UNIT 2: REFERENCE AND INFORMATION SOURCES

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2.1 LEARNING OBJECTIVES

After going through this unit you will be able to

- Explain how to categorize different sources of information;
- Know about the different sources of information;
- Define the reference source;
- Know about classification of the reference sources;
- Know about the different types of reference sources of information;

2.2 INTRODUCTION

There are mainly two types of information sources. They are: documentary and non documentary. The documents are physical sources of information that are fit for physical handling. The non documentary sources of information are live sources. This unit will discuss the different types of documentary as well as non documentary sources of information

with examples. The different types of reference source that are frequently consulted in providing reference services to the users are also being discussed in this unit.

2.3 NON DOCUMENTARY SOURCES OF INFORMATION

The non documentary sources of information are live sources which are extremely important in the process of communication. Very often, if a scientist working on an experiment needs some information, he would turn to his / her colleague working in the same laboratory rather than to a printed page. It is easier to have a dialogue with an expert than to use a bibliography or index or card catalogue or even a consultation with a reference librarian. Non documentary sources of information provide information instantly and it is very easy to handle. The main disadvantage of non documentary sources of information is that it involves high cost when distance between the people is large and that it also demands the use of highly sophisticated techniques i.e. computer system, video conference, telephone etc.

The non documentary sources of information include government establishment, departments, universities, technological institutions, data centres, information centres, referral centres, clearing houses, consultants, technological gatekeeper etc. Non documentary sources of information also include discussion with colleagues, visitors, participants of seminars and conferences etc. The library through the referral service provides access to important non documentary sources of information which may include the following types.

a) Research Association: Research association may establishe cooperative information centres. In such cases there is a possibility of firm to firm discussion and exchange of information between the members of an association.

b) Learned Societies and Professional Institutions: A member of these bodies forms the core of a discipline or profession. The head quarters staff help the members personally on professional matter and

sometimes they may direct the queries to the expert member of the body.

c) Industrial Liaison Officer: These officers provide particularly the preliminary information needed to put a firm on the right track and for information which needs to be given personally and supported by practical advice in order to be fully effective. They visit firms, explore their needs and problems and help them to find solutions, sometimes directly on the spot, more often by putting them in touch with specialized sources of information and assistance or refer to some other specialists.

d) Mass Media: Mass media is a means of communication of information through broadcasting and telecasting or a combination of these two for the masses, which is more effective than any documentary sources.

2.4 SOURCES OF DOCUMENTARY INFORMATION

A document constitutes embodied thought which is a record of work on paper or other material fit for physical handling, transport across space and preservation through time. It may include manuscripts, handwritten and engraved materials including printed books, periodical, microform, photograph, gramophone records, tape records etc. The recent advances in science and technology helps to origin another kind of document i.e. computer readable forms that includes C.D., DVD, pen drive, hard disk, web resources etc. All documents are the records of human observation and thought and in its creation direct human intervention is necessary. They provide some information to its readers or users. A library as a gateway of knowledge provides access to a variety of such documentary sources of information.

The sources of documentary information can also be termed as an *information product*. It is generated out of a service to be provided to the user. It is a kind of consolidation and presentation process giving tangibility to information.

2.4.1 Classification of Documentary Sources of Information

a) C. W. Hanson Classification: C. W. Hanson (1971) in the article "Introduction to science Information work" published in ASLIB (previously Association of Special Libraries and Information Bureau but now known as Association for Information Management) divides documentary sources of information into two categories i.e. primary and secondary.

i) Primary: The primary documents exist of their own and usually contain original information on the first formulation of any new observation, experiment, ideas etc. Thus, according to C. W. Hanson, a monograph, an article in periodical, text book, and encyclopaedia are all primary documents. An article in encyclopaedia or text book may not contain any new information on the subject but it presents the information in the particular form for the first time. The articles concerned are not a condensation or rewriting in any way of any existing document but has been written specifically for the text book or the encyclopaedia.

ii) Secondary: All secondary publications present the contents of primary document in a condensed form or list them in a helpful way so that the existence of a primary document can be known and access to it can be made.

iii) Primary / Secondary Sources of Information: Conference proceedings, theses and dissertations, monographs etc have the characteristics of both primary and secondary sources of information. Those of documents representing new facts can be regarded as primary publication and those having the character of reviews can be grouped as secondary publication. As a result of such mixing of primary and secondary sources of information some expert doesn't consider this division to be much practical utility.

b) Denis Grogan Classification: Denis Grogan, on the basis of level of reorganization, has classified the documents into three categories. They are: *primary*, *secondary* and *tertiary*.

i) Primary Sources: Primary publications are those in which the author for the first time supplies evidence, describes a discovery, makes or drives a new proposition or brings forward new evidence about previous proposition. It was created at or near the time being studied, often by the people being studied. It is a fundamental, authoritative document related to a subject of inquiry, used in the preparation of a later derivative work. Thus, the primary sources of information are basic sources of new information which are not passed through any filtering mechanism like condensation, interpretation or evaluation and are the original work of the author.

UNESCO (1968) defines a primary publication as "original scientific paper describing new research, techniques or apparatus." Primary does not mean superior. It refers to the creation by the primary players, and is distinguished from a secondary source, which is a historical work, like a scholarly book or article, built up from primary sources.

Primary sources may include periodicals, patent, standard, report, reprint, trade journal, classic book, letters, diaries, and other personal papers, photographs, interviews and transcripts, government and historical records, newspaper clippings, and other original sources. The significance of primary publications is as follows

- A subject becomes a discipline in its own right when independent primary sources begin to be produced in that area. The progress and development of a country directly depend on the primary literature that reports a new discovery.

- The information published in primary sources are newly generated, recent, current, full and up-to-date for all other investigators working in the same field.
- Any research or investigation is first published in primary sources and it becomes the basic and original sources of communication of information and reports quickly to be used by other users.
- Publication of primary sources of information avoids doubling and duplication in the research, thus saves time, money and labour to be spent on it. It also acts as a guide to the researcher engaged in the same field by pointing out what has been done? And up to what level? etc.
- The primary sources of information help in the compilation of secondary and tertiary sources of information. Often primary sources of information may be the only sources of information in existence.

There are certain primary sources of information, which remain unpublished. Very often these may be consulted for historical interest. Such materials include laboratory note book, memoranda, diaries, letters to and from a particular individual, company etc. The library also tries to procure such type of material if it comes within its scope of area or is relevant to its purpose.

ii) Secondary Sources: A document concerning a particular subject of inquiry which is derived from or based on the study and analysis of the primary source of information is called the secondary source of information. In the secondary source of information the original information is selected, modified and arranged in a suitable format for the purpose of easy location by the user. The secondary sources of

information thus provide digested information and also serve as bibliographical key to primary sources of information. Secondary publication includes text book, reference book, review of the literature etc.

iii) Tertiary Sources: The tertiary sources of information are last to appear and mostly do not contain subject knowledge. It is designed to provide information about information and so acts as a guide to the primary and secondary sources of information. The main function of tertiary sources is to aid the user in using primary and secondary sources of information. The tertiary sources of information are bibliography of bibliographies, guides to libraries, other organizations, indexing and abstracting periodicals, list of accession, list of research in progress, directories etc.

Eventually there is no rigid line of demarcation between primary, secondary and tertiary sources of information.

c) S. R. Ranganathan Classification: Based on the physical characteristics of documents S. R. Ranganathan classified documentary sources of information into four categories. These also reflect the chronological order of their development. They are:

i) Conventional: Books, periodicals, Map etc.;
ii) Neo Conventional: Standards, specification, patent etc.;
iii) Non Conventional: Audio visual, microcopy etc.;
iv) Meta Document: Direct records unmediated by human mind.

2.4.2 Types of Documentary Sources of Information

a) Newspaper: Newspapers are usually published as dailies or weeklies. The type of paper they are printed on, called newsprint is not meant to last. They are usually preserved on microfilm for this reason. Libraries usually keep paper copies of

newspapers until the microfilm copies arrive. Nowadays many newspapers are available on the Internet, some for free, and others by subscription.

b) Periodical: Periodicals are issued at intervals and numbered consecutively. They are given volume designations, several issues making up a volume. Periodicals include journals and magazines.

i) Journal: Journal is a scholarly publication devoted to disseminating current information about research and developments in a specific field or subfield of human knowledge. Journal is usually regularly published at interval. Most journal articles are long and include a paragraph at the beginning, called an abstract which summarizes the main points of the article and at the end a bibliography or list of works cited. The writings of the journals are most often peer-reviewed.

ii) Magazine: The magazine usually refers to the non-scholarly publications written for an educated audience and contains popular reading.

c) Reprint: Once an article is published in a journal additional copies are taken out separately and provided to the author. A fixed number is generally supplied free of charge. Additional copies are supplied at a cost; these copies are known as reprints and used for exchange with other scientists working in the same field.

d) House Journal: It is a publication issued by an organization to inform the public of its performance and style of function and also to know the reaction, opinions of its public. Generally house journals are of two types:

i) External House Journal: The external house journal is meant for the external audience of an organization. The external audience of an organization refers to those who

do not work under the roof of the organization, but are interested in it.

ii) *Internal House Journal:* Internal house journals are meant for the employees under the roof of an organization. Broadly speaking, it aims to inform and educate the employees of all levels about the organization's activities, functions, etc.

e) Newsletter: Newsletter is a publication issued by an organization often simple in format and crispy in style to provide speedy information for a definite audience. Newsletters are always issued regularly and have a short life span. It is a modest publication containing limited pages say four to eight and a few pictures and illustrations. Generally, the organizations that do not go for house journals find a good substitute in newsletters. While some newsletters are intended for the employees, others are meant for the external public.

f) Patents: A patent presents a detailed account of a new manufacturing process or improvement of an existing process, a new product, a new method of testing and control etc. Generally, when some kind of invention is made the manufacturer wants to protect his invention and the patent offices in various countries on the request of the manufacturer generally issue the patent, which provides an exclusive right to the manufacturer on the invention. It takes the form of an official document having the seal of the government attached to it, which confesses an exclusive privilege or right over a period of time to the proceeds of an invention.

g) Standards: Standards are units or measures in terms of weight, size, length, quality, composition, process of production etc., established by National and International Organizations. Standards are often finalized through testing, research, and study and prescribe the accepted quality or performance value of a product.

h) **Research Report:** Research reports are published as part of the annual report of an organization or as a separate report published at periodical intervals by individual and agencies that obtain research grants and have to produce them as a condition of such grants. The research reports are generally produced in limited number of copies and the distribution is also restricted and controlled.

i) **Trade and Product Bulletin / Journal:** Trade journals contain primary articles but of the nature of applied research. It contains the particulars of goods manufactured by or sold by a firm. Frequently illustrated and containing prices, it also often contains application oriented description rather than theoretical description. These are published by Research and Development Organizations, Trade Associations etc. The original objectives of all trade journals are product advertisement. The complete description, principles and working of a newly developed and highly sophisticated instrument may for quite time be available only in the manufacturer trade journals. Eg.: International Product Finder. Bombay: Business press.

j) **Conference Proceedings:** Manny conference proceedings present new findings or results of work for the first time or at least months before they are published in scientific journals. Some times, conference proceedings also include questions from participants and answers and clarifications from the authors of the papers. The conference proceedings generally contain the statement of objectives, opening address or presidential address, list of participants or conference's who's who, resolutions or recommendations etc.

k) **Thesis and Dissertation:** Thesis and dissertation are the results of purely academic pursuit. It reports some original work in a specific field. Among all the primary sources of information

thesis and dissertation are probably least used mainly because their existence is not known in many cases and also due to the limited number of copies of the document.

l) **Treatise**: A treatise provides an exhaustive treatment of a broad subject. It is encyclopaedic in coverage of the subject but different in its treatment. It presents in a systematic and consolidated manner the result of work and research in the field with full reference to the primary sources.

m) **Monograph:** The scope of a monograph is narrower than that of a treatise. Monograph is on a single topic whereas a treatise is on a broad subject. Research monographs are separately published reports on an original research that is too long, too specialized or otherwise unsuitable for publication in one of the standard journals. Each monograph is self contained which frequently summarizes the particular existing theory or practice along with the author's original work.

n) **Review**: A review is actually a narrative account or critical synthesis of the progress of a particular field of study prepared by an expert in the field. It shifts, evaluates and puts each significant contribution into its proper perspective. It indicates interrelationship of ideas, significance and possible areas of application and so on, so that one can easily get an expert view of the subject without having to go through the mass of literature.

o) **Text Book**: A text book is made of continuous exposition, sentences mount into paragraph, paragraphs into chapter, chapters get woven into a single swelling exposition in the continuous pursuit of a single idea, simple or complex, and text books are read consecutively for inspiration, enjoyment or information. There is a link at each stage. There is an element of continuity. According to Grogan, "a text book is a teaching instrument; its primary aim is not to import information about its

subject but to develop understanding of it. It concentrates on demonstrating principles rather than recounting detail".

p) **State of the Art Report:** These are types of reviews which do not have all embracing scope and historical orientation. These present information assembled from various sources and subjects to the operation of analysis, consolidation, extraction and evaluation in a formal presentation representing the most advanced degree of technical achievement in its field at the present time. Some owe their existence to a specific query while others are issued on a regular basis, in many cases once in a year. State of the Art report emphasizes on the recent and up-to-date ideas.

q) **Trend Report:** Trend report gives an account of the general direction of research in the subject based on a review of the documents on current development.

r) **Technical Digest:** A digest service is directed to executives, engineers, technical workers, etc. working in industries. It provides up to date technical information. It presents descriptive text of information in a condensed form and on the core ideas in brief and orderly form.

2.5 REFERENCE SOURCES

A reference work / book / source is a compendium of information, usually of a specific type, compiled in a book for easy consultation. The entries are disjointed but arranged in such a way that the intended information can be quickly found when needed or referred to, the sequence of which is determined by the scheme of arrangement chosen for that purpose. It might be alphabetical, classified or some other type of arrangement. Even then the connection between consecutive entries is not as compelling and continuous or as free from jerks as between the paragraphs in an ordinary book. The writing style used in these works is informative; the authors avoid use of the first person and emphasize facts.

Indexes are commonly provided in many types of reference work. Updated editions are published as needed, in some cases annually. Sometimes reference sources are also described as approach material. Broadly speaking, any book can be called a reference book provided the information contained in it is so organized that it becomes readily accessible. It may consist mostly of formulae, statistics, diagrams, tables, maps, charts or list of documents with or without abstracts or annotations or other features. All reference sources are also documentary sources of information.

According to *ALA Glossary,* a reference book has been defined as "a book designed by its arrangement and treatment to be consulted for definite item of information rather than to be read consecutively". Most of the reference book anticipates a particular need and approach to information. Generally, a reference source bears the following characteristics-

a) Consulted for Definite Item of Information: They are not meant for continuous i.e. cover to cover reading. They are consulted from time to time (occasional) for particular pieces of information.

b) Miscellany of Information: It is miscellany of information or facts and consists of disjointed entries of varying length which are collected from a vast number of sources. One entry in sources may or may not have any relationship with the other entry.

c) Bird's Eye View of the Topic: The books provide only the bird's eye view of the topics and rarely deal with them in depth.

d) Item can be Randomly Located: The arrangement of information is such that it can be conveniently and quickly recalled.

In the library, reference collections are shelved together in a special location separately from circulating items. Ordinarily, the reference collections are not lent out (circulated) or checked out from the library because they contain brief information about the topic in hand and, if needed, can be photocopied and, therefore, do not need to be borrowed by the users. Its availability in the library assures the provision of making it accessible on demand to any user to answer questions immediately. Reference books are also too valuable to permit the borrowers to take them out.

It may be added that the boarder line of demarcation between a reference book and others is not always sharp. The decision as to whether or not to regard a given book as a reference book will some time differ from library to library.

2.5.1 Classification of Reference Sources

William A. Katz divides the reference sources into two large categories-

i) Control Access Directional Type: It itself does not contain the required information but directs the user to the documents which contain the information. It includes bibliographies, catalogues, indexes, abstracts etc.

ii) Work of Sources Type: It itself contains the information. For example, Encyclopaedia, Dictionary etc.

2.5.2 Types of Reference Sources

We may generally recognize the following kinds of reference sources based on the internal characteristics.

a) Dictionary: A dictionary contains the words of a language or the terms of a subject, profession or vocation arranged according to some definite order usually alphabetical, giving their meanings, pronunciation, spelling, significance and use. Some times synonyms, antonyms, derivation and history of the words or terms are also given. Many dictionaries also provide grammatical information, etymologies (origin and development of the meaning of the word), usage guidance and examples in phrases or sentences. The word “dictionary” comes from neoclassical Latin word “diccio” meaning simply “word”. Therefore, primarily it deals with words and it is produced by lexicographers. A pictorial dictionary includes illustrations of the objects represented by the words listed; some other types of dictionary may also list out characters with their glyphs, or an

alphabetical list of words with corresponding words in other languages. It is most commonly found in the form of a book. However, in recent years some dictionaries are also found in electronic portable handheld devices. Some examples of English language dictionaries are Merriam-Webster Dictionary, Oxford English Dictionary (descriptive), The American Heritage Dictionary of the English Language, Webster's Third New International Dictionary (descriptive).

i) *Lexicon:* A dictionary of some ancient language that generally provides more grammatical analysis is known as lexicon.

ii) *Concordance:* A concordance is an alphabetical list of the principal words used in a book or body of work showing location in the text with immediate contexts. Because of the time and difficulty and expense involved in creating a concordance in the pre-computer era, only works of special importance, such as the Bible, Qur'an or the works of Shakespeare, had concordances prepared for them.

iii) *Glossary:* A list of difficult terms along with some explanation or definition in a special field. The glossary is sometimes also referred to as Word book.

b) Thesaurus: It is designed for drawing distinctions between similar words and assisting in choosing exactly the right word. So entries in a thesaurus should not be taken as a list of synonyms and antonyms. It also does not define words. That work is left to the dictionary. A formal definition of a thesaurus designed for indexing is: a list of every important term (single-word or multi-word) in a given domain of knowledge arranged in a systematic order and manifesting various types of relationship existing between the terms; and a set of related terms for each term in the list. The word "thesaurus" more commonly means a listing of words with similar, related, or

opposite meanings (this new meaning of thesaurus dates back to Roget's Thesaurus). For example, a book of jargon for a specialized field; or more technically a list of subject headings and cross-references used in the filing and retrieval of documents (or indeed papers, certificates, letters, cards, records, texts, files, articles, essays and perhaps even manuscripts), film, sound recordings, machine-readable media, etc. Some examples of thesaurus are Thesaurus of English Words & Phrases (ed. P. Roget); The Synonym Finder (ed. J. I. Rodale); Webster's New World Thesaurus (ed. C. Laird); etc.

c) **Encyclopaedia**: The word encyclopaedia or encyclopedia is derived from two Greek words "Enkyklios" which means "circle" and "Paideia" which means "of learning". The word encyclopaedia itself is synonymous with cyclopedia which means compendium of information or knowledge or a circle of knowledge, a work which represents synthesis of knowledge. It contains comprehensive written information on all branches of knowledge or a particular branch of knowledge, with the entries arranged in alphabetical order. Multi-volume encyclopedias often include an index in the last volume.

The oxford English dictionary has defined an encyclopaedia as "a literary work containing extensive information on all branches of knowledge usually arranged in alphabetical order". ALA Glossary of Library Terms define encyclopaedia as "a work containing information articles on subject in every field of knowledge usually arranged in alphabetical order or a similar work limited to a special field of subject".

Four major characteristics of an encyclopaedia are its subject matter, its scope, its method of organization, and its method of production. It attempts to bring some order to the knowledge reflecting the state of knowledge as it exists during the period of its compilation. The included knowledge is related

to kind of readership which an encyclopaedia intends to serve. There have historically been two main methods of organizing printed encyclopaedias: the alphabetical method (consisting of a number of separate articles, organized in alphabetical order), or organization by hierarchical categories. The former method is the most common by far, especially for general works. The encyclopaedias are written by a number of employed text writers, usually people with an academic degree but some modern encyclopaedia's articles are collaboratively written by the experts on the subject.

The fluidity of electronic media, however, allows new possibilities for multiple methods of organization of the same content in the encyclopaedias. Further, electronic media offer previously unimaginable capabilities for search, indexing, and cross reference.

Encyclopaedias can be general, containing articles on important topics in every field that describe the total accumulated knowledge on each topic or all that came before them. The general encyclopaedias are larger compendia and often contain guides on how to do a variety of things, as well as embedded dictionaries and gazetteers. Every general encyclopaedic work is, of course, an abridged version of all knowledge discussed in depth. However, the discussion of the included topic represents the opinions and worldviews of a particular time and the target audience is kept in view while discussing the topics. For example, New Encyclopædia Britannica, Encyclopedia Americana, Collier's encyclopaedia, and German Brockhaus. The encyclopaedia can also specialize in a particular field such as an encyclopaedia of medicine, philosophy, or law, Encyclopaedia of Library and Information Science, International Encyclopaedia of Social Sciences, McGraw Hill Encyclopaedia of Science and Technology, etc.

i) *Supplement to Encyclopaedia:* It is an annual or periodical publication issued by the publisher of the encyclopaedia. The purpose of encyclopsedia supplement is to provide up-to-date information about the articles in the basic set and to bring out a summary of the major events, which have taken place during a year. But in reality it only serves as general reading and browsing and for summarizing the significant events. It is extremely useful to determine the trend of development in a particular field during the previous year. Examples: Britannica Book of the Year, Americana Annual, etc.

d) Bibliographical Sources: The term "bibliography" was first used by Louis Jacod de Saint Charles in his Bibliographia Parisiana. It is a technique of systematically producing descriptive list of written or published records or in simple writing and transcription of books. A bibliography is a systematic listing of the records of human communication. In its most general sense it is the study and description of books or other multimedia material. Bibliographical works are almost always considered tertiary sources of information. They differ from library catalogues by including all relevant publications rather than the items actually found in a particular library. However, the catalogues of some national libraries also serve as national bibliographies, as they contain almost all the publications of the concerned country. Standard citation formats are used in writing the bibliographies. The main advantages of bibliographic entries are that they contain enough information for readers to locate the materials and are presented in a consistent format. In many cases bibliography is the end result of any literature search. The example of bibliography includes Indian National Bibliography, Indian Books in Print, etc.

i) Bibliography of Bibliographies: A bibliography of bibliographies lists the bibliographies which direct the reader to useful bibliographies through subject, place**,** institution etc. The bibliographies refereed to may be in the form of a separately published book or part of the book or part of the periodical article or some other type of document. Bibliography of bibliographies is highly selective in nature. For example, Bibliographic Index.

e) Indexing and Abstracting Periodicals: An index is a systematic guide to i) item contained in or ii) concept derived from a collection. These items and derived concepts are represented by entries arranged in a known or stated searchable order. According to Allen Kant, "an abstract is a summary of a publication or articles accompanied by an adequate bibliographical description to enable the publication or article to be traced".

The indexing and abstracting periodicals present a condensed form of the literature of the subject and provide a scientific or specialist bird's eye view of the progress and development of the subject so that the inquirer can select the most relevant documents relating to his work in the hand. An indexing and abstracting periodical helps to find out specific information in the literature of a subject.

i) Citation Index: A citation index is an index of citations between publications. It allows the user to easily establish as to which later documents cite which earlier documents. It is an ordered list of cited articles each of which is accompanied by a list of citing articles. The cited articles are identified as references and the citing articles as source. In a simple way it can be said that cited articles are ancestors and the citing articles are descendents and this descending relation of subjects is reflected through the citation index.

Citations provide a further reading list besides paying homage to the pionners and giving credit for their work; sometimes it also criticises, corrects and disputes the previous contributions. The first citation indices were legal citators such as Shepard's Citations (1873). In 1960, Eugene Garfield's Institute for Scientific Information (ISI) introduced the first citation index for papers published in academic journals, starting with the Science Citation Index (SCI), and later expanding to produce the Social Sciences Citation Index (SSCI) and the Arts and Humanities Citation Index (AHCI). Examples include ISI citation indexes (available online under the name "Web of Science"), Scopus published by Elsevier publishers (available online only), CiteSeer system, Google Scholar (GS) etc.

f) Geographical Sources: Geography is the study of the Earth's surface and its lands, features, inhabitants, and phenomena, people's responses to topography and climate, and soil and vegetation. Geographical sources of information can be of the following types:

i) Gazetteer: A gazetteer is a geographical dictionary, an important reference for information about places and place-names, used in conjunction with an atlas. It typically contains information concerning the geographical makeup of a country, region or continent, the social statistics and physical features, such as mountains, waterways, or roads. It also includes information about the location of places, dimensions of physical features, population, GDP, literacy rate, etc. World gazetteers usually consist of an alphabetical listing of countries, with pertinent statistics for each one, with some gazetteers listing information on individual cities, towns, villages and other settlements of varying sizes. Examples include The World Gazetteer, Worldwide Index etc.

ii) *Guides:* According to ALA Glossary of Library Terms, a guide book has been defined as handbook of traveller that gives information about a city, region or country or a similar handbook about a building, museum, etc.

A guide to the literature assists a user to use literature of a specific subject. It helps to evaluate and introduce literature. It lays emphasis on the literature of a subject rather than its content and covers secondary and tertiary sources. It presents a detailed account of the bibliographical apparatus and tools, basic literature, agencies etc through which it is possible to follow the development, status and progress of a subject. It gives the broadest bibliographical view of the subject. A guide to the professional organization gives the address and a brief description of the organizations engaged in a particular field at the national or international level. Guides generally include guides to the literature of a subject, guides to the libraries, guides to organization etc.

iii) *Map:* A map is defined as "a representation of a part or the whole of the surface of the earth or a celestial body delineated on a plain surface, earth points in the drawing intended to correspond to a geographical or a celestial position". It represents the outer boundaries of a part of the earth or the earth as a whole on a plain surface. In simple, it is a simplified depiction of a space which highlights relations between components (objects, regions) of that space. Most usually a map is a two-dimensional, geometrically accurate representation, normally to scale, of all or a portion of the three-dimensional earth's surface or of the heavens, or another celestial body. More generally, maps can be devised to represent any local property of the world or part of it. Maps are usually stored in specially designed cases which allow them to lie flat.

iv) *Atlas*: An atlas is a collection of maps, traditionally bound into book form, but also found in multimedia formats. It gives geographic features, political boundaries and some time geopolitical, social, religious and economic statistics. ALA Glossary defines atlas as "a volume of map, plates, engraving, tables, etc with or without descriptive letterpress". It may be an independent publication or it may have been issued to accompany one or more volume of text. Some cartographically or commercially important atlases include Times Atlas of the World (United Kingdom, 1920-present); Atlas Mira (Russia, 1937-present); National Geographic Atlas of the World (United States, 1963-present); Historical Atlas of China (China). Some other atlases are thematic. Example: The Times Atlas of World Exploration.

v) *Globe:* A globe is a three-dimensional scale model of Earth (terrestrial globe) or other spheroid celestial body such as a planet, star, or moon. It may also refer to a spherical representation of the celestial sphere, showing the apparent positions of the stars and constellations in the sky (celestial globe).

g) Biographical Sources: A biography is a description or account of the series of events making up of someone's life, which is usually published in the form of a book or an essay, or in some other form, such as a film. An autobiography is a biography of a person's life written or told by that same person. The biographical information also can be obtained from almanacs, biographical dictionary, directories, encyclopaedias, etc. Examples include International Who's Who, Dictionary of National Biography, etc.

h) Current Sources: Current sources of information are brought out on annual basis that depicts some important happening in the previous year. It may take the form of the following:

i) *Year Book:* A year book is an annual compendium of current information which may be sometimes restricted by subject

or country or region. It is mostly used for answering questions involving the recent trends and current developments. J. K. Cates defines a year book as "a publication which is issued annually for the purpose of current information in narrative, statistical or descriptive form". According to ALA Glossary, a yearbook is "an annual volume of current information in descriptive and or statistical form, sometimes limited to a special field".

ii) *Almanac:* The word almanac (also spelled almanack) is an annual publication containing tabular information in a particular field (mostly covering information about rising and setting of moons, periods of low and high tides, climate or weather related information) often arranged according to the calendar. According to the ALA Glossary, an almanac is a) an annual publication containing a calendar frequently accompanied by astronomical data and other information or b) An annual year book of statistics and other information sometimes in a particular field. It records most of the astronomical data and various statistics, such as the times of the rising and setting of the sun and moon, eclipses, hours of full tide, stated religious festivals, terms of courts, etc. Contents also include discussions of topical developments and a summary of recent historical events. Major topics covered by almanacs (reflected by their tables of contents) include: geography, government, demographics, agriculture, economics and business, health and medicine, religion, mass media, transportation, science and technology, sport, and awards/prizes. Sometimes almanac is grouped with yearbooks as this is also an annual publication giving current events, developments, statistics, etc. Example: World Almanac and Books of Facts, Whitaker's Almanack, Information Please Almanac, The Old Farmer's Almanac etc.

i) **Directory:** 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 user so as to enable them to get the required information readily. S. R. Ranganathan defines a directory as "a book containing the names, address, occupation, etc of the inhabitants of a town or a district, a list of the user of a telephone system or of the members of a particular profession or trade or a descriptive list of institution, enterprises or trade". ALA Glossary of library terms defines a directory as "a list of persons or organizations, systematically arranged usually in alphabetical or classified order giving address, affiliation etc. for individual and address, officers, functions and such data for organization". In a wider sense, even a list of periodicals or newspapers or places may also be termed a directory. Example: Times of India Directory and Yearbook including Who's Who, Bowker Annual of Library and Book Trade Information, World of Learning, Universities Handbook, etc.

j) **List of Research in Progress**: A list or directory of research in progress covers the research activities of a single institution, a laboratory or a group of institutions i.e. universities. The information content usually is a short description of projects, names of investigators, period of investigation, and names of funding agencies and, in some cases, reference to sources where preliminary results have already been published or likely sources of publication of results.

List of research in progress helps an individual information seeker to get in touch with the investigation, to get additional information about the work or can anticipate as to when and where to get the full report or results of an investigation and thus to avoid duplication in research. Example: Current research project in CSIR Laboratories, 1972 and 1976 compiled by INSDOC, R and D Projects in Documentation and Librarianship of FID.

k) **Notification of Forthcoming Conferences:** The knowledge of forth-coming meetings, conferences, symposia, seminar etc. on a specific field should be notified to the members belonging to that specific domain. Keeping this purpose in view some organizations publish small booklets giving essential general information about forth-coming seminar, conference and workshop in a specific field. Example: Forthcoming International Scientific and Technical Conference, Quarterly published by ASLIB.

l) **Handbook:** The term "hand book" literally comes from the German word "handbuch" i.e. a book which can be held in the hand comfortably. It is a compilation of miscellaneous information in a compact and handy form. It is a small manual, reference work or other collection of instructions, intended to provide ready reference regarding procedures, principles, etc. Table, graph, diagram and illustration are also provided. Louis Shores has defined handbook as "a reference book of miscellaneous facts and figures on one or many subjects assembled for ready use in response to popular interest or to a specific need for concise handy information".

m) **Manual:** The word "manual" is derived from the Latin term "manualis" which means a guide book or instruction book to pursue an occupation, art or study. The term "manual" in common parlences refers to instruction to do something with the aid of very explicit step by step directions. It gives instruction by means of specific and clear direction. Louis Shores opined that "manuals are sources that contain instruction for doing". ALA Glossary defines a manual as a) a compact book, a handbook b) a book of rules for guidance or instructions in how to perform a task, process etc. or make some physical subjects. Example: Fay, G.S. (1972). Rockhound's Manual. New York: Harper and Row.

n) **Statistical Sources:** The statistical information is distributed in other reference sources. The dictionaries may contain population statistics. The encyclopedia may provide socio-economic data about large geographical areas, which may be updated by their yearbook; the statistical yearbook may provide some other kinds of statistics over a longer period of time, and so on. Example includes Demographic Yearbook, Statesman's Yearbook, etc.

o) **Mathematical Table:** In early days before calculators were cheap and plentiful, people were using mathematical table i.e lists of numbers showing the results of calculation with varying arguments to simplify and drastically speed up computation. The most common are multiplication tables, which most people know from their early Maths classes. Nowadays, peple use logarithm tables and so on.

2.6 EVALUATION OF REFERENCE SOURCES

The checklists for evaluation of reference sources are more or less same for all types of work. They can be applied to all sources with slight modification. In general, they include the following

a) **Authority:** The work should be authoritative. The authority should be judged on the basis of the reputation of the author(s), editor(s), compiler(s), sponsoring bodies and the publishers.

b) **Scope and Coverage:** The kind of information included would depend upon the scope of the work. Some work may cover a particular country or the whole world or all subjects while others may be restricted to some specific or minute topic only. The date or period covered is an important criterion. Sometimes it may relate to a particular subject, organization also. The content page, preface, and introduction may give an idea of the information contained in the work.

c) **Treatment:** It is to be ascertained whether the information is reliable and accurate or not, whether the treatment is biased or unbiased.

d) Arrangement: The information must be systematically arranged. It is essential to have a detailed index which should provide for various kinds of approaches.

e) Uptodateness / Revision: Though some reference sources may contain some retrospective information, every year it should be thoroughly revised and updated. The time lag is important for current sources.

f) Format: All reference works should be a handy volume easy to withstand wear and tear. Type face should be clear and legible with suitable headings and subheading in bold types for the guidance of the readers.

g) Special Features: The other special features of the work include its total cost and whether the cost can be justified on the basis of its content.



CHECK YOUR PROGRESS

A) Match the Following

a) Primary source of information.	a) Text book.
b) Secondary source of information.	b) Journal.
c) Reference books in a library	c) Word book.
d) Another name of glossary	d) Not for circulation.

.....

B) Fill in the Blanks

a) C. W. Hanson divides documentary sources of information into two categories i.e. ..... and .....

b) Denis Grogan classifies the documents into three categories, i.e primary, ... and tertiary.

c) S. R. Ranganathan classified documentary sources of information into Conventional, Neo Conventional, Non Conventional and .....

d) Reference works are also known as ..... material.



2.7 LET US SUM UP

The information sources are of two types, documentary and non documentary. Documentary sources are the record in some physical form. The non documentary sources of information are live sources that provide information instantly. The non documentary sources of information include research organizations, societies, industries, government establishment, departments, learned and professional bodies, universities, technological institutions, etc.

Some of the reference sources overlap. For instance a supplement to an encyclopedia can be considered as a part of encyclopedia or separately. Similarly, the sources of statistics can be considered under yearbook or as a separate category. Many of the reference sources are now available in audio- visual format or as an online publication but still they can be included under their respective categories. Besides, the traditional reference sources, Search engine, Meta search engines can also be considered as reference sources of modern times.



2.8 FURTHER READINGS

1) IGNOU (2001*). MLIS-04: Information institutions, products and services, Block 3 (Information Products)*. New Delhi: IGNOU.
2) Katz, William A. (1982). *Introduction to reference work*, 4th ed. New York, McGraw Hill, V. 1.
3) Krishan Kumar (1996). *Reference service.* 5th rev. ed., Delhi: Vikas.
4) P.S.G. Kumar (2004). *A students manual of library and information science.* 2nd ed., Delhi: B.R. publishing corporation.
5) Ranganathan, S. R. (1996). *Reference service.* 2nd ed., Bangalore: Sarada Ranganathan Endowment for Library Science
6) Sharma, Jagdish Saran and Grover D.R. (1987). *Reference service and sources of information*. New Delhi: Ess Ess.
7) Tripathi, S.M., Lal, C and K Kumar (2002). *Descriptive questions in Library and Information Science*. New Delhi: Ess Ess.

2.9 ANSWERS TO CHECK YOUR PROGRESS

A) Match the Following

a) Primary source of information.	a) Journal.
b) Secondary source of information.	b) Text book.
c) Reference books in a library	c) Not for circulation.
d) Another name of glossary	d) Word book.

B) Fill in the Blanks

a) Primary, Secondary.
b) Secondary.
c) Meta Document.
d) Approach

2.10 PROBABLE QUESTIONS

A) Short Answer Type Questions

a) What are the two types of information sources?
b) What is a documentary source of information?
c) What is a non documentary source of information?
d) What do you mean by reference source?
e) Describe the characteristics of a reference book.
f) According to William A. Katz what are the two categories of reference books?

B) Essay Type Questions

a) What are the different types of non documentary sources of information?
b) Describe the primary and secondary sources of information.
c) What are different types of documentary sources of information? Describe some of them.
d) Write descriptive notes on different types of reference sources.
e) Write a descriptive note on geographical sources of information.
f) Write a note on evaluation of a reference source.
g) Write a short note on dictionary and encyclopaedia.

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