KNOWLEDGE, INFORMATION AND COMMUNICATION

M.LIB.-101

DIRECTORATE OF DISTANCE EDUCATION
SWAMI VIVEKANAND
SUBHARTI UNIVERSITY
Meerut (National Capital Region Delhi)

SLM Module Developed by :
Dr. Ramkumar Pathak
Ph.D., MLIS, PGDLAN

Reviewed by :
Dr. Javed Khan

Assessed by :
Study Material Assessment Committee, as per the SVSU Ordinance No. VI(2).

Printed and Published by : VIDYA Prakashan Mandir (P) Ltd.
Vidya Industrial Estate, Baghpat Road
Meerut-250 002 (Delhi-NCR)
info@vidyaprakashan.com

(M.LIB.—101)

Knowledge, Information and Communication

Syllabus

Unit 1:

- Information: Characteristics, Nature, Value and Use
- Conceptual Difference between Data, Information and Knowledge
- Communication of Information & Information Generation
- Communication Process, Channels, Models and Barriers

Unit 2 :

- Information Industry: Generators, Providers and Intermediaries
- Intellectual Property Right Acts
- Concept of Freedom, Censorship, Data Security and Fair Use
- National Policy on Library and Information System and Services

Unit 3 :

- Knowledge Management: Definition, Concept, Need and Basic Tools
- Knowledge Management Systems: Basic Components
- Approaches in Knowledge Management
- Trends in Knowledge Management
- Role of Knowledge Managers

Unit 4 :

- Knowledge: Definition, Need, Kinds and Basic Tools
- Development of Knowledge
- Implication of Knowledge for Development of Libraries

Unit 5 :

- Information Science: Definition, Scope and Objectives
- Information Society: Genesis, Characteristic, Changing Role of Library and Information Center in Society

CONTENT

Note

UNIT 1

Information

1.1 Introduction

Information is the basis of economic, social, cultural and industrial and all other such development of modern information-oriented society. Information is a major source for the qualitative development of society. Without it, progress is not possible. Authentic information is considered to be the basis for taking development related, proper and quick decisions. Today the whole world demands as much information as possible for various intellectual and objective activities. Today information has become an essential part of every person's daily life. Information is the basis of modern research work going on in the field of science and technology from the first stage of knowledge acquisition.

Defining information in this, the interrelationship of information and knowledge, types of information, types, need and purpose of information, etc. have been studied. Comparative study of data, information and knowledge has made their distinction clear.

1.2 Definitions of Information

The modern age is the information-intensive era in which the development and progress of a nation is measured and evaluated on the basis of the breadth of its information and communication system. Proper use of information energy gives new direction to research, development and managerial work. Information is the key to development, with the continuous use of which any nation can become developed and powerful. Information is such an important resource, in the absence of which no production system can be completed.

Human beings have the ability to make decisions. Information proves to be very important and useful in arriving at any decision. To be acquainted with a fact is information. Information is a human idea and knowledge is the overall form of human thought, that is, actually knowledge is information, which is used for social development.

UNIT- 1
Information

Note

Information is the refined form of innumerable ideas that are taking birth every moment in the human mind. That is, information is a product of human thought. Research work goes on continuously for better living and fulfillment of basic needs. The conclusion of the research work again transmits new information. That is, information is also the main source of quality development of the society. With timely availability of information, all wastage can be stopped by taking proper decisions.

Today everyone feels the need for information. We are all familiar with the word 'information' in some form or the other, but it seems difficult to define it, or to tie it to the periphery of words. Many scholars have defined information, but no definition is universally accepted.

1. According to Daniel Bell, "Information means news, facts, figures, reports, acts, tax codes, judicial decisions, resolutions and other similar sources. "
2. According to Mr. Rowley and Turner, the data transmitted between two persons is called information.
3. Machulp and Mansfield have defined information as different from knowledge. According to this :
   (i) Information is segment, part, part and particular, whereas knowledge is structural, coherent and universal.
   (ii) Information is short term, possibly transitory, whereas the existence of knowledge is long term.

   Information is the flow of messages whereas knowledge is the result of this flow.
4. According to Dr. Padmanabham, "Information is that which can be communicated through conscious and unconscious means."
5. According to Webster's Dictionary of English Language, "Information means any intellectual concept acquired by study or education in any form, which is based on facts, figures or knowledge, whether written or oral. "
6. In the definition presented in the Random House Dictionary, "The terms facts, intelligence, advice, knowledge, wisdom etc. have been included as synonyms of information."
7. According to the Concise Oxford English Dictionary, "The word information means knowledge which is related to any particular facts, events and subjects and can be communicated."
8. According to Harrod's Librarians Glossary & Reference Book, information is "a set of widely communicable facts."
9. According to J. Baker, "The facts related to a subject are called information."

Note

10. According to N. Bulkin, "Information is that which has the ability to change shape."
11. According to J.H. Shera, "The form in which biologists and librarians use information is called fact. It is a stimulus, which we receive through our senses. It can be just one kind of fact or it can be a whole set of facts, although it is a unit, it is a unit of ideology.
12. According to E. Hoffman, "The totality of statements, facts or numbers is called information which is synergistically interconnected according to intellectual, rational thought or other mental method."
13. According to Norbert Wener, "The subject-matter of the exchange that takes place with the external world and when we are in harmony with it and experience our harmony on it, is called 'information'. To live actively and effectively is to live with information."
14. Information has been defined by Wersing and Neveling on the basis of different approaches. Six approaches to information are represented by them :
    - **(i) Structural approach :** In this approach the information is contained within the structure of the world, or there are permanent relationships between physical objects, which may or may not be experienced.
    - **(ii) Knowledge Approach :** Under this approach, knowledge is recorded which is created on the basis of the understanding of the structure of the world. This approach was not accepted as it treated the terms knowledge and information as synonyms.
    - **(iii) Message approach :** This access is related to the marks of transmitting the message. Under this, information is recorded on some physical basis in the form of symbols etc. that can be communicated. This approach can only be used in mathematical communication theory of communication.
    - **(iv) Intent Approach :** Under this approach the meaningful content of a message is accepted as communication.
    - **(v) Effect Approach :** According to this approach, information is a process, which arises only in the form of a specific effect.
    - **(vi) Process approach :** According to this approach, information is generated as a process when a problem and important data come together in the human mind.

Based on the above approaches, information is an essential social process by which messages are communicated.

Note

That is, all new ideas are new information, whose timely collection will help the institution, society, nation and society to grow. There is a close relationship between information and communication.

Communication usually begins with an ideology, content or dialogue and through some medium the sender transfers to the recipient.

1.3 Kinds of Information

Information is generated to meet the needs of the society and as a result of finding solutions to social problems. There is no universally accepted classification of information.

1.3.1 Types of Information as per J.H. Shera

According to J.H. Shera, information is of the following six types :

1. **Perceptual information :** The ideas, theories and hypotheses that are formed by focusing on a problem are called perceptual information.
2. **Empirical information :** Under this, data obtained by literary investigation or research work being done in the laboratory, on the basis of personal experiences or by communication from other sources, is kept.
3. **Procedural information :** Under this, the procedures that can be made by the researcher to make his work more effective are kept. In this type of information, data is collected, processed and tested. This information is based and organized based on scientific attitudes.
4. **Motivational Information :** Human beings are curious and reflective and try to get new information, for these two factors affect them. One is itself and the other is the environment there. The information received by the environment reaches directly and is more effective. This is called persuasive information.
5. **Policy related information :** This type of information includes information related to policy making or decision making process. It helps in decision making, various activities are well defined in this information. Objectives and responsibilities are set. The division of tasks is clear.
6. **Indicative information :** It is necessary to have cooperation and coordination to carry out group activities effectively. The activities and activities of the group are carried out effectively by appropriate guidelines.

The above different types of information have been classified on the basis of their characteristics. Information can be made more effective by systematic communication.

Note

1.3.2 Types of Information Based on Use and Source

The types of information are decided on the basis of use and source of information. Source refers to the environment in which the information is produced. J.T. Morchandani has classified information into the following eight types :

1. **Scientific Information :** In this category the data collected on the basis of experiments are kept. Its purpose is to convey information about scientific research.
2. **Technical Information :** The purpose of this information is to make aware of the technical information related to various products and services. Most engineering specialities fall into this category.
3. **Techno-economic information :** The purpose of this information is to make aware of information related to development, production and other economic activities. In this category, data related to raw material, meaning refined material consumption and internal and international market survey, etc. are kept.
4. **Business Information :** In this category, data related to production, sales, warehouse, profit and loss – are kept. In this, along with the data of capital production and construction, the employment data of various labourers are also kept.
5. **Industrial Information :** In this category, data related to different types of industries, their production capacity, their licensing capacity, consumption of raw materials, production etc. is kept. Knowledge of skills related to multiple products and various services is also available.
6. **Manpower Information :** Under this data related to various skills, employment etc. is kept.
7. **Socio-demographic information :** In this category information related to geographical distribution of sources, production capabilities and manpower are kept. Under this, educational and training facilities and socio-economic data are also kept.
8. **Administration Information :** Policy making information is kept in this category. This type of information helps employers, fans and individuals involved in the administration of research and development to make appropriate decisions.

1.4 Characteristics of Information

Information is the basis of every activity, development and decision. Information is the solution to the unresolved aspects. Information is the solution to problems. In the absence of information, every field gets paused.

Note

Information be it general or scientific, social or economic, it has some natural characteristics. The following are the natural characteristics :

1. Information is an important democratic resource which does not get destroyed by using it.
2. Information is born on the basis of individual knowledge and thinking capacity of man.
3. Information is the sophisticated production of data.
4. Information can be used and consumed by each section of the society at any time according to its capacity.
5. Information is ever-increasing, infinite and multidimensional.
6. Information shared by many individuals, institutions and organizations without any damage can be put to use.
7. Information can be commutated and summarized.
8. Information is factual as well as descriptive.
9. Information is timely and its usefulness keeps on changing with the passage of time.
10. Information can be recorded and translated.
11. Information can be evaluated.
12. Through information, a constant connection is established between the past, the present and the future.
13. The usefulness of information lies in enriching knowledge.
14. Information is a resource and an asset in the information society.
15. Information is an essential input for human development and progress.

1.5 Nature of Information

Information in its combined form is called knowledge. Information is generated by refining the data. Information from data, knowledge from information and wisdom from knowledge. Information is inherent in many subjects. Its nature is clearly visible in different subjects. Computer technology shows the nature of information storage and retrieval, in the physical sciences information is considered the same essence as matter and energy, in the biology information is processed in living beings, in the social sciences information is treated as a resource and economic. It has been said that in library and information science, information technology is used for quick communication of information.

1.6 Scope of Information

The field of information is very wide. With the discovery of innumerable facts hidden in the world, the field of information goes on expanding. The last word cannot be used for any concept of information.

Note

Information is important in every decision-making process. Information cannot be separated from communication. The utility of information keeps on gaining momentum through communication and communication. The field of information is not limited by language and geographical barriers. The field of research is asymmetric and research is not possible without information. Traditional libraries are also being converted into information centers as a result of information. Based on the five sources of library science propounded by Mr. Ranganathan, the five sources of information science explain the immense field of information.

The Five Sutras of Science explain the vast field of information.

1. The information is for use only.
2. Every user should get the information he wants.
3. Every information the user gets.
4. Information saves the user's time.
5. The Information World Center is always growing.

1.7 Need and Objectives of Information

Information is an essential step of human civilization. The need for information is constantly felt in various activities of social development. Information is essential in making the society and nation developed and powerful. Information is necessary for education, research, development, mass communication, trade, industry, science and technology as well as recreational activities. The need for information can be proved on the basis of the following points :

1. **Education :** Education is a gradual development by which man gradually established harmony with his physical, social and spiritual life in various ways. Education is an art which helps in the physical, mental and moral development of the child. Education is the backbone of the material society which develops the ability of a responsible citizen. Education is a continuous and lifelong process. Information is needed to gain knowledge related to general and specific subjects. A continuous flow of new information is necessary for the updated information of any field. Today there is a demand for online information through computers so that the wastage of time, money and labor can be avoided. Therefore, information has an important role in the intellectual upliftment of the society by educating every person.
2. **Research and Development :** Due to population pressure, research work goes on continuously for the purpose of increasing the basic resources in the society. Research work requires prior information, on the basis of which research results are obtained and

Note

new information is issued. Fundamental research is carried out by educational institutions and learned organizations, which leads to the expansion of knowledge. By applying this information, practical research is done to find solutions to various problems. In this way one information is discovered by another and social life gets better. Therefore, information is necessary for research and research for the development of the nation and society.

3. **Mass communication :** Awareness is increased by informing the public by quick transmission of information through mass media. Information is transmitted using electronic, printed and online media. Keeping in view the increasing utility of information, rapid communication channels are used.
4. **Government Activities :** Information related to the activities, reports etc. of various government offices, departments, ministries, commissions, committees, etc. is very important and it is published. There is a constant need for this information. Several networks have been established and databases have been created for quick availability of information. Today, information is considered essential in many areas like planning, import-export, budget, small scale industries, health, energy and education.
5. **Trade and Industry :** In the modern era of competition, various business and industrial establishments are adopting the latest form by means of the latest equipment, tools and techniques. Information is needed to get established in his field and earn maximum profit, so that he can also lead his field. Marketing of information is also taking place.
6. **Daily Life :** Today every person in the society needs information in some form or the other. Information is also considered essential in the quality of items of daily consumption, health, safety, education, entertainment etc. There is also a demand for information about modern equipment working in everyday life.

1.8 Conceptual difference between data, information and knowledge

Generally, data, information and knowledge are considered to be synonymous with each other but there is a subtle and clear difference between them.

Data refers to facts, figures and statistics. These are pieces of information and are disorganized. Data does not provide a clear explanation of a fact. Before any information is received, data related to it is collected. Data refers to the unorganized information. When the data is organized it is called information. Therefore information means organized data and data means

Note

systematic presentation of data from unorganized information is called information and the overall form of information is called knowledge.

The new facts that arise due to the inquisitive nature and thinking ability of human beings are collected in an unorganized form, which is called data. After compilation, any information is obtained by organizing the data into different sections as per the requirement. After using this information, it increases the field of knowledge. Thus the field of knowledge goes on developing from ideas to data, from data to information and from information. Data is unorganized thought and information is organized thought, data has no meaning whereas information is meaningful. Systematic information is born from data and inference from information is the unitary form of all information called knowledge. The comparative study of data, information and knowledge has been done in the following table :

Table 1.1

S. No.	Data	Information	Knowledge
1.	The raw information is called data.	Information is organized data.	Knowledge is the aggregate form of information.
2.	This is a statistical fact	It is a thought.	It is a suffix created from thoughts.
3.	Collection, observation and survey of data is done experimentally.	Information can be obtained from analyzing the collected data.	The organized interpretation of information patterns is called knowledge.
4.	Data is misleading,	Information removes confusion.	The detailed explanation of knowledge makes the situation clear.
5.	Data is represented numerically.	Information is represented by means of expressive signs	Information is presented in detail in knowledge.
6.	Data is a piece of information.	Information is part of knowledge.	Knowledge is the aggregate form of information.
7.	Data or facts are received data in compilation.	Information is the flow of messages.	The result of information flow.

Note

8.	Data is recorded.	Recorded data is analysed.	The analyzed information is organized.
9.	The data is incomplete and meaningless	Information is subtle and meaningful.	Knowledge is a comprehensive form of meaningful information.
10.	Data is the result of observation or survey.	Use of knowledge is information.	Collected information is knowledge.

1.9. Communication of Information

All activities of human life are based on information only. If there is no information, there will be no movement in the world. The progress of the nation becomes possible only by getting the right information. In the modern era, an information network has been spread all over the world to receive information and to give information. Now libraries and information science cannot be imagined without an information system. There was a continuous change in the word library from the past, that is, after the library, documentation, documentation science, information, information science and finally the library subject appeared before us in the form of library and information science. Today the term Information Technology faculty has also been associated with library and information. Therefore, we can say that information technology has been included in libraries and information science. Through this unit you will be thoroughly introduced to information communication, a key element of your curriculum: library and information science.

1.10 Meaning and Definitions of Communication

Communication is a process of providing and receiving information, which is accomplished through speech, writing and signs. In other words, here we can say that communication is the act of sending information from one place to another.

Communication is derived from the Latin verb "Communicare", which means to communicate with each other, to discuss. Information communication takes place between at least two people, whether this communication face to face through things, whether directly or indirectly by telephone or by any means like books, newspapers, magazines, e-mails etc. The definition of information communication has been given by the following scholars :

According to Barelson and Gerry, "Communication is the transfer of information, ideas, emotions, skills etc. in the form of symbols of words, pictures, drawings, graphs etc. This transfer is an act or process, commonly known as communication.

Note

According to Fosti and Edward, "It is an on-going process. Ideas originate in a person's cognitive framework, they are indicated and they are sent by any medium or means. Messages are received and sent by another person. Decode is done, which is to "answer" it according to its own cognitive framework.

According to Aldridge, "When social interactions are expressed through the use of signals if it involves the transfer of meanings, it is known as communication.

According to Shannon and Weaver, "We can use communication in a broad sense, which includes all kinds of methods by which a person influences one's own mind. It can be not only written or oral, but also through music, theatre, pictorial cinema, dance-drama and all forms of human behavior.

According to Cutlip and Center, "Effective communication is that in which the message of the symbol or words has the same meaning to the sender of the message.

From the above definition "It is concluded that there are mainly three elements working under communication :

1. Source / Sender 2. Channel / Message; And
3. Receiver

The communicator must have complete knowledge. It is necessary to have complete faith and trust in the receiver towards the communicator. The communication signals made by him should be such that the receiver can also understand him, he can participate in it. The sender delivers the message and the receiver receives it on the basis of his/her knowledge and experience. When there is a lack of common experience between the two, communication becomes virtually impossible. The greater the common sense and common interests, the simpler and easier the communication will be. Participation in communication is essential in any regular organization for people and purposes. Communication is used in different ways. Generally speaking as a verb, it means to Communicate as a verb is :

1. Exchange of information, feelings and ideas,
2. To introduce,
3. To make known, or
4. Establishing a sympathetic relationship.

As a noun communication means :

1. The process of exchanging information, general messages and symbols;
2. The process of exchange of ideas between persons by similar symbols;
3. The process of expressing ideas, and
4. Science and technology of information communication.

Note

That is, communication is the mutual exchange of ideas, opinions or decisions of conversation or written material through a telecommunication system or any other medium.

1.11 Importance of Communication

It is known from the definition of information and communication that both information and communication are like the wheel of a chariot, which is helpful in driving the chariot of human form. If there is no one of these wheels, then the work of man will be impossible.

If there is information but there are no means to communicate it, then that information is not useful, it is useless. Similarly, the means of communication of information are available, but if the information is not communicable, then there is no justification for that communication.

Similarly, by the communication of information, not only the activities of human life, but also a progressive society and that progressive state and the nexus of all these information-rich states, a progressive, energetic, powerful, bright world with high technological potential can be created.

The importance of information communication is automatically proved by providing the right information, which is worthy of communication, to the right person at the right time through the right means of communication.

Thus communication is a process of transfer and reception, which incorporates the information of ideas, imaginations. People are in constant communication, whether they are at home, working, walking on the road, travelling. Communication is a fundamental element of life, and it is as indispensable as air and light to the individual. Cultural and institutional changes can be experienced through science, technology and communication, telegraph, telephone, wireless, radio, telephoto, hymns, popular newspapers, periodical broadcasts, movies. At present, the technologies of information communication are developing rapidly. Teleprinter, fax, e-mail, satellite, mobile etc. are new achievements.

1.12 Types of Communication

There are three main types of communication :

1. **Wheel type communication :** It is similar to the formal structure of an institution, information center, library, etc., where the concerned persons have to be in contact with only one focused person.
2. **Circular type communication :** Under this type of communication system, all the concerned persons can communicate information only to their two neighbours.
3. **Free flow or all channel type communication :** Under this communication system, all the concerned persons are completely free to communicate their message to each other.

Note

1.13 Forms of Communication

There are many routes of communication in an organization or information center. The following chart shows the types of communication : According to the institutional framework. The nature of communication Formal, Informal, Oral, Written, Downward communication, Vertical communication and Horizontal communication.

On the basis of the gestures of the signs, communication can be in any form, oral or written. The following three types of communication are mainly found in both the institutional framework or "gesture" methods :

1. **Downward Communication :** In this type of communication, the communication usually comes from top to bottom-like instructions related to understanding the task, communication related to control i.e. information transmitted by a higher position to a lower position. Downward communication provides information but has not been able to make sense of it, so many people do not consider it effective. It also takes more time and it does not create mutual trust. To make this communication effective, managers have to create a positive communication attitude, get all the information, plan the communication and build trust between the sender and the receiver. The following possible oral and written communication can take place from this type of communication :

   (i) Oral :

   - Interviews, counseling
   - Personal instructions
   - Lectures, Assembly Conferences
   - Social and Cultural Affairs

   (ii) Written :

   - Orders and Instructions
   - Letter, reminder, notice
   - Bulletins and notice boards
   - Posters
   - Annual report

2. **Upward Communication :** In this type of communication the message is given by the subordinate to the higher position. Under this, things related to subordinate work capacity, problems related to work, classification of orders, criticisms, new ideas and suggestions come. This can be in the form of providing suggestions, reports and

Note

advice. It can also be called suggestive communication.

Although this communication is subordinate, but due to lack of constant contact with the subordinates, the delay in exchange of information can be considered normal. In this, the employee gives only that information to his superior officer which cannot promote his interest. For this communication to be effective, a suitable environment has to be created in the organization and the top managers have to be good listeners as well.

It may contain the following possible oral and written communication :

(i) Oral :

- Direct conversation
- Meetings and conversations
- Interview
- Federal chain
- Phone

(ii) Written :

- Report
- Personal method
- Complaint method
- Suggestion Method

3. **Horizontal Communication :** This communication takes place between people of the same chain. If the exchange of ideas, facts and information takes place between persons of the same level and between persons working at different levels. Its main purpose is to speed up the flow of information, improve understanding and establish coordination. It may include the following possible oral and written communication :

(i) Oral :

- Phone
- Lectures, conferences and meetings
- Social and Cultural Affairs

(ii) Written :

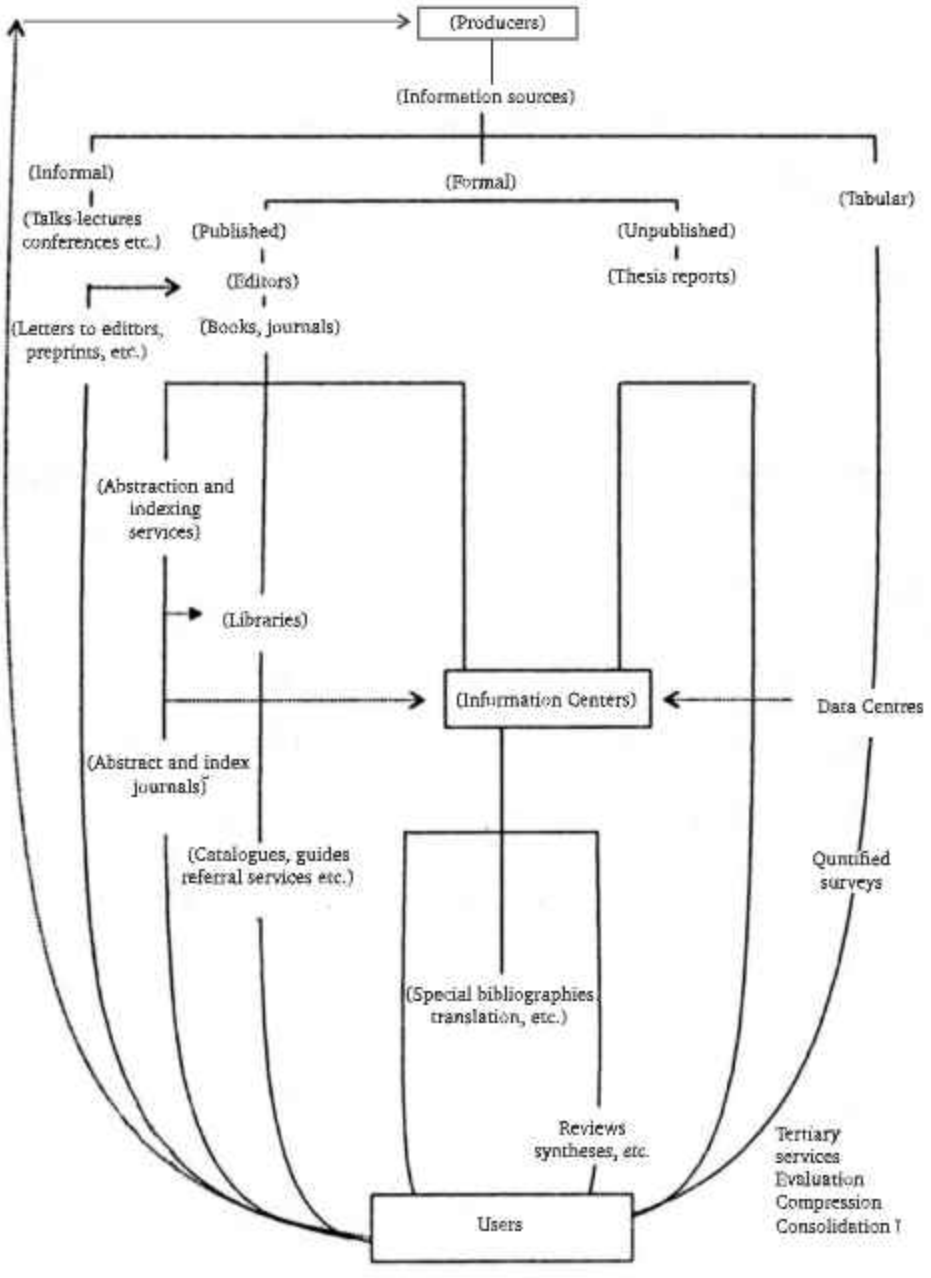
- Letters, lectures, conferences and meetings
- Handbook
- Annual report
- Federal report

1.14 Libraries, Information Centers and Information Communications

Libraries and information centers play an important role in information communication. The work of producing information is done

Note

by publishers, authors, educational institutions, scientific and technical institutions, research institutions, conferences, oral conversations, reports, correspondence, etc. Library and Information Center selects, collects and analyzes important and necessary information from sources and transmits it to the users. This process of information communication goes on continuously, this process is shown by the following diagram :



Hand book for Information Systems and Services

Note

1.15 Promoting Agencies of Information Communication

The media can be texts, magazines, newspapers, radio, movies etc., they themselves depend on some such organization, which can transmit them systematically. They have been divided into the following parts by D.S. Aggarwal

1. Author, 2. Business, 3. Government, 4. Semi-Government Organizations, 5. Business and Industry, 6. World Broadcasting, 7. Newspapers, 8. Libraries. Apart from the institutions mentioned above, there are some organizations which play a very important role in information, such as information centers, societies, autonomous organizations, industrial houses, producers, movies etc.

1.16 Information Generation

Information is being produced in various forms. Much information is also produced in more than one form. Information is also public and personal also public information is available to the general public. Personal information is contained in the mind of a particular person, and to get them, one has to see the lectures, interviews, articles etc. of the person. Following are the main forms of information generation :

1. **Oral form :** In the Vedic period only oral form was prevalent. At that time knowledge was based on Shruti and Smriti, there was no practice of writing. In this type of knowledge, no script or spelling of words was required. There are many tribes that speak. But they do not have scripts, in these tribal societies only oral form was prevalent. The exchange of information takes place in oral form. It is simple and direct. In this, any concept, statement, suffix etc. is formed in the mind and it is expressed with the help of words. Others listen to these ideas and receive their feedback. Oral communication can be carried over a long distance using physical means such as telephone, radio and television. In this way direct knowledge of the information related to the oral form of the information is obtained. For this some language is used. In the oral form of information, two parties can benefit in the following ways :
   (i) A person to person contact in which two persons meet with each other, discuss face to face or express information through telephone.
   (ii) Contact of a person to a group in this, a person can express information by giving lectures to a group or can be made aware of appropriate information to satisfy their curiosity.
   (iii) Contact of one group with another group in which information is expressed through group discussion and a conclusion is reached.

Note

2. **Audio-Visual Format :** In this format, audio-visual means are used to produce information. This form is useful for both illiterate and literate. In this form the production of information is effective which can be easily received by other persons. The production of information in this category is possible in the following way :
   - **(i) Exhibition :** In this, information is communicated with the help of electric audio-visual means by organizing an exhibition. The queries of the group are also satisfied by being directly present by the producer of the information.
   - **(iii) Demonstration :** In this, information is transmitted to distant people by broadcasting a live display through audio-visual means.
   - **(iii) Film :** In this, information is displayed through a film. For this special shows of the film are organized. The film is also telecast for the general public.
   - **(iv) Television :** Information is produced through television. It is very useful for informing the general public and for instant communication.
   - **(v) Radio :** Communication of information is also possible by listening to radio, tape recorder, cassette, etc.
   - **(vi) Visual aids :** The use of visual aids for oral and written information includes oral and written information. Written information is communicated through visual means.
3. **Marked Language Form :** Deaf and mute persons cannot use the verbal form of information. Therefore, the development of a language based only on symbols, through which information can be communicated. In this form of information production, information is produced by the hands, fingers and other parts of the body. It is a marked language form. For example, the sign of "V" with the fingers expresses happiness and sometimes by shaking the neck. In both these examples, marked language was used in the form of information production.
4. **Printed Form :** The Chinese developed block printing technology in about the 8th century. The development of the art of printing was rapid due to the contribution of the German printer Gutenberg to the printing arts. The printed form of information generation is still the most popular form of information production. In this format the information is in printed form.
5. **Documentary Format :** This is a written form of information. It is not direct, in which the information is provided by the person in

Note

written form. The following are the categories of documentary form :

(i) **Personal :** In this, the person expresses the information through correspondence.

(ii) **Published :** In this, the person publishes his information and makes them accessible for social use. It is available in the formats like book, magazine, research paper, pamphlet, catalog etc.

(iii) **Unpublished :** Under this report, dissertation, information paper etc. are kept.

6. **Illustration Format :** Maps and atlases represent information in an illustration form. In Namo and Atlas etc., through pictures, the information of places, rivers, mountains, lakes and roads etc. is in the form of illustration. There are similar examples in newspapers and in cartoons etc.
7. **Handwritten form :** The script for writing in ancient Egypt, Indus Valley and China was invented in BC. The written form of information production evolved from the script. To preserve the information, hand writing was done on papyrus, vellum, bamboo strips, porch clay tablets and inscriptions etc. This handwritten form of information generation was in vogue at this time. Even today thousands of manuscripts are preserved in many libraries and archives.
8. **Digital format :** In this format, all the information remains in digital form, which is stored in the computer. With the help of computers, information can be accessed online at the same time by many people from different places. In relation to the information, mutual discussion can also be done with the producers of the information. Information is available in the form of a database. New information technology has changed the nature of information using computers, telecommunications and satellites. It has also given speed to its transmission and communication.
9. **Multimedia Format :** Multimedia format can be clarified on the basis of following points :

(i) **Multimedia :** Multimedia (*i.e.* multimedia) consists of multiple mediums, which are integrated into a single unit within a digital environment that searches the stored information using a computer system. Multimedia products are available in CD ROM.

(iii) **Hypertext :** We use this word in discussion on multimedia. Hypertext—A system of storing text, pictures, sounds and

Note

other data that provides direct links to related articles, pictures, sounds and other information.

(iv) Hypermedia : When information is presented together in text, sound, animation and hypertext in an interactive system, we call it information presented in hypermedia. The Hypertext system links images, audio and visual elements, and text together. The World Wide Web is an example of this.

(v) Cyber Media : Both the Internet and the World Wide Web operate in cyberspace. That's why both these mediums are called cyber media, but both cyber media and cyberspace are different ideas. Cyber media needs a composite space that is in cyberspace. Apart from this, using cyber media, a person can see physical objects like computers in the real world. The medium consists of globally linked databases that act on receiving inputs.

1.17 Communication Process

In the communication process, along with the communicator, the medium of communication and the recipient or target group play an important role. If there is a change in these, then the process of communication also changes. In the communication process, the communicator conveys his message to the receiver through the medium of communication or route. The process of communication is considered complete only when its feedback or feedback is received by the receiver. There should also be equality in communication between the transmitter and the receiver, because in the case of asymmetry, communication gets blocked. The parity between the two is necessary because due to the multifaceted changes taking place in the medium, now the communicator along with the direct expression of the message also encodes the social, cultural and linguistic symbols or symbols, which the receiver decodes to receive the message and give feedback, it happens. Therefore, there should be equality between the communicator and the receiver at the level of language, sign, symbol and information element of the message.

Sender ---- Message ----- Signal Quote-------Recipient

Understand implicit sense ---- Message

------Feedback------

Main Components of Communication Process : There are seven major components or basic elements of the communication process that make communication meaningful. The major constituents of the communication process are as follows :

Note

1. **Idea :** Before transmitting a message, the idea that comes in the mind of the communicator about the message that he wants to transmit to the receiver. Every written or oral message begins with the generation of an idea. So any excitement that arises in the mind that one wishes to share with another person is basically the same thought. So the first stage of communication is thought.
2. **Communication :** Communicator is called the sender, communicator or the person who delivers the message. Through this the message is transmitted, it is the source of the message. The communicator plays the most important role in the communication process. No communication process can be imagined in the absence of a communicator; Because it is the facilitator of the communication process.
3. **Channel :** The medium acts as a bridge between the transmitter and the receiver. The medium can be whatever the communicator thinks fits and uses to connect with the receiver; For example, mutual conversation, correspondence, meeting or meeting, newspaper, telephone, mobile, radio, television, internet etc. All these mediums help the communicator to convey his message to the receiver. The success of communication depends on the choice of medium. This should be chosen carefully by the communicator. A suitable medium is selected by the communicator to convey the message to the target group. This process is done through the medium of communication. That is why at the time of the development of the communication industry, the talk of 'the medium is the message' was raised, but today the difference between the message and the medium is well known.
4. **Message :** When the communicator presents his idea through speaking, writing, pictures or signs, then it is called a message. Message includes information, ideas, hints, attitudes, instructions, orders, complaints, suggestions, etc. Before transmitting the message to the communicator, it should be kept in mind that what is the content of the message? Who is to interpret it? Through which medium to broadcast? To whom is the message to be conveyed? What level of language of the message to keep? These things have to be considered before sending the message to the communicator. If the communicator does not pay attention to these things, the communication fails. For example, if the message is not sent with the rural people in their level and language, then the message will not be able to be communicated.

Note

5. **Encoding and Decoding :** With the development of communication media, the form of communication has changed. Now communication is no longer limited to traditional media, face to face or magazines. Due to the development of Radio, Doordarshan, Internet etc., it has become widespread. Because of this, many new things have been added to the communication process. With the development of information technology, there has been a multifaceted change in the process of communication, as well as the process of receiving the message by the receiver has also changed.

In these new media, words and pictures are encoded before sending the message, that is, they are converted into sound and waves. The communicator uses language, visuals, images, symbols, music, etc. as symbols to convey his feelings, thoughts, information. This is called signaling. In the process of signaling the message, it is necessary to keep in mind that the signal should be able to express the idea in the right form. For this it is necessary that the message should be signaled in such a way that the vision is equally structured in the mind of both the communicator and the receiver.

1.18 Communication Models

Understanding the invisible phenomenon is like a fairy tale. There are mainly two reasons for any model sample. The first is that the sample guides the research process and provides information for academic conversation. The second is that the sample conceptual framework presents a plan for the application of the design.

C. David Mortensen in 'Communication' : The Study of Human Communication' has presented the idea that the model is the ideal and abstract form of an event or object.

Samples are free in nature. It focuses on essential facts by limiting the definite detail in the act of summarization. The main utility of the sample lies in the acceptance of the points in the determination of the feasibility of the conversation. He further argues that communication models are mere pictures, they are distorted images, mainly dynamic images required for interaction. The communication model can be divided into four types as follows :

Communication models

- Classical Communication Model
- Early Linear Model
- Non-linear Model
- Multi-dimensional Model

Note

1. **Classical Communication Model :** The traditional communication model was influenced by the dominance of the ancient Greek and Roman empires. This communication model was first presented by the Greek philosopher Aristotle (384-322 BC).
2. **Early Linear Model :** It is associated with the characteristic of the art of doing work. In this, the free flow of information communication process is mainly defined in terms of linear measurement. Shannon Weaver is considered the father of this type of sampling. Shannon Weaver's mathematical model is the beginning of the initial linear sampling.
3. **Non-linear Model :** Such models are associated with the characteristic of working art, whereby they define the free flow of information communication process mainly in terms of non-linear measurement. The helical or serpentine model of the Danes is the flagship of this category.
4. **Multidimensional Models :** Different types of geometrical structures are involved in this type of model. Reich and Bateson functional model is the best example of this category.

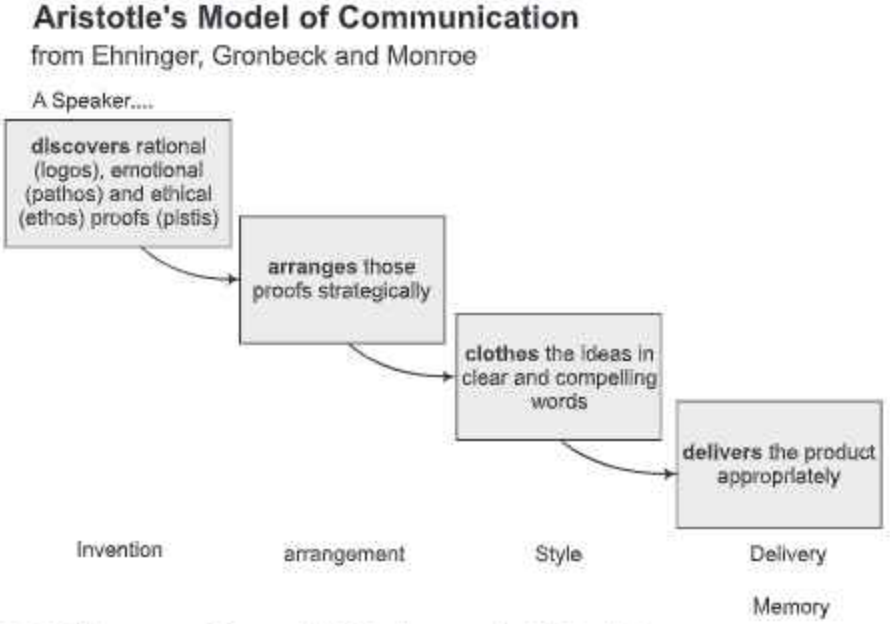
1.18.1 Aristotle's Model of Communication

According to the Aristotle model, a speaker plays a major role in the communication process. He alone is responsible for the entire internal communication process. The sender of the message implicates his factual ideas in the document, after which he distributes those ideas to the recipient. Adequate and effective communication requires apart from the ability of the sender to influence the recipient. Therefore, it is the speaker at the central point that conducts the whole process. In the Aristotle model of communication, the sender is the active operator and the receiver is in a passive role. Therefore, in Aristotle's communication, the sample sender is central.

In order to establish better communication of information, the sender should pay more attention to the following facts, because on the basis of these facts the whole information communication process operates

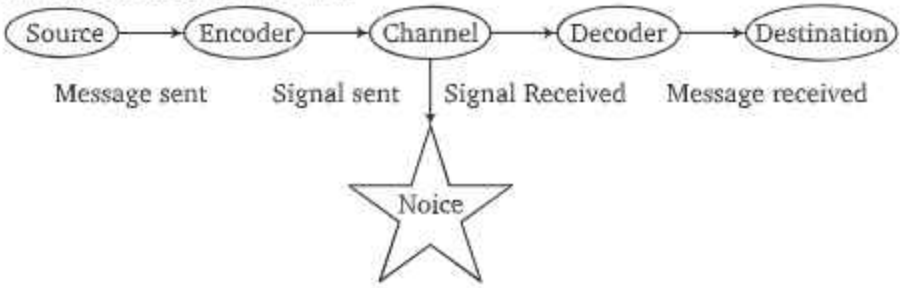
1. Choice of Words
2. Good understanding of the target reader
3. Quality of Information Content
4. Effective use of language
5. Excellent Communication Skills
6. Ability to impress the reader

Note



1.18.2 Shannon Weaver's Mathematical Model

Claude Shannon was a research scientist at the Bell Telephone Company of America. He wanted to provide consumer support with maximum telephone line capacity with least interruption. Therefore, Shannon presented his mathematical theory of signal transmission for telephone communication. But Warren Weaver applied this information loss theory of Shannon in the field of interpersonal communication. Shannon rendered it in 1949.



Different Elements of Shannon Weaver's Model : The following is a detailed description of the various elements used in Shannon Weaver's mathematical model :

1. **Source :** It initiates the communication process, hence is initiated or productive. It can also be individual or collective effort, which creates or produces information. For example, leaders or universities.
2. **Encoder :** It receives the ideas or facts produced by the source or sender and converts those facts into proper code according to its ability and transfers the information further.

Note

3. **Message :** Any idea, fact that is transmitted from one end to another is raw data, information or message. Message is the main factor of communication, because without it no communication can be imagined. The message can sometimes be in the form of a written statement, written gesture or gesture.
4. **Channel :** It is a medium through which a message (oral, written or digital) is sent or transmitted.
5. **Noise :** The noise which obstructs the free flow of information from sender to receiver during communication is called noise.
6. **Decoder :** The decoder converts the information received in the form of code into understandable information.
7. **Receiver :** Receiver is the one who receives the information sent by the sender. The receiver is the essential point of the communication process because in its absence communication ceases to exist.
8. **Feedback :** For effective communication it is essential to know whether the information received, understood and acted upon by the recipient is eligible or not. Feedback is an essential part of communication, it shows the usefulness of the information.

1.18.3 Berlo's S.M.C.R.

This model was propounded by David Forces in 1960, which was based on the Shannon Weaver model. In this sample the forces are represented in a linear form, which is as follows :

Encoding		Decoding	
Source/sender	**Message**	**Medium**	**Receiver**
Communication ability	Source	Hearing	Communication ability
Nature	Element	Vision	Trend
Knowledge	Processing	Touchy	Knowledge
Social system	Pattern	Full of smell	Social system
Culture	Coding language	Test	Culture

1.18.4 S.M.C.R. Model of Communication

The SMCR model believes in the fact that the sender and the receiver must be in equal position for effective communication. If both are in equal position then communication will be established properly. That is why the sender and receiver are the same. For example, if the communication ability is good on the source side, then there is good listening ability on the receiver side.

Note

1.18.4.1 *Criticism of Berlo's S.M.C.R. Model of Communication*

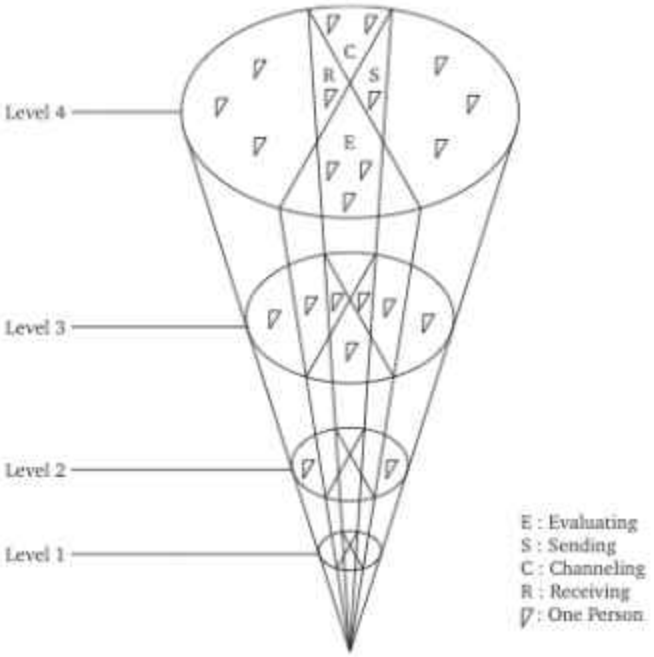
Various scholars have criticized the SMCR model of the forces of communication, which are as follows :

1. In this type of sample there is no provision for retrospection.
2. There is no mention of barriers to communication in this type of sample.
3. It is a complex model.
4. In communication, different people should be of equal status, which is not possible in real life.
5. The main drawback of this model is that it eliminates the use of the sixth sense as a medium, which is God-given in people.

1.18.5 Reusch and Bateson's Functional Model

Reich and Bateson formulated the functional model in 1951. These scholars have propounded four functional levels of communication process on the basis of working together on this model. Communication functions at each of these four levels—evaluation analysis, sending, receiving and based on the medium. The different levels as propounded by Reich and Bateson are the following :

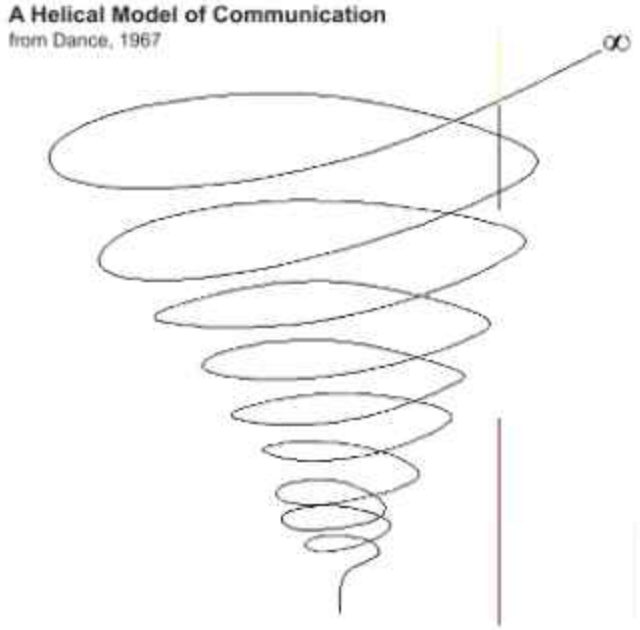
Level 1 - Communication Process
Level 2 - interrelationship communication process
Level 3 - Communication between people
Level 4 - The cultural level, where many people are connected to each other.



Note

1.18.6 Dance's Helical or Spiral Model

Danes propounded the helical or serpentine model in 1967. According to this helical or circular model, communication is a constantly changing process and in this the entire communication process can be seen as a circular shape in the communication path from sender to receiver.



1.19 Barriers of Information Communication

In communication of information, a number of processes have to be passed from the communicator to the receiver. At present, information has been considered as a powerful and useful resource for the multifaceted development and prosperity of the nations, whose utility has been accepted everywhere. The prosperity, growth and development of the nation is worthy of it and loyal citizens depend on theoretical and applied research and a high level of education and training. For such activities, events and plans, there is an absolute need for information at the appropriate and appropriate time, in the absence of which there is an obstacle in the direction of progress. That is to say, it is very necessary to transfer information from one person to another.

The collection of information is done in information materials and users of information are the last link in the chain of collection, transmission and transfer of information, for whose use and benefit only libraries or information centers are established. The purpose and function of these centers is to make the information contained in the information materials

Note

available for their use only. Therefore, it is certain that there are many types of obstacles in conveying the message or information to the recipient of the information, which are as follows :

1. **Language problems :** Language is a powerful medium for communication. This is the biggest obstacle that comes in the form of communication. The language that the communicator knows and the language in which the information is being sent is not necessarily the language that the informant knows. In such a situation, such information would not be valid.
2. **Financial problems :** This is a termite problem, which is always involved in human life. Due to this problem in the library :
   - All published literature is not available in libraries or information centres.
   - Researchers and scientists are not able to participate in conferences, discussions etc.
   - Facilities are not available.
3. **Time Element :** Time takes a lot in formal media and information is transmitted quickly by new technology methods, but due to the upcoming technical problem and lack of knowledge, it takes more time than formal mediums.
4. **Literary Explosion :** In today's scientific age, information has become a hoard. In such a situation it has become a very difficult task to find all the information. This hinders the free flow of information.
5. **Foreign Exchange :** In order to acquire or purchase foreign literature, it has to go through a long process of foreign exchange and it has to go through a long process, from which either literature is obtained, and even if it happens, it takes a lot of time.
6. **Political and Diplomatic Relations :** Political relations of one country with another country are based on such that scientists and researchers of one country can communicate information and research of another country with the researcher of that country. Many times, even due to these disputes, scientists and researchers of these two countries are not able to communicate information.
7. **Government Publications :** There are some such types of records of the government, which are not published publicly. Their information reaches a very limited number of people. Also there is some kind of text which is not published systematically; For example, foreign standards, technical reports, patents, etc.

Note

8. **Lack of media of information communication :** There are many areas where there is no systematic medium of information communication and if so, they are not used due to reasons like electricity problems and lack of knowledge, experience etc. Most of the mediums are one-way communication, due to which the informant is not able to get much information on any related subject.

1.19.1 Suggestions for Resolving the Obstacles Coming in Information Communication

There is an explosion of information in the present context. Along with this, the number of informants to get the information is also continuously increasing innumerable. In such a situation, when the barriers to information transmission come to the fore, we seem unable to follow even Ranganathan's five sutras.

To eliminate this irony, the necessary solutions for easy and simple information transmission are as follows :

1. The communicator should use modern technology.

   Such as – Computer, E-mail, E-chat, Fax, Mobile, Mobile SMS
2. It is most appropriate if the information communication is face to face, so that the receiver of the information removes all his confusion and gives new suggestions together.
3. Both the communicator and the receiver of the information should be in constant touch, so that everyone is aware of the latest ideas.
4. There should be clear expression in the message of the communicator.
5. The communicator's own views should be very clear, so that no doubt remains.
6. Information should be collected and reinvested.
7. The communicator should pay special attention to the time element.
8. The communicator should pay special attention to the language of the receiver of the information.
9. The communicator should keep his information up-to-date on a regular basis.

Note

Exercises

Very Short Answer Questions

1. Write the definition of information.
2. What do you mean by downward communication?
3. Define 'communication'.
4. Name three elements of communication.
5. Name any two barriers to communication.
6. State the types of communication of information.
7. What is vertical communication?
8. State any two problems of communication.
9. Define information.
10. Name the methods of information generation.

Short Answer Questions

1. What is the importance of information in library science? explain?
2. Explain the importance of information communication.
3. Explain the forms of communication.
4. Explain the elements of communication.
5. What are the barriers in the information world? Discuss.
6. Present your suggestions to remove the barriers in the communication of information.
7. Discuss the different forms of information generation.

Long Answer Questions

1. What do you mean by communication? Explain the types, forms and importance of communication.
2. Explain in detail the various barriers to information communication and their appropriate solutions.
3. Define communication. Explain the barriers in communication of information.

UNIT 2

Information Industry, Intellectual Property Rights and National Policy

2.1 Introduction

In today's era, institutional framework is required to perform any task like health, education, environment, safety, defence, industrialization, research and development etc. The man power and head power related to an institution or organization is the real heritage of that institution or organization. Proper management, distribution and use of information and knowledge produced by the organization is the main reason for knowledge based economic development. This is the reason that today the transfer of a particular person from one institution to another does not cause any special problem, because there is no effect on the knowledge-base of that institution. Therefore, there is a need for how the knowledge generated by that institution can be kept organized so that it can be used properly in future. Libraries and information centers play an important role in this situation.

To establish contact between the source of information and the users of information, the need for a medium was felt which would act as a bridge between the two. The sources of information, the collectors of the information and the subject-matter experts of the information act as mediators to introduce the information. The collection of information, presentation of information and dissemination of information are done by these information intermediaries according to the needs of the users. Thus the role of information intermediary is important in establishing links between information producers and information users. Information intermediaries form the link between information producers and information users. Reference librarians, reference specialist, information manager, information

Note

consultant, information officer, information searcher, information producer are known as information mediators. An information intermediary is neither a creator of information nor a producer of information, he merely acts as a bridge between the producers of information and the seekers of information. The basic objective of the information intermediary is to provide information according to the inquiries and try to satisfy them. The information intermediary, by keeping information about various information producers/sources, supplies the information to the users of the information as per their demand.

Intellectual property is a type of property. Intellectual property can also be bought, sold, licensed and exchanged like traditional property. The concept of Intellectual Property is considered in India since 1956. In this unit, detailed information has been given about Intellectual Property Rights, Copyright and Cyber Law. The properties that come under Intellectual Property Rights such as patents, trademarks, concepts, copyrights, etc. have been discussed. How digital documents are protected in law, what is cyber crime and the law related to it has been studied under Intellectual Property Rights.

2.2 Information Intermediaries

2.2.1 Definition of Information Intermediary

The information intermediary is mainly a link between the information producer and the information user, which serves the needs of both the parties, the rapid transfer of information, information products and information services between the two parties. An information intermediary can be defined as :

1. The person who establishes the relationship between the information source and the information seeker is called information mediator.
2. The information intermediary is a link between the information producer and the information seeker.
3. The information intermediary distributes the collected and organized information to its customers.
4. An information intermediary is a human or machine-like medium that helps process information to its customers.
5. An information intermediary is a service for providing specific information in favor of an information producer to its dominant customers.
6. The information intermediary supplies the product of information to its users. Both the information producer and the information user

Note

make use of the service provided by the information intermediary.

7. Information intermediary is also called an information carrier. The information intermediary supplies trade and non-trade information.

2.2.2 Characteristics of Information Intermediaries

Following are the characteristics of an information intermediary :

1. To satisfy the information producers and information seekers as per the need.
2. To facilitate quick communication of information products between information producers and information users.
3. To have proper knowledge of various information sources.
4. To have knowledge of the needs and competencies of information users.
5. To have knowledge of the technical basis of information transfer.
6. To have knowledge of different subject-wise information fields and their producers and users.
7. Possess the ability and proficiency in analyzing intellectual questions.
8. Knowledge of communication tools and skill in their efficient use.
9. The information mediator should be full of personality of service spirit, inquisitive tendency, extrovert, candor, humility, self-confidence, intuition.

2.2.3 Functions of Information Intermediaries

The main function of an information intermediary is to make the desired information available to the inquisitors quickly. The job of an information intermediary is to find, analyze and distribute information according to the demand of the user, giving them the desired form. This work is possible only when the information intermediary has a good knowledge of various information sources and their retrieval techniques.

2.2.3.1 Information Data Discovery

In the first phase, the information intermediary should search for information producers and information users, then transfer the information according to the information the user needs.

Activities to accomplish this task are as follows :

1. Knowing the information needs of users.
2. To acquire knowledge of information sources/producers.
3. To use technology, skills and competencies in information search.

Note

4. To search the collections of data in physical form, virtual form and digital form.
5. Evaluate the discovered information.
6. Directing the user to other sources of information as needed.

Information mediators performing the above functions are known by many names, such as reference librarian, information consultant, information searcher, etc.

2.2.3.2 *Analysis of Information/Data*

Exploration and analysis of information/data obtained in the second phase through various formats such as library material, computer file, data basic, etc.

Activities to accomplish this task are as follows :

1. Abstraction; and
2. Summarization.

The information intermediary who performs this task is also known as analysis specialist, operations analyst, information consultant and research assistant.

2.3.3.3 *Transmission of desired form of information*

In the third stage, providing desired form of information– transfer to the user. Activities to accomplish this task are as follows :

1. Consolidation
2. Re-packaging
3. Abbreviation
4. Preparation of status quo report

The information intermediary who performs this task is also known as information analyst, information research officer and reviewer.

2.2.3.4 *Establishing relationships with information collectors*

(i) To find out the desired needs of the users and to solve their problems by providing the relevant information.

(ii) To provide information to the public seeking specialties by providing a specific format of the information received.

(iii) To provide satisfaction by properly handling the queries received from various media institutions and distinguished persons.

(iv) Developing and expanding the existing range of publications for specific marketing.

2.3 Types of Information Intermediaries

Mainly, information intermediaries can be of two types, one who provides information for a fee and the other who provides information without charge. Their explanation is as follows :

2.3.1 Profitable or fee based information intermediaries

Information brokers who provide information by charging an intermediary fee :

1. **Information Broker :** Individuals or business entities that provide information services for a fee are referred to as information brokers. Due to the speed of research, the usefulness of information has increased. Information appears in the form of a commodity and is known as infinite knowledge. Thereafter there has been an unprecedented increase in information brokers as well. The information broker is the distribution center of information as a link between the producer of information and the user of information. The services of information brokers are used by libraries, business institutions, publishers, elite persons in obtaining various information.

   The information broker provides the following two types of information services :

   (i) Providing information service in the first type to handle the daily needs of the users. Short questions and their answers are settled in this information service.

   (ii) To provide information service for conducting complex research tasks by the utilities in the second type. In this information service, long questions and their answers are resolved after a thorough search. It is not possible for research institutes and researchers to collect or acquire all the information with them. Therefore, the services of information brokers are taken for research purposes. The information broker acts as a bridge between the researcher and the information sources.

   Information brokers provide other types of services in addition to the above two types of information services; As :

   (i) Telephone Survey

   (ii) Retrieval of specific facts/data

   (iii) Translation

   (iv) Report writing

   (v) Preparation of book list

Note

(vi) Abstraction

(vii) Material discovery

(viii) Timely Recognition Service, etc.

The buyers of these services of information brokers are various types of organizations, such as industry, advertising, publishers etc., which do not have proper facilities. There are two main categories of information brokers:

(i) **Independent Information Brokers :** All information brokers in this category sell information. They engage in these tasks full time and provide specific types of information in desired form at a cost to the users. For them it is a business and a source of income. In modern times, many advisory agencies work in different fields, such as information consultants, freelancers can be included in this category. In other areas of the society we also see such information brokers, such as - in the purchase and sale of property, for marriage, in the field of money investment, etc.

(ii) **Institutional Brokers :** This class of information brokers related to an organization or organization - provide services, most of them are fee based services, such as online search, document distribution, bibliography, photocopies etc. These organizations or institutions provide other services at no charge. For example, the services of NISCAIR (National Institute of Science Communication and Information Resources-NISCAIR) are included in this category.

The information broker not only transmits the external information to the researchers, but also the information generated after the research is done in the institute and it is sent to the specified person or institution.

Some of the special fee based services offered by the information broker are as follows :

(i) Document distribution

(ii) Photocopies of published literature

(iii) On-line search

(iv) Retrieval of statistics

(v) Abstraction

(vi) Translation

(vii) Quick Telephone Survey

(viii) Compilation

(ix) Report making

(x) Providing specific facts from unclassified source

Note

2. **Information Consultant :** Consultants are those experts who give expert advice. They review and evaluate technologies on behalf of their customers. Assist in the development of new skills and knowledge for the client, such as providing advice and information in the tasks of productive development in the industrial sector, process development, documentation of institutional knowledge, etc. Consultancy and consultancy services are provided in many professional, social and research and development activities. which provides a solution to a specific problem. There are also many information consulting companies, which do library and information related work in various organizations.

Information Consultant means individuals or professional institutions engaged in various activities such as database design, library information/ information center design, records management, selection process and training of hardware and software.

Information consultant also provides information service in the following ways :

(i) Listing
(ii) Editorial service,
(iii) Indexing Service
(iv) Collection construction
(v) Abstraction

Purposes of Information Consultant : Some of the important functions of Information Consultant are as follows :

(i) Providing the information requested.
(ii) To arrange a solution to a problem.
(iii) Diagnosis to re-effect the problem.
(iv) Providing suggestions.
(v) To assist in implementation.
(vi) Creating consensus and commitment.
(vii) Helping users to increase their knowledge.
(viii) To improve organizational effectiveness.

Difference between information broker and information consultant :

Information Broker

1. The information broker provides information only on demand by the user.

Note

2. The Information Broker provides the appropriate information to the user from the relevant information sources only on demand from time to time.
3. The information broker provides the evaluated information from the information sources to the users according to their need and demand.

Information Consultant

1. Information Consultant Advice on the usefulness of the information even if the user does not demand it.
2. Information Consultant Experts on what is the use of the information and how to use it from time to time to the user.
3. The Information Consultant provides the information by reviewing and evaluating the information keeping in mind the user's information needs. Information consultants have an important role in providing advice on production, import-export etc. related to industrial areas.

3. **Online Vendor :** This is a computer network based information retrieval service. Various libraries and information centers are available online in virtual form through computer and telecommunication systems *i.e.* information retrieval service is available on computers round the clock. These are called virtual libraries. Information can be obtained from any corner of the world through the network. The collection of information is available on the server at all times. The usage and download facility of the database available on the server is provided by the online vendors along with the fee. This is an external trading service. Information related to his subject is available to the user at all times (On-Line) through a networked computer. The online seller makes the subject-wise information source available to the user only after charging the subscription fee. This membership fee can also be deposited online. Online sellers operate through the Internet or a private network. Information is always available in the form of an electronic bibliography.

   Online sellers—OCLC, DELNET, DIAlog, INSPEC, MEDLARS etc.

2.3.2 Non-Profit Information Intermediary

Information intermediaries who provide free information come in this category, they are as follows :

1. **Technological Gatekeeper :** Technological Gatekeeper means any person or organization who receives and transmits technical information from external information sources to the users of

Note

information (individuals or individuals of an organization). Since technical knowledge is changeable, the technical gatekeeper is the research and development in various disciplines.

Monitors the work regularly, acquires their knowledge and provides quick information as per the demand of the user. The pace of development of technical knowledge is most dynamic in today's modern information age because technical research work is being done on the subtlest topics. Because of this there is an extraordinary increase in information. At the same time, the situation of complexity in information is also arising. In such a situation, the role of the technical gatekeeper becomes all the more important to make available complex to complex information as per the demand to the user of the information, so that the way of research work of the user can be easier. In today's information revolution era, the technological gatekeeper acts as an important link between complex sources of external information and the users (researchers, researchers, organizations, experts, individuals). The technical gatekeeper does not rely solely on external information sources. Rather, it also outsources the information generated as a result of ongoing research in the research institute. The technical gatekeeper does not rely solely on external information sources. Rather, it also outsources the information generated as a result of ongoing research in the research institute. Technical Gatekeeper collects subject-wise technical information and repackages it on demand. Keeping in view the electronic nature of documents, networks and changing size and form of information, the role of information gatekeeper has increased.

2. **Librarian / Information Officer :** Librarian / Information Officer has an important role in making the library users / readers available to their desired information in the shortest possible time. Today, there is a continuous multi-dimensional growth of information in libraries. As a result, today the user/reader expects that even the smallest information in a useful form will be made available by the library in a short time.

   The librarian / information officer provides information service in the following ways :

   (i) Information Handling and Transfer Service
   (ii) Translation
   (iii) Selective Information Dissemination
   (iv) Current Awareness Service

Note

(v) Online Information Service

(vi) Advance Information Service

(vii) Abstraction

Qualified / technically proficient librarian / information officer selects and evaluates the appropriate information for the eligible reader in the form of a link and transfers the information in a timely manner at the lowest cost. The efficiency of the information system depends on the individual characteristics of the information officer. The identity of the Granthavali/Information Officer is made by his soft and cooperative nature. Its capabilities are measured by providing qualified information to the eligible user.

3. **Information Filter :** The information filter serves to give useful information to the researcher from the infinite information available in the information source. Innovative information is produced in abundance by research institutes in various formats. The information filter provides useful material to the researcher from this vast amount of information. The information filter makes available only relevant information to the researchers by filtering out all the information. An information filter acts as a carrier of information between the information source and its users. The information filter keeps information about the information sources of various subjects and provides only useful information by examining the information according to the demand of the user. With the help of an information filter, the researcher's time is not spent in finding the right information, he gives maximum time to research work. Today information can be filtered by both human and digital means. It is now easier to select useful information in a software based process. That is, the filter process became very simple. Selective Dissemination of Information (S.D.I.) is a good example of printing information which automatically keeps scientists informed about the published documents in their specific fields.

4. **Invisible College :** Invisible colleges perform their work towards a certain social area with the aim of social upliftment. Such institutions (government/non-government, business/social, producer/consultant) create awareness about a subject area to different communities of the society. Such institutions play the role of information intermediary. Invisible colleges act as a neutral information mediator by providing their participation in education dissemination, community benefit information dissemination, productive use, education dissemination etc. The Invisible College exchanges investigative and intellectual

Note

ideas with the user of the information. The process of exchange of ideas is done by post, advertisement book, meeting, face-to-face. Invisible College is a community service in which information, ideas, technical skills, awareness campaigns, guidance are transferred freely among the society, for example— distance education stage, open school, open university.

5. **Expert System :** It is a computer based software which represents knowledge. Those who apply their skills and provide solutions to a particular problem to the user on the basis of available knowledge, hence they are also called as Knowledge Based Expert System. Intelligently accepts questions and judgments and based on the database of knowledge gives advice or reasoning and gives its decision. If needed, also inquire with the customer before taking the decision so that the right decision can be taken. Expert : System is also called the Knowledge System or Intelligent System.

   Example Mycin software, year 1974, which diagnoses infectious bacteria present in the blood by the data sought by the user on the basis of symptoms.

6. **Extension Worker :** Health workers, block development officers, block extension officers, family planning workers, community health workers, etc. come under the category of extension workers. The work of extension worker is mainly done in rural areas. They play an important role as an information mediator in the transfer of correct information to the villagers. The extension worker provides information service in the following ways :

   (i) The collection, collation and repackage of information is done according to the needs of the village level users and their needs.

   (ii) To provide information about various agricultural techniques to the farmers for increasing agricultural production.

   (iii) To convey the problems stated by the farmers and the opinion given by them to the research scientists, which may become the basis of research.

   (iv) To provide medical information among the villagers.

   (v) To provide beneficial information integrated with health, family welfare.

   (vi) Example Shiksha Mitra (under Sarva Shiksha Abhiyan), Swasthya Karyakarta (under Pulse Polio Program), Saksharata Karyakarta (Under Saksharata Abhiyan)

Note

2.4 Intellectual Property Right

With the development of strong global and national intellectual property systems, the question of Intellectual Property Rights (IPRS) and their protection is in the context of economic, scientific and technological development, protection of traditional knowledge and economic cooperation between industrialized and developing countries has become a central issue. "The development of a coherent legal framework to promote the adoption of a framework aimed at maintaining the ownership of intellectual property, the just and equitable distribution of benefits for the social good, and the continuity of the pace of research are considered essential to a vibrant global order." "He is going." Intellectual property rights are a complex subject. Here we will describe the different dimensions of intellectual property systems.

Intellectual property basically consists of the products and structures of the mind and the purpose of intellectual property law is to control the use of these products by granting certain time bound rights (intellectual property rights) to the creators and other producers of intellectual goods and services. To protect the interests of the author.

2.4.1 Intellectual Property Rights Acts

Intellectual property, like any other traditional form of property, is an asset. Intellectual property can be bought, sold, licensed, and exchanged like real private property. It can even be exchanged without getting any rendering. The owner of the Intellectual Property also has the right to prevent its unauthorized use or sale. The most important difference between other forms of property and intellectual property is that its form is not fixed. They cannot be explained by means of any physical parameter of their own and may or may not be recognized. The protection of intellectual property, therefore, requires that it be expressed in an understandable manner. Intellectual property like any physical object (which could be a research idea, music or a trademark) cannot be protected from being used by other people by merely being in possession. Therefore, the need was felt for the creation of intellectual property laws in a different way from the traditional laws of protection of personal property.

The tradition of interpreting intellectual property originated in Italy. According to available information, the first patent was granted in 1421 to Philippo Brunelleschi of the Republic of Florence. He was given a three-year monopoly for the use of special hoisting gears in his boats. The first ordinance on patents was issued under a Venetian law in 1474. From Italy this trend spread to other countries of Western Europe. In England, during the reign of Queen Elizabeth I (1533–1603) her minister, Lord Bale (1520–

Note

1958), issued a number of patents to foreign researchers to encourage them to popularize their research in England. By doing this an attempt was made to motivate the local producers for research work as well.

The basic concept of intellectual property rights in India was first introduced in 1856 through the Protection of Research Act. This act was based on the British Patent Act, 1852. Patent laws in India begin from there. A hierarchical description of the development of Indian Intellectual Property Rights laws is given in the table below :

Table : Acts and laws enacted in India related to Intellectual Property Rights

Year	Acts and laws enacted in India related to Intellectual Property Rights
1856	Invention Protection Act (Based on the British Patent Act of 1852. Patent and Design Protection Act
1872	Patent and Design Protection Act
1883	Protection of Invention act
1911	Indian Patent and Design Act. This Act came into force with effect from 15th August, 1947
1940	The Law for the Protection of Trademarks was enacted on March 11, 1940. This Act came into force with effect from June 1942
1957	Accepted several principles of the UK Copyright Act, 1956. It came into existence due to the challenges posed by technology developments in the fields of communication, broadcasting, microfilming, photolithography and motion pictures
1959	Indian Trade and Commerce Marks Act
1967	Patents Bill was introduced in Parliament
1970	The Indian Patents Act, 1970 came into existence
1972	The Patents Act on the 20th April, 1972.
1983	Several changes were made to the Patents Act to reap the benefits resulting from the 1983 Berne Agreement and amendments to the World Copyright Agreement. India is bound by these agreements.
1984	Patent to discourage and prevent theft of video films and records

Note

2.4.2 Patents

In fact, a patent is a property right. The recipient of this patent gets it from the state. It prohibits the owner of the patented invention from using that invention for a certain period of time without proper permission. No invention is private property without a patent. After the expiration of the patent, it is put to public use. The purpose of patents is to encourage inventors and investors to pursue inventive activities and commercialization of inventions. Another purpose of a patent is to encourage the disclosure of an invention.

Not every invention can be patented. Required for the invention to be patentable. That it is new, has some inventive process attached to it (or is indirectly related) and has an industrial use. These basic norms are included in the patent laws of almost all countries. But in some countries many objects, processes and ideas cannot be patented even though they are new. The goods, ideas and processes which cannot be patented in India are mentioned below :

1. Claims of a frivolous nature made contrary to well-established natural laws.
2. Anything that is contrary to law, morality or public health.
3. A combination, rearrangement or simulation of known devices, in which each device operates independently of each other in accordance with already known methods.
4. A test method or procedure used in a manufacturing process to be used to repair or improve any machine, apparatus or other apparatus or to control its production.
5. Any method of agriculture or horticulture.
6. Inventions related to nuclear energy.
7. Computer Software.
8. Aesthetic compositions.
9. Discovery, scientific principles, mathematical methods.
10. Schemes, rules and methods relating to the mental process of playing a game or doing business.
11. Presentation of Information
12. Methods of treating humans or animals by surgery or medical prescriptions
13. Animals, plants and biological methods of their production and culture (but patent rights can be obtained in respect of microorganisms in India).

Note

14. Substances that can be made through chemical synthesis, such as foods and drugs.

Granting of patents in India comes under the jurisdiction of the Ministry of Commerce, Government of India. The Patent Offices have been set up in the following metropolitan cities divided into 5 geographical divisions- New Delhi, Kolkata, Mumbai, Chennai and Ahmedabad.

2.4.3 Trademark or Marka

Trademarks or marks are those marks appearing on the goods or services of a particular enterprise, which distinguish them from competitors. Several things included in the scope of the term 'visible sign' are mentioned below. Any one of these processes or objects, or their combinations, may be used as a visual mark. These are the following :

1. Arbitrary or fictitious titles
2. Name
3. Common and invented words
4. Slogans
5. Equipment
6. Numbers and their accumulation
7. Characters
8. Image or Symbol
9. Label
10. Combination of colors or their decoration
11. The size of the holders or the object itself

Industrial bodies not only do business, they also provide services like travel, advertising, transportation, insurance and reaction of substances etc. A 'Service Mark' is used to identify these services. There is virtually no difference between mark and service mark. The only difference is that Marka is related to goods. Whereas service mark is related to service. Generally the term trademark or mark is used in a broader sense.

These marks indicate the source of origin of the enterprise or goods and services of different enterprises or any other characteristic found in a similar form. Generally the owner of the collective mark is a co-operative society, a council of enterprises or an institution of public character. The collective mark is used to indicate the membership of the organization or the specific characteristics of the product e.g. Library Association of India, Red Cross Society, Indian Medical Association etc. For example - ISI, ISO etc. Proof mark can be used by any enterprise adhering to the declared norms.

Note

The choice of a particular symbol for a Marka requires great care. A part from this, the selection of the mark should be done in such a way that it does not cause any problem related to registration or encroachment. In order to avoid this problem, in the form of enterprise application, a small number of possible marks for a product or product range should be—Present the list. This process is called 'primary clearance'. No mark can be registered as a mark alone. There are certain legal conditions that have to be fulfilled for Marka registration. Below mark may be disqualified for validity as a mark for any of the given reasons :

1. If a mark does not have any characteristic expressing its distinctiveness and expresses only the inherent nature of the goods or services or the form or shape assigned to them by reason of their industrial activity.
2. If any mark is merely a sign indicating the type or quality of the goods or services.
3. If a mark itself has become customary in the course of the trading process to denote the goods or services concerned.
4. If any mark is intended to deceive the public as to the nature, geographical origin, characteristics and suitability of the goods.
5. If any mark collides with the prevailing mark. There should be no equivalence between the prevailing mark of the same goods or service and the mark applied for.
6. If any mark signifies immoral, fraudulent and hateful material.
7. If any symbol depicts national symbols.
8. If any mark expresses relation to any person (living or dead), institution or belief in him or shows contempt or disrespect.

In this way, after the selection of a mark for adoption as a mark, it should be ascertained whether such a mark is already registered or not. For a mark to be legally protected, it must be registered in the Trademark Register of the country's Intellectual Property Office.

2.4.4 Industrial Design

Industrial design refers to the creative activities related to giving formal or ornamental form to industrial products. The concepts or ideas that form the design can be two dimensional or three dimensional. The design can be used in mass production of the designed goods. If the design cannot be produced on an industrial scale, then that work will be classified as an artistic work and in that case it will be protected not by industrial property law but by copyright law.

Note

An industrial design can be protected only if it is new or original. Industrial design is generally protected against copying or duplication. The design applied to or contained in an object must be visible so that it can be judged by looking at it. The protection given to an industrial design is concerned only with its appearance. It has nothing to do with his performance. The criteria commonly considered for whether a design is registrable are size, configuration, structure or decoration.

The meaning of 'size' is self-evident. Configuration is concerned with the arrangement of the components of an object. Structure and decoration cannot be clearly separated from each other. The design of an object can refer to the texture of its surface, while the decoration can mean that a few more things have been added to its basic shape. Like a patent, an industrial design cannot be publicly disclosed before applying for registration. An application for registration of an industrial specification generally includes the following :

1. Application for registration.
2. Name and address of the applicant.
3. Any photographic or linear representation of the object that gives the shape of the sample or design.
4. Information about the product on which the design is to be used.
5. Fee prescribed in accordance with the Industrial Estate Laws of the country in which the application is made.

After verification, if the design is found to be registrable, its details are entered in the National Register of Designs. The registration is effective for a fixed period, usually five years. After that it can be renewed. Generally, the maximum period of its protection is 10 to 15 years.

National Policy on Library and Information System and Services

The field of knowledge is increasing day by day as a result of the revolution in the publishing and information world. It is also necessary to fulfill the information requirement of every business person. In order to do this, the governance system will have to develop an integrated information system and for this, keeping in mind the political, legal, economic, social and administrative systems and realities in the process of planning national policy, the governance system needs a person skilled in this subject. Forming a committee under the chairmanship and asking it to make recommendations. After independence in India, committees have been formed for policy planning in many areas.

Note

2.4.5 Development of Library Policy in India

At the end of the Second World War, for the revival of the country, the enlightened persons prepared elaborate plans in their respective fields. Dr. S.R. Ranganathan has given his ideas for the overall development of libraries in the book "Post-War Reconstruction of Libraries in India", which was published in Madras in 1944. It was taken as the first policy document in the field of library and information. It can be seen that in this book, he had recommended the opening of regional libraries in multilingual provinces and large one—lingual provinces and he recommended the opening of a central library at the top position in the province.

In India too, through various forums related to library and information services, in which the role of the Library of India, the Union, and the Raja Rammohan Roy Library Foundation is important, the demand from the government to declare a unified library and information policy for the whole country was passed in their annual meetings. in the proposals. As a result, several commissions and committees have been formed.

2.4.6 Policies relating to Library and Information

UNESCO has always been emphasizing on the implementation of science information systems at the national level in the world. Many programs sponsored by Unocist/UNESCO have been run in India under the supervision of NISSAT (National Information System for Science and Technology). It is a matter of great regret that NISSAT has now ceased to exist. The Society for Information Science has made a good contribution to the formulation of the National Science Information Policy. The following are the policies relating to books and information.

2.4.7 National Book Trust-1957

The Government of India formed an autonomous organization National Book Trust in 1957 to promote the development and popularity of books. Its main functions are—(1) publication, (2) promotion of books and book reading, (3) promotion of Indian books abroad, (4) assistance to authors and publishers and (5) promotion of children's literature. It publishes books in Hindi, English and 15 other languages of India and in Braille script. Every other year this trust also organizes the World Book Fair in New Delhi. The Trust also organizes National Book Week every year from 14 to 20 November.

2.4.8 Science Policy - 1958

The first mention in the series of policy documents comes from the Science-Policy Resolution of the Government of India passed in 1958. It is the result of this science policy resolution that today India is included in the

Note

category of nuclear power countries. In this policy resolution, emphasis has been laid on the following points related to library and information services:

1. To encourage individual efforts and activities to acquire and disseminate knowledge in an atmosphere of academic freedom.
2. To make available all the benefits arising out of the acquisition and application of scientific knowledge to all the people of the country in general.

2.4.9 Technology Policy-1983

The policy statement announced by the Prime Minister envisages the establishment of a technology information base for the collection, collection and analysis of technology information.

2.4.10 Information (Communication) Policy

It is clearly mentioned in the document titled 'Background of Development of National Information Communication Policy' that it is absolutely necessary that the general public should get 'information' in order to keep the real democracy intact. The public mind must get updated information about contemporary political, social, economic issues. To achieve this objective, it is necessary to have public libraries and information centers in all cities and rural areas.

2.4.11 New Education Policy 1985

In May 1986, the Government of India announced the adoption of a new education, which included libraries related to brief Recommendation "With the development of books, a nationwide movement will be launched for the upgradation of in-service libraries and the establishment of new libraries. According to this policy, "Provision will be made to make library facilities accessible in all educational institutions and the post of librarian will also be upgraded.

2.4.12 Book Policy-1985

With the objective of making books available at affordable prices, improving their quality, preparing books for children and other special groups/groups and solving problems related to production of books etc., the Government of India formulated a book policy in 1985. Key and also constituted the Book Promotion Council.

2.4.13 Indian Copyright Act-1957

The Copyright Act, 1957 is one of the many Acts related to Intellectual Property Rights IPR-Intellectual Property Rights in the country. The Copyright Office was established in January 1958 to register categories of

Note

various creative works. Keeping in view the technological changes, extensive amendments were made in the "Indian Copyright Act 1957" in the year 1994. The amended Act came into force on 10th May, 1995. In 1999, this Act was further amended and it came into effect from January 15, 2000 in a new form.

2.5 National Policy on 'Library' and Information System-1986

National Policy on Library and Information System-1986 The Department of Culture, Ministry of Human Resource Development, Government of India, in 1985 under the chairmanship of Dr. D.P. Chattopadhyay, to prepare the National Policy on Library and Information System (NAPLIS) has 14 nominated members. Shri BS Keshavan, Prof. Ashindas Gupta, Shri Girja Kumar, Shri TS Rajagopalan, Prof. KA Isaac, Prof. B. Anderson, Prof. PB Mangala, Prof. PN Kaula, Dr. Sushila Kumar, Shri SC Biswas, Prof. V. Rajaraman, Joint Secretary, Department of Culture, Dr. BP Barua, Member-Secretary and two co-opted members. Formed the committee of Dr. BD Nag-Chowdhary and Prof. Ravindra Kumar.

After six meetings of the Plenary Committee between December 1985 and February 1986, the report of the Nepolis Committee was submitted to the Prime Minister on 31 May, 1986. In this, 17 recommendations related to public libraries, 12 recommendations related to educational libraries, 3 recommendations related to specific libraries and information systems, 10 recommendations related to national library system and social services, 5 recommendations related to manpower development, modernization of library and information system. Related 5 recommendations, 8 recommendations for implementation agency and financial support are included.

2.5.1 Major Recommendations of Naples

The major recommendations of the National Policy on Libraries and Information Systems (NAPLIS) are as follows :

1. To promote, promote and promote the administration, access and use of information by all appropriate means in all areas of national activity.
2. To take suitable steps towards making the existing library and information systems and services active and high level and taking advantage of the latest achievements and developments of information technology, to organize suitable and innovative programs to meet the national information requirement.

Note

3. Arrangement of high level training programs for library and information workers so that they can develop adequate capacity to provide library and information services. Also, to recognize their services as an important component for achieving high level of development and quality in the nation.
4. To establish an adequate monitoring system for rapid development of library and information facilities and services so as to meet the information needs of all sectors and levels and strengthen the national economy.
5. To encourage individual efforts and talents in the collection and dissemination of knowledge and for exploration of new knowledge in an environment of intellectual freedom.
6. To make all the benefits arising out of the collection and acquisition and application of knowledge equally accessible to the people.
7. To preserve the cultural heritage of the nation and its multidimensional nature and make people aware of them.
8. Establishment, maintenance and promotion of public libraries in the country.
9. Necessary linkage between community center library and primary schools.
10. Important role of community center library in adult education.
11. All public libraries in a state should be part of one system.
12. The central Government brought amendments in the Model Library bill.
13. The Raja Rammohun Roy Library Foundation should be declared as an institution of national importance.
14. There should be an agency at the state level for proper development of the school library.
15. The local educational library should also provide library service to the students of far-reaching education.
16. UGC/AICTE/University/college make arrangements for providing necessary training in information technology to the staff of libraries and teachers of library science.
17. Substitution of National Library System.
18. The Department of Library and Information Science Education should lay special emphasis on Information Technology.

19. Constitution of National Commission on Library and Information Systems.

Note

2.5.2 Recommendations of the Empowered Committee on Naples

The Empowered Committee, constituted to review the recommendations of Naples and give its decision to the government, made 13 recommendations of public libraries, 7 recommendations of educational libraries, 5 recommendations of national library and bibliographic services, one recommendation of manpower development. 2 Recommendations and Implementation Agency of Library and Information System.

The Government of India was informed on 11 April 1988 of its decision to fully accept the 4 recommendations of financial support. The main recommendations of this empowered committee made on the recommendations of the Naples Committee are as follows :

1. Constitution of National Library Commission which should play its major role in implementation of library policy and development of libraries.
2. Formation of All India Library Service.
3. The need for an active role of the Central Government in the development of public libraries.
4. The need for agencies involved in social education, rural development, etc. to support the development of public libraries.
5. To recognize university and college libraries as academic units and senior library workers as members of the academic community.
6. Enrichment of the National Library, Kolkata.
7. To develop a system of National Library.
8. Establishment of at least one multilingual library in each State by the Central Government.
9. Constitution of a Standing Committee by the Central Advisory Board of Education to resolve the issues related to Library and Information Science.
10. Establishment of Library Unit by Ministry of Human Resource Development at the level of Bureau Head.

The implementation of these policies of the Naples Committee will accelerate the development and up-gradation of libraries at all levels in the country and usher in a new era in the field of library and information.

2.5.3 Working Group on Review and Implementation of Recommendations of Empowered Committee

Unable to implement the recommendations of the Empowered Committee in its original form, the Culture Department of the Government of India under the chairmanship of Smt. Srivastava (University of Delhi), Prof. CP Vashishth (President, Indian Library Association), Mr. SN Khanna (Delhi Public Library), Mrs. Kalpana Das Gupta (National Library, Kolkata), Mr. N. Sikandar (Culture Department) and Mr. Inder Dev (Central Secretariat Library, New Delhi) constituted working group. During 1st July to December 1992, this Working Group, in its four meetings, thoroughly studied each of the recommendations of the Empowered Committee and accepted 32 recommendations and sent other recommendations to the concerned departments/agencies for their consideration. recommended to hand over.

Exercises

Very Short Answer Questions

1. Write the definition of Information Intermediaries.
2. Write two characteristics of an information mediator.
3. Write the activities of the desired form of information.
4. Define Information Broker.

Short Answer Questions

1. Write the functions of an information mediator.
2. Describe the desired form of an information.
3. Define institutional broker.

Long Answer Questions

1. Describe in detail the information consultant.
2. Explain absolute information intermediary.
3. Describe Mickey Property Rights.

UNIT 3

Note

Knowledge Management

3.1 Introduction

Today, like human money, machines and matter, knowledge is also considered as an important resource. And it is being realized that like the management of these substances, knowledge should also be managed. "Knowledge Management" is a rapidly developing subject today. Knowledge management is not a new idea but today in this age of technology its management and development are in a new form.

In fact, the core of knowledge management can be traced back to generation-to-generation business houses where business secrets, skills and ingenuity are passed from one generation to the next. In European countries, America and India also, a practice is developing in private companies, in which a new appointment is made before the retirement or resignation of the top or high official and this newly appointed person is given an opportunity to work with the person retiring. So that he can learn, assimilate the experience and knowledge acquired by that person.

The present era is the era of competition, in order to stay ahead in this era, there is a great need for the creation of new knowledge. Every organization and organization wants to keep itself ahead in this race of development and continuous competition. For this it is necessary that we pay proper attention to knowledge. Known cost reduction through new developments and opens up new areas.

Public resources are a major aspect of management. In this, the management of human knowledge was done. So that all other resources can be developed. Today knowledge management is a multidisciplinary subject. Today it is

Note

more prevalent in the management and artificial intelligence communities. In this unit, knowledge management, the need, types of knowledge, barriers to knowledge and information and the role of librarian in knowledge management have been discussed in detail.

3.2 Definitions of Knowledge Management

Knowledge management has been propounded by different scholars in different ways, which is as follows. M. Thenmozhi writes - "Knowledge management is a process by which organizations generate meaning from their intellectual and knowledge-based wealth. This wealth was born at that time. When an organization uses knowledge to create a more effective and efficient process to reduce cost.

In the words of M.A. Gopinath, "Knowledge management is a major section of human resource management. It organizes human pride for the growth of all other resources."

Ruggles wrote, "Knowledge management is a newly emerging interdisciplinary business model that deals with all aspects of learning. In the context of a firm, it includes knowledge creation, classification, sharing, learning, innovation".

Smith and Leles (2003) define Knowledge management as an economic approach to the strategic value of organizational knowledge that facilitates the acquisition, sharing, and use of knowledge.

D. Kamal Vijayan says, "Knowledge management is the process of creating the unknown and restructuring the known on the basis of the known."

3.3 Origin of Knowledge Management

Knowledge is a valuable asset. The origin and usage of the term 'Knowledge Management' is new. Its use appears in the 1990s. The use of the term knowledge management has grown very rapidly over the years. In India, the term was used in the field of information technology in the 90s. Gradually this word spread very fast in this field and the words knowledge company, knowledge management company etc. appeared in vogue. At the same time a word became very popular, that is the knowledge industry, information technology and other related subjects came under the knowledge industry. In the late 1990s, articles on wealth management were written extensively. In almost every field, whether it is information technology, pharmaceutical science, biotechnology, that is, a lot has been written on this subject in the journals of almost all the fields. Considering the Indian scenario, the term 'Knowledge Management' was first used by 'Tata Consultancy Services' in 1995. After the primary study in 1998,

Note

a dedicated knowledge management team called District Corporate Groupware was formed. This group started the Knowledge Management Pilot Project in 1999. This project was successfully implemented in TCS. There are many groups in this, such as Steering Committee, Corporate Groupware, Implementers, Branch Champions, Application Awareness and the Infrastructure Support Group etc.

3.4 Needs of Knowledge Management

Today knowledge management has become an essential element. Production activities require land, labour, capital and entrepreneurship. Today there is any element more than these four elements, then it is knowledge management. Under knowledge management, emphasis is being laid on increasing, rewarding and aggregating knowledge resources like experiences, features, documents, services etc. The need for knowledge management can be substantiated by the following statements :

1. Knowledge helps in adjusting to changes as services and products are redesigned, re-extended, re-deposited.
2. Knowledge takes society forward.
3. Knowledge is the basic input for all types of services.
4. Development of professions based on the creation and use of knowledge.
5. Convergence of Information and Communication Technologies.
6. Knowledge to be seen as intellectual property.
7. It is the most valuable resource for the economic activities of any nation.
8. Knowledge also reduces its value by simplifying tasks and reducing unnecessary processes.
9. Knowledge management increases the production efficiency of knowledge personnel.
10. Knowledge management benefits the whole society.
11. It distributes information and knowledge to the users very fast.
12. Knowledge management enables effective organization of information and knowledge.
13. Specific information services may be organized for the users.
14. For easy access to information from various information platforms.

Note

3.5 Philosophy of Knowledge Management

D. Rajyalakshmi sums up the essence of knowledge management as follows : "Connecting people to people with people to information, transforming information into knowledge, encouraging innovation".

Under this, creating a balance between logo, processes and technology. that determines the organization and its relationship with the market. In fact, this is the philosophy of knowledge management. The philosophy of knowledge management refers to the creation of an environment where knowledge is valuable and where the differences and inequalities between information and knowledge are understood and an environment that values creation and innovation. In addition, different ways of doing things are encouraged. Many acts are done by the researchers subconsciously in such a way that they are not aware of doing it.

3.6 Knowledge Management vs. Information Management

Both knowledge management and information management have many similarities and dissimilarities. Some people are of the opinion that there is no significant difference between knowledge management and information management, whereas scholars are of the opinion that these two terms are not the same, but they differ. Following are the major differences between knowledge management and information management:-

S.No.	Knowledge Management	Information Management
1.	The emphasis is on unorganized and formal information and knowledge	The emphasis is on organized and formal information and knowledge
2.	Information is primarily in the text	Information is primarily in the text
3.	Information management is systematic	Information management is systematic
4.	Focus on knowledge, understanding and wisdom.	Focus on data and information.
5.	Deal with both codified and uncodified.	Deal with unstructured and structured facts and figures.
6.	Focus on locating, understanding, enabling and encouraging by creating environments cultures where knowledge is shared and created.	Focus on organizing, analyzing and retrieving again due to the codified nature of the information.

Note

3.7 Knowledge Management Tools in Library

Today, technology has an important contribution in knowledge management. Knowledge management does not exist without technology. Tools of knowledge management means the technology that helps in accelerating the production, codification and transfer of knowledge. In collecting and organizing the knowledge which is possessed by a particular person and that knowledge is transferred in some medium to others. Planning and tools are used by libraries for the creation, adaptation, distribution and review of knowledge. The following are the tools of knowledge management used in the library sector :

1. Digital Library
2. Internet and Intranet
3. Library Consortia
4. Expert System
5. Online Catalogs
6. CD ROM
7. Electronic Journals
8. Electronic Book
9. Email
10. Website of Library
11. Local Database
12. Groupware

3.8 Knowledge Management and Library and Information Professionals

The role of library and information professionals is very important in the field of knowledge management. In order to improve the services provided to the users and for the learning and sharing of the knowledge created, the library and information professionals shall perform the following responsibilities :

1. Consolidation of Knowledge
2. Packaging and Repackaging of Knowledge
3. Reuse Facility
4. Standardization of available knowledge
5. Acquisition of new knowledge from external sources
6. Conversion of individual knowledge into collective knowledge

Note

7. Creation of new knowledge within the organization
8. Facility of Online Acquisition in Libraries and Information Centers; Electronic document distribution services should be promoted in libraries. Librarians are not only providers of information but they are also knowledge workers.

Knowledge management is the process of transforming information and intellectual property into permanent value. In fact, knowledge management combines people with knowledge. People need knowledge to complete any task. In the corporate sector, knowledge management is seen as a way of achieving success in competition or removing obstacles.

Knowledge management is not really the same as data management and information management. In fact, knowledge management consists of three things. they are the following :

1. Hear Knowledge
2. Knowledge Code
3. Knowledge Applications

Knowledge creation refers to the development of new knowledge through implicit and expressive knowledge. Some new knowledge emerges during knowledge codification. Today knowledge codification is dependent on information technology. An important aspect of knowledge management is to enhance the knowledge application process of the organization.

3.9 Knowledge Management Systems : Basic Components

The role of libraries in society has been considered important since ancient times. Since that time, libraries have been playing an important role in the collection and maintenance of documents and information. In the present era, along with the development of technology, there has been some change in the activities of libraries. In the past, where these libraries were operated with human cooperation and intervention, today due to the availability of various types of technical solutions, such as software and hardware, various activities of the library are done automatically. Despite these changes, even in today's technological age, libraries have the same important role as they used to be in the past. The competence of libraries in the processing and maintenance of documents and information ensures their significant existence in various organizations such as educational, scientific, business management, production etc. Libraries play an important role in all these types of organizations and contribute significantly in the achievement and development of the basic objectives of these organizations. Life management is based on knowing how to manage knowledge while

Note

ensuring proper use of available knowledge. As it has become clear that knowledge management is completely individual based, hence the role of libraries in knowledge management increases greatly. During the process of processing and producing information, it should be clear to whom the information is being produced. How to handle/transfer it and get maximum use out of it? The task of determining all these facts can be done only by a library. The role of library in knowledge management can be understood on the basis of following facts and contributions:

1. It is necessary to have adequate knowledge about the persons/ personnel, materials and money involved in the task of knowledge management. All these facts can be recognized only by a library. The role of a skilled librarian is very important in the quality management of all these facts.
2. In the process of knowledge management, it is necessary that there is sufficient information about the various potentially important sources to be used, so that those sources can be used to the maximum. This task can easily be done through a library.
3. In the process of knowledge management, document management, indexing databases and creation of dictionaries are all important tasks, which is the basis of knowledge management. Mainly all these processes can be done with quality only by a library practitioner. All such functions of the library make the role of the library important in knowledge management.
4. Only a librarian is able to understand the quality, efficiency, shortcomings and problems of the process of knowledge management from different perspectives.
5. An important objective of knowledge management is to expand knowledge literacy as far as possible. Libraries are well-versed in establishing information literacy from the point of view of their nature, functions and services. Therefore, only they can perform the task of knowledge management in a convenient manner and quality.
6. Just as time and its management is an important point in providing information and information service to the users through libraries, in the same way time and capacity play an important role in collecting and disseminating knowledge in knowledge management. In this way a library can perform the task of knowledge management with quality based on its established competencies.
7. A library practitioner is clearly aware of how a user can quickly acquire or learn knowledge that is important to him/her. He is

Note

knowledgeable about the use of different types of methods used for this purpose and can use those methods in time. Such experience and knowledge are helpful in fulfilling the objective of knowledge management.

8. Knowledge management requires that we have adequate knowledge of the needs of the reader. A library practitioner is able to perform this task in the best possible way. Apart from this, the librarians are skilled in getting the users in touch with various subject experts related to them through various informal means of networking.
9. A library worker is skilled in the task of finding the desired document by understanding the needs of the user.
10. In the present scenario, various librarians are already trained for the use of information technology in the work of information recording and distribution.
11. Generally the library personnel of different libraries play a mutually cooperative role in solving the problems related to their library. Such a collaborative approach proves to be highly effective from the point of view of knowledge management.
12. Librarians are always willing to acquire new knowledge, knowledge and competencies. They also do not hesitate to take various educational risks when required. Such nature and attitude of the library staff helps in the use of new tools of knowledge management.

It becomes clear from the above study that only a library practitioner is the custodian of the collected knowledge, at the same time he also plays his role as a capable producer of new knowledge. The role of a banthali has increased even more in today's electronic environment. Technology has converted ordinary libraries into information centers. Due to this change a clear change is reflected in all the different areas associated with the library. From the point of view of knowledge management also the role of libraries has become very wide. Today it fulfills all the roles of information and knowledge from production to processing, classification and distribution.

3.10 Approaches to Knowledge Management Trends

There are three fundamental approaches to knowledge management - the process, the practice and the best practice approaches.

The Process Approach

The process approach attempts to codily organizational knowledge through formalized controls, processes and technologies. The process approach frequently invalues the use of information technologies to enhance the

Note

quality and speed of knowledge creation and distribution in the knowledge organizations.

The Practice Approach

The practice approach to knowledge management assumes that a great deal of organizational knowledge is facit in nature and formal controls, processes and technologies are not suitable for transmitting type of understanding.

Best Practices

Best practices are the activities and methods that the must effective organizations use to operate and manage various functions. Chevron recognizes four level of best practice that include :

1. A good idea that is not yet preven, but makes intuitive sense.
2. A good practice has improved the knowledge.
3. A best practice based on analyzing hard data.
4. A best practice is using hard data from library.

3.11 Role of Knowledge Managers

Knowledge managers have to identify, acquire and evalute internal and external sources of knowledge and integrate, organize and make relevant knowledge available to the right person at the right time. Libraries provide a base to research by collection, processing, storage and distribution of knowledge and information. Libraries make a link between information and the information seeker. Librarians can play the following an effective role as a meber of the knowledge management system.

1. Creating knowledge maps to find out when and what is available.
2. Generation of knowledge vocabulary for standardization of terms and retrieval.
3. Importing information literary instruction to the users.
4. Acquisition of documents from external sources.
5. Training of users to maximize use of the knowledge repository.

3.12 Responsibilities of the Library in the Task of Knowledge Management

1. To provide strategic support to the library or its unit for the development of a wide and best diversified universal organization.
2. Leading a strategic change in the existing functioning of the library or information system for better results of knowledge management.

Note

3. Develop a strategy in the library through which the staff to be involved with more commitment in the tasks of achieving the objective.
4. To identify and solve various problems related to organizational development.
5. To implement them by making adequate efforts for the development of the learning process and related curriculum in the organization.
6. Developing and leading the strategy for external employees of the organization.
7. Manage internal competency review process for employees.
8. To conduct a survey process to assess the satisfaction of the employees of the organization.

3.13 Functions of Librarian in Knowledge Management

In the process of knowledge management by a library worker in a library, the following tasks are performed :

1. To search for knowledge for carrying out the task of knowledge management by a library worker, the work of mapping, filtering, packaging and dissemination is done.
2. A librarian tries to make it useful by converting the implied knowledge of different individuals into a common resource.
3. Librarians carry out various types of analysis to know the needs of the users, identify resources related to them and identify the barriers to excellence in their performance by ensuring their participation.
4. A librarian ensures the transfer of knowledge for different types of tasks and activities.
5. He is able to manage various types of organizational changes taking place in the library.
6. The library provides information to maintain the vibrancy of the work of different people.
7. A librarian can develop a self-directed way of learning in his organization.
8. The trustee can develop a system in which the views of different persons can be transferred directly to the work being done.

Note

In the 'Encyclopedia of Library and Information Science' (2010), the indispensable role of inthalaya in the knowledge management landscape has been mentioned in the following formats :

Knowledge Officer : As a knowledge officer, a library performs various tasks, establishing a synergy between the objectives of knowledge management and the objectives and strategies of the organization.

Knowledge Manager : As a knowledge manager, the librarian is responsible for the work of acquisition and management of various internal and external knowledge.

Knowledge Navigator : As a knowledge navigator, a librarian clearly knows where the desired knowledge can be found. Knowledge navigators are sometimes referred to as knowledge brokers.

Knowledge Synthesizer : A knowledge synthesizer is responsible for recording the important knowledge of the present for future memory of his organization. Sometimes they are also called Knowledge Stewards.

Content Editor : These are responsible for structuring and codifying the content of any subject. In this form they are also known as Content Managers. Under this process, the following types of roles related to the collection and documentation of knowledge are involved :

- Web Developer
- Electronic Publisher
- Intranet Manager
- Content Manager

In addition to the above roles, a librarian can also perform the following roles :

Learning Oriented Roles : A librarian as a coach, works as a facilitator, experienced consultant and a good teacher.

Human Resources Roles : Acts to promote plans and processes for the development of a knowledge-based culture and behavior.

Help Desk Activities : A library deals with the distribution of knowledge management based services and training based information related to them. This work can also be done through a Knowledge Support Office.

Note

Exercises

Very Short Answer Questions

1. Write the definition of knowledge management.
2. Write the difference between knowledge management and information management.
3. Write the tools of knowledge management used in the library sector.
4. Write the functions of the library in knowledge management.

Short Answer Questions

1. Explain the role of a library practitioner in the context of knowledge management.
2. Describe the responsibilities of a library in knowledge management.

Long Answer Questions

1. What do you understand about knowledge management? Throw light on the role of libraries in the task of knowledge management.
2. Explain the need for knowledge management.

UNIT 4

Note

Knowledge

4.1 Introduction

Knowledge can be defined both philosophically and from a very technical point of view, especially with respect to its nature, essence, origin and validity. But if it is said in simple and simple words, then whatever is known to mankind, that is knowledge. Ranganathan has defined knowledge from the point of view of the librarian. According to him, "knowledge is the sum total of ideas preserved by man."

In clear words it can be said that knowledge is the sum total of harmonious ideas, facts, fantasies, myths, values, symbols and recorded feelings collectively available with mankind. Knowledge is the proud and powerful asset of any society. The English philosopher Francis Bacon (1561-1626) said long ago - "Knowledge is power." This statement seems quite appropriate in the context of today. Today knowledge has taken the form of economic, technological and military power.

No society can survive without knowledge. The amazing development of human society is due to the continuous enrichment and growth of knowledge through its educational and research centers and personal efforts. They are the forces that shape our systems and values and increase our available knowledge.

Knowledge tells us about our understanding of the physical and social world and our position in it. Knowledge improves the standard of living by removing the poverty, diseases and superstitions spread in society. This is an important element of human empowerment. Ignorance of knowledge is a sin. The very existence of our civilization depends on knowledge and its management. In short it can be said that it is knowledge that has transformed the cave man into a mighty creature flying in jets desirous of control over

Note

the environment and the entire universe. In this unit, topics, their types and growth have been discussed in detail.

4.2 Definition and Meaning of Knowledge

Knowledge is the product of human thoughts, human needs and human achievements. When a person, that is, the inquisitive, becomes acquainted with things and ideas, that is, knowledge, then knowledge arises. Man is the only living contemplative being who creates and uses knowledge. The world is a storehouse of known and unknown facts. That part of the world that is known to man. It is called knowledge. And that part of the world which is unknown will also become known in future. In this way man always keeps on developing his knowledge by getting acquainted with unknown facts.

Knowledge arises from the interaction between man and the known. When a person accepts an object or idea, it is said that knowledge has been created. The simplest process of knowing is the introduction of known objects by the senses, it is also called primary experience.

When logic and intelligence are used on getting acquainted with facts or by focusing on some idea and reaching a conclusion through experiments and analysis, then it is called systematic knowledge. That is, when abstract knowledge is converted into concrete knowledge, then it is called systematic knowledge. Knowledge is the gift of the human mind. With the development of man's thoughts comes the development of knowledge. The curiosity and enthusiasm existing in man are the main sources of development of knowledge. Familiarity with human beings is called common sense. When the human mind becomes dynamic and comes to a conclusion after logical and experimental analysis of any known information, then it is called systematic knowledge. Practical knowledge is organized on the basis of certain assumptions and through several stages it becomes systematic knowledge.

4.3 Types of Knowledge

Knowledge is of three types :

1. **Rational knowledge :** It is based on knowledge and experiments. This knowledge is natural and final. This knowledge is based on authentic ideas. In the field of science, this knowledge develops in the form of material knowledge and in the field of other subjects in the form of philosophy.
2. **Insightful knowledge :** The rational knowledge is developed and converted into introspective knowledge. This is the highest category of

Note

knowledge, in which the brain, intuition, understanding, hindrance, intelligence etc. are included and the help of reasoning and analysis is taken. This knowledge varies from person to person. This knowledge is acquired even in the subconscious state of the mind and cannot be challenged.

3. **Scientific knowledge :** When the insightful knowledge is defined and organized on the basis of principles, then it is called scientific knowledge. Science is the systematic study of knowledge. Scientific knowledge has the following characteristics :
   (i) It is based on clear principles, rules and experiments.
   (ii) Its nature is organized and it is divided on the basis of facts only.
   (iii) Scientific knowledge is systematic, analytical and synthetic.

4.4 Characteristics of Knowledge

A greater totality can be obtained by combining all the fragmented parts of knowledge. J.H. Shera (1903-1981) believes that there is a sense of unity in knowledge. In other words, the entire spread of knowledge is like a system, which has its own definite characteristics as follows :

1. Knowledge is not independent, it is based on the knower *i.e.* the individual. This person is relative and resides in his mind.
2. It is protected by human society. So it is social in nature.
3. Knowledge is never perfect, it is more. It is dynamic, multidimensional and variable. It keeps on changing with time and society.
4. Thus it is renewable (*i.e.* never ending). In other words it is infinite.
5. Technology, social progress and the pursuit of knowledge are interdependent. Knowledge arises in both its physical and social environment. The individual is the knower and nature (including society) is the original source of knowledge. Therefore, our sense organs can be called crude instruments for realizing knowledge.
6. When the knower comes in contact with nature through his senses, information is generated. The information thus obtained is integrated with the knowledge already preserved in his mind, for use and validation. In this way, the composition of knowledge is socio-organic. Society is both producer and consumer of knowledge whereas, knowledge is the prime mover of all social activities. Therefore, both society and knowledge keep influencing each other. In relation to these, it is not possible to identify the one-sided effect,

Note

as the society develops, knowledge also develops while the newly produced knowledge leads to changes and development in the society. It is the society that decides what kind, in which direction and how much knowledge it needs and it determines the parameters of values for different categories of knowledge. Thus, the major areas of knowledge development depend on social values and priorities.

4.5 Importance of Knowledge Studies for Librarians

Knowledge is both written and oral (tribal societies preserve their knowledge in oral form even today). Librarians are only concerned with written knowledge *i.e.* documents. For librarians and information professionals, knowledge is the main stock in trade of their profession. Therefore, it is definitely important for us librarians to study knowledge and its characteristics and structure. Prof. J.H. Shera (1903–1981) says that the study of the nature of knowledge is as important for library and information professionals as the study of anatomy for a surgeon. Therefore, as a librarian, we need to know about the nature of knowledge, its structure and sources. Only then will we be able to store, administer and disseminate it effectively. Knowing its importance, Dr. S.R. Ranganathan had included the study of the world of knowledge in the form of a full paper in the course of Master's degree in Library and Information Science in the 1940s itself.

4.6 Development of Knowledge

There is a continuous natural increase in knowledge. This growth continues in every type of situation as well. The following three methods of knowledge enhancement can be considered

4.6.1 Natural

Knowledge itself is incremental, it is constantly growing along with its dynamic nature, human curiosity and self-respect to know and tell more and more about the world's responsibilities are the main driving force.

4.6.2 Cultivated

Knowledge acquired through research is used to solve problems. This is the main and most popular method in modern states and planned economies. capital investment on research and development

4.6.3 Induced

Knowledge can also be generated through competition and inspiration. This method can be considered as the middle of the above two. It is well known that the environment is the ultimate source of knowledge and man is the sole agent of its production. The entire universe around us is an object of knowledge. Knowledge arises when the knower comes in contact with the object of knowledge.

Note

Knower – Knowledge – Object = Knowledge

The knower is human whereas, the object of knowledge can be any tangible or intangible element.

4.7 Division of Knowledge : Disciplines

Knowledge in its entirety is a system and a symbol of unity. It is a complex and tangled web of subjects and concepts. To know its origin and development, it is first divided according to discipline. This division is also necessary for understanding and further augmenting the knowledge. Discipline can be considered a major part of knowledge or the line arising from the first division. Traditionally three major disciplines can be placed in the following order of their origin and development :

Discipline	Subject-matter of study	Research method
Science	Study of physical environment	Experimental
Humanities	Inner personality (Inner self) study	Reflective and Speculative
Social Science	Society and its institutions	

The main feature of the above disciplines can be considered as the relatedness of their collected ideas and similarity of subject-matter or similarity of research methods used in the promotion and development of these disciplines. Disciplines are further divided into sub-disciplines and disciplines.

4.7.1 Subjects

Discipline consists of disciplines. A subject is a coherent structure of ideas that can be understood by an ordinary person. According to Ranganathan, "The subject is an organized and well-organized set of ideas. The structure of a subject helps in its perception and understanding. This knowledge determines his position and level in the world. A magazine describing a topic (Journal) can be done as a small article or as a whole book or even in a multi-part encyclopedia. For example - from a short article to a multi-part book on the subject of Hinduism. Subjects can be designed on the basis of some specific idea or concepts or by taking a central question or by some object or context.

According to Ranganathan's school, there are three types of subjects. Although this terminology.

Note

The bar of the sphere of influence of ideology is not acceptable :

1. **Basic Subjects :** A basic subject is a subject which is enumerated in the schedule of basic subject. It cannot be expressed as the compound subject of any of the existing basic subject. It calls for schedules of special personality, matter and energy isolates. It has some specialization - academic or professional segmentation.
2. **Compound Subjects :** A compound subject is a subjext having a basic subject and one or more isolate ideas or concepts as its components. For example, each of the following subject statement or title of a monograph indicates that the subject matter of the monograph is compound subject.
3. **Complex Subjects :** Complex Subject (C × S) is a subject formed by a combination of two or more subjects - basic or compound. Between two or more simple subjects or compound subjects, for example—Physics compared to Chemistry of Psychology for Doctors. According to Ranganathan, "If in document or a work deals with or contains description of inter-relationship, comparison etc. among two or more basic subjects or compound then such a subject of the work or document is deemed to be of type complex subject.

The term is originally derived from the subject of chemistry.

A core subject, though made up of singles, is inseparable as a unit. Single is the smallest unit of knowledge.

Knowledge is the main stock in trade of librarians. Therefore its study is as important for us as the study of anatomy for a surgeon. The implications of its study are effective at many and wide levels in the context of library and information science. D.S.R. Ranganathan (1892–1972) was a very important pioneer in the study of methods of knowledge enhancement. In 1948, he started a paper named 'Structure and Development of Subject World' in the curriculum of M.Lib.Sc, University of Delhi. He had also announced a book on the subject. Although that book was never published. Even then, his interest in this subject always remained and new results were being obtained due to his efforts. This work has been continued by persons influenced by his ideology at Documentation Research and Training Centre, Bangalore and other places. As J. H. Shara (1903–1982) lauded it as "an enduring intellectual contribution to the basic philosophy of library science" (Ranganathan's).

Implication of Knowledge for Development of Libraries

As gateways of knowledge and culture, libraries play a fundamental role

Note

in society. The resources and services they after create opportunities for learning, support literacy and education. They also help ensure an authentic record of knowledge created and accumulated by past generations.

Libraries are keenly aware of the need to matain the balance between protecting the rights of authors and safeguarding the wider public interest. They play an essential role in enabling the delivery of library services to the public and in achieving the copyright system's goals of encouraging creativity and learning. Knowledge explores the enduring importance of libraries and some of the intellectual property related challenges.

Libraries represent different things to different people from a place where mothers can take todders to read their first stories and users can study to gain access of knowledge.

Exercises

Very Short Answer Questions

1. Write the definition of knowledge.
2. How many types of knowledge are there?
3. How many methods of knowledge enhancement are considered?

Short Answer Questions

1. Describe the characteristics of knowledge.
2. How does knowledge develop? Explain.

Long Answer Questions

1. Explaining the meaning of knowledge, describing its types.
2. Explain the importance of study of knowledge for a librarian.

Note

UNIT 5

Information Science and Society

5.1 Information Society

Information is power, so today the same person or nation is powerful, who has a wealth of information. A few years ago, the economic foundation of developed countries in the world rested on the export of military equipment there, whereas today it is dependent on information-products.

An information society is a society in which the creation, distribution, diffusion, uses, integration and manupulation of information.

An information society is a society in which the creation, distribution, diffusion, uses, integration and manipulation of information is a significant economic, political, and cultural activity. The knowledge economy is its economic counterpart whereby wealth is created through the economic exploitation of understanding. People that have the means to partake in this form of society are sometimes called digital citizens. As Beniger shows, this is one of many dozen labels that have been identified to suggest that we are entering a new phase of society. The markers of this rapid change may be technological, economic, occupational, spatial, cultural, or some combination of all of these. Information society is seen as the successor to industrial society. Closely related concepts are the post-industrial society post-fordism, post-modern society, knowledge society, Telematic Society, Information Revolution, Liquid modernity, and network society.

There is currently no universally accepted concept of what exactly can be termed information society and what shall rather not so be termed.

Information technology is not only internet, and there are discussions about how big the influence of specific media or specific modes of production really is. Some people, such as Antonio Negri, characterize the information society as one in which people do immaterial labour. By this, they appear to refer to the production of knowledge or cultural artifacts. One problem

Note

with this model is that it ignores the material and essentially industrial basis of the society. However, it does point to a problem for workers, namely how many creative people does this society need to function? For example, it may be that you only need a few star performers, rather than a plethora of non-celebrities, as the work of those performers can be easily distributed, forcing all secondary players to the bottom of the market. It is now common for publishers to promote only their best selling authors and to try to avoid the rest—even if they still sell steadily. Films are becoming more and more judged, in terms of distribution, by their first weekend's performance, in many cases cutting out opportunity for word-of-mouth development. Considering that metaphors and technologies of information move forward in a reciprocal relationship, we can describe some societies as an information society because we think of it as such.

5.2 Development of the Information Society

The issue of technologies and their role in contemporary society has been discussed in the scientific literature using a range of labels and concepts. This section introduces some of them. Ideas of a knowledge or information economy, post-industrial society, postmodern society, network society, the information revolution, informational capitalism, network capitalism, and the like, have been debated over the last several decades.

The passage to post-industrial society takes place when investment results in the production of symbolic goods that modify values, needs, representations, far more than in the production of material goods or even of 'services'. Industrial society had transformed the means of production: post-industrial society changes the ends of production, that is, culture. The decisive point here is that in postindustrial society all of the economic system is the object of intervention of society upon itself. That is why we can call it the programmed society, because this phrase captures its capacity to create models of management, production, organization, distribution, and consumption, so that such a society appears, at all its functional levels, as the product of an action exercised by the society itself, and not as the outcome of natural laws or cultural specificities". In the programmed society also the area of cultural reproduction including aspects such as information, consumption, health, research, education would be industrialized.

5.3 Role if Libraries in Educational Development

Education has been defined as a complex of social processes of acquiring knowledge and experience, formally or otherwise. Ogunsheye (1981) states that it involves the total apparatus used for the development of the individual.The library enables the individual to obtain spiritual, inspirational, and recreational activity through reading, and therefore the opportunity

Note

of interacting with the society's wealth and accumulated knowledge. The library can be seen as an extension of education. Library services are needed to keep the skills that have been acquired through literacy classes alive by the provision of good literature. If education is to have a greater share in the moulding and building of a happier individual and a better society, the providers of education must go further than their roles as literacy facilitators to a more practical role of providing libraries for sustaining the newly acquired skills of adult learners. Organizing a library to aid education calls for an atmosphere of friendliness and a useful collection. Education facilitators should involve librarians in planning education programmes and learners should be given library instruction. 'Education' and 'Library' are two inseparable indivisible concepts, both being fundamentally and synchronically related to and co-existent with each other. One cannot be separated from the other. None of them is an end in itself; rather both of them together are a means to an ultimate end. One dies as soon as the other perishes. One survives as long as the other exists. This inter-relation, co-existence, if you like, this dependence of one upon the other have been coming down from the birth of human civilization to the posterity through a process of evolution in accord with varied needs, changes, and circumstances of various stages of human life.

5.4 Information Science

Library and Information Science (LIS) is a long-standing academic discipline, with its own set of theories, perspectives and methods. It studies all aspects of the creation, organisation, management, communication and use of recorded information in documents of all kinds, including new forms of digital and immersive documents. It underlies a variety of practices such as information management, librarianship, data management, and archiving and records management, educating professionals for work in those areas, and carrying out research to improve practice. While the roots of LIS are in bibliography, the efforts over several centuries to make published information organised and accessible, modern LIS grew from the documentation movement of the mid-twentieth century, which sought to use new technologies to make specialised knowledge better accessible. It is a broad subject, with its interests sometimes distinguished as, on the one hand, information in all its aspects and manifestations, information in specific domains and contexts, and technology applications ('information science') and on the other as collection management, information literacy development, and services to communities and culture ('Library Science'). However, the overlaps in interest are so great that it is best to think of a single discipline. LIS overlaps with a number of other disciplines and professions, including computing and information systems, media and

Note

publishing, digital humanities and e-science, and cultural heritage studies.

Definition of Information Science

Due to lack of mutual agreement on the definition and nature of information science, attempts to settle this debate have always been fruitless. At the same time it is also clear that the importance of the field of study on Informatics is worth remembering. On the basis of its definitions given by various scholars, it is not possible to give a completely acceptable definition of it. In the absence of unanimous views, it would be appropriate to try to understand information science on the basis of the main arguments given by various scholars.

Britain has classified information science as an 'Institutional library science'. According to Slamka, Information science is a field of study of an interdisciplinary nature mainly in the context of the use of information, its nature, properties and control. On the other hand, Bersig has used the term 'postmodern science' for information science. Informatics is mainly used for the need to develop a plan to solve a problem created by traditional science and technology.

According to McRank, science as history is information science. It specifically informs the present about the past. Mansfield has criticized the debate over the definition of information science, and has described both the terms 'information' and 'science' as vague.

5.5 Digital Revolution and Digital Divide

With the advent of information and communication technology and digital devices, there has been a huge change in the basic thinking, behavior, communication, work and earning of livelihood of the people. This revolution led to the creation of knowledge.

It has given a new direction to education and dissemination of information. be any area; For example, in government, private, political, economic, social, educational training, health, environment, entertainment, science etc. Digital revolution has provided new dimensions. This revolution has inspired everyone to re-establish their objectives in the new century. It is expected that by this revolution the standard of living of the people will be greatly upgraded which will also prove to be very helpful in laying the foundation for a developed information society.

5.6 Scope

It also engages how persons are unders food and constructed as 'infomration seeking' subjects in this field, including LIS students and researchers. An 'informationelized' reaches dadire and winterestiy, political subject, both within and outside of information research in the university, both within & outside of information profession after and in the specific at large, which

Note

should all how be educated to be "information professionals" is a critical harver. The overareling discipling of students and researchers toward 'positive' research in the field, a reseveral that is in part often founded upon very shaky 'foundational' theoretical models.

Objectives :

the school of library and information science offers a graduate well progress of preperation for carrers in all types of libraries and information centres that.

1. Provides students will a strong, well sounded educate through a curriculur that reflection the professions immediate and why range needs and prepares students to be leaders in a charging field.
2. Sustains and environment supportive of students, faculty members, and staff frose all segments of a multicultural, multi their and multilingual society.
3. Pronotes excellence in research contributions to the base of theoretical and practical knowledge in lbirary and information science.
4. Helps students develop an understanding of how to meet the varied and changing information needs of individuals and groups in a global socienty.
5. Provides public service thorugh watinuing education prograss, wasulting services for library and information centres, and particle postion in professional organizations.

Exercises

Very Short Answer Questions

1. Write the definition of informatics.
2. Write the features of informatics.
3. Explain the relation of Informatics with Mathematics.
4. Explain information society.

Short Answer Type Questions

1. Write the relation of informatics with psychology.
2. Write a note on digital revolution and digital division.
3. Explain e-governance.

Long Answer Questions

1. Define Informatics. Write a detailed note on the interdisciplinary perspective of Informatics with reference to various subjects.
2. Explain the role of the Department of Science and Technology in the development of information society.