot buy all the dictionaries available, hence he has to carefully evaluate each one of them on the basis of the following criteria:

6.2.3.5.1. Authority

The authority of a dictionary is determined by the reputation of the publishers, editors, compilers, etc. Name of some reputed publishers of dictionaries include Oxford University Press, Merriam-Webster, Random House, Macmillan, Simon & Schuster, Houghton Mifflin, Funk & Wagnells, etc. They have published various types of dictionaries and earned good name.

6.2.3.5.2 Scope and Purpose

The librarian should know the basis for word selection adopted by the compilers of a dictionary. He should know about the size of the vocabulary, and the type of readers for whom it is compiled. Vocabulary can be described in terms of the period of the language covered and the numbers of entries included in a dictionary. In case of bridged dictionaries the words could be more than 2,65,000 ; and the abridged dictionaries generally have from 1,30,000 to 2,65,000 words.

6.2.3.5.3. Arrangement

Dictionaries are mostly arranged in alphabetical order either letter-by-letter or word-by-word, as this arrangement is easier for the users. The keys to the abbreviations used and pronunciation with the help of diacritical marks should be made clear.

6.2.3.5.4. Currency

Timeliness of the words in a dictionary is quite important. All the reputable publishers keep on updating their dictionaries after every three to four year to include the new words. The arduous task of revising a dictionary has been made considerably simple with the assistance of computer.

6.2.3.5.5. Spellings

In a good dictionary, different forms of spellings, e.g. British and American, should be clearly indicated.

6.2.3.5.6. Etymology

Etymology and history of words recorded with dates enable the user to track the changes in meaning and usage of a word over a period of time.

6.2.3.5.7. Synonyms

Generally, the average user does not consult a general dictionary for synonyms. But if these are included it helps to differentiate between similar words.

6.2.3.5.8. Syllabication

A good dictionary indicates, usually by a hyphen, how a word is to be divided into syllables useful for writers, editors, secretaries, etc.

6.2.3.5.9. Format

A major aspect of format of dictionaries is binding, hence hardbound editions should be purchased in a library. However, printsize, readability, spacing between words, boldface, type/quality of paper etc. should be checked.

6.6.2.3.2.10. Special Features

Some dictionaries include geographical and historical information, names of notable persons, tables of weight and measures, maps sketches, illustrations, list of abbreviation, sign and symbols, etc. Librarians should assess the value and usefulness of dictionaries on the basis of the above mentioned checkpoints.

6.2.4 Biographical Sources**6.2.4.1 Definition**

Biography is "a study sharply defined by two definite events, birth and death", said Edmund Gosse. But the Oxford English Dictionary defines biography as the history of the lives of individual men. **Harrod's librarians' Glossary of Terms used in librarianship....** defines biographical dictionary as "a collection of lives of people arranged in alphabetical order:", Lousis shores has defined it as "a directory of notable persons, usually arranged alphabetically by surnames, with biographical identification that range from brief outline to extended narrative:. It should be accurate, balanced and objective.

Thus biographies are individual and collective ; and librarian more interested in books of collective biographies these are usually called as " Biographical Dictionary" or, "who is who", or even "Directory" in some cases.

6.2.4.2. Uses

In reference service according to Katz, the primary uses of

biography

- i. to locate information on a person,
- ii. to locate people who are famous in a given occupation, career, or profession,
- iii. to locate supporting material about an individual, and
- iv. to locate a possible name for the baby.

In addition, it is also used for the following purposes.

- v. to know about the awards received and the year(s),
- vi. to know about the publications,
- vii. to know about the professional affiliations,
- viii. to know the present address, etc.

6.2.4.3 Types

Biographical sources are grouped into two broad heads :

- i. Current biographical sources, and
- ii. Retrospective biographical sources.

Both of them could have universal scope or limited to national regional,"or local or institutional.

Examples

1. **Websters Biographical Dictionary**, Springfield, Mas G&C Meriam, 1995.
2. **International Who's Who**, London : Europa Publications, 1935-, Annual.
3. **India Who's Who**, New Delhi ; INFA, 1970 - Annual.
4. **Dictionary of National Biography**, edited by S.P.sen, Calcutta : Institute of Historical Studies, 1972-1974, 4 volumes, Two Supplements.
5. **Who's Who of Indian writers**, 3rd edition, 2 volumes, edited by K.C. Dutt, New Delhi : Sahitya Akademi, 1999.

6.2.4.4 Evaluation

The following criteria will help the librarian in assessing the usefulness of a biographical source of information.

6.2.4.4.1 Authority

The authority of a biographical source depends upon the reputation of the publisher, editor, compilers, writers of the entry.

6.2.4.4.2 Scope

The scope is found out by knowing if it is general, international, national or specialised ; comprehensive or selective, retrospective or current.

6.2.4.4.3. Selection Process

The process of selection of entries varies from publisher to publisher or from editor to editor, but it has to be checked if it is on the merit, or by invitation, or on payment.

6.2.4.4.4. Method of Compilation

Many biographical sources use the questionnaire method of compiling entries, whereby biography himself writes and later corrects his own entry. Another method followed is where the Publisher researches the material. Both methods have advantages and disadvantages.

6.2.4.4.5. Length of Entry

The scope and purpose decide about the length of entry. If it is who's who data, it occupies relatively less space, but if it is presented in essay form, it makes the entry long.

6.2.4.4.6. Frequency

Most of the biographical sources are published on a yearly basis, while others are updated every three or four years. There are other publishers who bring out supplements to update the information. If the work is irregular, a librarian should check the latest edition with the previous edition for updation.

6.2.4.4.7. Arrangement

The usual approach followed for arranging entries is alphabetical, though some works may also be arranged in chronological sequence determined by birth dates, period, events, area of subject interest, etc.

6.2.4.4.8. Format

Since a biographical source is used frequently, its physical get-up should be well checked. Also check if it has the photographs, biographies also. Questions about the typeface used, quality of paper, binding, etc. constitute the format.

6.2.4.4.9. Index

Is the biographical work adequately indexed, or given sufficient cross-reference.

6.2.4.4.10. Other Features

While evaluating the work, find out if it is in the same way. How is it different from others when compared with them? The reliability and accuracy of the work should also be checked.

6.2.5 Geographical sources**6.2.5.1 Definition**

Sources of geographical information are generally graphic representation of earth. According to Katz, many of them are works of art, and they provide a type of satisfaction rarely found in the purely textual approach to knowledge.

6.2.5.2 Uses

Geographical sources are used at different levels :

- i. To ask general questions about the geographical areas on the earth,
- ii. To ask about the location of a country, a city, a town, etc.
- iii. To ask about the climate, environment, political boundaries, etc. of geographical areas,
- iv. To ask about the lakes, rivers, forests, mountains, islands, etc.

6.2.5.3 Types

These sources may be divided into three broad categories : Maps and atlases; gazetteers and guidebooks. These are defined as given below.

6.2.5.3.1 Maps and Atlases

- (i) A map is a representation of a flat surface of certain boundaries of the earth. R. A. Spelton, a former superintendent of the Map Room of the British Museum defines it like: "A map is a graphic document in which location, extent and direction can be more precisely defined than by the written word; and its construction is a mathematical process strictly controlled by measurement and calculation."
- (ii). An atlas is a collection of maps of inform dimensions put together in a book form. According to **ALA Glossary of Library and Information Science**, an atlas is "a volume of maps, plates, engravings, tables, etc. with or without descriptive letter press. It may be an independent publication or it may have been issued to accompany one or more volumes of text."
- (iii). A globe is a spherical representation of earth's surface. It is a hollow ball of metal bearing a world map on its surface, and is mounted on an axle which allows it to rotate.

Examples

1. **Columbia Lipborncatt Gazettees of the World NY.** Columbia University Press, 1952.
2. **The Times Atlas of the world : Comprehensive Edition,** 9th edition, London: Times Books, 1992.

6.2.5.3.2 Gazetteers**6.2.5.3.2.1 Definition**

A gazetteer is a reference source which provides information on places of the world or a particular country, or a region, arranged under their names in alphabetical order. It is therefore a "dictionary of places." But the **ALA Glossary of Library and Information Science** calls it as "a geographical dictionary." Gazetteers has another meaning : the index in any atlas is also a gazetteer.

6.2.5.3.2.2 Uses

- i. It is a valuable source for locating places.
- ii. It provides historical, social, cultural, political, individual, etc. details about a place.

Examples

- i. **Gazetteer of India : Indian Union**, Delhi: Publication Division, 1965-78. 4 volumes.

6.2.5.3.3 Guidebooks**6.2.5.3.3.1 Meaning**

A general guide book is a travel guide which is meant "for travellers that gives information about a city, region or a country or about a building, museum etc."

6.2.5.3.3.2 Purpose and Use

These guides inform the travellers about what to see, where to stay, where to take food, mode of transportation, etc. These guidebooks contains sufficient information about countries, sights Worth seeing, museums, places of amusements, routes, accommodation, exchange rates, fares, climate, communication, etc.

Examples

- i. **Murihead's Blue Guides**, London : Ernest Benn, 1988 to date.
- ii. **Fodor Travel Guides**, London: Mckay, 1953 to date.
- iii. **Murray's Handbook for Travellers in India, Burma and Ceylon**, 21st edition, London: Murray, 1968.

6.2.5.4 Evaluation

Librarians can evaluate the various geographical sources taking into consideration the following points.

6.2.5.4.1 Authority

The representation of the publisher, cartographers, etc is important because printing of maps and atlases requires high degree of skill. As the process involves heavy expenditure, most countries have

their own cartographic survey agencies. In USA, Rand Mc Nally & company, C.S. Hammond & company, National Geographic Society; in U.K.G. Bartholomev, and the Oxford University Press; while in India Survey of India maps are popular.

6.2.5.4.2 Scope and Audience

Some atlases are international/universal in scope, others are national or regional. The maps included are topographical or thematic such as political, physical, historical, geological, commercial, linguistic, etc. They cover such information as latitude, longitude, area, population, transportation, etc. These are used by professionals, students and research workers in different subject areas.

6.2.5.4.3 Scale

Maps are often classed according to scales which should be clearly stated on all maps. The more the detailed map, the larger the scale, is, one inch on map can be equal to 200 kilometers on the earth's surface. But the scale for maps may vary within an atlas.

6.2.5.4.4. Standardisations

There are constant changes in names as well as in the spellings of established place names. This causes problems for cartographers in making maps. Attempts should be made to standardize domestic as well as foreign place names.

6.2.5.4.5 Arrangement

A helpful arrangement for maps is countrywise or theme wise. It should, however, be supported by a comprehensive index listing all place names.

6.2.5.4.6. Revision/Currently

Well known map makers follow a revision policy because of political and topographical changes. Librarian must check if it has been revised, and new spellings, new name are used.

6.2.5.4.7. Format

It consists of the quality of the photographic reduction from the original colour that helps to differentiate land and sea, different continents, countries, states, etc. A standard set of symbols for roads, railways, streams, villages, airports, parks etc. should be used. The, projections should be clearly indicated to show various distortions in maps. Similarly, grid system using latitude and longitude are helpful in locating a specific place. Suitable typeface, strong binding, marginal information, are other aspects of format.

6.2.5.4.8 Special Features

Good atlases contain bibliographies, charts, illustrations, tables, statistical information, etc. that help in the selection and evaluation of maps and atlases.

6.2.6 Ready Reference Sources

Ready reference sources are generally fact-finding sources. These include yearbooks, almanacs, directions, handbooks, manuals, etc. Librarians refer to these sources mostly for the factual queries of the readers. Let us discuss them briefly and check their evaluation.

6.2.6.1 Yearbooks**6.2.6.1.1 Definition**

According to ALA Glossary, a yearbook is "an annual volume of current information in description and/or statistical form, sometimes limited to a special field." William Katz defines it as "an annual compendium of data statistic of a given year, "A year book therefore can quickly provide facts on history, geography, population, politics and trade.

6.2.6.1.2. Types

Year books can be divided into two major categories :

- i. Yearbooks, as annual publication at international, national or regional travel.
- ii. Yearbooks, as supplements to encyclopaedias, to keep them up-to-date.

6.2.6.1.3 Uses

- i. Give recent data on a particular subject or country.
- ii. Provides brief facts about trade, industry, social welfare, govt, tourism, education, etc
- iii. Indicates trends in the development of the society.
- iv. Gives activities of various organisation.
- v. Make possible to browse through a mess of statistical and other information.

6.2.6.1.4 Examples

- i. **The Europa World Yearbook**, London : Europe Publications, 1926 todate, Annual, 2 volumes.
- ii. **The Stateman's Yearbook : The Politics, Culture and Economics of the Worlds** London: Macmillan, 1864 todate, Annual.

- iii. **India: A Reference Annual**, New Delhi: Publication Division, 1953 to date, 'Annual.
- iv. **Britannica Book of the year**, Chicago and London: Encyclopaedia Britannica Inc. 1938 to date, Annual.

6.2.6.2 Almanacs

6.2.6.2.1 Definition

In old times almanacs were regarded as a book arranged in chronological sequence providing information concerning rising and setting of moon, periods of low and high tides, calendar of holidays, and some miscellaneous information. But now, according to **Harrod's Librarians' Glossary** it is "a publication, usually annual, containing variety of useful facts of miscellaneous nature and statistical information." According to William Katz, "An almanac is a compendium of useful data and statistics relating to countries, personalities, events, subjects, and the like."

6.2.6.2.2 Types

According to scope, purpose and coverage almanacs are grouped into the following:

- i. **Astronomical Almanacs**
Ex: Astronomical Almanac, London : HMSO, 1989 to date, Annual
- ii. **Informational Almanacs**
Ex.
 - 1. **Whitaker's Almanac**, London : J. Whitaker & Sons, 1869 to date, Annual.
 - 2. **World Almanac and Book of Facts**, New York: Newspaper Enterprise Association, 1868 to date, Annual.
 - 3. **The Bowker Annual of Library and Book Trade Information** N.Y. R.R. Bower 1955.

6.2.6.2.3 Use and Purpose

(Same as for the Year books)

6.2.7 Directories

6.2.7.1 Definition

According to **ALA Glossary**, a directory is "a list of persons, or organisation systematically arranged, usually in alphabetical or classed order, giving addresses, affiliations, etc. for individuals, and address, officers, functions and similar data for organizations." This is a clear definition of a simple, pure directory.

6.2.7.2 Purpose

A directory helps in finding out:

- i. the address of an individual;
- ii. description of a particular manufacturer's products, services;
- iii. "Who is.....", for example, the chairman of the school board;
- iv. historical and current data about an institution, a firm, etc;
- v. data for commercial use;
- vi. limited, but upto date, biographical information on an individual;
- vii. random or selection samplings is a social or a commercial survey.

6.2.7.3 Types

There are two major categories of directories:

- i. General directories at international, national, regional and local level,
- ii. Special directories of institutions, professions, trade, etc.

6.2.7.4 Examples

1. **The World of Learning**, London: Europe Publications, 1947 to date, Annual.
2. **Commonwealth universities Year book : Directory to the universities of the commonwealth, and, the Handbook of their Associations**, London: Association of commonwealth Universities, 1914 to date, Annual, 2 volumes.
3. **Universities Handbook, New Delhi. AIU**

6.2.8 Handbooks and Manuals

6.2.8.1 Definitions

The word 'handbook' is derived from German, word 'handbuch'. It is a small book or treatise giving useful facts, and as may conveniently be held in hand. Similarly, a manual is also a book intended to be kept at hand for reference. A handbook is a compilation of miscellaneous information, in a compact and handy form; while a manual is an instruction book so as to give guidelines as to how to perform a job. Katz states that it is not easy to distinguish between the average hand book and the average manual. But they are important reference sources in a library.

6.2.8.2 Purpose

The handbooks and manuals are, prepared with a purpose to serve as ready reference sources in any field of knowledge. These sources primarily give information about 'how to do', 'how to perform', 'how to make', etc, i.e., those consisting of facts to know, and 'instructions to do'.

6.2.8.3 Types

With the growth of knowledge, countless handbooks on specific subjects are published. They can be grouped into the following types:

- i. **General Handbook:** They facts regarding the first and best of everything. For example:
- ii. **Statistical Handbook :** This cover information regarding various aspects in numerical form. For example:
Handbook of Labour Statistics, Shimla :, Labour Bureau, 1991.
- iii. **Historical handbooks :** They provide information regarding events, discoveries, 'music, art, etc. in different countries of the world. For example:
The Time Tables of History : A Chronology of World Events.....revised ed., New York: Simon & Schustev, 1987.
- iv. **Literary Handbooks:** Useful for queries on literature, literary works, etc.
- **The Cambridge Guide to English Literature**, Cambridge: Cambridge University Press, 1983.
- v. **Subject Handbooks:** Useful for the academicians and specialists in various subject fields. For example:
Handbook of Special Librarianship and Information Work, edited by P. Dossett, London: ASLIB, 1992.
Handbook for Members of Rajya Sabha, 'New Delhi : Rajya Sabha Secretariat, 1996.
- vi. **Practical Handbook:** Provide instructions to do, to make, to learn, etc. For ex:
- **Your Guide to Health**, by C.R.Anderson, Poona : Oriental Watchman, 1976.
- **Learn to Drive**, rev, ed. by George Hansel, Warner Books, 1987.
- vii. **Official Handbooks :** For consisting in following office rules in govt. offices. ex :
Swamy's Handbook for Central Government Servants, Madras : swamy Brothers; 1989 todate, Annual.
- viii. **Tables :** Present numerical and quantitative information in tabular form ex:
Tables of Physical and Chemical Constants, by G.W.C. Kaya and T.H. Laby, London: Longman, 1973.'

6.2.8.4 Manuals

Examples :

- **A Manual of Style: For Author Editors and copywriters**, Chicago : University of Chicago, 1969.
- **Manual of Reference and Information Sources**, by Sewa Singh, New Delhi, B.R. Publishing Corpn. 2004. 2 volumes,

6.2.9. Evaluation of Ready Reference Sources

As discussed above, a variety of reference sources are available for use by students, researchers, academicians, professionals, business executives, housewives, etc. But no library can afford to buy all with in limited funds. It is therefore necessary to evaluate each and every ready reference sources. The criteria for their evaluation is as given below.

6.2.9.1 Authority

For these sources, the authority is checked by the reputation, credibility, expensiveness, qualifications of the editors, compilers, publishers, as they provides the latest and established information.

6.2.9.2 Scope

Most of the ready reference sources are limited in scope. They emphasize on a specific area of interest with depth of information which makes them more significant. They can be comprehensive or selective, current or retrospective, etc. They provide more information about well known facts, knowledge, information, etc.

6.2.9.3. Arrangement

Their arrangement can be alphabetical, chronological, geographical or classified. Whatever the arrangement, it should be systematic and consistent to facilitate the users to locate information.

6.2.9.4 Treatment

The treatment of presentation of data should be scholarly in some of them like the subject handbooks, but popular and simple in manuals.

6.2.9.5 Recovery

The uptodateness of data and information included in these sources in quite important. They should be accurate, thorough, reliable, with a regular revision policy.

6.2.9.6 Format

As these sources are frequently used, their format should be checked for the size, typography, quality of paper, type of binding, physical get-up etc.

6.2.9.7 Index

The provision of index in ready reference sources is an asset.

6.2.9.8 Special Features

While evaluating ready reference sources, it is important to look for other features such as method of compilation, trends in development, glossary, bibliographies, etc.

6.2.10. Statistical Information Sources**6.2.10.1 Importance and Need**

Statistics are numerical facts. They are concerned with the collection, classification, analysis and interpretation of numerical facts, data. About the importance of the statistics, **Facts in Forms**, explains thus : "statistics are part of our way of life. Politicians, professionals and amateurs, argue over them, businessmen and administrators plan with them; trade bargain around them. They are essential to the academic researcher, and-every social student must know where to find a wide range of data critical." Statistics are curtsied to the needs and work of many social scientists such as economists, geographers, sociologists, political scientists, historians, educationists, market managers, sports persons, health workers, and so on. According to Peter Lea and Alan Day, the increasing influence of the news media and socio-economic changes gave many statistics a new prominent role.

In most cases, the government of a country collects the widest range of data published in the form of census reports. At the international level, such inter-governmental organizations as the United Nations, World Bank, ILO, etc produce statistical sources.

6.2.10.2 Uses

Sources of statistical information are used for the following purposes:

- i. Readymade statistics in any one field of specialisation, or all the fields;
- ii. Data on different subjects authenticated by experts;
- iii. Statistics on population giving details about births, deaths, age, sex, etc;
- iv. Historical statistics on various aspects;
- v. Comparative statistics of various countries;
- vi. Statistics about agriculture, forests, animals, industries, education, etc.

6.2.10.3 Types

Most of the ready reference sources and many reference sources also possess statistical data. For example:

- i. **Dictionaries:** These often provide population statistics as well as other kind of statistics,
 - ii. **Encyclopaedias:** These provide socio-economic data about countries, etc.
 - iii. **Yearbooks and Almanacs:** These provide various types of statistical information on a variety of subjects,
 - iv. **Directories:** These provide demographic and other statistics.
 - v. **Biographical Sources:** These provide vital statistics relating to dates of birth and death, age, sex, address, occupation, etc.
 - vi. **Atlases:** These provide economic, geographic, physiographic data.
- There are many more such sources providing statistics on different fields. Besides, there are sources of primary statistics compiled by government and other organizations/agencies. There are sources of secondary information as/mentioned above. These sources can also be categorised as social publication, and ad-hoc publications at international, national and regional levels.

6.2.10.4 Examples

1. **U.N. Statistical Yearbook**, New York: United Nations Statistical Office, 1949 to date, Annual.
2. **Census of India**, New Delhi : Register General and census commission, India, 2001.
3. **Statistical Abstracts of Punjab**, Issued by Economic Advisor to Govt, Punjab, Chandigarh: Economic and statistical organisation, Govt of Punjab, 1959 to date, Annual.

6.2.10.5 Evaluation

The following check points for evaluation of statistical sources may be considered.

6.2.10.5.1 Authority

The reliability of statistical sources of information depends upon the compilers, editors, publishers, etc.

6.2.10.5. Scope

The scope of the source depends upon the area covered, subjects included etc.

6.2.10.5.3 Arrangement

Usually data is arranged in tabular form which can be according to some well-defined subjects/topics.

6.2.10.5.4 Revision

As statistics go out of data very soon, these sources need to be revised on yearly basis to keep the data up-to-date.

6.2.10.5.5 Index

A detailed index is considered always helpful.

6.2.10.5.6 Format

It depends on typography, quality of paper, type of binding, etc.

6.2.10.5.7 Special Features

These could include some special features on areas interest, key regarding how to use the tables, other explanatory notes, etc.

6.2.11 Sources for Current Events**6.2.11 Introduction**

With the information overload, it has become imperative for researchers, students, and other to know the current material on recent events around the world. The problem of recovery of literature has been solved in many countries by introducing online computerized service. But the problem remains unsolved for libraries which do not have access to computerized services. Therefore, they look for such alternatives, according to Katz, as scanning the latest issues of newspapers, magazines, consulting the local bureau of radio, television, consulting the experts, etc.

6.2.11.2 Types

Sources for current events can be grouped into three categories as given below:

6.2.11.2.1 Indexes to Newspapers

Newspapers include such current events as socio-economic developments policy pronouncements, opinion on current happenings, news about important persons, political parties, elections, environment, finance, sports, etc. Newspapers should be consulted only if one has the idea about the date, otherwise it is a tedious and time consuming job. Therefore, the indexes to newspapers are very helpful sources to search such information.

Examples

- 1 **The New York Times Index**, New York: New York Times, 1851 to date, semi monthly with quarterly and annual circulations.

2. **The Times Index**, Reading, Eng., Newspapers Archives Development, 1906 to date, monthly with annual circulations.
3. **The Hindu Index**, Chennai : The Hindu, 1991 to date.
4. **Newspaper Abstracts on Disc** (computer File), Louisurille, NY: UMI/Date courier, 1985 to date.

6.2.11.2.2 News summaries and News Digests

Sources having news summaries and news digests are based on newspapers, and are consulted for some details about the news about current events. One can always get brief information about the current events without consulting the newspapers.

Examples

1. **Keesing's Record of World Events**, Cambridge : Longman Group Ltd., 1931 to date, Weekly upto 1971, and 1972 onwards Monthly.
2. **Asian News Digest : A Weekly Digest of Asian Events with Index**, New Delhi: Ashish Publications, 1955 to date, Weekly.
3. **Data India**, New Delhi: Press Institute of India, 1976 to date, weekly.

6.2.11.2.3 Summaries of Television and Radio Broadcasts

Those days audio-visual materials like films, televisions, radio, etc. are assuming increasing importance as sources of current information. Therefore some services have been designed which can be helpful to search for current affairs broadcast from radio and television.

Examples

1. **Summary of World Broadcasts**, Caversham : British Broadcasting corporation, 1947 to date, Daily.
2. **Foreign Broadcast Information Services**, Washinton, D.C. : U.S. Department of Commerce.

6.2.11.3. Evaluation

The checkpoints for evaluation of sources of current events are the same as for other ready reference sources as discussed above.

6. 3. Summary

This lessons discusses the importance, need, types, uses and checkpoints for such reference sources as encyclopedias, dictionaries, sources of biographical information, geographical information, statistical information, and various types of ready reference sources. It has also takes into account the need and important of

sources of current events, and their evaluation for selection in libraries.

6.4. GLOSSARY

- | | | | |
|-----|-------------------------|---|---|
| 1. | Antonym | : | A word that is opposite meaning to another. |
| 2. | Biographical Dictionary | : | A collection of writing on lives of people arranged in alphabetical order. |
| 3. | Census | : | A country's population counted officially. |
| 4. | Chronological order | : | An arrangement in order of data. |
| 5. | Cumulation | : | The progressive inter-filling of items arranged in a pre-determined order. |
| 6. | Cyclopedia | : | Synonym of encyclopaedia. |
| 7. | Demography | : | Study of statistics of births, deaths, etc. to other the state of a community. |
| 8. | Gazetteer | : | A record of public events published periodically by government agencies to convey official information. |
| 9. | Online searching | : | The interactive searching of databases via a host computer system. |
| 10. | Scale | : | The ratio of distance on a map, globe, drawing, etc. |
| 11. | Synonym | : | A word or phrase with the same meaning as another in the same language. |

6.5. REFERENCES

1. Cheney, Frances Neel **Fundamental Reference Sources**, 2nd ed., Chicago: American Library Association, 1980.
2. Katz, William A. **Introduction to Reference Work**, 7th ed., New York: Mc Graw Hill, 1997, 2 vols.
3. Krishan Kumar **Reference Services**. 5th ed., New Delhi : Vikas, 1996.Reprint 2006.
4. Lea. Peter W. L and Day Alam, Eds. **The Reference Sources**

- Handbook**, 4th ed., London : Library Association Publishing, 1996.
5. Sewa Singh. **Manual of Reference and Information Sources**, 2nd ed., New Delhi : B.R. Publishing Corporation, 2004.
 6. Satija, M.P. and Sewa Singh. **Sandharab ate Soochna Sarot**, Patiala : Punjabi University Publication Bureau, 1996 (in Punjabi).

BIBLIOGRAPHICAL SOURCES

STRUCTURE

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7.1. INTRODUCTION

There has been tremendous growth of knowledge in a wide variety of formats in recent times. It has made different for the researchers and other users to keep themselves abreast of the latest information. A number of new methods of document description, Storage and retrieval have been developed. Bibliography is one of such tools that helps to assess the vast amount of information published each year.

7.2. DEFINITION

The term 'bibliography' has been derived from two Greek words 'biblion' and 'graphein', meaning 'a book' and 'to write' respectively. Thus bibliography means 'writing of books'. This meaning has changed over the years to 'writing about books'.

According to Louis Shores, bibliography is a 'list of written, printed or otherwise produced record of civilization, which may include books, Serials, pictures, films, maps, records, manuscripts, and any media of communication.' Similarly, William Katz said, "A bibliography records not only what is available, but what has been available in the past and what will be available in the immediate future."

There are many more definitions available, but it seems from the above that bibliography is defined primarily in relation to books. However, in practice, it is concerned with all published documents and also the non print media.

7.3. AIMS AND OBJECTIVES

The UNESCO and the Library of Congress in their survey report in 1950 stated the following aims and functions of bibliography.

- "1. Its aim is to make it possible for intellectual workers, to learn of publications recording the developments in their fields of interest not only in their own countries but also through the world.
2. Promote the effectiveness of particular project in a research.
3. Contribute to the cultural development and enjoyment which are derived from records of learning and culture.
4. Assist in promoting useful applications of existing knowledge and in making the applications which have been developed in one country, widely known to all countries."

7.4. FUNCTIONS

A bibliography has the following functions:

- i. It is a systematic guide to the literature of the subject.
- ii. It locates a title on a given subject, and identifies the bibliographical details on it (i.e., author, title, publisher, place, year, etc.)
- iii. It serves as a selection tool in acquiring material for the library.
- iv. It helps in obtaining information on complete works of an author.
- v. It saves the time and efforts of researchers as it helps in selecting relevant documents from a large number of documents.
- vi. It is useful for conducting retrospective search for the purpose of research.

7.5. USES

A bibliography has several uses such as the following.

- i. It helps the users in locating documents of their interest.
- ii. It helps in identifying and verifying bibliographic information of documents.
- iii. It helps in selecting useful material for collection development,
- iv. It further helps in tracing the development of subject.
- v. It helps to avoid duplication in research.
- vi. Provides access to materials of interest to researchers,
- vii. Performs the function of bibliographic control over the existing literature.

7.6. BRANCHES OF BIBLIOGRAPHY

The following main branches of bibliography have been identified :

7.6.1 Analytical Bibliography

It is the study of books as physical objects; the details of their production, the effects of the method of manufacture on the text. It may also take into consideration the history of paper, printing and binding. Thus it deals with textual matters arising during the progression from author's manuscript to published book.

7.6.2 Descriptive Bibliography

It involves describing books in a standard form including the full name of the author, exact title of the book, place and year of publication, name of the publisher and printer, pagination, edition, illustrations, price, paper binding, etc. Thus, it records the bibliographic details of a book.

7.6.3. Historical Bibliography

It deals with the history of making books covering the history of writing, printing materials, binding, etc. It describes the history and the methods of book production.

7.6.4. Textual Bibliography

Its purpose is to determine the effect of writing or the printing process on the corrections or completeness of a text. It deals with the textual variations between a manuscript and the printed book or between various reprints of editions.

7.6.5. Systematic or Enumerative Bibliography

It is the listing of books according to some system in logical and useful arrangement by author, subject or by year of publication. Enumerative Bibliography attempts to record and list, rather than to describe minutely. The systematic bibliography therefore should lead to effective access to information.

7.7. TYPES OF BIBLIOGRAPHY

The various types of bibliographies are described below:

7.7.1 Universal Bibliography

It includes all published records not necessarily limited by time, territory, language, subject, or form. Such bibliographies present surveys of human records, and the universal bibliography is that which encircles all records of civilizations in all fields of knowledge.

But such universal scope of bibliography is now almost impossible, and there are no known published universal bibliographies. But some nearest approaches are.

Examples :

1. U.S. Library of congress, **Catalog of Books**
2. U.K British Library, **General Catalogue of Printed Books**

7.7.2 Trade Bibliography

This bibliography is list of books and other materials which are published and available for sale in a country through publishers, booksellers, etc. Their main function is to promote book trade and serve commercial purposes. These bibliographies are generally published by every country.

Examples

1. **Indian Books in Print**, Delhi: Indian Bureau of Bibliographies, 1967 to date, annual.
2. **Whitaker's Books in Print**, London: J. Whitaker & Sons, 1965 to date, Annual.

7.7.3 National Bibliography

It is a list of books, documents, pamphlets, serials, thesis, dissertations or other printed material produced in a country, in the language(s) of the country, by the people living in the country or elsewhere within a stipulated

time limit. It may also include audio-visual works, musical works, maps, globes, atlases, art reproductions, drawings and prints, etc. A national bibliography is generally current record of a country's intellectual output.

Examples

1. **Indian National Bibliography**, Calcutta : Central Reference Library, 1957-, Monthly.
2. **British National Bibliography**, London: British Library Bibliographic Services Division, 1950-, Weekly.

7.7.4. Subject Bibliography

It is a systematic list of written works by a specific author, or on a given subject or which share one or more common characteristics, (language, form, period, place, etc). Ranganathan defined a subject bibliography as the one that is a document bibliography confined to a specific subject field, instead of covering the entire universe of subjects.

Example

1. Indian Library and Information Science Literature, 1990-91, by Sewa Singh, New Delhi: Concept, 1994.

7.7.5 Author Bibliography

It records books, articles, monographs, etc. written by an author or attributed to him, and also includes material written about the author by others.

Examples

1. **Mahatma Gandhi: A descriptive Bibliography**, 2nd ed., by J.S. Sharma, Delhi: S. Chand, 1968.
2. **S.R.Ranganathan : Birth Centenary Literature**, by Sewa Singh, New Delhi : Ess Ess Publications, 1995.

7.7.6 Bibliography of Bibliographies

It is a list of bibliographies recorded in a systematic order by subject, by place, or by individual. It includes all types of bibliographies in various subject fields published separately.

Examples

1. Besterman, Theodore. A World Bibliography of Bibliographies and of Bibliographical Catalogues, calendars, Abstracts, Digests, Indexes and the like, 4th ed., Geneva: Societas Bibliographica, 1965-67, 5 Vol.
2. Kalia. DR. and Jain, M.K, Bibliography of Bibliographies on India, New Delhi: Concept, 1975.

7.7.7 Bibliography of Periodicals

It is a list of periodicals, serials, magazines, newspapers, etc. irrespective

of time, space, etc. It could also be restricted to periodicals of a country or on a subject. It is generally comprehensive in coverage and is meant for researchers etc. It tells about the availability of particular title on a subject, address of a given title, its subscriptions, frequency of publication, etc.

Examples

1. **Ulrich's International Periodical Directory**, New York: R.R.Bowker Company, 1932 -, Biennial
2. **Directory of Indian Scientific Periodicals**, 4th ed., New Delhi :INSDOC, 1992.

7.8. EVALUATION OF BIBLIOGRAPHY

Bibliography, like other sources of information, is an important reference source in a library. Reference librarian must have thorough understanding of bibliography for making the best use of it. This can be achieved by evaluating bibliography. The criteria for evaluation of bibliography is given as under.

7.8.1 Authority

The bibliography should be authoritative, accurate and dependable. The authority of bibliography can be judged by the reputation of the sponsoring body, publisher, experience of compiler, editor and his team.

7.8.2 Scope

The bibliography should be as complete as possible. The coverage, limitations, kinds of material, language, place, period, etc should be examined carefully from the preface, blurb, etc. It is important to know if it is current or retrospective bibliography.

7.8.3 Methodology

The method of compiling the bibliography should be clear that the compiler has examined all material listed. The items of bibliography should be described in a standard bibliography should be described in a standard bibliography style.

7.8.4 Arrangement

The bibliography should be arranged in clear, easy-to-use manner. The arrangement can be alphabetical, classified, alphabetico-classed, or chronological. It should include subject or author order to supplement the main body.

7.8.5 Items of Information

An entry in a bibliography should provide full bibliographical information including author(s); title; edition; imprint (publisher, place, year); series; number of volumes, if any; illustrations; bibliographies, pages; annotation of abstract.

7.8.6 Annotations

Where descriptive and/or critical makes are used for entries,

annotations/ abstracts should be clear, succinct, and informative.

7.8.7 Currency

While evaluating a bibliography it should be checked that the material included is current, at least where this is the purpose of bibliography.

7.8.8 Revision

If a bibliography is to be kept up-to-date, it must be revised regularly to meet the requirements of the researchers.

7.8.9 Commutations

In a bibliography commutations of main entries or indexes can be highly useful, though its cost could be prohibitive. However, with computer application this could be achieved promptly at a comparatively cheaper cost.

7.8.10 Format

Due consideration should be given while checking the quality of printing typefaces, paper, type of binding, get-up of the book.

7.8.11 Index

A bibliography must be equipped with subject index and/or author index referring to the main entries. Any number of indexes will help the users to locate the appropriate item quickly.

7.8.12 Special Features

The distinguishing features of a bibliography should be highlighted. By reading the prefatory pages, librarian can find out any instructions as to how to use the work; any abbreviations, or other keys should also be included.

7.9. INDEXING AND ABSTRACTING PERIODICALS

Indexing and abstracting periodicals are secondary publications that provide bibliographical details about the primary documents covered. These are also called access tools as they help to know about the already published journal articles, research papers, reports, conference and seminar proceedings etc.

7.9.1 Definition

According to Denis Grogah, indexes are among "the most important bibliography tools for controlling the periodical literature". The word 'index' is derived from the Latin word 'indicare' meaning 'to point out' or 'to show.' An indexing periodical is an access tool to a systematically arranged list of periodical literature providing complete bibliographical references of already published documents. An abstract, according to **ALA Glossary**, is "an abbreviated, accurate representation of a work, usually without added interpretation or criticism accompanied by a bibliographical reference to the original work when appearing separately from it." Thus an abstracting periodical not only gives citations with bibliographical details but also provide summaries of the

content publications.

7.9.2 Functions

Indexing and abstracting periodicals have the following functions:

- i. To keep scholars abreast of current literature in the fields of their interest. They can obtain the latest literature/information by securing the current issues of the periodicals,
- ii. The indexing and abstracting periodicals are key tools for reference purpose, but researchers use them extensively for retrospective searches also.
- iii. To provide bibliographical control of literature output either by country or by subject or by kind of materials, if these services are exhaustive by coverage.
- iv. To help users get over the language barrier,
- v. To provide correct and complete bibliographical details of a given item of literature,
- vi. To look up for information on topic not well covered by books and other sources
- vii. To know about the work of individual scholars,
- viii. To help users get information at one place which is scattered in other sources.
- ix. To serve as a source for carrying out statistical, bibliography and other studies on the growth and pattern of literature, indicating research and development efforts.

7.9.3 Need

The growth in published literature in recent years has been enormous. According to the 2003 edition of **Ulrich's International Periodicals Directory**, the number of research periodicals is about 260,500 and the number articles published in them goes to million. Besides there are other documents as books, monographs, research reports, conference papers, dissertations and theses etc. which add to the volume of literature. This makes it almost impossible for researchers to know about the documents they may be interested in.

There is another problem of scatter and seepage of information, due to which the scholars remain unaware of literature published in alien sources.

For keeping pace with growth of knowledge and saving time and effort, scholars need indexing and abstracting (I & A) periodicals which provide them condensed information about the vast volume of literature.

For conducting a retrospective literature search on a given topic, scholars need I & A periodicals.

For adequate reference and information work, a representative collection of I & A tools is developed,

7.9.4 Types of I & A Services

Although most of the I & A Services are brought on different subjects, yet these can be grouped by the purpose. Some of these types are given below.

7.9.4.1 Comprehensive Services

In countries like Russia, France, Japan, etc, some centralized agencies have been producing comprehensive I & A services in science and technology, covering all types of published literature. The purpose is to overcome the language barrier for free access to information. A typical example is :

1. **Referativnyi Zhurnal**, 1953 to date Periodicity varies. Moscow: All Union Institute for Scientific and Technical Information (VINITI). It is published in more than 40 series devoted to specific field in science and technology.

7.4.2 Citation Indexes

Dr Eugene Garfield of ISI, Philadelphia (USA) developed a unique technique citation indexes- based on citations made in current documents. They establish subject relations through citations. It is an ordered list of cited articles, each of which is accompanied by a list of citing articles.

Examples

1. **Service Citation Index**, Philadelphia: Institute for Scientific Information 1967 to date, Bi-monthly.
2. **Social Science Citation Index**, Philadelphia: Institute for Scientific Information, 1973 to date, Three issues per annum.
3. **Arts and Humanities Citation Index**, Philadelphia: Institute of Scientific Information, 1978 to date, Three issues per annum.

7.9.4.3 Current contents

Current contents type of indexes include content pages of important journals in different subject fields to provide quick current awareness service. These are brought out and index separate subject areas. These are also published with abstracts. Each issue has a table of contents which is easy to scan.

Example

1. **Current contents: Physical, Chemical and earth Sciences**, Philadelphia : institute for Scientific Information, 1961 to date, weekly.
2. **Current contents: Social and Behavioural Sciences**, Philadelphia: Institute for information, 1969 to date, weekly.

Current Contents and current contents with Abstracts are also available in diskettes and on CD-Rom as well as on line.

7.9.4.4 By subject coverage

Mostly I & A services are published in various subject fields. With the volume of literature increasing rapidly, I & A services are now also being published in specialized subjects. They include all kinds of documents on a subject.

Example

1. **Biological Abstracts**, Philadelphia: Biosciences Information Service (BIOSIS), 1926 to date, semimonthly.
2. **Chemical Abstracts**, Columbus, US.: Chemical Abstracts Service of American Chemical Society, 1907 to date, Weekly.
3. **Library and Information Science Abstracts (LISA)**, Oxford: Cambridge Scientific, 1950 to date (Publisher varies), Monthly.
4. **Humanities Index**, New York: H.W.Wilson company, 1974 to date, Quarterly.
5. **Social Sciences Index**, New York: H.W.Wilson Company, 1974 to date, Quarterly.

7.9.4.5 By kind of Materials

I & A periodicals are these days being produced covering specific kinds of materials such as periodical articles, theses, conference proceedings, research reports, newspapers, and so on.

Examples

1. **Indian Dissertation Abstracts**, New Delhi: ICSSR, 1973 to date, Four times per year.
2. **Guide to Indian Periodical Literature**, Gurgaon; Indian Documentation Service, 1964 to date, Four times a year.
3. **Index to Conference Proceedings** Boston Spa, UK: British Library Bibliographic Division, 1970 to date.
4. **Report Index, Leatherhead**, Gr.Brit: Longley Associates, 1979 to date, Six times per year.
5. **Patents Abstracts of Japan**, Kyoto, Japan: Japan Patent Information Organisation, 1976 to date, Monthly.
6. **Canadian News index**, Toronto: Micromedia, 1977 to date, Monthly.

7.9.4.6 By Geographical Area

Some I & A services cover literature published in a country with purpose to have bibliographic control at national level. These sources are further

subdivided by subject.

Examples

1. **Indian Science Abstracts**, New Delhi: NISCIR (formerly INSDR), 1965 to date, Fortnightly.
2. **Canadian Business Index** : Toronto : Micromedia Ltd, 1975 to date, Monthly.

7.9.5 Use of I & A Services

The use of I & A services depends on the efficiency of their indexes. Some I & A periodicals may have more than one index. The keywords within a subject being used by the scholar may be different from those used in the services. Therefore, not only familiarity with those keywords is required, but even the alternate subject headings should be used to locate the desired information. It may also be pointed out that usually I & A periodicals are not up-to-date in their publication which reduces their usefulness to some extent. But in the absence of any other alternative, they still continue to be updated publication source for current literature on different subjects.

7.9.6 Evaluation

(The same as for the Bibliography)

7.10 SUMMARY

Bibliography are important source for research work. They help in identification of documents, their existence and for selection of materials for libraries. The need to be complete as far as possible and should be available in various forms like universal, national, trade author and subject bibliographies. The compilers of bibliography therefore have to be careful in its description, arrangement, etc. The evaluation of the bibliography on various checkpoints has to be done carefully by the librarian. Indexing and abstracting periodicals have been developed out of necessity to provide access tools in the context of growth of knowledge. These are very useful and valuable services to the scholars and scientists. There are various types of I & A periodicals which are required in a library to serve the needs of the users in keeping them aware of current information.

7.11. GLOSSARY

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|------------------------------|---|--|
| 1. Access | : | Points of approach to information |
| 2. Bibliographic Description | : | The description of a work giving particulars of author, title, edition, year, etc. |
| 3. Current Awareness | : | To keep abreast of current developments in a subject. |

- | | | | |
|----|----------------------------|---|---|
| 4. | Database | : | A collection of related items of information which together make up the record for a topic. |
| 5. | Retrospective Bibliography | : | A bibliography which lists books/documents published in previous years. |
| 6. | Scatter | : | Material published in different places. |
| 7. | See page | : | Slow but continue flow of material outside the subject field. |

7.12. REFERENCES

1. Girja Kumar and Krishan Kumar **Bibliography**. New Delhi : Vikas.
2. Grogan, Denis. **Science and Technology : An Introduction to the Literature**, 4th ed., New York: Mc Graw Hill, 1992.
3. **Guha, B. Documentation and Information: Services, Techniques and Systems**, 2nd ed. Calcutta: The World Press, reprint 1999.
4. Katz, William A. **Introduction to Reference Work**, 7th ed. New York: McGraw Hill, 1997, 2 Vols.
5. Krishan Kumar Reference Service, 5th ed., New Delhi : Vikas, 1996.
6. Lea, Peter W. and Day, Allan; Eds. **The Reference Sources Handbook** 4th ed., london : Library Association Publishing, 1996.
7. Satija, M.P and Sewa Singh **Sandarbh ate Soochna** Sarot, Patiala. Punjabi University publication Bureau, 1996 (in Punjab)
8. Sewa Singh, Manual of Reference and Information Sources. 2nd ed., New Delhi: B.R Publishing Corporation, 2004.