
UNIT 3 USERS OF INFORMATION SERVICES

Structure

- 3.0 Objectives
- 3.1 Introduction
- 3.2 Information Services in Libraries
 - 3.2.1 Libraries as Facilitators
 - 3.2.2 Information Demand
- 3.3 information Service Agencies
 - 3.3.1 Links in Information
 - 3.3.2 Facilitating Centres/Services
- 3.4 Users of Information Services
 - 3.4.1 User Needs and Use and User
 - 3.4.2 Information Behaviour
 - 3.4.3 Methods of Assessing
 - 3.4.4 User Groups and Their Specific
 - 3.4.5 Information Services
- 3.5 Summary
- 3.5 Answers to Self Check Exercises
- 3.7 Key Words
- 3.8 References and Further Reading

3.0 OBJECTIVES

In this Unit, we shall introduce you to the various information agencies making up the total information transmission chain in which libraries act as facilitators between information resources and its ultimate users.

After reading this Unit you will be able to:

- explain the reasons for providing information services in libraries;
- describe information service agencies with their specific functions and responsibilities; and
- identify users their information needs, and their behaviour in seeking information.

3.1 INTRODUCTION

In this Unit, first we shall introduce you to the various types of information services provided by libraries. There are at least three important reasons why libraries are expected to provide information services. They are: proliferation of primary literature, increase in subject specialization and the increasing need on the part of the users for quick access to information.

Then, there are also information service agencies which provide information. They are discussed in the two sub-sections on Information Transmission Chain and Facilitating Centres. Facilitators include libraries/documentation centres/information centres, indexing and abstracting services, on-line database services, information analysis centres and referral centres.

In the fourth section of this Unit, we shall describe users, their information needs and their behaviour in seeking information.



3.2 INFORMATION SERVICES IN LIBRARIES

3.2.1 Libraries as Facilitators

The libraries are no longer passive observers of users trying to find their ways in libraries to locate what they want and are no more considered as merely store-houses of documents. They actively participate in the process of transmission of information from the sources to the ultimate users. Thus, services provided by a library are referred to as "library and information services" combining the conventional library functions with its information service role. There are at least three important reasons why libraries are expected to provide information services.

- i) The rapid increase in the volume of primary literature;
- ii) The increasing specialisation in all branches of knowledge which is becoming more and more interdisciplinary in nature; and
- iii) The users need to have quick access to the vast amount of information.

While information grows exponentially, the time available at the disposal of users remains almost the same, if not less. They cannot, therefore, scan even a small fraction of the available literature in their own areas of specialisation.

3.2.2 Information Demand

Information services are needed to provide information not only on demand but also in anticipation of its use. Often it will be necessary to repackage the information contents collected from various sources to suit the requirements of specific group of users. Further, there might also be a need to translate a document from one language into another to make the content intelligible to users who are not familiar with the language of the original document. Finally, it would also be necessary to provide users with the complete texts of the documents. Section 3.4 describes users' information needs and their information seeking behaviour and also the methods of assessing their needs and analysing the behaviour.

Before we discuss the various services, it is necessary to point out that it is not the library alone which provides information services. It is one of the important links in the information transmission chain - the chain that links the sources of information to the ultimate users. There are other links also in the chain which along with libraries constitute the family of information providers. Authors, publishers, librarians, information specialists and users libraries. The next section briefly discusses the roles of such links.

Self Check Exercise

- 1) State the various individual links in the information transmission chain.

Note: i) Write your answer in the space given below

ii) Check your answer with the answers given at the end of this Unit.

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

3.3 INFORMATION SERVICE AGENCIES

In Section 1.3 of Unit 1 we have described the process of generation of information. We also said therein that researchers had the unique distinction of being both consumers (users) and producers (i.e., generators or creators) of information. We shall use the example of the

research community in explaining the information transmission process and the various links in the information transmission chain. The links are as follows:



3.3.1 Links in Information Transmission Chain

- i) **Sources of Generation:** As discussed in Unit 1, the researchers and their employing organisations are responsible for generating information. The outputs are in the form of research papers and reports.
- ii) **The Primary Publications System:** The most important component of this system is the primary journal which publishes outputs of research as research papers. It is a mechanism for linking the members of the research community who are working in the same field. A researcher may gather information directly from these primary sources (Journals).
- iii) **The Secondary/Tertiary Publications Systems:** The indexing and abstracting publications belong to this group. They are aimed at accelerating transmission of information to users, i.e., they link the primary sources to users.
- iv) **Facilitators of Information Transmission:** Although researchers have access to both the primary and secondary publications, they also need intermediaries which can link them to the right sources at the right time. Libraries and information centres act as facilitators of information transmission from the generator to the user and from one user to another.

3.3.2 Facilitating Centres/Services

Traditionally, only libraries functioned as facilitators, but over a period of time, several other specialized facilitating services have come into existence which include:

- i) information centres:
- ii) on-line database services, information analysis centres, referral centres. In the subsequent sections a brief account of each of them is presented.

Self Check Exercise

- 2) List the different types of facilitators of information transmission.

Note: i) Write your answer in the space given below

ii) Check your answer with the answers given at the end of this Unit.

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

a) Information Centres

It is now customary to establish documentation cells within many special libraries to provide different types of information services to their clients. Whatever may be the organizational structure, the purpose is to accelerate the use of information through retrieval and dissemination process. These libraries and documentation cells often cater to the needs of people outside the organization, although their basic concerns are the requirements of host organizations.

In many countries, primarily at the instance of the UNESCO, national documentation centres have been set up which provide most of the services described in Section 3.4.5. The Indian National Scientific Documentation Centre (INSDOC) and National Social Science Documentation Centre (NASSDOC) are examples of such national level centres in India. At the international level, several agencies of the United Nations function as international information centres e.g., the Information Unit attached to the Department of International, Economic and Social Affairs of the UN maintains the Development Information System, the services of which are available to all the member nations.



b) Indexing and Abstracting Services

While the compilation and publication of an indexing and abstracting service in itself is an information service, many publishers of these services, provide a wide range of supplementary services. One of the most important examples is the services provided by the Chemical Abstracts Service (CAS) which publishes the Chemical Abstracts, the world's most comprehensive abstracting service in chemistry and allied subject areas. Besides publishing the weekly Chemical Abstracts, it provides online access to the CA database (the online version is called CA search) and also the following supplementary services:

- i) Search Service -undertakes computer searches (for those who lack the time or facilities) and provides search outputs.
- ii) Selective Dissemination of Information Service.

c) Online Database Services

In Unit 7, we shall be referring to online databases. Most of the well-known indexing and abstracting services are now available both in the print form and in the machine-readable form. For example, Engineering Index is the name of the print version of internationally known abstracting service in engineering. The computerized form is known as COMPENDEX. To accelerate the use of online databases, these have been leased to a number of online vendors, like DIALOG Information Services (presently known as Knight-Ridder Information Inc. as DIALOG has been recently acquired by them). The vendors not only provide online access to several databases to users, but also undertake literature searching on behalf of users (known as delegated literature searching). Copies of source documents (full texts) are made available selectively by Knight-Ridder through their "Uncover" service.

d) Information Analysis Centres

An Information Analysis Centre (IAC) has been defined as an organization which indexes, abstracts, translates, reviews, synthesizes, and evaluates information and/or data in clearly defined specialized fields. The key activities of IAC are collection, analysis, interpretation, synthesis, evaluation and repackaging of information or numerical data. The IAC is the most efficient system for transferring authoritative and evaluated information to a user in a convenient form.

e) Referral Centres

A referral centre is some sort of "information desk" for the scientific and technical community which does not provide enquirers directly with the information they need, but suggests sources (organizations or individuals) likely to satisfy the clients. The Science and Technology Division of the Library of Congress maintains one of the most active referral centres - the National Referral Center. An efficient referral centre maintains an exhaustive inventory of significant information sources and also publishes directories of such sources.

Self Check Exercises

- 3) Describe the functions of an information analysis centre in five sentences.
- 4) Distinguish the functions of a referral centre from those of a library. State at least three distinctions.

Note: i) Write your answer in the space given below

ii) Check your answer with the answers given at the end of this Unit.

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



.....

.....

.....

.....

.....

.....

3.4 USERS OF INFORMATION SERVICES

Having studied how and where information is generated and transmitted, it will be useful to look at the relationship between libraries and users. It is also useful to know how users seek information and how to analyse their information behaviour.

3.4.1 User Needs and Use and User Studies

Libraries, information centres and databanks are now known as information facilities which exist for the benefit of users. The management of these facilities consists, therefore, of meeting the users' reference and information needs in study and research. For this, it is necessary for librarians and information staff working in libraries to know:

- what the users' needs are;
- how they go about in acquiring the information they need;
- how they use it; and
- what for they use it.

In other words, it is necessary to know the extent to which the library meets the users' information needs, All investigations in search of these facts - needs and the extent of satisfaction - are known as use and user studies.

All libraries as information systems have subjective and objective aspects. The library resources, the subject coverage they provide and the various dissemination techniques employed for their use are the objective aspects. The users' opinion about the adequacy and suitability of these resources, their willingness to use them, and their ability to use the services are the subjective aspects of these systems. All investigations into the objective aspects such as library resources, coverage and techniques are known as use studies. On the other hand, all investigations into the subjective aspects like users' opinion, willingness and ability to use the library services are referred to as user studies. Objective aspects of the system are thus real, outward and external elements not governed by the behaviour of users, whereas the thoughts and feelings of users are the subjective aspects of the system. Let us now discuss briefly the meaning of the term 'information behaviour'.

Self Check Exercises

5) Distinguish between the objective and subjective aspects of a library system.

6) Distinguish between use and user studies.

Note: i) Write your answer in the space given below

ii) Check your answer with the answers given at the end of this Unit.

.....

.....

.....

.....

.....



3.4.2 Information Behaviour

Briefly, information behaviour means the way users seek information, the way they go about finding it and the way they use it. Again, users' information behaviour has two aspects: verbal and actual. Users' verbal behaviour is what they express, they like and they do. Their actual behaviour at the catalogue, in the stack area, in the reference room or periodicals room could be quite different. Here, they may be using the sources they have never mentioned as their preferences. For example, in spite of consistently getting a lower rank in opinion surveys, title part is still the most common and heavily used component of the library catalogue even in science libraries. Similarly, the information on users' preferences for information sources gathered through opinion surveys is not always validated in citation analyses which would discover what the users have actually used. Thus, actual behaviour could be different from their verbal behaviour. You are already aware that libraries provide different information services. These services are ideally planned after assessing users' information needs. While assessing needs, users' information behaviour is analysed. One set of methods is used for analysing their verbal behaviour and another for analysing their actual behaviour. Now you will understand that we analyse users' actual behaviour in use studies and their verbal behaviour in user studies. Having understood the difference between verbal and actual behaviour and between use and user studies, let us now know in the next sub-section, what different methods are used in these analyses.

Self Check Exercise

7) Indicate what you understand by information behaviour and distinguish between verbal and actual behaviour.

Note: i) Write your answer in the space given below

ii) Check your answer with the answers given at the end of this Unit.

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

3.4.3 Methods of Assessing Information Needs

As mentioned above there are two sets of methods:

One used in user studies for analysing verbal behaviour and the other in use studies for analysing actual behaviour. The most common methods for assessing information needs and evaluating adequacy of library support services to users are as follows:

- Survey through (a) questionnaire and (b) interview
- Observation
- Secondary analysis.

A brief explanation of how these methods are used is worth mentioning here. A survey is conducted through a questionnaire or interview. Both these involve questioning techniques inviting users' responses for eliciting information on their expectations of or satisfaction from, library and information services. In other words, questionnaires and interviews offer the users an opportunity to express their opinions on the library support. Analysing and interpreting these responses amounts to investigating into their verbal or expressed behaviour. In user studies we employ a variety of questioning techniques both in the questionnaire and the interview methods.

Observation technique is employed to study the actual behaviour of users at the various service points in the library such as the catalogue, the periodicals room and the like. We observe the use, they make of the various resources.



Secondary analysis consists in examining the already existing records such as loan records, Users of Information Services suggestion books and reference requests. In this process, citation analysis is a more sophisticated technique of secondary analysis for studying the use made of the library resources. Citation analysis also shows the extent of users' dependence on the library and their preference for particular channels for getting the information, e.g., monographs or serials. The technique of citation analysis is very commonly used for producing a ranked list of journal titles which helps library staff to take several management decisions relating to acquisition, retention and selection of source material for developing information products like indexing and abstracting bulletins.

Self Check Exercise

8) How does citation analysis help in use studies?

Note: i) Write your answer in the space given below

ii) Check your answer with the answers given at the end of this Unit.

.....

.....

.....

.....

.....

3.4.4 A User Groups and Their Specific Needs

You will see in details, in Unit 5, Section 3.1, the different user groups which seek library support and the kind of support they expect. You have also learnt from your study of Unit 1, Section 4, that information is a vital input in different types of activities carried by different groups of people, e.g., students, teachers, researchers, scientists, engineers, planners, government officials, business executives, jurists, legislators and several other professionals. Information needs and information seeking habits vary with each group. It is, therefore, necessary first to assess users' needs and analyse their information behaviour so that the following information services may prove productive enough.

3.4.5 Information Services

In this section we shall discuss eight types of information services:

- a) Current Awareness Service (CAS)
- b) Selective Dissemination of information (SDI) Service
- c) Indexing and Abstracting Services
- d) Literature Searching Service
- e) Reference Service
- f) Translation service
- g) Document Delivery Service
- h) Reprography Service

The first four services are basically bibliographical services, which guide the users to the documents wherein the required information is likely to be available. These services can be grouped into current information services and retrospective information services. As the names suggest, the current awareness service as well as its variant form 'selective dissemination of information' fall in the first category. Indexing and abstracting services, although to an extent useful as current awareness tools, are basically meant for providing retrospective



information. Literature searching is the means for providing retrospective information using and organisations the indexing and abstracting publications. Reference service, on the other hand, provides the answer rather than the source in which the answer could be found. Translation service is a mechanism for making the contents of documents in languages not known to the user to the languages intelligible to him. And finally, document delivery is the culmination of information services when the complete texts of various references are delivered to the users, usually in photocopies which is made through reprography service.

Self Check Exercise

9) List the eight types of information services Indicate if all libraries should provide all these types of services.

Note: i) Write your answer in the space given below

ii) Check your answer with the answers given at the end of this Unit.

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

a) Current Awareness Service (CAS)

For any active researcher it is absolutely essential that he keeps himself up-to-date in the field of his work. In addition, he is also required to know the developments in other broader and peripheral areas which impinge on his field. This type of approach to information is known as current approach to information. Any service intended to meet this current approach is generally known as current awareness service.

The most important characteristic of CAS, however, is the speed with which current information is made available to users. The service must necessarily be very fast. It should be mentioned that it is not the researchers alone who need current information, but there are other user groups too to whom current information is of great value e.g., policy-makers, professionals.

It is customary for any special library to provide some kind of CAS to its users. We may call it in-house CAS. There are at least four ways of providing in-house CAS:

- i) display of currently received documents;
- ii) notifying the receipts of new arrivals;
- iii) routing of journals; and
- iv) publication of in-house current awareness bulletins.

The display method is practised by all libraries. Current issues of journals are displayed on specially designed racks to facilitate browsing by users. Most researchers adopt this method of keeping in touch with the current journal literature: The display of newly acquired books in the library also falls into this category.

Since most of the libraries are aware of the needs and interests of many of the library users, it is not uncommon to find librarians informing them in person about any interesting additions to the library. This is generally done as an informal process. In fact, the root of selective dissemination of information discussed in the next section lies in this system. Routing of



journals to the users is also adopted by many libraries which, however, is a cumbersome and time-consuming process and generally not encouraged in many libraries.

There are a number of commercially available current awareness publications. Current Contents, published by the Institute for Scientific Information, reproduces tables of contents of highly cited journals. As mentioned in Unit 2, many of the indexing and abstracting publications can also be used as current awareness tools.

b) Selective Dissemination of Information (SDI)

The SDI is a type of current awareness service, the objective of which is to keep users of the system informed of new developments in their respective areas of interest without overburdening them with non-relevant and unwanted documents. It provides notifications of new primary documents. Notifications are based on a match between a reader's interest profile (user profile) and document profiles as discussed in Unit-6.

c) Indexing and Abstracting Services

We have already discussed in Section 3.3.1 the indexing and abstracting publications as secondary documents. The *topic* has also been discussed in detail in Unit 4 of BLIS 05. Suffice it to say here that many comprehensive indexing and abstracting services are available commercially and there may not be any need to provide in-house services. However, in many libraries in-house indexing and abstracting services are undertaken in response to some special needs, e.g., to cover special category of documents like, reports literature, working/ discussion papers.

A good collection of indexing and abstracting publications will facilitate literature searching discussed in the following section. It also needs mention that most of the important indexing and abstracting publications are also available in machine (computer) readable format which can

d) Literature Searching Service

There are occasions when users want to know "everything that has been published" on a subject. The most important reason is that they want to know the state-of-the-art before 'undertaking a new research project. Such information need can be satisfied by undertaking a comprehensive search in bibliographies - the indexing and abstracting publications: This is known as literature searching. The structure and arrangement of these secondary publications facilitate undertaking comprehensive literature search. A comprehensive literature search can be done very fast using online databases.

Many libraries now provide literature search service. Before initiating a search for the user it is essential that the searcher understands what the user wants. Understanding what he wants is critical in literature searching, in view of the time usually needed for literature searches. This is more important when an online database is used because of the high costs of online searching. Before conducting a literature search, the searcher needs to get clarifications on the following:

- i) a clear statement of the query;
- ii) how far back the search should go;
- iii) whether the search is to be comprehensive;
- iv) whether the focus should be on specific regions, and
- v) whether certain types of document (e.g., patent reports literature) should be included/ excluded.

e) reference Service

Notwithstanding library catalogues and various other aids available for exploiting the library resources, users would frequently need some personal assistance in understanding the shelf arrangements and in locating documents, and more importantly, specific Pieces of information. It is customary to provide assistance in such circumstances which is considered one of the most important tasks of libraries and information centres. However, assistance in location specific pieces of information is generally called reference service. Unit 5 of this course is fully devoted to reference service.



f) Translation Service

One of the constraints in the flow of information is the language barrier. About half of world's literature is published in languages other than English and generally scientists would also like to know what has been published in languages with which they are not conversant (i.e., source languages). They would, therefore, need a service to get such literature translated into the languages intelligible to them (i.e., target languages).

Cover-to-cover translations are done in anticipation of use (i.e., an anticipatory service). Scientists also need translation of papers which they come across in course of literature searches. It is, therefore, necessary to develop an "on demand" translation service. The national documentation centres usually provide such service. Many special libraries and documentation centres attached to R & D establishments also have in-house translation facilities. The services of free-lance translators are also available. Depending upon the nature of the source documents and the need of scientists, three types of translation services are usually provided:

- i) complete literal translation of documents
- ii) free translation of the major points of the documents, and
- iii) oral explanation of contents of the documents.

Since translation is a difficult and time consuming activity, several attempts are being made in India and also internationally to build up pools of available translations to avoid duplication in translation effort. Two important examples of such pools are the translation banks established and maintained by:

- i) The International Translation Centre, The Delft, The Netherlands. The Centre brings out a monthly World Transindex to announce its acquisitions of translations from various countries.
- ii) The National Translation Centre (located in John Crerar Library, USA) which brings out a monthly Translations Register-Index.

Self Check Exercise

10) List the three different types of translation services that may be provided.

Note: i) Write your answer in the space given below

ii) Check your answer with the answers given at the end of this Unit.

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

g) Document Delivery Service

The primary responsibility of the library is to provide the user with the texts (we may call them original documents). If the original documents are not available in the library, the librarian either borrows them from another library (inter-library loan) or obtains their photocopies. Although a precise definition of document delivery service is yet to emerge, we shall define it as the provision of documents by a library or information centre from its own resources or from some other sources. The document may be an original one or a copy thereof.

Inter-library loan is one function of document delivery service which existed even in the late nineteenth century when the number of documents was not too large and the cost was also not prohibitive. The exponential growth of information, the ever increasing cost of documents, and cut-backs on library budgets as economy measures had forced many libraries to realise that the development of self-sufficient library collections even in a narrow discipline is an unattainable task. Besides, many libraries also need documents in peripheral subject areas. As a result, what was known as inter-library lending grew into a planned system of inter-library cooperation and to facilitate such cooperation, unified catalogues of

the documentary resources of the cooperating libraries called 'Union Catalogues' were compiled. The library cooperation ultimately grew into a system of resource sharing which goes beyond sharing the documentary resources of the cooperating libraries.



h) Reprography Service

We have already mentioned above that if the original document is not available, its photocopy is provided by a document delivery service. The introduction of the fast plain paper copiers (PPC), which was pioneered by Xerox Corporation (the copying process is often called Xerography), has revolutionised the copying process. The demands for photocopies have also considerably increased. Libraries and information centres, therefore, have developed photocopying facilities to provide reprography service. The PPCs are not merely copying devices, but they can also produce multiple copies of documents. It should be noted that providing photocopies of documents is governed by the Copyright Laws, e.g., the U.K. permits taking one photocopy of a document provided that the requester signs a declaration stating that the copy is for "research or private study".

Self Check Exercise

11) Explain document delivery service in five sentences.

12) Describe reprography service in five lines.

Note: i) Write your answer in the space given below

ii) Check your answer with the answers given at the end of this Unit.

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

3.5 SUMMARY

In this Unit, we have discussed :

- i) the reasons why libraries are expected to provide information services;
- ii) the kinds of information agencies, besides the libraries, which are involved in providing access to information;
- iii) the different types of facilitators of information transmission with their specific characteristics and functions;
- iv) users, their needs, use and user studies, information behaviour of users, and methods of assessing needs and analysing user behaviour; and
- v) eight types of information services, each one having a specific function related to the needs of users.

3.6 ANSWERS TO SELF CHECK EXERCISES

1) The various individual links in the information transmission chain are as follows:

- i) Generators of information. (authors, writers, resel hers)



- ii) Publishers
 - iii) Librarians
 - iv) Information specialists and
 - v) Users
- 2) The different types of facilitators of information transmission are:
- i) Libraries/Information centres
 - ii) Indexing and Abstracting services
 - iii) On-line database services
 - iv) Information analysis centres
 - v) Referral centres.
- 3) An information analysis centre (LAC) is defined as an organization which indexes, abstracts, translates, reviews, synthesizes, and evaluates information and/or data in clearly defined specialized fields. The key activities of IAC are collection, analysis, interpretation, synthesis, evaluation and repackaging of information to enable users to assimilate information or numerical data. IAC is the most efficient system for transferring to a user, authoritative and evaluated information in a convenient form.
- 4)
- | Referral Centre | Library |
|--------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------|
| i) provides sources of information | provides not only sources of information but also documents as well as the needed information |
| ii) stocks only access tools such as directories, guides union catalogues and lists. | stocks primary, secondary and tertiary literature |
| iii) provides only enquiry service | provides enquiry, reference, bibliographical and a range of other services. |
- 5) All library systems have subjective and objective aspects. The library resources, the subject coverage they provide and the various dissemination techniques employed for their use are the objective aspects. The users' opinion about the adequacy and suitability of these resources, their willingness to use them, and their ability to use the services are the subjective aspects of these systems. The former are real, outward and external elements not governed by the behaviour of users, whereas the thoughts and feelings of users are the subjective aspects.
- 6) All investigations into the objective aspects such as library resources, coverage and techniques forming the components of total library support are known as use studies. On the other hand, all investigations into the subjective aspects like users' opinion on the library resources, their willingness to use them and their ability to use the library services are referred to as user studies.
- 7) Information behaviour means the way users seek information, the way they go about finding it and the way they use it. In short, information behaviour is the totality of users' information seeking habits. Users' information behaviour has two aspects: verbal and actual. Users' verbal behaviour is what they say, they like and what they do. Their actual behavior at the catalogue and other service points in the library may be altogether different. At such places, they may use the sources which they have never mentioned as their preferences.
- 8) Secondary analysis consists in examining the already existing records such as loan records, suggestion books and reference requests. Citation analysis is a more sophisticated technique of the secondary analysis. In this technique, citation provided by authors in his communication are analysed from different aspects and is very commonly used for producing a ranked list of journal titles which helps librarian take several management decisions relating to acquisition, retention and selection of source material for developing information products. More importantly the technique helps the librarian to assess the extent of users' dependence on the local library.



- 9) The eight types of information services are :
- a) Current Awareness Service (CAS)
 - b) Selective Dissemination of Information (SDI) Service
 - c) Indexing and Abstracting Services
 - d) Literature Searching Service
 - e) Reference Service
 - f) Translation Service
 - g) Document Delivery Service
 - h) Reprography Service

It is not necessary for all libraries to provide all these services. The types of services to be provided are dependent on the users' needs.

- 10) The three types of translation services that may be provided are :
- i) a complete literal translation of documents;
 - ii) a free translation of the major points of the documents;
 - iii) oral explanation of the contents of the documents.
- 11) Document delivery service is defined as the provision of supplying documents by a library from its own or outside resources. This is usually done through inter-library loan for books and other monographs. For journal articles, photocopies are usually supplied. This service is organized at local as well as national levels. This service can be successfully operated only with the cooperation of libraries within a country.
- 12) Reprography services include supply of photocopies of documents, using plain paper copiers when the original copies of documents can not be issued. Usually supply of photocopies is made for journal articles, conference papers, brief reports, etc., but this service is given only on an individual basis to avoid copyright violations.

3.7 KEY WORDS

Accelerate	: To speed up.
Copyright	: Exclusive right granted by law for a certain number of years to make and dispose copies of literary, musical or artistic work.
Information Transmission Chain	:A linking chain that connects information from its generation to its use.
In-House Service	:A service organized ,by the establishment for its employees and customers.
Routing	:A regular method for circulating documents within an organization.
Vendor	:A person or agency that sells the products or services.

3.8 REFERENCES AND FURTHER READING

- Grogan, D.J. (1982). Science and Technology: An Introduction to the Literature. London: Clive Bingley.
- Guha, B. (1983). Documentation and Information. Calcutta: World Press.
- Kunz, Werner (et al). (1976). Methods of Analysis and Evaluation of Information Needs. Munich: Verlag Documentation.