# UNIT 15  INSTITUTIONAL INFORMATION SOURCES

**Structure**

## 15.0   OBJECTIVES

After reading this Unit, you will be able to:

• understand that institutions are means and mechanisms for organising every human activity;

• perceive the different nature of institutions and their functions;

• comprehend the different types of information institutions and their evolutionary growth pattern;

• identify the specific functions of information institutions and their role in information organisation and delivery;

• grasp the reference value of information institutions; and

• cultivate the effective use of institutions in reference services.

## 15.1   INTRODUCTION

Human activities invariably cause generation of new information or knowledge which is recorded in some form or the other for immediate or future use. It is also significant, that almost every activity is pursued through an institution for which it has been created. In the last half a century, every society - developed or developing, has become a society of institutions.

Today, we see every major task is performed through an institution. Education, research, health care governmental functions, defence and security, business and industry, cultural activities- in fact, almost every human activity is performed through institutions. It is the performance of these institutions that determines growth, development or progress of any society. Institution building has, therefore, become a prerequisite for any organised human development. It is also to be noted that in every institution, it inhuman beings that perform the different functions with a set goals for the development of their society. Development obviously implies socio-economic, political, cultural, industrial every aspect of well being of people and society. This Unit focuses attention on these aspect of institutional growth and functions, and their utilisation as information sources.

While every institution has invariably an information component, in the sense that some kind of information is generated by it, in this Unit, we are particularly concerned with information institutions that are primarily active in the creation of knowledge/ information, and disseminate, store, retrieve, and deliver them in different forms to those who seek them.

Here, we shall study the evolution of information institutions, their growth patterns, their variety and functions, the effective way they can be used as information sources, the Indian scenario and the possible future trends.

## 15.2 INSTITUTIONS AS SOURCES OF INFORMATION

An institution is an organisation or establishment devoted to the promotion of a particular course or objective. It is expected to serve set goals, objectives and criteria for established preferences and priorities; respond to challenges and utilise opportunities. It has carefully conceived roles, well defined tasks, and a clear sense of purpose. Its programmes, infused with societal values, must be symbolic of what it stands for and its role in the society. It has a purpose, function and ability' to survive and a commitment to serve its client's relevant needs.

Every institution builds up its resources of finance and manpower through direct subsidies from government, funding agencies or earn funds through sale of its own products and services. In performing their activities, institutions generate information/ knowledge of various kinds, depending on their nature of activities. Some of these information get disseminated through formal channels such as journals, reports and special publications. Others get stored in the files of. the institutions in some form or the other. While published information get properly noticed in secondary sources, the information filed in the institutionshrecords, generally, don't get noticed in any secondary sources.

In addition to these recorded informations, experts performing their duties and responsibilities in these institutions, also become invaluable sources. We have already referred to in Unit 14, the value of human expertise as information sources.

Thus, institutions are sources of information in terms of their published and unpublished information. Very often unpublished information may be in the form of statistical data or other kinds of factual information, which may not be available from any other sources except the institution, which generates them.

I ibraries and information centres, therefore, should become acquainted with various types of institutions, their nature of work and activities, their publications and the types of unpublished data and information that may be available from them. Directories of institutions carrying all the details of functions and activities including their publications and other facts are also, sometimes available in published form. But most often one may have to tap referral centres to obtain the right location of these institutions and the way the information sought may be obtained.

**Self Check Exercise**

1)      Why are institutions important for reference service?

**Note:**   i)   Write your answers in the space given below.

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

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## 15.3    TYPES OF INSTITUTIONS

The process of information/knowledge transfer comprises a series of activities linked to each other like a chain. The main links of this information chain, are the generators (authors, writers, reporters, researchers, etc.), editors, publishers of primary and secondary sources, libraries, documentation centres, information agencies, on-line service vendors, information distributors, and finally the end users. Institutions invariably perform these link activities.

We can broadly group these institutions into three categories as given below:

- **Knowledge creating institutions**

    Research institutions and laboratories;

    Research and development establishments;

    Universities and professional institutions;

    Institutions of higher learning;

    Learned societies and professional associations;

    Government Ministries, Departments;

    Industries and Business Houses; and

    Similar others.

Each one of these research institutions, (belonging to public or private sectors), may be related to research in scientific and technological subjects, socio-economic, political and other subjects of social sciences, humanities and other types of creative literature and cultural activities like performing arts, etc. These institutions disseminate information generated by them through learned journals, research and technical reports, and other specialised publications.

Various executive, legislative and judicial bodies of governments also generate information of high research value which would, of course, not constitute information resulting out of research. But the potential value of this governmental information for research and development is immense. Statistical data, government legislations and their implications for various executive processes, significant judicial pronouncements and many other types of information generated by government agencies are as important as new knowledge created. All of these may not always be available in any published form. They may have to be sought from the respective institutions that generate them through specific requests.

- **Knowledge/information processing and disseminating institutions**

    Commercial publishers (Books, journals, others);

    Statistical organisations;

    Data centres;

    Similar others.

These institutions do not generate data, information or knowledge but have the means and mechanisms to collect and organise the assembled information and disseminate it in a form to suit different categories of customers.

These institutions produce primary and technical periodicals, statistical data and other types of factual information.

- **Institutions that service knowledge and information**

    Libraries;

    Documentation centres;

    Information centres;

    Information Analysis Centres;

    Referral centres;

Clearing houses;

Information Brokers;

Information industries;

PROs of and industrial organizations

Similar others.

The primary responsibilities of these type of institutions are to collect, store, process, disseminate and most importantly service knowledge/ information, already available in various pack-ages of primary or secondary forms. They create different access tools like indexing and abstracting services and distribute or deliver them to customers according to their needs.

These institutions, it must be noted, have evolved over a period of time. We could also perceive a typical pattern of growth of these types of institutions, reflecting the nature of demands for information/knowledge at different periods of time by users and their needs. This pattern of growth can be seen in three groups of information systems as given below:

1) Discipline-oriented information systems reflecting needs of academic studies, research in pure and applied sciences and the like;

2) Mission-oriented information systems reflecting, mostly government sponsored projects/ programmes such as Nuclear energy missions, Space research and the like;

3) Problem-oriented information systems reflecting the need for solutions to deal with various socio-economic and other developmental problems such as industrial planning, environmental problems and the like.

The word `system' is used here to indicate a particular type of information institutions that grew during these different periods, without any organical links but co-ordinating for purposes of inter-library co-operation.

**Self Check Exercise**

2)   What are the three types of information institutions that have evolved over a period of time?

**Note:**   i)   Write your answers in the space given below.

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

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## 15.4    INFORMATION INSTITUTIONS

Some of the essential features of the evolution of information institutions with their typical characteristics are discussed below:

**Discipline - Oriented Information Systems**

The fundamental basis for development of the first category of information institutions was to provide support to education, professional learning, research and development in different disciplines. The information/knowledge generated by the academic and research institutions, learned societies, professional bodies and the like, was generally disseminated through primary periodicals, monographs, seminars and meetings. Access to primary information was

through indexing, abstracting and bibliographic publications. Institutions facilitating documents and use were largely the academic libraries and other institutional libraries. Normally, the user communities form students, teachers, academicians, scholars, research and such others. The services were absolutely free except for a nominal fee for photocopies of journal articles. This traditional system has been in vogue for a long some constraints and limitations.

**Mission-oriented information Systems**

The basic governing principle for the development of information institutions category, was to facilitate built-in organisational information support to mission-oriented agencies. Research and development projects such as atomic energy research, development and use; space programmes and the like, were operating under government institutions teams drawn from different disciplines such as electronics, biology, medicine aeronautics chemistry, physics. Specialists engaged in work in these organisations require support facilities with greater speed, reliability, authenticity and accuracy. Tech: Lion centres were the new types of information service institutions that develop period. Besides the conventional journals and other similar primary publication current awareness services, newsletters carrying news on current developments ports, disseminating progress of research, current status of research and such co table publications of this period. Scientists, engineers, technologists, specialist in some social sciences and others were the users. There was a feedback mechanism system to ensure relevance of information supplied and its maximum utilization. A significant emergence during this period was the market-oriented information transfer through information was not generally priced, except for document delivery and the like.

**Problem-oriented information Systems**

The organising principle that necessitated the development of information inst third category was to provide information support facilities to societal probe; harnessing appropriate information. Systems that emerged during this period re text in which information is utilised for societal problem solving such as economic development, industrial planning, agricultural productivity, environmental protection, disaster management, etc.

Institutions that could handle the specific types of information required to solve problems of various kinds have been slowly but surely evolving. The new type of organism evolved to meet the demands of the new categories of users, are consultancies; brokerages, information companies and the like. Some of these agencies repackage information, collected from a variety of sources with validated and authenticated data customers to solve societal problems with supplied information. Persons who provide these kinds of services have the competence to analyse and interpret technical results i ate manner to suit the needs of clients so as to enable them to take well informed and responsible decisions in matters of public interest and promotion of private business. Naturally information of this type is not available without a price. Private entrepreneurs market-oriented organisational set-up, willing to take risks by investing large sums of money, to cater to information needs of consumers, have come up paving the way for the information industry.

An important aspect of this evolutionary growth has been that the latter systems planted the earlier systems but only supplemented them. However, with the increasing demands of information from specialists as well as laypersons, volume and varieties of information sources, spectacular advances of technologies, the earlier systems like libraries, documentation centres are transforming themselves to stay in the competition of information business.

Let us examine a few typical examples of institutions of each of the three categories of institutions, their scope of activities and services, and the possible trends for the future they tend to show. We shall also study the functions of the emerging new institutions and likely to respond to challenging demands.

### 15.4.1 Libraries and Documentation Centres

Libraries have been the oldest of information institutions, initially, supporting education, scholarship and scholastic studies, and subsequently moving into further dimensions. Public librar-

ies grew out of a social milieu for the provision of access to information and knowledge for the general public. This became a movement for state support to fund and run public libraries. With the rapid development of formal educational facilities at school, college and university levels, academic libraries took new shapes to support learning and teaching. University libraries built their resources to support to research also. Several research establishments also sprang up to conduct research in different disciplines. This led to establishment of documentation centres, enlarging the scope of normal library and bibliographic service facilities. Many of these came to be called documentation centres, growing as an extension of conventional library services. The emphasis and shift were towards specialised bibliographic and information services.

Special libraries were part of institutions, specialising in subjects like medicine, agriculture, or providing information support to industries and business houses, or serving specific clienteles. As they were not concerned with the information needs of larger populations, their collection were usually smaller, oriented to the areas of specialisation of their parent organisations. They offered services, placing emphasis on information as a unit of service not merely supply documents that may carry the required information.

Technical information centres emerged to meet the specialised information requirements of research complexes. They were either discipline or mission-oriented establishments.

These types of information institutions were the types of institutions that had evolved till the middle of this century.

### 15.4.2 Information Analysis Centres (IAC)

IACs were highly specialised types of information institutions that emerged to provide critical, analytical and evaluated support services to institutions involved in high level research and development establishments. An IAC `is a formally structured unit, specifically (but not necessarily exclusive) established for the purpose of acquiring, selecting, storing, retrieving, evaluating, analysing and synthesising a body of information and/or data in a clearly defined specialised field or pertaining to a specified mission with intent of compiling, digesting, re-packaging, or otherwise and presenting pertinent information/or data in a form most authoritative, timely and useful to a society of peers and management.'

This type of highly sophisticated service involve selection, analysis, evaluation, interpretation, synthesisation and packing the evaluated matter in a form that could be straight away used by a researcher. This was provided by scientific middlemen, who themselves were, in addition to being subject specialist of the level of a research scientist, skillful in using bibliographic and reference materials, and in technical writing.

The main activities and the resulting products of an IAC have been

| Activities | Products |
|---|---|
| • Selecting and collection of documents | Bibliographies |
| • Document/Information | Current Awareness |
| • Indexing/Abstracting<br>  Customised searches | Indexed bibliographies |
| • Extraction<br>  Compilation (Unevaluated) | Descriptive reviews |
| • Evaluation<br>  Critical compilation of data<br>  Criteria for experimentation<br>  Recommendation<br>  Correlation of data | Critical Review |

**Self Check Exercise**

3)   Describe briefly the characteristic features of the patterns of the three information systems that have grown?

4)   State the activities and products of an IAC.

**Note:** i)   Write your answers in the space given below.

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

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### 15.4.3   Emerging Institutions for Societal Problem Solving

We have indicated earlier that the types of institutions to deal with providing information support for problem solving were consultancies, brokerages, information companies, etc, These types of institutions have been called by different names but the type of information services provided have been to offer a highly need based information support facility, To illustrate this point, let us take an example of providing intensive information support service to an entrepreneur who is interested in starting a small scale industry.

Entrepreneurs require a variety of information when they get involved in the process of identifying and formulating industrial projects, raise various resources to implement them and keep them growing. While identifying a project, the person needs to have a checklist of projects that may suit his/her background, within the person's capacity to invest, relevant to the preferred location and such others. With the list of products or projects, the person has to under-take market research, and by process of elimination, select a project and prepare a detailed report. Thereafter he/she has to raise resources, arrange for land and building, plant and machinery, recruit personnel, erect and commission the equipment, develop products, establish marketing channels and sell the project, get customers feedback, keep competing in the market and try to grow. All the activities require a mass of accurate, authentic, reliable data and information, and also get them constantly updated.

If the entrepreneur wishes to compete in the international markets, the person needs to know about foreign trade information concerning importers, exporters, countries to choose, their industry and business profiles, sources of technology, raw materials, equipment, patents, quality standards, prices, government rules and regulations, taxes and duties, and so on.

Such information services have been well organised in the industrially developed countries, thanks to the skills available in collecting, selecting and organising data and information and knowledge. Information technology enables these services to be organised through computers alit communication networks, transmitted through e-mail, fax and other computer linkages. Information companies like Knight Rider International Inc., Compuserve, America Online

and World Trade Centre are some of the well known companies which have been revolutionising business and trade activities. In addition to these, Internet is proving to be a versatile medium for both information and communication netting, providing a world wide web.

These are the types of new information systems that are evolving, particularly in the private sector in many countries.
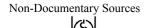
**Self Check Exercise**

5)     What are the information needs of a small entrepreneur?

**Note:**   i)   Write your answers in the space given below.

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

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## 15.5    INDIAN SCENE

With the dawn of independence, efforts were made in many directions for socio-economic development. Deliberate decisions were taken by the Government to harness science and technology for economic growth and development. In this process, a variety of institutions have been set up in every region of the country. Development of infra-structural facilities which are essential for organising appropriate and effective information systems and services, were given due attention. This naturally initiated the development of libraries and information institutions in the country,

The characteristic features of the three systems of information institutions mentioned in the earlier sections are reflected in the Indian evolution of information institutions to a certain degree. Some of the institutions that have come up in the first two categories of information systems are libraries, documentation centres attached to R & D establishments in science, technology, and social sciences, government agencies, many private and public undertakings, academic and research bodies, and so on. However, no proper linkages have been established to develop proper networks and communication systems to fully exploit resources built in these institutions. However, the efforts made in this direction by SAILNET and RAILNET may be considered as the initiatives in this direction.

Beginning from I 980s, efforts have been made to modernise and co-ordinate the resources in he country, through information systems like NISSAT, ENVIS, BTIS, etc. INFLIBNET, and number of city network of libraries.

Some sporadic efforts have been made to set up information institutions to specifically deal with problem solving. But this remains a serious desiderata at present.

## 15.6 REFERENCE VALUE OF INFORMATION INSTITUTIONS

No library or information institution can ever be able to build up a comprehensive collection of information to meet the information needs of even its own clientele. They have to draw upon the resources of other sister agencies and cognate bodies. In this context, it is prudent for a library or a information centre to know the information strengths of institutions of different kinds. While it is useful and important to be familiar with all the knowledge/information generating and disseminating types of institutions, we have placed our emphasis in this Unit primarily on information service institutions. The way in which they have grown very clearly indicates their potentials in terms of the information services they could offer. The reference value of each of these categories of information institutions is obvious. The success lies in acquiring the skill and ability to tap these institutional resources while answering questions that go beyond the resources of a library or a documentation or information centre. The activities of institutions, their research areas and disciplines, expertise of their research, technical and managerial personnel, their published and unpublished sources of information, etc, are important source materials. Referral directories may sometimes be available on institutions in a published form. But by and large, this type of information has to be collected and stored in a proper manner for easy retrieval by libraries and information institutions, appropriate to their needs. Institutions that undertake design and maintenance of computerised databases in such field of information will be certainly worth while creating.

## 15.7 SUMMARY

This Unit deals with institutions as sources of information. The, implication is that every human endeavour is invariably organised through institutions. While almost all institutions generate some kind of information, we are particularly concerned with three types of knowledge/ information institutions. These three are knowledge/information generating institutions through research and development activities; those that disseminate collected information through appropriate tools like journals, reports, etc; and the third concerned primarily with information services.

In discussing these three types, three patterns of evolutionary growth is highlighted. The first type of institutions support education, learning and teaching, R & D activities; the second are involved in publications of books, monographs, reports and such others; and the third collect, store and service collected information from a multitude of sources. These institutions have grown over a period of a century to specialise in different categories of service. Libraries, Documentation Centres, Technical Information Centres and Information Analysis Centres and Consultancies and Information Companies are typical examples representing different types of evolutionary growth.

Information institutions constitute a very important source for meeting information needs of a variety of groups of users, particularly when a library or an information centre has constraints of finding resources from its own stock of information. Just like a stock of reference materials, facilities to access online databases, use of CD ROM, information institutions serve as a reference source.

Libraries and information centres could profitably exploit these sources, if only they become aware of the potentials of these institutions as reference sources. These institutions carry published and unpublished information; they have an expertise in terms of their personnel: and they may also offer very highly need based services.

## 15.8 ANSWERS TO SELF CHECK EXERCISES

1) In performing their activities, institutions generate information/knowledge of various kinds, depending on their nature of activities. Some of these information get disseminated through

formal channels such as journals, reports and special publications. Others get stored in the files of the institutions in some form or other. While published information get properly noticed in secondary sources, the information filed in the institutions' records, generally, don't get noticed in any secondary sources. In addition to these recorded information, experts performing their duties and responsibilities in these institutions, also become invaluable sources. These two strengths, make institutions very valuable source of information.

2) Discipline-oriented information systems reflecting needs of academic studies, research in pure and applied sciences and the like;

Mission-oriented information systems reflecting, mostly government sponsored projects/ programmes such as Nuclear energy missions, Space research and the like;

Problem-oriented information systems reflecting the need for solutions to deal with various socio-economic and other developmental problems.

3) The first type of institutions, libraries and documentation centres collect, store, organise, and service information through a number of bibliographic and information services. Largely these institutions serve learning, teaching and research functions.

The second types of institutions, particularly information analysis centres, are specialising in specific areas and involved in selective information gathering, analysis, synthesis and produce repackaged information products such as trend reports, state-of the-art reports which could be used by specialists in the disciplines. Persons who offer this service are subject specialists with knowledge and experience in repackaging critical and consolidated information. This type of service is offered to discipline-based research institutions or mission-oriented research projects.
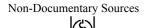
The third type of institutions provide services to solve societal problems. These are highly need-based services, specifically oriented to provide support to problem solving. The new types of institutions that are emerging are consultancies, information companies, etc. This service is available only for a price.

4) The main activities and the resulting products of an IAC have been

| Activities | Products |
|---|---|
| • Selecting and collection of documents | Bibliographies |
| • Document/Information | Current Awareness |
| • Indexing/Abstracting<br>Customised searches | Indexed bibliographies |
| • Extraction<br>Compilation (Unevaluated) | Descriptive reviews |
| • Evaluation<br>Critical compilation of data<br>Criteria for experimentation<br>Recommendation<br>Correlation of data | Critical Review |

5) While identifying a project, an entrepreneur needs to have a checklist of projects that may suit his/her background, within the person's capacity to invest, relevant to the preferred location and such others. With the list of products or projects, the person has to undertake market research, and by process of elimination, select a project and prepare a detailed report. Thereafter he/she has to raise resources, arrange for land and building, plant and machinery, recruit personnel, erect and commission the equipment, develop products, establish marketing channels and sell the product, get customers feedback, keep competing in the market and try to grow. All the activities require a mass of accurate, authentic, reliable data and information, and also get them constantly updated.

If the entrepreneur wishes to compete in the international markets, the person needs to know about foreign trade information concerning importers, exporters, countries to choose.

their industry and business profiles, sources of technology, raw materials, equipment, patents, quality standards , prices, government rules and regulations, taxes and duties.

## 15.9    KEY WORDS

| | | |
|---|---|---|
| **Institutions** | : | An institution is an organisation or establishment devoted to the promotion of a particular object and to serve set goals, with objectives and criteria for established preferences and priorities; to respond to challenges and utilise opportunities, has carefully conceived roles, well defined tasks, and a clear sense of purpose. Its programmes, infused with societal values, must be symbolic of what it stands for and its role in the society. It has a purpose, function and ability to survive and a commitment to serve its client's relevant needs. |
| **Information Institutions** | : | These institutions collect, store, classify, analyse, synthesise, disseminate, and service information. Depending upon the nature of information and the type of institution that serves, the products will vary. Services will range from mere fact finding, providing references, or answering enquiries to highly sophisticated services like critical and evaluative repackaged reports and the like. |
| **Information Service for** | | |
| **Mission-Oriented Institutions** | : | Research establishments which have target-based projects to do research on a multidisciplinary problem. The information supply here is highly related to the research projects, providing data and information whole are accurate and authentic. An Information Analysis Centres is a typical example. |
| **Information Service for** | | |
| **Societal Problem Solving** | : | The service for this type of requirements are need-based, specific and highly timely and fast. Information consultancies, information companies are typical examples of this category. This information service is highly priced. |

## 15.10    REFERENCES AND FURTHER READING

Guiliano, V. E. (et al) (1978). *Into the Information Age: A Perspective for Federal Action on Information.* Chicago: ALA. pp.134.

IGNOU, MLIS-04, Block 1(1994): *Information Institutions. 97p.*

Lancaster, F. W. (1983). Science, Scholarship and Communication of Knowledge. *Library Trends. 27(3),* 367-388.

Nayudamma, Y.(1980). *Science and Technology -Pattern of Institution Building Society and Science. 3(4),* 137-138, 141.

Rajagopalan T. S. and Rajan T. N. (1986). Information Institutions. Patterns of Growth and Development with a Perspective of Future. *In* Rajagoplan T. S.(ed). *Ranganathan 's Philosophy: Assessment, Impact and Relevance.* New Delhi ILA,pp. 64-75.