

Reference Sources and Services

DLIS105

Edited by:
Seema Sharma



LOVELY
PROFESSIONAL
UNIVERSITY



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REFERENCE SOURCES AND SERVICES

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SYLLABUS

Reference Sources and Services

Objectives:

- To educate and expose students to various basic reference sources and services that can be used to cater for varying needs of library users in different libraries and information centres.
- To equip the students to face the current trends in user demand for information in different formats.
- To enable students to have adequate knowledge of location, application and usefulness of information sources. Also on-line searching (web search tools) as the current trends would be impacted on the students

Sr. No	Topics
1	Reference and Information sources :Documentary sources of Information ; print and non -print :categories: primary, secondary and tertiary:
2	Human and institutional sources of Information. Reference Services: Kinds and nature of reference services, Methods and Evaluation.
3	Users and Non users, User Education Program, Orientation, ready and long range reference service.
4	Reference and Information Sources: Types of Reference and Criteria for evaluation of Reference and Bibliographical sources.
5	Reference and Information Services: Concept, definition, need and trends. Basics of digital and virtual reference services.
6	Need, techniques and evaluation of CAS and SDI services. Bibliographic, referral, document delivery, and translation services.
7	Information Systems and Network: Services and products of Documentation and Information Centers, and Information systems and networks at national level: NISCAIR, DESIDOC, NASSDOC, INFLIBNET, DELNET.
8	Services and products of Documentation and Information Centers,
9	Information systems and Networks at international level: OCLC, AGRIS AND INIS.
10	Indexing and abstracting Services: Purpose and types. Development of abstracting services, Functions, types, uses and criteria of evaluation.

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Unit 1: Reference and Information Sources

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Objectives

After studying this unit, you will be able to:

- Discuss documentary sources of information
- Explain print and non-print media
- Explain Primary sources, Secondary sources and Tertiary sources.

Notes**Introduction**

Information science is an interdisciplinary science primarily concerned with the analysis, collection, classification, manipulation, storage, retrieval and dissemination of information. Practitioners within the field study the application and usage of knowledge in organizations, along with the interaction between people, organizations and any existing information systems, with the aim of creating, replacing, improving or understanding information systems. Information science is often considered a branch of computer science. However, it is actually a broad, interdisciplinary field, incorporating not only aspects of computer science, but often diverse fields such as archival science, cognitive science, commerce, communications, law, library science, musicology, management, mathematics, philosophy, public policy, and the social sciences.

Information science focuses on understanding problems from the perspective of the stakeholders involved and then applying information and other technologies as needed. In other words, it tackles systemic problems first rather than individual pieces of technology within that system. In this respect, information science can be seen as a response to technological determinism, the belief that technology "develops by its own laws, that it realizes its own potential, limited only by the material resources available, and must therefore be regarded as an autonomous system controlling and ultimately permeating all other subsystems of society". Within information science, attention has been given in recent years to human-computer interaction, groupware, the semantic web, value sensitive design, iterative design processes and to the ways people generate, use and find information. Today, this field is called the Field of Information, and there are a growing number of Schools and Colleges of Information.



Notes Information science should not be confused with information theory, the study of a particular mathematical concept of information, or with library science, a field related to libraries which uses some of the principles of information science.

1.1 Documentary Sources of Information

"The most valuable assets of a 20th century company were its production equipment. The most valuable asset of a 21st century institution, whether business or non-business, will be its knowledge workers and their productivity".



Did u know? Today's workforce, largely professionals known as knowledge workers, spends a great deal of its time creating, using and communicating knowledge. Currently knowledge workers spend an average of 9.25 hours per week just gathering and analyzing data. For more than two decades, information seeking end-user research has consistently shown that professional knowledge workers spend, on average, 25% of their workweek seeking and analyzing information. Of that time, 50% is spent analyzing the information. Also, individuals intuitively cease information seeking after spending 20-25% of their time doing so because a) other work-related tasks have become more important and b) they perceive further effort will yield insufficient results to warrant more time expenditure.

It is the generation, transfer, and reuse of both external and internal information in the form of knowledge that distinguishes information as an asset. If information is the raw material of knowledge work, then the relationship between an organization's productivity and its information services is

critical to an information intensive industry such as the practice of law. An important application of knowledge management involves the concept of intellectual capital, "knowledge that exists in an organization that can be used to create differential advantage".

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Notes Knowledge management (KM), defined as the deliberate modification of an organization to improve its information and knowledge creation and sharing, seeks to aggregate and manage an organization's information environment to ultimately contribute to improved organizational performance and productivity.

Empirical research exists that proves cost effective information services do provide its parent a competitive advantage. Because this issue crosses multiple disciplines, research findings are published in a scattered, sometimes obscure, body of literature across disciplines such as business, economics, social sciences and library and information sciences. During the 1970's and 1980's, the generally accepted measures of information services contribution to productivity were based on valuing Library services. An example is cost savings accrued to the Library's parent by having professionally trained librarians locate required information. Highly paid, highly productive employees can then focus on their primary duties instead of spending time finding information themselves.

Organizations continuously strive for productivity improvements by seeking to maximize efficient and effective use of its resources (inputs) to produce maximum goods and services (outputs). Productivity has long been an accepted and highly desirable economic measure; one so important that high productivity can be a competitive advantage ensuring sustainable market share.

1.2 Document Description

Men have been communicating with speech for about 100,000 years. This form of communication, *i.e.*, the oral form, reigned unrivalled for thousands and thousands of years. Gradually, it dawned on man that message can be left on some surface using drawings or symbols. The great cave paintings of Altamira in Spain and Lascaux in France daubed on the cave walls some 20,000 years ago seem to convey some distinct message [Odhams]. Millennia passed by before drawings and paintings took the form of early pictorial writing. In some parts of the world pictorial writing gave birth to scripts. The oldest known writing we are aware of is that of Mesopotamia inscribed as early as 3,000 BC by the Sumerians. That only points to the fact that the practice of writing emerged only about 5,000 years ago. Printing that opened the floodgate for the production of books and revolutionised the spread of education came into being much later.



Notes Evidences suggest that the Chinese invented the method of block printing by 8th century AD.

Their method remained more or less confined to China and did not spread all over the world and the production of books did not attain the necessary momentum.



Did u know? In 1450s (according to some source 1454 AD) Johannes Gutenberg of Germany invented the method of printing using movable types.

Notes

The impact of this method of printing was of unimaginable dimension. The method spread like wild fire and by the end of the 15th century some 9,000,000 books were in circulation in Europe, a scene the world has neither seen before nor after [Odhams: p55]. At one stroke, the world saw the birth and development of the printing industry, printing machinery industry, publishing and book trade industry, printing ink industry, sudden rise in pulp and paper industry, and so on. It also created in people a tremendous urge for reading leading to the growth of literacy, educational institutions like schools, colleges and universities. Moreover, it gave rise to professionals like printers, composers, proofreaders, publishers, book traders, book binders, and so on.

The print media reigned supreme and unrivalled for about 500 years when at the 2nd half of the 20th century it faced a formidable challenge from non-print media.

Now, a big question has cropped up before the world whether the print media will be able to withstand the threat from the non-print media and continue as usual in future, or it will yield to the pressure and gradually vanish from the scene.



Task

Write a short note on document description.

1.3 Print Media

Printing involves a minimum of four different items:

- (i) Manuscript, *i.e.*, the piece of writing to be printed;
- (ii) Composition of the matter either by hand or by machine;
- (iii) The physical medium, say, paper on which the matter is to be printed; and
- (iv) The ink with which the matter to be printed. For illustrations, blocks, etc., are also required.

Products of printing are many and varied. For example, books, periodicals, newspapers, etc., are all products of printing and all of them represent one medium or the other.

All these products taken together from the print media. Hence, in this unit we are using the term print media instead of print medium.

1.3.1 Types of Print Media

Print media can also be categorised according to the physical formats on which the matter is printed, say paper, plastic, cloth metal sheet, and so on. In this writing, we are confining ourselves to such items as are printed on paper such as sheets, leaflets, booklets, books, periodicals and so on.

Printed Sheets

A sheet is a piece of paper of varying sizes on which the written or typed matter is printed. Usually the printed sheets are used for advertising campaigning and other purposes. The details of a product, items being sold at shop, the opening of a new shop, showroom, restaurant, stall, etc., are printed on the sheet and the same is distributed to the prospective customers. Sometimes these sheets are also pasted on the walls to attract the attention of the public. College and university students and teachers, politicians of all levels, and many others fighting some election use printed sheets for propaganda.



Notes Printing of the sheets is neither time consuming, nor costly. Moreover, they can be distributed by hand and pasted on walls , tree trunks, and other places with ease.

Notes

Leaflets

A leaflet is a small sheet of paper folded once and printed to make two or four pages. The pages follow the same sequence as those of a book. It is neither stitched nor stapled. It may be noted that in U.S. and Canada, a leaflet or booklet is termed as a folder. At times, serials also appear in the form of leaflets. Examples: Leaflet, Department of Agriculture, Bengal; Indian forest Leaflet (1941), etc.

These leaflets contain product information, tourist information, road maps, and so on and generally distributed free. A tourist while proceeding on a journey can conveniently carry the leaflets and use them with utmost ease whenever necessary. Neither carrying nor using creates any difficulty. Many publishers send blurbs of their publications by post or courier to prospective buyers. The approach is personalised, not costly, but quite effective and can reach even the most undeveloped and remote area of a country.

Printed Cards

Cards are printed to convey greetings, invite people to attend marriage and other ceremonies, and so on. During Deepawali, New Year, Christmas, etc., we purchase the greeting cards and send them to near and dear ones. At times, these cards become valuable source of information in as much as the card gives us information about somebody's date of marriage, names of the bride and bridegroom and their parents and so on. If you see the cards in the archive of a celebrity, you will know with whom he/she had connections during his/her lifetime.

Pamphlets

As per Unesco's definition as pamphlet is a non-periodic printed publication of 5 to 48 pages excluding cover pages. It is stapled/ stitched and cut. Pamphlets Usually provide information on a topic in simple language and are meant for wide range of users. Many textbooks of kindergarten and elementary classes as well as for neo-literates are pamphlets. They are printed usually with large fonts and colourful illustrations. Manuals supplied with various gadgets of domestic use like fridge, washing machine, etc., are also generally pamphlets. Nowadays mobile phones have turned into a ubiquitous gadget and become affordable. No wonder, of late mobile phones have outnumbered landline phones just within a few years of its appearance. Companies like Airtel and Hutch selling mobile phone connections have also brought out beautiful pamphlets for customers in various languages. Quite often customers are to use them to call somebody outside India, or making it roaming while going away to some other place and so on.

Some serials also appear in the form of pamphlets. Examples: Forest Pamphlets. Indian Forest Research Institute. Dehradun. No. 1 (1908) – 16 (1916); indigo Pamphlets. Bihar Planters Association Kolkata. No. 1 (1906) – 8 (1907).

Pamphlets are produced cheap; distributed by hand (say, in a gathering, fair, or an exhibition), post or courier; used for a long time: do not require any gadget for reading; and can reach any part of a country within a short time. Pamphlets in most cases are available free of cost. People in all walks of life use pamphlets. A housewife uses pamphlets to run her microwave, fridge, etc., properly. An amateur horticulturist uses it for producing better roses and other flowers. An engineer uses a standard (most standards are pamphlets) to generate quality products; to install, run and maintain a machine properly; and so on.

Notes**Books**

According to Unesco, a book is a non-periodic printed publication of at least 49 pages exclusive of cover pages. A book is usually stapled/ stitched along one edge and placed within protective covers to form a volume. In general libraries, the collection is predominated by books. The sizes of books vary. The size of The New International Webster's Comprehensive Dictionary of the English Language (Encyclopaediced) is 28 × 21 cm. Atlases are usually still bigger. Textbook in general is of medium size. For example, Reference Service by Krishan Kumar Measures 21 × 13 cm. Computer Dictionary by In Scales and Geof Wheelwright goes to another extreme measuring about 6 × 5 cm. According to the intellectual content, books can be categorised as textbooks, monographs, treatises, reference books and so on.

Illustrations

Photographs, drawings, paintings, etc., become print media when they are printed. Illustrations are but a common component of a book. Children's books are usually adorned with colourful illustrations to make them more attractive and educative. Other educative books are also illustrated for making the matter easily comprehensible to the reader. For example, a book on birds usually includes coloured illustrations of almost each bird included in the book whereby a bird can be easily identified by a bird watcher. You will find in many cases predominance of illustrations especially in books on photography and architecture. Illustrations are of various types. Some of them are frontispiece, plate, photograph, portrait, map, plan, facsimile, table, chart and diagram. Most of them are known to you. A brief description of the less known ones follows. A frontispiece is an illustration that faces the title page. In many biographies and festschriften the photograph or the portrait of the celebrity appears as frontispiece. For example, the book National Bibliographical Control.

Problem and perspectives (New Delhi: Allied, 2003) brought out in honour of the renowned librarian A.K. Dasgupta, contains his photograph as the frontispiece. A plate is a photograph of an illustration printed anywhere in the book other than the page facing the title page. Normally, a plate covers the whole page. A portrait is an artistic representation of a person, especially one depicting the face or head and shoulders [COD: p1116]. In some biographical dictionaries portraits of the persons are included along with their biographical sketches. A plan is a scale drawing of the horizontal section of a particular level of a building, structure or a machine. An exact copy of a piece of writing, painting, etc., is called a facsimile. A photocopy is an example of a facsimile.

Periodicals

The periodical is a powerful medium for the dissemination of information. Researchers all over the world publish their papers describing latest finding in primary periodicals. Secondary periodicals gather information from primary periodical and present the same in the form of abstracts, popular articles or reviews. Going through these periodicals a researcher, teacher student, and others keep themselves updated generally overriding the language barrier. Compared to textbooks, treatises or monographs, the information presented in periodical is almost always more up-to-date.

Apart from specialist periodicals, which are devoted to particular subjects (e.g., Current Science) and are categorised as primary, secondary and tertiary. There are general periodicals also.



Did u know?

A general periodical includes writings from various disciplines. For example, India Today—it covers articles related to politics and government, sports, business and trade, art and culture, and so on.

There are also periodicals called magazines. A magazine is meant for light reading and includes among others short stories, serialised fiction, poems, articles on films, theatres, sports, and so on. Sometimes these magazines are meant for children (e.g., Chandamama, Suktar), women (e.g., Femina, Sananda, neo-literates, and so on.

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Newspapers

For centuries newspapers have been serving human community as a powerful medium of communication. Newspapers appear from almost all parts of the world in numerous languages. In India also, newspapers appear not only in English and Hindi but also in numerous regional languages like Bengali, Marathi, Gujarati, Tamil, Telugu, Assamese, Oriya, and so on. Circulation of newspapers varies from a few hundred to a few million. The usual frequency of a newspaper is daily. However, there are also newspapers, which are tri-weekly, bi-weekly or weekly. Newspapers can also be categorised as general newspaper and specialist newspaper.

General newspapers include current information pertaining to any important event occurring in any part of the world, and, any part of the universe. Besides news, we find in it editorials and articles based on current events. In general, these newspapers publish news, editorials, articles, etc., on politics and government, crime, business and trade, accidents, sports, cultural events and so on. Very important events relating to science, medicine, technology, literature, religion, etc., are also covered. Newspapers are usually biased nationally or locally. For example, The Times of India is biased towards Indian news, whereas Ananda Bazar Patrika appearing from Kolkata is biased towards news from West Bengal. Unlike e-newspapers, updating of news several times a day is not possible in the printed newspaper. The newspaper as a form of document enjoys the largest readership. For example, the circulation of Hindustan Times appearing from a number of cities in India is more than one million. A newspaper in a house, club, library, office and in other places is read by many people. If we consider that a copy of Hindustan Times is read on average by four persons per day, then the daily readership of Hindustan Times comes to more than four million. You cannot think of any other type of document whose readership will be so large per day. A specialist newspaper is usually devoted to a particular subject. The Financial Express, The Economic Times, etc., are the examples of specialist newspapers. In these newspapers you will find a predominance of the news on the subject to which the newspaper is devoted. Other important news also appears in these newspapers.

Maps

We all have learnt about maps during our school days and many a time have drawn them on sheets of papers. A map is a depiction of the earth's surface or any component of it (say, a country, state, city, roads, etc.,) printed on a durable sheet of paper. The sizes of the sheets vary. Many maps are hung on the wall for easy reference. Reproduction of a map in printed form without the permission of the proper authority is illegal.

There are various types of maps such as political, demographic, and agricultural. Political maps indicate the political boundaries of each state; its capital, important towns, rivers, railroads, and so on. Demographic maps indicate the population from various angles of the world or a part of it such as a country or a state. Agricultural maps show soil types, crops grown, agricultural productivity and so on of a particular area.

We have maps of the sky as well where we can see various constellations, the signs of zodiac, planets of the earth, etc. The surface of the earth or any area of it is more or less constant. This is not the case with the sky. The winter sky is different from summer sky. Hence, we have different sky maps for different times of the year.

Notes**Calendars and Diaries**

Government offices, industrial establishments, financial institutions, business houses, publishers and various other organizations bring out calendars and diaries every year and distribute them free of cost to its employees, customers, agents, and many others. Calendars usually provide the days and dates of a month indicating holidays usually with red colour or some other way. Some calendars contain colourful photographs on each page like temples, mountains, places of scenic beauty and so on. The name of the organization figures prominently on the calendar which gives a little publicity to the organization.

Diaries apart from days and dates provide more information. For example, the diary of Life Insurance Corporation of India (LIC) for the year 2004 distributed free of cost to its employees, agents, customers and so on included among others the following information: a general overview of life insurance; plans marketed by LIC; useful information about policy holders; group insurance schemes; tax benefits from life insurance; bonus; welfare activities: highlights of LIC's investments; progress on LIC since its inception in 1956, etc. Diaries for personal use sold in the market also include such information as list of holidays; income tax rates; STD codes; ISD codes; postal information; etc. In some diaries you may find maps of the country and important towns: world time chart and so on.

Computer Printouts

The computer printout is also a new variety of printed material. We can take a printout of a file or part of it stored in a floppy, compact disc, or database. Many of the computer files or databases are copyrighted according to law. Hence, downloading or taking a printout from a copyrighted file or database is illegal and a punishable offence.

1.3.2 Future of Print Media

Printed sheets, leaflets, printed cards, and pamphlets are not yet facing any major threat from non-print media. Till date in developing countries these are the cheapest and most effective media for publicity, propaganda, sales promotion, maintenance of friendly relation and family ties and so on. Through e-mail we can send colourful cards conveying greetings, inviting people for some ceremony, and so on.

However, the percentage of people having e-mail facility being very small in countries like India and China, we cannot reach everybody through this medium. Moreover, people appreciate invitation with a personal visit and invitation card much more than invitation through e-mail or phone. Hence, we can safely predict that these printed media are not going to vanish in foreseeable future.

Now, let us consider the position of books. With the passage of time, more and more e-books are appearing in the market. Books are also appearing in the form of video recordings. E-books and video recordings have got several advantages over printed books. Take for example, a CD-ROM, this particular storage medium can hold the data about 2000 books of 150 pages each. A CD-ROM is available at affordable cost, requires negligible amount of space for storing. The content of a CD-ROM can be uploaded to a computer and then can be made available to anybody in the world through Internet. Many e-books are produced with hypermedia facilities providing us not only text, but narration, sound, colourful picture, animation and interaction. We can also surf from one topic to the other with utmost ease. More or less similar is the case with video recordings. Blinds and deaf and dumb people can use e-books since the blinds can hear, and deaf and dumb can see. A CD or a floppy has negligible weight and can be carried easily in a pocket.

Despite all these advantages, e-books are failing to replace or displace conventional books in printed form in as much as an e-book is either in CD, or in a floppy that requires a computer for reading, which is costly, difficult to carry, and susceptible to breakdown due to fluctuation in power supply,

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heat, dust and so on. Moreover, a CD or a floppy can easily become unusable on such flimsy causes as a scratch or a fall. A printed book remains totally unaffected by all these factors. Moreover, we can carry a book with us, read it with naked eyes standing at a bus stop, sitting in a train, and even while walking in a lonely alley. Hence, it can be safely predicted that printed books will co-exist with e-books as newspapers co-exist with radios, and radios co-exist with TVs.

Periodicals nowadays are available in various forms such as printed form; electronic form, *i.e.*, e-journals; and microform. Sometimes, they are available both in electronic and printed form. A small survey conducted by the author with a sample of about 550 titles in physics included in Ulrich's 1999 revealed that 85 titles were available in electronic form (4 in CDs) and the rest were in printed form. None was only in electronic form or in microform. It is unlikely that the situation has undergone a vast change by 2005. Renowned publishers of periodicals who used to bring out periodicals earlier in printed form, now they bring out an electronic version as well. Instances are rare where publishers have discontinued printed version in favour of the electronic version.

The facilities of e-journals are many and varied and cannot be ignored. We get e-journals much earlier through Internet than their printed versions since they reach us via postal channel, which takes time. Many e-journals provide facilities for downloading of articles free of cost. This is also a big advantage. Ofcourse, for consulting most e-journals you will have to pay both for consulting the journal and downloading the article. If money is not a problem for a researcher, then he/she can browse through all e-journals of his/her interest sitting in the house or office room using his/her Internet connected computer. This saves him/her from the botheration of going to the library, moving from shelf to shelf, getting disappointed if some issues, volumes, are not available in the library.

Once purchased, you can use a printed journal any number of times for any number of years without paying anything extra. That is not the case with e-journals. Suppose, you have paid for consulting an e-journal for the year 2004. Now, if you want to consult this journal in 2005, you will again have to pay. Moreover, e-journals are generally residents of databases; they cannot be accessed and read without a computer. Moreover, you cannot carry them with you according to your sweet will and read whenever you want. In all such cases printed journals fare much better.

Both printed journals and e-journals have some advantages and disadvantages. If we take a global view, then we find that like e-journals, new printed journals are also emerging every year. Readership of printed journals are not yet showing any sign of decline. Hence, we can conclude that the future of printed journals is not yet bleak and there is every possibility that printed journals will also co-exist with their electronic counterparts.

Despite the availability of Internet edition of many newspapers in the world, the readership of printed newspaper is not declining. Even in our country the newspapers like Hindustan Times (HT) and The Times Of India (TOI) are having Internet editions. Strangely enough, the circulation of the printed edition of these newspapers are continuously increasing! Why is it so? Let us delve deep into the matter. Suppose somebody intends to read the Internet edition of HT in Delhi for half-an-hour a day. For this he/she needs Internet connection. There are different rates depending on the number of hours one subscribes to. For 100 hours, the VSNL rate is Rs. 800. That means Rs. 4.00, for half an hour. In addition, you are to pay telephone charges at local rates, *i.e.*, Rs. 10.00, for half an hour. So, for reading the Internet edition of HT or TOI for half-an-hour you are to pay Rs. 14.00, when the cost of the printed edition is only Rs. 1.50. Even if you take the cable connection for Internet like Sify broadband, the cost for 10 hours is more than Rs. 300.00. Moreover, one can read the printed edition sitting anywhere in the house, lying down on the bed, standing in a bus stop or railway platform, sitting in a bus or train, and so on. You cannot do the same thing with the Internet edition. May be, in future, the cost of Internet connection will reduce. But Internet edition will not be able to provide the facilities that a printed edition can provide. No wonder, with the growth of literacy, the readership of printed edition of newspapers is increasing. For countries like India the trend will continue. The findings of the National Readership Survey in India are indicating

Notes positive growth year after year. It is most likely that the printed edition and the Internet edition of newspapers will co-exist, and in developing countries printed edition will possibly enjoy more readership.

Computerisation of data gave birth to computer printouts, as data in computers is not safe. Virus can corrupt any file resident in a computer. Crashing of hard disk is also not uncommon. That is why the practice is to keep backup in a floppy or a Compact Disc (CD). More often than not, a floppy become unusable due to a variety of reasons and a simple scratch on a CD can make the entire data in CD inaccessible. In such a situation, the wisest step is to keep a printout on paper. If everything in electronic form gets corrupted or destroyed, the printout comes to our rescue. At least, the data is there. It can be inputted to computer whenever needed. However much we go for electronic media, the need for printouts is likely to be there always.

Maps are used by teachers, students, military personnel, travellers, common men and many others. Normally big size maps are hung on the wall for ready reference. The size of a computer screen being small, normally we are to see a map part by part in a computer whereby we do not get the full view of the map. Reducing the size of the map five to ten times we may get the full view sacrificing its readability. Of course, using a device called Liquid Crystal Display (LCD), we can project a map on a big screen and get its full view, but LCD is a costly equipment normally used by sophisticated educational institutions. The sum and substance of the matter is that the ease with which printed maps can be consulted, its electronic counterparts cannot be ignored. Hence, printed maps will also stay.

Conclusion—Summing up we can only say that there is no immediate threat to print media. In future, in some cases print media will dominate, in others non-print media. It can be safely predicted that both will co-exist for a long time to come.



Task What do you mean by periodicals? Explain with example.

1.4 Non-Print Media

We shall categorise non-print media as conventional, electronic and cyber media.

1.4.1 Conventional Media

The conventional media can further be categorised as oral, audio, visual, and audio-visual media.

Oral

Once upon a time oral medium was the only medium that the human beings used to communicate. Even today we communicate maximum amount of information through oral medium. In our houses, offices, schools, colleges, universities, market places, practically everywhere, we use this medium for communication. No physical medium (except air) is needed for short distance communication. We just speak and others hear. By using physical medium like telephone, microphone, radio, and television oral communication can be transmitted over long distances. In oral medium we communicate information in different modes as discussed below.

One-to-One

This happens when two persons talk to each other. Talks between husband and wife, father and son, a teacher and a student, friend to friend, are examples of one-to-one communication. Many a time a reporter interviews a VIP. This is also a case of one-to-one communication.

One-to-a-Few**Notes**

This happens in a classroom, small gatherings, and so on. In a class room the teacher speaks and the students listen.

One-to-Many

This happens in big meetings, conferences, and so on. Before elections you have seen meetings addressed by political leaders. Here, the political leader speaks and hundreds and thousands of listeners listen.

Many-to-Many

This is seen in meetings when a VIP (say, a minister, government official, etc.) meets common people to listen to their grievances, complaints, and so on. The persons, one-by-one, voice their grievances, and the VIP takes note of them and tells them about the action he/she is going to take. This also happens when a VIP calls for a press conference. The reporters put questions to the VIP and he/she answers. The same scene is seen in an interview also. The candidate is asked various questions by the members of the interview board which he/she answers.

Many-to-Many

This happens in a group discussion, round table conference, and so on. Here, one-by-one everyone speaks and others hear and react.

Audio

These are the media using which either we speak, or listen, or both speak and listen. In a big conference, we use microphones to speak so that others can hear the voice clearly. This is a device used only for speaking. We use record players, radio, etc., to listen to music, news, speech, and so on. These devices are only for hearing. A telephone, walkie-talkie, etc., are devices through which we can both speak and hear. A radio ever since its discovery has been a great source of information for one and all. It has been a great help for the blinds for their education, awareness of current events, and entertainments.

Visual

Visual media comprise among others photographs, paintings, drawings, blueprints, slides, and transparencies. You all know about photographs, paintings, and drawings. Hence, we shall discuss here only about blue prints, slides and transparencies.



Notes

Blueprints—‘A blueprint is a photographic copy of an early plan for a building or machine with white lines on a blue background’ [Cambridge International Dictionary: p140].

Many libraries of industrial enterprises, consultancy firms, etc., possess a huge collection of blueprints. The blueprints are frequently required by engineers, technicians and others for assembling or repairing a machine, erection of a plant, construction or extension of a building, and so on. Not much attention has been paid by librarians so far towards the classification, cataloguing, storage, etc., of these materials, which are of great value for an industrial organisation from the point of view of information.

Notes**Slides**

'A slide is a small piece of photographic film in a frame which, when light is passed through it, shows a large image on a screen or plain surface' [Cambridge: p1352]. For using slides a projector is needed. Slides are used while presenting a paper in a conference; delivering a lecture in a class or any other gathering; demonstrating the function of a machine, side effects of a drug, usefulness of a specific fertilizer, and so on. Slide shows are organised even in villages to educate illiterate farmers, craftsmen, and others about better method of cultivation, healthy living, low cost housing, usefulness of family planning, etc. Many scientists, scholars, teachers, demonstrators, etc., maintain slide collections of their own. Some libraries also possess slide collections.

Transparencies

A transparency is a transparent plastic sheet on which the matter to be projected is handwritten, photocopied, or printed. For using a transparency, a slide projector is needed. Its use is more or less the same as a slide. However, it is much more handy than a slide in as much as even in remote areas where preparation of a slide is difficult, a transparency can be easily prepared.

Audio-Visual

Audio-Visual media (A-V media) combine both audio medium and the visual medium. With the help of this media people not only see but also hear. Motion pictures, video recordings, television, are a few examples of A-V media.

Numerous documentary films almost on any subject have been produced in the world. These films show in most cases colourful pictures of objects with narration in lucid language. The colourful object such as a tiger hunting a deer is often animated. Seeing and hearing have deeper impact on our memory whereby we remember the scene quicker and retain in our memory for long. These films serve both for education and entertainment. As a result they are becoming important sources of information in libraries. These films are nowadays available in video cassettes that can be run on a Video Cassette Player (VCP) or Video Cassette Recorder (VCR). Many libraries have now a section on documentary films. There are film libraries as well.

The Television (TV) has gradually become not only the source on entertainment but also a great source of current information. Apart from providing news at intervals, it also provides interesting discussions where politicians, journalist, experts, etc., take part; broadcasts live various sports like cricket and football matches, events of Olympic, Asiad, and so on; immediately flashes important declaration by the head of a state, information on accidents, disasters, and so on.

1.4.2 Electronic Media

In this Section we shall deal with multimedia, hypermedia, hypertext, and cybermedia.

Multimedia

As the term suggests, multimedia encompasses several media, which are integrated into a single entity within a digital environment that accesses stored information with a computer system. Hence, the term multimedia is considered as 'singular' like media. It incorporates moving and still pictures, sound, music, text, and facilities for surfing.

Now let us try to understand the concept of multimedia. We have read textbooks in schools and colleges. These textbooks are printed and sometimes include black and white and/or coloured illustrations. Thus in textbooks we find at times the happy combination of two media, *i.e.*, print and graphic media.

Notes

Suppose, in an encyclopaedia, you are reading about the bird called the cuckoo. In the text you are getting a good description of the bird's look, size, habitat, behaviour, nest, egg, and so on. The encyclopaedia may include a coloured illustration of the bird as well. From the article you get a very good idea about the bird. However, if you are interested to know about the call or the flying pattern of the bird, the encyclopaedia might give you the description of the call or flying pattern. But, it will not be able to reproduce the actual call or the flying pattern. Here comes the multimedia. A multimedia encyclopaedia can reproduce the actual call and the flying pattern of the bird. Once you remember the call, you will be able to identify the bird whenever you hear the call. Summing up, we can say that in a printed encyclopaedia we find the combination of text (description) and graphics (illustrations).

In a multimedia encyclopaedia, we find the combination of text, graphics, audio (call of the bird), and animation (flying of the bird), and at times interaction. Many a time, a multimedia encyclopaedia is in hypertext, which helps the reader to move from one text to the other with ease. Suppose, while studying the article on birds in a multimedia encyclopaedia, you come across the term '**migratory birds**' in different colour (an indication of hypertext). You click on 'migratory birds'. Immediately, the article on migratory birds appears on the computer screen. In this article, you find the name of the 'Siberian crane' in hypertext. Now, you can click on 'Siberian crane' to get the article on Siberian crane. This is how, in a multimedia encyclopaedia, we can move from one concept to the other practically without any loss of time or difficulty.

Multimedia Products

These products are available in CD-ROM. For using these products a well-configured computer system is needed. The computer should have CD drive, speakers, adequate memory, and so on. Use—The use of multimedia is picking up at a rapid rate. It is finding ample use in education and training. In classroom lectures when something is demonstrated with multimedia, say, an open-heart surgery, it creates a deep impression in the minds of the pupil, because they are actually seeing the operation as if in reality and hearing what is happening at every moment. It is affecting simultaneously two sense organs, *i.e.*, eyes and ears. The combined effect of both on the memory is definitely better than one.

Even handicapped students can reap the benefit of multimedia. Blind students can hear not only the narration of the text, but also the sound of other associated happenings related to the text. For example, while listening to the narration on rainy season, the blind student can hear the beautiful sound of rain, terrifying sound of thunder and devastating sound of storms.

For deaf and dumb students also, the multimedia has proved to be a boon. They can see the objects in colour as well as in motion and thereby can comprehend the matter much better.

Nowadays, even in seminars, conferences, workshops, etc., multimedia presentation is becoming pretty common. It helps the speaker greatly in presentation and the audience in comprehension.

In business and trade also, multimedia is entering in a big way. Many companies are giving multimedia demonstration of their products to the customers, and the questions raised by them are being answered then and there many a time with the help of multimedia. The development of multimedia has obviated to a great extent the need for carrying the machinery, product, etc., for demonstration. Seeing the multimedia demonstration, the customer can tentatively select the items, and finally see the items themselves before purchasing or placing order. In publishing and book trade industry also, multimedia has entered in a big way. Encyclopaedias, dictionaries, atlases, collected works of various authors are now available in multimedia. Some publishers along with the printed book provide a CD-ROM also that harbours the electronic version of the book.

Libraries and information centres have also started procuring multimedia products for their uses. Multimedia publications are becoming formidable competitors to conventional printed books.

Notes	Multimedia is also entering entertainment market in a big way. Now you can get a documentary film, a feature film, a circus show, a cultural function, and so on in CDs.
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Hypertext

While discussing multimedia, we have used the word 'hypertext'. Now let us see what this hypertext is. Hypertext is defined as 'a system of storing images, text, and other computer files that allow direct links to the related text, images, sound and other data' [Encarta: p94]. To understand hypertext we are reproducing a small text from Macmillan Science and Technology Encyclopedia. The text reads as follows:

Palynology Study of SPORES, SEEDS, and POLLENS. It is a part of such disciplines as archaeology, PALAEOGEOGRAPHY, and PALAEONTOLOGY [Macmillan: p268].

You can see that in the above text, SPORES, SEEDS, POLLENS, PALAEOGEOGRAPHY, and PALAEONTOLOGY are all in capital letters. These capitalised words indicate that there are separate articles in the encyclopaedia on these topics. If somebody does not know the meaning of, say, palaeontology, he/she can go through the article on the topic included in the encyclopaedia by turning the pages and can read it to have some idea on the topic. If you find this in multimedia, you will simply have to click on the word PALAEONTOLOGY, immediately the article on the topic will appear on the screen. The same text in hypermedia like World Wide Web (WWW) will showcase the list of websites containing the word PALAEONTOLOGY on the computer screen in serial order. Now you will have to check the websites one by one to see which one provides the answer to your satisfaction. After clicking the selected website, you will get the article on the topic on your screen.

From the above discussion it is clear that for linking broad, related and narrower topics appearing in the text you will have to highlight the words either by capitalising or by using different colours or some other means so that the reader can go to any of the words to get its meaning as well as other details. In the text already discussed, the words have been highlighted using capital letters. In Compton's Concise Encyclopedia in CD-ROM, the topics have been highlighted in crimson. For images, a camera has been used as an icon, clicking which you can get the picture, and for chronology, a clock has been used as an icon, a click on which leads you to related timeline event.

You can see that in hypertext, words in the text are highlighted to link related topics existing in cyberspace, *i.e.*, World Wide Web or Internet. This is not all. In hypertext, as in multimedia, we get sound, visual image including animation. Suppose we are reading an article on India in hypertext. There, in one section, the text of our national anthem Jana gana mana is included. In one corner, there is a musical symbol indicative of sound. Now, if you click on this symbol, immediately the computer system will reproduce the song along with the music. Similarly, if you click on the symbol of national flag, the flag will appear on the computer screen.

Hypermedia

We have already discussed print media and multimedia. In print media, we find text and graphics printed usually on paper. In multimedia we find text, graphics, sound, animation, and sometime mechanism for interaction. Multimedia products are in digitised form and usually available in CD-ROMs. If information is presented along with graphics, sound, animation and interactive mechanism in hypertext then we say that information is in hypermedia. Thus, hypermedia is defined as 'a hypertext system that supports the linking of graphics, audio and video elements and text'. [Encarta World English Dictionary: p926]. The World Wide Web is a beautiful example of hypermedia.

1.4.3 Cybermedia

Both Internet and World Wide Web function in cyberspace. Hence, these two media are being considered here as cybermedia. It may be noted that cybermedia and cyberspace are two different

Notes

concepts. Cybermedia does not require an encompassing space as cyberspace does. Moreover while using cybermedia, a person sees physical objects like computer in the real world. The media comprises interconnected databases on a worldwide scale and functions on receipt of input [Internet 1].

Internet—It is a worldwide network of computer networks connecting millions of computers harbouring every type of information retrievable usually from multiple angles practically in no time and from any part of the world.

*Did u know?*

The initial work for the launching of Internet was started by Advanced Research Projects Agency (ARPA) of the U.S. Department of Defence (ARPA/DARPA) in early 1960s. JCR Licklider of MIT, the first head of the computer research programme at DARPA envisioned a globally interconnected set of networks through which anybody could access data or program from any site in the world.

In 1969, four host computers were connected together to form a network. In 1972, e-mail was introduced over the network. The network has grown from four computers in 1969 to 100 in 1977, 28,000 plus in 1987 and 20,000,000 in 1997 [Meadow, 2000].

To enter the wonderful world of Internet, what you need is a computer of adequate capacity that will be equipped with a sound card, Internet connection that you may get from an Internet Service Provider (ISP) like Videsh Sanchar Nigam Ltd. (VSNL), a password, which the ISP will supply, and software like Netscape Navigator. In the system, there may be provisions for sending and receiving e-mails and voice mails and fitting a camera with which your photograph may be transmitted to the receiver when you speak and vice versa. Now you also can enter Internet as well as World Wide Web (or simply Web, in short). Using a search engine like Google, you can search any item that comes to your mind. The search engine is not something like a car engine. It is simply a powerful computer program that searches given keywords existing in the cyberspace and returns a list of websites wherein the given keywords exist. You can access the matter recorded in any of the websites by just clicking on it.

Internet can be compared with a huge library harbouring books, journals, newspapers, reports, patents, theses, video cassettes, and so on. However, this library we are calling Internet is imaginary. Four walls do not bound it, neither there are racks and shelves. For locating information on something, there is no dictionary or classified catalogue. But you have powerful search engines with which you can search the item(s) you need.

Internet is the most important reference source that man could ever evolve. In Internet you will find dictionaries, encyclopaedias, directories, yearbooks, bibliographies, primary periodicals, secondary periodicals, life sketches of persons, description of places, and so on. While searching Internet, you will have to remember that:

- (i) all documents in Internet are in digitised form, not all of them can be browsed free of charge, neither all can be downloaded;
- (ii) each and every document the world has produced is not available in Internet, what is available is only a small percentage;
- (iii) there will be some documents in Internet which will not be available in your library and vice versa;
- (iv) documents in Internet in many cases are more up-to-date than their counterparts available in your library;
- (v) usually, documents in Internet are updated more frequently than printed documents;
- (vi) Internet supplements your library collection and not replaces it;

Notes

- (vii) Internet in no way makes a library or its collection redundant; and
- (viii) most documents in Internet are copyrighted. Hence, downloading any of them without the permission of the concerned authority is illegal.

Many journals and newspapers are also available free of cost on Internet. For reading you do not need a password, neither you are to pay any extra money other than normal Internet charge and local telephone charge. A few examples of such journals and newspapers are given here with their URLs. Reader's Digest [Reader's Digest-rd.com]; Hindustan Times [www.hindustantimes.com]; Nav Bharat Times (Hindi newspaper) [navbharattimes.indiatimes.com]; and Ananda Bazar Patrika (Bengali newspaper) [www.anandabazar.com]. Apart from English, you can search Internet also in Hindi, Bengali, Telugu, Marathi and Tamil using the search engine Google.

There are thousands of other journals, which you can access through Internet on payment basis. One of the special features of the Internet edition of journals is that you get the latest issues of the journal in many cases earlier than their printed counterparts. For example, the latest issue of many American journals reaches India by sea mail about a month or more after its release in USA. Using Internet you can see the issue on the same day it is released.

The Internet edition of newspapers is updated several times a day. Hence, the news available in the Internet edition in many cases will be more up-to-date than their printed counterparts.

You have already come to know that for many documents available in Internet one has to pay. Let us see, how this payment is made. Suppose you want to subscribe to a few Internet edition of journals for your library. First of all, you are to contact the publishers of the journals. They will send you the bills for payment. Once you have made the payment, you will be given the URLs, *i.e.*, web addresses, of the respective journals and their passwords. Now, whenever needed you can access the full-text of any of the journals following the normal procedure of using Internet.

World Wide Web - The abbreviation of World Wide Web is WWW. It is also referred simply as the web. The web does not have its own databases. However, it searches the databases owned by others and finds out the required information [Meadow: p3].

The World Wide Web was created by Tim Berners-Lee, a physicist of Centre Europeene Recherche Nuclear (CERN) by using a hypertext model and Standard Generalised Mark-up Language (SGML) with some extensions. To launch the web, an international telecommunication network was needed which Internet provided. Berners-Lee coded the documents in hypertext with Internet addresses that could be read by a program called browser that copied the hypertext documents from servers along with text and graphics.

The web is not only a medium for the exchange of scientific information, but also for advertising products, disseminating news, making friendship with like-minded people at different parts of the world, choosing life partners, and so on. It is an integral part of our culture today [Meadow: p33].

Millions of computers all over the world are holding databases created using various software. These databases are of various sizes and qualities and devoted to almost any subject we can think of. To harvest information from these databases a mechanism was needed. The Internet and the web combining together provided the most-wanted mechanism.

Virtual Reality Products

The image that we see in a looking glass is a virtual image. In a virtual reality environment the observer gets a feeling as if he/she is a part of the system. Many of us are familiar with video games like car racing. The person who wants to play this video game sits in a chair in front of a computer screen and comes to know which car visible on the screen he/she is to drive. There are all the mechanisms needed for car driving whereby you can increase or decrease the speed of your car, change lane, take left or right turn, apply break and so on. The moment the race starts, you also start

Notes

driving along with other cars. If your car is lagging behind, you increase speed of your car to catch up with other cars in the race and forge ahead by changing lane. If by chance, your car dashes with another, a big crashing sound is generated, flames emanate, and your car is reduced to ashes. Mind you, in real world you are still sitting on the static chair and nothing happens to you. If you want to play it again, you start afresh.

In virtual reality, real situation is simulated whereby one gets the feeling of a real world. Many car-driving schools nowadays use virtual reality products to teach car driving. These products prove to be the mainstay of video games.



Task

What do you mean by non-print media? Describe conventional, electronic and cybermedia with example.

1.4.4 Print and Non-Print

Keyword searches in online and print sources: Search relevant keywords in catalogues, indexes, search engines, and full-text resources. Useful both to narrow a search to the specific subject heading and to find sources not captured under a relevant subject heading. To search a database effectively, start with a Keyword search, find relevant records, and then find relevant Subject Headings. In search engines, include many keywords to narrow the search and carefully evaluate what you find.

Subject searches in online and print sources: Subject Headings (sometimes called Descriptors) are specific terms or phrases used consistently by online or print indexes to describe what a book or journal article is about. This is true of the *Library's Online Catalogue* or the *Reader's Guide* or other indexes. For example, in the online catalog, DIVORCE and CHILDREN OF DIVORCED PARENTS are different subject headings with different books under them. If you want the latter and find the specific subject heading, you will save time finding the most relevant resources. DIVORCE as a Keyword in the Online Catalog will pick up both topics above, but also about 1300 other catalogue records with the word "divorce" in them.

Citation searches in printed sources: Track down footnotes, endnotes, and citations in relevant readings. Search for specific books or journals in the Library's Online Catalogue. This technique helps you become part of the scholarly conversation on a particular topic.

Searches through published bibliographies: Published bibliographies on particular subjects (Shakespeare, alcoholism, etc.) often list sources missed through other kinds of searches. BIBLIOGRAPHY is a subject heading in the Online Catalogue, so a Guided Search with BIBLIOGRAPHY as a Subject and your topic as a keyword will help you find these.

Searches through people sources: People are often more willing to help than you might think. The people to start with are often Reference Librarians at the Reference Desks in the Library.

Systematic browsing, especially of full-text sources arranged in predictable subject groupings: Libraries organize books by subject, with similar books shelved together. Browsing the stacks is a good way to find similar books; however, in large libraries, some books are not in the main stacks, so use the catalogue as well.

The advantages of trying all these research methods are that:

- Each of these ways of searching is applicable in any subject area
- None of them is confined exclusively to English-language sources

Notes

- Each has both strengths and weaknesses, advantages and disadvantages
- The weaknesses within any one method are balanced by the strengths of the others
- The strength of each is precisely that it is capable of turning up information or knowledge records that cannot be found efficiently or often even at all by any of the others.

Self Assessment

Fill in the blanks:

1. Information science is an science and dissemination of information.
2. The most valuable assets of 20th century were its equipment.
3. The most valuable assets of 21st century will be its workers.
4. To search a database effectively start with a search.
5. Printed card is an example of
6. Talks between husband and wife, father and son are the examples of communication.
7. A is a photographic copy of an early plan for a building or machine with white lines on a blue background.

1.5 Categories of Sources of Information

Different sources of information may broadly be grouped as documentary and nondocumentary sources.

Printed documents are published in a variety of forms; documents are further grouped into primary, secondary and tertiary documents.



Notes Primary documents contain new or original idea or new interpretations of known facts.

Secondary documents are those derived from primary sources. Tertiary documents are those that are based on the primary and secondary sources of information.

The information presented in the tertiary sources is highly condensed and the aim is to provide relevant information in minimum number of expressions. They are primarily the aids to search primary and secondary sources.

Sources of information are generally categorized as primary, secondary or tertiary depending on their originality and their proximity to the source or origin. For example, scientific information moves through a dissemination cycle. Initially, findings might be communicated informally by e-mail, and then presented at meetings before being formally published as a primary source. Once published, they will then be indexed in a bibliographic database, and repackaged and commented upon by others in secondary sources. The designations of primary, secondary and tertiary differ between disciplines or subjects, particularly between what can generally be defined as the sciences and the humanities. Primary sources for critics studying the literature of the Second World War are different from those for a research scientist investigating a new drug for arthritis. The critic's primary sources are the poems, stories, and films of the era. The research scientist's primary sources are the results of laboratory tests and the medical records of patients treated with the drug. You should always check with your lecturer or tutor if in doubt.

1.5.1 Primary Sources

Notes

Some definitions of primary sources:

- Primary sources are original materials on which other research is based
- They are usually the first formal appearance of results in the print or electronic literature (for example, the first publication of the results of scientific investigations is a primary source)
- They present information in its original form, neither interpreted nor condensed nor evaluated by other writers
- They are from the time period (for example, something written close to when what it is recording happened is likely to be a primary source)
- Primary sources present original thinking; report on discoveries, or share new information.

Some examples of primary sources:

- scientific journal articles reporting experimental research results
- proceedings of Meetings, Conferences and Symposia.
- technical reports
- dissertations or theses (*may also be secondary*)
- patents
- sets of data, such as census statistics
- works of literature (such as poems and fiction)
- diaries
- autobiographies
- interviews, surveys and fieldwork
- letters and correspondence
- speeches
- newspaper articles (*may also be secondary*)
- government documents
- photographs and works of art
- original documents (such as birth certificate or trial transcripts)
- Internet communications on e-mail, list serves, and newsgroups.

Self Assessment

Multiple Choice Questions:

8. Depending on their originality and their proximity to the source origin, source of information generally categorised as:

(a) Primary	(b) Secondary
(c) Primary, Secondary	(d) Primary, Secondary or tertiary.
9. Diaries and Autobiographies are the examples of:

(a) Primary sources	(b) Secondary sources
(c) Tertiary sources	(d) Primary and Secondary.

Notes**1.5.2 Secondary Sources**

Secondary sources are less easily defined than primary sources. What some define as a secondary source, others define as a tertiary source. Nor is it always easy to distinguish primary from secondary sources. A newspaper article is a primary source if it reports events, but a secondary source if it analyses and comments on those events. In science, secondary sources are those which simplify the process of finding and evaluating the primary literature. They tend to be works which repackage, reorganize, reinterpret, summarise, index or otherwise “add value” to the new information reported in the primary literature. More generally, secondary sources:

- describe, interpret, analyze and evaluate the primary sources
- comment on and discuss the evidence provided by primary sources
- are works which are one or more steps removed from the event or information they refer to, being written after the fact with the benefit of hindsight?

Some examples of secondary sources:

- bibliographies (*may also be tertiary*)
- biographical works
- commentaries
- dictionaries and encyclopedias (*may also be tertiary*)
- dissertations or theses (*more usually primary*)
- handbooks and data compilations (*may also be tertiary*)
- history
- indexing and abstracting tools used to locate primary and secondary sources (*may also be tertiary*)
- journal articles, particularly in disciplines other than science (*may also be primary*)
- monographs (other than fiction and autobiography)
- newspaper and popular magazine articles (*may also be primary*)
- review articles and literature reviews
- textbooks (*may also be tertiary*)
- treatises
- works of criticism and interpretation.

1.5.3 Tertiary Sources

Tertiary source is a term used to describe a work which is chiefly a selection or compilation of other primary and secondary sources. The distinction between a secondary and tertiary source is relative, whereas the difference between primary and secondary sources is more absolute in historiography. As a general rule, however, tertiary sources tend to be more focused on the identification of scholarly work than on the content itself.

Depending on the context, tertiary sources might include bibliographies, library catalogs, directories, reading lists and survey articles.

*Did u know?*

Encyclopedias and textbooks are examples of written materials that typically embrace both secondary and tertiary sources, presenting on the one hand commentary and analysis, while on the other attempting to provide a synoptic overview of the material available on the topic.

Tertiary sources consist of information which is a distillation and collection of primary and secondary sources.

Notes

This is the most problematic category of all. Fortunately, you will rarely be expected to differentiate between secondary and tertiary sources.

Some Definitions of Tertiary Sources:

- works which list primary and secondary resources in a specific subject area
- works which index, organize and compile citations to, and show you how to use, secondary (and sometimes primary) sources
- materials in which the information from secondary sources has been “digested”-reformatted and condensed, to put it into a convenient, easy-to-read form
- Sources which are once removed in time from secondary sources.

Some examples of tertiary sources:

- almanacs and fact books
- bibliographies (*may also be secondary*)
- chronologies
- dictionaries and encyclopedias (*may also be secondary*)
- directories
- guidebooks, manuals, etc.
- handbooks and data compilations (*may also be secondary*)
- indexing and abstracting tools used to locate primary and secondary sources (*may also be secondary*)
- textbooks (*may also be secondary*).

Table 1.1: Examples of Primary, Secondary and Tertiary Sources

<i>Discipline</i>	<i>Primary Source</i>	<i>Secondary Source</i>	<i>Tertiary Source</i>
Art	Original artwork	Article critiquing the piece of art	Art Index
Engineering	Patent	Derwent Patents index	Guide to using patent literature
History	Explorer's Diary	Book about exploration	APAIS
Literature	Poem	Treatise on a particular genre of poetry	MLA
Psychology	Notes taken by a clinical psychologist	Monograph on the condition clinical psychologist	Dictionary of psychology
Science	Journal article reporting original coral research	1. Biological Abstracts 2. Review of recent coral research	1. Textbook of Biology 2. Biological Abstracts
Theatre	Videotape of a performance	Biography of a playwright	Chronology of the play

Notes



Task

Differentiate primary, secondary and tertiary sources.

Self Assessment

State whether the following statements are true or false:

10. An Autobiography is an example of secondary source of information.
11. Patents may be categorised as primary source of information.
12. History categorised as primary source of information.
13. Newspaper and popular magazine articles are tertiary source of information.
14. Dictionaries are primary source of information.
15. Textbooks are primary source of information.
16. Scientific journal articles are primary source of information.

1.6 Summary

- Information science is an interdisciplinary science primarily concerned with the analysis, collection, classification, manipulation, storage, retrieval and dissemination of information.
- Secondary sources are less easily defined than primary sources.
- Information science focuses on understanding problems from the perspective of the stakeholders involved and then applying information and other technologies as needed. In other words, it tackles systemic problems first rather than individual pieces of technology within that system. In this respect, information science can be seen as a response to technological determinism, the belief that technology "develops by its own laws, that it realizes its own potential, limited only by the material resources available, and must therefore be regarded as an autonomous system controlling and ultimately permeating all other subsystems of society".

1.7 Keywords

- Dissemination* : Broadcasting
Obscure : Difficult to understand
Abstract : Conceptual
Contingent : Dependent

1.8 Review Questions

1. Define documentary sources of information.
2. Explain document description.
3. What is print and non-print media, explain with examples?
4. Define the term categories of source of information.
5. Write some examples of primary sources.

- | | |
|--|--------------|
| 6. Define secondary source. | Notes |
| 7. What is tertiary source? Explain in detail. | |

Answers: Self Assessment

- | | | |
|----------------------|----------------|---------------|
| 1. Interdisciplinary | 2. Production | 3. Knowledge |
| 4. Keyword | 5. Print media | 6. One-to-one |
| 7. Blueprint | 8. (d) | 9. (a) |
| 10. False | 11. True | 12. False |
| 13. False | 14. False | 15. False |
| 16. True. | | |

1.9 Further Readings



Books

RANGANATHAN (S R). Reference service. Ed 2. 1989. *Ranganthan Endowment for Library Science, Bangalore*.

KRISHAN KUMAR. *Reference service* Ed. 3. 1996. Vikas Publishing, New Delhi.



Online links

<http://www.library.illinois.edu/village/primarysource/mod1/pg1.htm>

<http://www.buzzle.com/articles/types-of-print-media.html>

Notes**Unit 2: Human and Institutional Sources of Information****CONTENTS**

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- Introduction
 - 2.1 Sources of Information
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 - 2.1.3 Journals/Magazines
 - 2.1.4 Books
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 - 2.1.6 Government Publications
 - 2.1.7 Libraries
 - 2.2 The Modern Library
 - 2.3 Evolution of Library
 - 2.4 Notable Libraries
 - 2.5 Summary
 - 2.6 Keywords
 - 2.7 Review Questions
 - 2.8 Further Readings

Objectives

After studying this unit, you will be able to:

- Define human and institutional sources of information
- Discuss the modern library and its evaluation
- Explain the complete idea about notable libraries.

Introduction

Library is a collection of books or other written or printed materials, as well as the facility in which they are housed and the institution that is responsible for their maintenance. Modern libraries may

contain a wide range of materials, including manuscripts and pamphlets, posters, photographs, motion pictures, and videotapes, sound recordings, and computer databases in various forms.

Notes

2.1 Sources of Information

Sources of information can be broadly categorised into documentary and non-documentary sources. Among the non-documentary sources of information we have institutional and human sources of information. Among institutional sources of information we may consider various institutions, for example: in India we may cite National Social Science Documentation Centre (NASSDOC) of Indian Council of Social Science Research, New Delhi; Indian Council of Historical Research, New Delhi; Planning Commission Library, New Delhi; National Council of Applied Economic Research, New Delhi; National Archives of India, New Delhi; Rajasthan State Archives, Bikaner, etc. The human sources of information play an important role in information dissemination.

Traditionally lists of experts in various disciplines have been created specially at local level in the institutions. In the recent past in India there have been a few attempts to create database of experts in different disciplines, for example: National Roaster of Social Scientists in India (at ICSSR), Database of Experts being developed by INFLIBNET Centre of University Grants Commission at Ahmedabad and a similar attempt to develop a database of experts by National Assessment and Accreditation Council (NAAC) at Bangalore.

Documentary sources have all categories of documents, including printed sources, for example: books, serials; audio-visual sources, for example: cassettes, slides, videotape, etc.; micro documents for example: microfiche microfilm, etc., magnetic media for example: floppy, tape, disk, etc., optical media for example: CD-ROM, VCD, DVD; and so on.

So far, we have studied how the various types of information surrounding us are produced. Next, let us look at the features of information according to distribution type.

- The Internet
- Newspapers
- Journals/magazines
- Books
- Encyclopedias
- Government publications

2.1.1 The Internet

- The Internet is a computer network. By inter-connecting computers around the world, the Internet has made it possible to share information with others. With the advent of commercial service providers in the 1990s, Internet use spread to general households, which in turn resulted in the explosive growth in the volume of available information.

2.1.2 Newspapers

- Newspapers provide coverage of the events of the day.
- Newspapers include local newspapers that are published locally in each prefecture or area (The Tokyo Shimbun, The Kanagawa Shimbun etc.), national newspapers that are sold nationwide (The Asahi Shimbun, The Yomiuri Shimbun etc.), as well as specialized newspapers that are field-specific (The Nihon Keizai Shimbun etc.).

Notes

- In addition to articles written by their own reporters, newspapers carry articles and photographs produced by other news agencies, as well as articles written by experts. In order to determine the reliability and possible bias of information released by newspapers as well as any other mass media, it is very important to know who generated the information.
- While newspapers provide electronic versions of their articles on their respective websites, not all the articles appearing in paper form reach such websites. In most cases, only a portion of the contents of the actual newspapers on any given day is selected to be posted on the web. Generally, access to past articles is provided as a fee-charging service.
- Meanwhile, libraries subscribe to various newspapers around the world. Past editions of newspapers are provided through various mediums including contracted databases, compact editions or microfilms, and CD-ROMs.

2.1.3 Journals/Magazines

Magazines are publications that are issued continually on a periodic basis.

Magazines include many articles and papers by different authors.



Notes

Magazines can be used to obtain the newest information by viewing the latest issues or reading only the articles that are relevant to topic by looking up what articles or papers have appeared in which issue.

Libraries carry not only the latest issues but also stock previous issues in the form of bound volumes of magazines.

Some magazines are offered in a format that is viewable on a computer and are referred to as electronic journals. Electronic journals can be accessed through the university's network.

Magazines can be roughly divided into popular magazines and academic periodicals.

2.1.4 Books

Books are works written on a certain theme.

Such themes vary widely, and genres range from documentary and technical books to novels and non-fiction books. Books are written by researchers or experts, and are published only after passing through the hands of editors or publishers. Therefore, books can be considered a source of information wherein assignments of responsibilities for the quality of that information are relatively clear.

When writing reports or studying for your class, start with your designated textbooks, or books introduced to you as reference books. Since textbooks and reference books are edited for the purpose of providing explanations of basic terms and concepts in a particular field, they enable readers to acquire systematically the knowledge necessary to proceed with their studies.

2.1.5 Encyclopedias

Dictionaries and encyclopedias provide commentaries regarding the definitions, historical background, scholastic history and current status of terms or concepts relating to various matters.



Did u know?

Encyclopedic entries are written by experts in their respective fields, and can be considered highly reliable pieces of information.

Notes

Encyclopedias can be roughly divided into two types: encyclopedias and subject-specific encyclopedias.

2.1.6 Government Publications

Official information generated by public organizations include congressional records of the Japanese Diet or those from overseas, laws, court records, administrative reports (white papers, surveys, annual reports etc.) and statistics. This information is released publicly in the form of documents (booklets).

Such official documents are increasingly being disclosed over the Internet, so it may be beneficial to begin your search for official documents with the Internet. However, not all official information is currently on the Internet.

Some information is only partially available, while the availability of others is limited to the newest versions.

Caution is required when using the Internet however, since in certain fields and circumstances, such as in the citation of Case Law, precedence is placed on information published in documents such as books and periodicals over information on the Web.

2.1.7 Libraries

Libraries provide access to every single type of information we've covered.

At libraries, you can use materials such as books and magazines or search for information through specialized databases or on the Internet. University libraries are centers of information gathering.

The most important feature of information handled by libraries is that it is specially selected information. Among the abundance of information available around the world, libraries select and collect only those that are appropriate for its users.

The information provided by the library of your university was chosen by faculty members and librarians, and purchased as information that will assist you in your studies and research. Therefore, it is safe to say that the books, periodicals and specialized databases that you use at your library have all been evaluated twice: initially when they were published, and then again when they are purchased by the library. This means that everything in libraries is a source of high quality information selected by librarians.



Task

Write short note on Encyclopedias.

2.2 The Modern Library

Modern libraries, in addition to providing patrons with access to books and other materials, often publish lists of accessions and may maintain a readers' advisory service. Interlibrary loan services, lecture series, public book reviews, and the maintenance of special juvenile collections are other important recent developments. Three systems of book classification are widely used to facilitate access to library collections: the Dewey decimal system of Melvil Dewey, the system of Charles Ammi

Notes

Cutter, and the Library of Congress system. Since, the 1930s public library systems have had several technological tools at their disposal, including micro photographic techniques for copying, computer data banks enabling the storage of far more information and the search of indexes and catalogues far more quickly than ever before, and computer networks that provide instant access to materials in libraries throughout the world and to the Internet and its increasingly rich resources.

Major university libraries in the United States must work to meet an enormous demand for research materials and spend nearly \$5 million a year for books and related supplies such as binding materials. Preservation of pulp-based paper, which becomes brittle after a few decades, has become a major drain on library resources; many libraries will no longer acquire books that are not printed on acid-free paper. Such libraries typically have private endowments as well as receive federal and state support. Other libraries throughout the world operate on far smaller budgets, frequently with severe financial handicaps.

The architectural design of modern public libraries in the United States has placed the highest priority on functionalism. Outstanding examples of library construction include the central housing for collections in New York City (1911), Los Angeles (1926; major renovation 1993), Baltimore (1932), and San Francisco (1996) and university buildings at Columbia (1896; no longer a library) and Harvard (1915). Modern buildings tend toward modular construction and smaller, separate housing for special collections.

Self Assessment

Fill in the blanks:

1. Three systems of book classification are widely used to facilitate access to library collections: the Dewey decimal system of Melvil Dewey, and the system.
2. Library is a collection of
3. NASSDOC is an example of source of information.
4. Encyclopedia roughly divided into parts.

2.3 Evolution of Library

The earliest known library was a collection of clay tablets in Babylonia in the 21st century B.C. Ancient Egyptian temple libraries are known through the Greek writers. Diodorus Siculus describes the library of Ramses III, c.1200 B.C. The extensively catalogued library of Assurbanipal (*d. 626?* B.C.) in Nineveh was the most noted before that at Alexandria. The temple at Jerusalem contained a sacred library.



Did u know? The first public library in Greece was established in 330 B.C., in order to preserve accurate examples of the work of the great dramatists.

The most famous libraries of antiquity were those of Alexandria, founded by Ptolemy I, which contained some 700,000 Greek scrolls. The library at Pergamum, founded or expanded by Eumenes II, rivaled those at Alexandria. The first Roman libraries were brought from Greece, Asia Minor, and Syria as a result of conquests in the 1st and 2nd century B.C. Caius Asinius Pollio established the first public library in Rome, but the great public libraries of the Roman Empire were the Octavian and the Palatine and the more important Ulpian library, founded during the reign of Trajan. In addition to these public collections, there were many fine private libraries by the time the Roman Republic was ended in 27 B.C. Of these there remain only fragments of one at Herculaneum.

Notes

The early Christian libraries were in monasteries; the Benedictines amassed a fine collection at Monte Cassino. The Romans had brought book collections to the British Isles, but important early monastic libraries were founded in York, Wear mouth, Canterbury, and elsewhere in England and Ireland by Anglo-Saxon monks. Some of the finest manuscript illumination was produced in these libraries. On the Continent, St. Columban and other missionaries founded monastic libraries in the 6th century. Most of the ancient Greek and Latin texts that have survived until modern times were preserved in medieval European monastery libraries.

The Arabs in the 9th to 15th century collected and preserved many libraries, and the Jews and the Byzantines also developed fine libraries during the medieval period. In the 14th and 15th century Charles V of France, Lorenzo de' Medici, and Frederick, duke of Urbino, all formed fine libraries; part of the Urbino library is now in the Vatican Library. In the 15th century the Vatican Library, the oldest public library in Europe, was formed. In 1475, Platina, as its first librarian, made a catalogue that included 2,527 volumes. In 1257, the Sorbonne library at Paris was founded, and in 1525, the erection of the Laurentian Library in Florence, designed by Michelangelo, was begun. Many of the great university libraries were opened in the 14th century. In the United States a circulating library, the Library Company of Philadelphia, was chartered in 1732 on the initiative of Benjamin Franklin. A public library had, however, been opened in Boston as early as 1653. Other early subscription libraries included the Boston Athenaeum, the New York Society Library, and the Charleston (S.C.) Library Society. In 1833 the first tax-supported library in the country opened at Peterborough, N.H. The American Library Association was formed in 1876, and this organization spurred improvements in library methods and in the training of librarians.

Libraries in the United States and Great Britain benefited greatly from the philanthropy of Andrew Carnegie, who gave more than \$65 million for public library buildings in the United States alone and strengthened local interest by making the grants contingent upon public support. Among the innovations of the late 19th century were free public accesses to books and branch libraries or deposit stations for books in many parts of cities; in the early 20th century? travelling libraries, or "bookmobiles," began to take books to readers in rural or outlying areas.

Self Assessment

Multiple Choice Questions:

5. The first public library in Greece was established in:

(a) 1200 B.C.	(b) 330 B.C.
(c) 410 A.D.	(d) 1500 A.D.
6. The libraries of which country was benefited greatly from the philanthropy of Andrew Carnegie:

(a) United States and Great Britain	(b) Greek
(c) Paris	(d) Moscow.

2.4 Notable Libraries

Among the chief modern public and university libraries are the Bibliotheque nationale and the Mazarine, Paris; the British Museum, London; the Bodleian Library, Oxford; the Vatican Library, Rome; the Ambrosian Library, Milan; the Laurentian Library, Florence; the Russian State Library, Moscow; the Huntington Library, San Marino, Calif. Library of Congress, Washington, D.C.; the New York Public Library; the libraries of Chicago, Columbia, Harvard, Princeton, Yale, and other major American universities; and the Newbery and John Crerar libraries in Chicago.

Notes

There are several sorts of libraries in the United States and elsewhere that exist apart from the public and university systems. Three major categories of these are private libraries, usually housing special collections, e.g., the Pierpont Morgan Library in New York City of rare books in the humanities and the Folger Shakespeare Library in Washington, D.C. presidential libraries, which contain the papers of past presidents not held in the Library of Congress, e.g., the Jimmy Carter Library, Atlanta, Ga., the Dwight D. Eisenhower Library, Abilene, Kans., the Gerald R. Ford Library, Ann Arbor, Mich., the Rutherford B. Hayes Library, Fremont, Ohio, the Herbert Hoover Library, West Branch, Iowa, the Lyndon Baines Johnson Library at the Univ. of Texas, Austin, the John Fitzgerald Kennedy Library, Boston, the Franklin D. Roosevelt Library, Hyde Park, N.Y., and the Harry S. Truman Library, Independence, Mo.; and industrial libraries formed by many corporations to house research works relevant to their business.



Task Visit the most reputed library of your state and write a report about it.

Self Assessment

State whether the following statements are true or false:

7. A modern library apart from books also keeps other materials such as motion pictures.
8. Darwin system of books classification is used by some libraries.
9. Modern library buildings tend to be more and more large and spacious.

2.5 Summary

- Modern libraries, in addition to providing patrons with access to books and other materials, often publish lists of acquisitions and may maintain a readers' advisory service. Interlibrary loan services, lecture series, public book reviews, and the maintenance of special juvenile collections are other important recent developments.
- Major university libraries in the United States must work to meet an enormous demand for research materials and spend nearly \$5 million a year for books and related supplies such as binding materials.
- The earliest known library was a collection of clay tablets in Babylonia in the 21st century B.C.
- The first public library in Greece was established in 330 B.C., in order to preserve accurate examples of the work of the great dramatists.
- Libraries in the United States and Great Britain benefited greatly from the philanthropy of Andrew Carnegie, who gave more than \$65 million for public library buildings in the United States alone and strengthened local interest by making the grants contingent upon public support.
- Within information science, attention has been given in recent years to human-computer interaction, groupware, the semantic web, value sensitive design, iterative design processes and to the ways people generate, use and find information. Today this field is called the Field of Information, and there are a growing number of Schools and Colleges of Information. Information science should not be confused with information theory, the study of a particular mathematical concept of information, or with library science, a field related to libraries which use some of the principles of information science.

2.6 Keywords

Notes

- Library* : Collection of books and written materials
Philanthropy : Kind and good deeds

2.7 Review Questions

1. Explain sources of information in detail.
2. Define modern library.
3. Write short note on evolution of library.
4. What do you mean by notable libraries.

Answers: Self Assessment

1. The system of C.A. Cutter, the library of Congress
2. books or other written or printed materials
3. Non-documentary
4. two
5. (b)
6. (a)
7. True
8. False
9. False

2.8 Further Readings



Books

CHENEY (F N) and WILLIAMS (W J). *Fundamental reference sources*. Ed. 3. 2000. ALA, Chicago.

CRAWFORD (John). *Evaluation of library and information services 2000*. ASLIB, London.



Online links

http://en.wikipedia.org/wiki/Library#Early_history
<http://hj.se/bibl/en/search-help/searching-for-information/>

Notes

Unit 3: Reference Services

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- Objectives
- Introduction
 - 3.1 Definition of Reference Services
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 - 3.6 Summary
 - 3.7 Keywords
 - 3.8 Review Questions
 - 3.9 Further Readings

Objectives

After studying this unit, you will be able to:

- Know about reference services
- Define kinds and nature of reference service
- Explain library reference desk.

Introduction

The word “reference” in this context refers to the task of providing assistance to library users in finding information, answering questions, and otherwise fulfilling users’ information needs. Reference work often but not always involves using reference works, such as dictionaries, encyclopedias, etc. This form of reference work expands reference services from the physical reference desk to a “virtual” reference desk where the patron could be writing from home, work or a variety of other locations.

3.1 Definition of Reference Services

Notes

“Reference Services” is defined to include the professional advice and assistance provided by the library staff, from material in the library’s collections or elsewhere, to assist individuals using the library’s reading rooms or making enquiries by mail, telephone or on-line to meet their information needs.

It also includes the range of information products, such as guides, directories and databases, and the equipment and facilities that are provided to enable research to be carried out to meet information needs. The delivery of materials from the collections to users in the reading rooms is also included in the scope of Reference Services.

**Notes**

Ultimately, reference service is not simply someone asking a question and someone else providing an answer. It is about someone with an information problem working with someone with information skills.

The Components of Reference Service

Reference librarian performs four functions:

- (a) *Instructing the reader in the ways of the library:* In its original sense, the role of instruction was intended to help members of the newly educated public learn how a library is organized so that they could take advantage of the knowledge contained in its books. Today’s libraries are much more containing more resources in more formats serving more people in more locations. Instruction, on both a formal and informal basis, has become an even greater part of a reference librarian’s responsibilities.
- (b) *Assisting the reader with his queries:* The second function of the reference librarian, answering user questions, is the one that is most often associated with reference service. To many, the standard image of the reference librarian is of a kindly and knowledgeable woman sitting at a desk in a room full of reference books and patrons approaching with questions great and small. In this function of the reference librarian that has received the most publicity in recent years.
- (c) *Aiding the reader in the selection of good works:* The third function of a reference librarian - aiding readers in the selection of good works - is the link between the librarian’s knowledge of the collections and the needs of the users. Originally, the word “good” referred to morally and spiritually uplifting books. Today, we interpret good to mean appropriate, as in those sources that are most relevant to a user’s needs. In some libraries, this service is most commonly known as “Reader’s Advisory”. However, the practice of aiding the reader in the selection of good works goes far beyond recommending novels and mysteries. With the growth in the number of electronic resources and the advent of the Internet, the reference librarian recommends sources and search strategies in almost every interaction with a library patron.
- (d) *Promoting the library within the community:* The final activity of the librarian was to publicize the library within the community. The library as we all know is only one instrument of the greater community and that its success depended on recognition by the parent community. By having librarians available to the public, it is believed that the public would better understand, appreciate, and support the work of those librarians.

Notes**3.1.1 Present Scenario**

Although over a century has passed, these four functions remain the core of reference service today. First, libraries instruction, on both a formal and informal basis, is still a greater part of a reference librarian's responsibilities.

Secondly, many of the services which the librarian was envisioned to provide could have been accomplished in other ways. Readers could have answered their own queries by consulting encyclopedias and other reference works; readers could have done their own advisory by searching the library catalogue; and readers could have learned how a library operates by trial and error. The fact that the librarian was personally engaged in each of these functions - and personalized them for each reader - was the key to the success of reference service. It is precisely this personalization of service that made the fourth function - promoting the library within the community - work so well. Without personal service, reference work would never have become a standard function of libraries.

The evolution of libraries has been constantly moving in one direction from internally focused institutions to externally focused institutions. Ancient libraries were centered on the documents that they contained, preserving them for the few within their society who could use them.

**Did u know?**

Organizational systems were designed to help the librarian find those documents, with no need for outsiders to comprehend their design. Modern libraries focus on the users, providing information and services that benefit each individual on a personal basis.

By any measure, including circulation, exit count, acquisitions, and funding levels, libraries are more popular today than at any time throughout history.

By providing personal service, reference librarians have had a direct impact in making libraries succeed.

**Task**

Discuss the present scenario of reference services.

3.2 Evolving Tools and Changing Communities

The functions of the Reference Librarian have remained constant. The difference that exists now is primarily in the tools that are used. In the past, the librarian used books, magazines, and newspapers, with only the library catalogue. Today reference librarians have incorporated a host of new tools like the keyboard, telephone, photocopier, microfilm, fax machine, television, computer, printer, modem, disks, CD-ROMs, telecommunications, and the Internet to help their patrons.

Today's communities are much more diverse ethnically, racially, linguistically, and economically than those of a century ago. As a community changes, the library must redesign itself to meet the needs of the new demographics. The Reference Librarian needs to establish personal relations with each new generation of community members, even when that generation speaks different languages. He also needs to serve the community wherever it is located, whether in the library, at home, at work, or traveling around the globe. This is where technologies expand the reach of the library to the community - and the community's demands upon the library.

**Notes**

Electronic information technology, like clay tablets or papyrus or vellum or paper or microfilm, is a medium and a tool that enables the organization and dissemination of information.

Notes

Unlike these static media, however, today's and tomorrow's information technologies allow for something approaching simultaneity in the interconnected processes of obtaining access, selecting, and organizing information. Reference Librarians also engage in the process of interpreting information, something that no information technology demands of users and one that they can, if they wish, ignore.

Technology is simply a tool. It is a conduit for the delivery of information from provider to users. Although the physics, engineering, and programming that lie beneath the surface of information technologies and systems grows ever more complex and sophisticated, information technology tools grow more manageable and malleable for those who know little about the subsurface schemes that enable that malleability. Reference Librarians have a role in influencing the design and functionality of information systems. They are one of the natural designers of new tools for information organization, access, retrieval, and distribution: these are the functions they do best. They need to build on their successes and strengthen their roles in this arena. Signs of success to date include developments such as Serials Solutions, electronic reference software, that is, more software designed to meet the needs of the service and library users. Just as libraries have done with OPAC Web interfaces, they need to identify necessary tools and adapt them to their needs, taking the lead rather than being led by technologies that don't serve those needs.

**Did u know?**

If the point of reference service is to help people find the information resources they want or need, then the technological environment should help to dictate what a service should look like.

**Task**

Write short notes on the past evolving tools and present evolving tools in library.

3.3 The Future of Reference Service

Does reference service have a future? Of course it does and its future is one with the future of the library and the future of each depends upon the success of the other. The community has a voracious appetite for information and information in the aggregate is inherently confusing because it does not organize itself for ease of use. So, no matter how well any library service is organized, the community will continue to need libraries and reference service to make the universe of information relevant. Reference librarians will continue to select, organize, provide access, and interpret relevant information as their role will continue to evolve, some features will remain constant, while others will change.

The Constants

- (a) The library will be measured by its service to the community.

Notes

- (b) Reference Librarians will perform the four functions of selecting, organizing, provision of access, and interpretation of relevant information
- (c) Personal service will be valued.

The Changes

- (a) Newer and better tools will be developed.
- (b) The demand for instruction will rise.
- (c) The demand for factual information will decrease.
- (d) The community will become more diverse.
- (e) The librarians will become more diverse.
- (f) Librarians will become information generators rather than merely information conservators.

Over the next few years, we are likely to see an information environment dominated by an Internet being used in much the ways we know today: for communication via electronic mail, chat, and instant messaging; for delivery of information services such as the library catalog, databases, and native Web resources; with facilities such as search engines and directories as finding aids. Bandwidth, processing speed, and storage capacities will continue to rise and cheapen, technological access and use will continue to spread, and more information, of quality high and low, will be more available to more people in more ways as time goes on.

What makes sense here is that libraries will need to examine these possibilities, and others that might arise, and select from among them those that make the most sense for the communities they serve, the kinds of information needs they have, and the situations in which they find themselves, and the appropriate mix of resources (human, information, financial) to be allocated among them. If these services are made professional, attractive, effective, evaluated, marketed, integrated, institutionalized, value-based, and appropriate definitely the services would thrive.

Reference librarians will indeed make their own future. The reference librarian of the future will not be symbolized as the woman sitting behind the desk, but as someone who is readily accessible to everyone in the community and who provides individual information services using whatever technologies become available. By concentrating on the needs of their users, providing personal service, and providing leadership in the information society, the reference librarian will continue to perform an essential function for the community.

Reference service will remain place-based, but will no longer be place-bound. The place at which it is based won't be a reference desk staffed by a reference librarian. Instead it will be an information consultation room in which a librarian can work face-to-face with a user or from which a librarian can work screen-to-screen with a remote user. The place will also be a library's Web site, a "place" that transcends a building's fixity. It will grow organically to save the time of the researcher and to assure that every bit of information has its user and every user finds his/her needed information.

Reference Librarians will be faced with a much more difficult task than the profit sector because library services are only indirectly tied to revenues—the public decision makers who have to be convinced of the value of library services are generally not the consumers of the library's services. The separation of funding and customers will still make it very difficult for Reference librarians to transform their role and their services in academic and public libraries. It also explains why libraries historically have not placed a strong focus on obtaining direct customer feedback on quality of services.

To change the professional culture and to allow libraries to truly play a leadership role in designing future reference services, each organization has primary responsibilities that must be fulfilled:

- (a) Libraries must invest substantially more fiscal resources in staff training and develop effective and continuous feedback methods from all aspects of the system that influence reference service quality.
- (b) In view of the rapidly changing information technology environment of the 21st century, libraries must not continue to assume that the task of professional education rests primarily with library schools. Schools of Library and Information Science programs, which provide masters degrees in librarianship, must require core courses that include significant portions of the curriculum devoted to developing marketing values and skills in students. Marketing links the organization with its environment and involves identifying, gathering, analyzing and interpreting information for decision making.
- (c) Nigerian Library Association must provide models that develop effective assessment of library services that can be easily and effectively administered by practicing librarians at a reasonable cost. Evaluation of programs and services should be established as a primary professional value and should receive significant funding from the Association.

Notes

The future of reference services in libraries as it is presently rendered manually is not guaranteed. With the advent of the Web there is a growing drop in the quantity of reference questions in most libraries where there is Internet Connectivity. Many reference questions have become more complex and answering such questions requires more focus on instruction in search strategies and other elements related to the basic information competencies of identifying the type of information needed, and finding, evaluating, and communicating the information successfully.

Reference librarians have done roving of reference rooms, glancing at the contents of computer screens and offering users assistance when it seems appropriate. They now need to rove electronically. This means that information systems need features that monitor user behavior and can offer assistance online. Surely this can be done in such a way that user privacy and identity can be protected.

Libraries are already moving toward a knowledge counseling role, focused on advising users in locating and effectively utilizing resources primarily related to recorded knowledge. This trend is already changing the nature of reference services from answering the quick, routine, less than five-minute question to a more extended counseling or coaching interaction. Because these transactions require more time, libraries must be able to focus their human mediated services to users in those areas where they can really make a significant difference. In the future, they must become much more customer focused in our actions and service strategies than they are at present.

Education and training for librarians must be transformed in partnership with libraries, the Nigerian Library Association and our professional education programs. Marketing and program evaluation skills, including thorough knowledge of quality management principles and practices, will be as important as mastering the technology in our endeavor to retain human mediated assistance to users as an important library service.



Task Does reference service has future? Justify your views.

3.4 Kinds and Nature of Reference Service

Kinds of Reference Services

There are two kinds of services

1. Ready reference service
2. Long range reference service

Notes

3.4.1 Ready Reference Service

A process in which readers receive their information through personal contact of the reference librarian is called ready reference service. There are many types of queries. Reference department always makes efforts to remove the difficulties of readers to fulfil their requirements.

All such informations which are provided to readers immediately are called ready reference service. Dr. S.R. Ranganthan has defined it as "Ready reference service is reference service finished or replied in very short time, a minute if possible".

Some examples of ready reference services are:



Example:

1. What is the birth date of Gandhiji?
2. Literacy percentage of M.P.
3. Who is president of America?

All such answers can be given in very short span of time. The reference librarian either answers the query immediately or refers the names of reference resources.

Some of the reference resources are:

1. Directories
2. Dictionaries
3. Encyclopedias
4. Biographies
5. Year books/Annuals
6. Atlas

Need of ready reference service

Reference service is an essential service as sometimes reader needs some informations which are not known to them and are not related to their concerned books. Sometimes readers are not aware of reference books and references services/sources, which are also arranged differently and not known properly to the readers. So there is need of reference service which can assist the readers.

3.4.2 Long Range Reference Service

Long range reference service takes long time in providing reference service. This service is given to special readers requiring special informations. It takes normally long time, *i.e.* more than 5 minutes and takes the help of reference sources.

Long range reference service is not practised in every library.

Need of long range reference service

There are many reasons for the requirement of long range reference service, some of them are:

- (i) Explosion of knowledge: There is wide variety of literature and study of the whole is very difficult. Readers are always eager to know about the literature published in the country or in the world. Reference librarian is well versed and trained in searching the literature and can help easily to readers to get the documents.
- (ii) Saving the time of readers and experts: Reference librarian helps the readers to search the literature and saves a lot of time of reader.

- (iii) Information source of other libraries: A single library cannot procure all types of information sources and literature because of wide variety available, therefore there is need to use the resources of other libraries to fulfil the need of readers which is possible through resource sharing.
- (iv) Complexity of information sources: There are different types of information sources in the library which are full of complexities, a reference librarian provides all informations as per the requirements of readers.

Notes

Self Assessment

Fill in the blanks:

1. The two kinds of reference services based on time are and reference services.
2. The word reference in the context of library means providing to library uses.
3. Reference work is a process that includes and
4. includes range of information products such as guides, directories and databases and the equipment and facilities that are provided to enable research to be carried out to meet information needs.
5. Instructing the readers in the way of the library is a component of

3.5 Library Reference Desk

The reference desk or information desk of a library is a public service counter where professional librarians provide library users with direction to library materials, advice on library collections and services, and expertise on multiple kinds of information from multiple sources.

Explanation

Librarians are experts in the contents and arrangement of their collections, as well as how information is organized outside the library. Library users are encouraged not to be shy about asking a reference librarian for help. Even though most librarians stay busy when not serving a patron, their primary duty when they are at the desk is to assist library users.

3.5.1 Purpose and Usage

Library users can consult the staff at the reference desk for help in finding information. Using a structured reference interview, the librarian works with the library user to clarify their needs and determine what information sources will fill them.



Did u know? To borrow a medical analogy, reference librarians diagnose and treat information deficiencies.

The ultimate help provided may consist of reading material in the form of a book or journal article, instruction in the use of specific searchable information resources such as the library's online catalogue or subscription bibliographic/full text databases, or simply factual information drawn from the library's print or online reference collection. Typically, a reference desk can be consulted either in person, by telephone, through e-mail or online chat, although, a library user may be asked to come to the library in person for help with more involved research questions. A staffed and knowledgeable reference desk is an essential part of a library.

Notes	The services that are provided at a reference desk may vary depending on the type of library, its purpose, its resources, and its staff.
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3.5.2 Resources

Resources that are often kept at a library reference desk may include:

- A small collection of reference books (called ready reference) that are most often used, so that the librarians can reach them quickly, especially when they are on the phone, and so that the books will be returned in time for someone else to use later the same day. The library's full reference collection is usually nearby as well.
- Newspaper clipping files and other rare or restricted items that must be returned to the reference desk.
- Index cards with the answers to frequently asked questions, and/or drawers with folders of pamphlets and photocopies of pages that, from previous experience, were difficult to find. These enable librarians to find such information quickly without leaving the desk—even faster than they could look it up in a reference book or using the Internet.
- Books and other items that are being held for library users who asked the librarian by phone to set them aside for them to pick up later the same day, or within the next few days.
- Books from the circulating collection that have been set aside for students working on a special assignment, and are temporarily designated to be used only within the library until the project is due.
- Printed lists of items in the library that are not in the catalogue, such as newspapers, school year books, old telephone directories, college course catalogues, and local history sources.

Self Assessment

Multiple Choice Question:

6. The reference desk or information desk is a
 - (a) Counter
 - (b) Service counter
 - (c) Public Service counter
 - (d) Single counter.
7. Library users can consult the staff at the reference desk for help in finding
 - (a) Information
 - (b) Book
 - (c) Materials
 - (d) Document.

Services

Services that are often available at a library reference desk include:

- A sign up sheet for reserving computers with Internet access, or word processing software.
- The ability to place the book 'on hold', which prevents the person who has borrowed it from renewing it. The person who placed the 'hold' is notified when the book has been returned. (Some libraries provide this service at the circulation desk.)
- The ability to request Interlibrary loan of books and other material from other branch libraries in the same library system, or from a cooperating library anywhere in the world. (Some libraries provide this service at the circulation desk.)
- The opportunity to recommend that the library purchase something for its collection that it does not have, which may be needed or of interest to other library users.

The librarian who staffs the reference desk can usually do the following by virtue of her professional training and experience:

Notes

- The librarian can look up a brief, factual answer to a specific question.
- The librarian can use the catalogue to find out whether the library owns an item with a particular title or author, or that contains a short story, chapter, song, or poem with a particular title, or to compile a list of books by a particular author or on a particular subject.
- The librarian can briefly teach the user how to use the catalogue and how to use its advanced features, or recommend the proper subject words or terms that are used in the catalogue for the topic the user has in mind.
- The librarian can often take the library user directly to the shelves with books on a certain topic without using the catalogue.
- The librarian is familiar with the contents of hundreds of reference books, and can recommend books that might contain the answer to a particular question.
- The librarian can teach the library user to use online databases such as magazine and newspaper articles, and recommend words and search strategies for the topic the user has in mind.
- The librarian can recommend reliable web sites, give advice on searching the Internet for information, and evaluate the reliability of the information on web sites.
- If the library does not have information on a given topic, or if the library user wants more information, the librarian can refer the library user to another library or to an organization that can be contacted by phone or e-mail.

Self Assessment

State whether the following statements are true or false:

8. A reference librarian diagnoses and treats information deficiencies.
9. A reference librarian should keep handy index cards related to frequently asked questions.
10. There are two kinds of reference services.
11. The library reference desk of a library is not a public service.
12. A reference librarian can also play a role in developing library collections.

Electronic reference services

With the development of the Web, digital reference services are beginning to take over some of the roles of the traditional reference desk in a library. There is disagreement over whether or not this development is desirable or inevitable.

Staff qualifications

A reference librarian provides assistance to users of a library who need help locating resources and information. This job requires excellent customer service skills as well as familiarity with research and the ability to answer challenging questions from patrons who may be searching for obscure and unusual things. Reference librarians must hold a master of library science (MLS) degree and may have additional certifications and qualifications, depending on where they work.

The hub of the reference librarian's workplace is the reference desk, an area that members of the public can approach for information and assistance. The reference desk has resources like computers and connections to the catalogues along with references the staff uses frequently, like maps of the

Notes	<p>area, dictionaries, and so forth. People can ask the librarian for help finding information, or may have orientation of the library to learn how to use the resources , and other assistance.</p> <p>Many reference librarians teach classes to members of the public, showing them how to use library resources and providing them with some basic research tips and tricks. On college campuses, the librarian may be very active during orientation week, working with students to help them get familiar with the library. Librarians also provide assistance with using technical resources like microfilm machines, copiers, and so forth and may troubleshoot Internet access in the library and other problems patrons experience.</p> <p>A reference librarian can also play a role in developing library collections. Librarians need to know the stock of the library well so they can help people more effectively, and they usually identify weak points and holes in the collection as part of their work. They can make recommendations for new acquisitions and will work with the collections manager on determining what kinds of resources would be most useful for library patrons. These can include books, movies, tapes, music, and other acquisitions.</p> <p>Working as a reference librarian requires excellent communications skills. Patrons may have vague and unfocused requests that the reference librarian must be able to accurately interpret. Librarians usually want to show patrons how to help themselves in addition to providing information, so patrons will feel more confident in the library, and this requires learning about different communication styles to effectively connect with patrons. One useful skill for people in this position is the “reference interview,” where the librarian asks a series of questions to find out what a patron needs and selects the most appropriate and useful resources.</p> <p>In the United States, those who staff library reference desks are usually required to have an accredited Masters degree in Library Science from the American Library Association. However, if there is a lack of qualified applicants, particularly in rural areas of the country, a person with an Associate Degree, a Certificate in Library Technology, or a Bachelors Degree in Library Science may be performing these duties. In many academic libraries, student assistants are used as the primary contact, sometimes at an “information desk.”</p>
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Task

Study the working of reference desk in the library of your university or any research institution.

3.6 Summary

- A process in which readers receive their information through personal contact of the reference librarian is called ready reference service. There are many types of queries.
- Reference service is an essential service as sometimes reader needs some informations which are not known to them and are not related to their concerned books. Sometimes readers are not aware of reference books and references services/sources, which are also arranged differently and not known properly to the readers.
- The reference desk or information desk of a library is a public service counter where professional librarians provide library users with direction to library materials, advice on library collections and services, and expertise on multiple kinds of information from multiple sources.
- The librarian is familiar with the contents of hundreds of reference books, and can recommend books that might contain the answer to a particular question.

- A reference librarian provides assistance to users of a library who need help locating resources and information.
- Librarians connect people with information and ideas by organizing and facilitating the retrieval of information in all formats. Dictionaries have long tended to define the word "librarian" as the person in charge of a library. Library users tend to associate the word with anyone who works in a library. Professional associations and those people who work in libraries tend to reserve the appellation for one who holds a master's degree in library and information studies.

3.7 Keywords

<i>Reference</i>	: suggestion
<i>Colleague</i>	: associate
<i>Archives</i>	: records
<i>Inappropriate</i>	: unsuitable
<i>Consultation</i>	: discussion
<i>Encyclopedia</i>	: information bank

3.8 Review Questions

1. What is reference services?
2. Explain components of reference services.
3. Define evolving tools and changing communities.
4. Explain the different kinds of reference services.
5. Discuss in detail library reference desk.
6. Explain some of the resources that are often kept at library reference desk.
7. Write short note on staff qualifications.

Answers: Self Assessment

- | | | |
|-----------------------|-----------------------|-------------------------|
| 1. Ready, Long range | 2. Assistance | 3. Mediation, Follow-up |
| 4. Reference services | 5. Reference services | 6. (c) |
| 7. (a) | 8. True | 9. True |
| 10. True | 11. False | 12. True |

Notes

3.9 Further Readings



Books

FARMER (LSJ), Ed. *The human side of reference and information services in academic libraries: adding value in the digital world*. 2007. Chandos Publishing, Oxford.

FOSKETT (DJ). *Information service in libraries*. Ed. 2. 1967. Archon Book Hamden, Connecticut.



Online links

http://www.facetpublishing.co.uk/downloads/file/sample_chapters/

Unit 4: Library Orientation

CONTENTS

- Objectives
- Introduction
 - 4.1 User Education Programme: Definition and Need
 - 4.2 Basics of Library Orientation
 - 4.2.1 Aims of Library Orientation
 - 4.2.2 The Process of Library Orientation
 - 4.3 Summary
 - 4.4 Keywords
 - 4.5 Review Questions
 - 4.6 Further Readings

Objectives

After studying this unit, you will be able to:

- Explain user education programme
- Know the definition of library orientation
- Know about the aims of library orientation
- Understand the process of library orientation.

Introduction

According to the **Collins Concise Dictionary**, the term “orient” means “to adjust or align (oneself or something else) according to surroundings or circumstances”. The term “orientation” means “the adjustment or alignment of oneself or one’s ideas to surroundings or circumstances. Also, orientation course: a course, lecture, etc., introducing a new situation or environment”.

4.1 User Education Programme: Definition and Need

User education is concerned with educating the users in the use of the library with a view to enable them to derive maximum benefit from the materials kept in library.

The basic aim is to familiarise the user with all those techniques and tools which lead them to the treasure of knowledge hidden in library holdings including non-book materials. In short it involves helping the user to find his/her information by him/herself.

Notes	<p>Reference services presupposes personalised service and helps the user when he/she needs but, user education presupposes personalised training and orientation of the user with the presumption that he needs it. For that, user is trained in the use of library so that he/she could search the document of their interest without anybody's help.</p> <p>According to Fjällbrant and Malley—"User education is concerned with the whole information and communication process and one part of this involves the total interaction of the user with the library. This should be a continuous process starting with school and public libraries and with possibility of extension into academic and specialized libraries".</p>
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Definition user Education Programme

Fleming (1990) defines user education "as various programmes of instruction, education and exploration provided by libraries to users to enable them to make more effective, efficient and independent use of information sources and services to which these libraries provide access".

The Need For User Education

User education is essential. It helps publicize library services. It improves the image of the library. Above all, user education and training are the best ways to implement Ranganathan's five laws of library science. User education and training are often fee-based, because developing the infrastructure for the network environment is very costly. The world still appears to be suffering from an exponential increase in all kinds of information -bearing material. Even if much of this is of little value, it still has to be shifted to find the required information. Several new methods of information transfer, such as mechanized information retrieval systems, are being developed, giving rise to new aspects of user education. Both educational and research topics are becoming increasingly multidisciplinary in nature, thereby drawing information from a wider range of sources. Not being able to find necessary information delays research or decisions. Lack of awareness of information leads to duplication of effort. Various estimate of the extent and cost of this have been made.

Planning of user education is very important to provide better and more effective information service to the user, planning of user education programme requires four things (i) orientation (ii) bibliographic instruction (iii) course in literature search and (iv) seminar.

According to Fjällbrant and Malley, user education consists of two elements, namely: **orientation** and **instruction**. These two elements are not mutually exclusive and can be combined.

Orientation is "primarily concerned with ways of introducing the user to the general techniques of library usage and services available, and the organization, layout and facilities of a particular library".

Instruction is "concerned with learning to make use of the information resources within specific subject disciplines".

In the IFLA/UNESCO Guidelines for the development of public library services, public libraries are encouraged to assist their library users in developing skills to enable them to make the most effective use of the library's resources and services.

User education programmes should be developed in order to assist library users in developing the necessary skills to access the new information and communication technologies available in libraries. Library orientation or user orientation programmes form part of such a user education programme.

Self Assessment**Notes**

Fill in the blanks:

1. The user education consists of two elements namely: and
2. Orientation means alignment of oneself to or
3. People entering in library for the first time commonly feel and

4.2 Basics of Library Orientation

Library orientation or user orientation towards the library has to do with adjusting the new library user to the library.

4.2.1 Aims of Library Orientation

Important aims of library orientation are:

- to ensure that library users can make use of library resources and services, adequately and to their own satisfaction
- to help library users to feel at home in the library and trust the competency of the library staff
- to enable library users to become skilled at finding information and thus foster feelings of confidence and independence.

Library Orientation

Library orientation is of particular value to users who are coming to the library for the first time. People entering an unfamiliar environment, like a library, commonly experience disorientation and stress. Libraries intimidate people through their complexity, their huge volume of books and other library material, and their unfamiliar tools and equipment.

This strangeness is one of the reasons why we as library workers should try our best to make new library users feel comfortable and welcome at the library. Our attitude and behaviour should tell library users that they are welcome at the library and that we are interested in them and want to be of help.

It is very important that new library users should know where to go to find more information, if necessary. They must know that they can always rely on the library workers to do their best to meet the information needs of library users.



Did u know? Good library signage systems can make it easier for library staff who have to help users to find their way and gain access to the different collections and sections of the library.

Library Signage

A good library guidance system helps to give a library a friendly, welcoming atmosphere and promote its image as a well-organized, efficient place. The underlying principle of a good library signage system is that it introduces people to the plan and functions of the library, and helps them to create a mental map of where they are in the library in relation to where they want to go.

Notes	Library signage serves a multitude of functions. Signs: <ul style="list-style-type: none">• identify and locate the library• advertise specific events and programmes presented by the library• advertise available services and explain how to use them• Create an image and encourage library users to feel welcome. If your library has a good signage system, the new library user will feel much more comfortable. They will know where to ask for assistance.
--------------	---

Self Assessment

Multiple Choice Question:

4. The basic aim of user education is to familiarize the user with:
(a) all books of library (b) tools and techniques of library
(c) all members of staff (d) all of these.

4.2.2 The Process of Library Orientation

Library orientation can be done in different ways. Your choice of a method will depend on different variables, *e.g.*, Does the library have a computer? Does the library have enough personnel to do informal library orientation, or would formal orientation also be necessary? What target groups do you want to reach?

Informal library orientation

Informal library orientation takes place when library workers do library orientation (or “user orientation”-orientating them towards the library) continuously, on a one-to-one basis. When a new library user joins the library, the library worker explains to the new user how the library operates, *e.g.*, the hours that the library is open, the number of items a user can borrow from the library, what the rules are for using the library material, etc.

The library worker also takes the new library user on a guided tour through the library, showing him/her all the different sections in the library. As they go through the library, the library worker should explain to the library user how the material in the different sections is arranged. The library worker can also show the library user sections that might be of particular interest to that user, *e.g.*, books for newly literates, books on the user’s hobbies, where to find the Reference Section if needed, where to find the newspapers and magazines, places to sit down for a quiet read, study facilities, etc.

The library worker can also explain to the user how to find information in the library by either using the card catalogue (if available), or the computer. Show the user how each operates, if the user has time and is interested. It is very important that users know that they can return to you if they need more help finding information in the catalogue or on the computer, or if they have any other queries.

The different kinds of services offered by the library can also be promoted during this informal library orientation session. Tell library users about services that might be of interest to them and explain what they entail. Encourage them to ask questions, and respond to the best of your ability. Take the opportunity to market the library and all its services to new library users. They will tell

their friends about the library, and thus, motivate more people to come to the library and become library members.

Notes

After library orientation is completed, give new library users a bookmark or brochure or information pamphlet as support material. This will help them to remember the new information they received during the orientation session.



Did u know? It is very important that new library users feel positive towards the library and its staff-because if this is not the case after the first encounter, the library has probably lost a potential library user for good.

Formal library orientation

Formal library orientation is when groups of people are introduced to the library in an organized way.

Creating an orientation programme

Decide who your target groups will be School children, students, parents, interested adults, or others? Tailor your programme according to each group you want to reach. For small children, a story hour or puppet show can be included. For primary school children, a demonstration of how to use the simple reference works (for example, a dictionary and encyclopedia) could be included in the session, while students may be more interested in different study techniques, or ways of finding information on the Internet. The amount of information included in your orientation session will also differ from group to group.

Contact the different institutions you want to involve. Tell them about your programme and ask them if they would like to participate. Arrange a tentative date for a specific group to visit the library. When a group is due to visit the library, remind them of the visit at least one week in advance. Present your programme to the group when they visit. Encourage them to ask questions, to come back on their own, to browse through the library and to join and use the library.

Hints for planning your programme

See to it that the groups coming to visit are not too large. Make a point of determining the size of the group when an appointment is made for a group visit. Make your programme as stimulating and visually interesting as possible. Use aids, for example, let them use the computer to look for information on a specific author, subject, etc. if possible. Let them take an active part in the programme make it an experience they will remember. Give each one a bookmark or information pamphlet or brochure to help them remember the library and its services.

What kind of information can be included in a formal orientation programme?

The same kind of information may be given during the informal library orientation sessions. General information about the library, for example, hours of the library, services offered by the library (e.g., special requests, renewing books, reserving books, CIS. etc).

The arrangement of books in the different sections in the library, as well as the physical layout of the library. Something interesting about the library, its materials or services that will be of interest for the specific group you are working with.

Online library orientation

With the development of new technologies, library orientation is also possible via the Internet. Especially tertiary institutions like university libraries make use of this option.

Notes

The library worker and library orientation

What qualities does the library worker need to have to do library orientation?

Personal qualities like enthusiasm, the ability to communicate clearly and effectively, friendliness, patience and experience is very necessary in working with our public.



Did u know? We as library workers should always remember that we are there to provide a service to the public-they are the reason why we are working in the library. Although, we work with books, we serve people. And informed and satisfied library users are happy library users. Let us strive to build positive relations with our public, and to make our libraries play a part in creating a better tomorrow - for all! With library orientation, you have a chance to build this relationship-don't blow it. Go for it.



Task Study the library orientation process of a new batch of students in your university.

Self Assessment

State whether the following statements are true or false:

5. A good library signage system helps to give library a Frendly and welcoming atmosphere.
6. The two types of library orientation are formal and informal.

4.3 Summary

- Informal library orientation takes place when library workers do library orientation (or "user orientation"-orientating them towards the library) continuously, on a one-to-one basis.
- Library orientation is of particular value to users who are coming to the library for the first time.
- Library orientation makes library users aware of the library and the services it offers. Library orientation educates people regarding general use of the library, e.g., when the library is open, where specific items can be found, how to obtain the library material you need, etc. The purpose of library instruction is to enable library users to obtain the information they need, and circumvent possible problems.

4.4 Keywords

Orientation : Adjustment

Signage : Indication

4.5 Review Questions

1. Discuss user education programme.
2. Write the aims of library orientation.

- | | |
|--|--------------|
| 3. Define the term library orientation.
4. Define library signage.
5. Define informal library orientation.
6. What do you mean by online library orientation? | Notes |
|--|--------------|

Answers: Self Assessment

- | | |
|-----------------------------|--------------------------------|
| 1. Orientation, Instruction | 2. Surroundings, circumstances |
| 3. Disorientation, stress | 4. (b) |
| 5. True | 6. True |

4.6 Further Readings



Books

FOURIE (D) and DOWELL (D). *Libraries in the information age*. 2002. Libraries Unlimited, New York.

KATZ (William A). *Introduction to reference work: reference service and reference process*.



Online links

<http://www.academicjournals.org/ijlis/PDF/pdf2009/June/>
<https://www.ideals.illinois.edu/bitstream/handle/2142/8026/>

Notes

Unit 5: Reference Sources

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- Objectives
- Introduction
 - 5.1 Types of Reference Sources
 - 5.2 Service Procurement in Libraries
 - 5.3 Criteria for Evaluation of Reference
 - 5.4 Bibliographical Sources
 - 5.5 Summary
 - 5.6 Keywords
 - 5.7 Review Questions
 - 5.8 Further Readings

Objectives

After studying this unit, you will be able to:

- Define types of reference sources
- Explain criteria for evaluation of reference
- Know about bibliographical sources.

Introduction

Primary sources were either created during the time period being studied or were created at a later date by a participant in the events being studied (as in the case of memoirs). They reflect the individual viewpoint of a participant or observer. Primary sources enable the researcher to get as close as possible to what actually happened during an historical event or time period. A secondary source is a work that interprets or analyzes an historical event or phenomenon. It is generally at least one step removed from the event and is often-based on primary sources. Examples include scholarly or popular books and articles, reference books and textbooks.

5.1 Types of Reference Sources

Reference sources such as dictionaries, encyclopedias, almanacs, atlases, etc. are research tools that can help you with your paper or project. Reference sources provide answers to specific questions, such as brief facts, statistics, and technical instructions; provide background information, or direct

you to additional information sources. In most libraries, reference sources do not circulate and are located in a separate reference collection. This practice makes reference sources readily available and easily accessible.

Notes

Reference sources are designed to be consulted rather than read through. Their design is generally dependent on the type of information and treatment provided. Reference materials can be arranged alphabetically, topically, or chronologically. Many will contain cross listed information and more than one index. If it is not obvious how a reference source is organized, take a moment to look through the explanatory or how-to-use information, which is usually presented at the beginning of the book, or in HELP screens for online products.

There are thousands of reference sources available that cover practically every subject. Although the term reference “book” is frequently used, reference sources can be books, serials, online databases or the Internet. A large part of using reference sources well is choosing the right one.

Despite the wide variety available, reference sources can be categorized into a handful of groups. Think about the kind of information you need and how you will use it. If you are unsure which reference tool is best suited to your information need, a reference librarian will be able to assist you.

Quick guide for selecting the right type of reference source (Collins, 151):

For information about...	Choose...
Words	Dictionaries
General information/Overview of topic	Encyclopedias
Names and addresses of people, organizations, institutions, companies	Directories
Profiles of people	Biographical Dictionaries
Places/Maps	Gazetteers or Atlases
Facts and Statistics	Almanacs
Formula, Tables, How-To-Do-It	Handbooks and Manuals
A person's work	Reviews or Criticisms
Dates, outlines, historical timelines	Historical tables, Chronologies, Historical yearbooks
Periodical Articles	Indexes or Abstracts
Books and other sources	Bibliographies or Guides to Literature.

Types of Reference Tools

Two major categories of reference materials are general and subject. General sources include all subjects and present overviews of topics. Reference materials focused on specific subjects can provide more in-depth coverage.

There are reference sources that provide information on specific subjects as well as general sources that provide information on many subjects. In general, reference sources are either general or subject specific. If you need an overview of a subject, perhaps a general information source will suit your needs. If you need specialized information, a subject specific tool may be better suited.

5.2 Service Procurement in Libraries

Reference service illustrates the meta-process model of ISPL (Information Services Procurement Library). This model can be used to link and compare ISPL to other Information Technology methods. This study material provides each process with more information.

Notes

Define requirements

The definition of requirements is out of the scope of ISPL (Information Services Procurement Library). For more information on defining requirements the entry on requirements management processes is necessary.

Specify deliverables

Both customer and supplier organisations have to specify the information and services they want to receive from the other party.

Situation Analysis, Identify of risks and selection of strategy

The customer organisation has to conduct a situation analysis which is to identify critical risks and mitigate them using an appropriate delivery strategy.

Decision making

During the execution of the delivery plan the customer and supplier make decisions at each decision point. This is called the Contract monitoring phase.

Acquisition process sequence

This chapter provides a high-level description of the ISPL acquisition process from a customer supplier interaction point of view. It also describes customer and supplier processes during the acquisition.

Making request for proposal

To construct a request for proposal the customer first needs to describe the acquisition goal and other requirements, and perform a situation and risk analysis. Using the risk analysis a delivery plan has to be constructed.

Making proposals

The supplier company writes a proposal in which it clarifies how it can fulfill the acquisition goal.

Selection

The customer selects a supplier. The selection activity is an important step in the Tendering process which is a part of the Procurement process.

Negotiate contract

Customer and supplier negotiate the contract. Usually this means that the delivery plan is refined to a more detailed level. The information in the chapter Managing Risks and Planning Deliveries can be used to update the delivery plan.

Make decisions

For each contract the delivery plan is executed. Customer and supplier make decisions at each decision point. For an individual contract the final decision is whether Contract Completion is reached. The deliverables used in this phase are of the Decision point deliverable type. The final decision of the complete acquisition process is the Acquisition completion.

Managing acquisition processes

The ISPL Acquisition Process is the actual process of obtaining a system or service to achieve a goal contributing to business objectives and/or needs. It is one of the most important parts of the ISPL method.

Model	Notes
The acquisition process consists of three sequential steps.	
1. Acquisition initiation	
2. Procurement (one or more)	
3. Acquisition completion.	

These individual process steps are discussed in more detail in the paragraphs below.

Target domain and service domain

In ISPL the terms target domain and service domain are used quite frequently.

Target domain: The target domain is the part of the customer organization that is affected by the service.

Service domain: The service domain is the service organization that delivers the service, *i.e.*, the supplier.

Acquisition initiation

The first process to be executed by the customer contract authority within an acquisition is the acquisition initiation process. It consists of two sequential process steps: acquisition goal definition and acquisition planning. The final result of the process is an acquisition plan reflecting an acquisition strategy, along with a clear understanding of systems and services requirements defining the acquisition goal.

Acquisition goal definition

Acquisition goal is clear understanding of the requirements to the systems and services which are the goal of the acquisition and the costs and benefits for the business and its various stakeholders. This process consists of four activities:

1. Define the target domain.
2. Refine the definition of the acquisition goal in terms of systems and services requirements.
3. Analyse costs and benefits.
4. Analyse stakes and stakeholders.

Acquisition planning

The goal of this phase is to define an acquisition strategy adapted to the situation, plan the main decision points of the acquisition, and establish the acquisition organisation. The acquisition planning phase consists of the following activities:

1. Determine overall service delivery scenarios.
2. Analyse risks.
3. Design acquisition strategy within the risk management framework.
4. Plan the main decision points of the acquisition.
5. Setting-up the customer organisation within the acquisition.

Steps two to four are discussed in detail in the chapter, Managing Risks and Planning Deliveries. Both the acquisition goal definition and acquisition planning are activities within the phase of Acquisition Initiation. A more thorough entry of this phase can be found here.

Procurement process

The procurement step of the ISPL acquisition process embodies the obtaining of one single contract. Note that the acquisition itself can contain multiple procurements. Such a contract consists of one or more projects or ongoing services. The procurement step consists of three sequencing processes:

- | | |
|--------------|--|
| Notes | <ol style="list-style-type: none">1. Tendering2. Contract monitoring3. Contract completion |
|--------------|--|

Tendering

The aim of the tendering process is to select a supplier and a proposal for the considered services and systems and to agree with the chosen supplier on a contract in which both parties' deliveries and responsibilities are defined. A very important aspect of such a contract is the planning of the decision points. The tendering process consists of four different steps:

1. preparation of request for proposal
2. response preparation
3. supplier selection
4. contract preparation and signing

Contract Monitoring

This process aims to monitor the services defined in the contract. It has to ensure that the deliverables and services conform to the requirements in the contract. The most important activity of the contract monitoring process is the execution of the decision points. In the decision point execution the customer organisation makes judgments and decisions based on the status of the procurement at any given time.

Contract Completion

The aim of this process is to ensure that all outstanding technical and commercial requirements in the procurement contract (that was written and signed in the tendering phase) have been met.

Acquisition completion

This is the formal completion of all the contracts of the acquisition. The acquisition manager (often this is the customer company's contract authority) has to verify the successful conclusion of all contracts and the achievement of the acquisition goal. The acquisition completion process consists of four activities:

1. Check that all contracts have been completed
2. Assess the achievement of the acquisition goal
3. Decide whether the acquisition is complete
4. Write an acquisition report

The following paragraphs elaborate on the different activities of acquisition completion.

Check that all contracts have been completed

The acquisition manager has to check the completion of the different contracts by checking if each individual contract's completion phase has been achieved and the required reports are written. If necessary the acquisition manager has to trigger the contract completion process for contracts that need it.

Assess the achievement of the acquisition goal

Unfortunately, when all individual contracts' goals are reached this does not automatically mean that the acquisition goal is achieved. In this activity of the acquisition completion the acquisition

manager has to verify the customer company's business objectives have been met and there are no missing parts in the acquisition that have been overlooked.

Notes

Decide whether the acquisition is complete

Based on the assessment of the contract completions and the achievement of the acquisition goal, the decision is complete is made. This decision is generally made by the acquisition manager together with representatives of all the organizational authorities concerned with the acquisition. When one or more contracts are not completed or the acquisition goal is not reached this decision requires the involvement of the customer company's organizational authorities.

Write an acquisition report

The acquisition manager has to write an acquisition report. This report's purpose is to record all decisions made during the acquisition process, the level of acquisition completion, and lessons to be learned for future acquisitions. Interesting data to be included in the acquisition report are:

- Real costs and duration versus budget and planning
- Problems and their solution
- Risks and an assessment of the used actions and strategies to mitigate them
- Required expertise
- Effective delivery plans
- Quality of the suppliers

The whole idea behind the extensive acquisition report is that an enterprise can only learn from its faults and experiences when these are well documented available in relevant documents for future situations.

Self Assessment

Fill in the blanks:

1. Reference service illustrates the meta-process model of
2. The acquisition process of library references consists of sequential steps .

5.3 Criteria for Evaluation of Reference

Librarianship

Within the context of a librarian's evaluation, librarianship shall be considered that body of work which constitutes the primary roles for which the individual was hired. Typically, the elements comprising librarianship for an individual will differ based on the particular position and its library department. For a reference librarian, for instance, librarianship would normally encompass activities in collection development, reference, instruction, and liaison support to certain academic departments. In terms of the usual tenure evaluation criteria of teaching, scholarship, and service, librarianship takes the place of teaching in librarians' evaluations.

The library's primary role is to support the teaching and research mission of the university and its faculty. Librarians will be evaluated in this category most strongly on how their performance in particular roles—collection development, organization of knowledge, reference, instruction, systems, or management—contributes to effective teaching and to faculty research. While some librarians hold positions in which contact with our users is frequent and easily seen as teaching oriented, this does not imply that other positions cannot be evaluated for the same values or that they are any less

Notes

"faculty" in nature. In other words, librarianship will be considered as a related but different category of activity from teaching. Librarians will be evaluated on the quality of their librarianship in all of its appropriate facets, not on whether librarians model the teaching activities of other faculty. Implementation of computer systems and original cataloging of materials, for example, should both be based on priorities that consider the effects on our users and their academic success.



Did u know? It is expected that librarians will demonstrate strong abilities as generalists, able to perform effectively in a variety of tasks and, often, a variety of departmental disciplines as selectors, reference experts, and information literacy instructors. Strong generalist skills will be preferred over narrow specialization.

Expectations of the department

Based on the library's mission, librarianship will receive the majority of weight when a candidate for promotion or tenure is evaluated. Evidence of effective librarianship may be demonstrated by (but not limited to) the following:

- Development of productive liaison relationships with the faculty and students of designated departments;
- Development and implementation of programmes that encourage information literacy in our users;
- Effective point-of-use instruction with library users through reference desk assistance;
- Office consultations, electronic assistance, and so on;
- Creation of user assistance materials that serve curricular objectives, such as bibliographies, subject guides, web pages, and other tangible information products;
- Development and implementation of effective methods for organizing, classifying, or cataloging information resources;
- Effective management of library collections, in any media, through selection and deselection activities;
- Effective management of library staff and operations, especially in terms of the effects on university teaching and research.

As exemplified by the previous list, librarianship at an academic library is characterized by team processes and frequent communication within a complex organization. Librarians cannot be effective unless they are effective in a collegial environment. Candidates will be evaluated in librarianship on their competence in communication and other interpersonal skills that relate to their roles.

When candidates are evaluated during formal reviews, all relevant areas of librarianship will be considered. However, certain areas which are core to a particular position will receive the greatest weight, and failure to perform commendably in these core areas will be considered especially problematic for continued appointment during the probationary period, as well as for promotion and tenure. These core areas are defined by seniors for each librarian at the beginning of the probationary period and whenever these core areas are substantially changed.

Self Assessment

Multiple Choice Questions:

3. Librarian will be evaluated on the qualify of their:
- | | |
|-------------------|-----------------|
| (a) Librarianship | (b) Library |
| (c) Work | (d) Efficiency. |

4. Based on the library's mission, librarianship will receive the majority of:
- | | |
|---------------|----------------|
| (a) Candidate | (b) Loss |
| (c) Weight | (d) Promotion. |

5.4 Bibliographical Sources



Did u know? Bibliography, as a practice, is the academic study of books as physical, cultural objects; in this sense, it is also known as bibliopoly. On the whole, bibliography is not concerned with the literary content of books, but rather the “bookness” of books, how they were designed, edited, printed, circulated, reprinted and collected. A bibliography, the product of the practice of bibliography, is a systematic list of books and other works such as journal articles.

Bibliographies range from “works cited” lists at the end of books and articles to complete, independent publications. As separate works, they may be in bound volumes such as those shown on the right or computerized bibliographic databases. A library catalogue, while not referred to as a bibliography, is bibliographic in nature. Bibliographical works are almost always considered to be tertiary sources.

Bibliographic works differ in the amount of detail depending on the purpose, and can be generally divided into two categories: enumerative bibliography (also called compleutive, reference or systematic), which results in an overview of publications in a particular category, and analytical, or critical, bibliography, which studies the production of books. In earlier times, bibliography mostly focused on books. Now, both categories of bibliography cover works in other formats including recordings, motion pictures and videos, graphic objects, databases, CD-ROMs and websites.



Task Write the bibliography of your favourite subject with the help of internet.

Self Assessment

State whether the following statements are true or false:

5. The primary role of library is not to support the teaching and research mission.
6. A bibliography, as a practice, is the academic study of books as physical cultural object in this sense it is also known as bibliopoly.
7. Bibliographical works are almost always considered to be tertiary sources.

5.5 Summary

- The ISPL Acquisition Process is the actual process of obtaining a system or service to achieve a goal contributing to business objectives and/or needs.
- The first process to be executed by the customer contract authority within an acquisition is the acquisition initiation process.
- The procurement step of the ISPL acquisition process embodies the obtaining of one single contract.

Notes

- Within the context of a librarian's evaluation, librarianship shall be considered that body of work which constitutes the primary roles for which the individual was hired.
- The deliverables used in this phase are of the Decision point deliverable type. The final decision of the complete acquisition process is the Acquisition completion. The most important activity of the contract monitoring process is the execution of the decision points.

5.6 Keywords

Acquisition : Acquirement

Implementation : Accomplishment

Demonstrate : Exhibit

Tangible : Substantial

5.7 Review Questions

1. Analyze the different types of reference sources.
2. Explain service procurement in libraries.
3. Write a short note on target domain and service domain.
4. Define Acquisition initiation.
5. Define the Acquisition goal.
6. Explain the Acquisition planning.
7. Explain procurement process.
8. Explain the criteria for evaluation of reference.
9. Discuss in detail - Bibliographical sources.

Answers: Self Assessment

- | | | |
|---------|----------|---------|
| 1. ISPL | 2. Three | 3. (a) |
| 4. (c) | 5. False | 6. True |
| 7. True | | |

5.8 Further Readings



Books

RANGANATHAN (S R). Reference service. Ed 2. 1989. *Ranganthan Endowment for Library Science, Bangalore*.

KRISHAN KUMAR. *Reference service* Ed. 3. 1996. Vikas Publishing, New Delhi.



Online links

<http://www.library.illinois.edu/ugl/howdoi/refsources.html>

<http://books.google.co.in/>

Notes

Unit 6: Reference and Information Services

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Objectives

After studying this unit, you will be able to:

- Understand reference and information services - concept
- Know about reference interview
- Discuss parts of a reference interview and techniques
- Explain library users and reference services, usefulness of the reference interview
- Explain basics of digital reference services.

Introduction

Reference Transactions are information consultations in which library staff recommend, interpret, evaluate, and/or use information resources to help others to meet particular information needs.

Notes	Reference transactions do not include formal instruction or exchanges that provide assistance with locations, schedules, equipment, supplies, or policy statements. Reference Work includes reference transactions and other activities that involve the creation, management, and assessment of information or research resources, tools, and services.
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6.1 Reference and Information Services—Concept

Reference services also sometimes referred to as 'Reference and Information services' which means personal assistance provided to the users and potential users of information. It is characterized by a high degree of interaction between staff members and individual users or specifically identified group of users or potential users. Providing such personalized information service has remained the main aim of library and information profession. In another definition James Wyer has defined it as 'that part of library administration which deals with the assistance given to readers in their use of resources of the library'.

The function of libraries is three-fold. Libraries acquire information, organize that information in a way it can be retrieved, and disseminate the information the library has acquired. Reference services fulfills this last function.



Notes Reference services may vary from library to library, but most libraries have an information or **Reference Desk** where assistance from a librarian is available.

Almost all libraries also provide reference services via the telephone and in many libraries you can email your reference question, or **Ask a Librarian**, to a reference librarian who will e-mail you back with the answers.

There are three main types of reference assistance:

- Assistance or instruction in the use of the library, including location of materials, use of the catalog, use of computers to access information, and the use of basic reference sources.
- Assistance in identifying library materials needed to answer a question.
- Providing brief, factual answers to questions, such as addresses, statistics, phone numbers, etc. that can be quickly located.

The Reference and Information Services Section will address all aspects of reference work, in all types of libraries, in all regions of the world. Current interests encompass the new electronic environment and the resulting changes in reference work, the future role of reference work, and the quality of reference services.

Future investigation, discussion, and programming will focus on:

- User-centered reference services
- Organization and staffing of reference services
- Ethics and the provision of high quality service
- The impact of the digital environment on reference services
- Reference collections in a digital world
- Continuing education of reference librarians
- Marketing/Visibility of library reference services
- Providing a forum for information on the nature of reference work in different parts of the world.

Self Assessment**Notes**

Fill in the blanks:

1. Reference Work includes reference
2. The Reference and Information Services Section will address all aspects of reference

6.2 Reference Interview

A **reference interview** is a structured conversation between a librarian and a library user, usually at a reference desk, in which the librarian responds to the user's initial explanation of his or her information need by first attempting to clarify that need and then by directing the user to appropriate information resources.

6.2.1 Definition

Bopp & Smith (1995) defines the reference interview as the "conversation between a member of the library reference staff and a library user for the purpose of clarifying the user's needs and aiding the user in meeting those needs".


Notes

According to ODLIS, the reference interview is "the interpersonal communication that occurs between a reference librarian and a library user to determine the person's specific information need(s), which may turn out to be different from the reference question as initially posed."

A reference interview may occur in person, by telephone, or electronically (usually via e-mail) at the request of the user, but a well-trained reference librarian will sometimes initiate communication if a hesitant user appears to need assistance".

6.2.2 Parts of a Reference Interview

The reference interview is structured to help the librarian provide answers to the library user. In general, the interview is composed of the following stages.

1. Welcoming
2. Gathering general information from the user and getting an overview of the problem
3. Confirming the exact question
4. Intervention, such as giving information, advice or instructions
5. Finishing, including feedback and summary.

These stages may occur in loops, for example, when a clarification of the question leads to the need to establish more background information on the query topic. These steps are designed to put the user at their ease, and then help ensure that they have correctly explained what they require. When the reference librarian believes that the query is fully understood, they attempt to provide resources that help satisfy it. An important and often overlooked final step is checking that the information or service provided was indeed what the library user required.

Notes**6.2.3 Reference Interview Techniques**

The purpose behind the reference interview structure is to ensure that the library user's information need is satisfied. The librarian can use a number of interview techniques to help identify the user's exact need.



Did u know?

Poor reference interview skills may lead to misinterpretation of the real question, a lack of real help and an unsatisfied library user.

Librarians use many techniques to help identify a user's information need. With body language, repetition and paraphrasing of what the user says, the interviewer can encourage the user to give more information about what they need. Asking open questions establishes context and helps to identify exactly what is required. A lack of follow-up, or checking that the user found what they required, is arguably one of the most common mistakes made in the reference interview.

Forming the Query

One of the biggest problems with providing an effective reference service is that of badly-formed queries. In this instance, the user's reference question does not match up to the information they actually need. Badly-formed queries may lead to user frustration, as they perceive that the reference interview is not solving their problem.

Many of the techniques used in the reference interview are geared towards developing a badly-formed query until a sense of the user's true information need is gained. A great degree of care must be taken when helping users to develop their query. The librarian typically has little insight into the social and psychological barriers that might be preventing the user from explaining their question accurately. Anything from anxiety from an approaching deadline to lack of confidence with language can get in the way.



Example:

- User asks: "Where are the history books?"
- Actual information need: Scholarly journal articles on the impact of the stirrup on the Norman Conquest.

In this instance, answering the stated question literally (*e.g.* "The history books are on the 6th floor of the main library.") will not satisfy the user's information needs. More dialogues are required to determine the underlying question.

The virtual reference interview

As libraries have begun to adopt technology into their operations, the idea of the virtual reference interview has come to light. Virtual reference is a reference service initiated electronically, often in real-time. The user and librarian do not meet face-to-face. Virtual reference services can be conducted, for example, in internet chat, videoconferencing, e-mail, co-browsing and instant messaging.

Uptake of virtual reference has not been as swift as some had predicted. Stormont (2007) suggests that the complexity of virtual reference may be to blame, arguing that users want information quickly and with the minimum of fuss. Some evidence suggests that the problem lies with poor uptake and training among library staff.

6.2.4 Library Users and Reference Services

Notes

Library users are not always comfortable with reference services, let alone satisfied with them. Unobtrusive user studies suggest that only around 55 to 65% of users leave a reference interview satisfied with the result and willing to return. Demographics, social factors and users' preconceptions about libraries all contribute to this figure. Embarrassment, shyness, and anxiety can prevent a user from approaching the reference desk, and poor signposting and explanation of services can mean that some customers are not aware that the reference service exists. To be as effective as possible, libraries must be proactive in publicizing their services and reducing the stigma of asking for help.

6.2.5 Usefulness of the Reference Interview

For a long-time the value of the reference interview has stood unquestioned. More recently, with technological developments streamlining some of the tasks which once comprised the interview, some researchers are beginning to question the validity of the reference interview, and the investment that a reference librarian represents. Others argue that reference services should broaden their target audience. As people increasingly use the internet to make major, life-affecting decisions, so they also require the services of professionals who are able to provide help in this environment. If this proves to be the case, it will become more vital that the reference interview is conducted professionally and successfully. In the age of information overload, a successful reference interview may empower users to confidently make such decisions in their lives.

Facts about Librarians and the reference interview

1. Herbert White (1992) says that librarians need to emphasize their strengths. As computers increasingly take over clerical tasks that computers are good at, librarians should focus attention on aspects of service involving human communication that computers cannot do well. Let computers get involved in document identification, document delivery, overdue notices, interlibrary loans and cataloguing, White argues, and let librarians take a proactive role in information intermediation, making the reference interview even more important.
2. In an unobtrusive study of reference service in Suffolk County public libraries on Long Island, Thomas Childers (1978) instructed surrogate users to pose "escalator" questions, starting initially with a broad request so that librarians would have to use probes to discover the specific questions the users really wanted answered. No matter how general the initial question was, in 67 percent of the cases library staff members asked no questions to clarify what information was required. The result was that these staff members got to the last step—the real question only 20 percent of the time and hardly ever provided an accurate answer. By contrast, the third that did use probes to arrive at the specific question provided an accurate answer 62 percent of the time.
3. Accuracy is highly prized by librarians, but it is not the only, or even the most important, element that users look for: Users want information packaged in a certain format; they want it within a specified period of time; they want it in a certain amount; and above all they want it not to take more than a certain amount of effort to get it. Depending on their purpose, users may be quite satisfied with ballpark answers and would not require anything more exact. Part of conducting the Reference interview successfully is to find out how finely-grained the helpful answer needs to be. Matthew Saxton and John Richardson (2002) found that public library users were highly satisfied with the service despite lack of accuracy. Fifteen percent were highly satisfied even when they did not find everything they needed. Three percent were highly satisfied even when the response they received was later judged to be inaccurate. Three percent were highly satisfied even when they did not find anything useful.

Notes These findings provide more evidence to suggest that accuracy is not the only indicator for satisfaction.

Things needed to conduct a successful interview

It can be divided into two categories:

Non-verbal Skills • Eye contact • Gestures • Posture • Facial expression and tone of voice.

Verbal Skills • Remembering • Avoiding premature diagnoses • Reflecting feelings verbally • Restating content • Using encouragers • Closing • Giving opinions and suggestions • Asking open questions.

Self Assessment

Multiple Choice Questions:



Task State your own views about the verbal skills of reference interview: What are the non-verbal skills.

6.3 Basics of Digital Reference Services

Digital reference is a service by which library reference service is conducted online, and the reference transaction is a computer-mediated communication.

The word “reference” in this context refers to the task of providing assistance to library users in finding information, answering questions, and otherwise fulfilling users’ information needs. Reference work often but not always involves using reference works, such as dictionaries, encyclopedias, etc. This form of reference work expands reference services from the physical reference desk to a “virtual” reference desk where the patron could be writing from home, work or a variety of other locations.

Background

The earliest digital reference services were launched in the mid-1980s, primarily by academic and medical libraries, and provided by e-mail. These early-adopter libraries launched digital reference services for two main reasons: to extend the hours that questions could be submitted to the reference desk, and to explore the potential of campus-wide networks, which at that time was a new technology.

With the advent of the graphical World Wide Web, libraries quickly adopted webforms for question submission. Since then, the percentage of questions submitted to services via webforms has outstripped the percentage submitted via e-mail.

In the early- to mid-1990s, digital reference services began to appear that were not affiliated with any library. These digital reference services are often referred to as "AskA" services. Examples of AskA services are the Internet Public Library, Ask Dr. Math, and Ask Joan of Art.

Notes

6.3.1 Forms of Digital Reference

Webforms

Webforms are created for digital reference services in order to help the patron be more productive in asking their question. This document helps the librarian locate exactly what the patron is asking for. Creation of webforms requires design consideration. Because webforms substitute for the reference interview, receiving as much information as possible from the patron is a key function.

Aspects commonly found within webforms:

- A return e-mail address to send the answer to the question
- The question being asked
- What sources have been consulted by the patron
- How the patron is planning to use the information
- Location of the patron (are they a library patron?)
- A name to personalize the interaction
- A date by which the information is needed
- The type of sources being requested (print or electronic).

Chat using commercial applications

Several applications exist for providing chat-based reference. Some of these applications are: Question Point, Tutor.com, AspiringKidz.com, Vienova.com and VRLplus. These applications bear a resemblance to commercial help desk applications. These applications possess functionality such as: chat, co-browsing of webpages, webpage and document pushing, customization of pre-scripted messages, storage of chat transcripts, and statistical reporting.

Chat using instant messaging

Instant messaging (IM) services are used by some libraries as a low-cost means of offering chat-based reference, since most IM services are free. Utilizing IM for reference services allows a patron to contact the library from any location via the internet. This service is like the traditional reference interview because it is a live interaction between the patron and the librarian. On the other side, the reference interview is different because the conversation does not float away but instead is in print on the screen for the librarian to review if needed to better understand the patron. IM reference services may be for the use of in-house patrons as well as patrons unable to go to the library. If library computers support IM chat programmes, patrons may IM from within the library to avoid losing their use of a computer or avoid making embarrassing questions public.

Successful IM reference services will:

- Create a profile to convey information about the library and increase online presence.
- Accept imperfection in conversations without spending time to go back and make corrections. Most words are recognizable through context.
- Become familiar with and use accepted IM abbreviations such as LOL (Laugh Out Loud).
- Do not panic. While speed is important it is more important to not feel rushed.

Notes



Task If you have a research assignment, narrate your experiences about search of relevant material in libraries. Otherwise accompany a research scholar of your university to the library and find out about reference process.

Self Assessment

State whether the following statements are true or false:

5. Digital reference is a service by which library reference service is conducted online, and the reference transaction is a computer-mediated communication.
6. The earliest digital reference services were launched in the mid-1980s.

6.4 Summary

- The Reference and Information Services Section will address all aspects of reference work, in all types of libraries, in all regions of the world. Current interests encompass the new electronic environment and the resulting changes in reference work, the future role of reference work, and the quality of reference services.
- The reference interview is “the interpersonal communication that occurs between a reference librarian and a library user to determine the person’s specific information need(s), which may turn out to be different from the reference question as initially posed...A reference interview may occur in person, by telephone, or electronically (usually via e-mail) at the request of the user, but a well-trained reference librarian will sometimes initiate communication if a hesitant user appears to need assistance”.

6.5 Keywords

<i>Reference</i>	: Suggestion
<i>Clarification</i>	: Explanation
<i>Misinterpretation</i>	: Misunderstanding
<i>Frustration</i>	: Annoyance
<i>Unobtrusive</i>	: Inconspicuous

6.6 Review Questions

1. Write the concept of reference and information services.
2. Explain in detail reference interview.
3. Write a note on the parts of a reference interview.
4. Explain the reference interview Techniques in detail.
5. Write the uses of the reference interview.
6. What are the things needed to conduct a successful interview?
7. What are Digital reference services?
8. Discuss the forms of digital references.

- | | |
|--|-------|
| 9. Write a note on chat using commercial applications. | Notes |
| 10. Define instant messaging. | |

Answers: Self Assessment

- | | | |
|-----------------|---------|---------|
| 1. Transactions | 2. Work | 3. (a) |
| 4. (a) | 5. True | 6. True |

6.7 Further Readings



Books

CHENEY (F N) and WILLIAMS (W J). *Fundamental reference sources*. Ed. 3. 2000. ALA, Chicago.

CRAWFORD (John). *Evaluation of library and information services 2000*. ASLIB, London.



Online links

- <http://unllib.unl.edu/LPP/willenbrown.htm>
- <http://archive.ifla.org/VII/dg/dgrw/dp99-06.htm>
- http://www.webjunction.org/c/document_library/

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Unit 7: Virtual Reference Services

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Objectives

After studying this unit, you will be able to:

- Define virtual reference services
- Know about the Provision of service
- Explain organization of service.

Introduction

Technological developments have affected not only the format and sources of the information libraries use to provide reference service, but also where we provide reference service. Libraries and their resources have partially moved to the virtual world of the Internet. As a result, library patrons can access library resources from outside of the physical library. In an effort to reach patrons accessing the library via their computers, many libraries and library consortia are extending their reference service to include virtual reference. Technology now allows users to submit their queries to the library at any time from any place in the world. Virtual reference is responsive to patrons' need for convenient access to reference service.

The purpose of these guidelines is to assist libraries and consortia with implementing and maintaining virtual reference services. The guidelines are meant to provide direction, without being over-prescriptive. Variance among institutions will result in differences in the adherence to these guidelines, but we hope to have cast the model broadly enough to provide a framework for virtual reference which can be widely adopted and which will endure through many changes in the ways in which libraries provide virtual reference services.

Virtual reference is reference service initiated electronically, often in real-time, where patrons employ computers or other Internet technology to communicate with reference staff, without being physically present. Communication channels used frequently in virtual reference include chat, videoconferencing, Voice over IP, co-browsing, e-mail, and instant messaging.

Notes

While online sources are often utilized in provision of virtual reference, use of electronic sources in seeking answers is not of itself virtual reference.

Virtual reference queries are sometimes followed-up with telephone, fax, in-person and regular mail interactions, even though these modes of communication are not considered virtual.

7.1 Definition of Virtual Reference

Traditionally an individual institution provides reference service in a physical location, that is, in a library. With the development of technology, especially Internet technology, libraries have developed virtual (or "digital") reference services (VRS) in order to provide efficient and effective reference services to patrons in and out of the library and even to users not in the library's usual service community. According to the guidelines provided by the Reference and Users Services Association (RUSA), virtual reference is a reference service, such as chat, videoconferencing, co-browsing, instant messaging (IM), voice over Internet protocol (VoIP) or email, conducted electronically through computers or the Internet. Most VRS are in real time and use synchronous communication. Although reference services can be conducted using telephone, fax or mail, those are not virtual reference.

Provision of VRS is not limited by location and time. In fact, most VRS are offered outside regular office hours. Some are even 24/7.

**Notes**

In consideration of cost and of staff availability most VRS are offered by a group of libraries or consortia rather than by individual institutions. Public libraries in many states work together to provide VRS.

Who are the users of VRS? The target users may have characteristics different from traditional library users. VRS users may spend considerable time in front of computers and surfing on the Internet. They use email, instant messaging or VoIP to communicate with friends and at work. Some may participate in online chatting. Besides adults, teens and children may be potential users of VRS because of their familiarity with computers.

7.2 Preparing for Virtual Reference Services

Virtual reference should be undertaken with a view to the long-term integration of the service with the rest of the institution's reference services. Even at the planning or pilot phases, virtual reference should not be treated as an ad hoc service.

Administration should be aware of the staffing, start-up and maintenance costs involved in providing and marketing virtual reference and should be prepared to commit to long-term provision of resources.

Ideally, all levels of the institution's management should commit to supporting virtual reference before the service is formalized. As with any new service, total support from all members of management may not be possible; however, there should be a sufficient core of staff committed to providing a virtual reference service.

Representative members of the administration and reference library staff should be involved in planning, training, implementation, and promotion of virtual reference services and the selection

Notes	of virtual reference software. Representative members of the target audience should be involved in planning and promotion of virtual reference. Relevant computing staff should be involved in the planning, implementation, and maintenance of the infrastructure needed, and in the software selection and purchase decision, particularly with regard to compatibility with existing library software and infrastructure.
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Notes

Virtual reference service should be a consideration in collection development decisions, selection of electronic reference sources, and especially licensing issues that might affect the use of resources to serve off-site patrons.

Library staff and administration should facilitate regular assessment of the program's effectiveness and commit to adjustments as needed. Assessment should be comparable to the assessment of other reference services.

Self Assessment

Fill in the blanks:

1. Virtual reference is reference service initiated
2. Representative members of the target audience should be involved in and promotion of reference.

7.3 Provision of Service

Clientele

- The library should define the patron population and publicize this policy on the service's Web site, or other places where patrons may access it.
- Technical issues of patron authentication or proxy server login should be addressed as they apply to various groups within the patron population.
- If there are persons excluded from this service by institutional policy, enforcement should be uniform.
- Guidelines for appropriate behaviour while using the service should be made available to patrons.
- Marketing of the service should clearly define the target audience.

Parameters of Service

- The level of service to be provided should be defined and announced, so that staff and patrons will understand the mission of the service. Level of service includes the types of questions the service will answer (perhaps easier to define in the negative), as well as the patron population the service will serve.
- Guidelines should be established for determining which queries fall outside the parameters of service, and how to respond in those cases.
- Before the service begins, it should be decided if document delivery will be included and whether patrons will be charged for document delivery.
- Parameters of time should be determined and announced to both patrons and staff. For synchronous virtual reference, the times at which the service is staffed should be indicated. For asynchronous virtual reference, guidelines for how frequently queries will be checked, or how soon an initial response can be expected, should be given.

- Internal and external links to the virtual reference service should be designed to catch the attention of potential patrons and to clearly communicate the nature of the service.

Notes

Service Behaviours

- Virtual reference requires library staff having many of the same communication and interpersonal skills necessary for other forms of reference. The absence of a physically present patron and the different modes of communication may call for additional skills, effort, or training to provide quality service on par with face-to-face reference services.
- Staff should exhibit the professional competencies essential for successful reference and patron services librarians, as articulated in RUSA's "Professional Competencies for Reference and User Services Librarians."
- Standard guidelines of reference service (such as reference interviewing, exchange of questions between services, et al.) should prevail.
- Staff should follow interpersonal communication practices that promote effective provision of reference service, as articulated in the RUSA "Guidelines for Behavioral Performance of Reference and Information Services Professionals."
- Staff should be required to demonstrate skills in the effective use of online communication, as well as demonstrate awareness of the common potential problem areas when conducting reference interviews online, as compared to the face-to-face reference interview.
- Initial and on-going training should be offered to help staff learn and retain these effective online behaviours.
- Staff should treat patrons' and colleagues' online communication, including stored transcripts or records, as private and confidential.

Collaborative Virtual Reference

- Some libraries may choose to provide virtual reference services collaboratively with other libraries, for various reasons including: to extend their hours of operation, to distribute staffing of the service across multiple libraries, to extend the expertise available, or to realize cost saving associated with economies of scale. Such collaboration may include working with virtual reference vendors, and/or participation in large regional or national collaborations.
- Expectations for libraries participating in a collaborative service should be clearly defined before the local library commits to such a service.
- Responsibility for centrally administering and coordinating the service should be clearly defined.
- Each library should have a project liaison to represent the library in the group's activities. Expectations for project liaison's duties should be clearly stated.
- Procedures for communications between and among participants should be clearly delineated.
- Participating libraries should commit to a prescribed minimum level of service. For synchronous virtual reference, this level of service should be a set minimum number of service hours, based upon factors such as size of library or staff, patron population being served, budget, and extent of online reference service desired. For asynchronous virtual reference, this level of service should be a prescribed minimum number of questions to be handled or monitoring of the queue for specific blocks of time.
- Scheduling of libraries' contributions to the service should be centrally administered. For synchronous virtual reference, each library should commit to specific blocks of time. Finding specific reference staff to fill these blocks of time should be the responsibility of the local library, and not that of the project director. For asynchronous virtual reference, participating libraries should commit to monitoring question queues for incoming questions in specific blocks of time.

Notes

- The service should provide a central source of information on member library policies, operations, procedures, and regulations, so that it is simple for project reference staff to find information about other libraries.
- The service should establish a clear set of guidelines for establishing priorities for service for patrons from the various libraries *e.g.*, in a collaborative virtual reference service; questions are handled on a first-come-first-served basis, with no preference given to patrons from the on-duty staff's own local library.
- The service should establish clear policies and guidelines for using licensed online electronic resources to serve patrons from other participating libraries.
- The service should establish clear policies and guidelines that effectively ensure patron privacy in a multi-library setting.
- Observance of the NISO Question/Answer Transaction Protocol for transferring questions between services is encouraged.

Self Assessment

Multiple Choice Questions:

3. Guidelines for appropriate behaviour while using the service should be made available to:

(a) Librarians	(b) Patrons
(c) Audience	(d) Service.
 4. Participating libraries should commit to a prescribed minimum level of:

(a) Service	(b) Work
(c) Contribution	(d) Guidelines.

7.4 Organization of Service

Integration of Virtual Reference Service

- Virtual Reference is an extension of an institution's existing reference services. While staffing models and the location of the service may be different from face-to-face reference services, it should be accorded the same status and quality goals and be viewed as a part of the larger service of reference.
 - All public services staff should have an awareness of the virtual reference service's goals and basic operation.
 - Procedures should be established for referring a virtual patron (question) to another reference or public services point. Procedures should include both how the referral is presented to the patron and how information about the referral is communicated between the virtual reference desk and referral destination.

Infrastructure/Facilities

- It is a goal of all reference services to be of high quality. Integration of virtual reference into the mainstream of reference services implies that all services (in-person, telephone, and virtual) will be supported at a level to ensure quality service.
 - Each library should examine staffing models to determine one that is appropriate for their organization. While there is not a “one-size-fits-all” service model, a model should be chosen which would support quality reference interactions via all modes of communication.
 - Staff should be provided space, furnishings, hardware, and software to accomplish the mission agreed on by staff, administration, and technological support staff.

- Equipment, facilities, and software should be updated as needed to maintain efficacy. Planning should take into account the continuing evolution of technology.
- Awareness of the patrons' infrastructure and capabilities should be taken into account when planning library capabilities and choosing virtual reference software.
- Technical set-up should take into consideration use of the supporting software by patrons and reference staff with disabilities. Some options include choosing software that complies with Rehabilitation Act, software with non-text options such as voice-over-IP, or providing text on the Web site that directs screen-readers to an email form or alternate contact information.

Notes***Finances***

- The library budget should include specific allocation of funds to cover the personnel, hardware, software, connectivity, furnishings, training, publicity, and space to support this service.
- Planning should include ongoing budgeting even when the service is started as a pilot or with seed money from a grant.
- Whether the service is to be free to the patron or fee-based should be determined before the service begins and modified as needed.

Personnel

- Virtual reference service responsibilities should be shared among staff to ensure continuity of service.
- When possible, staff should be trained for all reference services (face-to-face and virtual) to provide greater depth of knowledge and flexibility for staffing.

***Did u know?***

Library staff conducting virtual reference should be selected on the basis of ability, interest, and availability. Service behaviours and skills to use the supporting technology need to be part of staff selection.

- Staff should be provided time and resources for training and continuing education to ensure effective service.

Marketing

- A marketing plan should be developed and implemented as part of the planning and on-going operation of the service.
- A target audience or audiences for the virtual reference service should be determined and marketing should be appropriate to that audience. Members of the target audience should be included in the planning and evaluation of marketing.
- There should be a budget for marketing and marketing should be assigned as a responsibility to a staff member or members.
- Marketing should be routinely evaluated and updated to keep the message fresh and reach new audiences.

Evaluation and Improvement

- A virtual reference service should be analyzed regularly, using input from staff and patrons, to evaluate its effectiveness and efficiency, with the goal of providing a high-quality service.
- Evaluation may encompass many methods such as the analysis of usage statistics, patron feedback, and reviewing transcripts.
- Evaluation of the virtual reference service should be equivalent to and part of a library's regular evaluation of all its reference services.

Notes

- Evaluation should be used to improve the service as needed through adjustment of staffing, levels of staffing, service parameters, training, or other improvements as indicated by evaluation and assessment results.

Privacy

- Virtual reference communications between patrons and library staff should be private except as required by law.
- Data gathered and maintained for the purpose of evaluation should protect patrons' confidentiality.
- It is recommended that patrons' personal identifiers, such as name, e-mail, etc. be stripped from transaction records. Stripped records may be maintained for statistical and evaluative purposes.
- Libraries need to develop retention schedules and privacy policies for their virtual reference transactions.
- Patrons should be advised whether a record of the transaction will be retained, and what, if any, personal information will be stored with the transaction log.
- Privacy policies and transcript retention schedules should be publicly available.
- Reference transactions may be used in the creation of databases and FAQs but care should be taken to maintain the privacy of patrons and the confidentiality of patrons' inquiries.
- Beyond removal of patron identifiers, inclusion in a database should not compromise patron confidentiality, and this should be evaluated when choosing questions for inclusion in a database.
- Patrons should be informed, through publicly available policy, that their questions might be included in a database. They should be provided a means to request removal of their inquiries from the database.
- Data gathered and maintained for training purposes and for publicizing the service should also protect patron confidentiality.



Task

Write a short note on virtual reference services.

Self Assessment

State whether the following statements are true or false:

5. All public services staff should have an awareness of the virtual reference service's goals and basic operation.
6. A marketing plan should be developed and implemented as part of the planning and on-going operation of the service.

7.5 Summary

- Virtual reference should be undertaken with a view to the long-term integration of the service with the rest of the institution's reference services.

- | | |
|---|--------------|
| <ul style="list-style-type: none"> • Representative members of the administration and reference library staff should be involved in planning, training, implementation, and promotion of virtual reference services and the selection of virtual reference software. • Virtual Reference is an extension of an institution's existing reference services. • Library staff conducting virtual reference should be selected on the basis of ability, interest, and availability. • Virtual reference communications between patrons and library staff should be private except as required by law. • Virtual reference is reference service initiated electronically, often in real-time, where patrons employ computers or other Internet technology to communicate with reference staff, without being physically present. Communication channels used frequently in virtual reference include chat, videoconferencing, Voice over IP, co-browsing, e-mail, and instant messaging. | Notes |
|---|--------------|

7.6 Keywords

Virtual : Almost

Collaborate : Work together

Synchronous : Happening together

7.7 Review Questions

1. Write the definition of virtual reference.
2. Describe virtual reference services in detail.
3. Explain the provision of services.
4. Explain organization of service.
5. Explain the evaluation and improvement of reference services.

Answers: Self Assessment

- | | | |
|-------------------|----------------------|---------|
| 1. Electronically | 2. Planning, virtual | 3. (b) |
| 4. (a) | 5. True | 6. True |

7.8 Further Readings



Books

FARMER (LSJ), Ed. *The human side of reference and information services in academic libraries: adding value in the digital world.* 2007. Chandos Publishing, Oxford.

FOSKETT (DJ). *Information service in libraries.* Ed. 2. 1967. Archon Book Hamden, Connecticut.



Online links

<http://knol.google.com/k/virtual-reference-services#>

<http://www.ala.org/pla/tools/technotes/virtualreference>

Notes

Unit 8: Current Awareness Services

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Objectives

After studying this unit, you will be able to:

- Understand the types and methods of CAS
- Discuss the characteristics of current awareness services
- Explain types of current awareness services.

Introduction

The advancement in communication and networking technologies and the adaptation of Internet and Intranet Technologies in organizational networks has given the Library and Information Centers an opportunity to improve the information services to the patrons in more effective way. Current Awareness Service of a library aims at providing information about recent arrival of books, journals and other library documents to the library members. This is usually done at libraries by taking printout list and displaying on notice board and circulating this list among various departments. This Method has limitation of reach ability of the information and the time constraints. Also Selective Dissemination of Information (SDI) meaning delivery of the user need specific Information is very difficult. These difficulties are overcome in the E-CAS method of Current Awareness Service, which combines both CAS and SDI together and makes the information about new arrival of documents available to the library patrons periodically using email facility.

Current Awareness Services has been important means for keeping the users up to date in their areas of interest. A current awareness service may be as simple as copy of table of contents or a bulletin containing bibliographic records, of articles selected from the current issues of journals and

Notes

other material, and usually organized by subjects. Libraries now compile current awareness bulletins using predefined search strategy and running on the database either on CDROM or online periodically and getting the desired output. Subject to copyrights, the output can also be stored on a local system, and disseminated online (internet, intranet) and offline (print, CDROM, e-mail). Table of contents of most journals are available free from the publishers' sites. Some publishers even offer free e-mail update of table of contents. A large number of electronic publishing sites or portals now offer current information via email to registered users. For example one can register on New York Times newspapers to receive summary of news on daily basis.

Internet has enabled a lot of innovations in contents, methods of production and distribution of current awareness products. Tools such as Listserv, Weblog, Webzines and e-newsletters are common. Listserv give the latest information, hot topics, ideas and opinions, a chance to discuss issues, a source of advice and assistance. Weblogs literally log the web. They review, select and package the latest relevant information, in a subject area. Some examples of web based current awareness service are *The NSDL Scout Report for Math, Engineering, and Technology* and *Free Pint* are examples of web based current awareness services.

Current awareness services (CAS) alert scholars, researchers, and health care practitioners to recently published literature in their fields of specialization. Librarians who provide these services use various methods to keep current with academic and professional literature. Traditional methods include routing print journals, distributing photocopied journal tables of contents, and simply browsing professional publications. Newer methods include conducting saved searches in preferred databases and creating e-mail table of contents alerts. Each of these methods has disadvantages: Routed print material moves slowly, distributing photocopies is labour intensive, and browsing material requires extra time and active participation. Saved searches involve expert users and continual search amendments. E-mail alerts flood in-boxes already brimming with unread items. The increasing availability of publisher and vendor-supplied really simple syndication (RSS) feeds provides another option for current awareness services, one that addresses many of the problems of traditional means. While RSS is not a new technology and feeds have been commonly available for news and blogs for many years, journal content providers were slow to follow suit. Moreover, the benefit of RSS for journal content in the dispersed digital environment is limited, as the identification, location, and management of new journal articles from multiple feeds can frustrate and overwhelm even the savviest user.

8.1 Types and Methods of CAS

While library literature on RSS feeds has been plentiful in recent years, few articles discuss services that fully leverage the "push technology" power of RSS. The idea of providing a convenient and time-saving service to library users by collecting journal feeds and then bundling them into outline processor markup language (OPML) files categorized by subject has not been developed in the literature. Only one 2007 article describes using OPML files to access information from multiple content providers without multiple subscriptions, thereby simplifying user access to the material.

Librarians at the Ebling Library recognized the challenges faced in keeping current with the literature, as well as the potential of new services utilizing RSS. While the volume of tables of contents feeds supplied by publishers and vendors have increased markedly, feeds were still not readily recognized by, or easily accessible to, Ebling Library's patrons, few of whom reported using RSS as a means of staying current with the literature. The use of OPML was well outside the mainstream of librarianship, and, even among colleagues who were aware of OPML, few had considered how it could be used to easily share groups of feeds between users and readers. The value of identifying, collecting, and categorizing new journal articles as a service to Ebling Library's clientele became apparent. After acknowledging this need, a group of six librarians set out to develop and promote a new kind of RSS-based current awareness service that would save time, minimize effort, ensure quality, and allow customization. Inspired by the Feed Navigator developed by the National Library

Notes of Health Sciences at the University of Helsinki, a working group was formed and charged with exploring possibilities for an RSS current awareness service.

Open source and freely available feed-finding tools and homegrown input forms that fed into the library's existing journal database structure were employed to create an initial collection of 1,900 journal feeds (now exceeding 2,400). Because the group had neither the time required for individual title review nor an established taxonomy necessary for categorizing the journal titles according to discipline, the group leveraged the category assignments in the SFX knowledgebase, the library's Open URL link resolver software, which has an internal taxonomy for electronic journals. Although, the taxonomy is not particularly refined, the group deemed it adequate for the task. The group exported the SFX categories for the library's active subscriptions, matched them against the library's electronic journals database, and reviewed the assignments for accuracy.

Methods of Providing CAS



Notes The categorical lists of RSS feeds comprehensively presented the titles available to Ebling Library users, but the extended length of most of the subject-based lists was cumbersome. Moreover, the alphabetically arranged categorical lists did nothing to signify the influence or popularity of a journal within the categories. To resolve these usability and qualitative concerns, the group selected core journals in each category to create much shorter, more relevant "top journals" lists.

The Ebling library compiled the lists using librarians' subject expertise, liaisons' core lists of titles, journal usage statistics, and the impact factors from Web of Knowledge's Journal Citation Reports. To save users' time and to allow easy import into feed readers, bundled OPML files were created for both these top journals lists and the comprehensive lists. Step-by-step instructions were provided to simplify the task of quickly populating users' feed readers with high-quality journal information.

With the feeds gathered, categorized, and bundled, the group's focus moved to bringing users to the current awareness project through multitiered educational and promotional activities. The obvious first target group for these activities was Ebling Library's own library staff, whose understanding of the project's purpose as well as the process of creating personalized RSS-based current awareness services would be essential to the project's success. A "proof of concept" session was held in which various feed readers were configured with feeds from library professional journals. This was contrasted with the system of routing journals among staff for current awareness purposes that had been used internally but had become bogged down and impractical. Staff members were also offered individualized sessions to help them to choose readers, set up feeds, and become comfortable using RSS feeds. Liaison librarians were encouraged to prepare themselves to be able to actively promote the value of RSS for current awareness among their liaison groups.

Along with a collection of instructional materials, including video, an hour-long "Keeping Current with the Health Literature Using RSS" class has been added to Ebling Library's regularly scheduled drop-in instructional sessions. The class emphasizes RSS as a convenient alternative to more traditional methods of staying on top of professional literature and includes hands-on activities for participants to set up a feed reader, select and import individual feeds and OPML bundles, and view and edit feeds in a feed reader. Brief introductions to the concept of current awareness using RSS have been incorporated into many of the various presentations provided to Ebling Library user groups in other instructional settings.

Self Assessment**Notes**

Fill in the blanks:

1. The full form of RSS is Really simple
2. The full form of OPML is
3. The full form of CAS is

8.2 Need and Characteristics of Current Awareness Services



Did u know? Information is the life-blood of research work. Research today depends on retrospective as well as current information. An important source of current information is journals or periodicals. A researcher has to keep himself updated by regularly scanning journals related to his/her area of work. However, increasing volume, specialization and interdisciplinary nature of research work have led to the problem of information explosion, seepage and scattering. Added to this is the escalating cost of journal publications.

These problems have been posing major challenge to information professionals for quite some time. Indexing and abstracting periodicals, both in print form and CD-ROM databases have tried to overcome this problem to some extent. They act as useful tools for identification of information. Rapid developments in information and communications technologies and the reduced costs of hardware, make possible new and better means of providing access to information, by affording just in time information rather than just in case information.

Publishers of journals are shifting to electronic and on-line publishing to reduce time lag. They also provide services like e-mail-based Table of Contents services like Link Alert from Springer Verlag and Contents Direct from Elsevier, where by they push the Table of Contents of journals to the desktop of researchers. This helps the researchers to locate articles that might be of interest to them. But with a great number of journals being published, it is still difficult to identify articles of relevance. To overcome these problem electronic versions of secondary services like Current Contents from ISI and Uncover Reveal have come up. They are similar to indexing and abstracting periodicals. They provide the Electronic Table of Contents of major publications, especially journals (often along with the abstracts) according to the requirements of the users.

But once the user has identified articles of interest, locating the full text is still a problem. The journal may be within the reach of the researcher, but he may not be aware of it. This information, of the availability or non-availability of a journal of interest to a researcher in the local library will greatly assist in the location of the full text of articles.

National Center for Science Information

National Centre for Science Information (NCSI), Indian Institute of Science (IISc), established in 1983, is a premier information centre providing computer-based information services to the research and academic community in Science and Technology all over the country. It provides different types of information services using bibliographic databases and other resources. One such is the 'Electronic Table of Contents' or ETOC service.

Notes

Current Contents (CC)

Institute of Scientific Information (ISI), Philadelphia, USA publishes Current Contents (CC), a current awareness database that provides information in the fields of science, social science, technology, and arts and humanities. Published weekly in seven editions, it covers the contents from the world's scholarly journals. CC displays the tables of contents from more than 7,400 journals and 2,000 books, and conference proceedings, and provides complete bibliographic data for every item covered. NCSI subscribes for Current Contents in four subject categories: Agriculture; Biology & Environmental Science; Engineering, Computing & Technology; Life Sciences and Physical, Chemical & Earth Sciences.

Journal Citation Reports (JCR)

ISI also publishes the JCR, which provides a systematic and objective means of determining the relative importance of journals within their subject categories. Five primary data fields with sort and filter options are provided in the JCR database: Total Cites (number of times the journal has been cited in a year), Impact Factor (frequency with which the average article in a journal has been cited in a particular year), Immediacy Index (how quickly the average article in a specific journal is cited), Articles (number of articles published in the year), Cited Half life (reflects the ongoing use of a journal).

Electronic Table of Contents (ETOC)

ETOC is a service provided by NCSI for the IISc community, using the latest CC issues, which are downloaded via the Internet using FTP. It delivers every week, by e-mail, content pages along with abstracts of up to ten journals identified by the user in advance. The ETOC users can enroll for the service thorough the Web by selecting ten journals of choice. The enrollment form is received through e-mail and a copy is sent to the user for confirmation. A profile is created for the user by assigning a profile number. The enrollment form indicates the availability of the journals in IISc library and also the Impact Factor of the Journal obtained from the JCR database. The records from CC issues are downloaded using 'CCWin', a programme supplied by ISI. This downloaded file is transferred to a Linux machine and processed using C Programmes, which have been developed in-house. Since, there are about 210 users, a batch processing of the profiles is done by creating inverted files for the journals. Then they are compared with the profiles of the users and the output is obtained. The output is mailed to the users. The users can modify their profiles at the same website.

Self Assessment

Multiple Choice Questions:

4. Information is the life-blood of:

(a) Work (b) Research work

(c) Information (d) Need.

5. National Centre for Science Information (NCSI), Indian Institute of Science (IISc), established in:

(a) 1973 (b) 1963

(c) 1983 (d) 1988.

8.3 Types of Current Awareness Services

Notes

To find out about the latest developments in an area one can study:

- monitor important journals in the field
- read articles related to the area of study
- join relevant associations
- attend relevant conferences
- read information bulletins or newsletters related to the field
- talk to others in the same field
- join list serves/newsgroups.

Before you begin it is a good idea to consider:

- major keywords and search statements associated with the topic
- major journals in your area - does the library subscribe to these journals in print or electronically?
- specialised resources which you may need to use, e.g., government documents, patents, statistics, etc.

There are many Current Awareness Services. They are:

- database services
- publisher services
- Internet services
- discussion lists.

They allow receiving information about the latest articles published in the favourite journals or area of interest. One can also find out about the latest books published in the field.

To check whether a current awareness service is available, look for options such as Register, Personal, My or Customize.

Blackwell Synergy:

- TOC-Alerts (Table of Contents) for your favorite Blackwell Synergy journals
- Save searches to run later, and add articles from searches to favourites. To access full text from Blackwell Synergy, click on Synergy Homepage to be taken to the University of the Sunshine Coast's subscription. Search here to find the full text of articles of interest
- To use Blackwell's current awareness service, Register, then login and go to My Synergy

Ovid Databases:

Current Contents, Bowker Books in Print and Sport Discus

- Current Contents and Sport Discus provides citations and abstracts for articles
- Bowker Books in Print provides information about books from major International publishers
- Set-up a e-mail TOC-Alert (Table of Contents) by saving your search as an Auto Alert (SDI) Service
- The Auto Alert is run periodically and any newly-added documents on your topic will be retrieved and e-mailed to you
- To Set-up SDI in Ovid run your search and then click Save Search History (under the search box). Select Save Search as an auto-alert (SDI) and enter your e-mail address and the format you want your citations to be forwarded in, then click the Save Search button.

Notes

Project Muse

Project Muse is a full text database covering over 100 titles including: literature and criticism; history; the visual and performing arts; cultural studies; education; political science; and gender studies.

- Sign up to receive e-mail alerts of new issues on Project Muse as well as new titles. Links are included to journal table of contents
- To set-up a current awareness profile, go to Information, select 'Communicating with Project Muse' and select 'Receive notification of New Materials'.

Science Direct

Science Direct is a full text database that provides access to almost 100 full text journal titles in all areas of research. In addition, it includes a searchable database of over three million article citations from all fields of science and the table of contents of over 1,700 journals, as well as book citations.

- Register with Science Direct and create a personal profile. This feature allows you to save searches, create search alerts, volume/issue alerts and citation alerts and create a personal favorites list of journals and books which can be searched or browsed
- To set-up a profile, choose the Register link at the top right of the screen and fill in the registration form
- To create a list of favorite journals, select the 'Add/Remove Favourite Journals and Book Series' link, locate the journal or book you wish to add to the list and then click Add. When you have finished, click Save
- To create alerts, select the 'Add/Remove Alerts' link. For search alerts, do a search and then click the 'Save as Search Alert' link at the top of the list of results. Fill in a name for the search and the frequency for how often you want the search run and click 'Update Alert'
- For Tables of Contents Alerts, choose the link for 'Add/Remove Volume/Issue Alerts. Locate the journal or book you wish to add to the list and then click Add. When you have finished, click Save. For citation alerts, find the article citation you want to save an alert for and click the 'Save as citation alert' link on the right hand document menu.



Task

Write twenty sentences about a CAS service of your choice.

Self Assessment

State whether the following statements are true or false:

6. Project Muse is a full text database covering over 200 titles.
7. Science Direct is a full text database that provides access to almost 100 full text journal titles in all areas of research.

8.4 Summary

- Publishers of journals are shifting to electronic and on-line publishing to reduce time lag.
- National Centre for Science Information (NCSI), Indian Institute of Science (IISc), established in 1983, is a premier information centre providing computer-based information services to the research and academic community in Science and Technology all over the country.

- Project Muse is a full text database covering over 100 titles including: literature and criticism; history; the visual and performing arts; cultural studies; education; political science; and gender studies.
- Science Direct is a full text database that provides access to almost 100 full text journal titles in all areas of research.
- While library literature on RSS feeds has been plentiful in recent years, few articles discuss services that fully leverage the “push technology” power of RSS. Information is the life-blood of research work. Research today depends on retrospective as well as current information. An important source of current information is journals or periodicals.

Notes

8.5 Keywords

Indistinguishable : Impossible to see or hear as different or separate

Dissent : When someone does not agree with something

Substantive : Important or serious

8.6 Review Questions

1. Define current awareness services.
2. Explain types and methods of current awareness services.
3. Describe need and characteristics of current awareness services.
4. Explain the types of current awareness services.
5. Define project muse and science direct.

Answers: Self Assessment

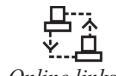
- | | | |
|------------------------------|--------------------------------------|--------|
| 1. syndication | 2. outline processor markup language | |
| 3. current awareness service | 4. (b) | 5. (c) |
| 6. False | 7. True | |

8.7 Further Readings



FOURIE (D) and DOWELL (D). *Libraries in the information age*. 2002. Libraries Unlimited, New York.

KATZ (William A). *Introduction to reference work: reference service and reference process*.



Online links http://www.asksource.info/support/manual/info7_9.htm
http://www-public.jcu.edu.au/libcomp/az/JCUPRD_026163#_Introduction

Notes

Unit 9: Selective Dissemination of Information (SDI) Services

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Introduction

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 9.3 Software Documentation Folder (SDF)

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 9.5 Referral

 9.6 Document Delivery Service

 9.7 Summary

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Objectives

After studying this unit, you will be able to:

- Explain selective dissemination of information services
- Define role of documentation and software documentation folder
- Define bibliographic database and document delivery services.

Introduction

Selective Dissemination of Information (SDI) was originally a phrase related to library and information science. SDI refers to tools and resources used to keep a user informed of new resources on specified topics.

SDI services pre-date the World Wide Web, and the term itself is somewhat dated. Contemporary analogous systems for SDI services include alerts, current awareness tools or trackers. These systems provide automated searches that inform the user of the availability of new resources meeting the user's specified keywords and search parameters. Alerts can be received a number of ways, including e-mail, RSS feeds, voice mail, Instant messaging, and text messaging.

Notes

Selective Dissemination of Information (SDI) was a concept first described by Hans Peter Luhn of IBM in the 1950's. Software was developed in many companies and in government to provide this service in the 50's and 60's, which allowed distribution of items recently published in abstract journals to be routed to individuals who are likely to be interested in the contents. For example, the system at Ft. Monmouth automatically sent out (by mail) a different set of abstracts to each of about 1,000 scientists/engineers in the Army depending on what they were working on. The selection was based on an "interest profile," a list of keywords that described their interests. In some organizations, the 'interest profile' was much more than a simple list of keywords. Librarians or information professionals conducted extensive interviews with their clients to establish a fairly complex profile for each individual. Based on these profiles, the information professionals would then distribute selectively appropriate information to their clients. This labour-intensive operation was costly, which over time was diminished.

9.1 Selective Dissemination of Information (SDI) Services

SDI is a special type of current awareness service. It supplies each user with the references of documents to their predefined areas of interest, selected from document published recently or received during a particular span of time.



Did u know? Luhn first coined the concept of SDI as a computer mediated information services.

The workflow of SDI service is based on the following steps:

- **Step I-Users' profile:** In the first step needs and interests of each user or a group of users having similar requirements are ascertained and carefully analyzed. These are then expressed in terms of some keywords, collected from an accepted thesaurus. User profile may be stored as a database file in case of computerised SDI.
- **Step II-Document profile:** In this step contents of selected documents are analyzed and expressed in terms of keywords selected from the same accepted thesaurus. It is necessary for precise matching. This may also be stored as a database file.
- **Step III-Matching:** The first two steps are the work of library professionals. This step *i.e.*, matching of two profiles is conducted by computer at regular intervals. The result of matching is then saved as a file in the required format such as text, html etc.
- **Step IV-Notification:** This step involves communication of result to the users. Notification may be sent to users through e-mail by attaching the result file or as a hard copy by obtaining printout of the result file (s).



Notes **Step V-Feedback:** SDI includes a mechanism of feedback from the side of users.

Generally, a feedback form is sent to each user along with the notification in which he/she has to indicate whether the document really interests him/her, whether he/she needs a copy or why it is of no interest to him/her. On the basis of feedback user's profile is updated regularly.



Task Discuss various steps involved in SDI.

Notes

9.2 Role of Documentation

Documentation is a general term for written information, media and other content used to support a tool or a process. Documentation (to document) also refers to the process of providing evidence.

Technical writers and corporate communicators are professionals whose field and work is documentation. Ideally, technical writers have a background in both the subject matter and also in writing and managing content (information architecture). Technical writers more commonly collaborate with subject matter experts (SMEs), such as engineers, medical professionals, or other types of clients to define and then create content (documentation) that meets the user's needs. Corporate communications include other types of written documentation that is required for most companies.

**Notes**

Common types of documentation include user guides, white papers, online help, and quick reference guides. It is less common to see hard copy (paper) documentation. Documentation is distributed via websites, software products, and other on-line applications.

Documentation Specializations:

- Marketing Communications to convey the company's value proposition through a variety of print, electronic, and social media. This area of corporate writing is often engaged in responding to proposals.
- In Technical Publications Technical writers document a company's project or service. Technical publication includes user guides, installation manuals, and troubleshooting/repair/replace procedures.
- Legal documentation This type of documentation is often prepared by attorneys or paralegals that could be in private practice or retained as corporate council.
- Compliance documentation This type of documentation codifies Standard Operating Procedures (SOPs), for safety, financial, or other regulatory compliance needs.

Computer Science

The following are typical documentation types: Request for Proposal (RFP) Requirements Statement of Work Software Design and Functional Specification System Design and Functional Specifications Change Management, Error and Enhancement Tracking User Test and Acceptance (UTA). There are many types of software applications used to create documentation tools which are available for this purpose.

Self Assessment

Fill in the blanks:

1. The SDI refers to used to keep a user informed of new resources on specified topics.
2. The SDI services include , or
3. Alerts can be received a number of ways including , and

9.3 Software Documentation Folder (SDF)

A common type of software document written by software engineers in the simulation industry is the SDF. When developing software for a simulator, which can range from embedded avionics devices to

3D terrain databases by way of full motion control systems, the engineer keeps a notebook detailing the development “the build” of the project or module. The document can be a wiki page, MS word document or other environment. They should contain a requirements section, an interface section to detail the communication interface of the software. Often a notes section is used to detail the proof of concept, and then track errors and enhancements. The result is a detailed description of how the software is designed, how to build and install the software on the target device, and any known defects and work-a rounds. This builds document enables future developers and maintainers to come up to speed on the software in a timely manner, and also provides a roadmap to modifying code or searching for bugs.

Notes

9.4 Bibliographic Database

A **bibliographic database** is a database of bibliographic records, an organized digital collection of references to published literature, including journal and newspaper articles, conference proceedings, reports, government and legal publications, patents, books, etc. In contrast to library catalogue entries, a large proportion of the bibliographic records in bibliographic databases describe analytics (articles, conference papers, etc.) rather than complete monographs, and they generally contain very rich subject descriptions in the form of keywords, subject classification terms, or abstracts.

**Notes**

A bibliographic database may be general in scope or cover a specific academic discipline. A significant number of bibliographic databases are still proprietary, available by licensing agreement from vendors, or directly from the abstracting and indexing services that create them.

Many bibliographic databases evolve into digital libraries, providing the full text of the indexed contents. Others converge with non-bibliographic scholarly databases to create more complete disciplinary search engine systems, such as Chemical Abstracts or Entrez.

History

Prior to the mid-20th century, individuals searching for published literature had to rely on printed bibliographic indexes. “During the early 1960s computers were used to digitize text for the first time; the purpose was to reduce the cost and time required to publish two American abstracting journals, the *Index Medicus* of the National Library of Medicine and the *Scientific and Technical Aerospace Reports* of the National Aeronautics and Space Administration (NASA). By the late 1960s such bodies of digitized alphanumeric information, known as bibliographic and numeric databases, constituted a new type of information resource”.

**Did u know?**

Online interactive retrieval became commercially viable in the early 1970s over private telecommunications networks.

The first services offered a few databases of indexes and abstracts of scholarly literature. These databases contained bibliographic descriptions of journal articles that were searchable by keywords in author and title, and sometimes by journal name or subject heading. The user interfaces were crude, the access was expensive, and searching was done by librarians on behalf of ‘end users’.

9.5 Referral

Referral describes the active mode of information service, of the type traditionally provided by **SPECIAL LIBRARIES**. The attention of users is drawn to information held by the library or information agency in anticipation of demands they might make.

Preparation and circulation of newsheets, literature surveys, reading lists, abstracts, etc. are used for this purpose, and in cases where the immediate resources of the service are insufficient users will be referred to specialist organizations for further help.

9.6 Document Delivery Service

Library

- New Design
 - Address and opening hours
 - Lending Service

Document Delivery Service

- FAQs
 - Service for Librarians
 - Translation programme
 - Information Service
 - Studying in Germany
 - Newsletter
 - Top of Form
 - Bottom of Form

Subito—the document delivery service

Subito is the delivery service of German libraries. This service (against a fee) can be used to order articles and essays from magazines and/or books that are available in German libraries and the texts can be received within 72 hours.

You can place your order online, send it by post or hand it over personally. Precise bibliographic details are required in order to process a request.

Self Assessment**Notes**

State whether the following statements are true or false:

6. Referral describes the active mode of information service of the type traditionally provided by special libraries.
7. Subito is the document delivery service of France libraries.



Task Write a short note on the history of bibliographic database.

9.7 Summary

- Common types of documentation include user guides, white papers, on-line help, and quick-reference guides.
- A common type of software document written by software engineers in the simulation industry is the SDF.
- A bibliographic database is a database of bibliographic records, an organized digital collection of references to published literature, including journal and newspaper articles, conference proceedings, reports, government and legal publications, patents, books, etc.
- Referral describes the active mode of information service, of the type traditionally provided by SPECIAL LIBRARIES.
- Subito is the delivery service of German libraries. This service (against a fee) can be used to order articles and essays from magazines and/or books that are available in German libraries and the texts can be received within 72 hours.
- Selective dissemination of information (“SDI”) was originally a phrase related to library and information science.
- Documentation is a general term for written information, media, and other content used to support a tool or a process.

9.8 Keywords

Documentation : Records

Software Documentation Folder : A common type of Software document which written by software engineers.

9.9 Review Questions

1. Explain the selective dissemination of information services.
2. What do you mean by role of documentation.
3. Define software documentation folder (SDF).
4. Explain bibliographic database.
5. Write a note on referral.
6. Write short note on document delivery service.

Notes

Answers: Self Assessment

- | | |
|--------------------------------------|--|
| 1. tools and resources | 2. alerts, current awareness tools, trackers |
| 3. e-mail, RSS feeds, text messaging | |
| 4. (c) | 5. (d) |
| 6. True | 7. False |

9.10 Further Readings



Books

RANGANATHAN (S R). Reference service. Ed 2. 1989. *Ranganthan Endowment for Library Science, Bangalore.*

KRISHAN KUMAR. *Reference service* Ed. 3. 1996. Vikas Publishing, New Delhi.



Online links

<http://www.srlst.com/ijist/ijism-Vol6No1/ijism61-27-44.pdf>

http://www.asksource.info/support/manual/info7_8.htm

Notes

Unit 10: Library Information Systems and Networks

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 10.2.2 Categories of Network

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10.5 National Social Science Documentation Centre (NASSDOC)

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 10.5.2 Facilities Available at NASSDOC

10.6 INFLIBNET Library

10.7 Summary

10.8 Keywords

10.9 Review Questions

10.10 Further Readings

Notes**Objectives**

After studying this unit, you will be able to:

- Define network development in India and types of networks
- Know about national institute of science communication and information resources
- Explain defense scientific information and documentation centre
- Elaborate national social science documentation centre
- Understand INFLIBNET Library.

Introduction

If all library administrators had mentors, they would be well-equipped to find "... computing solutions aimed at bringing the user and content together, which is the essence of service within libraries of all types and sizes." The authors use the term "Library Information System (LIS)" to encompass both mature and new developments, including Integrated Library Systems (ILS), online databases, Web based resources, digital library collections, and electronic books and journals. The explosion in the amount of literature that is available, increases among the number of users and their different needs, and the application of electronic media are forcing libraries to construct and participate in networks. Magnetic tapes, floppy disks, and CD-ROMs provide enough data storage capacity. Retrieval through telecommunications networks and access to international databases are available for searching for information on various subjects. With the advent of networks, remote transmission of texts and graphics, video clips and animated clips are also possible.

10.1 Definitions

- A library network is broadly described as a group of libraries coming together with some agreement of understanding to help each other with a view to satisfying the information needs of their clientele.
- UNISIST II working document defines Information Network as a set of inter-related information systems associated with communication facilities, which are co-operating through more or less formal agreements in order to implement information handling operations to offer better services to the users.
- The National Commission on Libraries & Information Science in its National Programme Document (1975) defines a network as two or more libraries engaged in a common pattern of information exchange, through communications for some functional purpose.

Objectives of a library network:

- To promote and support adoption of standards in library operations
- To create databases for projects, specialists and institutions to provide online information services
- To improve the efficiency of housekeeping operations
- To coordinate with other regional, national and international network for exchange of information and documents
- To generate new services and to improve the efficiency of existing ones.

10.2 Network Development in India

Notes

Some factors that are responsible for the development of library and information networks in India are:

- The report of the working group of the planning commission on modernization of library services and informatics for the seventh five year plan, 1985-90
- The National Policy on Library & Information systems document (1986) accepted by the ministry of HRD, Government of India
- The report on national policy on university libraries prepared by the Association of Indian Universities (1987)
- The UGC report on information systems for science and technology under the Department of Science & Industrial Research (DSIR) Government of India has been vigorously promoting an integrated approach to library automation and networking.

Limitations in Network Development

A network may fail in the early stages if there is no proper planning or if adequate funds are not available. Moreover, a common memorandum of agreement signed by the participating libraries at the institutional level is essential for the success of a network venture. On a more practical level, catalogue data must be in a standard, machine readable form for it to be shared and exchanged. And, finally, a continuous flow of external assistance is crucial for the network's survival.

10.2.1 Types of Networks

Presently, there are three types of computer networks:

- LAN
- MAN
- WAN

Local Area Network (LAN)

A LAN is a number of related computers and electronic devices that share information over a transmission media. A typical use of LAN is to tie together personal computers in an office so that they can all use a single printer and a file server. The LAN can be within a building or a campus wide network.

Metropolitan Area Network (MAN)

Attempts are being made to develop this type of network in metropolitan areas such as Delhi, Kolkata, Bangalore, Chennai, etc.

Wide Area Network (WAN)

A large-scale network, involving offices in different cities and countries is referred to as WAN, which is specially designed to interconnect data transmission devices over wide geographical areas.

10.2.2 Categories of Network

Library networks have been divided into two categories: general network and specialized network. The latter can further be divided into metropolitan network and countrywide network.

Notes

General Networks in India

NICNET (www.mylibnet.org):

Title: National Information Center Network

Sponsor: Planning Commission, Govt. of India

Membership: Four national and regional nodes, 32 states and union territory nodes; seventy cities and towns

Services: Bulk file transfer; teleconferencing; full text and bibliographic retrieval services Application: ICMRNIC Center; MEDLARS in India; Chemical Abstracts database.

INDONET:

Title: INDONET data Network

Sponsor: CMC Ltd (1986) = Informatics India Ltd (1989)

Membership: Commercial computer network

Services: Database services such as DIALOG, COMPUVERSE; IP; SHARP

Applications: ACME; file transfer; international gateway.

I – NET (VIKRAM):

Title: I – NET

Sponsor: Dept. of Telecommunications, Govt. of India

Connectivity: Packet switched public data network covering nine cities

Services: Information exchange through e-mail/FTP; Bibliographic databases

Specialized Networks

Metropolitan Networks

CALIBNET:

Title: Calcutta Libraries Network

Sponsor: NISSAT – Govt. of India

Applications: Cataloguing; serials control; acquisitions; circulation

Services: CAS; SDI; union catalogue; partial database; editing and retrieval of records; global information; search; full text document delivery; library automation; CALIBNET INFO Services

BONET:

Title: Bombay Library Network

Sponsor: NISSAT & NCST (1994)

Objective: To promote cooperation among libraries in Bombay

Services: Online catalogue; online document delivery; IRS; interlibrary loan; dissemination of information

DELNET (delnet.nic.in/):

Title: Developing Library Network

Sponsor: NISSAT & NIC (1988)

Objective: To promote resource sharing; develop a network of libraries; collect, store, disseminate information

Members: 165 Institutions, 600 Libraries, 15 States in India, 5 from outside India

<i>Services:</i> Resource sharing; free Software; ICE online facility; books database; thesis database; Indian specialists; database	Notes
ADINET (http://www.alibnet.org/):	
<i>Title:</i> Ahmedabad Library Network	
<i>Sponsor:</i> NISSAT, DSIR (1994) & INFLIBNET	
<i>Objective:</i> To bring cooperation among its regional libraries; to develop databases; to integrate scientific and technical information systems	
<i>Members:</i> Nine libraries	
<i>Services:</i> Library automation; library holdings; database in progress	
MYLIBNET (www.mylibnet.org):	
<i>Title:</i> Mysore Library Network <i>Sponsor:</i> NISSAT (1994)	
<i>Objective:</i> Developing software tools; conducting seminar; workshops/training programmes; conduct surveys	
<i>Host Site:</i> CFTRI, Mysore	
<i>Members:</i> 116 Institutions	
<i>Services:</i> MYLIB Database; e-journals; food patents; CFTRI Library Bulletin; public services.	
Countrywide Area Network: DESINET:	
<i>Title:</i> Defence Science Information Network	
<i>Sponsor:</i> DESIDOC, Delhi	
<i>Activity:</i> Focus on scientific, research and defense communities	
ERNET:	
<i>Title:</i> Educational and Research Network	
<i>Sponsor:</i> Dept. of Electronics, Govt. of India; UNESCO (Financial assistance from UNDP)	
<i>Members:</i> Eight institutions (5 IITs, IISc., National Centre for Software Technology – Bombay, CCI wing of Dept. of Electronics)	
<i>Services:</i> Communication services such as e-mail, file transfer, remote log on, database access, bulletin board, etc.	
SIRNET:	
<i>Title:</i> Scientific and Industrial Research Network	
<i>Sponsor:</i> CSIR (Commissioned Agency- NCST, Mumbai) <i>Members:</i> 40 labs and R&D Institutions	
<i>Applications:</i> Scientific communication; leather technology; natural products; food technology; medicinal Plants	
VIDYANET:	
<i>Title:</i> VIDYANET (Dedicated Communication Computer Net) <i>Sponsor:</i> TATA Institute of Fundamental Research, Mumbai	
<i>Objectives:</i> To provide rapid means of communications by linking computers at various institutions in India to similar networks outside the country; to stimulate corporate research, the day-to-day exchange of research information and the execution of joint projects and publications	
<i>Services:</i> File transfer facility; sharing of computer resources and access to remote applications, databases, libraries, etc.	

Notes

BTISNET (www.btisnet.nic.in/):

Title: BTISNET (Specialized Information Network) *Sponsor:* Dept. of Biotechnology, Govt. of India.

Connectivity: 10 Specialized Information Centres in genetic engineering, plant tissue culture; photosynthesis and plant molecular biology; cell transformation ; bio-process engineering.

Services: Data processing using applications software; online communication access; facsimile facility

INFLIBNET (www.inflibnet.ac.in/index.jsp):

Title: Information Library Network

Sponsor: UGC (1991)

Connectivity: Computer communication network of universities and R&D; libraries and bibliographic information centers throughout the country

Members: 200 Universities; 400 College libraries; 200 R&D libraries

Services: Catalogue service; database services; document supply services; e-mail; BBS: audio and video conferencing, etc.

BALNET:

Title: Bangalore Library Network

Sponsor: JRD; Tata Memorial Library (1995) *Members:* 100 Libraries

MALIBNET:

Title: Madras Library Network *Sponsor:* INSDOC & NISSAT (1993) *Members:* 15 Libraries

Activity: Two important databases, a directory database of current serials in Chennai and a contents database covering articles published in 300 journals available in Chennai libraries.

Self Assessment

Fill in the blanks:

1. The three types of network are LAN, and
2. The full form of LAN is
3. The full form of WAN is
4. The full form of MAN is
5. Library networks have been divided into two categories *i.e.*, and

10.3 National Institute of Science Communication and Information Resources (NISCAIR)

National Institute of Science Communication and Information Resources (NISCAIR), located at New Delhi, India, is one of the premier information science institutes in India under the umbrella of CSIR (Council of Scientific and Industrial Research) that comprise 36 other labs/institutes of different disciplines spread across the country.



Notes

National Institute of Science Communication and Information Resources (NISCAIR)

came into existence on 30 September, 2002 with the merger of National Institute of Science Communication (NISCOM) and Indian National Scientific Documentation Centre (INSDOC).

Both NISCOM and INSDOC, the two premier institutes of the Council of Scientific and Industrial Research (CSIR), were devoted to dissemination and documentation of S&T information.

Notes

NISCOM had been in existence for the last six decades (first as two Publication Units of CSIR, which were merged to form the Publications Division, which was later renamed as Publications & Information Directorate and in 1996, as NISCOM). Over the years, NISCOM diversified its activities, and through a host of its information products, comprising research and popular science journals, encyclopaedic publications, monographs, books, and information services, it had been reaching out to researchers, students, entrepreneurs, industrialists, agriculturists, policy planners and also the common man.

INSDOC came into being in September, 1951 and was engaged in providing S&T information and documentation services through myriad activities such as abstracting and indexing, design and development of databases, translation, library automation, providing access to international information sources, human resource development, consultancy services in setting up modern library-cum-information centres.



Did u know? INSDOC was also host to the National Science Library and the SAARC Documentation Centre. The first director of INSDOC was B.S. Kesavan.

Now, with the formation of NISCAIR, all the above multifaceted activities have been amalgamated, making NISCAIR, an institute capable of serving the society using modern IT infrastructure in a more effective manner and taking up new ventures in the field of science communication, dissemination and S&T information management systems and services. Broadly, the core activity of NISCAIR will be to collect/store, publish and disseminate S&T information through a mix of traditional and modern means, which will benefit different segments of society.

This institute provides the Associateship in Information Science (AIS) Degree.

10.3.1 Activities of NISCAIR

To meet the above mentioned objectives, the following services/activities are organised by the Institute:

1. Publication of 17 primary and 2 secondary scientific/research journals
2. Publication of CSIR News and CSIR Samachar
3. Raw Material Herbarium and Museum
4. Popular Science Magazines
5. Popular Science Books
6. Information Services
7. Developing and Maintaining Specialised Databases
8. Electronic Publishing
9. Human Resource Development
10. Information Resources
11. Sales and Marketing
12. Consultancy Services

Let us now know about details of some important activities of NISCAIR.

Notes

10.3.2 Journals Published by NISCAIR

NISCAIR is bringing out 17 primary journals in various subject fields related to science and technology. These are:

1. Journal of Scientific and Industrial Research (monthly)
2. Indian Journal of Chemistry A (monthly)
3. Indian Journal of Chemistry B (monthly)
4. Indian Journal of Experimental Biology (monthly)
5. Indian Journal of Pure and Applied Physics (monthly)
6. Indian Journal of Biochemistry and Biophysics (bi-monthly)
7. Indian Journal of Engineering and Material Sciences (bi-monthly)
8. Indian Journal of Chemical Technology (bi-monthly)
9. Indian Journal of Radio and Space Physics (bi-monthly)
10. Journal of Intellectual Property Rights (bi-monthly)
11. Indian Journal of Marine Sciences (quarterly)
12. Indian Journal of Fibre and Textile Research (quarterly)
13. National Product Radiance (bi-monthly)
14. Indian Journal of Biotechnology (quarterly)
15. Indian Journal of Traditional Knowledge (quarterly)
16. Annals of Library and Information Studies (quarterly)
17. Bhartiya Vaigyanik evam Audyogik Anusandhan Patrika (Hindi) (half-yearly)

Besides the primary journals, NISCAIR also publishes two abstracting journals, they are:

1. Medicinal and Aromatic Plants Abstracts (bi-monthly)
2. Indian Science Abstracts (fortnightly).

10.3.3 CSIR News and CSIR Samachar

NISCAIR publishes CSIR News (in English) fortnightly and CSIR Samachar (in Hindi) monthly, both of which serve as an effective link between various CSIR Laboratories. Information is also provided to users on various R & D programmes and activities of CSIR, R & D organisations, university departments and industry.

10.3.4 Wealth of India (WOI)

WOI is an encyclopaedia of Indian natural raw materials. A continuous activity of NISCAIR is to publish the supplements of WOI, publish books on the natural raw material resources of the country and provide enquiry services to information seekers on natural raw material resources. Bharat ki Sampada, the Hindi version of Wealth of India is also available.

10.3.5 Raw Material Herbarium and Museum

Raw Material Herbarium and Museum provides consultancy services on identification of plants and crude drugs of plant origin. Photo Library Service is also provided to users where photographs /illustrations are reproduced from a collection of over 3000 photographs/illustrations.

10.3.6 Popular Science Publications

Notes

NISCAIR publishes popular science magazines in three languages covering the latest scientific developments for all kind of users especially for users requiring popular kind of scientific information. These are Science Reporter (English) and Vigyan

- Pragati (Hindi) published monthly and Science Ki Duniya (Urdu), a quarterly publication.
- NISCAIR publishes a large number of popular science books in various areas that include fundamental science, contemporary areas of science and science entertainment.

10.3.7 Information Services

NISCAIR offers a number of information services, some of these have been continuing since the inception of the erstwhile INSDOC.

- Medicinal and Aromatic Plants Information Services (MAPIS) based on the Wealth of India and MAPA databases.
- Content Abstract and Photocopy Service, is a highly personalised service. This service provides contents information from journals on a regular basis.
- Literature Search Service is offered by providing access to over 6000 international databases.
- NISCAIR is the National Centre for ISSN International Centre for assigning ISSN number to serials published in India.
- NISCAIR provides S&T translation services from major foreign languages such as Japanese, German, French, Spanish, Chinese and Russian into English.
- Bibliometrics Services: NISCAIR renders bibliometrics services on specialised subjects for studying the growth, development and spread of any area of research.

10.3.8 Electronic Publishing

NISCAIR publishes digitised versions of some of its major publications that include Indian Science Abstracts, Medicinal and Aromatic Plants Abstracts, the Wealth of India, Raw Materials Series.

10.3.9 Human Resource Development

Development of human resources in library, documentation and information science has been a major activity of erstwhile INSDOC since 1964. Over the years, the changing dimensions in the areas of information science, technology and computer applications to library activities have been included in the various courses offered by NISCAIR. Besides Associateship in Information Science, the two year full-time academic course in information science, NISCAIR offers several short term training courses in computer application to library and information activities, attachment training programmes and even on-site training on request.

NISCAIR also offers short term training programmes in science communication and herbarium techniques.

10.3.10 Consultancy Services

NISCAIR offers consultancy services in several areas:

- Modernisation, reorganisation and automation of library and information organisations including turnkey projects.

Notes

- Design and development of specialised databases for various organisations.
- Editing, designing, production and printing of publications.

Mission Statement

To become the prime custodian of all information resources on current and traditional knowledge systems in science and technology in the country, and to promote communication in science to diverse constituents at all levels, using the most appropriate technologies.

Services

- e-Publishing
- Editing
- Indexing
- Print and Production
- Herbarium Techniques
- Taxonomical Identification of Plants
- Identification of Crude Plants-based products
- Contents, Abstracts and Photocopy Service (CAPS)
- Document Copy Supply Services
- Literature Search Services

ISSN

- Translation Services
- Training Programmes
- Short-term courses in Science Communication
- National Science Library Services
- Reader's Service
- Technical Query Service
- Copying Service
- Inter Library Loan Service
- e-Journals Access
- National Science Digital Library (NSDL)

Associateship in Information Science (AIS)

This is the flagship course of the institute and is highly acclaimed in industry and academia. The past students of this course are serving the national and International level.

A national level competitive exam generally takes place in June the notification is published in the Employment News in February, this test followed by interview is the criteria of selection.



Task

Write a short note on information services provided by NISCAIR.

10.4 Defence Scientific Information and Documentation Centre (DESIDOC)

Notes

Defence Scientific Information and Documentation Centre (DESIDOC) is a division of the Defence Research and Development Organisation (DRDO) located in Delhi. Its main function is the collection, processing and dissemination of relevant technical information for DRDO scientists. The present director of DESIDOC is Dr. Aragonda Lakshmana Moorthy.

History

DESIDOC started functioning in 1958, as the Scientific Information Bureau (SIB) and was a division of the Defence Science Laboratory (DSL) (now called the Defence Science Centre). The DRDO library became a division of SIB in 1959. In 1967, SIB was expanded and renamed DESIDOC. DESIDOC became a DRDO laboratory on 29 July, 1970. Originally functioning from the main building of Metcalfe House (a national monument), DESIDOC moved to new five-storeyed building in the same Metcalfe House complex in August, 1988.

The objectives of DESIDOC are:

- “To function as a central source for providing scientific information, documentation, library, reprographic, translation services to DRDO headquarters, laboratories, establishments and to coordinate their scientific information programmes,
- To develop an information system for Defence Science and Technology,
- To provide training and user education programmes in the field of scientific information,
- To provide consultancy and referral services, and
- To publish scientific and technical journal, books and monographs of DRDO”.

The various activities of the Centre include the following:

- (a) *Library Services.* DESIDOC maintains the Defence Science Library which is the central library of DRDO. It gives access to Online Public Access Catalogue, CD-Rom Search Service, Document Supply Service and Resource Sharing Service.
- (b) *Information Processing and Dissemination.* The Library collects scientific and technical information of interest to DRDO and provides current awareness services and selective dissemination of information to users of DRDO.
- (c) *Database Development.* It develops and maintains bibliographic databases which includes OPAC, bibliographic database of books, reports, conference proceedings in DSL. The full-text databases, include newspaper clippings, Defence Science Journal, IEE/IEEE contents.
- (d) *DRDO Publications.* DESIDOC functions as the publication wing of DRDO and brings out a number of journals, monographs, newsletters, etc.
- (e) *Training.* It provides training in information collection, processing and dissemination, library automation, database development, online searching, Internet use, and many areas concerned with it.
- (f) *Technical Services.* It provides reprography (photography, audio, video presentation materials), translation, communication (e-mail, Internet) and printing services.

Notes**Functional Areas and Activities**

In order to meet various objectives and provide the services, the activities of the centre are organised covering the following functional areas:

- (a) *Internet and e-mail Access.* DESIDOC provides e-mail and Internet access to the DRDO Laboratories in the country, through ERNET and NICNET. Communication links have also been established between the Internet gateway of VSNL and DESIDOC and also between VSNL gateway and DRDO Headquarters to provide scientists/managers high speed easy access to Internet and its resources. DESIDOC has established an Internet Lab to cater to the needs of the Internet users.
- (b) *Multimedia Laboratory.* This facility has been provided to facilitate multimedia authoring, designing and presentation facilities to the top management and the Scientific Adviser to the Defence Minister. Expertise in the areas of image processing, CD-writing, audio-video designing, desktop CD publishing and multimedia CD-ROM production has been established. In order to establish multimedia laboratories both within and outside DRDO a few multimedia products were published and consultancy was provided.
- (c) *Reprographic Facilities.* Reprographic facilities have been set up to help DRDO top management and scientists in their technical presentations. This facility has a computer-based multicolour slide making system, a digital colour copier, high quality colour printers and video recorders, which helps in providing high quality presentation materials.
- (d) *Printing Facility.* A full-fledged high quality printing facility has been established which includes designing, layout, typesetting, DTP, processing and printing units for in-house production of DRDO publications. Commercial printing agencies have been given the responsibility for high quality multicolour printing.

Functions**Notes**

DESIDOC functions as a central information resource for DRDO, providing DRDO scientists and labs with scientific and technical information, based on its library and other information resources.

It also provides secure e-mail and Internet connectivity to DRDO labs through the networks of ERNET (of Dept of Electronics) and NICNET (of the Planning Commission).

Library

DESIDOC maintains the Defence Science Library (DSL), a well-equipped library housing 262,000 documents. It also provides access to various databases, as well as newspaper archives and other reference material. Additionally, DESIDOC has taken up the initiative of digitizing complete research papers of DRDO scientists, as well as preparing presentation material and promotional material for DRDO scientists.

DESIDOC has Library software which is developed by Dr. Anil Kumar Tyagi and uses a seven module integrated library management software called "SUCHIKA". DESIDOC also has web application software for information retrieval, "Patrika" (newspaper clippings software) and search software.

Notes

Currently latest version of Suchika is running in DIAT DRDO Pune.

Publications

DESIDOC functions as the publication wing of DRDO, providing scientific and technical information via specialised publications, monographs, technical bulletins, online journals and popular science publications. These cover current developments in Indian Defence R&D. The publications are unclassified and available free of charge online. Monographs and other publications are available on payment. The periodicals published are:

Defence Science Journal—A bi-monthly research periodical.

Technology Focus—A bi-monthly periodical focusing on the technologies, products, processes, and systems developed by DRDO.

DRDO Newsletter—Monthly Newsletter with house bulletins of DRDO activities.



Did u know?

DRDO Samachar—Monthly Newsletter with house bulletins of DRDO activities.
Published in Hindi.

DESIDOC Bulletin Of Information Technology (DBIT)—A bi-monthly publication bringing out the current developments in library and information technology.

Training Programmes

Short-term training programmes and workshops are conducted every year for DRDO personnel, mainly in the areas of library automation, Internet use, DTP, multimedia development, communication skills, stress management, etc.



Task

Discuss the function of DESIDOC in library and publications

10.5 National Social Science Documentation Centre (NASSDOC)

The National Social Science Documentation Centre (NASSDOC), a constituent unit of the Indian Council of Social Science Research (ICSSR), was established in 1970. The primary objective of the NASSDOC is to provide library and information support services to social science researchers. It is considered to be one of the largest repositories of bibliographical databases in the area of social sciences.

The centre was setup to meet the following objectives in the field of social sciences:

- "To provide library and information support services to the researcher in the field of social sciences".
- To provide support to those working in academic institutions, autonomous research organisations, policy making, planning and research units of government departments, business and industry.

Notes

- To disseminate information about developments in social science research.
- To provide guidance to libraries of ICSSR Regional Centres and ICSSR maintained Research Institutions.
- To provide financial assistance for documentation and bibliographic projects.
- To conduct short-term training courses for social scientists, research scholars, librarians and IT professionals.
- To make available study grants to doctoral students for collection of research material from libraries located in various parts of the country.

10.5.1 NASSDOC Services

NASSDOC has a vast collection of unpublished doctoral dissertations, reports of research projects. The centre acquires a wide range of Indian and foreign social science journals including back volumes of all the journals and prepares printed and digital databases. Based on the rich resources and available collection, NASSDOC offers the following library and information services to researchers in social sciences:

- (a) Library and reference services.
- (b) Literature search service from available databases both printed and digital including online databases.
- (c) Bibliography compilation on request.
- (d) Document delivery service by procuring books and journals on inter-library loan or by photocopying the documents.
- (e) Acquisition of published bibliographies, directories and reference sources in social sciences and distribution to institutions and libraries.

NASSDOC Databases/Publications

One of the major activities of NASSDOC is the creation of databases and locating tools. The products of NASSDOC include Library Databases, Directories, Indian Social Science Periodicals Literature (INSSPEL), Union Catalogues, Bibliographies and Journals. Some of these are:

Database of Research Project Reports

This database covers bibliographic details like author, title, subject, etc. of over 3000 Research Project Reports funded by ICSSR as well as by other organisations. It is available both in print and digital form.

Database of Ph.D. Dissertations

The database covers bibliographic details like name of the researcher, topic of dissertation, year of award of Ph.D. degree, etc., of about 5000 dissertations acquired by NASSDOC. The database is available both in print and digital form.

Directory of Social Science Libraries and Information Centres in India

The Directory gives information of 447 social science and allied disciplines, libraries and information centres attached to government agencies, research and training institutes under various ministries, universities and autonomous bodies, banks, industry and trade, etc. Information about libraries

having independent name, is given by references provided by their parent institutions. Each entry contains address of the library, e-mail, strength of the staff, type of collection, budget, subject coverage, computerisation details, facilities and services provided like photocopying, bibliography services, inter-library loan, online databases, literature search, translation, etc. The data given in the directory may enhance cooperation and resource sharing among Indian libraries and information centres.

Notes

Directory of Social Science Research and Training Institutions in India

This directory given comprehensive list of about 450 social science institutions engaged in research and training in India. It provides details on areas of research, major achievements, special facilities, current research projects, publications, type of staff, library collection and services, relations with national and international organisations, and complete postal address with telephone, telex, fax and e-mail. The Subject Index and Location Indexes are appended in the directory to provide multiple access points. The directory was last updated in 1996.

Directory of Asian Social Science Research and Training Institutes/Organisations in India

This directory provides information of about 42 teaching and research institutes on Asian Studies in India. Each entry contains information about the name, address of the institution, type of organisation, type of staff, aims and objectives, activities, parent organisation, publications, name and level of training courses, library collection and services and facilities provided by the institution.

Union Catalogue of Social Science Periodicals and Serials in India

Since 1970, the compilation of the Union Catalogue of Social Science Periodicals and Serials is being undertaken by NASSDOC. The complete database was published in 32 volumes, having details of 31,125 journals in 550 libraries, in 17 states and two union territories, having a separate volume of the National Library, Kolkata.

Union Catalogue of Periodicals in Chennai, Mumbai and Hyderabad libraries have been updated till the year 2000. The periodical details in Chennai cover location of 867 journals in 12 libraries, Union Catalogue of Periodicals in Hyderabad provides location of 4,455 titles in 25 libraries, whereas, Union Catalogue of Periodicals in Mumbai covers 2,928 journals available in 16 libraries. All the three Union Catalogues are available in machine-readable format also.

Union Catalogue of CD-ROM Databases in Social Science Libraries in India

This catalogue covers information about 132 CD-ROM databases available in 40 major social science libraries and information centres in India. It provides information about the title of CD-ROM database, frequency, brief annotation, information about the producer/vendor and library symbols along with holdings of the respective CD-ROM databases.

Bibliography on India in 2000 A.D.

This bibliography has a record of 647 select books and articles appearing in journals, published and unpublished research reports and seminar papers, etc. on India in English language covering the period up to the first half of 1987. It also includes articles on Asia and the world with some bearing on India.

Notes

10.5.2 Facilities Available at NASSDOC

- Library and Reference Service
- NASSDOC Databases/Publications
- Bibliography on Demand/Literature Search Service
- Acquisition of Theses
- Document Delivery/Interlibrary loan/Reprography Service
- Current Awareness Service
- Study Grant (for consulting libraries)
- Grants-in-Aid to Bibliographical and Documentation Projects Continuing Education Programme
- Preservation of Documents: Microfilming
- Library Automation (for modernising the services)
- ICSSR Sales and Distribution Unit.

Library and Reference Service

The ICSSR-NASSDOC library has a rich collection of reference sources viz, bibliographies, encyclopedias, doctoral theses, research project reports, books on social science research methodology, computer and information technology, research surveys and also on all social science disciplines.

The collection is augmented by bound volumes of periodicals, current Indian/foreign periodicals including ICSSR publications and other abstracting and indexing journals in social sciences, newsletters and annual reports of different organizations. Government reports/serials and institutional publications are also acquired on regular basis.

Library collection

Doctoral Theses = 5,406

Bound Volumes of Periodicals = 12,000

Books = 13,615

The collection is augmented by 900 current Indian/foreign periodicals Publications including ICSSR publications and other abstracting and indexing journals in social sciences. Government reports/serials and institutional publications are also acquired on regular basis.

Library membership

ICSSR-NASSDOC library's membership is open to the following categories of readers:

Official Members

These include ICSSR Council members/ senior officials of the ICSSR secretariat and regular professional staff of the ICSSR (*i.e.* Research Assistants/Documentation Assistants and above are official members), they are entitled to borrow books from the library.

Institutional Members

This type of membership is open to autonomous organizations, corporate houses, and research wings of public/private bodies. Institutional/Corporate membership fee is ₹ 4000 per annum. An institutional member can borrow five books at a time for a period of one month.

Consulting Members**Notes**

Consultation facility is extended to academicians, research scholars, students and members of general public that may include retired persons and other categories of readers. Consultation membership fee is ₹ 200 per annum (minimum ₹ 50 for one month).

Borrowing Members

Borrowing facility is extended to social scientists, academicians, students and general readers who are registered as members of the library. Books are issued against a deposit of ₹ 500 per book. Two books are issued to individual members at a time. There is no fee for the guest readers who want to consult the library for a day or two. They are issued a guest card for the day.

Facilities and Services for the Readers

A user-responsive collection of books, periodicals and electronic databases in the field of social sciences. Online Public Catalogue (OPAC) is for use by the library members/readers so that subject /author or keyword based searches can be made from the holdings of library books, Ph.D. theses, research reports, journals, etc.

NASSDOC's library catalogue is now available through internet browser. The URL is <http://202.71.128.164:9080/icssr/html/SearchForm>.

Members of the library can refer to the following online bibliographic as well as indexing and abstracting databases to search relevant references on subjects of their study : EconLit, ERIC, International Political Science Abstracts, LISA, Sociological Abstracts, Social Service Abstracts in the Reading Room of NASSDOC library.

Reference queries in the field of social sciences from the scholars are responded to via e-mail, telephone, fax, in person, or through postal correspondence.

Research related information is provided to scholars from NASSDOC's own library databases and also by exploring electronic sources and certain internet-based sources.

Books are issued/returned through automatic circulation system-based on Radio Frequency Identification (RFID) Technology.

Referral Service-The scholars are assisted through inter-library loan service and even referred to other institutions/libraries to consult material that are not available in the library.

Bibliography on Demand

Bibliography on demand is a widely known support service provided by the NASSDOC to social science research community. Normally, the requests for this paid service are received from scholars living in cities and small towns where library and documentation services are severely limited. Bibliography is a systematic descriptive list of published books, periodical articles, etc. as well as unpublished Ph.D theses and reports on specific subject. Compilation charges are ₹ 25/- for 25 references plus postal charges. Bibliography order form can be downloaded from the ICSSR website www.icssr.org

Literature Search Service from Electronic Resources

NASSDOC has a very large and rich collection of CD-ROM/on-line based information sources. These are used for searching literature/references on specific topic on demand. Some of the most used CD-ROM/ online databases in NASSDOC are:

Notes	Dissertation Abstracts on Disc (Humanities and Social Sciences) EconLit International Political Science Abstracts POPLINE PsycLit Sociological Abstracts PsycINFO ISID CD-ROM database ₹ 100/- is charged for 20 references with abstracts. ₹ 50/- is charged for 25 references without abstracts. Registered Postal charges are met by the scholars.
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Online Databases

NASSDOC has subscribed to the following online databases w.e.f. 2004–2005

EconLit
ERIC
International Political Science Abstracts
LISA
Sociological Abstracts
Social Services Abstracts
PsycINFO

Acquisition of Theses

NASSDOC has a programme of acquiring copies of unpublished Ph.D. theses in social sciences accepted by Indian universities. Since, 2003 NASSDOC has revised its thesis acquisition policy. It has been decided to pay ₹ 1500/- to a scholar for a copy of Ph.D. thesis. A scholar is required to submit a soft version, preferably CD-ROM, along with a hard copy (print version) of the thesis.

Document Delivery/Inter-Library Loan

Document delivery service is provided through Inter-Library Loan or by photocopying the papers published in periodicals to help the scholars. NASSDOC borrows books, periodicals, reports, etc., from other libraries to meet the demands of the research scholars. The demand is normally met through inter library loan service.

NASSDOC as a member of DELNET (Developing Library Network) can access various databases hosted by the DELNET on its website. NASSDOC can get documents on inter-library loan through DELNET from the member libraries.

Reprography service

Photocopies are provided to the scholars from NASSDOC collection and also from its own network, if the document is not available within the premises.

NASSDOC Databases Publications

NASSDOC is involved in creation of databases and information locating tools. These tools are available in printed form and some of them are also available on floppies. These are of different type as mentioned below:

Library databases, Directories, Indexes, Union Catalogues, Bibliographies

Annotated Index to Indian Social Science Journals, 2005

Bibliographic Data Bank (1), 2005

Bibliographic Data Bank (2), Jan.2002-Dec.2004

Conference Alert July 2005 onwards

Directory of Social Science Research and Training Institutes in India 2005

Directory of Social Scientists in India

ICSSR Research Project Reports, 2000–2005

INSPEL (Indian Social Science Periodical Literature) up to 1970

Online Public Access Catalogue (all the documents available in the NASSDOC library, e.g., Books, Theses, Research Reports etc.

Union List of Current Social Science & Humanities Periodicals :Delhi Libraries 2004–05.

Doctoral Dissertation Abstracts 2003–2004

Holding List of Periodicals 2007

Accession List (Qly).

Self Assessment

Multiple Choice Questions:

Current Awareness Service (CAS)

NASSDOC provides current awareness service by bringing out different publications at regular intervals. Moreover, photocopies of references included in the CAS publications are provided whenever there is a request for that by the scholars. Following are the serial publications of NASSDOC available at the sales counter of the ICSSR:

Notes	<p>Accession List (₹ 25/- per copy).</p> <p>Annotated Index to Indian Social Science Journals (₹ 25/- per copy).</p> <p>Conference Alert: A Quarterly Calendar (₹ 25/-per copy).</p> <p>Study Grant Scheme</p> <p>Under this scheme, Ph.D. research scholars get financial assistance from the ICSSR to consult libraries and archives that are located in other cities. Traveling allowances and daily allowance (<i>i.e.</i>, subsistence allowance) are paid to the scholars for this purpose. Rates for ICSSR Study Grantees have been revised in the 101st meeting of the Council held on 7 November, 2005.</p> <p>According to the new rules, a scholar availing this facility is entitled to the following:</p> <p>Reimbursement of Second Class Sleeper rail fare/bus (a combination of both is also permissible) from the place of his/her residence to the place of visit (where libraries are located) and back. A scholar is allowed to visit two cities by round trip via shortest route.</p> <p>A fixed daily allowance ₹ 400/- per day to meet boarding and lodging expenses during the visit for a maximum period of 30 days in a financial year. An additional amount of ₹ 1000/- to meet conveyance and other miscellaneous expenses.</p>
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Grants-in-Aid to Bibliographical and Documentation Projects

Under this scheme NASSDOC provides financial assistance to conduct research in the field of Library and Information Science and compilation of research/reference tools for social scientists. The project proposals should fall under one of the following categories : Research in fields like bibliometric analysis, information seeking behavior, library users' study , etc.

Compilation of users' guide, directory, annotated bibliography or union catalogue etc., meant for locating information on a specific subject/topic of interest.

Continuing Education Programme

In order to familiarize the librarians, information intermediaries and social scientists, with new techniques of information technology, NASSDOC organizes short-term training workshops, seminars and lectures on regular basis under its Continuing Education Programme in different parts of the country.

Preservation of Documents: Microfilming

Microfilming of Theses Collection

As advised by the experts in the meeting held in 2003, the NASSDOC has started microfilming of Ph.D. Theses collection. So far approximately 1500 theses have been microfilmed in three phases during the year 2003–2004, 2004–2005 and 2005–2006. An amount of ₹ 14,52,727 has been spent for this purchase from the head modernization. Microfilm is still considered as a better media for preservation of old documents or research material. NASSDOC has rich collection of microfilms/ microfiches of Ph.D. theses, some of the Indian and foreign journals, Economic Working Papers, Union Catalogues, Government Publications and rare publications are available for consultation in the Microfilm Section in the Reading Room at ground floor.

Library automation

Retro Conversion of Catalogue Records

Under this scheme, several initiatives have been taken during the past five years. The catalogue database of the library has been converted into machine readable or electronic form with the help of

an agency. In total 6000, catalogue records have been converted using UNIMARC so that this data can be exchanged with other libraries.

Notes

Radio Frequency Identification (RFID) technology has been introduced for inventory management of books and members. This technology obviates the need for human intervention in issuance of books/journals to the members in the Library. The different components used in it are electronic chips, which are pasted on books; Membership cards (*i.e.* smart ID cards); two Mid Range readers and Pad Antenna. So far 10,000 books have been processed.

Library Automation Software

LIBSYS software is being used for library automation. NASSDOC has upgraded its LIBSYS Software version 3 to LIBSYS version 4 release 5 under Windows 2000. It works now in LAN.

Different modules used in the package are:

- Acquisition (Purchase of books)
- Cataloguing (Organisation of documents)
- Serial control (Pertaining to periodicals)
- Circulation (Membership Record and Books issue and Return)
- Article Indexing (Database of articles published in journals).

UNIMARC

For making the software compatible for exchange of catalogue records UNIMARC utility was purchased. To make catalogue available online on the web, purchase of webopac add on facility is under process. This facility has been implemented within NASSDOC building but not on Internet scale, due to lack of infrastructure. The vendor (*i.e.* Libsys Incorp.) has advised us to have RF link for this. However, the centre has asked the vendor to explore the possibility of providing this add on facility within the existing infra-structure.

INTERNET

Internet connectivity has been provided to all the officials and also library to scholars in the library. This Internet is used for electronic communication, accessing and retrieving information from the subscribed online databases and from other Internet resources. We have 1×64 kbit/s ISDN line and two broadband lines of 2 Mbit/s.

The centre has established a Cyber Cafe for the researchers with high speed Internet connection (TCP/IP Based Leased Line with a proxy server) and an Information Gateway in Social Sciences to facilitate access to Internet resources on social sciences.

New Equipment

Following equipments have been procured for the newly renovated NASSDOC building. The purchase is to enhance the infra-structural facilities so that a state of the art library and documentation center can provide training, seminar and research facilities to the social scientists.

One CD Server for mirroring of CDs and developing an on-line multi-user databases has been purchased at a cost of ₹ 2,92,400.00. The server contains a hybrid of network ready computer and CD Server, one DVD ROM drive, 288 MB RAM, one CD R/W drive and three 120 GB disk drive.

One plasma screen of 42" with its accessories has been procured for Multimedia center of NASSDOC at a total cost of ₹ 4,39,796/- and one LCD projector with ceiling mounting and other required accessories has been procured for the Training Room of NASSDOC for providing training related to Library and Information Science and social science information access. It has been procured at a total cost of ₹ 2,51,000/-.

Notes

Indian Social Science Literature in Electronic Form

Under this project, started in 2003 -2004, digitisation of Indian Social Science Periodical Literature was undertaken. The purpose was to digitise Indian Social Science Literature published in 119 periodicals since their inception to 1970. It has 97492 references. Two disciplines, *i.e.*, Economics and political science have been taken for this project. The work was outsourced to a commercial agency M/S Udbhav Computers Ltd. The product has been completed and the database has been released in CD - ROM (INSPEL).

The references in CD-ROM can be searched by name of the author, title of the article, subject of the article, name of the journal in which article has been published. Free search (*i.e.*, the term may exist in any field) can also be conducted. The search results can be printed, saved, or exported to MS word. INSPEL has been developed in Visual Basic as Front End for circulation on CDs. It shall be distributed to all the ICSSR institutes and Regional Centers free of cost.

Digitization of Theses Collection

NASSDOC has signed a memorandum of understanding (MOU) with Vidyanidhi Digital Library Project of Mysore University to digitise the Ph.D. Theses collection of NASSDOC for wider dissemination to scholars. More than 2000 Ph.D. theses have been digitised and put on CD-ROM format. The ultimate objective is to put them on the web, so that research scholars can view them on the website.

Vidyanidhi Digital Library, University of Mysore Indian ETD Collection : <http://dspace.vidyanidhi.org.in:8080/dspace/>

10.6 INFLIBNET Library

The INFLIBNET Library plays a vital role in the collections development and dissemination of scientific and technical information to meet the present and future needs of the Centre.

The INFLIBNET Centre has a small, specialized library consisting of 2000 documents on computer, communication, information and library science. The library is fully computerized using SOUL integrated library management software. The collection of the library is available online through the web OPAC facility of the SOUL.

The INFLIBNET Library plays a vital role in the collection, development and dissemination of scientific and technical information to meet the present and future needs of the Centre. The Library maintains databases of participants who attended various training programmes at INFLIBNET Centre;

SOUL installations; and universities and its contact details including e-mail and website addresses. These databases are accessible through the library website at <http://www.inflibnet.ac.in/universitydirectory/>

Library Services

The library provides following services to its users:

Reference Service

Document Delivery Service

Current Awareness Service

Inter Library Loan Service

Electronic Information Service

Photocopy Service.

CD-ROM-based Search Services**Notes**

The Centre subscribes to a large number of databases on CD-ROM consisting of bibliographic details of research articles mainly in the area of social sciences, arts and humanities. Services from these databases are available free-of-cost to the academic community including research scholars and the students for their research activities. These CD-ROM databases have been discontinued since 2003 given the fact that e-resources are now being made available to universities under the purview of UGC through the UGC-INFONET Digital Library Consortium. The CD-ROM databases available at the INFLIBNET Library are as follows:

- *LISA*: Library and Information Science Abstract [1969-2003]
- *Dissertation Abstracts International*: Humanities & Social Sciences [1987-2003]
- *EconLit*: Economic Literature [1969-2003]
- EMBASE Drugs & Pharmacology CD [1986-2003]
- Philosopher's Index [1999-2003]
- *PsycLit*: Psychological Literature [1887-2003]
- *Sociofile*: Sociological Abstracts [1974-2003]
- Current Contents on Diskette: Social and Behavioral Sciences [1999-2003]
- Inside Science [1999-2003]
- Inside Social Science [1999-2003]

The Centre also subscribes to the following bibliographic databases of books that are being used for authenticating bibliographic records in union catalogues. These databases are also available to visiting users:

- Ulrich's On Disc: International Periodicals Directory
- ISSN Compact: The ISSN register on CD-ROM [1999, 2003]
- NUCSAL: National Union Catalogue of Serials in Academic Libraries [2005]
- BNB: British National Bibliography, Current file [1986-2001]
- OCLC: Recent Books [1999]
- OCLC: Old Books [1999]
- OCLC: Serials [1999]
- OCLC: Authority file [1999]
- CDMARC: Subject Headings [1996]
- CDMARC: Names [1996]
- CDMARC: Holdings [1996]

Institutional Member

The Centre has institutional membership of following national and international organizations:

- Association for Information Management (ASLIB)
- International Federation of Library Associations (IFLA)
- American Library Association (ALA)
- National Information Standards Organization (NISO)
- Indian Library Association (ILA)

Notes

- Bureau of Indian Standards (BIS)
- Society for Information Science (SIS)
- Indian Association of Special Libraries and Information Centres (IASLIC)
- Computer Society of India (CSI)
- ADINET (Ahmedabad Library Network)
- American Resource Centre
- British Library, Ahmedabad.

e-Journals Archival Library (Print Version)

Besides receiving access to e-resources on complementary basis under the UGC-INFONET Digital Library Consortium, the Centre maintains a separate Archival Library consisting of print journals received as a part of the agreement with the participating publishers of the UGC-INFONET Digital Library Consortium. Under the agreement, the publishers are requested to submit a copy of all the issues of the journals. This archival library is open to all users interested in using these print resources for their study/research.



Task

Describe the working of any library network of India.

Self Assessment

State whether the following statements are true or false:

9. The full form of CAS is common awareness service.
10. The full form of INFLIBNET is Information Library Network.
11. The INFLIBNET is sponsored by UGC.
12. The full form of NISCAIR is National Indian of Science Communication and Information Resources.

10.7 Summary

- A library network is broadly described as a group of libraries coming together with some agreement of understanding to help each other with a view to satisfying the information needs of their clientele.
- A LAN is a number of related computers and electronic devices that share information over a transmission media.
- Library networks have been divided into two categories: general network and specialized network.
- National Institute of Science Communication and Information Resources (NISCAIR), located at New Delhi, India, is one of the premier information science institutes in India under the umbrella of CSIR (Council of Scientific and Industrial Research) that comprise 36 other labs/institutes of different disciplines spread across the country.
- Defence Scientific Information and Documentation Centre (DESIDOC) is a division of the Defence Research and Development Organisation (DRDO). Located in Delhi, its main function is the collection, processing and dissemination of relevant technical information for DRDO scientists. The present director of DESIDOC is Dr. Aragonda Lakshmana Moorthy.

- The National Social Science Documentation Centre (NASSDOC), a constituent unit of the Indian Council of Social Science Research (ICSSR), was established in 1970.
- Bibliography on demand is a widely known support service provided by the NASSDOC to social science research community.
- NASSDOC provides current awareness service by bringing out different publications at regular intervals. Moreover, photocopies of references included in the CAS publications are provided whenever there is a request for that by the scholars.
- The INFLIBNET Library plays a vital role in the collections development and dissemination of scientific and technical information to meet the present and future needs of the Centre.

Notes

10.8 Keywords

<i>Mentor</i>	: Counsellor
<i>Retrieval</i>	: Recovery
<i>Explosion</i>	: Flare-up
<i>Catalogue</i>	: Register
<i>Automation</i>	: Computerization

10.9 Review Questions

1. What do you mean by library information system?
2. Define the term ILS.
3. Write short note on objective of library network.
4. Write a paragraph on network development in India.
5. Explain the types of networks in detail.
6. Define MAN.
7. What are the general networks in India?
8. Explain specialized networks.
9. What is VIDYANET.
10. Elaborately discuss on NISCAIR.
11. Discuss activities of NISCAIR.
12. Write name of journals published by NISCAIR.
13. Explain DESIDOC.
14. Explain functional areas and activities of DESIDOC.
15. What do you meant by NASSDOC?
16. What are the facilities available at NASSDOC?
17. Write a note on Bibliography on demand.
18. Explain current awareness service.
19. Write a short note on Library automation software.
20. Explain INFLIBNET in detail.

Notes

Answers: Self Assessment

- | | |
|---|------------------------------|
| 1. MAN, WAN | 2. Local Area Network |
| 3. Wide Area Network | 4. Metropolitan Area Network |
| 5. General network, specialized network | |
| 6. (b) | 7. (c) |
| 9. False | 10. True |
| 12. False | 8. (a) |
| | 11. True |

10.10 Further Readings



Books

CHENEY (F N) and WILLIAMS (W J). *Fundamental reference sources*. Ed. 3. 2000. ALA, Chicago.

CRAWFORD (John). *Evaluation of library and information services 2000*. ASLIB, London.



Online links

<http://compnetworking.about.com/od/basicnetworkingconcepts/a/>
http://www.icssr.org/doc_main.htm

Notes

Unit 11: Information Services and Products of Documentation

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Objectives

After studying this unit, you will be able to:

- Know about concept of information
- Understand Information services
- Explain information systems and documentation.

Notes**Introduction**

Library and documentation centers are the backbone of any research and training institution. The rapid technological development the world over has increased manifold the value of information dissemination, and no research or training programme, or institutional development anywhere can be said to be pragmatic and complete if libraries do not have a role in it.

11.1 Concept of Information

Information is viewed as a type of input to an organism or designed device. Inputs are of two kinds. Some inputs are important to the function of the organism or device by themselves. In his book *Sensory Ecology*, Dusenberry called these causal inputs. Other inputs are important only because they are associated with causal inputs and can be used to predict the occurrence of a causal input at a later time. Some information is important because of association with other information but eventually there must be a connection to a causal input. In practice, information is usually carried by weak stimuli that must be detected by specialized sensory systems and amplified by energy inputs before they can be functional to the organism or device. For example, light is often a causal input to plants but provides information to animals. The coloured light reflected from a flower is too weak to do much photosynthetic work but the visual system of the bee detects it and the bee's nervous system uses the information to guide the bee to the flower, where the bee often finds nectar or pollen, which is causal inputs, serving a nutritional function.

11.1.1 Characteristics of Information

The view of information as a message came into prominence with the publication in 1948 of an influential paper by Claude Shannon, "A Mathematical Theory of Communication". This paper provides the foundations of information theory and endows the word information not only with a technical meaning but also a measure. If the sending device is equally likely to send any one of *the sets* of N messages, then the preferred measure of "the information produced when one message is chosen from the set" is the base two logarithm of N . In this paper, Shannon continues:

The choice of a logarithmic base corresponds to the choice of a unit for measuring information. If the base 2 is used the resulting units may be called binary digits, or more briefly bits, a word suggested by J. W. Tukey. A device with two stable positions, such as a relay or a flip-flop circuit, can store one bit of information.

Information as a message:**Notes**

Information is a message, something to be communicated from the sender to the receiver, as opposed to noise, which is something that inhibits the flow of communication or creates misunderstanding.

If information is viewed merely as a message, it does not have to be accurate. It may be a lie, or just a sound of a kiss. This model assumes a sender and a receiver, and does not attach any significance to the idea that information is something that can be extracted from an environment, e.g., through observation or measurement. Information in this sense is simply any message the sender chooses to create.

11.1.2 Definition of Information

Notes

Information is defined as facts or knowledge provided or learned or what is conveyed or represented by a particular sequence of symbols, impulses etc.

Information is any represented pattern. This view assumes neither accuracy nor directly communicating parties, but instead assumes a separation between an object and its representation, as well as the involvement of someone capable of understanding this relationship. This view seems therefore to require a conscious mind. Consider the following example: economic statistics represent an economy, however inaccurately. What are commonly referred to as data in computing, statistics, and other fields, are forms of information in this sense. The electro-magnetic patterns in a computer network and connected devices are related to something other than the pattern itself, such as text to be displayed and keyboard input. Signals, signs, and symbols are also in this category. Painting and drawing contain information to the extent that they represent something such as an assortment of objects on a table, a profile, or a landscape. In other words, when a pattern of something is transposed to a pattern of something else, the latter is information. This type of information still assumes some involvement of conscious mind, of either the entity constructing the representation, or the entity interpreting it.

When one constructs a representation of an object, one can selectively extract from the object (sampling) or use a system of signs to replace (encoding), or both. The sampling and encoding result in representation. An example of the former is a "sample" of a product; an example of the latter is "verbal description" of a product. Both contain the information of the product, however they are inaccurate. When one interprets representation, one can predict a broader pattern from a limited number of observations (inference) or understand the relation between patterns of two different things (decoding). One example of the former is to sip a soup to know if it is spoiled; an example of the latter is examining footprints to determine the animal and its condition. In both cases, information sources are not constructed or presented by some "sender" of information. To repeat, information in this sense does not assume direct communication, but it assumes involvement of some conscious mind.

Regardless, information depends upon, the medium or media used to express it. In other words, the position of a theoretical series of bits, or even the output once interpreted by a computer or similar device, is unimportant, except when someone or something is present to interpret the information. Therefore, a quantity of information is totally distinct from its medium.

11.1.3 Needs and Purpose of Information

Information is any type of sensory input. When an organism with a nervous system receives an input, it transforms the input into an electrical signal. This is regarded information by some. The idea of representation is still relevant, but in a slightly different manner. That is, while abstract painting does not represent anything concretely, when the viewer sees the painting, it is nevertheless transformed into electrical signals that create a representation of the painting. Defined this way, information does not have to be related to truth, communication, or representation of an object. Entertainment in general is not intended to be informative. Music, the performing arts, amusement parks, works of fiction and so on is thus forms of information in this sense, but they are not forms of information according to the previous definitions above. Consider another example: food supplies both nutrition and taste for those who eat it. If information is equated to sensory input, then nutrition is not information but taste is.

Information as an influence which leads to a transformation:

Information is any type of pattern that influences the formation or transformation of other patterns. In this sense, there is no need for a conscious mind to perceive, much less appreciate, the pattern.

Notes

Consider, for example, DNA. The sequence of nucleotides is a pattern that influences the formation and development of an organism without any need for a conscious mind. Systems theory at times seems to refer to information in this sense, assuming information does not necessarily involve any conscious mind, and patterns circulating in the system can be called information. In other words, it can be said that information in this sense is something potentially perceived as representation, though not created or presented for that purpose.

**Did u know?**

In 2003, J. D. Bekenstein claimed there is a growing trend in physics to define the physical world as being made of information itself (and thus information is defined in this way).

See the article on physical information. When Marshall McLuhan speaks of media and their effects on human cultures, he refers to the structure of artifacts that in turn shape our behaviors and mindsets. Also, pheromones are often said to be “information” in this sense.

**Task**

Define the term information. Discuss the needs and purpose of information.

11.2 Information Services

Information is one of the basic needs of human beings and it is unlimited in scope.

People seek information from different sources and formats for undertaking a variety of tasks. Tremendous growth in knowledge, technological advancements have led to an increased awareness of the importance of information in all aspects of life. Academic institutions play a key role in society by preparing future generations to use the acquired knowledge to fulfill their responsibilities more effectively. Libraries are considered as a nucleus of academic activities in all academic institutions. Where librarians of these institutions serve a variety of users such as students, faculty, staff and administrators with diverse information needs.

11.2.1 Impact of Information Technology

Developments in information technologies and advances in telecommunications have revolutionized the worldwide information society. New techniques have facilitated rapid transformation of data, information and knowledge into digital form. As a result, there have been significant changes in the ways in which documents and information are being stored, organized, accessed, retrieved and disseminated. These developments have further resulted in the change of approaches followed by the libraries which now have to be more innovative and user oriented. The libraries are being transformed with the development of their electronic and digital collections. With the development of hybrid and virtual libraries, the librarians have to acquire new skills and competencies. The reference librarian’s relationship with its users becomes more important as the needs of the users also getting changed with the technological developments. Libraries are providing full support and training to the users and also facilitating them with authentic information resources using all the available technologies. Information is now being supplied electronically using e-mail, image processing, online databases and e-journals.

The invention of computers and telecommunication technologies are landmarks in the history of Library and Information Science. In the present times, librarians are exploring ways of supporting

patrons in the emerging virtual communities such as offering online and real—time reference service. This way, the user can get assistance from the reference librarian without physically coming to the library. The terms ‘Live reference’, ‘Virtual reference’, ‘Digital reference’, ‘Online reference’, ‘Electronic reference’ and ‘Remote reference’ are often used for similar services because they all encompass all forms of electronic means.

Notes

11.2.2 Digital Reference Service/Virtual Reference Service

Digital reference is an Internet based question and answer service that connects the users with experts in a variety of subject areas. The experts in addition to answering the questions also provide the users with referrals to other online and print sources of information.



Notes

Digital Reference has been defined as “a mechanism by which people can submit their questions and have them answered by a library staff member through some electronic means e.g. e-mail, chat etc. not in person or over the phone” (James et. al 1999).

The early digital reference services primarily used e-mail to receive questions and provide responses and received very little attention from the users. But with the passage of time, it became popular eventually growing to services like ERIC in 1992 and Internet Public Library in 1995.

Virtual Reference Service is also an Internet based reference service where a user can ask a question online, where the user and the librarian communicate in real time. It uses computers and communication technology to provide reference service to users anytime and anywhere. In this digital or virtual information environment various reference services are being imparted to the users, some of them are as:

- Asynchronous Digital Reference: In this service , the user submits a question and the library responds at a later time for e.g., e-mail and Web form.
- Synchronous Digital Reference : In this service, the user and the librarian communicate in real time. Instant messaging and Short message service, Video conferencing, online chat etc., are the various developments in the field of Virtual Reference Service.

11.2.3 Web Based Reference Service

These services provide free access to various online reference sources and allow users either to select a specific source or conduct a search on a range or all of the reference sources. The examples of some such services are as following:

1. Internet Public Library- ask a question (<http://www.ipl.org/div/askus/>):



Did u know?

The Internet Public Library (IPL) is a public service organization and learning/ teaching environment founded at the University of Michigan School of Information and hosted by Drexel University’s College of Information Science and Technology.

The IPL is having separate division to attend the various questions. Trained professional, librarian, volunteers and graduate students in library science programs attend the IPL’s question service.

- Notes**
2. Infoplease (<http://www.infoplease.com>): Information Please has been providing authoritative answers to all kinds of factual questions since 1938—first as a popular radio quiz show, then starting in 1947 as an annual almanac, and since 1998 on the Internet.

11.2.4 Search Engine Services

Ask.com (<http://uk.ask.com/>) : It is also considered as a web based information service because unlike other search engines, users can ask a question in Ask.com and many a times, get the answer also. Secondly, users can ask a question on a given topic and Ask.com comes up with a list of questions on the similar topics, the user can select any of these predefined questions and Ask.com provides answers to that.

11.2.5 Types of Information Services Provided in the Networked Computer Environment

- OPAC (Online Public Access Catalogue): An Online Public Access Catalog or OPAC is a computerized online catalog of the materials held in a library. The library staff and the public can usually access it at several computer terminals within the library, or from home via the Internet. Since the mid-1990s, character-based OPAC interfaces are being replaced by Web based interfaces. OPACs are often part of an integrated library system.
- Current Awareness Service (CAS): The CAS is best described as delivering the right information to the right user at the right time in the right format to keep the user up to date with latest information in his/her respective areas.
- Selective Dissemination of Information (SDI): SDI is a part of CAS but a highly specialized service to restricted members of the library. In this service a user registers at such a system with keywords representing his or her fields of interest, called a search profile. When new publications matching the search profile appear, the system informs the user of them instantly, periodically or upon request. Some systems may also be able to inform the user if changes in already notified publications occur.
- CD – ROM Network Service: In this information is being provided with the help of CDs.
- E-mail Service: The users and faculty members who have given their request to the library are being facilitated with the e-mail alert service, through which any latest information related to their interest areas is coming in the library, the intimation is being provided to the user through e-mail.
- Bulletin Board Service: This is an electronic message service which serves specific interest groups. BBS allow one to review the messages left by others, and leave own message if somebody want. This is good place to interact and discuss various professional problems or development through web.
- Indexing and Abstracting Service: Indexing and Abstracting is two different kinds of services. In Index only citations can be given but in abstracting service abstracts for a set of published documents can be found. Many indexed and abstracts are now produced in electronic databases and accessible by author, subject, and keywords etc.
- Online Circulation Processes: Many of the library management software are providing this facility under this user can issue or return the document without being come to the library. In developed countries, this services is prominently available.



Task

Write short note on search engine services.

11.3 Information Systems

Notes

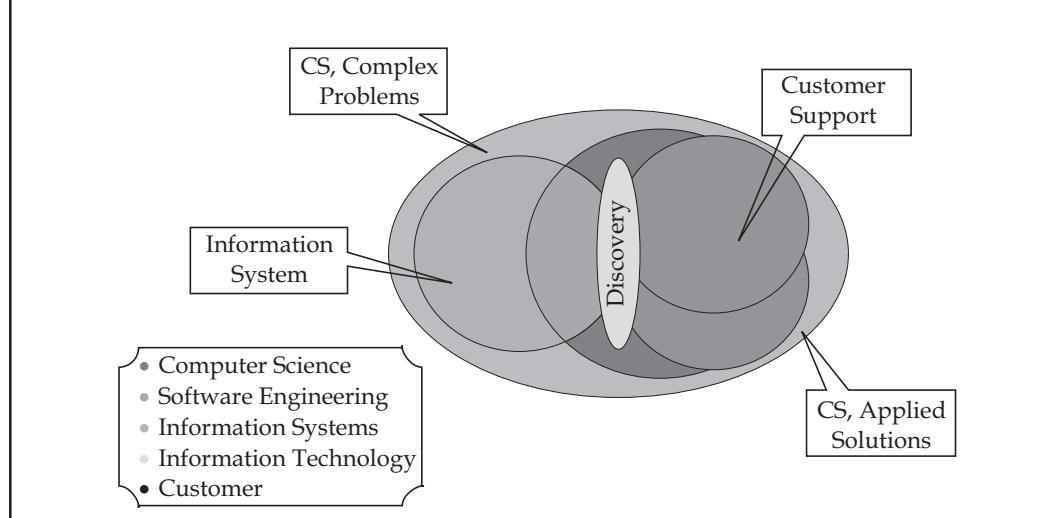
Information Systems (IS) is an academic/professional discipline bridging the business field and the well-defined computer science field that is evolving toward a new scientific area of study. An information systems discipline therefore, is supported by the theoretical foundations of information and computations such that learned scholars have unique opportunities to explore the academics of various business models as well as related algorithmic processes within a computer science discipline.

Typically, information systems or the more common legacy information systems include people, procedures, data, software, and hardware (by degree) that are used to gather and analyze digital information. Specifically computer-based information systems are complementary networks of hardware/software that people and organizations use to collect, filter, and process, create, and distribute data (computing).



Notes Computer Information System(s) (CIS) is often a track within the computer science field studying computers and algorithmic processes, including their principles, their software and hardware designs, their applications, and their impact on society. Overall, an IS discipline emphasizes functionality over design.

Figure 11.1

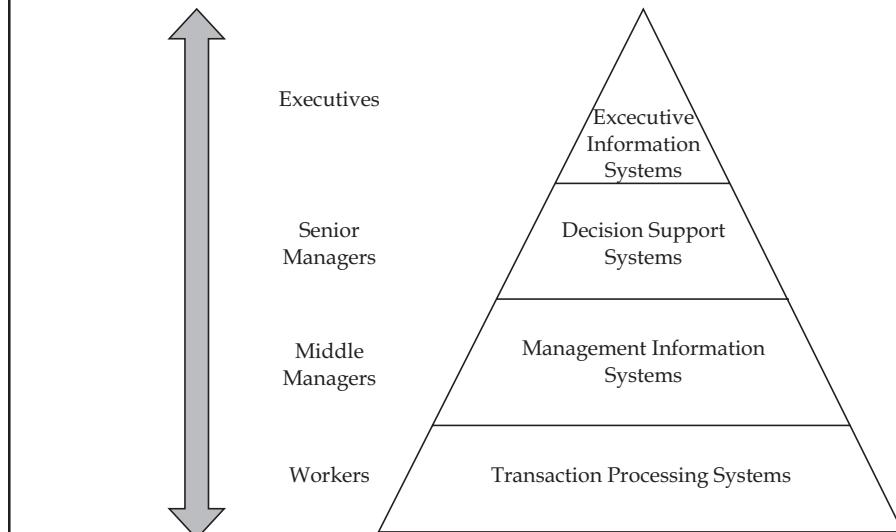


As illustrated by the Venn diagram, the history of information systems coincides with the history of computer science that began long before the modern discipline of computer science emerged in the twentieth century. Regarding the circulation of information and ideas, numerous legacy information systems still exist today that are continuously updated to promote ethnographic approaches, to ensure data integrity, and to improve the social effectiveness and efficiency of the whole process. In general, information systems are focused upon processing information within organizations, especially within business enterprises, and sharing the benefits with modern society.

A four level pyramid model of different types of Information Systems-based on the different levels of hierarchy in an organization.

Notes

Figure 11.2



The 'classic' view of Information systems found in the textbooks of the 1980s was of a pyramid of systems that reflected the hierarchy of the organization, usually Transaction processing systems at the bottom of the pyramid, followed by Management information systems, Decision support systems and ending with Executive information systems at the top. Although, the pyramid model remains useful, since it was first formulated a number of new technologies have been developed and new categories of information systems have emerged, some of which no longer fit easily into the original pyramid model.

Some examples of such systems are:

- Data warehouses
- Enterprise resource planning
- Enterprise systems
- Expert systems
- Geographic information system
- Global information system
- Office automation

Self Assessment

Fill in the blanks:

1. is an academic/professional discipline bridging the business field and the well-defined computers science field that is evolving toward a new scientific area of study.
2. Overall an IS discipline emphasizes functionality over

- | | |
|--|--------------|
| 3. In general, information systems are focused upon processing information within | Notes |
| 4. Information as a message came into prominence with the publication in the year | |
| 5. is an internet based question and answer services that connects the users with experts in a variety of subject areas. | |
| 6. is a computerized online catalog of the materials held in the library. | |
| 7. CAS stands for | |

Self Assessment

Multiple Choice Questions:

- | | |
|---|--------------------------|
| 8. In the classic view of information systems, the transaction processing system was at the: | |
| (a) Top of pyramid | (b) Bottom of pyramid |
| (c) Over of pyramid | (d) Below of pyramid. |
| 9. A four level pyramid model of different types of Information Systems-based on the different levels of hierarchy in an: | |
| (a) Institute | (b) Information |
| (c) Organization | (d) Information systems. |

11.4 Documentation

Documentation is a general term for written information, media, and other content used to support a tool or a process. Documentation (to document) also refers to the process of providing evidence.

Technical writers and corporate communicators are professionals whose field and work is documentation. Ideally, technical writers have a background in both the subject matter and also in writing and managing content (information architecture). Technical writers more commonly collaborate with subject matter experts (SMEs), such as engineers, medical professionals, or other types of clients to define and then create content (documentation) that meets the user's needs. Corporate communications includes other types of written documentation that is required for most companies.

Common types of documentation include user guides, white papers, on-line help, and quick-reference guides. It is less common to see hard copy (paper) documentation. Documentation is distributed via websites, software products, and other online applications.

Documentation Specializations

- Marketing Communications to convey the company's value proposition through a variety of print, electronic, and social media. This area of corporate writing is often engaged in responding to proposals.
- In Technical Publications Technical writers document a company's project or service. Technical publication includes user guides, installation manuals, and troubleshooting/repair/replace procedures.
- Legal documentation: This type of documentation is often prepared by attorneys or paralegals that could be in private practice or retained as corporate council.
- Compliance documentation: This type of documentation codifies Standard Operating Procedures (SOPs), for safety, financial, or other regulatory compliance needs.

Notes

Computer Science

The following are typical documentation types Request for Proposal (RFP) Requirements Statement of Work Software Design and Functional Specification System Design and Functional Specifications Change Management, Error and Enhancement Tracking User Test and Acceptance (UTA). There are many types of software applications used to create documentation. Tools which are available for this purpose.

Software Documentation Folder (SDF)

A common type of software document written by software engineers in the simulation industry is the SDF. When developing software for a simulator, which can range from embedded avionics devices to 3D terrain databases by way of full motion control systems, the engineer keeps a notebook detailing the development "the build" of the project or module. The document can be a wiki page, MS word document or other environment. They should contain a requirements section, an interface section to detail the communication interface of the software. Often a notes section is used to detail the proof of concept, and then track errors and enhancements. Finally, a testing section to document how the software was tested. This documents conformance to the client's requirements. The result is a detailed description of how the software is designed, how to build and install the software on the target device, and any known defects and work arounds. This builds document enables future developers and maintainers to come up to speed on the software in a timely manner, and also provides a roadmap to modifying code or searching for bugs.

Self Assessment

State whether the following statements are true or false:

10. Documentation is a general term for written information, media and other content used to support a tool or a process.
11. Common types of documentation does not include user guide, white papers, online help.
12. SDF stands for software documentation folder.

11.5 Summary

- The National Commission on Libraries and Information Science in its National Programme Document (1975) defines a network as two or more libraries engaged in a common pattern of information exchange, through communications for some functional purpose.
- In general, information systems are focused upon processing information within organizations, especially within business enterprises, and sharing the benefits with modern society.
- Retrieval through telecommunications networks and access to international databases are available for searching for information on various subjects.

11.6 Keywords

<i>OPAC</i>	: Online Public Access Catalogue
<i>DSIR</i>	: Department of Science and Industrial Research
<i>UNISIST</i>	: United Nations International Scientific Information System

11.7 Review Questions

Notes

1. Write short note on concept of information.
2. Explain information services.
3. Explain types of information services, provided in the computer network environment.
4. Write a short note on information systems.
5. Draw the four level pyramid model of information system.
6. Write the objectives of information system.
7. Write short note on software documentation folder (SDF).

Answers: Self Assessment

- | | | |
|------------------------------|----------------------|------------------|
| 1. Information system | 2. Design | 3. Organizations |
| 4. 1848 | 5. Digital reference | 6. OPAC |
| 7. Current awareness service | 8. (b) | 9. (c) |
| 10. True | 11. False | 12. True |

11.8 Further Readings



Books

FARMER (LSJ), Ed. *The human side of reference and information services in academic libraries: adding value in the digital world.* 2007. Chandos Publishing, Oxford.

FOSKETT (DJ). *Information service in libraries.* Ed. 2. 1967. Archon Book Hamden, Connecticut.



Online links

<http://www.ils.unc.edu/~losee/b5/node2.html>

<http://www.iva.dk/bh/core%20concepts%20in%20lis/articles%20a-z/>

http://en.wikipedia.org/wiki/Information_system

Notes

Unit 12: Some Important Information Centers

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Objectives

After studying this unit, you will be able to:

- Understand online computer library center
- Define agricultural resources information system
- Know about international nuclear information system.

Introduction

In today's Web environment, scale matters. Through, massive concentrations of shared data, applications and connections, communities can leverage the Web infrastructure to create new services, generate new operating efficiencies and develop new relevance to users.

12.1 Online Computer Library Center (OCLC)

The Online Computer Library Center, Inc. (OCLC), a non-profit corporation, is a membership-based, service and research organization dedicated to the purposes of furthering access to the world's information at reduced cost. The OCLC members are institutions, primarily libraries, which use OCLC products and services to locate, acquire, catalogue, lend and preserve books and other library materials. Researchers, students, faculty, scholars, professional librarians, and other information seekers use OCLC systems through libraries to obtain bibliographic, abstract, citation, and full-text

information. The OCLC catalogueing and resource sharing system is the largest and most heavily used computer library system in the world. The OCLC First Search service ranks among the leaders in the online information industry in terms of connect hours.

Notes

Notes The OCLC bibliographic database, WorldCat (the OCLC Online Union Catalogue), is one of the most consulted electronic databases in higher education.

The OCLC and its member libraries cooperatively produce and maintain WorldCat, the Online Union Catalogue of Books available in the libraries of member institutions. Members of the OCLC can also get access to a wide range of services and databases, including WorldCat. The OCLC is the world's largest library network.

History of OCLC

In 1967, the presidents of the colleges and universities in the state of Ohio founded the Ohio College Library Center (OCLC) to develop a computerized system in which the libraries of Ohio academic institutions could share resources and reduce costs. Its first offices were in the Main Library on the campus of the Ohio State University.



Did u know? Mr. Frederick G. Kilgour, was the first President of OCLC, responsible for the growth of OCLC from a regional library computer system for 54 Ohio colleges into an international network.

The objective of the OCLC as stated in its Articles of Incorporation is to "establish, maintain and operate a computerized library network and to promote the evolution of library use, of libraries themselves, and of librarianship, and to provide processes and products for the benefit of library users and libraries...."

In 1977, the OCLC changed its policy that enabled libraries outside Ohio to become members and participate in its governance. The Ohio College Library Center became OCLC, Inc. in 1981, the legal name of the corporation became Online Computer Library Center, Inc.

Membership

More than 50,540 libraries in 84 countries and territories around the world are members of OCLC.

Governance

The OCLC's governance structure consists of Members and Governing Members, Members Council and the Board of Trustees. Governing Members of OCLC have the privilege of electing representatives to the Members Council. Any OCLC Member or Governing Member may serve on Members Council, but only Governing Members nominate and determine (by vote) who serves. The Members Council is comprised of 60 delegates plus six international transitional delegates who reflect and articulate the interests of member institutions that participate in OCLC through qualifying regional service providers. Delegates come from many types and sizes of libraries, bringing different perspectives to the Members Council. The 15-member Board of Trustees consists of the President of OCLC and eight trustees elected by the Board itself.

Notes

Services

The OCLC offers several products and services, a few of them are described below:

WorldCat

WorldCat is a worldwide union catalogue created and maintained collectively by more than 9,000 member institutions in 84 countries representing hundreds of languages and cultures. With millions of online records built from the bibliographic and ownership information of contributing libraries, it is the largest and most comprehensive database of its kind. WorldCat is the foundation of many OCLC services that facilitates libraries to process, manage and share information resources.

The WorldCat includes catalogue records dating back to thousands of years nearly in every format. Records exist for everything from stone tablets to electronic books, wax recordings to MP3s, DVDs and Web sites. Whether an item is physical or digitally preserved, popular or one-of-a-kind, the integrity of its record is maintained by the input of catalogueing members, OCLC's standards and quality control.

The OCLC offers a number of catalogueing tools such as Connexion, PromptCat and CatExpress to interface with the WorldCat enabling librarians to perform copy or original catalogueing. Built around WorldCat, the OCLC offers a complete range of catalogueing and metadata service including online catalogueing, copy catalogueing, MARC record collections, (online and offline), offline catalogueing and customized OCLC catalogueing.

NetLibrary

The OCLC's NetLibrary platform provides access to electronic books from a wide range of publishers. More than 12,000 libraries worldwide subscribe to NetLibrary. NetLibrary's growing collection of monographs and reference resources spans hundreds of subject areas and can be accessed through an intuitive, easy-to-use interface that offers a single point of access. Users can find the latest titles, reference sources, business and economics resources, best-selling fiction, and more. NetLibrary also works with the world's leading publishers to provide even more resources, including foreign language collections, databases, journals and audio-books.

The NetLibrary offers detailed usage reports for books subscribed by a library. It is fully integrated into leading library systems allowing libraries to provide direct links to electronic books in NetLibrary.

OCLC's Electronic Collections Online

OCLC's Electronic Collections Online is a powerful electronic journals service that offers web-based access to a growing collection of more than 5,000 titles in a wide range of subject areas from over 70 publishers. It also provides a robust archiving solution and searching across journals. OCLC has secured archival rights to journal content, subscription to e-journals through the OCLC thus it ensures perpetual access to the journals subscribed through OCLC for the paid period of subscription.

OCLC Database Service: FirstSearch

The FirstSearch (FS) is an online service that provides web access to research databases consisting primarily of journal. The service provides seamless electronic access to more than eighty databases

containing 10 million full-text and full-image articles in most subject fields. Libraries have an option to select databases based on their needs. Some of the more important databases included in FirstSearch are:

Notes

ABI/INFORM

Applied Science & Technology Abstracts

ArticleFirst: index to articles in 12,500 journals

BasicBIOSIS

Geobase

ContentsFirst: Tables of contents of 12,500 journals

Disclosure: Financial reports of publicly owned companies

Education Abstracts: database of articles in education

Eventline: Schedule of conventions, exhibits, etc., world wide

Microcomputer Abstracts: Articles in computer applications

Periodical Abstracts: Index to articles in 1500 multidisciplinary journals

Proceedings: Index to conference proceedings

WorldCat: Catalogue of over 32 million book and other library resources

WorldScope: Financial reports on companies world wide.

The size and period covered in FirstSearch varies between the individual databases but many include data going back as far 1980. The FirstSearch facilitates search across multiple databases through its simple menu-driven search interface. Full image articles from Electronic Collections Online journals are linked to corresponding citations in databases throughout the FirstSearch service. Subscribers to FirstSearch may also place their orders online for articles that are not accessible to them.

Question Point: Cooperative Virtual Reference Service

A collaborative project of the Library of Congress and OCLC, QuestionPoint offers more than 7,000 question-and-answer sets from a database built from reference transactions. Its interface is available in 10 languages, and is used by more than 1,000 libraries in 20 countries. QuestionPoint helps libraries to manage their reference transactions, both online and in-person. Robust administrative tools available through Question Point allow libraries to route questions and manage other reference transactions locally, regionally and nationally. It provides statistical reports to make management decisions, demonstrate trends for funding proposals and measure user satisfaction levels. OCLC's Question Point interface can be added to the library's Web site so as to provide access to quality online reference assistance at any time of day. Users get online help through familiar online channels such as e-mail or a chat window. Question Point assistants can even "share" their solution with a technology that safely and securely gives them remote access to a user's desktop.

CONTENTdm: Digital Content Management Software

CONTENTdm is comprehensive digital management software. It provides tools to organize, manage, publish and search digital collections on the Web. It is a flexible, multifunction software package that handles all document formats including PDFs, images, video and audio files. CONTENTdm offers a scalable solution that can be upgraded based on user's needs. Its functionality allows a user to create collections quickly and easily using a simple point and click interface.

Notes***Inter-Library Loan Management Software: ILLaid***

The ILLaid from OCLC is a resource sharing management software that helps libraries to automate routine interlibrary loan functions. The software helps to reduce paperwork dramatically and increases productivity. The software serves as an integrated interface for the library to handle borrowing, lending and document delivery through a single Windows-based interface that includes access to WorldCat and OCLC ILL. The ILLaid automates the processing of interlibrary loan requests, compiles lending and borrowing statistics, provides financial tracking for lending and borrowing and delivers articles and other documents electronically. It even notifies users when requests are fulfilled. Moreover, users can submit and track their own requests via the Web.

Other Services

The OCLC's digitisation, microfilm and archival services are designed to protect and share collections for their members. The OCLC has infrastructure and skilled staff at their preservation centres. The OCLC's collection development services can assess the strengths and gaps of collection available in the libraries if a member institution using their analysis tools.

*Task*

Discuss briefly about the services provided by OCLC.

Self Assessment

Fill in the blanks:

1. The full form of OCLC is
2. WorldCat is a
3. OCLC was developed in the year
4. is an online service that provides web access to research databases consisting of primarily of journal.

12.2 User Studies

Education is a lifelong process. However, formal education starts at the elementary school level and is said to be complete at the university level after one acquires the highest degree in some discipline. In earlier days, it was the belief that knowledge regarding the use a library was an essential part of 'education-for-life' in order to prepare the students for the continuing process of self-education. In 1926, Coming, discussing the organisation of a university library in an article in the, Library Association Record, expressed the view that to learn how to use a library and to acquire a disinterested love of reading were important elements of education.

The education-for-life aspect is more important today when the rapid growth of information places greater stress on the ability to continue to learn throughout life. Students are encouraged to develop logical, creative and critical approaches to the subjects studied. In order to do this, they must be taught to be independent. In order to be independent, students need knowledge and skills to find their own way.

**Notes**

The emphasis on self-education has led to increased use of seminars, tutorials, projects, etc. as teaching methods and less reliance on formal lessons and classroom lectures. There is an implicit assumption in this educational change, that learner is capable of finding material relevant to his needs. However, in practice, such an assumption is not valid. In other words, the learner requires to be taught that capability. Only then, student is able to prepare for taking full and active part in the new ways of learning. Another factor which necessitates library use instruction to the student is the growth of interdisciplinary courses, particularly in institutions of higher education, such courses which cut across the traditional boundaries of subjects, creates problems for the student in the location, selection and organisation of the material for study. The mere quantity of material to be searched, because of the various disciplines involved, requires that the student should be helped to find his or her way. Not only quantity, but the diversity of sources and formats, makes the need for help essential. Without suitable training the student would be unable to make efficient use of all the information that is available and potentially useful.

Notes

In the beginning of the twentieth century; the service library was regarded as a reactive library providing excellent service for a relatively small group of users. Libraries cost a great deal of money to be equipped and run. These expensive institutions are only being used by a small proportion of the potential users. This fact has been reported by Committees such as Parry Committee. The Parry Committee report mentioned that many students were not active users of their academic libraries in U.K.

On the other hand, the concept of a proactive library advocates that an attempt should be made to attract all potential users into the library.

**Did u know?**

In all types of library, it is important to attract as many users as possible. It is no use buying literature, carefully processing and storing it, if no one uses it. Therefore, it has been stated that money spent on educating and training users is a good investment if this effort increases the use and appreciation of the library.

The purpose of user education was not solely to stimulate library use as this is but one of the sources of information. User education is concerned with the whole information and communication process and one part of this involves the total interaction of the user with the library. User education is central to the whole purpose of library and the effective utilization of information resources.

Self Assessment

Multiple Choice Questions:

5. The education-for-life aspect is more important today when the rapid growth of information places greater stress on the ability to continue to learn throughout:

(a) Life	(b) System
(c) Institution	(d) Information.
6. The Parry Committee report mentioned that many students were not active users of their academic libraries in:

(a) India	(b) U.S.A.
(c) France	(d) U.K.

Notes**12.3 International Nuclear Information System (INIS)**

The acronym INIS stands for International Nuclear Information System. INIS sponsored by the International Atomic Energy Agency (IAEA), Vienna started functioning in 1970. It is a cooperative, decentralised computerised abstracting and indexing system providing worldwide coverage of the literature on the peaceful uses of nuclear energy. It processes and merges input provided by its members and redistributes the information in machine-readable form as well as in print form. INIS, the International Nuclear Information System is appropriate for those who need information on the peaceful applications of nuclear science and technology.

**Notes**

INIS is an international co-operative information system, operated by the International Atomic Energy Agency (IAEA) in collaboration with 132 members that include 114 Member States and 19 International Organisations, with over 30 years of experience.

INIS processes most of the world's scientific and technical literature that falls within its subject scope. INIS maintains a bibliographic database which presently covers over 2.5 million abstracted and indexed records and a comprehensive collection of over 600,000 of full-texts of INIS scope publications which are not easily available through the commercial channels, thus making it the world's most comprehensive and leading information source on the peaceful applications of nuclear science and technology.

Subject Scope

INIS subject coverage has been developed keeping in view the information needs of the international user community for whom the interests and activities of International Atomic Energy Agency are relevant especially with regard to peaceful applications of nuclear science and technology.

The chief subject areas are: nuclear reactors, reactor safety, nuclear fusion, applications of radiation and radioisotopes in medicine, agriculture, industry and pest control. Besides the above some related fields are nuclear chemistry, nuclear physics and materials science.

Literature Coverage

The literature coverage by the INIS Database includes bibliographic citations and abstracts from relevant scholarly journal articles, R & D reports, papers presented in seminars and conferences, books, patents, theses, laws, regulations and standards. Besides these, the INIS inputting centres located all over the world regularly scan over 2,400 periodicals for articles relevant to the nuclear science field. An important feature of the INIS is the very fact that most of the abstracts of INIS records are in English as a carrier language. This is what has made INIS so popular internationally. Additionally, the INIS Database also contains bibliographic references to various literature types that include journal articles, books, reports, patents, etc. INIS Database can be accessed by individual users and institutions in the Member States of INIS and the other cooperating institutions of INIS.

Input Processing

For processing the input to the INIS database, the procedure is as given below:

Literature in each INIS member state collected by a designated national inputting centre that submits input to the INIS Secretariat in pre-prepared machine-readable form usually through e-mail or on diskette or magnetic media. The standardised format in which inputs are to be submitted conforms to the guidelines as provided by the INIS Reference Series.

Notes

Almost all the inputting centres send data through the 'FIBRE' (Friendly Inputting of Bibliographic Records), which is a PC based input preparation package especially designed for the purpose by INIS. FIBRE is a tool that not only helps the INIS Centres to streamline their input preparation but also ensures data of higher quality and consistency thereby reducing the costs through lower correction efforts and results in improving processing time.

After the input reaches the INIS Secretariat, bibliographic description of records are processed thoroughly by checking programs in order to identify the errors and omissions which are corrected by specialists employed by the INIS Secretariat. The input is then converted with the help of computer programs into an internal working format and is made ready for final processing.

Prior to final processing, the inputs are checked for the indexing and abstracting of records which are subjected to a continuing quality control based on an Expert System. For this, the system identifies records with a high probability of error for scrutiny by subject specialists of the INIS Secretariat.

Lastly, towards the end of each processing cycle, a final consolidated output file is created which becomes the input to further programs that firstly create the INIS output files in the INIS exchange format (ISO-2709) and eventually create the INIS Database for online and CD-ROM retrieval.

Besides the procedure discussed above, an important activity carried out at the INIS Secretariat is the processing of Non-Conventional Literature (NCL) submitted by the INIS members. Here, the full-text of such literature is received in electronic form or hard copy and is then processed for distribution in the form of microfiche, CD-ROMs or electronic mail.

INIS Products and Services

INIS makes available different products and services which are available to the end users in various INIS member countries. These vary from country to country and in each country, it is the responsibility of the designated National Liaison Officer to make available detailed information about available INIS products and services in that particular country.

The various products and services of INIS include the INIS Database and INIS Non-Conventional Literature. Let us know some details of the available products and services of INIS.

1. INIS Database. The INIS database is one of the leading information sources for worldwide published scientific literature on the peaceful applications of nuclear science and technology and other related fields. It is available from the year 1970, to till date. In the database, over 2.5 million scientific and technical bibliographic references have been indexed and abstracted in English as the carrier language and all this is according to agreed rules and standards. The INIS Database also includes the economic and environmental aspects of all non-nuclear energy sources published since 1992. The database not only contains validated and high quality references but also has comprehensive international coverage.

2. INIS Non-Conventional Literature (NCL). Easy access to the full-text of the non-conventional literature has remained one of the key features of INIS all these years. It is a well known fact that the literature represented in the INIS Database belongs to two chief categories, that is, conventional and non-conventional. The conventional literature is commercially available through normal distribution channels, such as books and journals. On the other hand, the non-conventional literature includes the scientific and technical reports, patent documents, conference papers and theses, which are usually not readily available through commercial channels.

3. Reference Series. INIS Reference Series tells us the rules, standards, formats, codes and authority lists on which the International Nuclear Information System is based. The various reference series are in the form of manuals which are being published since 1969 and are an essential tool for users of the system, which includes cataloguers, indexers, abstractors or searchers. These reference manuals are being revised all the time on continuing basis and are available for purchase worldwide.

- Notes**
- A widely used manual of INIS is the IAEA-INIS-13 (Rev 38) 1999 - INIS: Thesaurus. Details of other INIS manuals are available from INIS website: www.iaea.org/inis
- 4. INIS Web Services.** The INIS web services includes maintaining of links to websites on the Internet in various fields of interest to nuclear science and technology subject and to any other work related to the IAEA. Besides these, INIS also offers subject access to the contents of the IAEA website and the sites of various related international and multinational organisations in the field of nuclear science and technology.
- 5. Marketing and Promotion.** INIS is carrying out extensive marketing and promotion of its products and services, which is handled by the INIS Secretariat in Vienna and the individual member states in the respective countries. At the IAEA Secretariat, the INIS marketing and promotion activities are carried out with the help of online/CD-ROM demonstrations, by advertisements, by publishing articles in professional journals and by distribution of material, demo CDs, video films and other promotional tools. INIS member states, on the other hand, are assigned the responsibility for establishing and carrying out promotional activities in the area or regions under their domain in order to make aware the INIS potential to the users desiring information and information services in the field of nuclear science and technology. For this, they are assisted by the INIS Secretariat which assists by providing general promotional and informational materials about INIS and its databases.
- 6. Training.** A range of training activities provided by INIS meet a number of objectives that include: establishment and improvement of a national information infrastructure, transfer of modern information technology, enabling exchange of scientific and technical information, ensure high quality and coverage of the INIS Database, facilitate maximum utilisation of INIS output products and are responsiveness to a country needs.

Alert Services

Based on the INIS products, alert services are provided usually in the form of SDI services to the users requiring current information in field of nuclear science and technology. These services are mostly available through the National INIS Liaison-Officer of the individual INIS member states. Here the alert services are in the form of individual searches which are performed against individual subject interest profiles of the users.

Document Delivery Service

For providing the document delivery services, INIS has made arrangements with several INIS national centres which make available full-texts of INIS non-conventional literature to users in the individual INIS member state. This service, however, is limited only to the users of the particular INIS member state. For requests received from countries where no such facility is available, service is available by referring to the Knowledge Preservation Group of INIS.

Services in India**Notes**

From the very beginning India has been actively associated with INIS.

**Did u know?**

In India, Library and Information Services Division of BARC is the National Centre for INIS activities. This centre collects information on the subject and then sends it to the Centre Processing Unit and passes the output to the users.

The INIS database can be accessed online through Internet and CDs which are distributed by IAEA. The non-conventional literature of INIS is available in the form of CDs, microforms.

Besides the above products, each member state offers a host of individualised services based on INIS products received from the INIS Secretariat. Details of the exact availability of INIS related services in the particular country are available from the National INIS Liaison Officer.

Contact details in India:

INIS Liaison Officer, Head, Scientific Information Resource Division, Bhabha Atomic Research Centre (BARC), Trombay, Bombay 400085.

**Task**

Write a short note on NCL.

12.4 Agricultural Resources Information System (AGRIS)

AGRIS, the International Information System for the Agricultural Sciences and Technology, was started in 1974 by the Food and Agriculture Organisation (FAO) of the United Nations. AGRIS became fully operational in 1975 with the first issue of AGRINDEX and was modeled on the INIS pattern to facilitate information exchange and to bring together the world literature dealing with all aspects of agriculture.

**Notes**

Presently, FAO's another programme, Current Agricultural Research Information System (CARIS) and AGRIS are functioning collectively.

AGRIS is a cooperative system in which participating member countries input references to the literature produced within their country irrespective of the language and, in return, draw on the information provided by the other participants. To date, 242 national, international and intergovernmental centres are participating in the AGRIS/CARIS programme. AGRIS was established with the following objectives:

"Creation of a single, comprehensive, current inventory of world-wide agricultural literature reflecting agricultural research results, food production, rural development and to help users to identify problems concerning all aspects of world food supply."

Meeting the information requirements of users requiring agricultural information by offering specialised subject retrieval services, providing documents on request, current awareness and selective dissemination of information services, and Collaborating with new and existing specialised secondary information services so as to increase efficiency and eliminate unnecessary duplication".

Notes**Background and Development of the AGRIS Network**

AGRIS has been operational since 1975. Its main aim is “to build an information system in the field of agriculture science and technology and related subjects”. It is a system of collaborative network of agricultural institutions of the world. The basic principles on which AGRIS was established as an agricultural network are given below:

AGRIS is an international/global system that is:

- “entirely international in scope as all United Nations Member Countries are participating in the programme;
- multilingual with English as a carrier language;
- a centralised collection of bibliographic details of publications, outputs and activities of agricultural research programmes of various United Nations Member States;
- special emphasis is on non - conventional (grey) literature in Member States;
- a global system which is participatory as it is based on a designated national AGRIS Input Centre in each United Nations Member State and other related agricultural international organisations;
- an information system supported by Food and Agricultural Organisation (FAO) which has complete coordination with regard to application of tools and methodologies, data processing, training, and other technical back-up activities; and
- a system where all UN Member States have common ownership of agricultural data alongwith facility of easy access to the collective information base maintained at the AGRIS headquarters.”

The subject areas of the AGRIS include various aspects of agriculture, including forestry, food, environment, animal sciences, aquatic sciences and fisheries, human nutrition and all other aspects related to agricultural sciences from participating countries all over the world. AGRIS centres input information from periodical literature, monographs, reports, patents, standards, etc., on standardised data input formats. The covered literature also includes unique material such as unpublished scientific and technical reports, theses, conference papers, government publications, and more. Approximately 1,30,000, records are added each year with keywords in English, French, and Spanish. The centralised processing is then done at the AGRIS Coordinating Centre in Rome.



Did u know?

The AGRIS information system has till date a total of 242 participating centres located in various United Nations Member States.

Each AGRIS National Centre acts as a focal point in the concerned country or region which makes available information to the user community thereby acting as a decentralised system. Some of the centres are carrying out not only the documentation of scientific and technical literature, but are also working for the development of agricultural information management.

In the last three decades, AGRIS has been quite successful in achieving its initially stated goals, but there have been some problems faced by the participating centres which at times hamper overall progress of the network. Some of these problems are:

1. **Access to the original documents.** All AGRIS records comprise bibliographic reference. The abstract is usually available for only about 30% of AGRIS records. The access to the full-text of the documents, however, is only possible through document delivery (for example, by post or fax). Therefore, most developing countries have not been able to offer this service properly and this leads to a lot of problems.

2. **Incomplete coverage.** In the last few years, a review of the input statistics of literature received from Asia/Pacific region, Africa and Latin American/Caribbean regions to the central AGRIS database shows slight decline in the number of records input to the database. This has been in contrast to the statistics gathered from other sources that show a fast upward trend of global production of documentation and other outputs related to agricultural development and food security which too is a cause for alarm.
3. **Agriculture related systems other than AGRIS.** As per a chief objective of AGRIS, its database receives all inputs from the United Nations Member States only. But many national bibliographic databases, and even collections of electronic full-text documents pertinent to the scope of AGRIS, exist outside the framework of AGRIS, and thus have no involvement with FAO.
4. **Lack of structural and institutional linkages.** The overall setup lacks network linkages due to structural and institutional barriers. Thus the existing AGRIS system lacks proper coverage due to its centres not being linked in any significant way to the wider community of organisations and programmes working in food security or rural development.

Notes

Since its inception, the chief objective of AGRIS has been capacity building, improving access and exchange of information in the area of agricultural science and technology. Besides this, the system also aims to review the present day available technologies and user requirements for the future of development of the AGRIS. Presently, the strengthening of the AGRIS initiative has gone far beyond the creation and development of bibliographical databases. The focus has always been to improve accessibility of science and technology information to facilitate agricultural development and food security. AGRIS plays vital role in highlighting the need and importance of agriculture and information related to agricultural activities in the developing and developed countries thereby indicating that agriculture can be a central part of the developments in these nations. Although this effort is entirely based on the awareness and goodwill of the international community, AGRIS can lead to improving electronic publishing of documentation in agricultural science and technology, linking information about institutions, scientists and researchers, and activities, without too much of efforts and thus leading to a collaborative framework.

With the above in view, the AGRIS has revised its principles in collaboration with the Member Countries for the AGRIS network to achieve its objective in the near future. The revised principles take into account the aspects related to adopting a decentralised approach, more emphasis on national partnerships, improved linkages, capacity building, making available full-text of documents in the field of agriculture science and technology, web-enabled methodologies and tools and need for establishment of standards.

AGRIS Network and AGRIS Resource Centres

Efforts are on to improve the activities of AGRIS Resource Centres and thus improve the capabilities of the AGRIS Network. With this in view, a high level committee was set up in June 2000, which recommended that AGRIS Input Centres be renamed as AGRIS Resource Centres in order to reflect their revised role. These centres just like the input centres, are recommended to be located in various national, regional or international organisations. The Resource Centres are expected to play a key role in capacity building with focus on national and regional partnership. The international network on the other hand would lead to exchange of agricultural information and knowledge with help of the modern available tools and technologies. Some of the functions that are essential for the AGRIS Resource Centres are:

“adoption and implementation of standards for catalogueing and indexing agricultural information, especially the categorisations schemes, thesauri and the development of standard exchange formats;

Notes	collection, recording and organisation of non-conventional and conventional scientific and technical literature relevant to AGRIS which is produced in the region; creation of digital repositories for literature and other types of related scientific and technical information produced in their area, in consultation with FAO; and maximum use of Internet-based tools for data processing and dissemination.” Other areas where efforts have been made include: <ul style="list-style-type: none">— FAO and AGRIS Information Centre/Website— Improving Access to Documentation on Science and Technology— Strengthening and Establishment of Standards— The Central AGRIS Website/Database— Deployment of New Methods and WebAGRIS Tools
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Information Activities

The information collected from various input centres from all over the world is processed by AGRIS and is available to users in the form of various current and ongoing agricultural information projects in both AGRIS and CARIS. Some of these are:

WebAGRIS

It covers the current and ongoing agricultural information projects in AGRIS and CARIS and is considered as networking for AGRIS in the future. The target users are those that require information related to all areas of agricultural and rural development.

AGRIS AP

AGRIS Application Profile (AP) gives the Guidelines for Description of Information Objects for the International Information System on Agricultural Sciences and Technology. This document contains specifications about the metadata that should be exchanged and disseminated through the AGRIS system.

Electronic Discussion Forum

This is the discussion group workspace for the exchange of ideas on using the AGRIS AP, WebAGRIS. The ideal target audience consists of coordinators and facilitators of established or incipient communities, as well as groups of individuals with shared interests in agricultural and rural development.

AGROVOC

AGROVOC is the multilingual international agricultural thesaurus. The terms are in English, French and Spanish. Each key term included in the AGROVOC is either a descriptor or a non-descriptor. AGROVOC is also available online referred to as AGROVOC Online.

AGRIS Information Products

Various products of AGRIS available from the AGRIS Secretariat are:

AGRIS and CARIS on CD – This includes the bibliographic references, CARIS Project Data, the AGROVOC Thesaurus and the FAO Catalogue.

AGRIS Manuals – Several manual of AGRIS are available for immediate downloading for use by the resource centres.

AGRIS and CARIS - FTP site - Makes available AGRIS and CARIS data.

FAO Documentation – Food and Agricultural Organisation documents starting from 1980 to 2000 are available with complete text from the document repository of AGRIS.

Notes

AGRIS Categorisation Schemes

These are categorisation schemes for information in the areas of agriculture, nutrition, forestry and fisheries. The categorisation schemes available from AGRIS are:

AGRIS/CARIS Subject Categories – A List of 17 AGRIS/CARIS Subject Categories

Countries Codes – A List of Member Country Codes

Language Codes – A List of Language Codes

AGRIS/CARIS Categorisation Scheme

Services in India

India has been actively participating in AGRIS from the very beginning. The participating AGRIS/CARIS institution from India is the Agricultural Research Information Centre, Indian Council of Agricultural Research, Krishi Anusandhan Bhavan, Pusa Road New Delhi 110 012. On an average, 3500 bibliographic entries are submitted to AGRIS database as Indian input every year.

The Agricultural Research Information Centre, every month, receives from FAO updated machine-readable AGRIS outputs. Retrieval is then provided to agricultural scientists requiring information in the country. A computerised SDI service is also made available to agricultural researchers of India.

Contact details in India

AGRIS Liaison Officer, National AGRIS Centre, Agricultural Research Information Centre, Indian Council of Agricultural Research, Krishi Anusandhan Bhavan, Pusa Road, New Delhi 110 012.



Task

Visit the site of AGRIS or INIS or any site of united nations and collect material of your interest.

Self Assessment

State whether the following statements are true or false:

7. The full form of AGRIS is Agricultural Resources Information System.
8. The full form of INIS is International Nuclear Information System.
9. INIS is operated by International Automatic Energy Agency.
10. INIS started functioning in the year 1971.
11. AGRIS became fully operational in the year 1975.
12. INIS is operated by IAEA in collaboration with 132 members.

12.5 Summary

- The Agricultural Resources Information System is the Central Sector Scheme for Strengthening/Promoting Agricultural Information System in the Department of Agriculture and Cooperation (DAC), Ministry of Agriculture, and Government of India.
- The International Nuclear Information System (INIS) is an information system on the peaceful uses of nuclear science and technology. INIS is operated by the International Atomic Energy

Notes	Agency in collaboration with 122 Member States and 24 cooperating international organizations. <ul style="list-style-type: none">• With the advent of networks, remote transmission of texts and graphics, video clips and animated clips are also possible.• The Web-scale model will encourage users to participate in a network and community of libraries by enabling them to reuse information and socialize around information. It also will create a powerful, unified presence for libraries on the Web and give users a local, group and global reach.
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12.6 Keywords

CIS : Computer Information System
AGRIS : Agricultural Resources Information System

12.7 Review Questions

1. Elaborately discuss on online computer library center (OCLC).
2. Define WorldCat and netlibrary.
3. Explain user studies.
4. Explain INIS in detail.
5. Write short notes on INIS product and services.
6. Write a paragraph on agricultural resources information system.
7. Explain background and development of the AGRIS network.
8. What do you mean by AGRIS network and AGRIS resource centres.

Answers: Self Assessment

- | | | |
|-----------------------------------|----------------|----------|
| 1. Online Computer Library Centre | | |
| 2. World wide union catalogue. | | |
| 3. 1967 | 4. FirstSearch | 5. (a) |
| 6. (d) | 7. True | 8. True |
| 9. False | 10. False | 11. True |
| 12. True. | | |

12.8 Further Readings



Books

FOURIE (D) and DOWELL (D). *Libraries in the information age*. 2002. Libraries Unlimited, New York.

KATZ (William A). *Introduction to reference work: reference service and reference process*.



Online links

<http://dictionary.reference.com/browse/online+computer+library+center,+inc>
<http://www.oclc.org/uk/en/about/history/default.htm>

Notes

Unit 13: Library Classification

CONTENTS

- Objectives
- Introduction
 - 13.1 Classification-Purpose and Types
 - 13.2 Summary
 - 13.3 Keywords
 - 13.4 Review Questions
 - 13.5 Further Readings

Objectives

After studying this unit, you will be able to:

- Know the purpose and types of library classification
- Understand universal classification system.

Introduction

Digital libraries, once project-based and largely autonomous efforts, are maturing. As individual programs have grown, each has developed its own personality, reflecting the circumstances of its creation and environment, and its leadership. This report draws on the results of a survey and case studies to reveal how these influences have moulded a range of organizational forms that we call the digital library.

13.1 Classification-Purpose and Types

A **library classification** or indexing is a system of coding and organizing library materials (books, serials, audiovisual materials, computer files, maps, manuscripts) according to their subject and allocating a call number to that information resource.



Did u know?

Similar to classification systems used in biology, bibliographic classification systems group those entities together that are similar, typically arranged in a hierarchical tree structure.

Notes

A different kind of classification system, called a faceted classification system, is also widely used which allows the assignment of multiple classifications to an object, enabling the classifications to be ordered in multiple ways.

Library classification forms part of the field of library and information science. It is a form of bibliographic classification (library classifications are used in library catalogues, while "bibliographic classification" also covers classification used in other kinds of bibliographic databases). It goes hand in hand with library (descriptive) cataloguing under the rubric of cataloguing and classification, sometimes grouped together as technical services. The library professional who engages in the process of cataloguing and classifying library materials is called a cataloguer or catalogue librarian. Library classification systems are one of the two tools used to facilitate subject access. The other consists of alphabetical indexing languages such as Thesauri and Subject Headings systems.



Caution Library classification of a piece of work consists of two steps. Firstly, the "aboutness" of the material is ascertained. Next, a call number-based on the classification system in use at the particular library will be assigned to the work using the notation of the system.

It is important to note that unlike subject heading or thesauri where multiple terms can be assigned to the same work, in library classification systems, each work can only be placed in one class. This is due to shelving purposes: A book can have only one physical place. However, in classified catalogues one may have main entries as well as added entries. Most classification systems like the Dewey Decimal Classification (DDC) and Library of Congress classification also add a cutter number to each work which adds a code for the author of the work.

Classification systems in libraries generally play two roles. Firstly, they facilitate subject access by allowing the user to find out what works or documents the library has on a certain subject. Secondly, they provide a known location for the information source to be located.

Until the 19th century, most libraries had closed stacks, so the library classification only served to organize the subject catalogue. In the 20th century, libraries opened their stacks to the public and started to shelve the library material itself according to some library classification to simplify subject browsing.

*Notes*

Some classification systems are more suitable for aiding subject access, rather than for shelf location. For example, UDC which uses a complicated notation including plus, colons are more difficult to use for the purpose of shelf arrangement but are more expressive compared to DDC in terms of showing relationships between subjects. Similarly, faceted classification schemes are more difficult to use for shelf arrangement, unless the user has knowledge of the citation order.

Depending on the size of the library collection, some libraries might use classification systems solely for one purpose or the other. In extreme cases a public library with a small collection might just use a classification system for location of resources but might not use a complicated subject classification system. Instead all resources might just be put into a couple of wide classes. This is known as a "mark and park" classification method, more formally called reader interest classification.

Types**Notes**

There are many standard systems of library classification in use, and many more have been proposed over the years. However in general, classification systems can be divided into three types depending on how they are used.

- Universal schemes covering all subjects. Examples include Dewey Decimal Classification, Universal Decimal Classification and Library of Congress Classification.
- Specific classification schemes for particular subjects or types of materials. Examples include Iconclass, British Catalogue of Music Classification, and Dickinson classification, or the NLM Classification for medicine.
- National schemes specially created for certain countries. An example is the Swedish library classification system, SAB (Sveriges Allmänna Biblioteksförening).
- In terms of functionality, classification systems are often described as enumerative: produce an alphabetical list of subject headings, assign numbers to each heading in alphabetical order library classification is the technical process hierarchical: divides subjects hierarchically, from most general to most specific faceted or analytico-synthetic: divides subjects into mutually exclusive orthogonal facets.

There are few completely enumerative systems or faceted systems, most systems are a blend but favouring one type or the other. The most common classification systems, LCC and DDC, are essentially enumerative, though with some hierarchical and faceted elements (more so for DDC), especially at the broadest and most general level. The first true faceted system was the Colon classification of S. R. Ranganathan.

Universal classification systems used in the English-speaking world

- Dewey Decimal Classification (DDC)
- Library of Congress Classification (LCC)
- Bliss Bibliographic Classification (BC)

The above systems are the most common in the English-speaking world

- BISAC Subject Headings: The publishing industry standard for classification that is being adopted by some libraries.
- Harvard-Yenching Classification: An English classification system for Chinese language materials.
- V-LIB 1.2 (2008 Vartavan Library Classification for over 700 fields of knowledge, currently sold under license in the UK by Rosecastle Ltd.

Universal classification systems in other languages

- A system of book classification for Chinese libraries (Liu's Classification) library classification for user.
- New Classification Scheme for Chinese Libraries
- Nippon Decimal Classification (NDC)
- Chinese Library Classification (CLC)
- Korean Decimal Classification (KDC)
- Library-Bibliographic Classification (BBK) from Russia.

Notes	Universal classification systems that rely on synthesis (faceted systems) <ul style="list-style-type: none">• Bliss Bibliographic Classification• Colon Classification• Cutter Expansive Classification• Universal Decimal Classification Newer classification systems tend to use the principle of synthesis (combining codes from different lists to represent the different attributes of a work) heavily, which is comparatively lacking in LC or DDC.
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Comparing Classification Systems

As a result of differences in notation, history, use of enumeration, hierarchy, facets, classification systems can differ in the following ways:

- **Type of Notation:** Notation can be pure (consisting of only numerals, for example) or mixed (consisting of letters, numerals, and other symbols).
 - **Expressiveness:** This is the degree in which the notation can express relationship between concepts or structure.
 - **Whether they support mnemonics:** For example, the number 44 in DDC notation usually means it concerns some aspect of France. For example, 598.0944 concerns “Birds in France”. The 09 signifies country code, and 44 represent France.
 - **Hospitality:** The degree in which the system is able to accommodate new subjects.
 - **Brevity:** Length of the notation to express the same concept.
 - **Speed of updates and degree of support:** The best classification systems are constantly being reviewed and improved.

The following qualities are important for assessing a classification system

Consistency

Simplicity

Usability



Task

Write a report on the classification system of your university library.

Self Assessment

Fill in the blanks:

1. DDC is
 2. LCC is
 3. BC is

Multiple Choice Questions:

5. The second tool of facilitating subject access is: Notes
- (a) Alphabetically indexing languages (b) Systematic
 (c) Alphabetically (d) Disorderly.

State whether the following statements are true or false:

6. Library classification systems are one of the three tools used to facilitate subject access.
 7. The Harvard-Yenching Classification is an English classification system for Chinese language materials.

13.2 Summary

- A library classification or indexing is a system of coding and organizing library materials (books, serials, audiovisual materials, computer files, maps, manuscripts) according to their subject and allocating a call number to that information resource.
- The library professional who engages in the process of cataloguing and classifying library materials is called a cataloguer or catalogue librarian. Library classification systems are one of the two tools used to facilitate subject access. The other consists of alphabetical indexing languages such as Thesauri and Subject Headings systems.

13.3 Keywords

<i>DDC</i>	: Dewey Decimal Classification
<i>LLBA</i>	: Linguistics and Language Behaviour Abstracts
<i>PAIS</i>	: Public Affairs Information Service
<i>POPLINE</i>	: Population Information Online
<i>HAPI</i>	: Hispanic American Periodicals Index

13.4 Review Questions

1. Write a short note on digital library.
2. Write a paragraph on purposes and types of library classification.
3. Explain the types of classification systems.
4. Discuss a universal classification system.

Answers: Self Assessment

1. Dewey Decimal classification
2. Library of Congress classification
3. Bliss Bibliographic classification
4. (b)
5. (a)
6. False
7. True

Notes

13.5 Further Readings



Books

RANGANATHAN (S R). Reference service. Ed 2. 1989. *Ranganthan Endowment for Library Science, Bangalore.*

KRISHAN KUMAR. *Reference service* Ed. 3. 1996. Vikas Publishing, New Delhi.



Online links

<http://www.britannica.com/EBchecked/topic/339461/library-classification>

<http://skuastkashmir.ac.in/>

Notes

Unit 14: Development of Abstracting Services

CONTENTS

Objectives

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Objectives

After studying this unit, you will be able to:

- Discuss the functions and types of patents
- Explain the criteria of evaluation of software for libraries.

Introduction

Development in abstracting is currently noted in: Applied Social Sciences Index and Abstracts (ASSIA); British Library of Development Studies DEVLINE; Bowker-Saur; CAB International; Cambridge Scientific Abstracts-Linguistics and Language Behavior Abstracts (LLBA) and Sociological Abstracts; Community WISE; CSA Worldwide Political Science Abstracts/CSA Illumine; Current Bibliography on Africa; Development Initiatives; Dialogues pour le Progress de l'Humanité; EBSCO Publishing; Elsevier Geo Abstracts: International Development Abstracts; Hispanic American Periodicals Index (HAPI); Index Islamicus; International Bibliography of the Social Sciences (IBSS Online); International Political Science Abstracts; KIT TROPAG/RURAL; Multicultural Education Abstracts; Population information online (POPLINE); Public Affairs Information Service (PAIS); SCOPUS; Social Planning, Policy & Development Abstracts; Sociological Abstracts; Studies on Women.

Notes

14.1 Functions and Types of Patents

Patents can generally only be enforced through civil lawsuits (for example, for a U.S. patent, by an action for patent infringement in a United States federal court), although some countries have criminal penalties for wanton infringement. Typically, the patent owner will seek monetary compensation for past infringement, and will seek an injunction prohibiting the defendant from engaging in future acts of infringement. To prove infringement, the patent owner must establish that the accused infringer practices all the requirements of at least one of the claims of the patent.

An important limitation on the ability of a patent owner to successfully assert the patent in civil litigation is the accused infringer's right to challenge the validity of that patent. Civil courts hearing patent cases can and often do declare patents not valid. A patent can be found invalid on grounds that are set out in the relevant patent legislation that vary between countries. Often, the grounds are a subset of requirements for patentability in the relevant country. Although an infringer is generally free to rely on any available ground of invalidity (such as a prior publication, for example), some countries have sanctions to prevent the same validity questions being relitigated. An example, is the UK Certificate of contested validity.

The vast majority of patent rights, however, is not determined through litigation, but is resolved privately through patent licensing. Patent licensing agreements are effectively contracts in which the patent owner agrees to forgo their right to sue the licensee for infringement of the licensor's patent rights, usually in return for a royalty or other compensation. It is common for companies engaged in complex technical fields to enter into dozens of license agreements associated with the production of a single product. Moreover, it is equally common for competitors in such fields to license patents to each other under cross-licensing agreements in order to share the benefits of using each other's patented inventions.

14.2 Ownership of Patents

In most countries, both natural persons and corporate entities may apply for a patent. In the United States, however, only the inventor(s) may apply for a patent although it may be assigned to a corporate entity subsequently and inventors may be required to assign inventions to their employers under a contract of employment. In most European countries, ownership of an invention may pass from the inventor to their employer by rule of law if the invention was made in the course of the inventor's normal or specifically assigned employment duties, where an invention might reasonably be expected to result from carrying out those duties, or if the inventor had a special obligation to further the interests of the employer's company.

The inventors, their successors or their assignees become the proprietors of the patent when and if it is granted. If a patent is granted to more than one proprietor, the laws of the country in question and any agreement between the proprietors may affect the extent to which each proprietor can exploit the patent. For example, in some countries, each proprietor may freely license or assign their rights in the patent to another person while the law in other countries prohibits such actions without the permission of the other proprietor. The ability to assign ownership rights increases the liquidity of a patent as property. Inventors can obtain patents and then sell them to third parties. The third parties then own the patents and have the same rights to prevent others from exploiting the claimed inventions, as if they had originally made the inventions themselves.

Self Assessment

Fill in the blanks:

1. In most countries, both and may apply for a patent.
2. The investors, their or their become the properties of the patent when and if it is granted.

14.3 Governing Laws of Patents

Notes

The grant and enforcement of patents are governed by national laws, and also by international treaties, where those treaties have been given effect in national laws. Patents are, therefore, territorial in nature. Commonly, a nation forms a patent office with responsibility for operating that nation's patent system, within the relevant patent laws. The patent office generally has responsibility for the grant of patents, with infringement being the remit of national courts. There is a trend towards global harmonization of patent laws, with the World Trade Organization (WTO) being particularly active in this area. The TRIPs (Trade Related Aspects of Intellectual Property Rights) Agreement has been largely successful in providing a forum for nations to agree on an aligned set of patent laws. Conformity with the TRIPs agreement is a requirement of admission to the WTO and so compliance is seen by many nations as important. This has also led to many developing nations, which may historically have developed different laws to aid their development, enforcing patents laws in line with global practice.

Self Assessment

Multiple Choice Questions:

3. The grant and enforcement of patents are governed by:

(a) National laws	(b) Patents office
(c) National governing body	(d) National organisation.
4. TRIPS stands for:

(a) Trade related aspects of intellectual property rights	(b) Trade rational aspects of intellectual property rights
(c) Trade related aspects of international property rights	(d) None of these.

14.4 Criteria of Evaluation of Software for Libraries

In any endeavor in which we make a substantial investment of money, energy, and time or other resources, we like to know what kind of return we are getting. The ability to evaluate the return on our investment gives us the basis on which to choose between alternative. So, an evaluation is basically a judgement of worth. It is a matter of comparison of actual result with external standard, in the light of existing institutional realities which may be relevant to evaluating the future trajectory of the programme or services and provide an objective basis for decision making.

Software evaluation is quite a difficult task; we have to consider the following procedure, features and aids to evaluate software packages.

1. Preliminary step:

- (a) **Consult others:** You do not want software that stops unexpectedly, slows down on large network, report error message, so consult with other who have already used the software in the same way you intend to use the system or consult other who have already experienced on that software.
- (b) **Who is the advisor:** The reputation of person or the institution, his/her experienced on that particular software should also be justified at this point.
- (c) **Reputation of the manufacture and vendor:** The reputation of the manufacturer and vendor should also be considered.

Notes**2. Documentation:**

- (a) **Existing literature:** Go for the software after carefully examining the existing literature and documentation on the particular software.
- (b) **Training:** Does the company or authority of the particular software provide training? Where and how the training is conducted, whether it is online, Onsite should also be consider.
- (c) **Manual:** Does the training is accompanied by easy to follow supporting print material or manual. How good the manual is?

3. General features of the software:

- (a) **Various computer platform:** The various computer platform needed to run the software, *i.e.*, server, wireless connectivity, hard disc space needed, etc.
- (b) **Multiple platform:** Is the software able to run in multiple platforms such as windows 2000, windows N.T., windows98, 95, etc.
- (c) **Capacity:** The restriction in total number of database /information /records in a database it can handle effectively.
- (d) **Speed:** Speed of operation in different environment.
- (e) **Flexibility:** Flexibility to handle of records of variable sizes.
- (f) **Standardize data format:** Does it use standardize data form for importing and exporting of data.
- (g) **De-bugging facility:** De-bugging facility and scope of proper error message while executing the software.
- (h) **User friendliness:** Is the system easy to use? Does the system empower the experienced user with short cut and flexible tool. Does the system easy to learn? Is the system menu driven.
- (i) **Effectiveness:** Does the system meet the specification.
- (j) **Reliability:** Does the search give consistent result?
- (k) **Expandability:** Does the system permit addition?
- (l) **Total cost of the software:** Does the system come in different modules *i.e.*, available in only circulation module, circulation plus cataloguing module. What is the total cost of the system?
- (m) **Streamless movement of data:** Is the database built on open standard technologies such as SQL, cold fusion, or XML that allows different types of software to talk to each other. That means your different systems of the software can easily and automatically share and update any information that is in common, *e.g.*, students name, address, etc.

4. Services:

- (a) **Acquisition:** Does the system carry out duplicate checking while entering the data. Does it have the capacity to print accession register?
- (b) **Data entry and editing:** How effective the system is for data entry? Does the software provide easy way for editing of records? Are insertion and deletion of records easy?
- (c) **Circulation:** provision of facility for issue, return, computation of fines, reservation of document etc.

- | | Notes |
|---|-------|
| (d) Serial control: Provision of monitoring multiple issue of a serial, provision of grace period for receiving the serial, provision of renewal, overdue alert, entering the abstract of a serial. | Notes |
| (e) OPAC: Provision of reservation through OPAC, provision of searching OPAC from outside the library, provision of searching the OPAC and web simultaneously (Meta search) using a single word search. | |
| (f) Library administration: The software should allow generating different reports <i>i.e.</i> , collection statistics, circulation statistics and also should be helpful to create your own specialized report to meet your specialized need. | |
| (g) Enhanced MARC data: Many software allow to catalogue website, e-Books, AV resources in addition to the library resources. These websites are added by the library media specialist manually. | |
| (h) Updating: Does the library automation system company from their own site help to install, upgrade (web-based updates), and patches or simply to help you with a particular function. | |
| (i) New technologies: | |
| – Provision of handling in catalogue item | |
| – Provision of internet connectivity, e-mail connectivity. | |
| – Scope of integration of the software with other school department. | |
| – Provision of accessing the software from computer outside of the school walls via a web browser. | |
| – Does the library software keep pace with global technology, web enhancement, online information, virtual services, etc? | |
| – The latest softwares are now a days hosted by a vendor by an Application Service Provider (ASP) or by the school web server. This is an advantage, here cataloguer can work from remote location and OPAC can be accessed from both home and school, 24 hours a day. | |
| – Can other applications besides library software run on the workstation? | |
| – Can the software make it easy to switch between the OPAC and writing station because there are times when you like that your public OPAC station to function as writing station and there are other times when you like the writing station to become functional as OPAC. | |

5. Security:

- (a) Provision of user id /barcode etc.
- (b) Provision of access restriction to certain records/fields.
- (c) Is there any provision for students and staff to log in and log off on their own.
- (d) How new modification/new version of the software to be obtain by the librarian?
- (e) **Power out feature:** Is there any power out feature included? There should be a manual hand scanner available to check material in and out that can easily be connected to the compute system once its back up and running.
- (f) **Future exist cost:** In near future if you want to switch over to another packages then the cost involved in such cases should also be consider.

Notes

6. Post installation:

- (a) Does the vendor gives performance/service warranty?
- (b) Post installation support from the vendor.



Task Visit various sites including WTO and study various patent laws.

Self Assessment

State whether the following statements are true or false:

- 5. An evaluation is basically a judgement of worth.
- 6. Features of the software are the various computer platform needed to run the software, *i.e.*, server, wireless connectivity, hard disc space needed, etc.

14.5 Summary

- The ability to evaluate the return on our investment gives us the basis on which to choose between alternative.
- The grant and enforcement of patents are governed by national laws, and also by international treaties, where those treaties have been given effect in national laws.
- It is common for companies engaged in complex technical fields to enter into dozens of license agreements associated with the production of a single product. Moreover, it is equally common for competitors in such fields to license patents to each other under cross-licensing agreements in order to share the benefits of using each other's patented inventions.
- The ability to assign ownership rights increases the liquidity of a patent as property. Inventors can obtain patents and then sell them to third parties. The third parties then own the patents and have the same rights to prevent others from exploiting the claimed inventions, as if they had originally made the inventions themselves.

14.6 Keywords

TRIP	: Trade Related Aspects of Intellectual Property Rights
WTO	: World Trade Organization

14.7 Review Questions

- 1. Explain the development of abstracting services with its function.
- 2. Explain function and types of patents.
- 3. Define ownership of patents.
- 4. What is governing laws of patents.
- 5. Discuss in detail criteria of evaluation of a software for libraries.

Answers: Self Assessment

Notes

- | | | |
|--|--------------------------|---------|
| 1. natural persons, corporate entities | 2. successors, assignees | 3. (a) |
| 4. (a) | 5. True | 6. True |

14.8 Further Readings



Books

CHENEY (F N) and WILLIAMS (W J). *Fundamental reference sources*. Ed. 3. 2000. ALA, Chicago.

CRAWFORD (John). *Evaluation of library and information services 2000*. ASLIB, London.



Online links

http://www.streetdirectory.com/travel_guide/192540/business_and_finance/
<http://publications.drd.gov.in/gsdl/collect/dbit/import/v18/dbit1805009.pdf>

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