Subject: Library and Information Science

Production of Courseware
e-Content for Post Graduate Courses

Paper No : 04 Information Sources, Systems and Services

Module : 16 User Studies, Users' Education

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Module 16: User Studies and User Education

I. Objectives

- To know about the concept and need of user studies;
- To describe the methods of user studies;
- To know the implications for libraries;
- To understand the concept, objectives and need of user education;
- To understand the limitation of user studies;
- To identify different levels and methods of user education;
- To learn about the various limitations of user studies.

II. Learning Outcome

After reading this module, you will able to:

- Know the Meaning, objectives and need for user studies,
- Identify necessary steps in planning of a user study,
- Learn about various methods/techniques for user studies.
- Know the meaning, objectives and need for user education.
- Describe methods of user education, and
- Know the meaning of information literacy.

II. Module Structure

1. Introduction
2. User Studies: concept and meaning
    2.1 Objectives of User Studies
    2.2 Need for User Studies
    2.3 User Studies: Planning
        2.3.1 Steps in the Plan
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    2.5 User Studies: Methods or Techniques
        2.5.1 General or Conventional Methods
            2.5.1.1 Questionnaire Method
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        2.5.2 Indirect Methods
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            2.5.2.2 Citation Analysis

1. Introduction

Of the three components of a modern library and information centre, viz., documents, users, and staff, the users are regarded as the most important component. All the activities of a library, from acquisition of documents to providing information contained therein, revolve round the needs of the users. They are the people who use the resources and services a library offers. The nature and type of users depend upon the type of library and information centre. So are their information needs which change according to their types. It is a necessity on part of the libraries to assess their information needs in order to serve them better and provide effective information services. It is a well-known fact that the fundamental objective of a library is to meet the information needs of its various types of users in minimum possible time. This becomes easier if the library attempts to assess their information needs, and user studies have the potential to know that. Similarly, it is an aim of a library to attract a large number of users so that the resources are put to maximum use. In order to remove any barriers between the users and the information, the library educates the users so as to make them aware about the valuable sources and services. The users are guided to help themselves to locate the required sources and information to meet their needs. In the present Module, attempt is made to know about the methods of user studies as well as user education.

2. User Studies: concept and meaning

The concept of user studies has been defined differently by different expert librarians and information scientists, based on the library surveys they conducted from time to time. A user study

can be considered as a systematic study of users' information needs. The user studies help to identify as to what the users require from their libraries.

Britain, while defining user studies, said that empirical studies of the use of, demand or need for, information are usually called user studies. The Centre for Research on User Studies at the University of Sheffield, observed that "the general objectives of research on users is further understanding of the processes of information transfer. The research may be expected to lead to the improvement of information transfer system of all types and to have implication for the organization of communication, the distribution or researcher and the relationships between systems." It is clear from the above that user studies generally centre on the users in an attempt to understand their information needs, use behaviour and use pattern.

User studies, according to Wilson, "is a term which covers a very wide range of potential research, from the study of users' choices of books from a university library, through reactions to online search outputs, to the in depth analysis of the underlying needs that result in information seeking."

2.1 Objectives of User Studies

Some of the objectives of user studies can be listed as follows:

- To examine patterns of library use and identify gaps in use;
- To evaluate the library resources;
- To make selection of documents systematic;
- To introduce documentation and information services; and
- To evolve resource sharing with other libraries.

2.2 Need for User Studies

There are a number of reasons for conducting user studies. A library and information centre would like to know about the information needs of its user community. User studies would help them to know about the gaps between what is required by the users and what is being delivered. This and some other reasons necessitate conducting user studies. Some of these reasons include:

- To identify the levels and kinds of user needs;
- To identify the priorities of users for library resources and services;
- To identify the actual strengths and weaknesses of library resources and services;
- To identify the limitations or problems which seem to discourage the use of the library;
- To identify the level of involvement or participation of users in the library programme;
- To improve the organization and planning for library services at both the local and national levels; and
- To know about the future information needs of the users.

2.3 User Studies: Planning

When the librarian or investigator is ready to conduct a user study, he must plan it carefully to the last detail where each step needs to be worked out before plunging into the exercise.

2.3.1 Steps in the Plan

There may be more than one way of conducting a user study to determine the information needs of the users of a given library. However, a good plan for conducting a user study will usually consist of the following steps:

a. **Selection of the Problem**: The investigator or librarian first identifies the problem to be studied as the problem for one library may be different from that of another. The problem may be related to reading habits, information needs, information seeking behaviour, use pattern of sources and services, etc.

b. **Objectives**: The investigator must formulate clearly the objectives of the study related to the problem.

c. **Previous Studies**: The librarian must survey the previous studies as well as literature in general and learning about all aspects of user studies.

d. **Variables**: The variables to be studied and the model to be followed may be determined at this stage.

e. **Sample Population**: The sample population to be studied may be selected.

f. **Collection of Data**: From the many methods available, the most suitable method for collection of data for observation may be selected.

g. **Analysis of Data**: The method of analysis and interpretation of the collected data has to be determined with the help of experts in statistical techniques.

h. **Presentation of Data**: The ways of presentation of data in tabular form, or charts, etc.for preparation of the report need to be determined.

i. **Report Writing:** This is the last step where a final report has to be prepared. It would generally include the title of the study, need of the study, objectives, methodology, scope and limitations of the study, findings, suggestions, and conclusion of the study.

2.4 Selection of Sample

Selection of sample from the user population is regarded as important step, among other decisions. There are a number of methods available for this purpose. Some of the most commonly used sampling techniques are as follows:

a. **Convenience Sampling**: This method consists of deciding on the, say, first 20, or 50, etc. users that come along as subject of study.

b. **Random Sampling**: It means picking the users for study from a population at random.

c. **Stratified Sampling**: It involves subdividing the population into sub-groups and then selecting users for study randomly from each sub-group.

d. Representative Sampling: This method consists of determining beforehand individuals, pairs of individuals, or small groups as subject of study with some characteristics in common.

2.5 User Studies: Methods or Techniques

Many methods and techniques are available to conduct user studies for determining their information needs.Wood, while reviewing the methods used in studies of information users and their needs, has classified them as follows:

- Questionnaire method
- Interview method
- Diary method
- Observation
- Analysis of library data

Guha, on the other hand, categorized all the available methods under the following major groups:

i. General or Conventional Methods
   - Questionnaire Method
   - Interview Method
   - Diary Method
   - Observation
   - Operations Research

ii. Indirect Methods
   - Analysis of Library Records
   - Citation Analysis

iii. Other Methods
   - Computer Feedback
   - Unconventional Methods

In the following sections will give a brief description of these methods employed in user studies.

2.5.1 General or Conventional Methods

The general methods of user studies include the following methods:

2.5.1.1 Questionnaire Method

It is one of the most popular methods among the investigators of research problems. A questionnaire is usually a structured schedule of questions pertaining to a particular problem under study. A structured questionnaire is used for the survey conducted by the questionnaire method. This questionnaire is generally given to the user to fill in and return. On the other hand, unstructured questionnaire is used as a tool to conduct interviews. The questions in a questionnaire can be

grouped into such categories as general, close-ended, open-ended, etc. on the basis on the purpose of the study.

While designing a questionnaire, the investigator must take into consideration the following points:

- Questions should be simple and easy to understand.
- Questions framed should reflect the objectives of the study.
- The number of questions should be limited.
- Questions of confidential nature should be avoided.

The format of the questionnaire should be such as to understand and complete it easily. Therefore, the layout of the questionnaire should be given due attention, and made consistent and clear.

Once the questionnaire is prepared, it is advisable to pre-test it through a pilot study on few users from the population under study. It will help to know the shortcomings, if any, in the questionnaire, which can be incorporated. It will also provide an estimate of time taken in completing the questionnaire, and so on.

On the basis of pilot study, the final form of the questionnaire is determined. At the time of the distribution the questionnaire should be accompanied by a covering letter stating and objectives of the study and requesting the complete cooperation of the user.

a. Advantages

It is experienced that the majority of the investigators follow the questionnaire methods an important technique of data collection. Some of the reasons may be as follows:

- It is simple and convenient method of data collection.
- When the population is large and dispersed geographically, this method is useful.
- It is economical and fast.

b. Disadvantages

This method has the following disadvantages also:

- The response level is usually low.
- Due to poorly phrased questions respondents may not be able to answer them.
- Difficult to verify the information provided by the respondents.

2.5.1.2 Interview Method

Another conventional method of data collection popular among the investigators is the interview method. It is adopted in most field research or empirical social surveys. It is a method of personal interaction through which the investigator gains an understanding of the reasons, etc. for human attitudes, preferences, or behaviour.

Interviews can be structured and unstructured. Structured interview is based on a carefully worded interview schedule. In unstructured interview, the interviewer encourages the respondent, in

between, to talk freely. In the present times of computer technology, interview can also be conducted through mobile phone, or e-mail, or online chatting.

a. Advantages

It has the following advantages:

- It is simple and easy to perform.
- It is quick to be used.
- The response rate is usually high.
- Can cover wide geographical area.
- Possible to obtain complete response.

b. Disadvantages

This method also has the following disadvantages:

- It is time consuming and uneconomical.
- Conducting interview requires some training.
- Respondents have little time to think.
- Sometimes responses may be difficult to analyze.

2.5.1.3 Diary Method

This is another conventional method of data collection which is used in survey research. In this method, the respondents under study are asked to keep a detailed record of particular events, information activities, such as information research, reading, browsing, literature search, and so on. These are problems which involve human behaviour, i.e. the users keep the record of their own activities and behaviour. The record is maintained in the diaries given to the respondents over a period of time, rather than on a single occasion. This method is used for items that are easily forgotten, whether because they are insignificant (for a particular study), or because they occur frequently. After the study is complete, the diaries are returned to the investigator for analysis.

a. Advantages

The advantages of this method are as follows:

- It is useful for recording events that may be difficult to recall at a later time.
- It is useful to find out an aspect of users' behaviour that may change over time.
- It can be used in situations where observation may not be practical.

b. Disadvantages

It has the following disadvantages also:

- Difficult to obtain a running record from the busy respondents.
- When a user's library use is being investigated, he may change his usual patterns.
- Difficult to persuade users to keep a diary, hence representative sample may not be available.

2.5.1.4 Observation Method

Observation as a method of data collection involves recording the behavioural pattern of people and events. It is useful in such library areas as observing users' behaviour at reference desk, circulation desk, periodical area, catalogue area, etc. There may be broadly two types of observations:

i. Participant Observation: The investigator becomes part of the group being investigated. This will provide an opportunity to the investigator to study the insights of the situations.
ii. Non-participant Observation: The investigator observes the activities or situations closely but does not communicate with people being observed.

The investigator can observe individual's information seeking activities, for example, study of the pattern of reference questions at the reference desk, or the use of reference sources, etc. If the investigator observes situations repeatedly the reliability of data increases the validity of the study.

a. **Advantages**

The advantages of this method include the following:

- Useful to study the actual behaviour of the respondents.
- The data collected is more reliable.
- It is not biased.

b. **Disadvantages**

The disadvantages include the following:

- It is time consuming method.
- The duration of an activity may either be very long or too short to observe properly.
- Sometimes difficult to quantify the human behaviour.

2.5.1.5 Operations Research

Operations research is the application of scientific methods to management and administration of government, commercial, or industrial systems. It is often considered as sub-field of mathematics because it employs techniques from mathematical modelling, statistical analysis, etc. In this way, it arrives at optimal or near-optimal solutions to complex decision-making problems. Interdisciplinary research teams adopt and adapt scientific methods to large scale problems such as resource allocation, inventory control, etc.

In this method, respondents selected for the study are observed at random during working hours of the library. The time spent on various information activities is recorded by the investigator. Thus, it helps organizations to investigate complex issues, identify and solve problems and make better decisions by using analytical methods.

2.5.2 Indirect Methods

The indirect methods of data collection are as discussed below:

2.5.2.1 Analysis of Library Records

This method ascertains the users' information requirements in an indirect manner. It involves the analysis of statistical records maintained in a library which can provide a view of the information needs of the user community. It includes the analysis of important library records such as circulation records, interlibrary loan records, reference query request records, and so on. Analysis of these records reveals the nature of use of the documents, types of reference questions asked, effectiveness of reference and information services, etc.

a. **Advantages**

- It is useful in determining the policies of the library regarding collections, services, etc.
- It is useful in the computerization of library in-house activities.
- It can help to enhance the efficiency and effectiveness of library services.

2.5.2.2 Citation Analysis

This is an indirect, but popular, method of user studies. It analyses the bibliographic citations appended to their documents (journal articles, theses, books, etc.) by authors. It provides useful data on the types of documents used and cited by theauthors. The citations or reference provided by authors become the basis of citation analysis. It explains that the documents cited by the authors are used by them; hence it is an indication as to the nature of materials required by library users. Citation analysis proves helpful to the librarian to take decision regarding the acquisition of documents, selection or rejection of material used for developing an information service or product, etc.This method is also found to be useful in determining the non-use of a significant proportion of journals; hence library can review its journal subscription policy.

a. **Advantages**

Citation analysis has the following advantages:

- It is regarded as unbiased method.
- It helps to produce a rank list of journals thus helping in their acquisition.
- It also provides useful indicators for identifying institutions of excellence, individual experts, etc.

b. **Disadvantages**

Some of the disadvantages of this method are as follows:

- Citation studies are not always good indicators of actual use of journals.
- It provides only a limited idea about the use of documents as many other documents are not cited by authors.
- There is a possibility of citing unused documents of reputed authors.

2.5.3 Other Methods

The other methods include the following:

2.5.3.1 Feedback or Computer Feedback

There has been a wide use of computer in libraries these days. Computer feedback makes use of the records obtained as by-products of a computer search by users. Analysis of such records with the help of computer can make it an effective technique in ascertaining users' information needs. A library or an information centre can acquire feedback on the services and products it provides to its users. For example, in Selective Dissemination of Information service, the library asks for feedback for every document citation supplied to the users. Such feedback from users can help to improve their profiles, and the services.

2.5.3.2 Unconventional Methods

Investigators can also make use of unconventional methods to know the users' information requirements. By making use of biographical, autobiographical, and other accounts of library scholars can explain their own experience in the collection of information from various sources. Such a study can provide interesting indicators on the uses' approach to information. Being an unconventional method, it may or may not bring in any additional data for the purpose of the study.

As is clear from the above discussion, each method has its own advantages and disadvantages, therefore, the investigators may select any method that is suitable to the sample population and serves the purpose of the study. The investigators invariably make use of more than one method, particularly in survey research, to substantiate the data and findings of the user study.

2.6 Data Analysis Methods

Analysis of the data collected through various methods as discussed above indicates the trends of the findings. Some of the more frequently used methods of analysis are given below:

2.6.1 Statistical Analysis

It includes the application of standard statistical techniques. These techniques help in summarizing the data, comparing it, and testing it for any statistical significance.

2.6.2 Semantic Analysis

It covers application of semantic techniques. It is helpful in summarizing and comparing data collected through user study.

2.6.3 Psycho-social Analysis

This method involves application of psychological and sociological techniques which are useful in classifying or describing the data.

2.6.4 Economic Analysis

This method of data analysis constitutes the application of macro or micro economic techniques. These techniques are useful in knowing the economic implications of data.

2.7 Implications of User Studies for Libraries

User studies can play important role in refreshing and improving library system and services. Some of the implications of user studies for library resources and services can be as follows:

2.7.1 Collection Development

In order to develop a balanced and suitable collection, it is essential to know the requirements of the users. This is accomplished through user studies undertaken by library staff the findings of which can become basis of a well-balanced collection.

2.7.2 Weeding out Documents

In view of the growing collection of a library, it is becoming difficult to store new acquisitions every year. Some user studies conducted about the use of library documents bring to light the unused collection. This may become a strong basis for weeding out those documents lying unused and outdated in the library for a long time. These may be kept in a separate dormitory before gifting out to some needy libraries.

2.7.3 Allocation of Resources

The opinions of users determined through user studies regarding the appropriate allocation of resources in a library, such as money, men, material, and physical facilities, etc. must be given due consideration by library authority. This may help to improve the use of library resources and services.

2.7.4 User-based Information Services

In order to introduce new service(s) and/ or improve the existing ones, it is advisable to ascertain opinions, and get feedback, through user studies. A service which is required by a few users will prove to be uneconomical, and should not be started. Only those library and information services need to be developed and introduced which are likely to be used by a majority of the user community.

2.7.5 Improvement of Library Techniques

For the organization of knowledge in libraries, librarians have been making use of such techniques, inter alia, as cataloguing and classification. The public catalogue has a direct bearing on the literature search by the users. Therefore, catalogue use study will enable to assess the merits and demerits of the physical and internal form of the catalogue, and help to improve it by making alterations wherever suggested. Now that catalogue has been computerized in large libraries, user studies can again help to improve it further, if the need arises.

2.8 Limitations of User Studies

Librarians have conducted many user studies from time to time to assess the information needs of their user community. The results of these studies have provided the opportunity to know about strengths and weaknesses of their collection and develop as per the users' needs. However, it has been observed that because of many complexities in the information needs these could not reflect a true picture.

Some of the shortcomings occurring in the user studies may be as follows:

- Objectives of the user study are sometimes not properly determined by the investigators, and they attempt to plunge into administering the questionnaire, etc.
- Sampling techniques used by the investigators are not flawless. Selecting the right sample of users is a big problem in itself. The investigators are not able to give due consideration to the refined techniques of random sampling. Therefore, the resultant sample may be biased. This makes the results of the study lop-sided which do not reflect the true picture.
- The size of the sample should be such as to reflect the entire population which, in most of the user studies, is not a representative one. This adversely affects the findings.
- The composition of user population is equally important, because the information needs of users working in an academic institution may be markedly different from those in government departments or in industry, and so on.
- Other variables such as age, education, experience, etc. also affect the information seeking behaviour of users.
- Statistical analysis methods chosen may not be appropriate for the type of data collected.

If these and other limitations are removed from the user studies in future, the findings can be made more valid and reliable. The library and information systems can come out of their cocoon, shed their passive image, assume proactive role, and promote their resources and services.

3. User Education: Concept and Meaning

It is an acknowledged fact that the various types of users from teachers to students, scientists to engineers, managers to workers, business people to housewives, and so on, do not make optimum use of library and information resources. The reasons are no far to seek. Thegrowth in the size of information sources in a variety of subjects has been making it difficult for users to find the needed documents. Coupled with this is the impact of information communication technology in recent years which has led to change in the format of documents making it further difficult to access the required sources.This makes it imperative for users to learn the ways and methods for easy access to valuable sources of information. The librarian and his staff may take some steps to impart some basic training to the users in the use of information services and sources.

In library and information science literature, many terms such as 'initiation', 'bibliographic instruction', 'user education', 'user orientation', and 'user assistance' have often been used interchangeably. However, the activities included in these categories are interrelated and influence each other.

The aim of 'orientation' programme is to familiarize the users with a particular library and information system and to help them through their problem. On the other hand, 'user education' generally consists not only of orientation of the user in the practices and methods prevailing in a particular library system but also of the knowledge regarding the structure of subject literature, its development, its information resources, etc.

In the words of Mews, "user education is instruction given to readers to help them make the best use of a library." According to Tocatlian, user education may be defined to include any effort or programme which will guide and instruct existing and potential users.

Wilson defined user education as the process whereby potential users of information are made aware of the value of information in specialized fields of activities.

So, the traditional user education programmes are designed with the aim of making the users aware of what resources exist in the library, promoting them, and how best these can be used by individual users to find suitable information.

It is clear from the above that user education is instructing and guiding the users how to use the library. A user education programme, therefore, helps them to learn library and information practices, methods, services and sources on their own.

3.1 User Education: Objectives

Some of the basic objectives of user education and training are as follows:

- To create an awareness and understanding of the basic relevant library and information sources and services,
- To bridge the gap between the potential user and the library collection,
- To enhance users' abilities to select appropriate information sources and systems for a given information need,
- To offer instruction in the effective and efficient use of the available library facilities and resources,
- To develop users' knowledge and skills to access or retrieve the information required, and
- To help in the assessment of existing library and information resources and services.

Thus, the long term objective is to make the user-library and information system interface more productive and to improve the use of resources and services.

3.2 User Education: Need

The following factors may explain the need for user education programmes:

a. Growth of Information: In recent years, as a result of activities of various institutions, research and development organizations, individuals, etc. there has been increase in information to the extent that it has become almost difficult to keep track of it. This growth is further compounded by the growth in the interdisciplinary and multidisciplinary subjects. Also, many information sources are being brought out in digital form such as CD-ROMs, DVDs, etc. while many others are available online. For efficient and effective use of these sources, and in order to retrieve the required information out of a mass of information, user education and training has become necessary.

b. Non-use of Library Resources: Library being a service institution, adds new documents to its stock every now and then for its users. But user studies about the use of library resources have reported that many of the documents in different subjects remain unused for various reasons. It is a great challenge for librarians. User education will help to encourage the better use of available resources.

c. Unfamiliarity with Library System: Most of the library users are not well familiar with the way the documents are organized; they are not well familiar with the search process from the

online public access catalogue, online databases, computer-based retrieval system, and so on. User education programme will definitely motivate them to have easy and efficient access to information stored in various sources.

These are only some of the important reasons for initiating user education programmes in library and information systems. Other reasons may include new methods of information transfer, changes in physical format of documents, lack of proper guidance in library, and so on.

3.3 Methods of User Education

As no single method of user education is panacea for all categories of users, many methods are available for this purpose. Nancy Fjallbrantand IanMalleyhave identified the following three groups of methods:

i. Group Instruction: For providing instructions to users in groups they included :
   - Lecture method
   - Seminar/Tutorial/Demonstration method
   - Guided tour

ii. Individual Instruction: Teaching methods generally used for individual instruction are:
   - Practical exercise
   - Self-instructional material (tours, signs, etc.)
   - Individual help

iii. Group and Individual Instruction: For providing instructions both to groups and individual, the following methods are included:
   - Films
   - Video tape
   - Tape/slide
   - Audio tape
   - Printed media (books, printed guides, etc.)

It may, however, be mentioned that the choice of teaching methods depends upon learning/teaching situation, the users, and the subject material available for the purpose.

Some of the important methods are briefly discussed here.

   a. **Lecture Method**

This is the most common and popular method of teaching, particularly when a large group of students is involved. Delivering lectures about the use of library and its resources, and how best to use them is a technique used by the librarian/reference librarian. Lectures, supported by the power point (ppt) technique, can become quite effective in communicating the information to the audience.

   b. **Seminars/Tutorials/Demonstrations**

Seminars, tutorials, and demonstrations are organized for small groups of users by the library. These are regarded as effective methods for awareness and imparting awareness about library sources and services. These methods come up with an opportunity for more useful interaction between the users

and the library staff. The staff, by way of demonstration can easily explain to the users how to use various reference and information sources for retrieving needed information. The users may be given topic/s to search information by consulting various reference and other sources.

c. Guided Tour

The basic objective of guided library tour is to familiarize the users in a small group with the location of different sections the library. These tours are generally conducted under the guidance of a senior library staff member and users are taken around the library building. This method is useful as the users get to know about the actual use of catalogue, classification system being followed, photocopying section, circulation section, how to enrol members of the library and get books issued, and other library rules. In many libraries, self-guided tours with the help of printed booklets have also been followed. However, this method requires lot of library staff time.

d. Audio-Visual Method

This is yet another method of providing instructions to a group of users about the library sources and services. The use of tape/slide medium or audio tapes in combination with printed material was considered suitable for user education in the 1980s and 1990s. It was possible to display with the help of audio-visual aids, how to make use of library resources, how the classification system works, how the circulation section performs the job, how to search information from reference sources, and so on. This method had the advantage of having profound impact on the minds of the users. With the introduction of computers in libraries, this method is now replaced with the use of multimedia, and the like.

e. Video-Tapes

Many libraries prepare short motion films for user education purpose on different aspects of library sources and services. The users can be explained about, say, how to use catalogue and find books, how to use various reference sources, the services   offered by the library to its users and how to use them effectively, and so on. This method is useful when the users are in a group. A well prepared video tape or film can be useful to motivate users for making a better use of library and its resources. The only disadvantage is that the users have to view and listen to the entire programme and then seek clarifications, if any.

f. Programmed Instruction

Programmed instruction is a course of instruction given by library staff making use of a variety of media. The subject matter of instruction is generally divided into a logical sequence of short items. It is carried out by means of printed books, automatic projection of slides, or computer-aided instruction programme. The advantage of programmed instruction is that the users while working at their own pace can actively participate in the learning process. They can also check the suitability of their responses immediately.

g. Computer Assisted Instructions

It is regarded as a very useful means of programmed instructions for teaching the use of more complex bibliographic tools, use of catalogue, indexes, etc. The instructions are given to the users through a computer with inbuilt software. The instructions are presented in small steps, and there is

no need for a human instructor. The user learner makes a response in a two-way conversation which determines the next step. It also provides immediate feedback to the users.

h. Signs and Informational Graphics

One of the basic methods of user education is the use of sign systems and informational graphics. This method has been in use since long, as the libraries have been using the different types of signs. The sign system can be grouped into two main types, viz. signs related to direction finding, and signs related to the use of library resources. It is observed that to make the signs most effective for user orientation they must be carefully planned with regard to position, content and presentation.

i. Individual Instructions

Reference desk is the vantage point for the reference librarian where he meets the user. Library instructions provided to the individual user when he approaches the reference desk for help is one of the best ways of user education. It is the easiest way to help the needy user teaching him how to find out the required information. In this process, the user can learn about the use of library and its resources.

j. Library Pathfinders

Printed guides have been found very useful as a method of user education. An alternative to these guides has been developed as library pathfinders. A library pathfinder is "a kind of map to the resources of the library; it is an information locator for the library user whose search for recorded materials on a subject of interest is just beginning." According to Online Dictionary for Library and Information Science pathfinder is "designed to lead the user through the process of researching a specific topic, or any topic in a given field or discipline, usually in a systematic step-by-step way, making use of the best finding tools the library has to offer."

It is a step-by-step instruction tool that will help users to find the basic documents required to begin a search on a topic. It is designed to gather all of the most useful, relevant, reliable and authoritative resources on a variety of academic work-related or general interest topic. Pathfinders were originally developed in printed format in large academic libraries, but with the emergence of the World Wide Web they may now act as portals to information about resources in a variety of formats including books, encyclopaedias, bibliographies, journals, databases, almanacs, websites, search engines, etc. Each pathfinder may include systematically the scope of the topic, standard works, guides and bibliographies, indexing and abstracting services, call number, subject headings, etc. for literature searching. Pathfinders, therefore, help users, particularly students, find paths to information. This is why Jeanne Galvin suggests that the users of assignment-specific pathfinders that are readable and that can be used by students from completing assignments are more useful than more general pathfinders. Therefore, a library, to meet the information needs of its users, ought to prepare its own specific pathfinders to provide guidance to the users.

It has been observed from the above discussion that no single teaching method is all encompassing for user education purpose. The suitability of teaching method and media depends upon teaching-learning situation, the subject concerned, and the users and staff involved in the training process.

3.4 Towards Information Literacy

With the development and application of computers, the face of libraries is also changing. Libraries are acquiring reference and information sources in new format, i.e., electronic resources; the catalogue has become online; new services are being developed (including Internet-based services) to meet the rising and complex user needs; and so on.

Library users, therefore, need specific type of training in the use of new reference sources, electronic sources, internal tools developed by the library (such as OPAC), etc.to meet such a complex situation, in this context, a new term 'information literacy' wasdeveloped in the early 1970s. Information literacy aims at making a user capable to recognize when information is needed, how to locate it, how to evaluate it, and use it effectively. It is the ability to use information from various sources in an effective and efficient manner and become informed about various information retrieval techniques. The American Library Association (in 1989 only) defined information literacy as a set of abilities enabling individuals to "recognize when information is needed and have the capacity to locate, evaluate, and use effectively the needed information." Thus, information literacy can be defined as the basis for lifelong learning for the users because they know how to access information efficiently and effectively, they can evaluate information critically and critically, and they can use information accurately and creatively.

3.7 Evaluation of User Education Programmes

Evaluation helps in assessing any programme, project or any other initiative regarding its aim, concept, etc. Evaluation is a systematic determination of a subject's merit, worth and significance, using a standard criteria. In other words, it is a systematic, rigorous and meticulous application of scientific methods to assess the design, implementation, improvement, or outcome of a program. The primary purpose of evaluation is to find out the quality of a programme by formulating a judgement and use the analysis results for rational decision making.

4. Summary

A library or an information system, and all its activities revolve round the user. From library collections to information sources, to in-house tools, to library and information services, and so on, are developed keeping into view the requirements of the various types of users. Despite the efforts of the library and its manpower there exist some gaps between what the library offers and the information services needed by the users. In an attempt to bridge this gap libraries plan and conduct user studies. In this Module, the concept of user studies, the need for user studies, their objectives, etc. are discussed. It has explained in detail the various methods and techniques used by the investigators to conduct user studies from time to time. The findings of the user studies have their implications for improving the library system and promoting the use of its resources. The Module also discusses another related user education. It describes the need for educating the users so as to improve the use of precious resources of a library. In order to achieve the objectives of user education, various methods of user instruction followed by a library have been explained. In view of the new developments, it concludes with the concept of information literacy, and need for evaluating user education programmes.

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