BLIS S1-02

ONE YEAR BACHELOR DEGREE PROGRAMME
LIBRARY AND INFORMATION SCIENCES

SEMESTER-I

INFORMATION SOURCES AND SERVICES

Guru Prasad Das School of Interdisciplinary and Vocational Studies

KRISHNA KANTA HANDIQUI STATE OPEN UNIVERSITY

Subject Experts

Prof Sanjay Kumar Singh, DLIS, Gauhati University

Dr. Dipen Deka, DLIS, Gauhati University

Course Coordinators : Komal Kumari, KKHSOU

SLM Preparation Team

UNITS	CONTRIBUTORS
1, 2	Dr. Badan Barman, Gauhati University
3, 4	Ms. Komal Kumari, KKHSOU
5	Mr. Pranjit Kalita, KKHSOU
6, 7, 8, 9, 10	Ms. Komal Kumari, KKHSOU
11	Dr. Latifur Alom Ahmed, USTM
12	Ms. Komal Kumari, KKHSOU
13	Ms. Astha Borah, Lanka Mahavidyalaya
14	Ms. Komal Kumari, KKHSOU

Editors

Content & Language : Ms Anupama Chetia, KKHSOU
Prof. Sanjay kumar Singh (Unit-1,2)

Structure & Format : Ms. Komal Kumari, KKHSOU

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City Campus: Khanapara, Near Bodoland Guest House, Guwahati-781022; Web: www.kkhsou.in

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COURSE INTRODUCTION

Welcome to the course on "Information Sources and Services," designed to provide you with a comprehensive understanding of the various sources of information available in a library and information centres, along with the services they provide. This course will guide you through the essential concepts of information, its properties, and its role in the creation, dissemination, and storage of knowledge.

We will begin by exploring the fundamental relationship between data, information, knowledge, and wisdom, helping you to understand the Information Transfer Cycle and its significance in the library context. The course will introduce you to various theories of information, including the nature of information needs, the impact of information in different contexts, and how to identify these needs. You will learn about the evolution of information as a commodity, including the concept of information explosion and its impact on society and information systems, as well as measures to handle this ever-increasing volume of information.

A significant focus of this course is the categorization of information sources. We will explore different types of information sources, such as primary, secondary, and tertiary sources, examining their content, utility, and how they contribute to the creation and dissemination of knowledge. We will delve into primary sources like periodicals, reports, theses, and official publications, followed by secondary sources such as bibliographies and databases, and finally, tertiary sources like library catalogues and directories. The course will also cover the evaluation of these sources, equipping you with a set of criteria to assess their reliability and relevance in different contexts.

In addition to the theoretical aspects, we will also focus on the practical side of information services provided by libraries. You will gain an understanding of various reference and information services, including ready reference, current awareness services, selective dissemination of information, and alerting services. We will explore on-demand services such as bibliographic services, translation services, and consultancy, which are integral to supporting information seekers in libraries.

As information and technology continue to evolve, understanding how to effectively perform literature searches and navigate electronic databases becomes crucial. This course will guide you through the process of literature searches, the role of databases, and the services libraries offer in accessing them. We will also examine indexing and abstracting services, providing you with the knowledge of different types of indexes and abstracts, and their importance in organizing and retrieving information.

We will explore the growing field of marketing information services, examining the need, purpose, and strategies for promoting information services within libraries. You will learn how to engage library clients, market library products and services, and implement effective marketing strategies that align with library goals.

This course is designed to provide you with a well-rounded understanding of information sources and services, preparing you for a successful career in the dynamic and ever-evolving field of library and information science.

UNIT 1: INFORMATION AND ITS ROLE

UNIT STRUCTURE

1.1 Learning Objectives

1.2 Introduction

1.3 Data, Information, Knowledge and Wisdom

1.4 Properties of information

1.5 Information Transfer Cycle

1.6 Let Us Sum Up

1.7 Further Readings

1.8 Answer to check Your Progress

1.9 Probable Questions

1.1 LEARNING OBJECTIVES

After going through this unit, you will be able to –

- Define data, information, knowledge and wisdom
- Establish relationship between data, information, knowledge and wisdom.
- Know characteristics of information
- Learn the information cycle

1.2 INTRODUCTION

This is the first unit of this course, embarking on a fascinating exploration of information and its vital role in our world. In today's rapidly evolving landscape, understanding the nature of information is more critical than ever. As Library and Information Science professionals, we are tasked with managing, organizing, and disseminating this essential resource. This unit will serve as your foundation, providing a comprehensive overview of the core concepts that underpin our field. We will begin by defining data, information and knowledge, clarifying their distinct characteristics and interconnectedness. Furthermore, we will delve into the fundamental

attributes that define information itself - exploring qualities such as accuracy, relevance, and timeliness.

We will also examine the information transfer cycle, a crucial model for understanding how information flows from creation to dissemination and ultimate use. By grasping the dynamics of this cycle, you will gain valuable insights into the processes that shape how we access and interact with information.

1.3 DATA, INFORMATION, KNOWLEDGE AND WISDOM

Data, Information, Knowledge and Wisdom are the products of the mind. The Data, Information, Knowledge, and Wisdom are evaluated in an ascending scale of values, Data having the least value, Wisdom the greatest.

a) Data: The word “data” is Latin in origin, & literally, it means anything that is given. In sum, the term includes facts, figures, letters, symbols, words, charts & graphs that represent an idea, object or condition. Webster’s Third New International Dictionary defines data as “something given or admitted facts or principles granted or presented, that upon which an interference or argument is based, or from which an ideal system of any sort is constructed.” According to Oxford Encyclopaedic English Dictionary, Data are “known facts or things used as a basis for interference or reckoning.” UNESCO defines data as “facts, concepts or instructions in a formalized manner suitable for communication, interpretation or processing by human or automatic means. In simple, Data is a unit of fact and a raw material of information. It is derived by observation and experiences.

By nature, data are either quantitative or qualitative. Quantitative data are numerical and qualitative data are descriptive. It is also possible to transform qualitative data into numerical values. Additionally, in science, data can also be graphic in nature. The following are the properties of data:

i) Amenability to Use: Data must be amenable to use. The use may differ with the context.

ii) Clarity: Data should necessarily display clarity.

iii) Accuracy: Accuracy is an essential property of data.

iv) Essence: Data should be compressed & refined. Only the refined data can present the essence of value.

b) Information: The word "information" is derived from two Latin words "forma" and "formatio". Both the words convey the notion of giving shape to something and of forming a pattern. Information is the processed data, organized and presented by someone. The data becomes information when these are collected, processed, interpreted, presented or communicated to some one in an organized or in logical form to facilitate a better comprehension of the concern issue. Information is the knowledge concerning some particular fact, subject or events in any communicable form. It is a structured collection of data i.e. sets of data, relation between data. It consists of data that have been retrieved, processed or otherwise used for informative or inference purpose, argument or as a basis for forecasting or decision making. Let us mention some of the definitions of Information-

According to Harrod's Librarian's Glossary and Reference book compiled by Ray Prytherch, 7th ed, 1990, information is "an assemblage of data in a comprehensible form capable of communication".

Mikhailov et.al (1966) has cited Brillounin's definition. According to them "information is the raw material and consists of a mere collection of data".

Hayes (1969) defines information as "result of data, usually formalized in processing".

Davis (1974) has defined information as "data that has been processed into a form that is meaningful to the recipient and is of real perceived value in current or prospective decision".

Stevens (1986) has defined information as "the factual data, ideas and other knowledge emanating from any segment of society that are identified as being of value sometimes gathered on a regular basis, organized in some fashion, transmitted to others and used in some meaningful fashion".

According to S. C. Blumenthal in "Management Information System" (1969), "information is data, recorded, classified, organized, related or interpreted

within context to convey meaning".

According to A. J. Evans et al, information is a "sensible statement, opinion, fact, concept or idea, or an association of statement, opinions or ideas. It is closely associated with knowledge in that once information has been assimilated, correlated and understood it becomes knowledge".

c) Knowledge: The word "knowledge" means an assured belief or that which is known. It is the information read, heard or seen and understood. It is an organized set of statements of facts or ideas –presenting a reasoned judgments or an experimental result which is transmitted to others through some communication medium in some systematic form. When information is stored in mind, it constitutes knowledge, particularly when relationships are established between items of information.

The Webster's New International Dictionary of English language defines knowledge as, "Familiarity gained by actual experience, practical skill, technical acquaintance". It has also been defined by Webster as "Acquaintance with fact; the state of being aware of something or of possessing information; hence scope of information".

When man knows the entities (things or concepts), knowledge is established. As man knew more and more about entities knowledge grew, in order that knowledge already gathered is not lost from the scope of posterity and it must exist in recorded and stored format. Due to the comparatively larger age of human, living of three generations in a family within society, ability to reason and analyse, ability to transfer the accumulated knowledge to its posterity increase his/her stock of knowledge. Knowledge is the ability of an actor to respond to a body of facts and principles accumulated over a period of time. The quality of knowledge depends on the properties of the agent. Knowledge can be viewed in terms of the following

i) Knowledge is the structure or organization of information including the relationship among items of information.

ii) Knowledge is created and modified by new information.

iii) When information is applied by people it becomes knowledge.

iv) Knowledge is universally regarded as a much wider concept than information, both in the everyday world and within the specialty theory and practice.

Further, knowledge is individual to each person and does not depend upon humans to exist; when it exists apart from information it can only be useful if it becomes a commodity or a resource. Knowledge can only reside in an organic brain. As soon as it is objectified outside of a biological organism it becomes disembodied information, capable of entering production similar to a manufactured product or commodity. Some of the characteristics of knowledge are

i) It is dynamic, ever growing and continuing.

ii) It is contained in the subjective realm.

iii) It is structured, coherent and often of enduring significance.

iv) It is a stock, largely resulting from the flow, inputs of information.

v) It is the basis for action.

Wisdom: Wisdom is the distilled and integrated knowledge and understanding. It is the most precious human capital in all developmental processes.

Cleveland, Ohio Association for System Management, 1979 has treated raw data from “birth” into evaluated form as information, through maturity as knowledge, to “death” and inclusion in the knowledge base. It may be noted in passing that in common social process, data, information and knowledge are regarded as mutually sustaining elements at times distinctly different, on occasions overlapping, and interchangeable. Both data and information have intrinsic properties. While information is shareable, knowledge is individual to each person. Again, information depends upon humans to exist but knowledge does not depend upon only humans to exist.

1.4 PROPERTIES OF INFORMATION

Information has an origin. It is communicated from the origin or from a “source” where information is termed as “message”. The message needs a “medium” for communication. The message is aimed to be communicated

to a "recipient". At each step the information possesses certain characteristics. Some of the characteristics or properties of information are listed below

a) General Characteristics

i) Information is Heterogeneous: Information is extremely heterogeneous with virtually infinite variation in response to individual conjunctions of supplier, processor, user and channel of communication. It is inter-disciplinary in nature.

ii) Information Itself is Valueless: Information is rarely of value in itself. It always requires a content structure or model within which it can be interpreted.

iii) Information is Central: The role of information in any organization is central and can be viewed as a fundamental factor of production like money and manpower.

iv) Protection: The supplier and the user of information often need special protection by means of government intervention such as copyright and patent laws, privacy legislation, fraud statutes, etc.

v) Demand Varies: Demand for information is a function of such variables as age, perishability, convenience, reliability, source, etc.

vi) Un-destroyable: Information is not consumed in its use.

vii) Shareable: It can be shared by many and can be used simultaneously without any loss to anyone.

viii) Democratic Resource: Information is the best democratic resource that can be consumed by the poor and the rich alike depending upon their intake capacity.

b) Characteristics at the Source of Origin

i) Reliable and Genuine Source: When information is received from a valid, reliable and genuine source then only it should be considered for communication to the recipient or end user.

ii) Communicability: Information should be in a communicable form.

c) Characteristics as a Message

i) Accuracy: Information should be precise and free from error.

ii) Timeliness: The information should be timely. To achieve this, modern electronic device can be used.

iii) Completeness: Information as a message should include all the relevant information.

iv) Explicitness: The message should not leave any doubt in the mind of the user as to its validity, comprehensiveness, etc.

v) Availability and Accessibility: Information must be available and readily accessible to the user.

vi) Verifiability: The message must be verifiable so that its validity, accuracy, appropriateness, etc can be assessed.

vii) Biasfree: Information should be free from any kind of bias.

d) Characteristics at the end of the Recipient

i) Adaptability: Information should be adaptable for a new use, need, situation, etc.

ii) Cost Effectiveness: Information should improve the performance of a system at an acceptable cost or at no cost or should reduce the cost without unduly effecting performance.

iii) Currency: The information should be timely available. It should not be obsolete as well. Timely information will be of high value.

iv) Relevancy: Information should be relevant to the user.

v) Conciseness: Information should summarize the relevant data so that it will be useful for the managers.

1.5 INFORMATION TRANSFER CYCLE

Cycle means a series of events that are regularly repeated in the same order. Transfer of information from its generation to its end user becomes possible through many processes. These processes are also regularly repeated in the same order. These processes completed a cycle, which is called Information Transfer Cycle (ITC). The ITC comprises generation, collection, storage, communication and retrieval.

a) **Information Creation / Generation:** Information is created with the happening of incidents and activities of humans. If an activity or

an incident does not happen, no information is created. Information is mostly created by research and development programmes, government activities, survey and census of population, business and industrial organizations etc. and presented in format by author, scientist, researcher, editor, writer, poets, novelists, dramatist, etc. Over the web, information is produced by the general people irrespective of their background and is not restricted only to academics such as scholars, scientists, etc.

b) **Information Production and Dissemination:** It is the mass production of knowledge through publishing companies or others that will help the mass distribution of knowledge in some physical or electronic form. Previously the information had been disseminated in the form of book. Many conventional and non-conventional, printed and non-printed sources of information are nowadays available which are different in shape, size, type and format. Over the web, the production is accelerated by posting the information electronically over some kind of websites. It speeds up the transfer of information globally at a rapid rate instead of taking months or years to get published on paper.

c) **Information Storage, Organization, Retrieval and Communication:** The storage is the process by which the information described and presented in the documents are stored. Information is collected and stored by libraries, documentation centres, information analysis centres, data banks, data centres, etc. Computer has been accepted as a boon for storing of information. It can store a huge amount of information in the form of database. Besides, the computer, disks and CDROMs are the newly developed and very significant tools of storing information.

Organization is how that representation of knowledge is found among others of its kind. In the library environment, the classification and catalogue, shelf list, various kinds of guides, etc facilitate the retrieval function. All these tools are equipped with controlled vocabulary. In

the computer environment, organization is facilitated by databases, search engines, etc. Knowledge is individual and the users determine its usefulness; so keyword and natural language searching in computer environment is more attractive.

Retrieval is a process of getting information from the collection of a library, for providing answer to the queries of the users, etc.

Communication is the process of transmission of information from one place to another, from the creator of information to its users. It is necessary for the best use of the same. It is the process of social exchange. In the library environment, communication of information can be made through telephone, CAS services, SDI services, teleconferencing, e-mail, etc. Sometimes the publisher also brings different kinds of information sources to the notice of the user community.

d) **Information Diffusion and Utilization:** Diffusion is viewed as a more targeted flow of information to a particular segment of society. The diffusion of information should find its way to people who actually need it instead of targeting the people who will use it for their own benefit. Utilization is the adoption and implementation of the knowledge by the user. Information is needed by each and every person of modern society for some purpose or the other. When information is consumed by one person it gives new dimension to his knowledge. This knowledge when he applied to some other purposes it gives birth to new information. Thus, the information cycle is continuum in nature.

e) **Information Preservation and Destruction:** The different kinds of libraries, archives are trying to preserve information in different format. Over web, the Internet archive and the cached page of search engines are serving some purpose in this regard. The information that is less frequently accessed or has met its assigned retention periods may be considered for relocation to an archive. Then from the archive, it needs to be weeded at some time or other by means

of appropriate procedure for the content.

CHECK YOUR PROGRESS



1.Fill-in-the-blank

a. Data can be either _____ or _____ in nature.

b. Information is the _____ of data when it is processed, organized, and presented to someone.

c. Knowledge is created when information is _____, correlated, and understood by an individual.

d. _____ refers to the integration of knowledge and understanding, representing the highest level of human capital.

e. The _____ is a crucial model that describes how information flows from creation to dissemination and use.

f. The _____ property of information ensures that it is free from error and is precise.

g. The _____ stage of the Information Transfer Cycle involves making information available for communication and retrieval.

h. _____ is the process of transmitting information from its source to its intended recipient.

i. Information that is no longer frequently accessed may be considered for _____ in an archive.

1.6 LET US SUM UP



This unit introduces the importance of information and its role in the world, focusing on its management, organization, and dissemination. It defines key concepts-data, information, knowledge, and wisdom-explaining their differences and relationships, emphasizing how they evolve from data to wisdom. Data is raw, qualitative or quantitative, and must be accurate, clear, and amenable for use. Information arises from processed data, structured and communicated for

understanding. Knowledge is the application of information, and wisdom is its integrated and distilled form.

We have also learned properties of information, which include its heterogeneity, value dependence on context, and shareability. Information has essential characteristics such as accuracy, timeliness, completeness, and relevance, and must be adaptable for various uses. The Information Transfer Cycle (ITC) describes how information is created, produced, stored, communicated, and ultimately used. It involves several stages: generation, production, storage, retrieval, diffusion, utilization, and preservation, ensuring that information is effectively disseminated and preserved for future use.

1.7 ANSWERS TO CHECK YOUR PROGRESS



Ans to 1.

a. quantitative, qualitative

b. transformation

c. assimilated

d. Wisdom

e. Information Transfer Cycle

f. Accuracy

g. Communication

h. Communication

I. Preservation

1.8 FURTHER READINGS



Bates, M. J. (2005). An overview of information science. In *Encyclopedia of library and information science* (2nd ed.). Taylor & Francis.

Machlup, F. (1983). *Knowledge: Its creation, distribution, and economic significance*. Princeton University Press.

Prabha, C. (2010). *Fundamentals of information science* (2nd ed.). Ess Ess Publications.

1.9 MODEL QUESTIONS



1. How is information different from data?
2. Define wisdom.
3. What are the general characteristics of information?
4. How does information flow in the Information Transfer Cycle?
5. Why is timeliness an important property of information?
6. Explain the differences between data, information, knowledge and wisdom.
7. What is the role of knowledge in relation to information?
8. Discuss the properties of information in detail, focusing on its characteristics.
9. Describe the Information Transfer Cycle (ITC) and its stages. How does each stage contribute to the flow of information from creation to utilization?

*** *** ***

UNIT 2: THEORIES OF INFORMATION

UNIT STRUCTURE

2.1 Learning Objectives

2.2 Introduction

2.3 Theories of Information

2.4 Information Need

2.5 Role of Information

2.6 Let Us Sum Up

2.7 Further Readings

2.8 Answer to check Your Progress

2.9 Probable Questions

2.1 LEARNING OBJECTIVES

After going throughthis unit, you will be able to:

- Understand Theories of Information
- Comprehend Information Needs
- Explore Types of Information Needs
- Learn the Role of Information in Society

2.2 INTRODUCTION

This unit explores the multifaceted concept of information, examining its various definitions, theories. Information has been a driving force behind human progress, influencing communication, decision-making, research, education, and more. Theories provide frameworks for understanding how information is distributed, processed and utilized. The unit delves into the concept of information needs, highlighting how individuals and organizations seek and use information in different contexts, ranging from professional needs to daily life. Through this exploration, we recognize information as a powerful resource, essential for decision-making, innovation, and societal development.

2.3 THEORIES OF INFORMATION

At different times, different people in different context propose various theories of information. Some of them are listed below-

a) Communication: The communication process requires at least three elements - *source*, *message* and *destination*.

i) Mathematical Theory: According to Shannon and Weaver, the amount of information in a message is related to the size of the vocabulary. If one is restricted to “yes” or “no” then the recipient has the fifty percent chance of guessing correctly. If the vocabulary has ten signals then the recipient has less chance of guessing and so amount of information in a message is increased.

ii) Semantic Theory: Fairthorne proposed the “phlogiston theory of information”. According to this theory, information is something that can be squeezed out like water from a sponge. Information will obviously be affected by the prior state of knowledge of the recipient.

As an alternative to the above theory Y. Barttiller and R. Carnap came out with semantic information theory. They suggested that a prior knowledge may increase information from a message (how precisely do the transmitted symbols convey the desired meaning).

iii) Information for Decision Making: M. C. Yovits proposed that “information is data of value to decision making”. Information involves reduction of uncertainty that is what the decision makers accept from the information system.

b) Commodity: Information is a commodity that is needed to do a job. Acquiring, storing and retrieving information are important for our daily life.

i) Zipf’s Law: George Kingsely Zipf proposes a relationship that exists between the frequency in the use of words and their distribution in books, reports, documents and other printed matter. The Zipf’s law was published in the book “Psycho-biology of language: An introduction to dynamic philosophy, Cambridge, Mass MIT press, 1935. According to this law, if the number of different words occurring once in a given sample is taken as X, the number of different words occurring twice, three times, four times, n

times in the sample is respectively 1/2., 1/3, 1/4, 1/n of n upto, though not including, few most frequently used words.

ii) Bradfords Law: Samuel Clement Bradford in 1948 proposed another law. According to him, if scientific journals are arranged in order of decreasing productivity of articles on a given subject they may be divided into a nucleus of periodicals, more particularly devoted to the subject and several groups of zones containing the same number of articles as the nucleus. When the number of periodicals in the nucleus and successive zones will be as 1:n:n2 where n=5, that is, the second zones has five times the number of journals of the first zone and the third zones has 52 or twenty five times the number of journals in the first or nucleus zone. This law was extended by many, notably B. C. Vikery, F. Leimkuhler and B. C. Brookes.

iii) Lotka's Law: Alfred J. Lotka produced his law in 1926. Lotka's law states that there is an exponential relationship between the number of items contributed to the literature and the total contribution by those who contributed two, three or more papers. Lotka developed a general formula for the relationship between the frequency of y persons making n contribution as xny=constant. Finding the value of constant when n=2, he observed that "the number of persons making 2 contribution is about one fourth of those making one (1/22), the number making 3 contribution is about (1/32) of those making one. The number making n contribution is about 1/n2 of those making one, etc.

iv) Law of Economics: According to the followers of this theory, information is analogous to energy (Meta energy). So, it is also a resource that can be handled as a utility. It can be packaged, stored and distributed in various forms. In this sense, information has value and the laws of economics can be applied to it.

c) State of Process: Information represents the state of an organism following the reception of energy from the environment in the form of a symbol or datum. The transformation that takes place between datum and the resulting state, information is part of the function of all organisms. It reaches the highest known competence in the human being through the activities of the central nervous system. Electronics devices such as

computer extends these capabilities.

d) Cognitive Process: Much of the human behaviour can be seen as information processing. Thinking, memory, learning and perception are in fact the function of processing information. A. Turing proposed automata theory. Scholars have applied this theory to the study of behavior. According to these studies, information can be considered as a process intrinsic to all organism activities and can be replicated by machines.

2.4 INFORMATION NEED

The information needs; demands and wants have been used interchangeably, although they may not be identical. Information need involves a cognitive process which may operate on different levels of consciousness and, hence, may not be clear even to the inquirer himself / herself.

People in different situations require information on a subject in different forms and with different emphasis and different depth of explanation. Even the same person seeks information in different ways and forms on various occasions depending on his/her knowledge of the subject and the reasons for wanting the information. So, the information need is very difficult to define and categorize.

a) Definition: Information need is seen as a subjective, relative concept existing only in the mind of the experiencing individual. The Librarian's Thesaurus defined information need as "that need which library science and material are intended to satisfy".

Maurice B. Line has defined information need as "what an individual ought to have for his works, his research, his education, his recreation, etc".

According to Brenda Dervin, "an information need is an impediment preventing an individual from moving forward in cognitive time and space. The person is faced with a gap that must be brought by "asking question, creating ideas and for obtaining resources. Such gaps do not occur in the abstract but arise out of a particular critical event and situation".

Faibisoff and Ely (1976) viewed that information needs as either shaped by activity such as problem solving or decision making or manifest through a passive reception of information which is stored as knowledge.

Krikelas (1983) has defined it as the "recognition of the existence of uncertainty". While, N. Ford in 1983 defined it as "recognition of the existence of uncertainty and described it as something which prevents an individual from making progress in a difficult situation".

b) Types: Information is a power and so it is needed in virtually every field of human thought and action and by everyone for some purpose or the other. According to Carol C. Kuhlthou (1991) in the process of information searching, initially a person first becomes aware of knowledge or understanding, feeling of uncertainty and apprehension. This is the stage showing the need for information. Information need generally varies from individual to individual, according to their working condition, the discipline in which they are working, the time, etc.

Tague has presented the following types of information needs

i) Social or Pragmative Information Need: Required to cope with day-to-day life;

ii) Recreational information need;

iii) Professional information need;

iv) educational information need.

Krikelas on the basis of information seeking behavior, categorized information need as

i) Immediate Need;

ii) Deferred Need.

David Bawden (1986) identifies four kinds of information in particular for aiding the creative process. They are

i) Interdisciplinary information;

ii) Peripheral information;

iii) Exceptions and inconsistencies.

Melvin J. Voigt's (1961) study revealed that the same person could interact with the information system in different ways at different times depending

upon his purpose in relation to his works, stage of his works, general interest, amount of information already available to him and so on. According to him, a scientist's use of information arises from three different needs. These are -

i) Current Approach: The need-to-know what other scientists have recently done or are doing. It keeps up to date with the current progress of a scientist's field.

ii) Everyday Approach: The needs that come to the scientist in course of his work for some specific piece of information. This need is directly connected with the research work or the problem at hand.

iii) Exhaustive Approach: The need to find and check through all the relevant information existing on a given subject.

Later a fourth type of information need was added to the Voigt's types of information need by other workers in the same field.

iv) Catching up or Brushing up Approach: A worker may at times need to have a brief but a complete picture of the recent development of a related subject in which he was not vary much interested or which did not come within the area of his main interest. In such cases he needs a catching up approach.

The need of the scientist at different levels makes him adopt different approaches to gather the required information.

Information needs also can be categorised as follows

i) Information for its Own Sake: Information for its own sake is live in this world in order to know the world and our surrounding environment. Therefore, no action is necessarily going to be taken on this type of information.

ii) Professional Need: Information is needed to meet the professional need, to cope up and compete with other professionals in the subject. Professionals such as doctors, lawyers, librarians and others need information to pursue their vocations. They cannot afford to ignore new development in their respective fields. Their ignorance about the latest development in the field would affect their performance. Engineers,

technologist, business executives need information for solving the problems related to their respective profession.

2.5 ROLE OF INFORMATION

From the primitive days of human civilization to the present day, information has always been a component of growth and development and improvement of the living standard. Nowadays, the information has come to occupy the central position to be reckoned as the driving force for all human development. It is clearly interlinked with the growth and development in economic, political, social, occupational, cultural and other sectors of the society. Information and knowledge have become the principal generator of wealth in the form of educational institutions, research and development establishment, scientific and technological centres and other similar knowledge-oriented bodies.

The impact of information and knowledge is seen in a number of human activities centering on information. Some of these are as follow, which will give a cursory account of societal changes taking place in a few sectors.

a) Education: Education is the process of acquiring general and specialized knowledge by means of study and learning that develop intellectual power of reasoning and judgment. At no point of time in the life of a person does education really terminate and in real sense it is a continuous process. While IT provides easy and effective access to the different types of educational kits, information is the life blood of education. It is the essential ingredient in new ideas, in course content and curriculum development, and in the creation of material and methods of technology and learning. Students need information for pursuing academic studies; teachers need information for teaching their students.

b) Research and Development: Research is a never-ending spiral activity. It aims to provide solution to problems. The inputs as well as the output of research are information. So, information is the life blood for research and development. The quality of information content alone will determine the success or growth and development of research. Researchers need

information on a continuous basis for conducting research works.

c) Management and Decision Making: We are living in a world of change. We face complexities, uncertainties and risks unknown to our predecessors. The list of activities in our private life and its associated problems are virtually endless. In each of these personal activities' decisions are required to be taken and information is needed to support the decision. People need information to make the best possible decision. People with information are likely to have better career opportunities and to be better equipped to make personal decision. Information provides a means of improving the management of enterprises and services of all kinds. Information is needed by the decision makers in organizations. A common need basic to all decision makers is an understanding of the purpose of the organization, that is, its policies, programmes, plans and goals. The decisions to be made in an organization do vary and the information needs also vary. A manager needs information to choose the possible alternatives presented in terms of ranges of values of particular attributes. Information provides a wider knowledge base for the solution of any problem; it gives new alternatives and approaches to the solution of technical problems and opinions for minimizing future fault. It improves effectiveness and efficiency of technical activities in the production and service sector. So, information is used for better decision making in all sectors and at all levels of responsibilities. Governmental officials of different levels need information for decision making. They need census, weather and other related information. Legislators need information of different types to argue a point on the floor of the legislature.

d) Daily Life of a Person: Naturally, living today is quite different from what life was about a generation ago. Nowadays people in different situations require information on a subject in different forms and with different emphasis and different depth of explanation. An ordinary person in his daily life needs to have access to information on many of his daily activities. It may pertain to the quality, availability or cost of a number of things like articles of foods, health care, education, entertainment, travel, social

security, etc. One may need information on cooking, gardening, house decoration and maintenance, and a host of other subjects. In private life one needs information to organize vacation activities, to make intelligent purchases, fertilize a lawn, soup up an engine, prune a shrub, groom a pet, select a garment, vote for a candidate, choose a doctor or lawyer, protest a tax increase, evaluate career opportunities, pick an investment, select a course, make a trip plan meal and so on. The list of activities in a private life is virtually endless.

e) **Business and Industry:** Information and knowledge are getting their appropriate place in enterprises that are not static, because it is increasingly being recognized today that external information on market, competitors, social and political environment, government regulations and trade and tariffs etc are invaluable if an enterprise is to thrive. It is only the central role of information that business and industries are day by day inclined to invest in R & D to generate new knowledge which would ultimately provide them an edge over their competitors.

In business sector, information helps in telemarketing, better financial management, customer service, training, sales, product development, market intelligence, looking for customers, etc.

In industry, the types of information needed are not limited to production, but cover all aspects of industrial activity. The major types are: identification of product, determination of technical and economic feasibility including the potential for use of indigenous resources; outlets for disposal of waste either as saleable by-products or for further processing, market or marketing, etc.

f) Scientific Development: The increase in population has resulted in mounting social pressure for increased production, but as population increases, natural and near natural commodities start depleting. So, there is an urgent need for exploitation of new resources, and creation of artificial commodities. All these developments are impossible without the use of proper information and immediate use of new scientific discoveries.

Air transportation, the concept of global village, satellite communication,

nuclear energy, exploitation of outer space, improvement in agriculture, health, environment, etc are some of the results due to exclusive use of information in the field of science and technology.

g) Government: Information improves the capacity of a country to take advantage of the existing knowledge and "know how" to achieve success in various fields. So, the governments of almost all the countries of the world are the largest consumers of information and knowledge. All their commitment and responsibilities to create a welfare state, they need information and knowledge on every conceivable subject. They collect, organize and disseminate statistical data on all its activities which constitute the most important and vital information resources for their planning and later implementation and execution.

All ministries of the government need up to date and timely information on the overall management of the country's resources and general administration. Management Information System (MIS), Decision Support System (DDS) are widely used in planning and policy making.

h) Socio-Economic Development

i) Entertainment: With the viewer's complete control over programmes, and interactive television (to watch a missed TV show).

ii) Health Care: With information sharing and even diagnosis and treatment by means of interactive video link-up.

iii) News: With consumers able to point and click to select information for personally tailored news items.

iv) Home Shopping: With 24 hours a day, virtual global mall accessed by two-way video and digitized sales.

v) Security: Uses of electronic fingerprint, retina scanning, voice recognition, DNA finger print, signature dynamics.

Today, information has become a great source of power as a principal driving force for the acquisition of wealth, political strength and more knowledge etc. Information-rich countries of today are becoming even more powerful than the colonial powers of the nineteenth and early twentieth centuries, on account of their expertise in creating new information and knowledge and

exploiting them for their advantage. Information is not only the source of power but also an effective power in itself if released in appropriate time.



CHECK YOUR PROGRESS

01. Fill-in-the-blank

a. According to Shannon and Weaver, the amount of information in a message is related to the size of the _____.

b. Fairthorne proposed the "_____ theory of information," which compares information to something that can be squeezed out like water from a sponge.

c. Zipf's Law, proposed by George Kingsley Zipf, suggests a relationship between the _____ of words and their distribution in books and reports.

d. Lotka's Law states that there is an _____ relationship between the number of items contributed to literature and the total contribution by individuals.

e. According to David Bawden, the four types of information aiding the creative process are interdisciplinary, peripheral, _____, and inconsistencies.

f. The principle that information can be packaged, stored, and distributed like a utility is associated with the _____ Law.

g. In today's society, information has become a driving force for _____, political strength, and societal advancement.



2.6 LET US SUM UP

Information is central to human development and plays a significant role across various fields. Theories like Shannon and Weaver's Mathematical Theory and Semantic Theory highlight how information is influenced by the size of vocabulary and prior knowledge. Information is also viewed as a

commodity, with laws like Zipf's Law, Bradford's Law, and Lotka's Law describing its distribution and use.

Information is not just a commodity but also represents a cognitive process in organisms, transforming external data into meaningful knowledge, as proposed in Turing's automata theory. Information need refers to the subjective desire for information, varying across situations, with types like social, educational, and professional needs.

Information is vital in education, research, decision-making, and business, and is crucial for government policies and socio-economic development. It drives innovation and economic growth, shaping modern society and global power.



2.7 ANSWERS TO CHECK YOUR PROGRESS

Ans. Q. No. 1. a. vocabulary

b. phlogiston

c. frequency

d. exponential

e. exceptions

f. Law of Economics

g. wealth



2.8 FURTHER READINGS

Shannon, C. E., & Weaver, W. (1949). *The mathematical theory of communication*. University of Illinois Press.

Fairthorne, R. (1969). The measurement of information. *Journal of the American Society for Information Science*, *20*(3), 120-125.

Krikelas, J. (1983). Information seeking behavior: Patterns and concepts. *Library & Information Science Research*, *5*(2), 129-150.

Bawden, D. (1986). *Information systems: Theory and practice*. Routledge..



2.9 MODEL QUESTIONS

1. Who proposed the Mathematical Theory of Communication?
2. What does Semantic Theory of information emphasize?
3. What does Zipf's Law states?
4. How does Bradford's Law explain the distribution of articles in scientific journals?
5. What does Lotka's Law describe in the context of scientific literature?
6. How does information contribute to research and development?
7. What is the significance of information in societal development?
8. What is the role of information in decision-making?
9. What are the types of information needs proposed by Carol C. Kuhlthau?
10. How is information categorized in Voigt's study?
11. Discuss the Semantic Theory of information.
12. Describe Zipf's Law and its relevance to the distribution and frequency of words in written texts

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UNIT 3: INFORMATION AS A COMMODITY

UNIT STRUCTURE

3.1 Learning Objectives

3.2 Introduction

3.3 Information as a Resource

3.4 Commodity

3.4.1 Information as a commodity

3.5 Information Explosion

3.6 Information Overload

3.7 Let Us Sum Up

3.8 Further Readings

3.9 Answer to check Your Progress

3.10 Probable Questions

3.1 LEARNING OBJECTIVES

After going through this unit, you will be able to:

- Understand the Concept of Information as a Resource
- Explore the Commodification of Information
- Examine the Impact of Information Explosion
- Evaluate Measures to Control Information Explosion

3.2 INTRODUCTION

In the context of library and information science, information can be defined as the structure of any text that has the potential to alter the mental framework of the recipient or any stimulus that diminishes uncertainty. In the 1980s in the UK, there was a growing recognition of the commercial significance of information, highlighted by the release of a report titled Marketing a Business of Information. This report was created by the

Information Technology Advisory Panel (ITAP), a group that advised the Government's Cabinet office.

3.3 INFORMATION AS A RESOURCE

Information is considered a vital resource same as human resource and capital, as it has all the characteristic and qualities of being a resource. Oxford English Dictionary defines resources as “A person or thing that can be used to help achieve something”.

Characteristics of Information

The quality of information is hard to define because it depends on how useful and reliable the information is. It depends on how the user perceives and uses the information. The general characteristics of the information that are important are-

A) Timeliness: Information should reach users at the right time. If it’s delayed, it loses value. It should also be up-to-date and current.

B) Accuracy: Information needs to be correct, free of errors and clear. It should also be unbiased. Wrong information can lead to incorrect conclusions, especially in research.

C) Relevance: Information is relevancy if it answers the key questions: who, what, why, where, when and how. It should be useful and help the user in their tasks. It must be suitable for both the context and the subject matter.

D) Adequacy: Information should be enough for its purpose, but not excessive. Too little information can cause problems, while too much can be overwhelming. It’s important to know what to focus on based on user needs.

E) Completeness: Information should cover everything the user need. Incomplete information can cause confusion and lead to poor results.

F) Explicitness: Good quality information should be clear enough that users don’t need to analyze it further to use it effectively.

G) Impartiality: Information should be unbaised and collected without

any distortion or personal opinions.

H) Worth its cost: Information has a cost, whether it's financial or in terms of time and resources. The value of the information should be worth the cost to those using it.

Information act as resource in various ways-

i. Information is essential for informed decision-making. The context, facts, and insights, helps individuals and organizations make strategic choices.

ii. Information serves as the foundation for innovation. It allows individuals to combine existing knowledge in new ways to generate creative solutions.

iii. Information is critical in education systems, providing the foundation for learning, research, and the development of new knowledge.

iv. Effective communication and collaboration depend on information flow. It enables individuals and organizations to work together efficiently.

v. Information drives economic development by enabling businesses to operate efficiently, foster innovation, and engage in global trade.

3.4 COMMODITY

A commodity According to "New Oxford Dictionary of English" is "a raw material or primary agricultural product that can be brought or sold, such as copper or coffee. The "concise Oxford dictionary"defines it as "an article or raw material that can be brought or sold, especially a product as opposed to a service.

Economics of Information

Information is a valuable commodity to everyone. It is an indispensable raw material for decision makers for taking right decisions. To information has an economic value also in transforming all natural resources of any country into finished products. To marketing of information is done to its significance and importance. It is being demanded as information products and services. Information has several properties that make information a commodity. These includes-

- Supply of information
- Demand of Information
- Cost of Information
- Price of Information
- Market of Information
- Consumers Surplus

3.4.1 Information as a commodity

Information as a commodity refers to the idea that information has become a valuable resource that can be produced, bought, sold, exchanged or traded, similar to physical goods or services. In today's digital age, information is considered a key asset that drives many industries. The commodification of information reflects its increasing importance in shaping economies, business models, and social interactions.

i. Information in the Digital Economy

- **Easy Access and Distribution**: With the rise of the internet and digital technologies, information is now easily accessible and distributable. This has made information a globally traded commodity, with vast amounts of data available online through various platforms, databases and social networks.
- **Big Data**: In the digital economy, the collection and analysis of large datasets (often referred to as "big data") has become a major source of value. Businesses and governments leverage big data for decision-making, targeting consumers, improving products, and predicting trends.
- **Monetization**: Multinational companies like Google, Facebook, and Amazon generate revenue by collecting user data and selling access to targeted advertising. This demonstrates how personal and behavioural data has become a commodity in the market.

ii. Information as Intellectual Property

- **Copyrighted Material**: Information in the form of books,

research papers, software, and digital media is often protected by intellectual property laws like copyright. These protections allow creators or businesses to control and profit from the distribution and use of their information.

- **Patents and Trade Secrets**: Research and development-driven industries, such as pharmaceuticals and technology, treat information as intellectual property in the form of patents or trade secrets. Companies monetize these innovations by licensing them, selling them, or using them to gain a competitive edge.

iii. Information Markets

- **Information Brokers**: Companies and individuals act as intermediaries to buy and sell information. They collect data from various sources and sell it to those who need it for market research, legal purposes, or targeted marketing.
- **Subscription Services**: Information can be monetized through subscription models, where users pay for access to specialized databases, news outlets, academic journals, and other premium content (e.g., JSTOR, Netflix, or Bloomberg Terminal).

iv. The Impact of Information Commodification

- **Economic Growth**: The commodification of information has significantly contributed to the global economy. Data-driven businesses like tech companies, advertising agencies, and e-commerce platforms have grown exponentially due to their ability to leverage and monetize information.
- **Digital Divide**: As information becomes a valuable commodity, access to it becomes a point of inequality. Those with greater access to digital tools and networks can harness information for economic advantage, while those without may be left behind.
- **Privacy Concerns**: The growing emphasis on information as a commodity raises concerns about privacy and data security. Individuals often have little control over how their personal data is collected, sold, or used.

v. Examples of Information as a Commodity

- **Social Media Platforms**: Social media companies like Facebook and Twitter collect vast amounts of personal data and sell it to advertisers. In this case, user data becomes a commodity that drives the revenue model for these platforms.
- **News and Media**: News outlets and media companies sell access to content through subscriptions or paywalls, turning information into a marketable asset.
- **Knowledge-Based Services**: Consulting firms, research institutions, and academic organizations produce valuable reports, insights, and data that are sold to clients or used for competitive advantage.

vi. The Ethical and Social Implications

- **Information Overload**: The commodification of information can lead to information overload, where individuals are bombarded with too much information, biasness in information, making it difficult to discern what is truly valuable or relevant.
- **Exploitation of Personal Data**: The trade in personal data raises concerns about exploitation, where individuals' private information is used without consent or adequate protection, mostly for profit.
- **Digital Literacy**: As information becomes more commodified, the need for digital literacy increases. Individuals must understand how to critically engage with, evaluate, and navigate the vast amounts of information available to them.

3.5 INFORMATION EXPLOSION

The term "information explosion" refers to the rapid and overwhelming increase in the amount of data and information being produced, stored and shared globally. According to the Online Oxford English Dictionary the term was used in March 1964 New Statesman article. The phenomenon can be said result of technological advancements, particularly in digital technology, the internet, and communication systems.

The General Causes of the Information Explosion include-

1. The rapid increase in the production rate of the new information
2. The ease of duplication and transmission of data across internet
3. The increase in the number of channels of information
4. Large amount of historical data
5. Contradictions and inaccuracies in available information
6. Lack of a method for comparing and processing different kinds of information.
7. Email is amongst the major contributors of the information overload, as individuals struggles to keep up with the rate of incoming messages. The commercial messages (spam), email attachments in long format (reports, presentation, media files).

Impact of information explosion include-

i. Information overload
ii. Difficulty in data management
iii. Increased need for digital literacy
iv. Increased duplication of information
v. Difficulty in retrieval of relevant information.

3.6 INFORMATION OVERLOAD

The term 'Information Overload' was coined in the year 1970 by Alvin Toffler in his book titled Future Shock. Information overload occurs when individual is overwhelmed by too much information, making it difficult for them to select, process and retain the most relevant data. This problem has become increasingly common with the rapid advancement of modern technologies, which allow for the easy creation, duplication and access to vast amounts of information. As a result, both information organizations such as libraries and databases and individual users face challenges in managing the overwhelming flow of information. While access to more information might seem like a benefit, experts argue that it often leads to information overload –

a. The availability of so much information lead users finds themselves

receiving irrelevant or unnecessary data related to their topic of interest. This excess can make it difficult for users to focus on what is truly important, as they are forced to sift through large volumes of irrelevant material. As a result, they may feel frustrated and distracted, leading to inefficiency.

b. In digital age, information flows faster than ever before, making it even more difficult for user to keep up. Information arrives quickly and constantly and in large quantities. Experts argue that the speed at which information arrives can actually turn it into a burden rather than a helpful asset. If users are unable to process the constant stream of data, it becomes a liability rather than a useful tool for decision-making.

c. As the volume of information increases, users often have little control over the quality of the data they encounter. There is a risk of encountering inaccurate, biased or irrelevant information, especially with the rise of unverified online sources. This uncertainty can undermine the user's ability to trust the information they receive, making it harder to make informed decisions. Shannon & Weaver's (1949) information theory highlights how the increased noise in communication system contributes to the confusion and difficulty in determining the reliability of the information received.

d. When users are unable to keep up with the constant flow of information, they may experience a sense of being de-skilled. This means they feel less capable of navigating and making sense of the information that they receive.

e. Technology evolves quickly and new tools and platforms for managing information are constant being developed. However, this rapid pace of technology change can lead to difficulties for users who are not able to keep up with the latest systems. The constant need to upgrade technology or learn new software can be expensive and time-consuming and many users may not have the resources to do so.

Measures to control information explosion

The goal of controlling the information explosion is not to slow down the production of knowledge but to create systems that allow us to efficiently

manage, store, organize, and access this vast amount of information. It should also focus of generation of original information rather than duplicating. Some of the measures to deal with information explosion are-

i. Build comprehensive databases to store and organize vast amounts of information

ii. Use indexing and abstracting services to make it easier to locate relevant information.

iii. Automate the filtering of irrelevant information using AI algorithms.

iv. Offer digital literacy programs to train individuals in navigating, evaluating, and effectively using information.

v. Support open-access publishing to reduce redundant research and make academic work easily accessible.

vi. Share early-stage research to prevent duplication of work.

Strengthen peer review processes to ensure only high-quality, relevant research is published.



CHECK YOUR PROGRESS

Q. 1. Fill in the blanks

a. _____, as coined by Alvin Toffler, refers to when individuals are overwhelmed by too much information, making it difficult to select, process, and retain relevant data.

b. A key challenge of information overload is the availability of _____ information, which makes it difficult to focus on what is truly important.



3.7 LET US SUM UP

The evolving role of information in the digital age, both as a resource and a commodity. It explores the concept of information as a crucial asset, similar to human resources and capital, emphasizing characteristics such as timeliness, accuracy, relevance, and completeness. Information is seen as vital for decision-making, innovation, education, communication,

and economic growth.

The commodification of information refers to its increasing value in business and the economy, driven by digital technology and the internet. Information can be bought, sold, and exchanged in various forms, such as big data, intellectual property, and subscription-based services. However, it can raise concerns about privacy, digital literacy, and access inequalities.

The rise of digital information has led to an "information explosion," characterized by a rapid increase in data production and the ease of duplication and transmission. This explosion causes information overload, where users are overwhelmed by too much data, leading to inefficiency, frustration, and challenges in data management. The need for better tools and systems to manage information, such as comprehensive databases, indexing, and digital literacy programs.

To mitigate the challenges of information overload, measures like automating information filtering, supporting open-access publishing, and improving peer review processes to ensure the quality and relevance of information. These approaches aim to help individuals and organizations effectively navigate the growing volume of data in the digital age.



3.8 ANSWERS TO CHECK YOUR PROGRESS

Ans to 1. a. Information overload

b. irrelevant



3.9 FURTHER READINGS

Davenport, T. H., & Beck, J. C. (2001). *The attention economy: Understanding the new currency of business*. Harvard Business Press.

Eppler, M. J., & Mengis, J. (2004). The concept of information overload: A review of literature. *Information Society*, *20*(5), 325-335.



3.10 MODEL QUESTIONS

1. How does information act as a resource in decision-making?
2. What is meant by the commodification of information?
3. What does the term “information overload” refer to?
4. Define “information overload” according to Alvin Toffler.
5. What are the ethical implications of information commodification?
6. Discuss the various characteristics of information.
7. Describe how information has become a commodity in the digital economy.
8. Discuss the causes and consequences of the information explosion.
9. What measures can be taken to control information overload and ensure effective management of information in the digital age?

*** *** ***

UNIT 4: CATEGORIZATION OF SOURCES

UNIT STRUCTURE

4.1 Learning Objectives

4.2 Introduction

4.3 Information sources categories

4.3.1 Documentary Sources

4.3.2 Non-Documentary Sources

4.4 Printed and Non-printed Sources

4.5 Published and Unpublished Sources

4.6 Categorization of sources by Hanson

4.7 Categorization of sources by Grogan

4.8 Categorisation of Sources by Dr S. R. Ranganthan

4.9 Let Us Sum Up

4.10 Answer to check Your Progress

4.11 Further Readings

4.12 Model Questions

4.1 LEARNING OBJECTIVES

After going through this unit, you will be able to:

- Understand sources of information
- Explore documentary sources and non-documentary sources
- Understand different types of sources of information
- Learn the categorization of sources by Hanson, Grogan and Ranganathan

4.2 INTRODUCTION

Information sources play a vital role in the process of gathering and disseminating knowledge, catering to the needs of both information

organizations and users. These sources are the places or people from which valuable and useful information can be obtained, and they encompass a wide variety of formats and mediums. Understanding the different categories of information sources is essential for conducting thorough research and obtaining accurate, reliable data.

Information sources can be broadly classified into two main categories: **Documentary Sources** and **Non-Documentary Sources**. Each of these categories further breaks down into various subtypes based on their characteristics, such as the form of information, its content, and its intended use.

Documentary Sources: These sources include any recorded forms of information, whether in print or electronic media, that are available for consultation.

Non-Documentary Sources: These sources do not exist in a physical or electronic document but are equally valuable for obtaining information.

By understanding these categories and the various forms of information they encompass, users can better navigate the vast landscape of information to gather the most relevant and accurate data for their needs.

4.3 INFORMATION SOURCES CATEGORIES

Both the type of sources Documentary and Non-Documentary have distinct features that make them useful in different research and informational contexts.

4.3.1 Documentary Sources

Documentary sources are recorded forms of information that can be physically handled or stored. These sources are typically tangible or available in digital formats, and they are widely used in research for their organized and preserved content. The characteristics include-

-Physical or Recorded Form: Documentary sources exist in physical or electronic formats, such as books, journals, newspapers,

reports, audio recordings, and digital files. They can be printed (books, articles) or stored electronically (PDFs, online databases).

-Permanence and Durability: Once created, documentary sources maintain their form and content, making them stable references over time. They are stored for long-term access, which makes them valuable for historical research and archival purposes.

-Structured Information: Documentary sources often have a clear structure, such as chapters, sections, indexes, or citations, which makes it easier for users to locate specific information. This organization aids in systematic research and retrieval of data.

-Variety of Formats: Documentary sources come in various forms, including books, articles, research papers, official documents, and multimedia (e.g., audio and video recordings). They can be categorized as primary (original content), secondary (interpretations or analyses) and tertiary (summaries or compilations of primary and secondary sources).

-Accessibility: Documentary sources are often more easily accessible through libraries, archives, or digital platforms (e.g., online repositories and databases). Many documentary sources are available in both physical and digital formats, increasing their accessibility.

-Credibility and Authority: Documentary sources created by reputable authors, institutions, or organizations are often considered authoritative and credible. Scholarly articles, books, and government reports are examples of authoritative documentary sources.

-Comprehensiveness: Documentary sources can range from concise summaries (tertiary sources) to in-depth analyses (primary or secondary sources), allowing users to explore topics at varying levels of detail.

-Reference for Citations: Documentary sources are often cited in academic or professional works, providing a way to back up arguments, validate information, or trace the origin of ideas.

4.3.2 Non-Documentary Sources

Non-documentary sources are live, dynamic sources of information that are not stored in physical or electronic documents. These sources play a crucial role in knowledge gathering, particularly when direct interaction or real-time information is needed.

-Live or Real-Time Information: Non-documentary sources provide real-time, spontaneous, or live information, such as conversations, interviews, or observations. They include sources like oral traditions, meetings, or expert consultations, where information is transmitted through personal interaction.

-Non-Physical and Interactive: These sources do not exist in physical form or recorded formats. Instead, they rely on human interaction and experience. Examples include interviews, expert advice, phone calls, and discussions.

-Dynamic and Subjective: Non-documentary sources often provide information that is evolving or changing, such as firsthand reports, current news, or ongoing discussions. The information may be more subjective, as it often reflects personal perspectives or opinions, particularly in informal settings.

-Informal and Flexible: Non-documentary sources can be informal in nature, such as casual conversations, word-of-mouth, or community knowledge. They can be flexible and adaptable, changing in response to new information or changing circumstances.

-Access to Experts or Firsthand Experiences: These sources can provide direct access to experts, eyewitnesses, or individuals with specialized knowledge, offering unique and valuable insights that may not be available in written or recorded form. Examples include interviews with specialists or attending live events where information is shared in real time.

-Limited Documentation: Unlike documentary sources, non-documentary sources often lack formal records, making them harder to verify or reference systematically. This can limit their use in formal

research or scholarly contexts but can be invaluable for obtaining firsthand knowledge or experiences.

-Non-Structured Information: Non-documentary sources are usually less structured and may require interpretation or analysis by the user. Unlike documentary sources, they don't usually provide organized indexes, chapters, or sections, which can make accessing specific information more challenging.

-Flexibility in Interaction: Non-documentary sources often allow for two-way communication or feedback. For example, conversations, forums, and discussions enable the exchange of ideas, clarification of doubts, and elaboration of points in real time. This makes them useful for brainstorming, problem-solving, or gathering diverse viewpoints on a topic.

4.4 PRINTED AND NON-PRINTED SOURCES

Information sources can also be categorized based on their physical format whether they are printed or non-printed. Both types of sources serve important roles in knowledge dissemination and research, but they differ in form, accessibility, and usage.

Printed Sources

Printed sources refer to physical materials that are produced by printing, typically on paper. These are traditional forms of information sources and are characterized by their tangible nature. Printed sources have been the primary means of storing and transmitting knowledge for centuries.

i. **Physical Format**: Printed sources are physically produced and stored as books, newspapers, journals, magazines, pamphlets, brochures, maps, and other printed documents. These sources are usually found in libraries, archives, bookstores, and other places where physical collections are maintained.

ii. **Permanence**: Printed materials are often permanent and durable, which makes them valuable for long-term reference. Once printed, they remain in the same format until they are damaged or degraded. They are a stable form of information that can be accessed over time,

making them useful for research, documentation and historical records.

iii. **Structured and Organized**: Printed sources are typically well-organized and easy to navigate. Books, for example, have a clear structure with chapters and tables of contents that help users locate specific information. Printed periodicals, such as newspapers and journals, follow consistent formats that allow readers to find particular articles or reports easily.

iv. **Authority and Credibility**: Printed sources, especially those produced by reputable authors, publishers, and institutions are often regarded as credible and authoritative. Scholarly books, peer-reviewed journals and government publications are considered reliable sources of information.

v. **Accessibility**: Printed sources can be readily accessed by anyone who has physical access to them, making them accessible in libraries, bookstores, and other public spaces. While digital versions of printed materials are increasingly available, printed sources still play a key role in regions or contexts where digital access is limited.

Non-Printed Sources

Non-printed sources refer to materials that are not produced or distributed in a physical printed form. These sources are usually digital, electronic, or experiential in nature, and they can be accessed through modern technology or live interactions. Key features of non-printed sources include:

i. **Digital Format**: Non-printed sources are primarily stored and accessed in digital formats, such as online articles, e-books, databases, websites, podcasts, videos, and social media content. These sources may be hosted on the internet, digital libraries, or multimedia platforms and are accessible through electronic devices like computers, tablets, and smartphones.

ii. **Real-Time and Dynamic**: Many non-printed sources provide real-time information, such as news updates, blogs, social media posts, and live broadcasts. These sources are continuously updated and

can provide the most current insights on a topic. They are more dynamic than printed sources, which can take time to be published and distributed.

iii. **Interactivity**: Non-printed sources often enable interaction and engagement. For example, websites may allow users to leave comments or ask questions, podcasts may encourage listener participation, and online forums foster discussions. This interactivity can make non-printed sources a valuable tool for learning, brainstorming, or collaborative research.

iv. **Flexibility and Accessibility**: Non-printed sources are highly accessible due to their digital nature. They can be accessed globally via the internet at any time, provided the user has an electronic device and internet connection. They also allow for quick searches and instant retrieval of information, which makes them convenient for users who need information rapidly.

v. **Variety of Formats**: Non-printed sources come in a wide variety of formats, including text (e-books, articles, blogs), audio (podcasts, radio), video (YouTube, online lectures), and multimedia (interactive websites, digital magazines). This diversity allows users to consume information in various forms, depending on their preferences and needs.

vi. **Less Structured**: Non-printed sources may not always follow a formal or structured format, especially in the case of user-generated content (e.g., blogs, social media posts). While digital articles or academic papers may have a clear structure, many online sources are informal or unverified, which can sometimes affect their credibility.

vii. **Timeliness and Accessibility**: Non-printed sources are often the most current, offering up-to-date information on fast-changing topics, such as news, trends, and scientific developments. However, some non-printed sources may not have the same permanence or stability as printed sources, as websites or digital platforms may be taken down or changed frequently.

4.5 PUBLISHED AND UNPUBLISHED SOURCES

Published sources refer to materials that have been formally made available to the public through commercial or institutional channels. These sources are usually professionally produced, distributed and accessible to a wide audience. Key features of published sources include:

i. Widely Available: Published sources are generally accessible to the public, often through bookstores, libraries, or online platforms.
ii. Formal Distribution: These sources are produced by publishing houses, academic institutions, or media outlets and go through an official distribution process.
iii. Credibility and Authority: Published works, especially academic books, peer-reviewed journals, and official reports, are considered credible and authoritative.
iv. Reviewed and Edited: Many published sources undergo a formal review and editing process to ensure quality and accuracy.

Examples: Books, academic articles, newspapers, magazines, research reports, and government publications.

Unpublished sources are materials that have not been formally distributed or made publicly available. These sources are typically in draft or private forms and are often restricted to specific audiences. Key features of unpublished sources include:

i. Limited Distribution: Unpublished sources are not officially distributed and are often available only to a select audience, such as researchers or internal stakeholders.
ii. Not Reviewed or Edited: These sources may not undergo the same formal review or editing process as published sources, which can affect their reliability.
iii. Unique Information: Unpublished sources can contain original, firsthand data or insights that are not yet available in the public domain.

iv. Restricted Access: Unpublished materials may be harder to access and may require permission or special access rights, such as academic or institutional approval.

Examples: Personal diaries, unpublished research papers, internal reports, private correspondence, and thesis/dissertations before publication.

4.6 CATEGORISATION OF SOURCES BY HANSON

C. W. Hanson's classification of documentary sources, as outlined in his 1971 article "Introduction to Science Information Work," published by ASLIB divides information sources into two main categories: primary and secondary sources.

a. Primary Sources

Primary sources contain original information, typically based on new observations, experiments or ideas. They are first-hand documents that present new facts, research or discoveries directly.

Examples: Monographs (single-author books); Articles in periodicals (journals or magazines); Textbooks and encyclopaedias (even though they may not present new information, they offer it in a new form).

According to Hanson, textbooks or encyclopaedia articles are primary sources because they present information in a unique form for the first time, even if they don't contain brand-new information. These articles are not condensed or rewritten versions of other documents but are created specifically for the text.

b. Secondary Sources

Secondary sources summarize, condense, or list the contents of primary sources, helping users discover and access primary documents.

Examples: Reviews, summaries, or commentaries that provide a brief overview of primary documents; Indexes and bibliographies that list primary sources or guide users to where they can find them.

c. Primary/Secondary Sources

Documents like conference proceedings, theses, and dissertations, can be considered both primary and secondary sources. If these documents

present new facts or research, they are considered primary. If they provide reviews or summaries, they are considered secondary.

This category shows that some sources do not fit neatly into either primary or secondary. For example, a conference proceeding may contain original research (primary) or a review of existing research (secondary).

4.7 CATEGORISATION OF SOURCES BY GROGAN

Denis Grogan, based on the level of reorganization, classifies documents into three categories: primary, secondary, and tertiary sources. Here is a simplified explanation of each category according to Grogan:

a. Primary Sources

Primary sources are original works that provide new information, discoveries, or evidence. They are created at or near the time of the event or discovery and have not been altered or interpreted by others.

Examples: Research papers, patents, government reports, original scientific studies, and classic books; Personal documents such as letters, diaries, photographs, and interviews; Historical records, newspaper clippings, and other original materials.

Significance:

- Primary sources are essential for establishing a subject as a discipline. They are the first to present new knowledge.
- They provide the most up-to-date, detailed, and accurate information about a subject.
- Primary sources help avoid duplication in research, saving time and effort.
- They are the foundation for creating secondary and tertiary sources of information.

b. Secondary Sources

Secondary sources are based on or derived from primary sources. They analyze, interpret, or summarize the information found in primary sources, often to make it easier for users to access.

Examples: Textbooks, review articles, reference books, and literature reviews; Any publication that summarizes or interprets original research or

data.

Significance:

- Secondary sources provide a condensed or reorganized version of primary data.
- They help users understand the context of primary research and make the information easier to locate and use.

c. Tertiary Sources

Tertiary sources are used to help users find and use primary and secondary sources. They do not focus on subject knowledge directly but act as guides to locate information.

Examples: Bibliographies, indexes, directories, guides to libraries, and research in progress lists; Abstracts or summaries of primary and secondary sources.

Significance:

- Tertiary sources are helpful for users who are searching for specific primary or secondary sources.
- They assist in organizing and locating information efficiently but don't provide in-depth knowledge on a subject.

4.8 CATEGORISATION OF SOURCES BY DR S. R. RANGANTHAN

Dr. Shiyali Ramamrita Ranganathan in his classification of documentary sources of information, divided them into four categories based on their physical characteristics. These categories also represent the chronological order in which these types of documents have developed over time.

a. Conventional Sources

- Conventional sources refer to the traditional forms of documents that have been used for centuries. These are physical documents that contain written or printed information. They are the most familiar forms of information sources.
- Examples: Books, periodicals, maps.

2. Neo-Conventional Sources

- Neo-conventional sources are more modern documents that still

convey information in written form but have specific, technical purposes. These documents often deal with standards, specifications and legal aspects of inventions or techniques.

- Examples: Standards: Documents that set technical or professional guidelines (e.g., ISO standards).
  Specifications: Detailed descriptions of technical requirements for products or services.
  Patents: Legal documents that grant exclusive rights to inventors for their inventions.
- These sources are newer compared to conventional ones and are primarily used for technical, scientific, or legal purposes. They are important for industry, research, and development.

3. Non-Conventional Sources

- Non-conventional sources refer to more modern forms of information storage that do not rely on traditional written or printed media. They are often in the form of audio-visual or digital formats.
- Examples: Audio-Visual: Videos, films, and recorded sound materials like tapes, DVDs, and online media.
  - Microfilm or microfiche.
- These sources provide information in ways other than text, such as through visual and auditory formats. They are more advanced and often used for multimedia, archival or educational purposes.

4. Meta Documents

- Meta documents are records that are directly generated without human interpretation or mediation. They represent raw, unprocessed data or direct records. They are not filtered or analysed by human minds but simply document events or data as they occur.



CHECK YOUR PROGRESS

Q 1. Fill in the blanks

a. According to Dr. S. R. Ranganathan, _____ sources refer to traditional forms of documents like books and periodicals.

b. According to Denis Grogan, _____ sources are original works that provide new information, discoveries, or evidence.

c. _____ sources are used to help users find and use primary and secondary sources and include bibliographies, indexes, and guides.

d. Meta documents represent _____ data, unprocessed and without human interpretation.

4.9 LET US SUM UP

Documentary sources are recorded, structured, and more permanent forms of information that are often used for in-depth, long-term research. They are reliable, organized, and easily referenced. On the other hand, non-documentary sources provide dynamic, real-time information that is typically accessed through direct human interaction. While non-documentary sources may be less formal and harder to verify, they offer valuable firsthand insights and up-to-date knowledge that can complement the structured information provided by documentary sources.

Hanson's division of sources into primary and secondary categories helps clarify how information is used and accessed. Primary sources offer original insights and data, while secondary sources condense or list these original materials. However, some sources can serve both functions, depending on their content.

Grogan's classification helps organize sources based on how much they have been reorganized or interpreted. Primary sources provide original information, secondary sources analyse or summarize that information, and tertiary sources help users locate and use both primary and secondary sources. This system ensures that researchers can easily navigate between different types of sources based on their needs.

S. R. Ranganathan's classification of documentary sources based on physical characteristics highlights the evolution of information documents from traditional printed formats (conventional) to modern, digital, and automated records (meta documents). Each category serves a specific

purpose and reflects how information sources have changed over time to meet the growing needs of society.



4.10 ANSWERS TO CHECK YOUR PROGRESS

Ans to 1. a. Conventional

b. Primary

c. Tertiary

d. raw



4.11 FURTHER READINGS

Grogan, D. J. (1992). *Science and technology: An introduction to the literature* (4th ed.). Clive Bingley.

Kawatra, P. S. (2000). *Textbook of information science*. APH Publishing Corp.

Ranganathan, S. R. (1989). *Reference service* (2nd ed.). Sarada Ranganathan Endowment for Library Science.

Krishan Kumar. (1996). *Reference service* (3rd ed.). Vikas Publishing.



4.12 MODEL QUESTIONS

1. What are documentary sources? Give examples.
2. What is the key feature of non-documentary sources?
3. What types of sources are considered primary sources in C. W. Hanson's classification?
4. What is the main advantage of non-printed sources over printed sources?
5. Give examples of non-conventional sources according to Dr. S. R. Ranganathan's classification.
6. How are secondary sources different from primary sources?
7. Discuss the characteristics of documentary sources.

8. Explain the classification of information sources into documentary and non-documentary categories, with examples.
9. What are the key features of published and unpublished sources.
10. Discuss Dr. S. R. Ranganathan's classification of documentary sources of information and provide example.

*** *** ***

UNIT 5: PRIMARY SOURCES OF INFORMATION

UNIT STRUCTURE

5.1 Learning Objectives

5.2 Introduction

5.3 Primary Sources of Information

- 5.3.1 Periodicals
- 5.3.2 Reports
- 5.3.3 Conference Documents
- 5.3.4 Monographs
- 5.3.5 Official Publications
- 5.3.6 Patents
- 5.3.7 Standards
- 5.3.8 Trade Literature
- 5.3.9 Theses and Dissertations
- 5.3.10 Reprints and Manuscripts
- 5.3.11 Laboratory Notebooks, Diaries, Minutes of Meetings
- 5.3.12 Official Files, Correspondence, Audio and Video Tape and Data Files

5.4 Let Us Sum Up

5.5 Answers to Check Progress

5.6 Further Readings

5.7 Model Questions

5.1 LEARNING OBJECTIVES

After learning this unit, reader will be able to –

- Understand details about primary sources of information.
- Know different types of primary sources of information.

5.2 INTRODUCTION

Information sources are essential while conducting research, knowledge acquisition, and decision-making assistance. Mainly there are three categories of information sources: primary, secondary, and tertiary; each have unique characteristics in various situations. The uniqueness of the content and the closeness to the source or origin serve as the basis for these categories. This lets the reader know if the author is reporting first-hand knowledge or sharing the experiences and viewpoints of others, which is regarded as second-hand. It might be difficult to tell whether a source is primary, secondary, or tertiary. As they are direct, unmediated, and provide original facts and firsthand insights, primary sources of information are particularly important among them.

5.3 PRIMARY SOURCES OF INFORMATION

A first-hand or up-to-date description of an event, topic, or subject is referred to as a primary source. These resources give users direct, unfiltered access to information and a clear connection to the location, time, or event they are describing. Primary sources are original works produced at the time of the event or by those who were directly involved, as opposed to secondary or tertiary sources, which evaluate, condense, or interpret the original material. The capacity of primary sources to provide the most direct evidence is their most important characteristic. For instance, official military records from the time period, images of significant battles, or private letters written by troops could all be considered primary sources when researching a historical event such as the American Civil War.

According to Merriam Webster dictionary primary source is an account or record such as a first-hand account, a contemporaneous news report, a photograph, or an audio or video recording; reflecting direct experience of a thing for instance a historical event that is being researched or studied. Library of congress defines Primary sources as the raw materials of history, are the original documents and objects that were created during the time under study

Some key characteristics of primary sources are:

- **Originality:** They are the firsthand accounts or original creation and are not derived from other sources.
- **Proximity to the event:** These are created during or close to the time of occurrence of the event or phenomenon.
- **Unfiltered Perspective:** Reflects the viewpoint of the creator without interpretation or analysis by others.
- **Discipline- specific:** Their nature can be vary depending field of study.

Importance of primary sources of information:

Since primary sources offer firsthand proof of events, concepts, or phenomena, they are highly regarded in research because of their ***authenticity*** and serve as a solid basis for investigation. Primary sources provide an objective viewpoint, offering an ***unbiased insight*** that enables researchers to make their own decisions free from the impact of supplementary interpretations, in contrast to secondary sources, which interpret or analyze data. Furthermore, primary sources are essential for comprehending ***historical context*** because they provide a vivid and accurate window into the past by capturing the language, attitudes, and circumstances of a particular era. Additionally, because secondary sources rely on primary sources for their interpretations and insights, primary sources form the ***basis for analysis***. The study and comprehension of historical occurrences, scientific breakthroughs, or cultural phenomena would be shallow and unreliable without primary sources. Therefore, primary materials are essential for developing an accurate and sophisticated grasp of any topic.

Challenges in case of primary sources of information:

Bias perspectives: As they often reflect the author's personal viewpoint, they may introduce incomplete narratives or biasness**.**

Lack of Context: Digital primary sources in particular may lack contextual information leading to difficulty in understanding their origin.

Accessibility: Some of them are difficult to access due to the physical location, language barriers or restricted archives.

Authenticity and reliability: It can be difficult to confirm the legitimacy of primary materials, particularly digital surrogates. Misattributions or forgeries may occur

Ethical considerations: Using confidential files, such letters or diaries, presents moral dilemmas regarding consent and privacy.

Technical Challenges: Poor scan quality, missing metadata, or incompatibilities with contemporary software can all affect digital materials.

5.3.1 Periodicals

A periodical is a kind of magazine that is released periodically or in a series at regular intervals. Journals, newspapers, periodicals, and newsletters are a few examples. They contain what are known as periodical articles. Periodicals, like magazines that include news, opinion, and personal stories, can be directed at the broad audience. A academic periodical, like a journal or scholarly peer-reviewed magazine, is intended for scholars and professionals and contains articles authored by subject-matter experts. Periodicals, such as journals, magazines, and newspapers, provide timely and original information on current events, research findings, and trends. They are often peer-reviewed, making them reliable sources for academic and professional research.

5.3.2 Reports

A report is a statement or document intended for a certain audience that provides information in an orderly manner. Reports are comprehensive documents that offer conclusions, evaluations, or suggestions regarding particular subjects. They are primary sources of technical or scientific information and are frequently created by businesses, governments, or research institutes.

5.3.3 Conference Documents

A conference paper is an article presented during a conference, as opposed to a journal or term paper. However, the abstract or whole manuscript must be delivered to the conference organizer for review and subsequent presentation permission prior to the presentation. Like a journal publication, the manuscript is often examined by two or more referees or reviewers. The conference will not include rejected papers. Usually given orally, the presentation may benefit from the use of PowerPoint and other visual aids.

5.3.4 Monographs

A monograph is typically a single author's or artist's work on one (usually academic) topic or one facet of a topic. Though it can be an artwork, audiovisual piece, or exhibition composed of visual artworks, it is typically written down and published as a book. Experts write monographs, which are in-depth volumes on a single topic. When they offer original research or thorough study on a particular subject, they are considered primary sources.

5.3.5 Official Publications

Documents published by governments, institutions, or international organizations are known as official publications. As reliable primary sources, they consist of laws, rules, policy documents, and statistical data.

5.3.6 Patents

An invention's exclusive privilege is known as a patent. By giving them legal protection for their creations, patents help inventors. But patents also help society by making technical details of these ideas accessible to the general public, which spurs creativity. An invention's exclusive privilege is known as a patent. By giving them legal protection for their creations, patents help inventors. But patents

also help society by making technical details of these ideas accessible to the general public, which spurs creativity.

5.3.7 Standards

Technical requirements, norms, or best practices are established by standards. They are the main resources used by researchers and enterprises to guarantee uniformity and quality.

5.3.8 Trade Literature

Businesses utilize trade literature as a type of marketing collateral to advertise their goods and services to prospective clients. It can take many different forms, including flyers, brochures, catalogs, product manuals, technical specifications, and advertising materials. Trade literature's main goal is to educate consumers about a business's products and encourage them to buy.

5.3.9 Theses and Dissertations

An extensive written work that incorporates original or expanded study on a topic that is either new or existing is called a dissertation. Although it is written for master's program graduates, a thesis is also an academic work. Students can demonstrate their knowledge and proficiency in the subject they have been studying through a thesis. Both are research documents submitted by students for academic degree.

5.3.10 Reprints and Manuscripts

Offprints, commonly referred to as reprints, are large-scale copies of individual articles that have already been published in scholarly publications. Researchers in certain domains use offprints from scientific, technological, and medical (STM) journals to raise awareness among audiences that do not subscribe to the journal, such as doctors, customers, investors, etc. They are often ordered

straight from the journal's publisher. There are, nevertheless, certain third-party service providers that act as a middleman and offer a single source of offprints from several publishers.

The Medieval Latin words "manu," which means "by hand," and "scribere," which means "to write," are the origin of the word manuscript. Therefore, a manuscript is any book or document that is handwritten. A manuscript is any type of written material that has not been duplicated in more than one copy, such as a handwritten or typed script version of a piece of music or literature. Original sources of human history, manuscripts can be found on a variety of media, including stones, clay tablets, barks, palm leaves, metal leaves, animal skins, fabric, paper, and more.

5.3.11 Laboratory Notebooks, Diaries and Minutes of meetings

Researchers' observations, raw data, and experimental protocols are documented in laboratory notebooks. They are the main resources for comprehending scientific methods and findings. Diaries are private logs of everyday experiences, ideas, and occurrences. They provide firsthand recollections of historical occurrences or individual viewpoints. Meeting minutes serve as formal documentation of the decisions, actions, and conversations that take place during a meeting. They are the main resources for comprehending institutional or organizational operations.

5.3.12 Official Files, Correspondence, Audio - Video tapes and Data files

Records kept by governments or organizations are called official files. They serve as primary documentation of actions and decisions and include letters, reports, and administrative records. Emails, letters, and other types of contact are all considered correspondence. It offers key insights on interactions that are formal, professional, or

personal. Audio and video recordings capture events, interviews, or performances in their original form. They serve as primary sources for research on artistic, cultural, or historical subjects. Raw or processed data from surveys, experiments, or observations are stored in data files. They serve as primary sources for both qualitative and quantitative research analysis.



CHECK YOUR PROGRESS

Q 1. Fill In the Blanks

a) The three categories of information sources are___, _____ and _____

b) _____ are documents published by govt., institutions and international organizations and serve as reliable primary source.

Manuscripts word came from ----_____ and _____ meaning _____.



5.4 LET US SUM UP

Information sources, which can be classified as primary, secondary, or tertiary, are crucial for research, knowledge acquisition, and decision-making. Primary sources are essential for authenticity and historical accuracy because they offer firsthand, unvarnished information. Journals, reports, conference papers, monographs, trade literature, standards, patents, theses, manuscripts, diaries, and government documents are among them. These sources are essential for professional and scholarly research because they provide firsthand proof of ideas, events, or phenomena. Although primary sources are prized for their uniqueness, closeness to events, and unvarnished viewpoints, they often come with difficulties. The author's own opinion may be biased, and incorrect interpretation may be impeded by a lack of context. Language limitations, archival restrictions, or physical location can all cause accessibility problems. Another issue is confirming authenticity, particularly for digital resources

that are vulnerable to frauds or misattributions. It is also necessary to handle ethical issues, such as privacy in private letters and diaries. Primary sources are nevertheless essential in spite of these difficulties. They aid researchers in creating appropriate interpretations by offering insightful information on historical, scientific, and cultural studies. The importance of secondary sources is further supported by the fact that they are analyzed using primary resources. Understanding historical occurrences, scientific discoveries, and cultural advancements would be lacking and untrustworthy without original sources.



5.5 ANSWERS TO CHECK YOUR PROGRESS

Ans to 1. a) Primary, Secondary and Tertiary

b) Official Files

c) Manu and Scriber and handwritten book



5.6 FURTHER READINGS

Evaluating Sources—Primary Sources—Research Guides at New York University. (n.d.). Retrieved February 10, 2025, from https://guides.nyu.edu/primary/evaluating-sources

Patents. (n.d.-b). Retrieved February 10, 2025, from https://www.wipo.int/en/web/patents

Thornhill, K. (n.d.). *Research Guides: DSCI 350M/LIB 350M Humanities Research Data Management: Evaluating Primary Sources*. Retrieved February 10, 2025, from https://researchguides.uoregon.edu/c.php?g=1370277&p=10125506



5.7 MODEL QUESTIONS

1. The main feature that sets a primary source apart from secondary and tertiary sources is what?
2. What are some common challenges faced when using primary sources of information?
3. Write about different types of primary sources of information.

*** *** ***

UNIT 6: SECONDARY SOURCE OF INFORMATION

UNIT STRUCTURE

6.1 Learning Objectives

6.2 Introduction

6.3 Secondary Periodicals

6.4 Bibliographies

6.5 Lists of Research in Progress

6.6 Reference Sources

6.7 Treatises

6.8 Textbook

6.9 Translations

6.10 Computer Files

6.11 Bibliographic Databases

6.12 Databanks

6.13 CD-ROMs

6.14 Let Us Sum Up

6.15 Answer to check Your Progress

6.16 Further Readings

6.17 Model Questions

6.1 LEARNING OBJECTIVES

After going through this unit, you will be able to :

- Understand the role and importance of secondary periodicals in research.
- Differentiate between indexing and abstracting periodicals.
- Recognize various types of bibliographies
- Identify and describe secondary sources

6.2 INTRODUCTION

Secondary periodicals and sources play a vital role in the research process by organizing, summarizing, and presenting information from primary sources. These resources help researchers navigate vast amounts of existing literature and data, providing quick access to relevant studies, articles, and research findings. We are going to learn about various secondary sources in this unit. These resources significantly contribute to the dissemination and accessibility of knowledge across various disciplines.

6.3 SECONDARY PERIODICALS

Secondary periodicals are publications that systematically scan primary sources (such as research articles, books, and conference papers), select relevant items, and organize them in a way that is helpful for researchers. These periodicals, typically published on a regular schedule (weekly, fortnightly, or monthly), serve as a bridge between primary sources and the research community, offering a valuable tool for discovering recent publications in specific subject disciplines. They do this by either indexing the items or providing abstracts of the documents, aiding researchers in identifying, locating, and understanding relevant sources.

The secondary periodicals are broadly of the following-

- **Indexing Periodicals**: Indexing periodicals focus on providing bibliographical information about relevant items in a specific field. They do not provide summaries or detailed descriptions but rather present essential bibliographic details that help researchers locate the original document. These periodicals arrange the items either under broad subject headings or class numbers, grouping all items on the same subject together for easy access. Bibliographical Details: For each entry, indexing periodicals provide key bibliographical details, including: Name(s) of the author(s); Title of the article or document; Title of the journal or source; Volume number, issue number, and year of publication; Page numbers of the article

Example: One example of an indexing periodical is *The Reader's Guide to Periodical Literature*, published monthly by H.W. Wilson Company. It covers articles from 400 scholarly journals and popular magazines across a broad range of subjects

- **Abstracting Periodicals**: Abstracting periodicals go a step further than indexing periodicals by summarizing or condensing the contents of the selected items. These summaries, known as abstracts, provide a brief description of the main ideas or findings of a document. This allows readers to quickly assess the relevance of a document before deciding to read the full article or report. Each entry in an abstracting periodical includes both an abstract of the document and its bibliographical details. The abstract helps users determine whether the document is relevant to their research.

Example: *Indian Science Abstracts (ISA)* is an example of an abstracting periodical. Published fortnightly by CSIR-NISCAIR, it reports on scientific research conducted in India and published in Indian journals. It includes research and review articles from Indian scientific and technical journals, conference proceedings, Indian standards, and theses.

Importance of Secondary Periodicals

Secondary periodicals serve a vital role in the research and information dissemination process by bringing together a wide range of primary sources scattered across different journals, conferences, and publications. The importance of secondary periodicals can be summarized as follows:

1. **Efficiency and Time-Saving**: Researchers can save significant time by using secondary periodicals to quickly find the most relevant articles and documents in their field of study. These periodicals condense large amounts of information into easily accessible formats, eliminating the need to search through multiple primary sources.
2. **Curated Content**: Secondary periodicals ensure that researchers have access to the most recent and relevant works in their area of study. By focusing on high-quality publications and providing either

bibliographical information or abstracts, these periodicals help researchers stay up-to-date with the latest developments in their discipline.

3. **Improved Access to Information**: Secondary periodicals often aggregate content from a wide range of primary sources, making it easier for researchers to discover studies from diverse journals or publications that they might not otherwise have encountered. This comprehensive approach improves the accessibility and visibility of important research.
4. **Facilitating Literature Reviews**: For researchers conducting literature reviews, secondary periodicals are invaluable. They not only provide a curated list of relevant studies but also offer concise summaries (in abstracting periodicals) that help identify key themes, methodologies, and findings across different works.
5. **Supporting Specialized Research**: In highly specialized or niche fields, secondary periodicals are critical. By summarizing or indexing literature within a specific discipline, these periodicals help experts and newcomers alike navigate the vast amount of research produced within a focused area.

6.4 BIBLIOGRAPHIES

A bibliography is a list of works compiled based on a common principle, such as authorship, subject, language, period, or place of publication. According to Dictionary.com, a bibliography is defined as “a complete or selective list of works compiled upon some common principle.”This list can be either comprehensive or selective, and the entries are organized in a specific order (e.g., alphabetically, chronologically). Bibliographies are considered secondary sources as they do not contain original research or new findings. Instead, they provide compiled and organized details of primary sources, which have already been published. The primary function of a bibliography is to catalogue and organize existing works, which helps users identify relevant sources and locate the documents

they need. It saves time for researchers by guiding them to the right information quickly. They act as a bridge between the original documents (primary sources) and the user. They provide essential details, such as the title, author, publication date, and other bibliographical information, making it easier for researchers to locate and access primary materials.

Types of Bibliographies:

- **National Bibliographies**: Comprehensive listings of books, articles, and other publications produced within a specific country. The British National Bibliography is a national bibliography listing books, journals, and other publications published in the United Kingdom.
- **Trade Bibliographies**: These bibliographies focus on specific industries or sectors, such as trade, commerce, or a specific professional field. They document books, articles, and other materials related to that field. A trade bibliography might list publications on the banking industry, for example, or works related to advertising and marketing. The New York Times Book Review is a trade bibliography providing reviews and lists of newly published books in various categories.
- **Subject Bibliographies**: Listings of works focused on a specific subject or field of study. The MLA International Bibliography is a subject bibliography that catalogs work related to literature, language, and linguistics.

6.5 LISTS OF RESEARCH IN PROGRESS

A List of Research in Progress is a specialized compilation or record that provides detailed information about ongoing research projects. These lists typically include essential details about research that is currently underway, often within a specific academic field, institution, or geographical region. The list can range from simple citations to more comprehensive entries with short descriptions, giving the reader insight into the objectives, scope, and status of the research. The List of Research in Progress is compiled from raw data obtained through methods like

questionnaires and surveys sent to researchers, the final list itself is often considered a secondary source.

6.6 REFERENCE SOURCES

Reference sources are materials that are designed to provide quick, factual information. They are often organized alphabetically or thematically and are meant to be consulted for specific data or definitions. These sources are intended for lookup purposes rather than sequential reading. Users consult them to find specific facts, definitions, or overviews based on the organization and synthesis of information from primary sources. The primary purpose of reference books is to serve as information retrieval tools.

Common types of reference sources include:

- **Dictionaries**: These provide definitions of words, phrases, or terms.
- **Encyclopaedias**: These provide comprehensive overviews of topics, often summarizing major theories, concepts, and developments in a given field.
- **Handbooks**: These are collections of facts, guidelines, and formulas used in specific disciplines.
- **Atlases and Maps**: These offer geographical information, including maps, charts, and data on countries, regions, or cities.
- **Biographical Dictionaries**: These contain brief entries about notable people, outlining their lives, achievements, and contributions.
- **Thesauruses**: These list synonyms and antonyms to help with vocabulary choices.
- **Indexes and Abstracts**: These organize citations or summaries of academic articles and other sources.
- **Directories**: These provide lists of organizations, institutions, or professionals within a particular industry or field.

Example: Encyclopedias Britannica, Oxford English Dictionary, Atlases, Yearbooks (for annual data and events).

6.7 TREATISES

A treatise is a formal, systematic written work that provides an in-depth examination of a specific subject, often addressing its core principles and conclusions. It is usually more detailed and longer than an essay, offering a thorough exploration of the topic. A treatise delves deeply into the subject matter, examining its various aspects, nuances, and complexities. Unlike a superficial overview, it seeks to provide a comprehensive understanding. Treatises are typically grounded in extensive research, drawing on existing literature, data, and relevant sources to support their analysis.

6.8 TEXTBOOK

A textbook is considered a secondary source because it compiles, summarizes, and organizes information from various primary sources, such as research reports, studies, and original works, into a single unified document. Instead of presenting original research or new findings, textbooks synthesize existing knowledge on a particular subject. They provide an overview of facts, concepts, and theories that have already been developed and documented by scholars in the field.

Textbooks are valuable tools in education as they distill complex ideas from multiple primary sources into a more accessible format for students. This allows learners to quickly grasp essential information without having to read numerous primary research works or studies. For example, a textbook on biology will summarize the findings from countless primary research papers, experiments, and scholarly articles, presenting them in a structured and digestible way for students.

Although textbooks traditionally exist in printed formats, many are now available as digital or online electronic books, expanding accessibility. Regardless of the format, the key function of a textbook as a secondary source is to offer a comprehensive overview and summary of existing research, aiding teaching and learning by building a foundational knowledge base for students.

6.9 TRANSLATIONS

Translation is typically regarded as a secondary source because it involves interpretation and is a step removed from the original work. The translator makes decisions about language, structure, and cultural context, which can introduce analysis and potential bias. Alexander Fraser Tytler, in his work The Principles of Translation, described translation as a secondary activity that doesn't demand the same creative originality as writing. Instead, it aims to recreate the original work. For example, the Ramayana by Valmiki was translated into Hindi by Tulsidas as the Ramcharitamanas. In essence, books are translated from one language to another, making them secondary representations of the original text.

6.10 COMPUTER FILES

A computer file can be considered a secondary source when it contains information that summarizes, analyses, or interprets primary data or original documents. A computer file containing bibliographic records, summarized articles, abstracts, or catalogue entries would be classified as a secondary source, because it does not present the original, unmediated data or documents but instead organizes or interprets them for easier access and use.

A library catalogue file is a computer file that contains records of books and resources, such as titles, authors, publication dates, and other bibliographic details. It doesn't provide the full content of the books themselves but acts as a reference tool for locating and identifying the original sources. The computer file itself is a method of organizing or storing information, the content within the file can be considered secondary because it provides access to or summaries of primary sources, rather than presenting the original data or documents.

6.11 BIBLIOGRAPHIC DATABASES

Bibliographic databases are typically regarded as secondary sources because they index, abstract, organize, or compile information from other sources. These databases are online collections of references to published works such as journal and newspaper articles, conference proceedings, reports, and books. Essentially, a database is a collection of cross-referenced files designed to facilitate the easy retrieval of information through various access points. Many indexing and abstracting services have created their own databases, which are accessible globally, usually for a fee. These databases serve as valuable tools for efficiently locating specific information. For example, Medline is a well-known database for medical literature.

6.12 DATABANKS

Databanks, which store data collected by someone other than the primary user, are typically classified as secondary sources. This is because secondary data involves the compilation of existing information from various sources and is used for purposes other than the original data collection. Secondary data is gathered from a range of channels, including censuses, government departments, organizational records, and data initially collected for other research purposes.

6.13 CD-ROMS

CD-ROMs are generally used for storing and distributing data such as software or reference materials. A CD-ROM (Compact Disc Read-Only Memory) is a type of compact disc that can only be read and not written to. It is a type of compact disc that can be read but not written to, meaning the data on it is fixed. A CD-ROM becomes a source of information when it contains data that can be accessed by users. If a CD-ROM contains information first reported in another source, it is a secondary source. This is because the data on the CD-ROM has been compiled or reproduced from primary sources for easy access or reference. Example include 24 volumes of Compton's Concise Encyclopedia.



CHECK YOUR PROGRESS

Q 1. Fill in the blanks

a. Secondary periodicals help researchers by organizing information from _____ sources.

b. Abstracting periodicals provide a brief _____of the main ideas or findings of a document.

c. _____ are in-depth examinations of specific subjects, providing comprehensive understanding.

d. _____sources are designed to provide quick, factual information, such as dictionaries and encyclopedias.



6.14 LET US SUM UP

Secondary periodicals are publications that organize and present information from primary sources to help researchers discover relevant studies. These include indexing periodicals, which provide bibliographic details to locate original documents, and abstracting periodicals, which summarize or condense the contents of documents. They are crucial for improving research efficiency, curating relevant content, and facilitating literature reviews.

Other secondary sources include bibliographies (lists of works), lists of research in progress (records of ongoing studies), reference sources (e.g., dictionaries, encyclopedias), treatises (in-depth studies), textbooks (summarized knowledge), translations (adapted works), and computer files (summarized or indexed information). Bibliographic databases, databanks, and CD-ROMs are also secondary sources, offering organized or compiled data for easier access. These sources help researchers access and organize existing knowledge efficiently.



6.15 ANSWERS TO CHECK YOUR PROGRESS

Ans to 1. a. primary

b. summary

c. Treatises



d. Reference

6.16 FURTHER READINGS

Grogan, D. J. (1992). *Science and technology: An introduction to the literature* (4th ed.). Clive Bingley.

Katz, W. A. (2001). *Introduction to reference work* (8th ed., Vols. 1-2). McGraw-Hill.



6.17 MODEL QUESTIONS

Short Questions:

1. What are secondary periodicals?
2. Give an example of an indexing periodical.
3. What is the main purpose of abstracting periodicals?
4. What information does bibliographies provide?
5. What is a treatise?

Long Questions:

1. What is the role of bibliographic databases in research?
2. How do textbooks function as secondary sources?
3. Describe the various types of bibliographies.
4. What is the role of treatises and textbooks in consolidating knowledge within a field of study?

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UNIT 7: TERTIARY SOURCES

UNIT STRUCTURE

7.1 Learning Objectives

7.2 Introduction

7.3 Library Catalogues

7.4 Bibliography of Bibliographies

7.5 Guides to Literature

7.6 Directory of Directories

7.7 Guides to Reference Sources

7.8 Almanacs

7.9 Handbooks

7.10 Let Us Sum Up

7.11 Answer to check Your Progress

7.12 Further Readings

7.13 Model Questions

7.1 LEARNING OBJECTIVES

After going through this unit, you will be able to —

- Understand the role and characteristics of tertiary sources.
- Identify the types of tertiary sources.
- Learn about bibliographies of bibliographies as a specialized tool for locating other bibliographies in various fields of study.
- Comprehend the purpose and structure of guides to literature.
- Explore directories as reference tools that organize contact information, professional listings, and specialized resources.
- Understand how guides to reference sources help users navigate and locate the best reference tools in various fields of study.

- Recognize the significance of almanacs and handbooks as quick-reference sources containing essential data, facts, and guidelines across various disciplines.

7.2 INTRODUCTION

Tertiary sources are derived from primary and secondary sources and act as a guide to finding these original sources. Tertiary sources do not provide detailed subject-specific information themselves, but rather help users identify and locate the most relevant primary or secondary sources for their research. These sources are typically compilations or collections of information and are not credited to a specific author. Essentially, they serve as a tool to direct researchers to the appropriate sources for more in-depth information on a topic.

Some of characteristics of tertiary sources:

i. Compilation of Information: Tertiary sources gather and organize data from primary and secondary sources, often presenting it in an easily accessible format.

ii. Guiding Tool: They guide users to relevant primary and secondary sources of information, helping researchers identify where specific data can be found.

iii. No Detailed Subject Content: Tertiary sources do not offer in-depth information or analysis on a topic. Instead, they point users to other sources that contain the detailed content.

iv. Not Author-centred: Unlike primary and secondary sources, tertiary sources are typically not attributed to a specific author, as they compile existing information from various sources.

v. General Reference: They are usually designed to be used for quick reference, providing an overview or summary of topics, rather than detailed academic research.

vi. Widely Accessible: Tertiary sources are generally easy to use and widely accessible, often in formats such as encyclopaedias, bibliographies, and factbooks.

Examples: Dictionaries, encyclopedias, indexes, almanacs, and databases.

7.3 LIBRARY CATALOGUES

Library catalogues reflect the collection of specific libraries or groups of libraries, like a union catalogue. These catalogues include documents from primary sources (e.g., theses), secondary sources (e.g., treatises), and tertiary sources (e.g., guides to reference books).

The text also notes that library catalogues can exist in different formats: card, printed, or digitized. Several examples of printed library catalogues are provided:

1. British Museum: *General Catalogue of Printed Books* (263 volumes, 1965-1966).
2. Library of Congress: *A Catalogue of Books Represented by Library of Congress Printed Cards* (167 volumes, 1942-1946).
3. Union List of Serials in the Libraries of the United States and Canada (3rd edition, 5 volumes, 1965).

Compilation of Sources: Library catalogues aggregate information about various resources, including books, articles, and other materials. They provide bibliographic details that help users find primary and secondary sources.

They serve as a reference tool, summarizing collections of works on specific topics without offering original analysis or interpretation. This organization aids in navigating large volumes of information.

Guidance for Research: Library catalogs guide users in identifying relevant literature for their research projects by categorizing resources based on subjects, authors, or titles.

Accessibility: They provide access to a wide range of materials, including encyclopedias, dictionaries, bibliographies, and indexes, which are

themselves often considered tertiary sources.

User-Friendly Interface: Many library catalogs include search features that allow users to filter results by various criteria, facilitating the discovery of both primary and secondary sources. These examples show how library catalogues serve as tools for accessing various types of information from different source categories.

A union catalogue is a consolidated listing of holdings from two or more libraries. It includes records of various collections, such as books, periodicals, and other materials, across these libraries. Its primary function is to help users find materials available in participating libraries. Union catalogues play a crucial role in resource sharing among libraries. They facilitate inter-library loans by listing which materials are available in participating libraries. This enables users to easily locate and borrow resources from libraries outside their own.

7.4 BIBLIOGRAPHY OF BIBLIOGRAPHIES

A bibliography of bibliographies is a specialized type of bibliography that lists other bibliographies systematically. It serves as a guide to finding bibliographies across various fields of study and helps users locate additional bibliographic resources for further research.

Bibliographies of bibliographies are classified as tertiary sources because they compile and organize existing bibliographic tools into a comprehensive list. They do not provide original research or data but serve as a reference guide to other bibliographies, which in turn point to primary and secondary sources of information.

The primary purpose of a bibliography of bibliographies is to guide users to find bibliographic resources on a wide range of topics. It provides a systematic and logical order for locating bibliographies that are relevant to a particular subject, field, or area of inquiry. These bibliographies include: Lists of bibliographies from various fields or topics; Guides to bibliographic resources that lead to further bibliographic studies or primary research sources; Approaches to accessing information from other bibliographies,

making it easier for researchers to find relevant works.

Examples: Bibliography of Bibliographies of the Languages of the World, Volume I: General and Indo-European languages of Europe (compiled by Rudolph C. Troike, 1990), is an example of a bibliography of bibliographies. It lists bibliographies related to the languages of the world in a systematic manner.

7.5 GUIDES TO LITERATURE

Guides to the Literature are resources that provide users with annotated bibliographies of books, journals, websites, databases, and other types of publications or information sources. These guides help users locate pertinent literature in a specific subject area.

As tertiary sources, guides to the literature do not provide original data or research. Instead, they act as reference tools by organizing and listing existing works that can lead to primary and secondary sources of information. They are a compilation of various resources that help users quickly access relevant information.

The primary function of Guides to the Literature is to:

- Direct users to appropriate sources in a particular field.

- Provide comprehensive coverage of a topic, especially when the desired information cannot be easily found in other resources.

- Offer annotated bibliographies that provide details about the content of various works, saving users time by pointing them directly to useful sources.

It includes annotated bibliographies of books, journals, websites, databases, and other materials; Information on databases, indexing and abstracting services, bibliographies, dictionaries, encyclopaedias, handbooks, directories, guides, and other reference sources; Web-based reference sources, associations, and publishers relevant to the field of study.

These guides are available in most subject areas, especially in fields like sciences and technology, and are commonly produced by major publishers.

They are useful tools for subject-specific libraries and information organizations.

Examples: A Guide to Reference and Information Sources in Plant Biology by Diane Schmidt (2006); Guide to the Literature of Art History 2 edited by Max Marmor and Alex Ross (2004)

7.6 DIRECTORY OF DIRECTORIES

Directories are structured listings that serve as essential tools for organizing and retrieving information. They can be arranged alphabetically, geographically, or by subject, facilitating easy access to information.

Types of Directories: i. General Directories: Include commonly used lists such as telephone directories that provide basic contact information for individuals and businesses.

ii. Special Directories: Include more specific lists such as professional directories, trade directories, and business directories. These may focus on particular professions, industries, or sectors, providing detailed information for specialized users.

The Encyclopaedia of Associations (EA) is a comprehensive directory that provides detailed information about organizations in the United States. It includes basic details for each listed organization, such as: Purpose, Meeting dates and locations, Names of publications associated with the organization, contact information, including the names of officers

The EA is published in three volumes by Gale, and it also has electronic versions available under the title Associations Unlimited, which can be accessed on CD-ROM and online.

The American Library Directory is a reference resource that provides detailed information about libraries in the United States and Canada. This two-volume directory includes: Contact information for libraries, Statistical data on library operations, Information about special collections housed in the libraries

The directory is organized by state or province, and then further arranged by city, making it easier to locate libraries by geographic area. This directory

is updated annually and is also available in electronic formats, including CD-ROM and online (by subscription). It serves as a valuable tool for those needing specific details about libraries across North America, whether for research, outreach, or collaboration purposes.

7.7 GUIDES TO REFERENCE SOURCES

Guides to Reference Sources are specialized tools designed to direct users to the best reference sources available for a particular field or type of information. Reference sources, which include tools like dictionaries, encyclopedias, and biographical works, are meant to provide specific answers to questions, offer background information, or direct users to further resources. These sources are usually not lent out but are instead kept in a special reference section for easy access.

At times it can be challenging for library staff or users to identify the right reference sources for specific needs. To address this, “Guides to Reference Sources” are used. These guides help users find the most relevant reference materials based on the type of source (e.g., dictionary, biography, review) or the subject field. They organize reference sources in a structured way, helping users to efficiently locate the information they need for their research. They enable users to locate essential information sources, such as:

- Brief facts
- Statistical data
- Technical instructions
- Background information
- Directions to additional information sources

Function: These guides help both library staff and users navigate and locate reference materials more efficiently. They provide an organized list of available reference sources in various subject fields, helping users find specific resources like:

- Dictionaries or Encyclopaedias for definitions and general knowledge
- Biographies for information about specific people
- Reviews for opinions and critical analysis

In most libraries, reference sources are not circulated but are kept in a separate reference collection. This makes them readily accessible to users, but it can sometimes be challenging to choose the right reference source for a specific query. Guides to Reference Sources bridge this gap by providing a clear path to the best reference tools for the task at hand.

7.8 ALMANACS

Almanacs are annual publications that provide a wide range of statistical, descriptive, and factual information. Originally used as a calendar with astronomical data, modern almanacs have evolved to cover topics such as geography, government, economy, health, agriculture, science, technology, transport, and more.

The main purpose of an almanac is to provide quick access to a wide range of facts and figures, including government data, statistical summaries, and articles on events of the previous year. They serve as reference tools for researchers, students, and the general public to get an overview of various subjects.

Modern almanacs often include a summary of recent events, statistical data, and articles on a variety of subjects. Some common topics found in almanacs include: Geography; Government and demographics; Economics and business; Health and medicine; Science and technology (S&T)

Examples: Kalnirnay (India) - An almanac popular in India that provides a variety of information related to festivals, auspicious dates, and statistics; Whitaker's Almanack (United Kingdom) - A well-known UK almanac that includes data on government, economy, and notable events.

7.9 HANDBOOKS

A handbook is a comprehensive and detailed work on a specific topic, designed for quick reference. It often acts as a supplement to textbooks and is widely used by professionals in various fields. Handbooks combine features of both dictionaries and encyclopaedias to provide critical information, guidelines, procedures, and standards.

Handbooks are designed to concentrate on essential, tested, and accepted procedures, techniques, and standards. They are intended to provide easy access to critical data and guidelines, especially in technical fields like science, healthcare, technology, and industry. Examples of critical data might include chemical structures, mathematical formulas, and technical specifications.

Handbooks typically include: Guidelines for accepted procedures or standards; Critical data such as formulas, structures, and statistical information; Review and summary of available information on a particular topic.

Produced by Professional Organizations: Handbooks are often produced by professional organizations and may range from simple sets of regulations to elaborate multi-colored reports. They are tailored for different types of users, including:

- Technical personnel in industries like engineering and science.
- Industrial workers and shareholders in organizations.
- General public for information about the history of organizations or processes.
- Examples: Famous First Facts by Joseph N. Kane; Handbook of Physics.



CHECK YOUR PROGRESS

1. State true or false

a. Tertiary sources provide detailed subject-specific information and in-depth analysis.

b. A bibliography of bibliographies lists primary research sources directly.

c. Guides to the Literature provide annotated bibliographies and organize resources for specific fields of study.

d. Tertiary sources are often attributed to a specific author because they compile original research.



7.10 LET US SUM UP

We have taken an in-depth look at tertiary sources and their critical role in research. Tertiary sources, such as dictionaries, encyclopaedias, bibliographies, and guides to literature, do not provide original research or detailed analysis themselves. Instead, they serve as valuable tools for guiding researchers to primary and secondary sources that contain in-depth information. Library catalogues, which aggregate various resources, also function as tertiary sources by summarizing and organizing materials like books, articles, and other documents. Bibliographies of bibliographies systematically list other bibliographic resources, helping researchers locate additional works across different fields. Moreover, guides to reference sources and directories further enhance research by organizing resources, such as dictionaries, biographies, and professional listings, in a structured and accessible manner. Almanacs and handbooks, as tertiary sources, provide a quick reference to important facts, statistics, and guidelines, covering a wide range of subjects, from government data to technical specifications.

The tertiary sources are essential reference tools that save time and effort by directing users to more comprehensive and specialized primary and secondary sources. These tools play a vital role in research by providing organized access to a wealth of information across multiple disciplines.



7.11 ANSWERS TO CHECK YOUR PROGRESS

Ans to 1. a. False

b. False

c. True

d. False



7.12 FURTHER READINGS

Katz, W. A. (2002). *Introduction to reference work* (8th ed., Vols. 1-2). McGraw-Hill.

New Walford's guide to reference resources (Vols. 1-3). (2005). Facet Publishing.



7.13 MODEL QUESTIONS

1. What are tertiary sources?
2. Write the primary purpose of a bibliography of bibliographies?
3. What is the function of directories?
4. What type of information does almanacs typically include?
5. Explain the role of tertiary sources in research and provide examples of common tertiary sources.
6. Write characteristics of tertiary sources.

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UNIT 8: CRITERIA OF EVALUATION

UNIT STRUCTURE

8.1 Learning Objectives

8.2 Introduction

8.3 The Need for Evaluation of Information

8.4 Criteria for evaluation of information sources

8.5 Checklist of Evaluation

8.6 Challenges in evaluation

8.7 Bibliographic control

8.8 Let Us Sum Up

8.9 Answer to check Your Progress

8.10 Further Readings

8.11 Model Question

8.1 LEARNING OBJECTIVES

After going through this unit, you will be able to –

- Understand the need of evaluation information sources
- Explain the five criteria of the CRAAP test
- Understand the impact of currency, relevance, accuracy, and objectivity in source evaluation.
- Develop skills to identify bias in information sources
- Understand of bibliographic control.
- Identify the primary goals of bibliographic control
- Assess the significance of authority control and peer review.

8.2 INTRODUCTION

When conducting research, it's essential to gather information from a wide range of sources, such as books, newspaper articles, specialized databases and websites. However, not all sources are created equal, and

it is crucial to evaluate the quality and reliability of the information they provide. To assess each source, one should consider several key evaluation criteria to ensure that the information is trustworthy and suitable for the research needs. These criteria include purpose and intended audience, authority and credibility, accuracy and reliability, currency and timeliness, and objectivity or bias. By thoroughly evaluating these aspects, one can determine whether a source is appropriate for the work and how much weight to give it in your research process.

8.3 THE NEED FOR EVALUATION OF INFORMATION

In academic research and also in any context the evaluation of information is an essential process that ensures the quality, relevance and credibility of sources. As we have vast array of information available through various mediums such as books, scholarly articles, online databases and websites it is crucial for users and librarians to assess each source rigorously before incorporating it into their work. This process of evaluation is especially important within the context of academic libraries, where access to both print and digital resources requires a systematic approach to discerning reliable, accurate, and relevant information. The need for evaluation of information can be understood through the following key points:

1. **Ensuring Credibility and Reliability**

   One of the primary reasons for evaluating information is to ensure its credibility and reliability. Not all sources are created with the same standards of academic rigor. While libraries provide access to scholarly and peer-reviewed materials that meet high academic standards, they also host resources from various other types of publications that may not be as authoritative or accurate. Through the evaluation of sources, researchers can distinguish between reputable, well-established sources and those that may lack credibility or scholarly integrity.

2. **Supporting Critical Thinking and Academic Rigor**

   The evaluation of information encourages critical thinking by requiring

researchers to engage with the content more deeply. Researchers must assess the quality of sources, including the expertise of the author, the methodology used, and the evidence provided to support claims. This promotes a thoughtful, analytical approach to research, where the goal is not simply to collect information, but to assess its validity and applicability to the research question. Libraries, as central academic resources, provide the tools and support to foster this critical evaluation process.

3. **Maintaining Academic Integrity**

   Evaluating sources is integral to maintaining academic integrity. By selecting only credible and well-supported information, researchers can avoid the risks associated with using inaccurate or biased sources. A proper source evaluation helps prevent the inadvertent use of plagiarized content, as scholars are encouraged to attribute information accurately and consult primary, authoritative sources where possible. Libraries support this process by offering guidance on proper citation practices and how to identify trustworthy sources.

4. **Enhancing Relevance and Focus**

   The evaluation process helps ensure that only relevant information is included in research. With the vast amount of information available through library catalogues, databases and the internet, one can easily become overwhelmed. Evaluation criteria such as the relevance of the source to the research question, the scope of the content, and the intended audience help narrow down the search and focus on materials that directly contribute to the research topic.

5. **Avoiding Bias and Ensuring Objectivity**

   An important aspect of evaluating information is identifying any potential bias within the source. Many sources may have underlying motives, whether they aim to persuade, promote a particular agenda or reflect a narrow viewpoint. A critical evaluation of the source's purpose, perspective and tone helps ensure that researchers use balanced, objective information, which is essential for producing well-rounded and credible research.

6. Adapting to Changing Information

Research is an ongoing process, and new developments in a field can significantly alter existing knowledge. Evaluating the currency and timeliness of sources ensures that researchers are working with up-to-date information that reflects the latest advancements or changes in the discipline. In fast-evolving fields such as technology, medicine, and social sciences, this is especially important for maintaining the accuracy and relevance of research.

8.4 CRITERIA FOR EVALUATION OF INFORMATION SOURCES

The CRAAP Test is a widely used method for evaluating the reliability and quality of information sources. Developed by Sarah Blakeslee and her team of librarians at California State University, Chico in 2004 the test provides a structured approach to assessing the credibility of sources based on five key criteria: Currency, Relevancy, Authority, Accuracy and Purpose.

1. C - Currency

- This refers to the timeliness of the information. When was the information published or last updated? Is the information still relevant given the current state of the topic?
- In fields like science or technology, it's crucial to ensure the source is up to date, as things change quickly. For historical research, older sources may be more appropriate.

2. R - Relevance

- This evaluates whether the information is directly related to your research or needs. Is the source addressing your specific topic or answering your questions?
- Relevance also involves the depth of the information. For instance, a brief summary might not be as useful for a deep analysis as a comprehensive report or article would be.

3. A - Authority

- This criterion focuses on who is responsible for the content. Is the

author or organization reputable in the subject area? Are they experts or scholars in the field?

- It's also important to consider the domain of the website (e.g. edu, .gov), as these tend to be more reliable than others like .com or .org, though not always.

4. A - Accuracy

- This assesses whether the information is reliable, truthful, and free from errors. Is the information supported by evidence or citations? Are there any noticeable biases or inconsistencies in the content?
- Look for peer-reviewed sources, references to credible sources, and cross-check the information with other trusted resources to confirm accuracy.

5. P - Purpose

- The purpose evaluates the intent behind the information. Why was this source created? Is it meant to inform, entertain, persuade, or sell something?
- It's important to identify potential biases or conflicts of interest, especially in sources that are meant to promote a product, idea, or agenda.

Importance of CRAAP Test

The CRAAP Test helps individuals evaluate sources critically, which is especially important in an age where information is readily accessible but not always reliable. By using this test, you can better assess whether a source is trustworthy, relevant and accurate for your research or decision-making needs.

When using the CRAAP Test, it's important to approach it as a guide rather than a strict checklist. Some sources may meet most criteria, but not all and context matters (e.g., a historical document may be outdated but still valuable for historical research). However, applying these five criteria can help you sift through the abundance of information and select the best sources for your work.

8.5 CHECKLIST OF EVALUATION

When evaluating the source of information, it is important to apply several key criteria to assess its credibility, reliability, and relevance. Below are the primary criteria:

1. Authority

- We find out the authority by asking -Who is the author or creator? Consideration should be the qualifications, expertise, credibility and reputation of the source delivering information. A source should come from an expert or an established authority in the field.
- **Example:** A study published in a peer-reviewed academic journal or a book written by a recognized scholar in the field, Government publication.

2. Accuracy

- We check the accuracy by asking -Is the information supported by evidence or verifiable facts? Assessing whether the claims made are accurate, clear and backed up by reliable data or reputable sources.
- **Example:** Cross-referencing claims with other credible sources to check consistency, consulting the expert's opinion, reviewing its primary source.

3. Objectivity

- We know it by asking-Is the source unbiased? Check if the information is presented in a balanced manner or if there is a noticeable bias. Consider whether the source has any vested interest in promoting a particular point of view.
- **Example:** A peer-reviewed scientific paper is typically more objective than an opinion piece from a biased publication.

4. Currency

- We get to know about it by asking-Is the information up-to-date? Depending on the topic, the timeliness of the information can be crucial. It indicates the information's recentness. For fields such as science, technology or medicine, more recent sources are often

more relevant.

- **Example:** A medical guideline from 2025 is more current than one from 2005.

5. Coverage

- We get to know it by asking-Is the source comprehensive? Evaluate whether the source covers the topic in sufficient detail and includes various perspectives. It should not omit important aspects of the issue being discussed.
- **Example:** A thorough research article should address methodology, results, and the discussion of findings.

6. Relevance

- The usefulness of the information is determined by asking-Does the source directly address your topic? Ensure that the information is directly applicable to the question or subject you're exploring. A source may be authoritative and accurate, but if it's not relevant, it won't be helpful.
- **Example:** A paper on climate change is relevant to environmental studies but not to a study focused on psychology.

7. Reputation of the Publisher

- Who is publishing the source? Established academic publishers, government agencies, and reputable media outlets typically produce high-quality information. Beware of self-published works or publications with poor reputations.
- **Example:** The World Health Organization (WHO) or Oxford University Press are reputable sources.

8. Peer Review Process

- **Has the information undergone peer review?** Peer-reviewed sources are usually more reliable because they have been evaluated by experts in the field before publication.
- **Example:** Scholarly journals often engage in peer review to ensure accuracy and quality.

8.6 CHALLENGES IN EVALUATION

Evaluating sources of information can present specific challenges and limitations. Some key challenges that while evaluating sources that can occur include:

1. **Bias in Library Resources**: While libraries aim to provide reliable information, some resources may still contain bias, especially in materials that serve particular agendas (e.g., government publications or materials from advocacy groups). Identifying and addressing bias within these sources can be difficult, especially when the bias is not immediately obvious.
2. **Information Overload in Library Databases**: Libraries offer access to vast databases and collections of journals, books, and other materials. With the sheer volume of available resources, it can be challenging for users to navigate these materials and effectively assess the quality of each source, leading to difficulties in selecting the most relevant and credible information.
3. **Access to Specialized or Paid Sources**: Many scholarly journals, databases, and other academic resources require subscriptions. In library settings, even though libraries often provide access to these resources, users may encounter restrictions in accessing certain types of information or be limited by what the library can provide.
4. **Time Constraints in Research**: In academic settings, students and researchers may be pressed for time and may not always have the opportunity to carefully evaluate every source. This can lead to the use of lower-quality or less-reliable sources due to time limitations.
5. **Difficulty in Evaluating Non-Traditional Sources**: With the rise of digital content and online repositories, libraries now offer access to a variety of non-traditional resources, such as blogs, websites and open-access content. Evaluating these sources can be more difficult due to the lack of peer review and the potential for misinformation.

6. **Rapid Changes in Fields**: In areas like technology, medicine, and social sciences, information becomes outdated quickly. Libraries must help users determine whether a source is current and reliable, but keeping up with the pace of change in these fields can be a challenge when evaluating sources for accuracy and relevance.
7. **Conflicting Information Across Library Resources**: Library users may encounter conflicting information when researching a topic. Different authors or publishers may present varied viewpoints or findings. Librarians and researchers must be able to critically assess these differing perspectives and decide which sources are the most trustworthy and relevant.
8. **Cultural and Contextual Understanding**: Many library resources come from different cultural or regional backgrounds. Understanding these contexts is essential for evaluating the appropriateness and relevance of certain sources, particularly in a multicultural or global research environment.
9. **Misinformation and Fake Resources**: Libraries work to provide credible and authoritative resources, but with the rise of misinformation, even reputable libraries may contain non-peer-reviewed, inaccurate, or manipulated content, especially in digital collections. Evaluating the authenticity of digital materials becomes crucial to ensure the integrity of research.

Inconsistent Evaluation Standards: While libraries follow established cataloging and classification systems, the evaluation standards for certain resources may not always be clear or consistent. This can lead to uncertainty when determining the quality of less traditional sources (e.g., self-published works or open-access materials).

8.7 BIBLIOGRAPHIC CONTROL

Bibliographic control refers to the processes and methods used to organize, catalogue and manage bibliographic records for various information resources (such as books, journals, articles and digital content)

to ensure that these resources are easily accessible and discoverable by users. It is a core part of library management, helping to make sure that resources are properly described, standardized, and stored for efficient retrieval.

The primary goals of bibliographic control include:

1. **Standardization**: Ensuring consistent, uniform descriptions of materials across libraries and information systems. This might include using standardized formats for author names, titles, subjects, and publication details.
2. **Cataloguing**: The creation of bibliographic records for each item in the library's collection. These records typically contain key data such as title, author, subject, publisher, year of publication, and other relevant details that make it easy to locate a resource.
3. **Classification**: Organizing resources based on their subject matter, usually through classification schemes like Dewey Decimal Classification (DDC) or Library of Congress Classification (LCC).
4. **Facilitating Access**: Ensuring that library users can easily find and access resources by making them searchable through catalogs, indexes, and databases. Bibliographic control helps make sure that materials are properly indexed by key attributes like title, author, and subject.
5. **Interoperability**: Allowing bibliographic records to be shared or integrated across different library systems, often using metadata standards and protocols that enable communication between various information systems and platforms.

Authority Control: Creating consistency in how names (of authors, subjects, etc.) and other entities are represented to avoid confusion or duplication. This ensures that a single author, for example, is represented uniformly across different records and databases.



CHECK YOUR PROGRESS

1.Fill in the blank

a. The CRAAP test evaluates information based on five criteria: Currency, Relevance, Authority, Accuracy, and _____.

b. In the context of the CRAAP test, the "R" stands for _____, which evaluates whether the information is directly related to your research or needs.

c. Bibliographic control helps in _____ by ensuring consistent descriptions of materials across libraries and information systems.

d. One of the key criteria for evaluating information is _____, which ensures that the information is truthful and supported by evidence.

e. The process of _____ ensures consistency in how names of authors or subjects are represented across different records.

f. A peer-reviewed source is often more reliable because it has undergone _____ by experts in the field.

g. The timeliness of information, or how recent it is, is evaluated under the _____ criterion in the CRAAP test.



8.8 LET US SUM UP

The evaluation of information is a critical skill for researchers, ensuring that the sources they rely on are credible, relevant, accurate and free from bias. Libraries play a vital role in equipping students and researchers with the tools and resources necessary to effectively evaluate information. By fostering a comprehensive understanding of the importance of source evaluation, libraries contribute significantly to maintaining the quality, integrity, and rigor of academic research. Libraries are instrumental in supporting the evaluation process by providing access to quality resources, offering guidance on evaluating information and helping users develop critical thinking skills. However, navigating these challenges requires a thoughtful and systematic approach to ensure the reliability and relevance of the information

used in research.

Implementing bibliographic control in libraries and information institutions can enhance resource discovery, improve user access to materials, and maintain a well-organized, standardized system for managing large volumes of information.



89 ANSWERS TO CHECK YOUR PROGRESS

Ans to 1. a. Purpose

b. Relevance

c. standardization

d. Accuracy

e. authority control

f. peer review

g. Currency



8.10 FURTHER READINGS

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Welcome to the UC Berkeley Library. (n.d.). *UC Berkeley Library*. Retrieved February 18, 2025, from https://www.lib.berkeley.edu/



8.11 MODEL QUESTIONS

1. Why is evaluating information sources important in academic research?

2. What are the key criteria for evaluating information sources?
3. How does the CRAAP test help evaluate the reliability of sources?
4. What does the “Currency” criterion refer to in source evaluation?
5. How can researchers ensure the accuracy of the information they use?
6. How does the “Relevance” criterion help determine if a source is useful for research?
7. Why is it essential to check the “Purpose” of a source during evaluation?
8. Explain the concept of bibliographic control.
9. Discuss the five criteria of the CRAAP test.
10. How does authority control contribute to the effectiveness of bibliographic control in libraries?
11. Why is the evaluation of information sources crucial in academic research?
12. Explain how the peer review process contributes to the accuracy and reliability of information in academic sources. Why is peer-reviewed literature considered more credible than non-reviewed sources?

*** *** ***

UNIT 9: REFERENCE AND INFORMATION SERVICES

UNIT STRUCTURE

9.1 Learning Objectives

9.2 Introduction

9.3 Reference Service

- 9.3.1 Need of Reference Services
- 9.3.2 Objectives of Reference Service
- 9.3.3 Theories of Reference Services
- 9.3.4 Functions of Reference Services
- 9.3.5 Types of Reference Services

9.4 Information Services

- 9.4.1 Definition
- 9.4.2 Need of Information Service

9.5 References services provided by libraries

9.6 Let Us Sum Up

9.7 Answer to check Your Progress

9.8 Further Readings

9.9 Probable Questions

9.1 LEARNING OBJECTIVES

After going through this unit, you will be able to

- Understand the definition and purpose of reference services in libraries.
- Explain the different theories of reference services
- Understand different types of references services provided by library
- Define Information Services

9.2 INTRODUCTION

Libraries are service-oriented institutions that acquire, organize, and disseminate information in a variety of formats, including print, audio, video, and digital media. The reference service focuses on connecting users with the information they seek through personal assistance, guidance, and resources.

9.3 REFERENCE SERVICE

Reference service involves librarians offering personalized assistance to users in finding and utilizing information resources effectively. This service entails direct interaction between the librarian and the user, aimed at fulfilling specific information needs.

One of their key functions is reference services, which assist users in navigating the library's resources, such as locating specific sections, using the Online Public Access Catalogue (OPAC), and identifying available journals or databases. Library staff play a crucial role by providing relevant and timely information, ensuring efficient access to library collections and services. Samuel Green, the librarian at Worcester Free Public Library, was instrumental in introducing the concept of reference service, emphasizing the librarian's role in helping users select books. He keyed out four components of reference services-

a. instruction- Teaching readers how to navigate and use the library effectively.
b. assistance with inquiries,
c. problem solving,
d. library promotion.

To further support resource use, libraries maintain tools like catalogues, bibliographies, and shelf lists. The overarching goal of reference services is to transform potential library visitors into regular users by increasing awareness of the resources and services available.

Definition

Reference service is a library function that involves providing personalized assistance to users in meeting their information needs. According to the

ALA Glossary of Library and Information Science, it is “that phase of library work which is directly concerned with assistance to readers in securing information and in using resources of the library in study and research”.

The Online Dictionary for Library and Information Science (ODLIS) expands this definition, describing reference service as all activities performed by a trained librarian to help users access, evaluate, and use information resources effectively. This includes answering questions, teaching search techniques, conducting searches on behalf of users, and referring them to external resources when necessary.

S. R. Ranganathan defined it as “personal service to each reader in helping them find documents answering their interests at the moment, pointedly, exhaustively, and expeditiously”. He emphasized that the primary goal of reference service is to “provide the right book to the right reader at the right time.” He further classified the queries answered by library staff into three categories:

- Ready reference queries
- Short-range queries
- Long-range queries

9.3.1 Need of Reference Services

Reference services are designed to assist users with a wide range of queries, such as how to navigate a catalogue, locate specific books or documents, or access particular services and facilities. Users can seek help from library staff for these inquiries. Although electronic resources are becoming increasingly prevalent, the fundamental role of reference services of providing personalized assistance remains unchanged. The abundance of both subscription-based and free online resources makes reference services even more essential, as users must sift through an overwhelming amount of information to determine what is reliable and relevant. The challenge of "information overload" is a key concern, with users often feeling inundated by the sheer volume of available content. Reference

services help users find exactly what they need, reinforcing the library's role as a vital and central institution. Key factors that underscore the importance of reference services in libraries include growing user expectations, information overload, the diversity of available documents, and the widespread availability of information and communication technologies.

9.3.2 Objectives of Reference Service

The primary objectives of reference services include:

- Providing access to relevant information and resources.
- Saving users' time by offering quick and accurate answers.
- Promoting the effective use of library collections.
- Encouraging lifelong learning and exploration.
- Enhancing user satisfaction through personalized assistance.

The key elements of reference service include:

- The user
- The information or knowledge base
- The information professional/librarian
- Electronic resources (such as web resources)

9.3.3 Theories of Reference Services

James Wyer proposed three philosophies for reference services. These approaches were referred to as Minimum, Middling and Maximum by Samuel Rothstein.

1. **Conservative (Minimum)**: The conservative approach is limited to personal assistance; it typically aims at guiding the inexperienced or confused user. This traditional model restricts the reference librarian's role up to pointing the users in the right direction without reading the resources for them. Here the librarian assists the users with locating resources but does not provide detailed explanations or analysis.

2. **Moderate (Middling)**: The moderate approach goes beyond basic instruction and provide help to users in utilizing materials or locating specific documents and facts. In this model, the reference librarian is more involved in the research process, conducting a thorough search to find answers to research or factual questions. The librarian's role is to assist the user in navigating and using resources effectively.
3. **Liberal (Maximum)**: This approach provides comprehensive and reliable information to the users. Reference librarians in this model take full responsibility for the user's query, conducting the necessary research, finding the appropriate materials, and presenting them to the user. In some cases, the librarian may also provide summaries or analyses of the information found. This type of service is commonly offered in specialized libraries.

9.3.4 Functions of Reference Services

Key functions include:

- Teach library users how to navigate the library, locate materials, and utilize online catalogues.
- Guide library personnel and staff, and understand the needs of library users through constant evaluation. Select and manage appropriate reference materials.
- Organize orientation sessions to introduce users to library rules, practices, and available resources.
- Help users understand how to use the library's website and collection, and provide them with necessary tools for self-guidance.
- Maintain a well-equipped Reference and Information Desk with up-to-date technology such as computers and mobile devices.
- Answer all types of questions and quickly provide accurate information by utilizing both physical and digital resources.
- Engage with users on social media to address queries and

provide information in real-time.

- Offer expert advice on how to best utilize library resources and materials.
- Recommend reliable reference sources and materials tailored to the user's subject or information needs.
- Provide guidance on topics such as career advice, professional development, and vocational information.
- Assist users in locating specific documents and selecting reading materials that fit their research or learning goals.
- Prepare and curate bibliographies to simplify the process of finding relevant materials.
- Offer specialized bibliographies that match the interests of the user and guide them toward newly acquired materials in their field of interest. Keep them informed about the latest publications.
- Regularly assess and evaluate the effectiveness of reference services, staff performance, and the quality of the resources.
- Measure the success of reference services using factors such as:
  - Whether user queries are effectively analysed and addressed.
  - If the correct procedures are followed in delivering information.
  - User satisfaction with the provided information and services.
  - Availability of relevant reference materials in the library.

9.3.5 Types of Reference Services

Reference services are generally divided into two types:

i) **Ready Reference Service:** Ranganathan defined Ready Reference Service as a service where the answer is provided quickly, often in just a minute. These services help users find information right away by pointing them to the right reference sources, and the information is usually gathered in a short amount of time. It provides quick answers to factual or straightforward questions.

- The commons queries may include questions like- What is the capital of France? When does the library close on weekends? What is the population of Japan? The answers are readily available and can be answered quickly on consolation with reference sources. It involves minimal research, typically using reference books or online catalogues.
- The Reference sources used for ready reference queries are fact-finding tools that provide quick, reliable information. These include: Biography, Encyclopaedias, Yearbooks, Census Reports, Dictionaries, Handbooks, Atlas.

ii) **Long-Range Reference Service:** Ranganathan highlighted that Long Range Reference Service is mostly used in public and special libraries. This service requires more time to provide, as it caters to users who need in-depth and specific information. Typically, it takes more than 5 minutes to respond to such queries, and it involves searching through a variety of reference sources.

- It offers in-depth assistance that requires extensive research over a longer period. The process begins with reference books and online resources, then extends to reports, articles, and other materials in both physical and digital formats. If the information isn't found in the library, the search can expand to other local or even national libraries. The information gathered through long-range reference services may become part of ready reference services, as librarians gain experience and become more efficient in finding resources. Long-range reference services also include bibliographical services, conducting detailed subject searches, referral services, and translation services.
- The answer to the queries may require in-depth research like a query like "What is the population distribution and migration patterns in South Asia over the last 50 years?".

- The ALA also differentiates between Direct Reference Services (involving personal interaction with users) and Indirect Reference Services (encompassing collection development, evaluation, and maintenance).

9.4 INFORMATION SERVICES

Information services focus on providing, managing, and utilizing information to address specific needs. These services are designed to enhance the efficient exchange, storage, processing, and retrieval of data in various formats, supporting decision-making, learning, and operational goals.

9.4.1 Definition

Information services refer to systems or processes that allow individuals or organizations to create, obtain, store, process, transform, retrieve, and use information. These services can operate through both physical and digital platforms. Information services refer to the various activities, functions, and systems designed to manage, deliver, and support the access to information resources for users. These services aim to help individuals or organizations find, organize, process, and utilize information effectively for their needs.

The core idea behind information services is the delivery of information that meets the specific requirements of users. This involves managing and maintaining a variety of information resources, such as databases, libraries, archives, and online platforms, and ensuring that the information can be accessed, understood, and used effectively.

The elements of information services include:

1. **Accessing Information Resources**: Information services provide mechanisms for users to access information, whether

that be through physical locations (like a library) or digital means (like websites).

2. **Organizing and Managing Information**: Information services organize information in a way that makes it easy to retrieve. This includes categorizing, cataloguing, and maintaining information systems or repositories.
3. **Providing Information in Useful Forms**: Information services involve repackaging or presenting information in formats that are useful to users. This could mean summarizing, analysing, or translating information into formats that match the user's needs.
4. **Disseminating Information**: Dissemination refers to the distribution of information to users. Information services often include systems for delivering information to users in a timely manner, whether through physical or digital channels.

Understanding User Needs: A significant aspect of information services is the recognition and understanding of user needs. Information services are designed with the end-user in mind, ensuring that the information provided meets their specific requirements and is relevant to their goals.

9.4.2 Need of Information Service

In today's interconnected and fast-paced world, the need for information services is more critical than ever. These services provide access to accurate, relevant, and timely data, enabling individuals and organizations to make informed decisions, solve problems, and achieve their goals.

1. **Decision-Making**

   Reliable information is essential for making informed decisions in both academic and non-academic contexts. Information services bridge the gap between knowledge and action.

2. **Learning and Education**

Information services are crucial in education, offering students, educators, and researchers access to academic papers, data sets, tutorials, and more. These services support lifelong learning and ensure individuals stay updated on the latest trends and theories in their fields.

3. **Innovation and Creativity**

Innovation relies on access to new ideas, research, and trends. Information services help individuals and organizations discover novel solutions to problems, fostering creativity and adding value across various domains.

4. **Effective Communication**

In a globalized world, understanding diverse perspectives is key to effective communication. Information services provide cultural insights, behavioural data, and other resources that help individuals navigate communication across different contexts.

5. **Problem-Solving**

Information services equip individuals and organizations with the tools to analyse situations, evaluate options, and implement solutions effectively, whether addressing personal challenges or organizational issues.

6. **Supporting Research and Development**

Researchers depend on information services to access comprehensive databases, journals, and other critical resources that advance knowledge in fields like science, technology, and medicine.

7. **Adapting to Digital Transformation**

As digital technology advances, the overwhelming volume of available information can be daunting. Information services help users navigate this vast sea of data by identifying credible sources, filtering out irrelevant content, and synthesizing useful insights.

8. **Enhancing Personal Growth**

Information services also cater to personal interests, such as

hobbies or self-improvement. They provide access to books, guides, videos, and other resources that enrich individual lives.

The concept of information services has greatly evolved from traditional library-based reference systems to modern digital platforms. This transformation reflects shifts in user needs and technological progress.

9.5 REFERENCES SERVICES PROVIDED BY LIBRARIES

Libraries offer a wide range of reference services tailored to meet the needs of their diverse user bases. These services vary based on the type of library, its resources, and the specific needs of its users.

i. **Outreach Reference**: Outreach reference involves the reference librarian being engaging with users and patrons face-to-face. By participating in community events and offering programs, librarians have the opportunity to educate the public about the library's services and resources.

ii. **Virtual Reference:** Virtual reference services are accessible through various channels such as phone, text, and chat. Mobile technology enables users who are immobile, distant, or tech-savvy to access library reference services from anywhere.

iii. **Roving Reference:** Roving reference means the reference librarian actively moves around the library space, engaging with patrons wherever they are, including in the stacks. They are available on-demand to assist users as needed.

iv. **Public Libraries:**
    a. **General Assistance**: Public libraries help users find books, answer factual queries, and offer general information.
    b. **Reader Advisory Services**: Librarians recommend books and materials based on users' personal interests.
    c. **Community Support**: These libraries provide resources on local history, career advice, and government information.

d. **Digital Reference**: Many public libraries offer online chat or email services for user convenience.

v. **Academic Libraries**

a. **Research Support**: Academic libraries assist students, faculty, and researchers with detailed research, literature searches, citation help, and bibliography creation.

b. **Subject-Specific Services**: Librarians often specialize in specific disciplines to offer tailored assistance.

c. **Instructional Services**: Libraries conduct workshops on information literacy and effective use of research tools such as databases.

d. **Digital Reference**: Virtual consultations and email services are commonly available for complex academic queries.

vi. **Special Libraries**

a. **Specialized Information**: These libraries focus on specific industries (e.g., law, medicine), providing specialized information services.

b. **Document Delivery Services**: Special libraries facilitate inter-library loans and provide access to rare materials not available elsewhere.

vii. **National Libraries**

a. **Preservation of Knowledge**: National libraries house important historical archives and national publications.

- **Reference for Researchers**: These libraries support advanced research by offering access to rare collections and specialized databases.
- **Inter-Library Loan Services**: National libraries often facilitate resource sharing with other institutions through inter-library loans.

Emerging Trends

Advancements in technology have revolutionized traditional reference services, transitioning them to digital formats. New methods of providing reference services now include:

- Email-based inquiries

- Instant messaging
- Video conferencing
- Virtual chat platforms

These electronic reference services meet the increasing demand for remote access to information.



CHECK YOUR PROGRESS

Q 1. Fill in the blanks

a. S. R. Ranganathan emphasized the primary goal of reference service is to "provide the right book to the _____ at the right time."

b. The four components of reference services outlined by Samuel Green include instruction, assistance with inquiries, problem solving, and _____.

c. James Wyer proposed three philosophies for reference services: Conservative, _____, and Liberal.



9.6 LET US SUM UP

Reference services in libraries are designed to provide personalized assistance to users in locating and utilizing information effectively. These services involve direct interaction between librarians and users, helping them navigate library resources, conduct research, and find answers to specific queries. Key functions of reference services include teaching library users how to use the library, guiding them in locating materials, and offering expert advice on various topics.

The main objectives of reference services are to offer relevant information, save users' time, promote library collections, encourage lifelong learning, and ensure user satisfaction. Reference services can be categorized into types such as ready reference services, which provide quick answers to factual questions, and long-range reference services, which involve in-depth research over a longer period.

Modern reference services have evolved with technological advancements, including virtual and email-based services, making it easier for users to access help remotely. Libraries, depending on their type (public, academic, special, or national), provide various reference services tailored to their specific user needs, from general assistance and research support to specialized information and document delivery services.

Overall, reference services are an essential function in libraries, helping users manage the vast amounts of information available and ensuring that they can access accurate, reliable, and relevant resources efficiently.



9.7 ANSWERS TO CHECK YOUR PROGRESS

Ans to 1. a. right reader

b. library promotion

c. Moderate



9.8 FURTHER READINGS

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9.9 MODEL QUESTIONS

1. What is the main function of reference services in libraries?
2. Who introduced the concept of reference services in libraries?

3. What are the four components of reference services outlined by Samuel Green?
4. What are ready reference services used for?
5. What is the primary goal of reference services according to S. R. Ranganathan?
6. Explain the concept of reference services and discuss its importance in libraries.
7. Describe the differences between ready reference services and long-range reference services, with examples.
8. Write the key functions of reference services?
9. Discuss the role of information services in libraries.
10. What are the specific reference services provided by different types of libraries.

*** *** ***

UNIT 10: INFORMATION REFERENCE SERVICES

UNIT STRUCTURE

10.1 Learning Objectives

10.2 Introduction

10.3 Characteristics of Information Services

10.4 Types of Information Services

- 10.4.1 Reference Services
- 10.4.2 Current Awareness Services
- 10.4.3 Selective Dissemination of Information
- 10.4.4 Information Analysis and Condensation Services
- 10.4.5 Alerting Service
- 10.4.6 Extension and online services
- 10.4.7 Translating Service
- 10.4.8 Document Delivery Services
- 10.4.9 Digital repositories

10.5 Let Us Sum Up

10.6 Answer to check Your Progress

10.7 Further Readings

10.8 Probable Questions

10.1 LEARNING OBJECTIVES

After going through this unit, you will be able to –

- Understand information service.
- learn different types of information services.
- explore different types of information services.

10.2 INTRODUCTION

Information is complex, existing in multiple forms and formats, and its communication involves several stages. Users desire information that

is relevant, accurate, complete, and reliable. Libraries serve as vital links, bridging the gap between static information and dynamic users, ensuring a constant flow of relevant content. The communication barriers like exponential growth, time, space, culture, and language, have led libraries to developed various information services over time to address these challenges.

The development of "information services" in libraries, especially within scientific and industrial research encompass reference, alert, review, analysis, and consolidation, were created to address the growing need for sharing scientific and technical information. Information services can range from simple guidance to extensive information searching, extraction, synthesis, and delivery. These services are crucial as they fulfil user needs and are supported by other library functions such as acquisition and technical processing.

In the 1970s, public libraries in the West broadened their scope by offering Information and Referral services, providing resources related to basic needs such as food, health, housing, and employment, often with the help of community experts.

10.3 CHARACTERISTICS OF INFORMATION SERVICES

- Information services should be easy to access and navigate, offering simple interfaces for users to retrieve information.
- The information provided must be accurate and comprehensive, ensuring users receive trustworthy and complete data.
- Protecting user data and maintaining privacy are essential, with measures such as access control and encryption in place.
- Information services should integrate with other systems, allowing smooth data exchange and usage across various platforms.
- Services need to be scalable to manage growing demands and flexible enough to adapt to changing user requirements.
- The interface should be intuitive and easy for users to interact with, enhancing the overall user experience.

- Many services offer real-time or near-real-time updates to ensure users have the latest information available.
- Services should be customizable to cater to specific user or organizational needs, improving their effectiveness.
- Information services must be dependable and operate efficiently, minimizing downtime and optimizing resources.
- Providing additional features such as analysis, recommendations, or insights enhances the value of the information offered.

Information services have two key aspects:

1. **On-Demand Information Provision**: This occurs when a user approaches the reference or information desk with a specific query. The user is provided with an answer to their query on request, offering information tailored to their immediate needs.
2. **Proactive Information Provision**: This aspect focuses on keeping users informed and up-to-date in their field of expertise and related areas. Known as dissemination of information or Current Awareness Service (CAS), it is an essential feature of information services. It is especially prominent in information/documentation centres, this type of service is also present in other libraries, though it may receive less attention.

10.4 TYPES OF INFORMATION SERVICES

Information services can be categorized based on their purpose and delivery method:

10.4.1 Reference Services

Offering quick answers to user queries through reference materials such as encyclopaedias or directories. The essence of reference service can be defined by the phrase “Ask Library Anything” (ALA) coined by Melvil Dewey. Reference service encompasses the activities:

- **Providing Information through Reference Books**: This

includes using reference materials like encyclopaedias, directories, etc., for quick factual answers (Ready reference). Examples include answering questions like “What is the length of the River Brahmaputra?” or “Who is the Prime minister of Indonesia?”

- **User Education**: This refers to helping users develop the motivation to seek and use information, as well as awareness of available information sources and tools like indexes and abstracts. It also involves teaching users how to extract, synthesize, and package information to meet their specific needs.
- **User Orientation**: This focuses on guiding users to understand the specific library or information system, helping them navigate different sources, and teaching the use of tools like classification systems, catalogues, and computers.
- **User Assistance**: This involves helping users finding a book on a subject and limitations of specific information sources, interpreting catalogue entries, and assisting in repackaging retrieved information.
- **Literature Search**: This refers to conducting a more time-consuming search for periodical articles or relevant literature for research purpose.

Referral: This service provides users with referrals to other sources or specialists when the library cannot answer a specific question.

10.4.2 Current Awareness Services

Current awareness services are designed to keep users informed about the latest publications and developments in their area of work or interest, particularly in specialized subject fields. It keeps users informed about the latest developments in their areas of interest These services provide information products at regular intervals to update users on newly received or identified resources by libraries. The goal is to anticipate the specific needs of users, highlight recent developments, and help them stay informed about the latest trends

and advancements in their fields. By doing so, current awareness services help users stay up-to-date with the technical, scientific, and managerial knowledge relevant to their work.

The four types of services in CAS are-

Contents-by-Journal Service: This service provides users with copies of journal contents pages within a specific subject area, such as medical sciences. The service can be implemented by duplicating and circulating journal contents pages individually or in compiled form, offering a cost-effective and quick way to keep users aware of current publications. *Current Contents* by the Institute for Scientific Information (ISI), Philadelphia is a example.

Documentation Bulletins or Current Awareness Lists: The library or documentation centre reviews primary journals and other sources of current information to find articles that may interest users. The bibliographic details of these articles are collected, organized into subject categories, and then listed. These lists are periodically duplicated and shared with users. Some bulletins may also include article abstracts. The lists can be published by organizational libraries, professional bodies, or commercial organizations for users interested in specific topics. Examples include *Chemical Titles* from Chemical Abstracts Service and *Current Chemical Papers* from the Chemical Society, UK.

Research-in-Progress Bulletins: These services inform users about new research projects and updates on ongoing ones. They often involve collaboration between multiple organizations working in related research fields. In India, organizations like CSIR or ICAR may release such bulletins. A well-known example is the *Current Research Information System* (CRIS) by the United States Department of Agriculture (USDA), where all USDA labs and research stations contribute.

Newspaper Clipping Service: Newspapers provide up-to-date news on political, social, and economic events. They offer valuable

information to a wide range of people, from children to business executives. Many organizations keep collections of newspaper clippings for reference. The *Times of India* maintains a comprehensive collection of clippings. Some libraries also send copies of relevant clippings to specific users to keep them updated on the latest news in their areas of interest.

Characteristics of Current Awareness Services:

- Typically provided in the form of a publication.
- Aims to bring current, new, or recent information to the users' attention.
- Usually focused on a specific subject area, though related topics may also be covered.
- Does not answer specific user queries.
- May be limited to certain types of literature, such as patents or standards.
- Can be bibliographical (e.g., a list of references) with or without abstracts, or discursive (e.g., a newsletter).
- Aims to inform users about recent developments or news quickly and make browsing easy and convenient.

10.4.3 Selective Dissemination of Information

Selective Dissemination of Information (SDI) is a service that sends users references to documents or summaries based on their specific interests. These documents are selected from recently published materials. SDI saves users time by reducing the need to go through lots of publications to find relevant documents. For SDI to work well, both the user and document profiles need to be carefully created. A user profile contains keywords that represent the user's interests. These keywords are compared to the keywords in document descriptions, and when they match, the document is selected. The selected documents or summaries are sent to the user, often with a feedback form asking if the document is useful or

if they need a copy. Based on this feedback, the user's profile is updated. Creating and maintaining an accurate user profile is a complex task, requiring help from information specialists and input from users. This process is done in stages and updated regularly. While SDI services can be managed manually for a small number of users, the availability of machine-readable databases has made it easier to scale the service. SDI can be set up for individual users or for groups of users with similar interests. Group profiles are more affordable but less personalized than individual profiles.

- SDI is one of the best current awareness services available.
- Retrospective Search Services are different from SDI because they help users find references related to a specific query, rather than keeping them updated on ongoing developments in a field. These services help users solve specific problems, like answering practical questions or gathering references on previous research.
- **Information Analysis and Consolidation:** Combining and summarizing data into reports or summaries for clearer understanding.
- **Online Services:** Digital platforms that provide access to databases, e-books, or virtual assistance.

10.4.4 Information Analysis and Condensation Services

Information analysis and condensation services involve analysing and summarizing original documents using data elements that represent them. These services aim to provide exhaustive literature on a subject, making it accessible to users who require a comprehensive approach. They are typically categorized into **condensation** and **evaluative** services.

Condensation Service:

Condensation services are among the earliest types of information services, with bibliographies having a long history. These services

are essential because it is difficult for libraries to acquire all documents, especially journals, in a given subject area. Similarly, users cannot browse through all available literature in their field of interest. Thus, condensation services are designed to cover literature exhaustively, providing brief representations of documents that guide users to primary sources. Condensation services are divided into two categories:

i. **Location Type**: This includes indexes, subject bibliographies, and catalogues, which help users locate materials related to a specific subject. For example, subject bibliographies offer lists of materials related to a particular discipline, such as the *Asian Social Science Bibliography*.

ii. **Accretion Type**: This includes abstract services, extracts, and technical digests, which provide summarized versions of documents or articles, allowing users to quickly grasp the essential information.

Union Catalogues: Union catalogues list the holdings of libraries and serve the purpose of document location, often facilitating interlibrary loans. These catalogues can be local, regional, national, or international in scope. For example, *NISCAIR – National Union Catalogue of Scientific Serials in India (NUCSSI)* or *Union Catalogue of Learned Periodical Publications in South Asia*.

Indexes: Indexes offer bibliographical details of documents and indicate the content through descriptors, making it easier for users to approach specific subjects. They provide exhaustive coverage and help in identifying various aspects of documents, ensuring that all relevant materials are accessible to users.

Abstracts and Extracts: Abstracts and extracts involve summarizing a document's essential points to avoid unnecessary

duplication of research. These condensed presentations allow users to access important content quickly. Abstracting services, initiated in 1965, are particularly popular in the scientific community. Examples include *Index Medicus* and *Biological Abstracts*, which provide citations and summaries of articles in various fields such as medicine and life sciences.

Evaluative Services: While condensation services focus on providing bibliographical details and summaries, evaluative services go a step further by analysing and repackaging the intellectual content of literature. These services distil the main findings of articles and present them in a more useful form for specific user needs. The goal is to evaluate, compact, and simplify information through selective extraction, correlation, and evaluation. The result is often state-of-the-art reports, trend reports, and critical data compilations. For example, state-of-the-art reports emphasize the most current findings in a subject area and are often prepared informally, targeted at a specific audience. *IFLA's Information Literacy State-of-the-Art Report (2012)* is an example of such a report.

Digests: In addition to other evaluative services, digests are useful tools for organizations to manage information for planning and development. These reports summarize relevant information on specific issues, such as the *United States Supreme Court Digest (1974–present)*, which compiles information for legal professionals.

10.4.5 Alerting Service

An "alert" is a term used to describe machine-to-person communication that is important and/or time-sensitive. It includes user-requested content such as reminders (important), notifications, and alerts. Alert messaging, or alert notification, refers to the delivery of these alerts to recipients. Alert notifications are a natural progression from RSS technology, allowing people to automatically stay updated with their preferred websites. Alerts help individuals

keep up with the most important information for them.

The library provides alerting services to keep you updated on new publications and databases. It allows you to track citations of scientific articles.

Alerting services (AS) have become essential due to the rapid growth of scientific publications, which double every 10–15 years, and the increasing popularity of electronic publications. Readers are no longer willing to constantly search for new information on their own, creating a strong demand for alerting services. These services help keep clients informed about new documents and events relevant to their interests. While commonly associated with scientific publications, alerting services are not limited to this area. They are also useful in applications such as digital libraries, stock tickers, and traveller information systems. Currently, various implementations of alerting services exist across different domains, catering to diverse needs for real-time updates and notifications.

Email alert: An email alert service is a system that automatically sends new content to your email inbox based on specific criteria you set. To set up an email alert, you need to register for free with a publisher, vendor, or database provider offering the service. During registration, you create a profile that includes your preferences for the type of content you want to monitor. Once set up, the service notifies you via email whenever new content matching your established parameters becomes available.

If you prefer, you can set up a filter in your email account to have these incoming messages directed to a separate folder, keeping them organized apart from your other incoming emails.

RSS feed: A growing amount of web content is now published in a format that allows you to subscribe and track it as it gets updated, similar to subscribing to a print newspaper to follow the news daily. This type of web content is syndicated, meaning it is sent out to anyone who subscribes to it. The technology behind this is called

RSS, which stands for Really Simple Syndication. To monitor and read new content published via RSS feeds, you'll need to set up an RSS feed reader (also known as a feed aggregator or news reader).

Feed reader: A feed reader is a personal web space where you can log in and view your subscriptions to different types of content. Some people prefer using a feed reader to manage certain tasks without cluttering their email inbox, though this is a matter of personal preference. If you are also tracking blogs, news sites, or other syndicated web content, a feed reader can help you organize everything in one place, making it a more convenient way to stay up-to-date. Additionally, unlike email alerts, RSS feeds don't always require you to register with the publisher, vendor, or database provider.

10.4.6 Extension and online services

Online services offer a platform where users can communicate through e-mail or engage in online forums and conferences, connecting them to a vast network of third-party information providers. Extending library services beyond the physical building through partnerships and community programs.

10.4.7 Translating Service

The world's scientific and technical publications around the world are in non-English languages also, making translation services essential for accessing global research. International and national translation banks are established to maintain indexes that inform and raise awareness about available translated works, enabling organizations to access translated materials. UNESCO's *World Bibliography of Translations* and *Index Translationum* (created in 1932) serve as international bibliographies of translated books. NISCAIR in India offers translation of Science and Technology documents from 20 foreign languages into English.

10.4.8 Document Delivery Services

Document Delivery Services are essential to interlibrary loan activities, helping users not only locate documents but also obtain them. The libraries offer document delivery services depending on their scope of the services. Some libraries provide this service using their own resources, while others may procure documents from other libraries. Institutions may operate on a larger scale, such as NISCAIR (New Delhi), which procures documents from across the globe for users in India.

The British Library Document Supply Centre, UK, is one of the largest providers of document delivery services, offering extensive access to documents worldwide.

With the emergence of online platforms, document delivery services can be done via the web, replacing traditional manual methods. These services ensure that users can access the documents they need, even when they are not available locally, supporting research and information sharing across the globe.

10.4.9 Digital repositories

An Institutional Repository (IR) is an online platform designed to collect, preserve, and provide access to the intellectual output of an institution, particularly research institutions or universities. It organizes and makes accessible institutionally generated information for both on-campus and global users. IRs improve the visibility of the institution's intellectual output, promoting access to research outcomes and investments. Digital repositories contribute to the protection and preservation of an institution's intellectual property.



CHECK YOUR PROGRESS

Q 1. Fill in the blanks

a. RSS stands for_____.

b. _____services, automatically send new content to users' inboxes based on their predefined preferences.

c. SDI stands for_____.



10.5 LET US SUM UP

Information services are designed to help users access, retrieve, and manage data effectively. They should be easy to use, offering intuitive interfaces that make information easy to access and navigate. These services must provide accurate, comprehensive, and trustworthy data while ensuring user privacy through measures like access control and encryption. Additionally, they should be scalable to accommodate growing demands and flexible enough to adapt to changing user needs. Information services can be divided into two main types: On-Demand information provision, where users request specific data, and Proactive information provision, such as Current Awareness Services (CAS), which keep users updated on developments in their areas of interest.

These services encompass various categories, including Reference Services, which offer quick answers to factual queries using materials like encyclopaedias and directories, and Current Awareness Services (CAS), which provide regular updates on new research, publications, and developments. Selective Dissemination of Information (SDI) services tailor the delivery of references or summaries to user interests, saving them time by providing only relevant information. Information Analysis and Condensation Services summarize and analyse literature to make it more accessible, often through abstracts, bibliographies, or digest services. Alerting Services notify users about important updates or new content, often via email or RSS feeds. Document Delivery Services assist users in obtaining documents from libraries or other institutions, even if they are not available locally. Digital Repositories store and provide access to institutional research outputs, promoting visibility and preservation.



10.6 ANSWERS TO CHECK YOUR PROGRESS

Ans to 1. a. Really Simple Syndication

b. Alerting

c. Selective Dissemination of Information



10.7 FURTHER READINGS

Bawden, D., & Robinson, L. (2015). *Introduction to information science* (2nd ed.). Facet Publishing.

O'Neil, E. (2014). *Reference and information services: An introduction* (5th ed.). Neal-Schuman.

Toms, E. G., & Latter, D. (2010). *User-centered information retrieval and information services*. Springer.



10.8 MODEL QUESTIONS

1. What is the primary purpose of Reference Services?
2. How do Current Awareness Services (CAS) help users?
3. What is the role of Alerting Services in information provision?
4. What is the purpose of Digital Repositories?
5. Explain the characteristics of Information Services.
6. Describe the different types of Current Awareness Services (CAS)
7. How does Selective Dissemination of Information (SDI) work.
8. What are the various components of Reference Services?
9. Compare and contrast Information Analysis and Condensation Services and Evaluative Services.

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UNIT 11: ON DEMAND REFERENCE AND INFORMATION SERVICES

UNIT STRUCTURE

11.1 Learning Objectives

11.2 Introduction

- 11.2.1 Concept of Bibliographic Service

11.3 Types of Bibliographies

- 11.3.1 Analytical Bibliography
- 11.3.2 Descriptive
- 11.3.3 Textual
- 11.3.4 Historical
- 11.3.5 Systematic or Enumerative
- 11.3.6 Universal
- 11.3.7 Trade
- 11.3.8 National Bibliographies
- 11.3.9 Subject bibliographies
- 11.3.10 Statistical

11.4 Compilation of Subject Bibliography

11.5 Referral Services

11.6 Translation Services

11.7 Reprographic Services

11.8 Consultancy Services

11.9 Let Us Sum Up

11.10 Answers to Check Your Progress

11.11 Further Readings

11.12 Model Questions

11.1 LEARNING OBJECTIVES

After going through this unit, you will be able to

- Identify the different types of bibliographies
- Understand the role and significance of bibliographic services
- Explore various on demand services

11.2 INTRODUCTION

Bibliographic services are specialized service provided by libraries and information centres. They focus on organizing, describing, and providing access to a wide range of information resources. These services involve creating, maintaining, and sharing bibliographic records, which describe books, articles, journals, digital media, and other materials. We are going to learn in detail about the bibliographic services, its types and other on demand services provided by libraries. Bibliographic services help users find and access the information they need for research, study, or personal use. In the digital age, they also facilitate access to electronic resources, databases, and online repositories. These services play a critical role in fostering scholarly communication and collaboration across different fields. Their primary aim is to improve information discovery and accessibility for users.

11.2.1 Concept of Bibliographic Service

Bibliographic services focus on organizing, describing, and granting access to a variety of resources such as books, articles, digital media, and more. These services involve creating and maintaining detailed bibliographic records that describe items using key metadata like titles, authors, publication dates, and subject classifications. This organization enhances the discovery and retrieval of materials. Standardized formats and metadata play a central role in bibliographic services, offering a structured approach to search and access materials based on consistent, globally recognized criteria. Bibliographic services go beyond traditional

library materials, encompassing digital and online resources such as electronic catalogues, bibliographic databases, and citation management systems, thus broadening access to a wider array of materials. The main objective of bibliographic services is to ensure the efficient organization and discovery of resources, both physical and digital, creating an accessible framework that connects users to the information they seek. Bibliographic services uphold the principles of accessibility, reliability, and academic integrity, ensuring that information is available, trustworthy, and accurately represented, making them essential in the realm of information management. Ultimately, bibliographic services act as a vital bridge between information seekers and the vast knowledge stored in physical and digital repositories, supporting the efficient functioning of libraries and information centres.

Need of Bibliographic services

- Bibliographic services are crucial for organizing, managing, and retrieving vast amounts of information in libraries, research institutions, and digital repositories.
- In today's world of overwhelming information, bibliographic services help users quickly find relevant materials within extensive collections.
- By employing standardized cataloguing and classification systems, bibliographic services create clear, structured pathways that simplify access to even the most complex collections.
- These services are essential for researchers, students, and professionals who rely on prompt access to accurate, reliable information for their academic, professional, and personal tasks.
- Enriched bibliographic records, with detailed metadata, enable users to locate materials by title, author, subject, or keywords, enhancing the research and discovery process.

- Bibliographic services facilitate proper citation practices and offer tools for managing references, ensuring scholarly work adheres to academic standards.
- These services encourage interlibrary loans, collective cataloguing, and resource sharing between institutions, thus expanding access to knowledge across different platforms.
- Bibliographic services have evolved to include electronic resources, databases, and online catalogues, ensuring a seamless integration of both traditional and modern materials.
- They bridge the gap between the rapid advancements in technology and user needs, integrating new tools and methods to improve access to information.
- Bibliographic services help preserve knowledge and streamline resource sharing, playing an essential role in advancing research, education, and the dissemination of information.

11.3 TYPES OF BIBLIOGRAPHIES

11.3.1 Analytical Bibliography

Analytical bibliography involves a thorough study and description of documents, focusing on their physical properties. It examines the physical components of documents, such as structure, paper quality, and binding, to understand them as tangible objects. Analytical bibliography mainly concentrates on printed books, analysing their physical attributes and specific features. It takes into account the history of paper, printing techniques, and other production elements involved in creating the document. The results of this examination are documented in a standardized format, providing comprehensive information about the publication's production and history. The main aim is to uncover factual data about a publication by analysing its physical characteristics and preserving this information for scholarly purposes.

11.3.2 Descriptive

Descriptive bibliography deals with documenting the material characteristics of books. It includes important details like the author's name, the exact title of the work, publication date and place, publisher and printer names, format, pagination, typographic features, illustrations, and price. For older publications, descriptive bibliography also records other physical characteristics like the type of paper used, binding style, and other relevant features. Descriptive bibliography relies on the data established through analytical bibliography. While analytical bibliography focuses on the examination of a document, descriptive bibliography is concerned with its detailed description. Descriptive bibliography follows specific standards and techniques to record bibliographic details in a consistent format. The role of descriptive bibliography has diminished in modern times due to standardized practices in book production, making bibliographic information more readily available and easier to access.

11.3.3 Textual

Textual bibliographies examine how writing and printing processes impact the accuracy and authenticity of a text. This type of bibliography studies the variations between manuscripts and printed books, identifying differences that may affect the text's original meaning. The main goal is to pinpoint the exact words the author intended, ensuring the text accurately represents their original work. Textual bibliographies involve analysing and comparing texts across multiple editions and printings. It also explores how texts are passed down and altered through various editions and printings over time.

11.3.4 Historical

This branch of bibliography focuses on the history of book production, covering aspects like writing, printing materials, binding, and more.

It examines the evolution of the printed document, tracing its development from handwritten manuscripts to the modern printed word. Historical bibliography explores the use of paper, printing ink, printing presses, and how advancements in printing technology have impacted the development of writing materials. It looks into the methods of book production, including printing, binding, paper-making, illustrating, and publishing. The field provides insights into the historical progression and changes in the techniques used to produce books throughout history.

11.3.5 Systematic or Enumerative

Systematic bibliography focuses on the enumeration and classification of books and other printed documents. It involves organizing bibliographic entries into logical and useful arrangements for study and research. A systematic bibliography is a well-organized list of written or printed records of civilization, including both published and unpublished documents. These records are arranged in a specific order, such as alphabetically, logically, or according to a particular principle. Systematic bibliographies can be categorized based on characteristics like form (physical, intellectual), language, subject, geographical area, time period, and producing agency. The goal is to ensure effective listing of printed documents so they can be easily traced by authors, titles, subjects, forms, and series. A systematic bibliography aims to provide efficient access to information, facilitating better research and study.

11.3.6 Universal

A universal bibliography includes all published materials, whether books, periodicals, or articles, covering every subject, in all languages, from all countries, and at all times. Dr. Ranganathan defines a universal bibliography as one that records all documents produced worldwide, without theme restrictions. The creation of a

universal bibliography is an immense task, made difficult by the rapid growth of knowledge, language barriers, and the complexity of compiling and organizing entries. The introduction of computers has helped mitigate some of the challenges involved in preparing a universal bibliography. One of the most notable early attempts was made by Belgian scholars Paul Otlet and Henri La Fontaine in 1895 to create a universal classified bibliography, though it ultimately failed due to lack of international financial support. Their efforts led to the establishment of the FID (International Federation for Information and Documentation) and the Universal Decimal Classification (UDC). Although no complete universal bibliographies exist, some notable examples include the British Library Reference Division, Library of Congress, and Bibliothèque Nationale of France.

11.3.7 Trade

A trade bibliography is a list of books and other materials available for sale in a country, published by booksellers, publishers, or distributors. Its primary purpose is to promote the book trade and help boost sales of printed materials. Trade bibliographies can be national or international in scope, listing books and reading materials available for sale. Unpublished documents (e.g., dissertations, theses, society publications), unpriced items, and government publications are typically excluded from trade bibliographies. The types of Trade Bibliographies include lists by individual booksellers, publishers, second-hand book lists, and periodical lists of documents in print within a particular country. Trade bibliographies can be both current (up-to-date lists) and retrospective (listing older materials). Examples include

- *Indian Books in Print* (Indian Bureau of Bibliographies)
- *British Books in Print* (Whitaker)
- *Books in Print* (R. R. Bowker)
- *Publishers' Weekly* (American Book Publishing Record)

11.3.8 National Bibliographies

National bibliographies are serial publications that list the publications of a specific country, including books, documents, serials, theses, dissertations, and more. They can include a wide range of materials, such as audio-visual works, maps, globes, atlases, musical works, art reproductions, and even works of fiction. These bibliographies record the intellectual output of a country, serving as an authoritative source for information on documents produced within that nation. National bibliographies aid librarians, booksellers, publishers, and users in selecting and purchasing recent books. They also help with bibliographical control and guide the book trade. According to Dr. Ranganathan, national bibliographies serve cultural, economic, and social purposes. They can provide both current and retrospective information, listing documents from a specific time period. Some national bibliographies, like those of the United States and the United Kingdom, have international significance. Example: The Indian National Bibliography is particularly useful to librarians, scholars, and users in India.

11.3.9 Subject bibliographies

Subject bibliographies focus on materials related to a specific subject, such as a place, person, broad field, or specialized area. Examples: Subjects can include topics like countries (e.g., United States), individuals (e.g., Pandit Jawaharlal Nehru), broad fields (e.g., Social Sciences), or specialized areas (e.g., Solid State Physics). Ranganathan described a subject bibliography as a document bibliography confined to a specific subject area, rather than covering all subjects. Subject bibliographies have a limited scope, focusing on specific forms of material, time periods, sources, and languages. They can be either selective (focused on key works) or comprehensive (covering all relevant materials). Subject

bibliographies can be current (listing new materials) or retrospective (covering past publications).

11.3.10 Statistical

Statistical bibliography involves analysing written communication by quantifying and examining different aspects of books and periodicals. Its goal is to shed light on the development of a discipline and the processes of written communication through statistical analysis. It identifies the national or global research usage of books and journals, highlight historical trends and movements within a discipline and measure the general use of books and journals in various contexts. Statistical bibliographies are relatively rare in comparison to other types of bibliographies.

Examples include-

- *Abstract of British Historical Statistics* by B.R. Mitchell and Phyllis Deane (1962, Cambridge University Press).
- *Guide to Official Statistics* by the Central Statistical Office (CSO) of the U.K., which details statistical publications from government departments.

11.4 COMPILATION OF SUBJECT BIBLIOGRAPHY

i. **Planning**: Create a provisional plan, defining the subject and its scope, including aspects like comprehensiveness, time period, form, language, and target audience.
ii. **Search for Material**: Start with library catalogs and other resources to find relevant documents.
iii. **Item of Information**: Collect bibliographic details, providing more comprehensive descriptions for scholars.
iv. **Selection**: Choose documents that meet the bibliography's purpose.
v. **Kinds of Entries**: Include entries based on author, title, and subject, ensuring diverse references.

vi. **Arrangement**: Organize the bibliography alphabetically, chronologically, or classified based on the audience.

vii. **Adjuncts**: Add elements like a preface, list of contents, classification outline, and usage instructions.

viii. **Final Presentation**: Present the bibliography in formats like slip cards, typed, or printed, depending on resources and users.

11.5 REFERRAL SERVICES

Referral Services refer to a system where information professionals' direct users to appropriate resources, services, or experts that can best fulfil their information needs. These services are essential in helping individuals find specialized information that may not be available within the library or information centre itself.

Purpose: Referral services aim to connect users with relevant information, resources, or experts, ensuring they receive the help they need, even if it's outside the immediate capabilities of the institution.

Types of Referrals:

- **Internal Referrals**: Directing users to other resources within the same institution, such as specific departments, specialized collections, or other databases.
- **External Referrals**: Suggesting external sources, such as other libraries, online databases, experts, or agencies that can provide more specialized or extensive information.

Librarians assess the user's needs and then either provide direct access to the needed materials or refer the user to another institution, database, or individual who can better address the request.

Common Examples:

- Directing a user to a different library or information centre with the desired materials.
- Suggesting online resources, databases, or government agencies for particular research queries.

Benefits: Users can quickly find resources outside the library's direct holdings. Users gain access to specialized knowledge and services. Helps users avoid unnecessary searches, guiding them to the best sources of information.

Challenges:

- Requires effective knowledge of both internal and external resources.
- Needs clear communication and cooperation between libraries and other institutions or agencies.

11.6 TRANSLATION SERVICES

Translation Services in libraries and information centres provides access to information in different languages. These services help bridge language barriers and ensure that users can access materials, resources, and information in their preferred or required language. **Purpose**:

- Translation services facilitate the conversion of written material from one language to another, enabling users to access content that would otherwise be unavailable due to language differences.
- They support multiculturalism and ensure equitable access to information for all users, regardless of their linguistic background.

Types of Translation Services:

- **Document Translation**: Translating books, articles, journals, reports, or other written materials.
- **Website and Database Translation**: Translating online content, including library websites, databases, and digital resources.
- **Interpretation Services**: Offering real-time oral translation, especially in settings like conferences, meetings, or one-on-one consultations.

- The library or information centre may have in-house translators or work with external professionals or agencies.
- Users submit materials or request specific translations.
- Translation may include adaptation to the target language's cultural context, ensuring accurate and meaningful interpretation.

Benefits:

- Users can access materials in their native or preferred language, enhancing their research, learning, and engagement.
- Libraries and institutions can expand their service offerings to a wider, more diverse user base.
- Translation services ensure better communication and understanding between people from different linguistic backgrounds.

Challenges:

- Requires skilled translators familiar with specialized terminology, especially in academic or technical fields.
- It can be time-consuming and resource-intensive, especially when dealing with large volumes of content.
- Some content may be difficult to translate accurately due to language nuances and cultural differences.

Importance: In a globalized world, translation services are essential for enabling libraries and information centres to serve diverse communities, fostering inclusive access to knowledge and resources. Translation services ensure that language is not a barrier to information, helping users navigate materials across languages and cultures effectively.

11.7 REPROGRAPHIC SERVICES

Reprographic Services refer to the process of reproducing or duplicating documents and materials through various methods, including photocopying, scanning, and printing. These services are widely utilized in libraries,

educational institutions and other organizations to facilitate the distribution and preservation of information.

Aspects of Reprographic Services:

- Reprographic services are designed to reproduce documents quickly and efficiently, allowing users to make copies of printed or digital materials.
- They help users obtain physical copies of documents for study, reference, research, or distribution.

Types of Reprographic Services:

- **Photocopying**: The most common form of reprography, involving the duplication of physical documents onto paper.
- **Scanning**: Digitizing documents into electronic formats, such as PDFs or image files, for easier storage, access, and sharing.
- **Printing**: Producing copies of digital files or scanned documents on paper, often in bulk.
- **Faxing**: Sending documents electronically via telephone lines (though less common today, it's still used in some contexts).

Benefits:

- Reprographic services offer a fast and convenient way to duplicate materials for users who may not have access to the original documents.
- Scanning documents for digital archiving can help preserve fragile or aging materials.
- These services help improve access to materials by making copies available to a wider audience, especially in situations where the original document is in high demand or restricted.
- Reproducing documents through reprographic services is often more affordable than purchasing multiple copies of expensive materials.
- Libraries provides users with copies of books, articles, and research materials that are in high demand.

- Allowing researchers to make copies of academic papers, journals, or data sets for analysis.

Challenges:

- **Copyright Issues**: Reproducing copyrighted material without proper permission can lead to legal issues. Libraries and institutions must ensure compliance with copyright laws.
- **Quality Control**: Ensuring high-quality reproduction, especially for documents with fine details like images, graphs, or small text.
- **Resource Management**: Managing resources such as paper, ink, and machine maintenance can be challenging, especially in high-volume environments.

Importance: Reprographic services are essential for maintaining the accessibility of documents, whether in libraries, research institutions. They help make information more available, reduce the need for physical storage, and support the needs of users who require copies of documents for various purposes. The advent of digital reprography has improved the speed, quality, and convenience of these services. Scanning and printing technologies continue to evolve, with options for color printing, large-format printing, and high-resolution scanning.

11.8 CONSULTANCY SERVICES

Consultancy Services refer to the professional advice, guidance, and support provided by experts in various fields to organizations, institutions, or individuals seeking specialized knowledge or assistance. These services are aimed at helping users solve problems, improve operations, and achieve specific goals by leveraging the consultant's expertise. Consultancy services provided by libraries or for libraries are essential in addressing the evolving demands of library operations and user services. These services are tailored to meet specific needs and can be categorized into several key areas:

Purpose:

- To provide expert advice and solutions tailored to the specific needs of the user.

- To help users make informed decisions by offering in-depth analysis, recommendations, and actionable insights.

Benefits of Consultancy Services:

- User gain access to specialized knowledge and skills that may not be available in-house.
- Consultants bring an impartial perspective, helping organizations make objective decisions free from internal biases.
- Instead of hiring permanent staff for every specialized need, consultancy services offer flexibility and cost savings by providing temporary expert input.
- Consultants help identify underlying problems, develop solutions, and assist with their implementation to improve overall performance.
- With the expertise of consultants, organizations can solve complex issues more quickly, allowing internal teams to focus on core activities.
- Consultants help organizations navigate challenges and risks by offering strategies to avoid common pitfalls or legal, financial, or operational issues.

Consultancy Process:

- **Assessment**: The consultant evaluates the users needs, identifies challenges, and gathers relevant information about the current situation.
- **Solution Design**: Based on the assessment, the consultant develops customized solutions or strategies to address the client's needs.
- **Implementation**: Consultants assist in the implementation of solutions, providing guidance and support throughout the process.
- **Monitoring & Evaluation**: After implementation, consultants monitor outcomes and provide

recommendations for further improvements or adjustments as needed.

Providers of Library Consultancy Services

Professional Associations: Organizations like the American Library Association (ALA) provide specialized consultancy services that cater to different library needs, offering guidance and resources for library development.

Independent Consultants: Experienced librarians or library managers who offer consulting services on a freelance basis, with expertise in areas like collection development, community outreach, or workflow improvements.

Challenges:

- **Client Expectations**: Consultants may face challenges in managing users expectations, especially when outcomes are not immediate or are dependent on factors outside their control.
- **Customization**: Every user has unique needs, so solutions need to be highly tailored, which requires significant time and effort.
- **Confidentiality**: Consultants must maintain confidentiality, especially when dealing with sensitive organizational information or strategies.



CHECK YOUR PROGRESS

Q 1. Fill in the Blanks

a. _____ bibliography involves a thorough study and description of documents, focusing on their physical properties.

b. _____ bibliographies examine how writing and printing processes impact the accuracy and authenticity of a text.

c. _____ bibliography organizes bibliographic entries into logical and useful arrangements for study and research.

d. _____ bibliographies include all published materials across subjects, languages, and countries, though no complete universal bibliographies currently exist.

e. _____ bibliographies list materials available for sale in a country, published by booksellers or publishers.

f. _____ bibliographies record the intellectual output of a country, listing books, documents, and other publications produced within that nation.

g. A key challenge of reprographic services involves ensuring compliance with _____ laws when reproducing copyrighted materials.



11.9 LET US SUM UP

The bibliographic services play a significant role of in the organization, description, and provision of access to various resources, such as books, articles, and digital media. These services rely on standardized metadata to facilitate the efficient discovery and retrieval of materials. There are various types of bibliographies, including analytical, descriptive, textual, historical, and systematic, each serving distinct functions in documenting and analysing resources, from physical document characteristics to the evolution of book production techniques. The library services, such as referral services guide users to relevant resources or experts; translation services bridges language barriers; reprographic services facilitate the reproduction of documents; and consultancy services offer expert advice to optimize library operations. While these services provide significant benefits, they also face challenges such as copyright concerns, quality control, and resource management. Thus, these services are essential for advancing research, improving access to information, and

supporting both physical and digital information needs.



11.10 ANSWERS TO CHECK YOUR PROGRESS

Ans to 1.

a. Analytical.

b. Textual.

c. Systematic.

d. Universal.

e. Trade.

f. National.

g. copyright.



11.11 FURTHER READINGS

Baca, M. (2016). *Introduction to metadata: A textbook of principles and practices* (3rd ed.). Getty Research Institute.

Green, S. (2019). *Managing information: A guide to information systems* (2nd ed.). Springer.

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11.12 MODEL QUESTIONS

1. What are the different types of bibliographies and how do they differ from each other?
2. What is the role of referral services in libraries, and what are their types?
3. Discuss the significance and challenges of translation services in libraries.
4. Describe statistical bibliography.
5. What is the difference between national bibliographies and subject bibliographies?

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UNIT 12: LITERATURE SEARCH AND DATABASE SERVICE

UNIT STRUCTURE

12.1 Learning Objectives

12.2 Introduction

12.3 Need

12.4 Importance

12.5 Role of Library In Literature Search

- 12.5.1 Accessing of Diverse Sources
- 12.5.2 Academic Databases Subscription
- 12.5.3 Reference Services for Assisting the Users

12.6 Process of Literature Search: Sources

12.7 Searching Techniques

12.8 Electronic Databases

12.9 Types of Databases

- 12.9.1 Reference Database
- 12.9.2 Multimedia Database
- 12.9.3 Source Databases

12.10 Database Searching and Its Service

12.11 Let Us Sum Up

12.12 Answer to Check Your Progress

12.13 Further Readings

12.14 Model Questions

12.1 LEARNING OBJECTIVES

After going through this unit, you will be able to

- Learn literature search
- Know about the role of the library in literature search.

- Gain the process of conducting the literature search.
- Understand about the database available for online searching

12.2 INTRODUCTION

The literature search is to find specific and suitable information on a specific subject or topic. Literature Search in library and information science means carefully reviewing all types of records to locate the information that is looking for. This session will teach you how to search organized information and why it is important. This module will give you about the search for information in manual and online and also the steps of literature search. Nowadays accessing literature more quickly and effectively has been made possible with the technological advancement of their applications to bibliographical organization. As there are various types of databases so this chapter will help to understand categories of databases.

12.3 NEED

The main aim of any information activity is to deliver the information within a limited time and cost frame. Now we assess the all elements involved in the retrieval of information and what literature is all about. The user of any library may be a layman who needs information for the satisfaction of his or her needs, a student who wants something details what is in the textbook, or a professional who plays the role of satisfying by performing certain tasks. A researcher considering a new product line, starting a new field of study, or an administrator who needs to make a choice on a new project report or develop a new plan. Naturally, each one of them has various requirements based on their type and volume of information. However, getting immediate information varies in various circumstances. The routine reference services offered by a good library can meet some of the needs of most users, but for some users particularly research workers and project managers an extensive literature search that requires the use of various resources from a modern information centre as well as the professional expertise is the only way to meet their needs.

Literature search comprises evaluating and searching available literature in a subject area. It is needed for the following reasons:

- Literature search is a vital part of any academic activity.
- It links a researcher's work to broader scholarly knowledge because it shows comprehension and places any completed research in a wider context.
- Recognizing the probable issues with the researchers work plans to do
- It helps to avoid unnecessary replicating in academic works especially in the research field.
- To identify that the task at hand is worthwhile, pertinent, and has the potential to advance knowledge.

12.4 IMPORTANCE

The importance of literature searches in research and other academic areas that allow the multifaceted applicability. A well-structured literature search is most important to locate sound evidence on the field that you are searching for. Maybe books, journals government sources and e-resources are the evidence in findings. It enhances the research's legitimacy in numerous ways.

- It helps establish the coherence of knowledge and applicability of available materials by adding an interpretation of the literature in light of recent advancements.
- Charting their knowledge progression assists in determining the influence of the most recent material in the field.
- For establishing facts it brings out the dialects of contradictions among various thoughts.
- To detect the flows and bias of existing literature.
- To learn about the terminology and various concepts regarding a particular field.
- To understand certain questions that the majority of researchers have found.

- To identify the gap in the existing literature.
- It helps in critical appraisal of research.

12.5 ROLE OF LIBRARY IN LITERATURE SEARCH

Library and information centers play an important role in searching for literature. The library professional creatively plays various types of document sources. There are many ways to practice by the professional of any library.

There are four tasks in regarding management these are planning, organizing, leading and controlling which are important parts of library professionals' job. For effective performance, there are two ways which are type of skill and hierarchy level. Based on their skills and expertise, the professionals work together to form various literature-searching tasks so that library users can come and search for their needs according to the related field. Libraries play an important role in literature search, serving as essential hubs for accessing and finding a wide array of information. For academic, professional, or personal purposes, libraries provide the resources, tools, and expertise needed for various disciplines. The following points are significant in the literature search in the library and information centre.

12.5.1 Accessing of Diverse Sources

As library has a wide collection of documents, including books, academic journals, e-books, and special collections, that are important for literature searches. From scientific research to humanities and social sciences, enabling users to access a variety of information whose resources cover a broad spectrum of subjects. Libraries are frequently subscribed to paid academic journals, specialized databases, and electronic resources that may not be freely available online, ensuring comprehensive literature searching.

12.5.2 Academic Databases Subscription

There are some scholarly databases that are not typically accessible through general search engines. Libraries often provide their users with access to resources like JSTOR, PubMed, Scopus, IEEE Xplore, etc, which contain good quality articles, conference papers, and dissertations. Researchers and students are allowed through these databases to find relevant, credible literature on a given topic with advanced search options, and filtering tools.

12.5.3 Reference Services for Assisting the Users

Librarians are professionally qualified with expertise in the retrieval of information and research methods. Library professionals provide invaluable support to their users in searching for their test of choice regarding relevant literature. Librarians also assist with search strategies, guide users through complex research questions, and suggest valuable resources. This support assists in streamlining the literature search process and saves the time of users with significant effort.

- **Interlibrary Loan and Document Delivery Services**

According to the user's choice, if the particular resource is not available in a library, libraries often participate in interlibrary loan (ILL) systems that allow them to borrow needed materials from other libraries. This type of service is always beneficial when searching for rare, hard-to-find, or specialized literature. Additionally, many libraries offer document delivery services, where users can request copies of specific needs or documents from outside sources.

- **Remote Access**

Due to technological advancements, libraries have embraced technology to provide remote access to literature. Nowadays libraries offer online catalogues, digital repositories, and e-resource access. Now users can search for relevant literature from across from anywhere in the world as long as they have an internet connection.

- **Preserving of Knowledge**

Libraries play a vital role in preserving documents and scholarly works for the next generations. There is some valuable literature including rare books or out-of-print materials that remain accessible by maintaining physical and digital archives. This kind of work helps with cultural, historical and scientific knowledge that might be lost otherwise.

12.6 PROCESS OF LITERATURE SEARCH: SOURCES

A bibliography, an encyclopedia, and a publication are the source of literature that provides some vital information and also helpful for reference. When the primary search is complete, the user should search at secondary search like abstracting and indexing services. Based on the area there are whether the secondary sources are available or not. If there are no secondary sources available then the researcher should search for some other broader subject.

- **Secondary Sources**

If secondary sources are available on the topic as well as a broader subject then the users must start with some secondary periodicals on the subject. Secondary periodicals that cover a wide range of topics that would encompass journals where somewhat unrelated to the primary search topic. However, it is a well-known truth that material on a certain topic is widely dispersed among a wide range of magazines covering core, peripheral, and alien fields. Few core journals cover a significant portion of the published literature on a given topic, a considerable amount can also be found by scanning a large number of peripheral journals which are not related to the fields. For the consultation of the secondary sources, the searching skills have to be developed as vast variation is observed in the pattern of the positioning of entries and the method of indexing. Generally, the method of searching is explained in the index. The relevant subject headings differ from one secondary periodical to another.

- **Searching for Other Sources**

No search is complete without proper searching. There are some topics

where secondary periodicals are not available. In such cases, other sources like reports of research conference proceedings, theses, patents, trade literature, etc., are available. Some information may be available only to institutions, experts, scientists, etc. these are called non documentary sources of information. Other sources may likely need to be consulted at some point, regardless of the sort of information. Therefore, having an understanding of the key characteristics of various sources is important. As mentioned earlier, much of the expertise in information retrieval lies in selecting the appropriate sources to consult in each case and determining the order in which to use them.

- **Information Recording**

In searching the literature, at every step, the researcher develops his or her own style of taking references. In the search, the researcher should spend some time to spend few seconds to make proper preliminary records that may be helpful in future. Using a single operation to do various tasks is the first principle of time saving in searching. Recording of references can serve only one purpose any order providing of reference list but with one reference in a card or slip can serve various purposes. If necessary under each reference abstract can be added and subject-wise, author or chronological way cards can be arranged.

- **Outcome presentation**

In defining the subject and parameters of search outcome presentation is also required in defining the subject and parameters of searching. On behalf of the researcher search needs some exhaustive treatment and inclined abstracts confirming the users' needs. Depending on the user's need the arrangements are alphabetically (by author name), source-wise (monographs, periodicals), non-conventional (audiovisuals, microfilms, etc.), and classified. How to prepare a complete bibliography, an indication should be given. The exact sources must be added with precise references.

- **Literature Search Skills**

Only by gaining experience, one can have expertise in the literature search. Some dispositions or characteristics that support an effective literature

search are mental flexibility, persistence thoroughness, for resolving contradictory judgments must be there and accuracy in recording. Although basic knowledge is not important it assists to some extent in the field of search.

12.7 SEARCHING TECHNIQUES

Searching any literature means knowing what is being searched for behind the search of any topic. The search topic should be good and well-defined. Effective search strategy is essential if any researcher wants satisfactory output. Any electronic information resource, such as online databases, CD-ROMs, and library catalogues, should be searched. Some search strategies like construction of research question, formulation of concepts and terminology, identification of searching terms for describing the concepts, choosing databases and resources, and academic databases for finding peer-reviewed articles, books, and other scholarly content. For example, Google Scholar, PubMed, JSTOR, IEEE, Scopus Web of Science etc. Library Catalogs are also institutional repositories that often provide to access theses, dissertations, and many more.

A literature search is generally a process of information literacy. Calvin Mooers coined the term information literacy in 1950, describing it as "searching and retrieving information from storage, according to a specific subject."

After completing numerous searches, one becomes an expert in searching the database. Searching is a practice that makes a researcher perfect. Online searching is really helpful when in-depth and exhaustive searches are involved. Another advantage of online searching is the ability to use Boolean logic, which enables users to refine or broaden their search as needed. Relevant terms can be combined to adjust the search strategy through the three logical operators OR, AND, and NOT. Unlike manual searches, online searching provides faster, more efficient and more precise access to information. Boolean logic is a set of logical operations that compile search terms in various databases.

AND, OR, and NOT represent basic Boolean logic and are used as conjunctions to combine or exclude terms in keyword searching. Boolean logic is for connecting and defining search queries. AND, OR and NOT are widely accepted by designer in search engine. The three Boolean logic operators are the logical sum (+) (OR), logical product (X)(AND), and logical difference (-) (NOT). All information retrieval systems permit users to prepare their queries by using these operators. Boolean operators AND is used in a specific query that limits results of that items which contain both of the search item in the query. In the case of searching the first phases, the OR operator is used when users are sure which information is available or what word is to categorize it. The OR operator directs the search tool to retrieve any record that contains either of the words When it is placed between two words. Boolean operators NOT is used to eliminate records that contain a specific word or combination of words in the search result.

12.8 ELECTRONIC DATABASES

One of the very powerful tools used for searching and retrieving vast amounts of information quickly and efficiently is electronic databases. These databases store structured data, such as journal articles, research papers, books, reports, and other scholarly or professional resources, which can be accessed online or with the help of institutional subscriptions.

When conducting searches in an electronic database, users can enter specific keywords, phrases, or terms to locate relevant information. Many databases offer advanced search features, such as the ability to use Boolean operators (AND, OR, NOT) to combine or exclude search terms, allowing for more precise and targeted results. Filters like publication date, document type, or subject area can further refine search results, helping users to find the most relevant topic.

Electronic databases are also helpful for providing powerful sorting and indexing features that improve the accuracy and speed of search results. These systems use algorithms to rank results based on factors such as relevance, citation count, or date of publication, allowing users to access

up to date information as needed. The indexing and abstracting services began using computers to produce their print products, and MEDLINE became the first computer-based database to offer online search services for remote users. This was immediately followed by commercial online search service providers such as DIALOG and SDC. From the various vendors, there were 300 public access databases in 1975, since then database industry has been growing. Any up-to-date information on publicly available on electronic databases accessible through online vendors.

12.9 TYPES OF DATABASES

Databases are categorized by various attributes like subject, geographical area, subject, accessibility, type of information etc. Moreover, Reference databases, Multimedia Database and Source Database are based on the content.

12.9.1 Reference Database

A reference database is a database that is implemented by other sources like documents, organizations, or some supplementary database that contains data for future queries or reporting purposes. It can be carried out by citations, hypertext links from a bibliographical entry in the database. Again the reference database is categorized as Bibliographical databases, Referral databases, and Citation Index databases.

- **Bibliographic Database**

The primary information of a book includes as author, abstract, title, source, date of publication, etc. included in the bibliographic information. To find the important information like the name of the journal. volume number of the journal, etc. are contained in a bibliographic database.

Biological Abstracts, Chemical Abstracts, and Indian Science Abstracts are example of bibliographic database.

- **Referral Databases**

In this database, information is contained like addresses and descriptions of other institution's sources like non print media, audiovisual, etc. The example of referral databases are Directories of individuals, organizations, source materials, etc.

- **Citation Index databases**

The citation index database contains information like biographical details of documents and citations of documents that have been referred to in the article. Science Citation Index is an example of this database that is maintained by the Institute of Scientific Information, Philadelphia.

12.9.2 Multimedia Database

A Multimedia database is a collection of image, text, graphics, animations, video, audio, photographs, etc. Additional information may be added to the database for records to enable searching by specific parameters, such as artist, date, subject, etc. Searching related to culture, and history is an example of a multimedia database.

12.9.3 Source Databases

A source database is a collection of original data sources. Sources databases are called Factual Databases. Again source databases are categorized as Textual Databases, Numeric Databases, Textual numeric databases, Full-text databases, and Software databases.

- **Textual Database**

A textual database that contains only textual matter. Dr. S.R. Ranganathan Memorabilia Database, Petroleum Abstracts, and GeoRef database examples of textual databases.

- **Numeric Databases**

This databases provide mostly in numbers. Census information of India, economic indicators, and financial data are examples of numeric data.

Textual-Numeric databases

This database contains the records of numeric as well as textual data. Dictionaries, organization reports, are examples of textual numeric databases.

Full-text databases

Full-text databases contain full-text publications. Bibliographic databases are considered full-text databases as they provide abstract as well as source of an article. Articles in periodicals, patents, technical specifications, etc. are examples of full-text databases.

Software database

A software database is a collection of programs that is managed and accessed through software. The Pascal program that is used with CDS-ISIS is an example of a software database.

12.10 DATABASE SEARCHING AND ITS SERVICE

Searching a database refers to the process of retrieving particular data from a database based on certain criteria or queries. This is a critical functionality for applications that deal with large volumes of data, as it allows users and systems to search, filter, and retrieve the information they need quickly and efficiently.

Database services provide ways to build, store, and retrieve their databases. Users will no longer use the computing infrastructure of their own company to access data; instead, they will use the software provided by the service provider. Outages brought on by modifications to the database service provider's hardware, software, or networking would not affect the application. Users are willing to access data by using the hardware and software at the service provider instead of their own organizations computing infrastructure. The application would remain unaffected by outages outcome from software, hardware, or networking changes or failures at the database service provider's site.

Database as a service is an architectural and operational approach that allows IT providers to offer database functionality as a service to multiple consumers. There are key benefits to the database as a service such as

scalability, cost-effectiveness and ease of management, high availability, reliability, security, and performance optimization. With the advent of ICT, there has been several changes have taken place in information storage, retrieval and dissemination of information. Earlier publishers of indexing and abstracting and primary publisher periodicals were separate organizations, now it is merged. In the case of Primary journal publishers, it provides online access to full-text e-journals provided under the license agreement to the subscribers. Producers of bibliographic databases are expanding by introducing factual, statistical, and multimedia databases. Based on the needs of the users' producers of the database provide customized services to bring out various products. Primary publishers are offering online access to full-text online aggregated databases by EBSCO and ProQuest that are providing links to full-text articles online from secondary services. By searching various parameters like date, and author, the database provides sorted results.

Secondary periodicals publish compiling of primary sources like research articles, conference proceedings, dissertations etc. Publishers of secondary periodicals scan the primary sources systematically arrange them with full bibliographical details and publish at regular intervals. This is called secondary periodicals that comprise bibliographical references with or without abstract. These periodicals are now in print and computer-readable form as well. Under the bibliographic database, the indexing and abstracting periodicals come. Under the license agreement, most of these databases are in nature and available for online searching. Some examples are:

Chemical Abstract Service (CAS) database is a division of the American Chemical Society that publishes chemistry-related literature.

CAplus Database contains bibliographic information which allows searching by author name, name of the organization, identifier of document journal and patent.

SciFinder is a tool of software that assists in searching CAS databases which contain chemistry, engineering, biomedical sciences, agricultural sciences etc.

MEDLINE/PubMed Database: MEDLINE (Medical Literature Analysis and Retrieval System Online) is a leading bibliographic database maintained by the U.S. National Library of Medicine (NLM). It includes more than 37 million references to journal articles in the life sciences, with a specific focus on biomedicine.

PubMed Central: PubMed Central is a full-text database that comprises journal articles free of charge.

Medline Plus: This offers information about patients and health care.

Gen Bank: This is a database on genetic sequence.

MESH Database: This database consists of Medical Subject Headings. Primary Periodical Publications of research and development institutes, government organizations, academic institutions etc. are publications of primary periodicals.

J-Gate: J gate was launched in 2001 by Informatics India Ltd. which is an electronic gateway to a global e-journal database. It indexes over 26,940 e-journals, providing links to full-text articles on publishers' sites. Additionally, it includes articles from 9,400 open-access journals and maintains links to those as well.

J-Gate Portal: This service offers tables of contents for the latest journal issues and a comprehensive online searchable database of over 5 million articles, with more than 4,000 new articles added daily.

Digital Library: A Digital library is a collection of stored information in a computer accessible. With the help of a computer network digital content can be access locally or remotely. The main advantage of digital libraries is it increases the accessibility of users. It also offers multiple searching options. Digital libraries can offer a user-friendly interface that makes their resources accessible.

The World Digital Library (WDL): Through the internet the library makes available from countries and cultural and multilingual formats for cultures covering seven languages. In addition to providing the contents, libraries and other cultural organizations from North and South America, Africa,

Asia, and Europe also provide linguistics, cataloguing, and technical expertise.

The Digital Library of India: which is being hosted by the Regional Mega Scanning Centre at the International Institute of Information Technology, Hyderabad, in collaboration with IISc, CMU, ERNET, and MCIT for the Government of India and 21 participating institutions, aims to create a collection of one million digital books. Books in several languages that describe India's ancient history as well as cultural and social texts have been digitalized. The sources of the materials include India's public libraries and accredited universities. Manuscripts and journals written in palm leaves are also digitized.

E-Journal of Open Access: Open-access journals are freely available that permit users to read, copy, distribute and link to full-text articles. The directory of open access journal covers free, full-text quality scientific and scholarly journals. The main purpose of open access journal is to increase visibility.

Institutional Repositories: IR is a research output of particular institutions. IR is a central repository of a group of institutions or a particular subject repository. For scholarly and educational purposes this repository offers scholarly archiving resources. IIT, IISc, and IIT have established institutional repositories for the dissemination of the research output of their particular institutions.



CHECK YOUR PROGRESS

Q. Define the Literature Search?

2. Discuss the role of library in literature search?

3. Define the literature search in the context of secondary sources?

4. What is searching techniques?

5. Define the types of databases?

6. What is database service?



12.11 LET US SUM UP

Literature search and database services have been discussed in this unit. The need and importance of the literature search we have discussed. Role of library in library in literature search, process of literature search, searching techniques, and searching database has also been addresses. This unit pointed out the types of databases and its electronic forms. At the end this unit gives database services from producer's point of view.



12.12 ANSWERS TO CHECK YOUR PROGRESS

Ans to 1. Searching for literature is a comprehensive search for published information on a particular topic or area to conduct systematically with the help of some bibliographic tools. The main purpose of a Literature search is to locate more and more information on a particular research area or subject. Literature search assists the library user to find the pinpoint information in their research or study. It helps avoid duplication in research and helps find some solution to a research problem. It also helps to find new area in research.

Ans to 2. There are four tasks in regarding management these are planning, organizing, leading and controlling which are important parts of library professionals' job. For effective performance, there are two ways which are type of skill and hierarchy level. Based on their skills and expertise, the professionals work together to form various literature-searching tasks so that library users can come and search for their needs according to the related field. Libraries play an important role in literature search, serving as essential hubs for accessing and finding a wide array of information. For academic, professional, or personal purposes, libraries provide the resources, tools, and expertise needed for various disciplines.

Ans to 3. Secondary periodicals cover a wide range of topics that would encompass journals where somewhat unrelated to the primary search topic.

However, it is a well-known truth that material on a certain topic is widely dispersed among a wide range of magazines covering core, peripheral, and alien fields. Few core journals cover a significant portion of the published literature on a given topic, a considerable amount can also be found by scanning a large number of peripheral journals which are not related to the fields. For the consultation of the secondary sources, the searching skills have to be developed as vast variation is observed in the pattern of the positioning of entries and the method of indexing. Generally, the method of searching is explained in the index. The relevant subject headings differ from one secondary periodical to another.

Ans to 4. Searching any literature means knowing what is being searched for behind the search of any topic. The search topic should be good and well-defined. Effective search strategy is essential if any researcher wants satisfactory output. Any electronic information resource, such as online databases, CD-ROMs, and library catalogues, should be searched. Some search strategies like construction of research question, formulation of concepts and terminology, identification of searching terms for describing the concepts, choosing databases and resources, and academic databases for finding peer-reviewed articles, books, and other scholarly content. For example, Google Scholar, PubMed, JSTOR, IEEE, Scopus Web of Science etc. Library Catalogs are also institutional repositories that often provide to access theses, dissertations, and many more.

Ans to 5. Databases are categorized by various attributes like subject, geographical area, subject, accessibility, type of information etc. Moreover, Reference databases, Multimedia Database and Source Database are based on the content. Again, the reference database is categorized as Bibliographical databases, Referral databases, and Citation Index databases.

The source databases are again categorized as Textual Databases, Numeric Databases, Textual numeric databases, Full-text databases, and Software databases.

Ans to 6. To compile the subject bibliography and in traditional search, there are various processes such as

- The bibliography should be comprehensive or selective and should be decided.
- Current or retrospective types of documents should be included.
- Proper searches should be conducted.
- References in standard form should be recorded.
- Arrange all reference sources for specific researchers and subjects.

The bibliography is the organized collection of data or information stored in an electronic database. Any researcher or user can easily access, modify, and update the information. For example, a bibliographic database contains the name of the author, title of the book, its edition, publisher details, etc., recorded in structured form for access. The database has grown to a height that any data can find for any subject. The database contains data based on the category. In the database, data may be numeric, may be textual, may be multimedia, etc.

Word-oriented databases are bibliographic databases, full-text databases and factual databases. Databank refers to the principal data in a numeric database that contains symbols and numbers which represent statistical, demographic data etc. For representing the multidimensional structure, graphs, and architectural maps are in a pictorial database. Audio databases include sounds, music, voice etc.

Service providers by online database

- Secondary Periodicals
- e-journal publishers
- Digital libraries
- E-journal of open access
- Institutional repositories
- Search engine



12.13 FURTHER READINGS

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12.14 MODEL QUESTIONS

1. What is a literature search? Discuss the need and importance of literature search?
2. What is the role of the library in literature searching?
3. What are the steps of literature search?
4. Discuss the different types of databases with example?

What is electronic database? Discuss the database service?

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UNIT 13: INDEXING AND ABSTRACTING SERVICES

UNIT STRUCTURE

13.1 Learning Objectives

13.2 Introduction

13.3 Meaning of Index

13.4 Indexing Services

13.5 Purpose of Indexing

13.6 Need of Indexing

13.7 Principles of Indexing

13.8 Types of Indexes

13.9 Meaning of Abstract

13.10 Abstracting Services

13.11 Types of Abstracts

- 13.11.1 Titular
- 13.11.2 Annotation
- 13.11.3 Descriptive
- 13.11.4 Comprehensive
- 13.11.5 Structured
- 13.11.6 Slant
- 13.11.7 Author
- 13.11.8 Subject Specialist

13.12 Importance of Abstracting

13.13 Content analysis

13.14 Let Us Sum Up

13.15 Answers to Check Your Progress

13.16 Further Readings

13.17 Model Questions

13.1 LEARNING OBJECTIVES

After going through this unit, you will be able to –

- Define indexing and abstracting services
- Learn about their need, purpose, principles and importance
- Identify their different types
- Learn about content analysis

13.2 INTRODUCTION

We are in the end of the fast quarter of the 21st century. As we look around, we realized that this is the digital era where everyone is being bombarded with information. We called it as 'Information explosion'. So, it is definitely a tough work to find the exact relevant piece of information an individual wants from the vast ocean of information. Services like indexing and abstracting are such tools that helps users to find and locate information fast. It has become so important to have tools and services like this because they can make it easy the process of finding specific information for vast amounts of information available in books, digital databases, journals etc. This unit will help you learn about these tools and services, their need, purpose, principles, types and their importance in the information management and how they help in effective dissemination of knowledge.

13.3 MEANING OF INDEX

An 'Index' is a simple list or a guide for users in a very structured form that contains topics or keywords of a document (book or a database) that helps in finding particular information quickly. Coming to the word 'index', it is a word that derived from a Latin word 'Indicare' which means to 'point out' or 'to show'. For example: When you look at a book, the index page of that book will provide you the page numbers for each of the chapters of the book.

13.4 INDEXING SERVICES

Indexing services can be defined as 'tools' that organizes and stores

information so that people can find it easily. For example: Google Search, where you can find websites organized in a way so that it helps to find information quickly. Then also Windows Search, Library Catalogues etc.

13.5 PURPOSE OF INDEXING

The sole purpose of indexing is to help everyone to find any piece of information quickly without wasting time. The purpose is to organize the information so that it becomes easy for anyone for retrieval and also to enhance accessibility. For example: In a library, a library index is a good example of this as that will provide you the information for finding the books by subject, author or title without checking or browsing out the entire collection.

13.6 NEED OF INDEXING

Indexing or indexing services are required or needed to 'save the time'. It is important for managing huge amounts of information and make specific data easier to find. Without indexing, finding a particular piece of information from the overload of information in this world is obviously a tough nut to crack for sure. For Example: Search engine like Google.

13.7 PRINCIPLES OF INDEXING

The principles of indexing are as follows:

a) **User as the priority:** The wording and structure of the subject heading should align with what the user is likely to search for in the index. While creating subject headings for indexing, the main goal should be aligning the words and structure with the thinking and search patterns of the users i.e. it should match according to the user queries. Subject headings should be intuitive and familiar.

b) **Unification:** A subject index must include everything together under one heading. It is simply bringing all related documents under a single, standardized heading, even if the authors might use different terms to describe the same subject. It must use a term which is

unambiguous and does not overlap in meaning with other headings in the index.

c) **Conventional Use:** It must be kept in mind that the particular subject heading which has been chosen must be easily or commonly understood by the users using the documents. Focusing on the type of users, the use of the words should be chosen. Suppose, if the users are general then the heading will be better off with known and familiar words. But if the users are experts, then use of scientific term will be more preferable. It depends what the different types of users searches for.

d) **Particularity:** The heading of the topic must be very particular about what the topic is all about. It should match the material of the topic. But the heading must not also be broader than the topic covered. If a single broad heading is unable to fully cover the topic, then it will be better for the cataloguer to use two or more specific headings for it.

13.8 TYPES OF INDEXING

By arrangement (Based on Structure and Function):

- **Alphabetical index:** Alphabetical Index is that index that is easier and convenient to use. It uses the 'known by all users' order. Here all the terms are arranged in alphabetical order i.e. subject terms, author names, place names etc. Types of this index are author index, title index and subject index. One drawback of this type is the problem of synonym and scattering of entries. Example: The index we find in the back of a book.
- **Classified index:** This index arranges or organizes the entries in a classification system rather than alphabetical order. This index is helpful because it brings same or similar things together. It is useful for generic searches. But this index is a bit difficult for most users as one cannot enter directly as one can with alphabetical index.

Example: Dewey Decimal Classification (DDC), Library of Congress Classification (LCC) etc.

- **Permuted Index (KWIC, KWOC, KWAC):** This type of index rearranges keywords from a title or phrase to appear in different positions, that means any user can find information based on any particular term not necessarily the first one. This helps to facilitate search. For example: We can find the use of this index in research databases, scientific papers, book indexes etc.

  KWIC: Stands for Key Word in Context. KWIC displays keywords along with other surrounding words.

  KWOC: Stands for Key Word Out of Context. KWOC use to provide us with keywords list separately with references to the full title.

  KWAC: Stands for Key Word Alongside Context. KWAC simply shows the keywords in their original and natural order.

- **Numerical or Serial index:** This type of index uses numbers for entries in place of words for organization. It is based on numerical or serial system, instead of keyword-based or alphabetical order. Example: Standard Industrial Classification (SIC), Patent numbers, can be seen used in statistic databases, product catalogues etc.
- **Concordance index:** This index lists every occurrence of a word in a document, along with the surrounding context. This locates a passage or phrase from a text that is either partly or completely remembered. This type of indexing helps users in finding particular words or phrases within a document/text. Example: Commonly used in Linguistic Research, Literary Works, Bible studies etc.
- **Citation Index:** A citation index is that type of index that is use for tracking references or citations made by one document to another document. This index lists the documents that have cited a particular work and is used in bibliometric studies and scholarly research. This also helps in measuring the impact and relevance of research papers. Example: Web of Science, Scopus, Google Scholar Citation Index.

- **Faceted Index:** A faceted index is that type of index that organizes information using multiple facets/attributes. This allows users to dynamic filtering and refine search outcomes based on different criteria. If we compare this index with the traditional indexes, this allows users a kind of flexible exploration, navigation and retrieval of information. We find this type of index used in digital libraries, e-commerce etc.
- **Chain Index:** Chain indexing is basically that systemic indexing method which is generally used in library classification systems where subject words are linked in a hierarchical way i.e. from broader to more particular terms. It helps in deriving subject headings from classification numbers. This type of index can be seen used in library catalogs and classification systems like DDC etc.

By forms of indexes (Based on Physical/Digital Format):

- **Printed Index:** Printed Index is that index that appears in physical format, that has been manually compiled and published such as books, journals or bibliographies. This index arranges the information in a systematic way either alphabetically, numerically or subject wise so that users find it helpful to locate important and relevant topics, authors or subjects within a document. This index usually appears at the end of a book or in a separate volume.
- **Online/Digital Index:** An online or digital index is an electronic index that is stored and can be searched by users to retrieve information from digital databases, websites or e-libraries. This type of index is available on the internet or within digital databases and can be updated and modified frequently. This enables fast and advanced searching of information digitally.
- **Card Index:** Card index is a manual indexing system where bibliographic details are put in different cards and stored in drawers for easy retrieval. These are physical cards with bibliographic details that has been used widely before the digital medium came to exist.

The information here is also organized alphabetically, numerically or by subject.

- **Machine-Readable Index:** These types of indexes are stored in databases in a structured format. It is a digitally encoded index that allows automated searching and sorting i.e. it allows computers to search, retrieve and manage information automatically. Machine Readable Cataloging (MARC) used in libraries for catalog records, ISBN and DOI Databases, digital repositories like PubMed falls into this category of index.

13.9 MEANING OF ABSTRACT

The word 'abstract' means a succinct summary of a text or a document such as a book or research paper, reports etc. The abstract provides us an overview of the document's main content, objectives, methodology and key findings. Abstracts help readers to have a rapid glance and know the importance of the document without going through the complete text. There are basically two types of abstracts, Descriptive and Informative. Descriptive abstracts summarize a text or document simply but informative abstract summary includes results and conclusions with it.

13.10 ABSTRACTING SERVICES

Abstracting services are the tools that helps in abstracting or summarizing any text or document. These plays a very pivotal role as it provides with abstracts and summaries of research articles, publications, reports or any other documents to help users in quickly finding relevant information they want. These services enhance accessibility, helps in increasing academic works visibility in databases and most importantly saves the valuable time of users like researchers, scholars etc. Examples of abstracting services are PubMed (used for medical and life sciences), INSPEC (used for physics, engineering and computing), Chemical Abstract Services (CAS) etc.

13.11 TYPES OF ABSTRACTING SERVICES

13.11.1 Titular Abstract

This type of abstract provides only the title of any document without giving the full summary. It is not that much of use but if the title is great enough to convey the meaning and main idea of the document then it might have some use for the users.

13.11.2 Annotative Abstract

Annotations are those brief comments or extra information added to the document reference to provide a clear and quick information. These abstracts definitely help readers in understanding main points, meanings, references within a text. In libraries, the use of annotations helps in easy retrieval of information as they categorize and summarize the contents.

13.11.3. Descriptive/Indicative Abstract

This abstract provides readers a general summary of a text or document without providing or revealing specific details of the document. Descriptive abstract gives information about purpose, scope or any other general details but does not summarize findings.

13.11.4. Comprehensive/Informative Abstract

Comprehensive Abstract provides detailed informative summary of a document that includes everything like key points, methodology, outcomes and conclusions. This type of abstract can be seen often in scientific papers, research papers etc. where detailed information is important and necessary.

13.11.5. Structured Abstract

This type of abstract provides us with nicely organized summary in different sections and ensures clarity and consistency. These abstracts follow predefined format with sections such as background, objectives, methods, results and conclusions. We can find these abstracts mostly in medical and scientific research.

13.11.6 Slant Abstract

A slant abstract focuses on target audience and provides information based on specific focus or bias, that means it does not provide the summaries of all the aspects of the documents instead put the light on certain points that will be more relevant to certain groups of people. This is a type of customized summary that works to meet the need of the specific audiences. It is audience specific and purpose oriented.

13.11.7 Author Abstract

An author abstract is written by the original author of a document. This helps in receiving the authentic and proper representation of the work by the author. These abstracts are usually present in the beginning of most research papers, journal articles where the original author summarize the key points in their own words.

13.11.8. Subject specialist abstract

A subject specialist abstract is that abstract written by subject specialist or an expert in the field like a researcher or a librarian or a domain expert etc. This type of abstracts ensures technical accuracy and relevance for a specialized audience.

13.12 IMPORTANCE OF ABSTRACTING

Abstracting services plays a very pivotal role in academic and research areas. It helps different users like researchers and scholars in saving their valuable time and effort by enhancing information retrieval. It

improves accessibility to research as it provides quick access to the latest research findings especially in digital databases. These services also help researchers, professionals and policymakers in making informed decisions based on the summarized content. In libraries or digital repositories, abstracting services are helpful as it arranges and organizes content in a systematic way. It also helps in bridging language barriers and facilitates scientific communication.

13.13 CONTENT ANALYSIS

Content analysis is a research method which is use to study the content of documents, images, audio or video in a systematic way. Content analysis helps in identifying and detecting themes, patterns, meanings and analyses written, spoken or visual communication. Another key feature of content analysis is that it is used in qualitative and quantitative research. There are two types of content analysis. They are as follows:

1. **Qualitative Content Analysis:** This type of content analysis is used in literature reviews, media studies and social sciences. This puts the focus on themes, meanings and patterns in text or media. For example: Political speeches can be analyzed to identify ideological themes.
2. **Quantitative Content Analysis:** This type of content analysis counts the frequency of words, phrases or concepts in a document or text. Quantitative content analysis is generally used in research that is ‘data driven’, analyzing social media and media monitoring. For example: In a news article, quantitative content analysis will measure how many times the positive vs the negative words have been occurred.



13.14 LET US SUM UP

This era is referred to as 'Information Explosion Era' that means the world is exploding with information due to the rapid increase and growth

of it. Ultimately this explosion leads to the challenge to manage and effectively utilize the information. It definitely becomes a very hard task to find out the specific information a user wants. In midst of all these, services like indexing and abstracting have become very crucial. These services help in organizing, categorizing and retrieving information efficiently. In the field of library and information science, these services play a very pivotal role as they enhance the accessibility and organization of information. They help in easy and proper retrieval of information through structured indexing and concise abstracts leading to fast detection of relevant content. Libraries, now a days have to deal with a massive amount of information and by implementing these services, information can be properly categorized, organized and can be made easily accessible for research and academic purposes and therefore it has become very crucial in controlling the data avalanche.



CHECK YOUR PROGRESS

Multiple Choice Questions:

Q 1. What is the primary purpose of indexing?

a. summarize a document
b. organize information for easy retrieval
c. analyze the content
d. replace abstracts

Q 2. Which of the following is an example of an abstracting service?

a. PubMed
b. Britannica
c. Wikipedia
d. Library of Congress

Q 3. A structured abstract is divided into which of the following sections?

a. Summary, keywords, references
b. Abstract, index, table of contents
c. Introduction, methods, results, conclusions

d. None of the above

4. Fill in the blanks:

a) The_____ at the back of a book helps locate specific topics or terms.

b) The principle of _____ ensures that the terms heading of the topic must be very particular about the content of the topic.

c) Abstracting services save time by providing _____ of documents.

d) A _____ abstract is commonly used in medical and scientific journals.

e) _____ is a research method that involves systematically analyzing the content of communication.



13.5 ANSWERS TO CHECK YOUR PROGRESS

Ans to 1. b 2. a 3. a

4. a. Index b. Particularity c. Summaries

d. Structured e. Content analysis.



13.6 FURTHER READINGS

Ranganathan, S. R. (1967). *Prolegomena to library classification* (3rd ed.). Asia Publishing House.

Bauer, M. W., & Gaskell, G. (2000). *Qualitative researching with text, image and sound: A practical handbook*. SAGE Publications.

Srinivasan, R. (2012). *Information retrieval and management: A practical guide for information professionals*. Neal-Schuman Publishers.

Gilbert, G. (2009). *Introduction to information science and technology*. Pearson Education.

Silverman, D. (2016). *Qualitative research* (4th ed.). SAGE Publications.



13.7 MODEL QUESTIONS

1. Explain the purpose and types of indexes and abstracts.
2. Define the term 'index' and explain its importance in organizing information.
3. Name an indexing service and explain its purpose.
4. How does indexing save time for researchers?
5. Differentiate between a subject index and an author index.
6. List three principles of indexing and explain why they are important.
7. How do abstracting services benefit researchers?
8. Explain the different types of abstracts with examples.
9. Why do abstracts play a key role in academic research?
10. What is the difference between an annotation abstract and a comprehensive abstract?
11. How does content analysis contribute to effective communication research?

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UNIT 14: MARKETING OF INFORMATION SERVICES

UNIT STRUCTURE

14.1 Learning Objectives

14.2 Introduction

14.3 Marketing Concepts

14.4 Purpose of Market

14.5 Scope of Marketing

14.6 Marketing of Information Services

14.7 Clients of Library

14.8 Marketing strategies

14.9 Marketing strategies for libraries

14.10 Let Us Sum Up

14.11 Further Readings

14.12 Answer to check Your Progress

14.13 Probable Questions

14.1 LEARNING OBJECTIVES

After going through this unit, you will be able to

- Understand Key Marketing Concepts
- Understand the Purpose of Marketing
- Examine Marketing Strategies
- Apply Marketing Principles to Libraries
- Identify Client Groups

14.2 INTRODUCTION

Definition

Dr. Philip Kotler considered as the father of modern marketing defines marketing as “the science and art of exploring, creating and delivering value to satisfy the needs of a target market at a profit. Marketing identifies unfulfilled needs and desires. It defines, measures and quantifies the size

of the identified market and the profit potential. It pinpoints which segments the company is capable of serving best and it designs and promotes the appropriate products and services."

14.3 MARKETING CONCEPTS

Marketing refers to the fundamental principles and philosophies that guide organizations in promoting and delivering their products or services to the target audience. It serves as the foundation for creating effective marketing strategies and tactics. Libraries can adapt it to meet the unique needs of library users and stakeholders.

The Production

The production concept is one of the oldest marketing concepts, which holds that consumers prefer products that are widely available and affordable. The focus of this concept is on producing goods at a lower cost and making them easily accessible to the masses. In libraries the production concept can be translate to ensure that library resources and services (books, digital media, workshops) are widely available and accessible to the public. This includes expanding library hours, offering a variety of materials (physical and digital), and ensuring that resources are in good condition and easy to find.

The Product Concept

The product concept focuses on the idea that consumers will favour products that offer the best quality, performance and features. This concept encourages businesses to invest in product innovation and continuous improvement to attract customers.

In libraries emphasizing in providing high-quality resources and services that meet the needs of the community. This includes offering a diverse selection of books, digital content, specialized materials and programs tailored to the interests and needs of library patrons.

The Selling Concept

The selling concept is based on the idea that consumers will not purchase enough of the product unless the organization undertakes a large-scale selling and promotion effort. It emphasizes pushing the product aggressively

to the consumers through sales techniques and promotional campaigns. For libraries this concept could include actively promotion of library services, resources and programs. This may include conducting outreach programs and offering incentives to encourage more people to visit and use the library.

The Marketing Concept

The marketing concept is customer-centric. It asserts that an organization should aim to satisfy the needs and wants of its target market more effectively and efficiently than its competitors. This concept involves identifying the target audience, understanding their needs and creating products or services that fulfil those needs.

Libraries can adopt the marketing concept by focusing on the needs and preferences of library users. Libraries should provide services, resources and programs based on the demands of their communities. This may be done by conducting market research, gathering feedback from library patrons and understanding the community's needs in order to offer relevant, useful services.

The Societal Marketing Concept

The societal marketing concept goes beyond the idea of satisfying consumer needs. It adds a layer of social responsibility, suggesting that an organization should not only focus on consumer satisfaction but also consider the long-term impact on society and the well-being of individuals and communities. Libraries can emphasize providing services that benefit the community and society at large. Libraries should focus not just on increasing circulation or attracting new members, but also on promoting education, social inclusion and lifelong learning.

The Relationship Marketing Concept

Relationship marketing focuses on building long-term, meaningful relationships with customers rather than focusing solely on individual transactions. It encourages organizations to engage with customers over time to foster loyalty and repeat business.

For libraries, relationship marketing means creating a strong bond with library patrons, encouraging frequent visits, and fostering a sense of

belonging. This can involve personalized services, loyalty programs, and providing a space where patrons feel valued and connected.

The Holistic Marketing Concept

The holistic marketing concept is an integrated approach that involves considering all aspects of marketing- product, promotion, pricing, and place—together. It emphasizes creating a unified strategy that involves all members of an organization in delivering a consistent message and experience to customers.

For libraries, this means aligning all aspects of the library experience—from the physical layout to digital services, from promotional campaigns to community programs—into a cohesive and consistent offering. Libraries need to ensure that all staff are involved in marketing, ensuring a unified message across all platforms.

14.4 PURPOSE OF MARKET

The purpose of marketing can be understood by the views of some prominent personalities in marketing. Philip Kotler *said "Marketing is the process by which companies create value for customers and build strong customer relationships in order to capture value from customers in return.* "According to Kotler, marketing's purpose is not only to create value for customers but also to establish relationships that allow businesses to benefit from customer loyalty and

Peter Drucker said *"The purpose of business is to create and keep a customer". H*e emphasizes that the core objective of marketing is to create and maintain a customer base. Marketing's role is to identify customers' needs and serve them better than the competition.

Seth Godin said *"Marketing is no longer about the stuff you make but the stories you tell."*

He highlights the shift in marketing focus toward creating compelling narratives that resonate with consumers, rather than just focusing on the product itself. The purpose of marketing is now about connecting emotionally with customers.

Kotler & Keller said *"Marketing is an organizational function and a set of processes for creating, communicating, and delivering value to customers and managing customer relationships in ways that benefit the organization and its stakeholders."* This view highlights that marketing's role extends beyond just selling products. It involves an ongoing process that creates value, maintains relationships, and benefits both the company and its broader ecosystem, including customers, suppliers, and partners.

David A. Aaker said *"The purpose of marketing is to build brand equity – the set of assets linked to a brand that adds value to the product or service." He* focuses on brand building. The purpose of marketing, according to him, is to enhance brand equity, which in turn leads to long-term customer loyalty and increased profitability.

Kevin Lane Keller said *"Marketing is about creating value for customers and building long-term relationships that result in profitability."* He underscores that marketing is about generating value for customers. The focus is on fostering strong relationships with customers, which leads to sustained business growth and profitability.

14.5 SCOPE OF MARKETING

The scope of marketing is broad and encompasses various activities aimed at promoting and selling products or services. The key points outlining its scope could be-

1. **Market Research**: Identifying market needs, customer preferences, and competitive analysis.
2. **Product Development**: Creating and improving products based on market demand and customer feedback.
3. **Branding**: Building brand identity, awareness, and positioning in the market.
4. **Advertising & Promotion**: Creating and managing advertising campaigns, digital marketing, and promotions.
5. **Sales Strategy**: Developing strategies for increasing sales and building customer loyalty.

6. **Customer Relationship Management (CRM)**: Managing and enhancing relationships with existing customers to improve retention and satisfaction.
7. **Pricing Strategies**: Setting competitive pricing models to maximize profitability while meeting customer expectations.
8. **Distribution & Channel Management**: Identifying and managing channels (online, retail, wholesale) to reach customers effectively.
9. **Public Relations**:Managing a company's image and fostering a positive public perception.
10. **Social media & Digital Marketing**: Leveraging digital platforms (social media, email, SEO, etc.) to engage with the target audience.
11. **International Marketing**: Expanding marketing strategies across global markets with cultural considerations.
12. **Sustainability and Ethical Marketing**: Promoting eco-friendly products, transparency and social responsibility.
13. **Market Segmentation & Targeting**: Dividing the market into distinct segments and targeting specific groups for more tailored strategies.

14.6 MARKETING OF INFORMATION SERVICES

Marketing of Information Services refers to the strategic process of promoting and delivering information resources and services to users, ensuring they are aware of what is available, how to access it and the value it can provide. Information services can be provided by libraries, information centres, digital platforms, and other organizations that provide knowledge resources.

The key aspects of Marketing Information Services include-

1. **Understanding the Audience**: The first step in marketing information services is to understand the target audience. This could include students, researchers, the general public. Understanding their needs, preferences and expectations helps tailor the services effectively.
2. **Identifying the Services**: Information services can include access to books, journals, databases, digital resources, research

assistance, reference services, workshops and any other innovative service needed by the new generation users. Marketing should clearly communicate what services are available and how they can benefit users.

3. **Promoting the Services**: It include a number of activities including-
   - Public Relations: Creating awareness through posters, newsletters and announcements.
   - Social media: Utilizing platforms like Facebook, Twitter, Instagram to engage and inform users.
   - Email Marketing: Sending out newsletters or service updates to subscribers.
   - Workshops and Training: Offering sessions to users about how to use services effectively.
   - Website: Maintaining an updated, user-friendly website with information on services and how to access them.
4. **Value Proposition**: Communicating the value of the services offered is key. Whether it's providing access to the latest research, offering user-friendly tools or giving personalized assistance, the unique selling points (USPs) should be emphasized.
5. **Customer Relationship Management (CRM)**: Building and maintaining relationships with users is essential. This can involve personalized communication, feedback solicitation, surveys to understand user satisfaction and addressing users' needs promptly.
6. **Utilizing Technology**: Leveraging technological tools like online databases, digital archives and mobile apps allows information services to reach users more effectively. Using search engine optimization (SEO) techniques to enhance discoverability is also important.
7. **Evaluating Success**: It's important to monitor and evaluate the effectiveness of marketing strategies through user feedback, usage statistics, and engagement levels. This helps refine the approach and improve service offerings.

Purpose and need of Marketing Information Services

1. **Awareness and Accessibility**: Marketing helps increase awareness about available services, ensuring users know where to find information resources and how to access them. It makes users aware of the value of the services provided.
2. **User Engagement**: Marketing strategies such as events, newsletters and workshops can increase user engagement, helping build a loyal and informed user base.
3. **Resource Utilization**: By effectively marketing services, institutions can ensure their resources are used optimally. This can help in increasing footfall, encouraging usage of digital resources and boosting overall engagement.
4. **Improved Service Delivery**: Understanding user needs and preferences through marketing activities helps information providers fine-tune their offerings, resulting in better service delivery.
5. **Promoting Digital and Remote Services**: As more users turn to digital resources, marketing plays an important role in ensuring they understand how to access and navigate online services, such as e-books, databases and virtual reference help.

Examples of Marketing Strategies for Information Services:

1. **Library Marketing**: Libraries often market their collections, databases, digital subscriptions, and reference services. This could involve a combination of outreach programs, social media campaigns, and user events to highlight library services.
2. **Educational Resources and Research Databases**: Information services offering specialized resources, such as research databases or e-learning platforms, use marketing to inform users of the resources available, their relevance to users' needs, and how to access them.

Digital Platforms: Online information services like news websites, digital libraries, or knowledge hubs use digital marketing strategies such as targeted ads, email campaigns, and interactive features to engage users.

14.7 CLIENTS OF LIBRARY

The clients in case of a library will be the individuals or groups who utilize the library's services, resources and facilities. Libraries serve a wide range of users, from local community members to specialized groups. Understanding the different types of clients helps libraries tailor their services to meet the specific needs of each group.

Types of Library clients include-

- **Students**: It includes school libraries where students are frequent users of school libraries. They access books, magazines and digital resources for academic purposes. College and University students rely on libraries for research articles, books, academic databases and study spaces.
- **Faculty and Researchers**: Professors, Teachers and researchers use library resources to access journals, research papers, databases and books relevant to their academic and research work. They may also utilize interlibrary loan services, citation guides, and specialized research materials offered by the library.
- **Children and Young Adults**: Libraries provide resources like storybooks, educational games and online resources for children to support early learning, literacy, and recreational reading. Libraries often organize programs like reading clubs, storytelling sessions, and homework help for young adults.
- **General Public**: Local residents visit public libraries for a variety of reasons, including borrowing books, attending community programs and using computers or Wi-Fi. Public libraries often offer free access to digital resources like e-books, audiobooks and magazines as well as educational workshops and community outreach programs.
- **Job Seekers and Career Professionals**: Libraries can support job seekers with career resources, resume-building workshops and access to databases with job listings. Many libraries also offer career counselling services and workshops aimed at skill development and job market readiness.

- **Senior Citizens**: Libraries offer a variety of services to senior citizens, including access to large print books, audiobooks and internet services to stay connected. Many libraries run programs for seniors, such as social events, lifelong learning opportunities and computer classes.
- **Government and Non-profit Organizations**: Libraries often serve government agencies, non-profits and other organizations by providing access to research, data and professional resources. They may also provide facilities for hosting events, meetings or workshops that support the community.
- **Online Users/Virtual Clients**: In the digital age, libraries cater to online clients who access e-books, audiobooks, research databases, and other resources through library websites or digital platforms. Virtual clients also engage with online services such as remote reference help, virtual library tours, and downloadable resources.
- **Special Interest Groups**: Libraries may also serve specialized groups like researchers in the medical field, legal professionals, or those seeking historical or genealogical research. Libraries often partner with these groups to provide specific resources and host specialized programs or workshops.

14.8 MARKETING STRATEGIES

Marketing strategies have been employed by various businesses and organizations to build their brands, increase sales and engage with customers. These strategies are often innovative, adaptable and have left a lasting impact on the way businesses approach marketing. Some of the effective marketing strategies include-

1. The 4Ps of Marketing (Marketing Mix)

- Product: What is being offered to meet the consumer's needs and wants.
- Price: How much the product will cost, which impacts its perceived value.
- Place: Where and how the product will be distributed.
- Promotion: The methods used to promote the product, including

advertising, sales promotions, and public relations. The 4Ps are a foundational marketing model used by companies globally to create well-rounded strategies.

2. Segmentation, Targeting, and Positioning (STP)

- Segmentation: Dividing a broad consumer or business market, typically consisting of existing and potential customers, into sub-groups of consumers based on some type of shared characteristics.
- Targeting: Selecting one or more of the segments identified to focus marketing efforts on.
- Positioning: Creating a distinct image of the product in the mind of the target audience. STP helps businesses tailor their marketing to specific customer needs, making it more effective and efficient.

3. Content Marketing

- Storytelling and Educational Content: Content marketing involves creating valuable, informative and engaging content to attract, engage, and convert customers. This could be in the form of blog posts, videos, infographics, or social media posts. Content marketing focuses on building trust with potential customers by providing them with useful information that solves their problems.

4. Influencer Marketing

- Collaborating with Influencers: Partnering with popular individuals who have a strong following on social media platforms or other digital spaces to promote products and services. Influencer marketing leverages the trust that influencers have with their followers to promote products more authentically.

5. Social Media Marketing

- Engaging Users on Social Platforms: Using platforms like Facebook, Instagram, Twitter and TikTok to build brand awareness, engage with customers and drive traffic to websites or online stores. Social media marketing allows businesses to connect with a wide audience and create meaningful relationships through direct interaction.

7. Email Marketing

- Direct Communication with Customers: Email marketing involves

sending targeted messages to individuals or groups to build relationships, promote products or offer discounts. Amazon's personalized email recommendations based on purchase history or browsing behaviour. Email marketing is effective for retaining existing customers and encouraging repeat purchases.

8. Brand Loyalty Programs

- **Rewarding Repeat Customers**: These programs incentivize customers to continue purchasing from a brand by offering rewards, discounts, or exclusive access.
- Famous Examples: Starbucks Rewards program, which allows customers to earn points on purchases for free products or special offers. Loyalty programs build long-term customer relationships and drive repeat business.

9. Cause-Related Marketing

- **Aligning with Social Causes**: This strategy involves partnering with charitable organizations or causes that resonate with the company's values and the target audience.
- Famous Examples: TOMS Shoes' "One for One" campaign, where the company donates a pair of shoes for every pair purchased. Cause-related marketing helps companies improve their public image and connect with socially-conscious consumers.

12. Experiential Marketing

- **Creating Immersive Customer Experiences**: Experiential marketing allows customers to interact with the brand in a memorable way, creating emotional connections.
- Famous Examples: Coca-Cola's "Share a Coke" campaign, where customers could personalize bottles with their names. Experiential marketing focuses on creating unique experiences that foster brand loyalty and lasting impressions.

13. Price Skimming

- **Setting High Initial Prices and Gradually Lowering Them**: This strategy involves setting a high initial price for a new product and then gradually lowering the price over time as the product becomes

more established or competition increases.

- Famous Examples: Apple uses price skimming for new product releases like the iPhone, where the initial price is high, but it decreases over time with new model launches. Price skimming is commonly used for technology products or innovations that have little to no competition at first.

14. Personalization Marketing

- **Customizing Marketing Efforts to Individuals**: This strategy involves tailoring products, content, or advertising to individual customers based on their preferences, behaviors, or demographic data.
- Famous Examples: Netflix's personalized recommendations based on viewing history or Spotify's customized playlists. Personalization improves customer engagement and creates more relevant, targeted marketing campaigns.

14.9 MARKETING STRATEGIES FOR LIBRARIES

Marketing strategies in libraries are essential for raising awareness about library services, increasing user engagement and promoting library resources to a diverse clientele. These strategies help libraries remain relevant, meet the needs of their users and compete with alternative sources of information and entertainment.

1. Community Outreach and Engagement

- **Collaborate with Local Organizations**: Partner with schools, local businesses, community centres and other organizations to promote library resources and events. These partnerships can create mutual benefits, bringing in new users and promoting library programs.
- **Host Events**: Organizing events like author talks, workshops, book clubs, story hours for children or educational seminars that appeal to a wide range of audiences. This can draw in community members who might not have visited the library otherwise.

2. Social Media and Digital Marketing

- **Social Media Platforms**: Libraries can use platforms like Facebook,

Instagram, Twitter and YouTube to interact with users, promote library events and showcase new resources. Social media can also be a place to engage users in conversations about books and other library services.

- **Online Newsletters**: The monthly or weekly email newsletters for library cardholders can be an effective way to keep them informed about new books, upcoming events or any changes in library services.
- **Library Website and Blogs**: Regular update the of the library's website and blog with helpful content, such as reading lists, user guides, upcoming events and articles related to library services. The website should be user-friendly and optimized for search engines (SEO).

3. Customer-Centric Approach

- **Personalized Services**: Offer personalized recommendations based on users' borrowing history or preferences. Use technology to offer tailored experiences such as book recommendations or curated reading lists.
- **Surveys and Feedback**: Regularly collect feedback from library users through surveys, suggestion boxes or online forms. Listening to the users and acting on their needs can help tailor services that better match their expectations.

4. Promoting New and Existing Resources

- **Highlight Special Collections**: Showcase unique collections, such as rare books, archives, digital resources or multimedia materials, to attract specialized user groups such as researchers, students and local history enthusiasts.
- **Feature New Arrivals**: Promote new books, e-books, audiobooks, or other materials through displays or online catalogues. Ensure users know what's available and encourage them to borrow new resources.
- **Digital Resources Promotion**: Many libraries offer access to e-books, online databases, audiobooks and other digital resources.

Promoting these offerings is crucial in the digital age, especially as users increasingly expect online access to library resources.

5. Library Visual Identity

- **Signage and Displays**: Use clear and attractive signage both inside and outside the library to help users navigate easily and discover new resources or events. Creative displays (themed book displays, interactive bulletin boards, etc.) can capture attention and encourage engagement.

6. Incentives and Rewards Programs

- **Loyalty Programs**: Implement a loyalty program for library patrons, rewarding them with 'Best user Award' for frequent visit and attending events. This can motivate users for library visits and participation in library programs.
- **Contests and Competitions**: Organize book-themed competitions or creative challenges, such as writing contests, book review competitions or scavenger hunts.

7. Targeting Specific User Groups

- **Outreach to Schools and Educational Institutions**: Libraries can create targeted marketing campaigns aimed at students, teachers and school administrators, offering educational resources, homework help and extracurricular programs that align with the curriculum.
- **Marketing to Senior Citizens**: Promote services for senior citizens, such as large-print books, audiobooks, tech literacy workshops and senior-focused programs. Libraries can also partner with local senior centres to increase outreach.
- **Youth and Family Programs**: Develop programs that target families, such as story time for children.

8. Collaborations and Partnerships

- **Corporate Sponsorships**: Partner with local businesses and corporations to sponsor library events, reading programs or technology upgrades. This can help libraries secure additional funding and resources while promoting the business.

- **Local Artists and Performers**: Collaborate with local musicians, artists and performers to organize events that draw the community into the library.

9. Marketing for Library Services for Special Needs Groups

- **Services for Disabilities**: Promote assistive technologies available at the library, such as screen readers, audio books, or accessible formats for people with disabilities. Libraries can offer outreach to disability groups and organizations to raise awareness of these services.
- **Targeted Communication**: Reach out to specific communities with tailored marketing materials, making them aware of library resources, programs, and facilities that meet their unique needs.

10. Advocacy and Public Relations

- **Library Advocacy Campaigns**: Promote the value of libraries through advocacy campaigns that highlight the importance of libraries for education, community development and access to information. These campaigns can be done in collaboration with library associations and community groups.
- **Public Speaking and Media Engagement**: Libraries can engage in public relations by speaking at community meetings, writing guest articles for local newspapers and participating in media interviews. This will raise awareness of library services and contribute to the library's image in the community.



CHECK YOUR PROGRESS

Q 1.**Fill in the blank**

a. Dr. Philip Kotler defines marketing as "the science and art of exploring, creating and delivering _____ to satisfy the needs of a target market at a profit."

b. The _____ concept is centred on creating long-term, meaningful relationships with customers rather than focusing on individual transactions.

c. The _____ concept emphasizes a customer-centric approach,

aiming to satisfy the needs and wants of the target market more effectively and efficiently than competitors

d. According to Kotler & Keller, marketing is "an organizational function and a set of processes for creating, communicating, and delivering _____ to customers and managing customer relationships."

d. In the context of libraries, the _____ concept would focus on promoting library services, resources, and programs to encourage more usage.

e. Marketing Information Services ensures that users are aware of what is available, how to access it, and the _____ it can provide.

f. One of the key aspects of marketing information services is _____, which involves understanding the needs and preferences of the target audience.

g. _____ involves dividing a broad market into sub-groups of consumers based on shared characteristics to tailor marketing strategies.

h. The 4Ps of marketing include Product, Price, Place, and _____. _____ is a strategy that involves sending targeted messages to customers via email to build relationships and encourage repeat purchases.



14.10 LET US SUM UP

An effective marketing strategy is crucial for libraries to enhance visibility, engage users, and demonstrate their value to the community. By adopting a multifaceted approach, libraries can strengthen relationships with diverse client groups, ensuring their continued relevance in an increasingly digital world. Tailored marketing strategies that cater to the specific needs of various library users, combined with clear communication and consistent branding, can contribute to long-term success.

Marketing concepts provide a valuable framework for libraries to design, deliver, and promote services that meet the diverse needs of their

communities. Whether focusing on production, customer-centric approaches, or community involvement, these concepts help libraries maintain their significance and build lasting connections with patrons.

Marketing information services goes beyond simple promotion-it's about fostering a connection between service providers and users, ensuring that the right resources are accessible and effectively utilized. This approach supports the overall goals of information services, from libraries to digital platforms.

In a broader sense, marketing is not just about promoting products but understanding customer needs, building relationships, creating value, and maintaining competitive advantage. It plays a vital role in business growth and customer engagement, driving both short-term success and long-term sustainability across industries.



14.11 ANSWERS TO CHECK YOUR PROGRESS

Ans 1. a. value

b. Relationship

c. Marketing

d. value

e. Selling

f. value

g. Understanding the Audience

h. Segmentation

i. Promotion

j. Email



14.12 FURTHER READINGS

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14.13 MODEL QUESTIONS

1. Who is considered the father of modern marketing?
2. What does the production concept in marketing focus on?
3. What is relationship marketing focused on?
4. What is the purpose of market research in marketing?
5. Name one strategy used in the marketing of information services.
6. What is the main goal of customer relationship management (CRM) in marketing?
7. What is segmentation in marketing?
8. Describe the various marketing concepts.
9. Discuss the purpose of marketing as highlighted by Kotler and Drucker.
10. What is the scope of marketing?
11. How can libraries utilize the marketing concept to better serve their communities?
12. Explain the concept of marketing information services.
13. Discuss the types of library clients.

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