CHAPTER III

INFORMATION PRODUCT SOURCES AND SERVICES

3.1 INTRODUCTION

Library contains information products which developed by others and marketed. Those products acquired by library for generate services. Some of the new products and by products can develop by the library. In other words the product in other words can be said as any type of physical goods or services provided on time and in required quantity. The word services suggest catalogues, any specific ideas, certain kind of industries etc. Being more specific Product can be anything under the sun. In case of library the products are various journals, periodicals, monthly editions, books reviews etc.

3.2 ORGANISATION FOR NEW PRODUCTS

Any program of innovation can be successful only when it gets top management support on a continuous basis and this support is not withheld even in the face of failure of some new product development efforts. It is for the top management may spell out the product categories it wishes to emphasis. To management has to set out the criteria against which new product ideas will be scrutinized. It is common experience for library and information centers that out of several ideas considered for a new product, only a handful passes the idea careening stage. Each idea reviewed. However, costs a lot to the library and information center. Only 50 per cent ideas of the screened out ideas might survive the concept testing stage and only a half of these might reach the for concept testing, and product development stage. There has to be budget for concept testing and product testing stages. Hardly one or two ideas are them launched at an enormous launch cost. They may or may not be successful or may not be. The total cost of developing the new product is thus the summation of the cost incurred an each stage of development the library and information center has to improve the gross ratio and reduce the cost at each stage to make the whole process cost effective.
3.3 PRODUCT PLANNING COMMITTEE

In several library and information centers, a committee is formed with representatives drawn from the top management for monitoring new product development. The committee usually consists of the chief executives and representative from the marketing, financing, production and research departments. Once the product is developed, the marketing responsibility is assigned to either a product manager or a new product department. The committee is an effort to pool the combined wisdom of different people. A resulting new product thus has the approval of the concerned administrators who were a party to its developmental decision.

3.4 STAGES IN THE NEW PRODUCT DEVELOPMENT PROCESS

The overall guide to the new product development is the product strategy of the organization. The development of new product proceeds in the following eight stages. At each stage, the firm has to decide whether to move ahead to the next stage or abandon the product or seek additional information. The eight stages, involved are

a. Generation of new product ideas,
b. Screening and evaluation of ideas,
c. Concept development and testing
d. Marketing strategy;
e. Business analysis
f. Product development test marketing
g. Commercialization

Library should acquire the skills of product development. The information technology helps the library to develop any type of product scientific evaluation of users paves the way for development of products, the present day knowledge of management system boost the academic libraries in the higher educational environment providing opportunity for generation or development of new products both from internal and external sources.
3.5 PERSONAL COMMUNICATION

Although the published word is the most common means of marketing library services, personal contact can be equally effective. College and universities offer particularly fertile ground for this method.

3.5.1 Atmospherics

The building must exude a welcome feeling the library must be a pleasant place where people will take advantage of the local organs for information dissemination. Perhaps no single source can provide such widespread coverage of library events, news and policy changes as the local paper is primarily national in scope and finds it easy to release to the back pages. However, even in major metropolitan centers, there are many local newspapers aimed at a select audience.

3.5.2 Combination Media

In order to get the right effect, one may combine two or more media to produce the required impact. The full significance of given utterance is only fully specified when we can assign values to reach the required levels.

These complex accessories to direct speech vanish in an in-direct approach in which written language is employed to convey messages. The perceiver of the full meaning of these messages has values of the parameters. Thus audio-visual images provide a better effect in precisely conveying the messages. Transmission of information through computer telecommunication networks is now making it possible to access data through computer terminals form any where in the globe. While these spectacular advances are undoubtedly bringing revolutions they cannot wipe out print-on-paper. The latter is going to survive in the complete, provably in a less dominant fashion at the output to go for computer-communication networks. This has definite advantages in handling of information.

The information scientists have to gear up to know the ramifications of the development of new media. The advantage of using the media appropriate to context implies good knowledge of the media’s capability to communicate the context of the situation such as education teaching and learning extension services, lectures and demonstrations. These can be effectively combined with oral and paper-print media.
Information centers and systems will have to develop the information services in the context of the confluence of new media.

It is increasingly recognized that a library must be effectively and attractively signposted so that readers can easily find their way round the library with a genuine urge to help will even display a welcome to the library sign at its entrance. The printed page is only one way to spread message. The local radio and TV station can be extremely valuable asset for marketing campaign. With rapidly growing acceptance of cable television, the opportunity for libraries to take advantage of airtime is better than ever. In evaluating the best media for library’s marketing effort, it is important to place news items or public service messages in proper perspective. Broad-casting, like print journalism offers several avenues of approach i.e. basic news story public service announcement longer broadcast specials devoted to a specific subject or format and visual story.

For information concerning the library the public service announcement is most appropriate. This briefs message designed to sit into a 15-60 second slot on radio or TV cab alert members of the community to an event, service or activity being planned by the library. The development as two-way or interactive cable television has considerable potential for libraries. Through such systems, coupled with computers home viewers can have direct access to library information resources.

3.5.3 Product Orientation

Product orientation directly refers to the specific product. All the set up is around that specific product. This concept is accepted by institution when library believes that users are admiring the selection of library or interested in buying the superior quality only.

3.5.4 Products and Services

One can see and touch the product and give his /her opinion about it. But in case of services, it has to be felt from the heart and also delivered from the heart. Institutes can increase the quality of product but in service there is total dependence on working staff of library. We can add to this sentence by saying that all the users are not same some are continuing or discontinuing the library only by means of services provided to them.
3.5.5 Product Market

The market can be defined in simple words as the bunch of customers with similar needs and near about same paying capacity. These all can be satisfied at the same time if library or the respective institution has two of basic things viz.necessary stock and reasonable prices with proper and quick services.

3.5.6 Target Segment

The process of segmentation can simply explained as dividing the whole of market in convenient parts, which are easy to follow and can be satisfied with available resources. The view of customers or group of customers is the key factor in target segmentation process.

3.5.7 Product Management

This step involves the main process of manufacturing the desired product according to needs and paying capacity of the customers. The process also includes important decisions related to quality, quantity of product, designs, specific features, different sizes, warranties, returns of problematic batches etc. The process also involves preparation, selection, manufacturing, new marketing plans in case of new product.

3.6 Library and Information Sources

Information sources means information +sources. In ordinary language information sources indicates to the new facts and new subject or information but in modern scientific language information is known as new knowledge which has special qualities which are related to specific subject, facts and events.

Modern age is a period of knowledge explosion. Millions of articles and lakhs of books are published every month. There is a problem of search of the desired information out of the whole knowledge. There are many checks to control the knowledge explosion. Reference sources help as the media of information. Information sources are related to subjects. These cannot be limited to a particular subject. They have wider information.

3.6.1 Primary Sources

There are information sources which include information of researches and developments. In other words all such facts, truth, information’s which are published for the first time and based on fundamental, research and primary survey. The documents in
which such information is published are known as primary sources, such information is not available in secondary sources. Primary sources are not organized themselves. They originally have primary information’s. It has more importance in researches, theses, reports, proceedings, etc.

Primary sources have following kinds of documents:

(a) Books- all books are not treated as primary sources. Only such books are known as primary sources which have new thoughts. Example five laws of library science.

(b) Periodicals: only such periodicals are known as primary sources which have fundamental and new information generated and reports. Periodicals are generally weekly, fortnightly, quarterly, monthly, half-yearly, yearly, etc. Periodicals include magazines, bulletins, reports, reviews, articles, research reviews.

(c) Patents: when a person invents a new technique, products formula, he needs his monopoly and keeps his rights with him. Government approves such monopoly as patent. Therefore, patent is an authority letter of the government which gives all rights of using such invention to the inventor. Patent is a primary source. It gives detailed report and description about the invention. Such patents are published in government gazette.

3.6.2 Secondary Sources

These are such sources which have fundamental or basic information’s. These are prepared and provide basic information in a planned way. Secondary sources present general information’s instead of basic or fundamental information’s. Moreover, in such sources information given in primary sources are collected, selected and arranged properly and grouped together.

(a) Abstracting and indexing periodicals: abstracting periodicals provide new and current information to scientists and technicians and such information’s are related to technical progress and provide up to date information these are such secondary sources which help in researches.

(b) Reviews of progress: the difficulties found in indexing and abstracting resulted into search in review literature. When a researcher cannot find the fact or does not
understand the abstract of an article or other item, he goes for consultation for review literature to get proper explanation or views about in which academicians or scholars highlight the development and progress of a specific subject and such information are very useful to the research scientists and students.

(c) Reference books: these are secondary sources. These are prepared on the basis of primary sources which include information regarding facts, knowledge, events and explanations.

Reference books can be arranged in a sequence as under:

(a) Encyclopedia
(b) Dictionary
(c) Handbook
(d) Tables

(d) Subject books: Subject books are such books which are different from reference books. Those books describe and arrange a subject or subjects. Such books help the reader in studying the fundamentals of a subject. These may be enumerated as under:

(a) Treatise
(b) Monograph
(c) Textbooks

3.6.3 Tertiary Sources

These sources are valuable important to search the primary and secondary sources. These are prepared with the help of secondary sources. Some tertiary sources are as under:

(a) Directory
(b) Yearbook
(c) Guides to literature
(d) Bibliography of bibliographies
(e) List of research in progress

(a) Directory: directories provide information of special type and in specific area of subject. These include information regarding persons, institutions, their address,
products, national and international organizations their activities etc. which are helpful to the readers of any nature and type.

Directory is a list of persons or organizations systematically arranged, usual in alphabetic or classified order, giving address, affiliations, for individuals, and addresses, officers, functions and similar data of organization.

(b) Yearbook: yearbook provides information of nation, region, etc. And is published yearly. It includes information of events, awards, addresses, etc. Arranged according to subjects. It has an index at the end.

(c) Guide to literature: guide represents the matter relating to basic information of subject. These guides also mention the descriptive photos tables, diagrams, etc to explain the information or detail of the item or subject. Readers are helped in searching their subject literature of their choice.

(d) Bibliography of bibliographies: bibliography is a systematic description and history of books, their authorship, printing, editions, etc. It is a list of books of a particular author, printer or country or those dealing with any particular theme, the literature or the subject. A bibliography may include a detailed description of the books themselves and in this sense the bibliographer requires knowledge not of the history of typography but also of book-binding and paper-making. A bibliography may be a author bibliography, critical bibliography and bibliography of bibliographies.

3.7 REFERENCE SOURCES

These are encyclopedias, dictionaries, geographical sources, biographical sources, year-books/ almanacs, directories and handbooks statistical (salient features and evaluation) reference sources are meant for preliminary perusal and casual consultation. Hence, these are less frequently used those works are also described as ‘approach material as the entries in a reference work provide basic information on a subject. In order to provide quick reference, mostly the entries in a reference work are arranged alphabetically. Each entry is an independent piece of information not related with the earlier entry
3.8 BIBLIOGRAPHICAL SOURCES

The bibliography is defined as the list of written printed or otherwise produced record of civilization which may include books, serials, pictures films maps records, manuscripts an any other media or communications.

The best known bibliography in a library is the catalogue which helps to identify and locate books in a particular library, but it fails when a particular book is not available in the collection of a library. For location of such book or books, one has to consult other bibliographical tools. Bibliography is a complex structure of lists which extends from the local library to the region, nation and world. A bibliography records not only what is available, but what has been available in the past and what will be available in the immediate future.

3.9 GEOGRAPHICAL SOURCES

The improvement in the means of communication has led to increase in travel all over the world. As a result the people are becoming more interested in knowing about the place they would like to visit or have already seen. There is also increasing emphasis on the teaching of geography.

Geographical sources consist primarily of graphic representations. Most of them are produced through team effort. These are made use of to find out answers to geographical questions geographical questions are concerned with information about places such as cities, town’s mountains etc.

3.10 ELECTRONIC SOURCES

Technology plays most efficient role in today’s life it is said to be the turning force in case of bringing changes in market trends. As we can see around all the technologies are coming together to form the max powerful network for convenience of human beings. These collaborations have affected each and every field of our day to day lives. The networked system are said to be the most efficient tool for better service providing as well as to develop better future opportunities for us. These technologies have also affected broadly on inter relationships among all kinds of give and takes.
3.10.1 Electronic Journals

Journals are an important part of library collection and represent a major investment in any library. The development of the internet and the World Wide Web (WWW or W3) has created the exciting opportunity to increase the value of these materials to the library users.

3.10.2 Advantages of Electronic Journals

Increased availability of new technologies and relatively low cost of electronic distribution are valuable considering reduced budgets in libraries. Also publication and peer review is faster. Primary materials can be made more accessible to a broader audience. Additional advantages to electronic journals include 24 hours a day, 7 days per week access, need for less physical storage space, direct linking to other resources, and enhanced searching capability.

3.10.3 Disadvantages of Electronic Journals

Despite the above stated advantages there are issues of credibility, accessibility, and permanence, and an ever-changing technical environment which need to be addressed before electronic journals become wide spread.

The challenge with the changes in social technological, economic and political environment has forced the library and information centers to change their time honored old practices. Pressure for accountability and the emergence of enterprise culture has lead the library and information professionals to take aggressive actions for needs principle and profit-making by library and information organizations.

3.11 E-BOOKS

Definition of an e-book

An E book can be defined as the word of library in digital format, consisting of one or more than one standard unique identifiers. The monographic body of the content along with its metadata were anticipated to publicize and accepted throughout the world. In another words an E-book can be said as electronic format of the same book made available for reader around the world.
3.11.1 Advantages of e-books

Rapid delivery to users. Limitation of printing and distribution costs, minimal processing for circulation. And easy to replace if lost or damaged are some of the often mentioned advantages. According to dowdy (2001) the missing or extra pages of the book can be deleted by users when they are online or offline after downloading the specific content with the use of appropriate and autonomous software. One can easily make the contents in convenient format by using simple functions like zoom, copy etc. In case of variety in available devices for reading purposes of the users, downloading the books, synchronizing the size of the original format are most unique characteristics of the E-books.

3.11.2 Disadvantages of e-books

1. Circulation inconveniences: Several libraries have reported circulation problems in E-books. The library may have only one soft copy which is unable to copy and share; this puts a barrier in reaching out to the maximum users at same time.

2. Readability issues: The resolution plays a crucial role in case of readability. Many times the font size of the E-book page does not match with respective screen size making it inconvenient for the users to read the necessary data. The page may have graphs, figures, drawings which are not matching to the software of p.c. of users.

3. Administrative problems: Most of the libraries face problems related to copyrights of E-books. The license agreements are needed to be addressed properly with correct information.

4. Bibliographic control problems: The bibliographic indexes are needed to updated on regular basis as the vendors don’t provide the indexes every time.

3.12 PRINT RESOURCES

Print resources are very important where wide variety of reference books and journals are added during their development. The print resources consists books periodicals, Dictionaries, handbooks, manuals, encyclopedia, atlas reports, annual reports institutional publications. Libraries have rich collection of well-chosen books on all subjects.
3.12.1 Print materials are limited and exclusive in use

When we discuss the issue of availability of printed material it’s always hard to manage several customers at the same time. Whereas the printed material can be printed and distributed several times with same data worldwide. Another important factor is the electronic material does not get exhausted by using several times. Therefore many of the routine problems can be avoided, there is no need to create or maintain extra place for these data’s. The production as well as stock and distribution can be easily controlled by single person at a time.

3.12.2 Advantages

Print materials can be stored for long period as there is no chance for getting corrupted or there no changes done by another person in case of printing pages.

In printing procedure there are no chances of getting the crash of server or software’s. Print is superior to online when the online publication is unable to reach their target audience due to them not being online.

3.12.3 Disadvantage

The major disadvantage of print material is heavy use of paper and other related things. To make modifications in already printed material one has to go through the complete procedure of again printing the whole of stock. One cannot get the latest updated format of the same book unless the printer is taking the reprint in another edition

3.13 LIBRARY SERVICES

3.13.1 Online Services

Today online services are the most modern facilities being provided through the computer applications. On line means the state of being in direct immediate communication with the computer on which the database is loaded. It is an interactive system i.e., an online system allows the user to input instructions receive response and then modify or manipulate the search of information can be wider and exhaustive.

In other words online means the direct access from a terminal to a computers CPU enabling immediate processing of input. And online service means the provision of facilities of online searching of bibliographic or non bibliographic databases using remote terminals.
In online processing it is possible to process individual jobs and is also possible to process individual records from files of records. In other words, the system response quickly to the user’s needs and the response time is of very low order. The advancements in computer and communication technologies have enabled online information systems and online bibliographical search services are being offered by many commercial firms. Thus online services are the bibliographical search services which are provided online.

Thus online service is a means whereby a searcher at a remote terminal can access and interrogate databases containing bibliographical or other data.

3.13.2 Translation Services

Translation service is one of the facets of documentation, which plays a very important role in dissemination and application of information and knowledge. Hence program to provide this service should be arranged and organized systematically in each library and documentation/information Centre. The program concerned with translation services are time consuming as well as money consuming.

In the world the literature specifically today in the field of science and technology is published in so many languages, to which the scientists do not find themselves able in understanding due to the variety of languages. Hence some agencies at national and international levels have taken the task of providing this literature published in variety of languages through translation services. For this purpose so many translation centers, translation banks. And translation institutes have been established, which we call translation pools and translation institutes, has been established. Which we call translation pools. And some periodicals are also being published in this field they may be called translation tools.
3.13.3 Reprographic Services

Repro means to rewrite or to reproduce and graph means printed or written matter. Therefore reprography means reproduction of printed and printed matter. Thus we can say that reprography comprises of process and methods used for both copy and duplicating of documents.

Reprography has become an indispensable part of information storage and retrieval systems and in an important tool for efficient communication and dissemination of information; reprography means to produce a fresh copy of the document. It is the technique by which images are produced by the action of light on certain light-sensitive surfaces. Thus reprography means copying and duplication processes for the preparation of one or more copies of document.

The term reprography was first used in 1954 to denote all types or facsimile reproduction of documents. Originally it comprehended reproduction techniques such as Photostat, microfilming and contact printing by the silver halide process now the connotation of the term reprography has gradually changed. Now it includes a wide range of processes which make use of heat sensitive papers or static electricity for the production of images.

3.13.4 Reference and Information Services

The primary aim of the library is to promote the use of reading material contained in it. Techniques like classification of documents and their subject wise arrangement on the shelves in a helpful order, providing open access to the readers, preparation of tools like the library catalogue and similar others are all indirect forms of assistance to users to find their documents in the library. However, the more direct method that will promote the use of documents is to bring together documents and their readers by personal efforts by the staff of the library this method of providing personal attention to readers in terms of meeting their specific needs of documents or for any information complained in them, is known as reference service.

3.13.5 Reference services

Ready reference service is a reference service finished in a very short time, in a moment if possible. This section in a library is also called as an ‘Enquiry Desk’ as the
staff meets the reader face and answers his enquiry immediately. Ready service is also known as fact-finding.

Ready reference service according to Ranganathan is justified on three counts viz the reference book; the nature of the users and overall economy. We have already seen that reference books are not meant for continuous reading but for only actual consultation. Thus the time taken for consultation of reference books remains short in duration. The arrangement of subject in such a way that the information needed is located quickly.

3.13.6 Long-Range Reference service

As the very name implies there can be no question of giving immediate satisfaction in long-range reference service. When compared with them standard for ready reference service, long-range reference service is allowed an appreciably long-time. Then the question as to what makes a query a long-range one or how to distinguish between ready reference service and long-range reference service. We can only say that most ready reference questions are solved in a few minutes, while some take longer time, but seldom more than half an hour similarly. It may be added that few long range reference queries takes less than half an hour while some take a whole day or even weeks.

3.13.7 Alerting Services

A particularly individual approach to the user is the alerting service. The success of an alerting service depends on the personal relations between service and user. Before an alerting order can be accepted, an interview is necessary between the user and the service to determine the user’s precise needs. Such an interview can be useful only if there is mutual trust and confidence. It must further be possible to alter the order after a period of trial. A second condition is that the service must continually keep the user’s interest in view and base its selection from the literature on it. It is even advisable for the literature searcher to visit the user’s (research) institute now and then.

A third condition is that the two parties agree on the collection of documents (journals, books, patents that are examined by the service and the service checks new material daily and as far as possible Sends out information daily. A non-mechanical system such this requires much analytical form those searching the literature. In the
immediate future, a combination of the intellectual with the computer method is the obvious choice.

### 3.13.8 Current Awareness Services

The current awareness service aims at bridging the time lag between the publication of primary document and its coverage in an indexing/abstracting periodical. These services can be more effective at local level.

**Keeping aware and keeping up-to-date**

Current awareness and keeping up-to-date overlap but they are not synonymous. Current awareness connotes being well informed over wide areas going beyond the fields which are obviously and directly relevant to current activities. Keeping up to date implies with something e.g. one’s own discipline/technology profession: the connotation is narrower and more purposeful.

Some current awareness is an automatic by product of normal working activities, arising accidentally from a multitude of actions and observations having other purposes. It can be increased greatly by deliberate regular reading of for example. A science news journal such as new scientist keeping up-to-date in narrower fields is mainly achieved by regular and methodical scanning of current specialist publications, plus plenty of professional talk with colleagues and contacts Says Hanson.

- **Need for CAS**

  A user may try to keep himself abreast of the recent developments on his own. But CAS offers additional advantages to the users. Its coverage may be wider and hopefully it would come out regularly. On the other hand a user would not be able to scan literature as widely and regularly as could be done by a CAS.

  CAS can lead to the saving of time. An individual or group of library information center professionals can scan sources of information and notify the members of the institution (parent body) or community being served thus saving their valuable time. In case each user scans literatures individually then this will lead to unnecessary duplication of efforts.

  There may be users who do not possess the ability or willingness to do scanning in such cases CAS willingness to do scanning. In such cases, CAS will come to their aid.
During the period of scarcity of financial to promote and market library services. CAS is one of the best ways to bring the resources of the library information center to the notice of the users. This will in turn lead to greater demand for library services giving opportunity to the library to prove its value and justification for the money spent on it. Thus we can say that CAS is a very useful thing and its uses are shown as below:

1. CAS is the best way to bring the resources of a library to the notice of its users.

2. CAS is produced by an external agency, then it may list primary sources of information which the library may not possess, then there would be need for backup libraries. The backup libraries should be able to supply documents on inter-library loan or photocopies.

3. CAS leads to increase in demand for inter-library loan and photocopiers. In addition there may be greater demand for procurement of additional titles. The library should be prepared to meet these additional demands.

4. Before starting CAS it is a must to ensure the availability of required resources (personnel equipment, material and finance) and their continuance in future. In case the service proves effective, then users are likely to support the case of library of sufficient resources for the purpose.

5. The success of current awareness survives would largely depend upon enthusiasm knowledge and resourcefulness of the librarian response from the users and organization of the library success of its users and in turn of its parent body.

6. The librarians should not remain merely busy with traditional services but should aim to provide current awareness services on a large scale. CAS forms an important aspect of information service the prestige lies in this area.

3.13.9 SDI- Selective Dissemination of Information

This is a type of CAS the objective of which is to keep users informed with the new developments of their respective areas of interest without over burdening them with non-relevant and unwanted documents. It provides notifications of new primary documents as and when added to the information dissemination system of a library giving
bibliographical details with or without abstracts of each document, notifications are based on a match between user’s interest profile and document profiles.

Libraries, particularly special libraries operate on information. It is their main function to communicate information about new documents and acquisitions to their scientists and technicians. For alerting them bringing out library bulletin information bulletin index to current literature, local documentation lists etc, are the different methods. It is a debatable point that how each individual scientist is really alerted by such methods. A new dimension can be given to CAS by individualizing It i.e. by rendering to each individual scientist an alerting service which is exclusively restricted to his areas of interest. This is called the selective dissemination of information (SDI) system.

Computer based SDI is provided in libraries with the help of following procedure

Selective dissemination of information of information (SDI) was developed with a specific purpose of providing a researcher at regular intervals a carefully selected list of all publications in his particular area of interest that have been published in the preceding interval in all the significant journals of the world. The use of computers and databases has greatly increased the potential of SDI service and expanded its scope so that what was originally concerned as a local service for an individual research organization has now acquired the function of proving a national or international service.

3.13.10 Information Services

Information most ancient and most effective means of dissemination of information is “oral diffusion” oral diffusion process can be classified into two –person to person; and exchange in groups. Person to person exchange is by word of mouth, through dialogue, interview or by telephone. Group exchanges are through lectures, group meetings, site visits, formal courses, etc

The major inputs which are essential for any business, industry, research and development are considered to be only four manpower, money material and machines. Now for developing countries one more input which has become essential is information this is a very important commodity. Generally information services and reference services are used as synonyms in library services.
1). Parameters of Information

1. Quality of information which can be measure by the number of documents, pages, words, Characters, bits, drawings, Pictures etc.
2. Content the meaning of the information.
3. Structure the formal or organization of the information and its logical ship between statements or elements.
4. Language the symbols, alphabets, codes and syntax with which the ideas are expressed.
5. Quality that which characterizes the completeness, accuracy, relevance and timeliness of information.

2) Communication

The communication is derived from the Latin word communes meaning common; when communicate we are trying to establish a communal with someone.

Purpose of communication and information

Information has no value until it is used. The work of scientists, technologist’s industrial workers and manager’s necessities effective communication

- To stimulate through and action by interaction with other people’s ideas knowledge experience and achievements.
- To promote continuous awareness of what others are doing so that individual workers may know of developments in their own special fields and in wider fields such as discipline or
- To diminish the probability of duplication o work and to save time and efforts.
- To provide introductory and background information for work in unfamiliar fields.
- To provide specific information and data needed for work in hand
- To aspect specific requirements of a country's development plan which usually includes the following there areas.

1. Industrial techniques management and economics;
2. Natural resources; and
3.13.11 Bibliographic Services

A) Indexing: an index is a retrieval tool. It provides various access points through which a user can identify the document of his interest.

Indexing is a technique or a complex of techniques of preparing an index. Indexing is a method of document representation. The ultimate aim of which is to provide access to the users through the description used. Sometimes it is difficult to represent a document in a single term. In such a case more than one form has to be used. These index terms are arranged in a more searchable order. This ordering involves a definite syntax, semantics and orthography because of these characterize, indexing is described as a language, more so an artificial language. The indexing engage may be available in a prepared form for adoption in any information retrieval system or the language may have to be specially designed for a system. A scheme of classification is a ready-made language similarly. A thesaurus is also a ready-made indexing language.

B) Pre-Coordinate Systems

In a pre-coordinate system the compound or composite subject is analyzed into its constituent concepts according to a plan and these constituent concepts are then represented in a particular of coordination of terms.

In such a coordinated string of concepts there are many access points in order to saucy the various approaches of user, many of the systems have evolved patterns of partition, shunting etc. of the terms.

Some important pre-coordinate systems are:

1. Kaiser’s systematic indexing.
2. Ranganathan’s chain indexing.
3. Postulate-based permuted subject indexing (POPSI).
4. Harradine’s relational analysis.
5. Coat’s BTI indexing system.
6. Sharp’s SLIC (selective listing in combination) and
7. Derek Austin’s PRECIS (preserved context index System).
C) Post-coordinate systems

Dissatisfaction on with the pre-coordinated indexes has led people to devise post-coordinate systems which eliminate pre-ordering of the concepts, etc. In a post coordinate system. The concepts will be kept separately and these can be coordinated by the user at the time of search. It should be noted that the process of coordination is there in both the systems, only they are done at two different stages. Important post-coordinate systems are:

1. MortimertaubesUniterm system.
2. Calvin moors zator system.
3. Cordonnier’s selector system.

3.13.12 Document delivery services

Use of documents: the extent to which the services of any library or information Centre used is likely to be heavily influenced by considerations of effort needed to use the services offered. Ease-of-use factors include physical accessibility e.g. where the library is located and where various portions of the collection are stored and intellectual accessibility e.g. how well a collection is catalogued or indexed how easy the catalogue is to use, how clearly the shelves are signposted as well as miscellaneous accessibility factors governed by library polices e.g. which books may circulate and for how long. How many be borrowed at one time and so on.

3.13.13 Reprography

Reprography is a term used to refer to photocopying as well as duplicating documents whereby one or more couples of the same size or in reduced or enlarged form are produced. Document reproduction methods can be conveniently grouped into two categories:

1. Photographic copying and
2. Micro-recording

a) Wet processes: Photostat couples are made on a Photostat machine. The apparatus and method are quite simple. One has to push the document to be copied into the machine and press the lever. A finished black and white product comes out in a few seconds.
Direct positive copying can be used when the object to be copied is translucent and the text to be copied is on its one side only. In this the light is made to pass through the original on the light-sensitive surface.

\textbf{b) Dry Processes:} Xerography is also known as electro photography Electrostatic photography Electrograph Electro–optical photography etc. This process combines both the capabilities of a copter and a duplicator.

\textbf{3.14 DIGITAL LIBRARIES}

Electronic libraries are those in which large number of geographically distributed users can access the contents of large and diverse depositories of electronic objects. Electronic objects include networked text Images, maps, sounds and videos. They also include hypertext hypermedia and multimedia compositions.

The three main characteristics of digital libraries are

1. The storage of information in digital form,
2. Usage of communication networks to access and obtain information and
3. Copying either by downloading or on-line printing form master file.

A digital library is understood to have the information stored predominantly in electronic or digital medium. The digital information collection may include digital books; digital scanned images graphics textual and numeric data digitized films audio and video clips, etc. A digital library is expected to provide access to the digital information collections.

\textbf{a) Problems Associated With Digital Libraries}

Libraries and information centers have been described to be in transition their change to electronic has been felt in the nature of functions and services offered by them and also in the behavior of users in terms of enhanced information access and increased demands. However, the transformation of electronic libraries to duties functions or objectives of library and information centers.

Libraries and information centers may have to face many challenges while transforming to digital libraries; addition of more and more electronic and digitized information providing access to the digitized information sorting out issues like access to
information versus ownership of budgets towards maintaining computer systems database etc.

3.15 VIRTUAL LIBRARIES

Information technology (IT) has resulted in virtual libraries. Users are no longer limited to their own library and information centers. Library and information professionals have also now to cater beyond the four walls of their library and information centers. Hence, the number of users has increased as well as universal availability of any information has become possible.