

**LIBRARIES, DOCUMENTATION CENTRES AND INFORMATION CENTRES****LIBRARY**

In the earlier days, a library used to be a mere storehouse where books were chained to the shelves for preservation. The librarian was supposed to be their custodian. Readers were not encouraged to visit libraries with a fear that books may get lost or damaged. There used to be a closed access system and only library staff could fetch books from the shelves when users required the same. But a modern library is a service institution with professionally trained staff to promote the use of the collection. It is a hybrid library having multi-media collections grouped into two distinct categories, which are:

- a) Teaching aids used for simplifying teaching learning processes, such as maps, globes, models, posters, pictures, charts, specimens, games, puzzles, multimedia kits, etc.
- b) Print and non-print information sources and electronic databases viz. reference sources, microforms, audio-visual material, CD-ROMs and DVDs, e-books and online journals for rendering effective reference and information services.

The main aim here is to attract the users to make effective use of the resources and services of the libraries. As libraries allow open access to the vast collection, the users can themselves browse through the shelves and refer to various books on the same subject. Modern libraries are computerized and users can view all print and non-print material on a particular subject through a single window. The librarian encourages the readers to be regular visitors and provides efficient library, information and reference services to help them in their studies or research.

After the World War II, there was tremendous increase in research and development (R&D) activities in areas of Science and Technology. Increase in R&D activities resulted in exponential growth of publications. The research results were being published in a wide range of sources such as primary periodicals, research reports, conference proceedings, theses, patents, standards, etc. Research scientists, due to a large amount of information scattered over wide range of sources, found it difficult to keep track of the published knowledge in their respective areas of research. Whereas, to be on the forefront, researchers needed an information service, which could collect, select and organise the latest published knowledge in their field of specialisation and bring to their notice at regular intervals. As traditional libraries were unable to meet this information need, subject specialization was required to provide such services. As a result, special libraries, particularly those in the area of science and technology were referred to as Documentation centres or Information centres. Thus emerged this category of information organisations that were established to meet the information needs of the scientists

## DOCUMENTATION CENTRE

The progress of civilization and advancements in science and technology resulted in tremendous growth of literature. The explosion of knowledge in multi-disciplinary subjects was not only recorded in macro documents such as books but also in latest research periodicals, research and technical reports, patents, standards and specifications, trade transactions, circulars, reprints, off-prints, etc. The specialists not only needed macro documents but also information contained in micro documents such as periodical articles indifferent subject journals.

### Definitions

A '*document*' is a single piece of written or printed matter which furnishes evidence or information on any subject. It can be graphic record of some idea in words, sound or image.

The term '*documentation*' is the process connected with identification, recording, organisation, storage and dissemination of intellectual content recorded in a document in print or non-print medium.

'*Documentation centres*' play an important role in collecting micro-literature, indexing and abstracting them, bringing them to the notice of the users and disseminating them quickly to the needy users. They are established at local, regional, national and international levels.

### Objectives and Purpose

The basic objective of a documentation centre is to bring current and recent literature to the notice of the specialist users. The main purpose of the documentation centre is to identify, acquire, organise and store documents after indexing and abstracting them. It retrieves and disseminates the document when requested by the users.

Documentation service is same as reference service but the emphasis shifts from macro-documents to micro-documents and general readers to special readers. Documentation service includes the following activities:

- Bring to the notice of readers availability of current information through Current Awareness Service (CAS) and Selective Dissemination of Information (SDI).
- Providing documents available in the centre.
- Getting documents on inter-library loan from other institutions.
- Reproducing documents and providing photocopies.
- Arranging translation of documents in a language requested by the readers from other foreign languages.

### **Types of Documentation Centres**

During 1950s and 1960s, Documentation Centres were established at local, regional, national and international levels.

- a) Local documentation centres are supposed to provide information services that support the requirements of the parent organisation to which they are attached. These are designed to meet the specific demands of the users.
- b) National documentation centres are attached to R&D organisations, business and industrial organisations, government departments etc. They undertake activities which are beyond the control of local documentation centres.
- c) International documentation centres collect, organise, process and disseminate special literature available at international level to meet the information requirements of the researchers and scholars.
- d) Regional documentation centres are usually established nationally or internationally in a region. These are designed to meet the requirements of users in a particular region.

During late 1970s and early 1980s, the emphasis shifted from documentation to information. This was due to the emergence of a variety of information sources, services and electronic databases. The databases could be accessed remotely. As a result, several new organisations came up to meet the requirements of users and the focus shifted from documents to the information contained in the documents. Besides this, the information centres acquired, processed and made available information not only from an individual organization but from other organisations. Both published and unpublished information is handled by the information centres. Now the terms documentation and information are used interchangeably.

### **INFORMATION CENTRE**

Information centre is an organisation that (a) selects, acquires, stores and retrieves information in response to requests, (b) prepares abstracts, extracts and indexes of information, and (c) disseminates information in anticipation and in response to requests. Information centres are attached to highly specialised research and development (R&D) organisations. Information Centre provides various services such as referral service, literature search, translations, bibliographies, abstracting, etc. to its large number of users. There are varied forms of information centres viz. (a) Information Analysis Centres (b) Clearing Houses (c) Data Centres and Data Banks.

- a) Information Analysis Centres: They collect literature produced in a particular field, evaluate its utility and communicate to the specialists conducting research in directly usable form on request. The

centre verifies the collected information for its validity, reliability and accuracy before dissemination. The reports of these analysis centres play an important role in strengthening research, pinpointing gaps in knowledge or shortcomings.

- b) **Clearing Houses:** They are set up either on a cooperative basis or by a national or international agency. They provide a single point of access to information originating from different sources, countries and languages. They compile bibliographies of particular disciplines and circulate them to the organisations interested in them. A copy of the available document, if requested, is also provided.
- c) **Data Centres and Data Banks:** Data centres collect, organise and store numerical data pertaining to specific subject fields to answer specific queries. They collect information in anticipation of the future requirements of their users. Data Banks are usually concerned with a broader field. They extract raw data from the collected data and relevant literature. They keep these structured files ready to provide right answers to user's queries.

These centres are managed by subject experts as well as library and information professionals who organise information to retrieve and disseminate for conducting research. Staff of these centres varies, but may include either of the following: research officers, librarians, bibliographers or trained information officers. These centres may include the functions of a special library and extend their activities to include collateral functions such as: technical writing, abstracting, SDI and library research for clients.

### **Difference among library, documentation and information centre**

A documentation/information centre differs from a library in many ways. Libraries provide macro-documents to their users whereas documentation/information centres provide micro-documents. Library differs from documentation/information centres in the types of documents, types and levels of users, provision of information rather than the document, rendering services to both internal and external users. Apart from collecting, processing and disseminating information, documentation/information centres also carry out analysis and presentation of information. A major difference thus is that, a library provides only the address of the document but a documentation/information centres provides not only the address of the document but also the details of the contents of the document.

**Functions of documentation/ information centres**

The documentation/information centres rely on the supply of information content of the macro document and micro document to the potential users. They perform several functions to bring right information to the notice of the right users at the right time.

- They make exhaustive searches through varied types of materials.
- They identify documents/information from various current as well as retrospective literature.
- They acquire and collect useful information according to the requirements of the users.
- They process the acquired information by indexing and abstracting them.
- They store information in an appropriate order.
- They retrieve and disseminate information to users on request.

**Services of documentation/ information centres**

The functions of documentation/information centres are performed with the basic objective of providing a variety of information services. These services are rendered either in response to or in anticipation of requests by the users. The responsive services are provided in response to users' specific special request. On the other hand, anticipatory services are provided in anticipation of the demands from the users. The various responsive and anticipatory services provided by documentation/information centres are:

**Responsive Services**

- Answering queries
- Referral services
- Compilation of bibliographies
- Retrospective search service
- Document back-up service
- Translation service

**Anticipatory Services**

- Current Awareness Service (CAS)
- Selective Dissemination of Information service (SDI)
- Preparation of indexes and abstracts
- Compilation of directories, handbooks, etc.
- Compilation of ad-hoc bibliographies
- State-of-the art reports

**Types of documentation and information centres**

Documentation and Information Centres are grouped into three broad categories such as –

- By ownership, i.e., centres that are owned either by government agencies or learned societies or professional associations or private agencies.
- By specialised interests i.e centres that cater to specialists in different subject areas of research, in mission oriented projects, and those interested in special materials, or specific kinds of information.
- By different levels, i.e centres that operate at the international, regional, national, or local levels.

Examples of the different types of centres discussed above are mentioned below.

**1) By ownership**

Information Centres by ownership include those institutions that are owned, managed and funded by government or non-government agencies or learned societies or professional associations or private agencies e.g. Government Information Centres, Semi-Government Information Centres, Information Centres of Non-Government Organisations (NGO), Private Information Centres, International Information centres(International Patent Documentation Centre (INPADOC), European Patent Office, Munich, Trade Information Services, International Trade Centre (UNCTAD/ WTO), Geneva)

**2) By specialised interests**

Information Centres grouped under this category are those institutions that cater to specialists in various subject areas of research, mission oriented projects, special kinds of information or information from particular regions.

**3) By different levels of services**

There are many information centres operating at various levels which can be global, international, regional, national or local.

a) Global Information Centres – They are characterized by decentralized input, centralised processing and decentralized distribution/dissemination of worldwide information. e.g. Agricultural Information System of FAO (AGRIS), Rome, Development Science Information System (DEVSI), IDRC, Canada

b) International Information/ Database Centres – They hold bibliographic databases in subject fields and offer on-line current and retrospective searches to users all over the world. e.g. International Patent Documentation Centre (INPADOC), Vienna, MEDLINE, National Medical Library, Bethesda, Maryland, USA.

c) National Information Centre/National Documentation Centres- They perform national level functions and services and are comprehensive in character because of their wide scope. e.g. Institute of Scientific and Technical Information, Beijing, China

d) Regional Information Centres – In recent times, a number of regional information networks, systems and programmes have come about in collaboration and cooperation among countries belonging to same geographical region. e.g. Commonwealth Regional Energy Resources Information Services, Melbourne, Australia

e) Local Information Centres

### **DIGITAL AND VIRTUAL LIBRARIES**

Today, libraries are much more than storehouses for books, journals, and newspapers, in print form. Present day libraries apart from print resources, acquire e-resources, audio/visual material, multimedia material and other resources depending upon the demands from the users. This change is evident in all kinds of libraries. However, one thing that has not changed is the universe of information or knowledge; it is forever expanding and is continuing to do so at ever increasing speeds. Digital, Electronic and Virtual libraries are the outcome of this speed. The term electronic library, digital library and virtual library are used synonymously. Electronic library has material both in print and electronic format. Digital library may have print as well as electronic resources but virtual library can be accessed only through Internet. Libraries all over the world can be accessed through LAN, WAN, and World Wide Web (WWW).

#### **Digital Library**

There are many definitions of digital libraries, in simple words; a digital library is a library in which collections are stored in digital or electronic form and accessible on computers and other electronic devices. In other words, a digital library is a collection of documents in organized electronic form, available for access on the Internet or on CD-ROM (compact-disk read-only memory) disks. Depending on the nature of a specific library, a user may be able to access magazine articles, books, papers, images, sound files, and videos using computers. Digital libraries, like traditional libraries, select, acquire, make available, and preserve collections. The major differences are that digital libraries consist of resources in machine-readable form only. This implies that the traditional concept of collection must be revised to accommodate materials that are accessible electronically. A Digital library is an organized collection of multimedia data with information management methods that represent the data as useful information and knowledge to people in a variety of social and organizational contexts. In general, the digital library is a structured,

processed and organized digital repository of knowledge. Such a repository is created to serve the user community as the traditional library.

### **Advantages of digital libraries over traditional libraries**

Millions of resources are digitized every year due to availability of high speed and low cost procedures for digitizing. There are several advantages of having digital libraries. These are:

- It is possible to access books, archives and images easily and rapidly through computer/internet compared to physical searching from the catalogue and the shelves.
- It has the potential to store huge information as digital information requires very little physical space than stacking print and non-print resources on book racks and cabinets.
- The cost of maintaining a digital library is much lower than a traditional library.
- Conventional libraries spend large sums of money for paying to staff, maintenance of books, building and equipments. Digital library can reduce or do away with these costs.
- Both types of libraries require cataloguing input for users to locate and retrieve information. Digital libraries adopt new technologies to provide access to electronic databases whereas others libraries feel that access to their Online Public Access Catalog (OPAC) is sufficient.
- There is no geographical boundary. DL can be accessed by users without going to library physically. Digital libraries provide increased access to users at different geographic locations; and unlike conventional library, it is available round the clock and can be accessed any time at any place through Internet. The same information can be used simultaneously by a number of members and institutions.

### **Challenges of developing digital libraries**

- To develop IT environment having minimum requirements such as a server with required number of PCs, scanning software, storage systems and software, Internet/WWW facility, LAN/WAN, printers, etc.
- To select and train new as well as existing staff to adopt the new technologies and arrange for their continuous training.
- To convert information from paper to electronic format using digitization software.
- To be familiar with processes of electronic publishing and building, storing, organising and retrieving information for dissemination.
- To self-update continuously regarding new technologies and commercial databases available in the market.



- To create databases with appropriate data structure by taking care of accessibility, presentation, packaging and storing of digitised information.
- To adopt archiving and preservation of electronic information and have strong retrieval security.
- To protect copyright laws and take legal permission while digitizing documents according to the Copyright Act.

### **Problems of digital libraries**

Librarians have to face several problems while developing digital libraries. These are:

- Non-availability of appropriate infrastructure.
- Financial constraints.
- Lack of self exposure in creating the IT environment.
- Technological obsolescence of hardware and software.
- Unwilling existing staff to adopt the new technologies.
- Lack of motivated skilled staff.
- Apathy of the authorities in providing infrastructural facilities and funds.

### **Services of Digital Libraries**

- Digital libraries can provide various services to their clientele. These are:
- Access to email: A widely used service to communicate with individuals as well as groups.
- Browsing World Wide Web: Internet browsing service to access information on any subject.
- Automated Web Search: It is a search engine service to access information available on remote computers.
- Audio-Video Conferencing: A face to face interaction between two or more people through the Internet.
- File Transfer Protocol (FTP): It permits a user to transfer data files from one computer to another through the Internet.
- Bulletin Board Service: It is the newsreader software permitting a person to read, compose and send messages to a newsgroup.