UNIT NO. 2

Department of Distance Education
Punjabi University, Patiala

UNIT NO. 2

2.1. Evaluation of Library Sources and Services : Books, Periodicals, Catalogues

2.2. Effectiveness : Cost-effectiveness and Cost-benefit Studies

2.3. I. User Studies : Methods, Techniques

II. Evaluation of User Studies

2.4. Users Education : Concept, Goals, Objectives and Levels

2.5. User Education : Techniques and Methods

2.6. Evaluation of User Education Programmes

2.7. Information Literacy : Definition, Need, Purpose and Programmes

LESSON NO. 2.1 **AUTHOR : DR. SEWA SINGH**

EVALUATION OF LIBRARY SOURCES AND SERVICES : BOOKS, PERIODICALS AND CATALOGUES

Structure

2.1.0 OBJECTIVES

This lesson is prepared with the following objectives:

1. To understand the need for evaluation of library sources and services;
2. To know the evaluation methods of book collection;
3. To know the criteria for evaluating journals;
4. To understand the need for evaluation of library catalogue.

2.1.1 INTRODUCTION

Evaluation is judging the essential merits of books and other reading materials. But selection is to determine whether the materials meet the needs of the individual users. The librarian must therefore first distinguish between evaluation and selection. The traditionalist librarian will insist on judging a work primarily on its intrinsic merits. If it fails, it is not selected. However, a liberal librarian supports the library selection policy on the basis of popularity. Here, emphasis is on today, not tomorrow. But most librarians stand between the two. They judiciously weight the selection and evaluative factors and try to keep each in balance.

2.1.2 EVALUATION METHODS

The librarian should use clearly defined criteria for evaluation and selection purpose. The degree to which the book being examined meets the criteria, will determine if it merits the selection or not. Since it is not possible for the librarian to read each and every book, and perhaps nor is it expected, he can before selection, depend upon his personal inspection, reviews, book fairs, etc for evaluation.

2.1.2.1 Personal Inspection

It is experienced that evaluation is best done by personal inspection of the book. But it is quite difficult for the librarian to find facilities for personally examining books, published even in his own country. Also, there is no single place where librarians can assemble to personally evaluate the newly published books. Moreover, books are not published in one or two places only, they are rather published in all sorts of places by all sorts of publishers in a country. Therefore, this makes personal inspection almost impracticable. However, there are a couple of ways to meet this situation.

2.1.1 Books on Approval

It may be possible to get books on approval in some cases but not at all times. A library with sufficient budget can also invite booksellers to bring their stock of new books for display where those can be evaluated and selected. Whenever such possibility arises, valuable, standard and scholarly books can be evaluated provided sufficient time is allowed. The librarian and other subject experts can go through the blurb form of advertisement designed to catch the eye of the readers. They can carefully examine the title, the author, the publisher, the table of contents, etc.

2.1.2 Book Fairs

Publishers and book suppliers organize book fairs usually as a yearly event, which provides an opportunity to personally examine the books. In India also such book fairs are organized by publishers 'associations, National Book Trust, etc. Besides, every two years a “World Book Fair” is also organized in New Delhi in which publishers from different countries also participate. Such occasions afford the opportunity to personally go through the books for evaluation and selection purpose.

2.1.3 Book Reviews

Reviews of books are published in scientific and technical journals, review periodicals, weekly editions of newspapers, etc. Book reviews generally provide information about the salient features, literary merit, and comparison with other books on the subject, overall qualities including the physical features of the book. Reviews should be as comprehensive as possible so that they could easily help the librarian sufficiently in selecting a book. Therefore, reading a book reviews should be regular activity of the librarian. It not only up-dates his information about current literature but a standard and reputable review source is also the real safeguard for evaluation and selection of books.

2.1.3.3 EVALUATION CRITERIA

It is usually said that the best guide to selection and evaluation of books, periodicals, etc is the experience and knowledge and skill of the librarian. However, an outline of the steps for evaluating the intrinsic merits of a book, as

described by William Katz, is given below for the benefit of the experienced librarian.

2.1.3.1 Purpose Scope and Audience

The purpose is usually clear from the title, table of contents, the index, or the jacket blurb in which the publisher tries to summarize what the book is about. It is to be evaluated if the book is scholarly, informational, advanced, etc.

The scope of a book pertains to how the author has handled the topic or situation. It can be readily ascertained from the contents and publishers description. It can be evaluated by considering terms such as exhaustive- brief, broad- narrow, explanatory advanced, etc.

The audience is to be determined as to who can read and use the book and for what purpose. It is to be decided if the book is for scholars, historian, or general adult readers.

Once the purpose, scope and readers (audience) are determined, it is easy to see how close the purpose of the library (selection) matches the purpose of the book; whether the scope is unique or interesting for the readers of the library so as to select the book.

2.1.3.2 Difficulty

It pertains to difficulty of the reading material from the readers point of view. Sometimes titles of books are difficult and do not help in identifying the subject; and sometimes the publishers are an indication of difficulty because university presses issue one type of work for better- educated readers while most paperback publishers issue quite a different type of book. When evaluating the difficulty of a book, librarian should keep in mind three key words: 'popular', 'scholarly', and 'technical'. But a book 'popular' for one person may appear 'technical' or even 'scholarly' for another. In such cases, knowledge about publishers, familiarity with the author, or a tip given by the title help the librarian to determine the relative difficulty of the book.

2.1.3.3 Authority, Honesty and Credibility of Author and Publisher

If the librarian knows the author is an authority in his field, the tendency is to purchase the book. Again, if the author has an honest, creditable point of view, no matter how different, the book is selected for the library. But when the author is not known or there is a question about the approach, it is always better to look at the book itself or wait for reviews.

Same is the case for the publisher. Some publishers have built their credibility and maintain standard, and don't publish a title of questionable quality. If the librarian regularly reads book reviews(as to who is writing what and who is publishing the better writers), publishers blurbs, advertisements, etc. it always helps.

2.1.3.4 Subject Matter

If there is a regular demand for books on a given subject, the librarian will invariably buy such titles from the publishers. So the importance of the subject and knowledge of the publisher also help greatly in the evaluation and selection of books.

2.1.3.5 Comparison

Though difficult, but it is important to compare the scope, purpose etc of the book under examination with other books in the library collection. Librarian while evaluating the book must ask if it will really add something to the collection or simply duplicate what is already there. Generally, such comparisons are not available in review journals, hence there is duplication of materials. But librarians believe that some duplication of materials is desirable even in the age of networks and resource sharing.

2.1.3.6 Timeliness

With the exception of classics and some other books, rest of the collection date rapidly. A book is most heavily used/read in its first one or two years on the shelves. This is why some libraries do not buy books more than five years old, however with some exceptions. Again, timeliness is kept in mind in case of a subject no longer of interest to the library readers. However, most important in terms of timeliness is purchase of the new editions of books.

2.1.3.7 Format

It refers to the physical attributes of the book. The requirement of format in terms of type, legibility, quality of paper, strength of binding for repeated use, latest photographs, accuracy of illustrations, bibliographies, etc. is applicable to all books. The greatest difficulty is with the binding as they all tend to be attractive, but are less than durable.

2.1.3.8 Price

Though Price is not a factor in itself, but if it is far beyond the average, the librarian must think before buying as he has to justify the expenditure. Some libraries have a policy of either not purchasing a book of more than a certain price, or has to be got approved by the Library Committee/Chairman.

2.1.3.9 Curriculum Support

In academic libraries a relatively objective test of a book is whether it supports the teaching and research programme or not.

2.1.3.10 Demand

And finally, where there is a request for a book, in most cases the title should be purchased.

The evaluative points as discussed above are objective as they can be measured and ascertained without difficulty or disagreement. For example, once

it is determined that a book is authoritative, timely etc., it may be purchased to support the curriculum or the expected demand.

2.1.4 INSTANT ACCEPTANCE

There are certain types of titles that are accepted almost automatically by librarians. Here, the size of the library plays a large part. The larger the library budget, the less likely that material is automatically rejected.

4.1. Reprints and new editions of classics that are already part of the library collection, or listed in bibliographies, catalogues, lists of "best" books, etc.

4.2. Books from the series 'the library has long considered important to the collection; for example, 'Land and People of India', etc.

4.3. Certain basic research and reference works because of subject matter, author, publisher, can be purchased safely.

2.1.5 EVALUATION OF PERIODICALS

Periodicals are purchased to cover the most current events and information or recent developments in subject fields, to provide reference materials, and for general reading. The selection of periodicals is based ultimately on the same principles as the selection of books. Librarians would acquire the best material in terms of authority, accuracy, effectiveness of presentation, usefulness to the community, etc. It becomes all the more important when librarians find themselves squeezed from two directions: one, subscriptions have been rising rapidly, and two, library budgets are being restricted and cut year after year. Librarians are finding it difficult to have a concise rationale for evaluation of periodicals. An American librarian noted in this context: "The multiplicity of new serial titles, the potential obligation to maintain a serial title in perpetuity, escalating costs of serials, cost of binding, and maintenance and Storage costs make a high degree of selectivety mandatory". This speaks amply about the rationality of such an evaluation.

2.1.5.1 Criteria for Evaluation

It is briefly given as under to assess the intrinsic worth of the periodical title to be selected for a library.

2.1.5.1.1 Purpose. Scope and Audience

For a periodical title these factors are of primary concern. The purpose should be obvious from a glance at the table of contents, editor's introductory note, etc. The scope will be known from the type of writers and the contributions. The audience is to be determined as to who can read and use a periodical title and for what purpose.

2.1.5.1.2 Contents

The contents of a periodical title must be judged in accordance with:

a) Accuracy and relative objectivity of the content within the stated purpose and scope;
b) Reputation of the publisher and the writer;
c) Quality of the writing and its suitability for the users; and
d) Subject matter and its relevance for the users.

2.1.5.1.3 Reference Value

This is another important criterion for evaluating and selecting a periodical title, though it is difficult to be precise about the research or reference value, because almost every periodical has some such value for some one because it is a subjective measure.

2.1.5.1.4 Local Interest

Sometimes a title of less quality is purchased when it is of local interest. It may be a periodical title about the local community or published locally, or about local history, genealogy, etc.

2.1.5.1.5 Format

Librarian must check the standard format items including quality of printing paper, illustrations, special features, etc.

2.1.5.1.6 Point of View

A periodical title should not be rejected for a particular article, editorial stand, or any different point of view, without judging its real value or utility for the potential users.

2.1.5.1.7 Indexed Periodicals

Some librarians evaluate the standard of a periodical title on the basis of their being indexed in an indexing and abstracting service. Such periodical titles are generally of research value, and of use to the readers. But it is not true in all the cases, as the newly started titles are generally not indexed so soon.

2.1.5.1.8 Support to Book Collection

A periodical title should be evaluated and selected so that it supports the book collection with a balance of subject matter being a representative of nascent thought in the respective subject.

2.1.5.1.9 Price

A periodical should also be evaluated from the price point of view, particularly in terms of the potential use of the title. Since cost is a major consideration, periodicals that are likely to be little used, may not be selected.

2.1.5.1.10 Scarcity of Material

There are subjects on which the material is scarcely available, but the subjects are in heavy demand by library users. These are some of the checkpoints for the evaluation and selection of the periodical titles in libraries, depending

upon their budget and size, and readership. However, these can be modified after examinining the selection policy statements, articles, and discussion with librarians.

2.1.6 STEPS FOR EVALUATING PERIODICAL COLLECTION

For determining the worth of peridical titles and their use in libraries, Katz has suggested a variety of methods. These are:

2.1.6.1 Journal Use Study

Through a journal use study the library can determine which journals are used in the library, which are lent out to local users, which are requested on inter-library loan, which are frequently photocopied, etc. But a use study is limited to the journals available in the library.

2.1.6.2 Circulation Statistics

This measure helps to know how often the periodical is circulated in the past three or four years, as well as how often it is used in the library itself. This is little more than a use study.

2.1.6.3 Citation Studies

This method is quite favoured one. It is essentially no more than counting how often an article or journal or author is cited in other journals as reference. The assumption is that a core list of journals may be established from citation counts. Such studies are useful in a general way because they normally provide a list of periodicals ranked in order of use.

2.1.6.4 Comparative Techniques

The periodical collection is compared with similar collections in similar libraries or with citation studies.

2.1.6.5 Interlibrary Loan Data

This is checked to see as to which periodicals articles are most often requested by outside libraries. The same data from interlibrary loans also show the availability of low-use periodicals in the library. However, some libraries have a policy not to provide interlibrary loan facility.

2.1.6.6 Questionnaire Method

This method is used to ask the users what they need but cannot find out from the periodical collection. It would help to know their reaction to periodicals being considered for purchase.

2.1.6.7 Recommendations by Experts/Librarians

This may be one of more satisfactory and easy techniques. There the librarian simply asks other librarians, subject experts, etc about which titles they recommend .

2.1.6.8 Circulation

Although publication, circulation of a periodical title is no guarantee of

quality, yet in subject and professional fields it suggests the title most likely to be read, and there is always a correlation between circulation and the findings of evaluative studies.

2.1.6.9 Number of Articles

Strangely, there seems to be a correlation between value and the number of articles in a journal. Studies have shown that journals with more articles have a greater probability of being used.

Thus these are some of the tests and methods that are used by librarians to check the value and prepare a list of core periodicals.

2.1.7 EVALUATION OF LIBRARY CATALOGUE

The catalogue is the major key to library's collections. The functions of library catalogue as propounded by C.A.Cutter in 1876 still hold good. In recent times librarians have shown interest to evaluate their effectiveness as finding tool. The accessibility of library collections will improve if more people use library catalogue effectively. Quite a number of studies on use of library catalogue have been made over the years, though only a few studies have been reported from India. The various studies have shown that the success of a particular library catalogue search depends on following factors:

(i) The accuracy of the information with the user.
(ii) The type of approach (author or title) made by the user.
(iii) The amount of user experience and training.
(iv) The average number of entry points per item provided in the catalogue.
(v) The number of cross-references provided.
(vi) The extent to which title entries are included.
(vii) The size and complexity of the catalogue.
(viii) The quality of the labeling and guiding given in the catalogue.
(ix) The perseverance, diligence, and intelligence of the library catalogue user.

The studies have shown that mostly the catalogue is approached through the author of the document, but the users rarely consult through he joint author/s, if any. The access to the library catalogue by the title of document is also not made as frequently.

Regarding the use of subject catalogue, it has been reported that a typical user consults only one single subject heading, and a very low percentage of users consulted a second subject heading.

Most of the users also did not make use of the classified part of the catalogue arranged according to the system of classification followed in the

library. It has also been found out that most users avoid using catalogue when they can. They find their books by browsing the shelf and consulting colleagues, friends, library staff, teachers, etc.

2.1.7.1 Ways for Improving Library Catalogue

In view of the above mentioned failures of the library catalogue, the access to this important tool, even in the age of computerization, must be improved. Librarians can always think of the following:

(i) Performance of the subject catalogue can be improved considerably with more see references from synonyms, from popular names to scientific or technical names used in the catalogue, from inverted to non inverted forms of entry (or vice versa), and from specific to more generic terms. Lancaster has been of the opinion that entry vocabulary is very important factor in influencing the performance of the system.

(ii) The studies have shown sufficiently that see also references were used comparatively little in subject searching. A permuted title approach rather may serve the catalogue users better.

(iii) It has been found that users generally do not make use of the classified catalogue making it almost redundant, and wondering at its utility. Keeping in view the cost, time, and efforts needed to create and maintain the classified catalogue, it is certain that its non-use does not justify its presence.

(iv) In view of the importance of library catalogue as search tool, a brochure describing the collection, arrangement of documents, services, methods of consultation of catalogue, etc. should be released to improve performance.

(v) There is need to conduct orientation programmes for the fresh students, researchers, or even faculty, in the effective use of library catalogue.

(vi) A computer-based cataloguing system would be the best way to permit searching with improved performance.

2.1.8 SUMMARY

As discussed, the need for evaluation of books and other reading material is essential to determine their suitability for library users. The experience and judgment of the librarian play an important part in the process of evaluation and selection of books, periodicals, etc. Librarian is supposed to take into view the evaluation criteria laid down by the experts for making selection of reading material a successful exercise. As the library catalogue is the mirror to the library collection, the evaluation of this search tool from the users point of view for document retrieval is essential. It helps in the improvement of its performance from various access points.

2.1.9 GLOSSARY

1. Blurb : A form of advertisement of the jacket of the book to catch the eye of the readers.
2. Format : It refers to the physical attributes of the book, such as type, paper, binding, illustrations, etc.

REFERENCES

1. Chakrabarti, Ajit Kumar. A Treatise on Book Selection, Delhi : D. K. Publishers, 1983.
2. Jenkins, Clare and Morley, Mary (Eds), Collection Management in Academic Libraries, Bombay: Jaico, 1996.
3. Katz, William A. Collection Development: The Selection of Materials for Libraries, New York : Hold, Rinehart and Winston, 1980.
4. Lancaster, F.W. The Measurement and Evaluation of Library Services, with the assistance of M. J. Jancich, Washington, D.C.: Information Resources Press, 1977.
5. Ranganathan, S.R. and Gopinath, M.A. Library Book Selection, Bombay: Asia Publishing House, 1966.
6. Krishan Kumar : Reference Service. Ed 5. 2006, New Delhi Vikas Pub. Reprint 2009.

LESSON NO. 2.2 **AUTHOR : DR. SEWA SINGH**

EFFECTIVENESS : COST- EFFECTIVENESS AND COST- BENEFIT STUDIES

Structure

2.2.0 OBJECTIVES

This lesson is prepared with the following objectives:

1. To understand the need and scope for evaluation of library services.
2. To know about the various types of cost studies
3. To understand how to carry out cost-effectiveness and cost-benefit studies.
4. To get familiar with the planning of cost-benefit study and know about theaction programme.

2.2.1 INTRODUCTION

Effectiveness is the evaluation of system performance in terms of the degree to which it meets the various user requirements. Evaluation can be said to be judgement of worth of the system, and library evaluation is a generic term used to describe the many different kinds of process relating to performance measurement and effectiveness analysis in libraries. According to Lancaster, evaluation is conducted to answer few of the following questions:

(i) How well is the system functioning?
(ii) Can the system be improved? and
(iii) How may it best be improved?

It therefore, concerns with performance level of the system, and effectiveness makes a judgement of its worth. But it is not an end in itself. The system should be simple and relevant to make it more useful for decision-making. If the system is simple and relevant, then it is also likely to meet the basic criteria; that it should be cost-effective, timely, accurate, and acceptable to all concerned.

2.2.2 SCOPE OF EVALUATION

There are three possible levels of evaluation as discussed below:

2.2.2.1 Effectiveness

It is the evaluation of system performance in terms of degree to which it meets user requirements, and thus makes an evaluation of system effectiveness.

2.2.2.2 Cost-Effectiveness

An evaluation in terms of how to satisfy user requirements in the most efficient and economical fashion is called cost-effectiveness evaluation.

2.2.2.3 Cost-Benefit

An evaluation of the worth of the system, i.e., is the system worthwhile, does it justify its existence? These evaluation programmes are generally associated with retrospective search systems in computer-based systems, though these are equally applicable to manual systems as well. However, here only the first of the three is directly concerned with the users of the system, while the other two concerns with the operators and the top management.

2.2.3 EVALUATION PROGRAMME

A complete evaluation programme will consist of the following stages:

(i) Establishing the scope and purpose, deciding what to evaluate;

(ii) Designing the evaluation programme;
(iii) Conducting the evaluation study.
(iv) Analyzing and interpreting the results of the study.
(v) Making system modifications, based on evaluation results, designed to improve the overall performance level of the present system.

2.2.4 COST

It is a measurement, for the purpose of accounting, of the cash value of whatever a firm has parted with when making expenditure in exchange for specified goods, services or labour used for a specific purpose. Broadly speaking, cost is the measure of what has to be given up or sacrificed in order to achieve an objective. In a library or information centre, the cost is measured in terms of input of resources(human, financial and physical).

2.2.5 KINDS OF COST

In the library system, there have to be considered those costs that are relatively fixed (for example, purchase of equipment, acquisition and purchase of materials, etc.), and those that are relatively variable (for example, number of transactions, literature searching, etc.). Keeping view of both, we can categorize costs on various items as follows:

(i) Staff Salaries

Payment towards staff salaries (which is generally more than 50% of the total library budget).

(ii) Purchase of Materials

Expenditure on purchase of materials to be used in the library like books, journals, newspapers, and so on.

(iii) Purchase of Equipment

Expenditure on the purchase of various items of equipment for use in the library. In addition to purchase cost, there are other costs involved in equipment. These include annual maintenance charges, recurring expenditure on computer stationery, photocopier stationery, etc.

(iv) Furniture Expenditure

Not only costs are incurred on purchase of new items of furniture but also on their repairs and maintenance of old furniture.

(v) Library Supplies

There are recurring costs on purchase of library supplies like library catalogue cards, book tags, labels, slips, etc. Besides, there is expenditure on the purchase of office stationery items.

(vi) Payment for Protection

Expenditure on insurance of library and reading materials as well as security system are items of regular costs.

(vii) Other Recurring Costs

These include costs on lighting, electricity, water, gas, cleaning, payment to

temporary staff, and so on.

(viii) Payment for Information and Knowledge

It includes costs on such items as:

(a) Membership fee of professional bodies;

(b) Payment to library consortia and networks;

(c) Payment towards continuing education and training of staff (for example, computer training from INFLIBNET, NISCAIR, etc. or participation in refresher courses, participation in professional seminars and conferences, etc.).

(ix) Payment for Outside Services

Expenditure on services supplied by outside vendors is becoming increasingly common in library and information services, especially since the development of computer-based bibliographic services and databases.

2.2.6 TYPES OF COST STUDY

The following types of cost study for library and information services can be considered:

2.2.6.1 Cost Analysis

It is the basic mode of study. It requires the following:

(a) Measurement of resource input to the system;

(b) Understanding of the nature and type of work carried out;

(c) Use of time by workers.

Data from cost analysis can be used in accounting, estimating, budgeting, and performance measurement procedures.

2.2.6.2 Cost Allocation/Cost Distribution

It looks at resource allocation. It provides general view of the costs carried and budgeting in different parts of the library and information system. It helps to understand previous allocations. These types of cost study can suggest corrections that can be made through estimating and budgeting.

2.2.6.3 Unit Costing and Timing

Unit cost is expenditure incurred on a particular product, service or process i.e. cost of acquisition of document is actual cost of document + cost of staff involved + overhead charges etc. This method makes use of cost analysis data with measure of output to give cost-time indices. These are often used as performance measures. However, to work out unit cost to volume is quite sensitive.

2.2.6.4 Cost-Effectiveness

This method is used for performance appraisal, planning and decision. Costs of existing performances and model cost data for alternatives are obtained through cost analysis. Cost-effective studies are usually system oriented, measuring thereby that which of several methods performs best according to effectiveness criteria (i.e., maximizing output, while minimizing cost).

2.2.6.5 Cost-Benefit Studies

Cost-benefit is concerned not only with the money costs and revenue of project or service but the social cost(value) of its benefits to the society and its costs. These studies are rarely done for library and information services. These studies draw cost data from other types of cost studies. Cost benefit analysis is done where public goods and services concerned, and social cost and social benefit are uppermost. Thus cost-benefit analysis is a technique which tries to determine and evaluate social costs and benefits of investment. It is not a substitute term for cost-effectiveness.

2.2.7 COST-EFFECTIVENESS

Cost-effectiveness is the evaluation in terms of how to satisfy user requirements in the most efficient and economical fashion. Lancaster defined cost effectiveness as "the relationship between level of performance (effectiveness) and the costs involved in achieving this level." It means that the least expensive of the different methods involved in achieving a particular performance level is the most cost-effective. Thus the technique of cost-effectiveness shows whether performance of library services can be improved at an increased cost or at no cost, or whether costs can be reduced without unduly affecting performance. Thus cost-effectiveness is a simple technique, which is often used in libraries and information centres/ systems. It is a method of finding the cheapest means of completing a defined objective of the library.

2.2.7.1 Measuring effectiveness

In order to measure effectiveness (i.e., performance) of various facets of library services, some of the approaches followed are:

(i) The ability of the library and information system to deliver a particular items when it is needed;

(ii) The ability of the catalogue and the shelf arrangement to disclose the holdings of particular items or of materials on particular subjects;

(iii) The ability of reference staff to answer questions completely and accurately;

(iv) The speed with which a particular item can be located when needed;

(v) The speed with which a reference enquiry can be answered or a literature search conducted and the results presented to the library user; and

(vi) The amount of effort that the user must himself spend in exploiting the services of the library and information system. This includes such factors as physical accessibility of the library and its collections; the size and quality of the library staff; and the way in which the collections are catalogued, indexed, shelved, and signposted.

2.2.7.2 Objectives

The objectives of a cost-effectiveness analysis is to increase the effectiveness (i.e. the value received) for the cost incurred on it. The cost-

effectiveness of an information system can be improved by one of the following two ways as stated by Lancaster:

(i) Maintaining the present performance level (for example, in terms of document delivery capabilities and response time) while reducing the cost of operating the system; and

(ii) Holding operating costs constant while raising the average performance level.

Thus, cost-effectiveness analysis involves the optimum allocation of resources to provide the best possible service with available funds. It is important to identify the major weaknesses of the library and information system and take appropriate actions to correct them. If these weaknesses can be removed without additional cost, the cost-effectiveness of the services provided is improved.

2.2.7.3 Steps in Cost-Effectiveness Analysis

In cost-effectiveness analysis, possible alternative methods of operating the library and information system, costs of these alternatives, and criteria for ranking the alternatives are determined and the most promising mode is selected. Hitch and McKean described five basic steps for a completely different context, involved in a cost-effectiveness analysis, though these are equally applicable in library situation also.

(i) Defining the objectives that must be attained;

(ii) identifying alternative methods of meeting the objectives;

(iii) determining the costs of the various alternatives;

(iv) establishing one or more models that relate the costs of each alternative to an assessment of the extent to which each could assist in attaining these objectives; and

(v) establishing a criterion for ranking the alternatives in order of desirability and choosing the most promising. The criterion provides a method of weighing estimated costs against estimated effectiveness.

It is generally felt that the unit cost per relevant item retrieved from the library system is a useful measure of cost-effectiveness. For comparing the efficiency of various alternative methods of searching a database the unit cost can easily be used. For example, method A is more cost-effective than method B, if the cost of retrieving each relevant citation in A is less than the cost of retrieving citation in B. Hence the least expensive method should be chosen if the search procedure is not complicated by the changes introduced.

2.2.8 BENEFIT

It is generally referred to the gain accruing to the individual from the use of a library and information service or product. Benefit could be in the form of satisfaction derived from the service by a user, growth in the existing knowledge, time saved, better use of leisure time, improved level of education, etc.

2.2.9 COST-BENEFIT

It refers to the relationship between the benefits of a particular product

or service and the cost of providing it. It is an appraisal of comparative benefits which are then related to cost of achieving them. It makes possible evaluation of speculative schemes, for instance, relocation of premises, etc.

2.2.10 COST-BENEFIT ANALYSIS

Because of some limitations of cost-effectiveness, cost-benefit analysis is followed. According to Roberts ***"cost-benefit analysis is a technique which attempts to set out and evaluate the social costs and social benefits of investment projects to help decide whether or not a project should be undertaken."*** He further states that the essential difference between cost-benefit analysis and other techniques of investment appraisal is the stress on social costs and benefits. Cost-benefit analysis is a systematic comparison between the cost of carrying out any service or activity and the value or the benefits of that service or the activity, quantifying as far as possible, all costs and benefits, whether direct, indirect, financial or social, being taken into account. ***According to Schauer***, ***"the cost-benefit approach examines the relationship between cost and output within the context of system objectives".***

2.2.10.1 Measures of Cost-Benifit

Lancaster observes that generally the benefits of library service are extremely difficult to measure than performance (effectiveness) . . . . Because the benefits are qualitative in nature, their quantification in numerical units is a major difficulty. Hence it is extremely difficult to conduct full cost-benefit analysis.

2.2.10.1.1 Criteria for Measuring

A possible criteria as proposed by Lancaster is given as under:

(i) Cost servings through the use of the service as compared with the costs of obtaining needed information or documents from other sources;

(ii) Avoidance of loss of productivity (e.g., of students, faculty, research scholars) that would result if information sources were not readily available;

(iii) Improved decision-making or reduction in the level of personnel required to make decisions;

(iv) Avoidance of duplication or waste of research and development effort, which either has been done before or has been proved infeasible by earlier investigators; and

(v) Stimulation of invention or productivity by making widely available the literature on current developments in a particular field.

2.2.10.1.2 Problems

However, there are some problems as identified by ***Raffle and Shishko,*** in measuring benefits. These include:

(i) Lack of ***"definite quantifiable, tangible objectives to be attained"*** in a library. Most published ***"goals and objectives"*** statements for Library service relate to supposed ultimate benefits, but these are virtually impossible to

measure.

(ii) Different sub groups may prefer different systems. For example, a library with large and efficient staff is not necessarily an effective library for undergraduates who may attach higher benefits to having more reserve books available.

Thus, goals and objectives should be stated in terms of quantifiable measures, such as increased use of certain categories of materials, increased use of the library by specific types of users, decreased number of directional queries, etc. Value gains should be quantified in Rupees by using some convertible rating system.

2.2.10.2. Decision Criteria

In cost-benefit approach the following key decision criteria may be used for comparing alternative library projects. These are:

(i) To maximize benefits for a given cost;

(ii) To minimize costs for a given level of benefits;

(iii) To maximize the ratio of benefits over cost;

(iv) To maximize net benefits.

However, of the four criteria, the net benefit approach is the most useful for most library applications. All of the other criteria have one problem or the other; for example, problem of incremental changes in costs or benefits. Suppose a fixed amount is given for spending on reference services. The problem is how best to allocate a given amount between several projects. If the projects are divisible, i.e. their scale can be changed in small units, then we maximize net contribution by equating benefits and costs at the margin. In this case even though the budget is fixed, the amount allocated to any given project is variable. *In other words, net benefit from the last Rupee of expenditure should equal to one Rupee.*

But unfortunately, all library projects are not divisible like this. For example, security system in library is not as divisible as buying books.

2.2.10. 3 Benefits of Library Service

There are many activities performed by the library, which provide benefits to the users. Some of the key activities include: selection of documents, physical and intellectual access, user assistance, equipments, other facilities, etc. It seems simple to identify these activities, but not so simple to measure their benefits. But while making resource allocation, such judgements are useful. Expenditure evaluation gives us a technique for investigating library's goals, the methods used to achieve them, and the costs and benefits of library programmes. We may not measure the absolute value of library services to users, but can suggest methods for estimating the relative value of alternative service options. Another way of estimating the impact of library and information services is in the form of time and material saved, increased utilization of library resources, etc. If the library increases its capability to locate,

reserve, and deliver documents/information it can maximize the use of library resource capacity leading to increased utilization of its total resources. Similarly, library and information system can increase its speed with which it can respond to changes in demand. Again, if the timely information provided by the library proves valuable in- decision-making it has its effect on the increased return on investment made say, in industry.

Yet another way of looking at the benefits of library services is devising techniques for measuring the value of library production. But it has been criticized by ***Du Mont and Du Mont: "These measures say little about effectiveness of these activities, since they ignore such vital questions as : how useful is the book to the person who takes it out; how pertinent is the reference service; how adequate is the cataloguing?"*** So according to them such measures of library use do not consider the question of value. But Schauer believes that if the users come back to the library and use its services, they are deriving value. Thus, it can be reasonably assumed that use of library services is a measure of benefits; increased use would mean an increase in benefits. When measure in the aggregate, libraries are maximizing use of their services and products and this implies that the society as a whole gains when more people get informed.

There can be several categories of economic benefits:

(i) those, which can be measured in monetary units;

(ii) those which can be measured in terms of some common denominator, such as the impact of higher library materials budget versus higher librarian salaries on information service use;

(iii) those effects which can be quantified, but not compared; and

(iv) those effects which are nonquantifiable.

Since cost-benefit analysis generally relies on prices, benefits of library services will be measured in terms of price, users are willing to pay for information services.

The value of library use may be expressed in terms of the time it takes the user to get to the library. On the other hand, projects to improve staff skills can be measured in terms of their ability to handle new tasks, etc.

Again, those effects, which cannot be measured in terms of market value, may be measured in the form of some other techniques. For instance, within the library, measures such as use, questions asked, etc. may serve as indicators of benefits.

2.2.10.4 Estimating the Benefits of Library Services

As discussed earlier, the benefits from library and information services are not easily measurable. These are not readily convertible into monetary terms. Schauer stated that the outputs of libraries are heterogeneous and difficult to measure, and many of the benefits are intangible. These are not quantifiable. But there is economic nature of library service production. The generation of library service is aimed at the satisfaction of human values or desires. Since libraries use

resources to satisfy these human wants, they are described as "economic entities". Despite that the most difficult part of economic evaluation of library and information services is the measurement of benefits. This is why cost-effectiveness approach helps to maximize the desired effect of consumer satisfaction at least cost.

2.2.10.5 Library Applications

Some of the library activities and operations in which cost-benefit analysis could be used are:

(i) Determining cost and benefits of book use.
(ii) Budget allocation for acquisition and cataloguing
(iii) Cost advantage of using printed catalogue cards instead of preparing them
(iv) Economics of library and information networks online search cost
(v) Weeding of documents
(vi) Reference Services
(vii) User education
(viii) Security system

2.2.11 Planning of Cost Benefit Study

Before planning and carrying out cost-benefit studies, the library and information managers must take care of the following:

2.2.11.1 Defining Needs

Library managers must know the general as well as special needs of their users

2.2.11.2 Study Design

There are four approaches in designing the cost studies

2.2.11.2.1 Procedural Approach

Here not only the needs are to be identified but also the involvement of staff has also to be insured

2.2.11.2.2 Methodological Approach

It is necessary to understand the costing methods, sampling procedures, reliability, etc.

2.2.11.2.3 Technical Approach

Care has to be taken for writing instructions, briefing participants, etc.

2.2.11.2.4 Post Study

There will be feedback, followers, and improvement, extra of the design.

2.2.11.3. System Description

An adequate description of the system, where the study is to be carried out is required.

2.2.11.4 Data Collection

Necessary data has to be collected by means of documents,

observations, questionnaire, interviews, etc.

2.2.11.5 Work Measurement Practice

Every aspect of work involved is to be measured with the available practices.

2.2.11.6 Processing and Analysis of Data

It is to be done for direct and indirect course. For example, staff salaries, equipments, expenditure of materials, and so on.

2.2.12 ACTION PROGRAMME

An action programme and check list for cost-benefit study is given below:

2.2.12.1 Objectives

The library and information managers will check the reasons as to why undertake cost measurements. It requires developing general objectives as well as specific objectives for the study.

2.2.12.2 Performance Evaluation

For the purpose of performance evaluation, the questions coming to mind are:

- Will the cost measures increase general knowledge of performance?
- Are the cost measures being collected to supplement other measures?

2.2.12.3 System Knowledge

Adequate knowledge about the system is required. It will help to categorise the system by programme, function, depts, units, or type of input, throughput, and output to obtain meaningful and useful cost categories.

2.2.12.4 Budgets and Programmes

(i) A programme structure is a useful analytic framework;

(ii) Programme structure can be used as the basis for the estimates and budgets;

(iii) Develop a programme structure for the services (eg. general administration and management, personnel management, public relations, classification and cataloguing, acquisition, conservation, handling of materials, information handling, etc.); and

(iv) Think of costing, accounting and performance measurements in terms of programme structure.

2.2.12.5 Input/Output and Throughput

(i) Develop an analysis of service activities using input, output and throughput.

(ii) Combine this with the ideas on programme structure, functions and tasks.

2.2.12.6 Cost Reports

- Results of the cost studies must be presented in the framework of the cost report structure.
- The more general and regular studies, more useful cost data and cost reports are.

2.2.12.7 Staff Roles

- Develop chain of responsibility for collecting and evaluating cost data.
- Allocate responsibility for specific cost studies.
- Ensure time and resources for successful and useful results.

2.2.12.8 Discussions and Evaluation

These are of utmost importance at many levels of staff and management. Discussion and evaluation are also needed for analysis, policy-making, control and feedback.

2.2.13 Conclusion

It can be said that although the basic steps are relatively simple, cost-benefit analysis is complex because of the difficulties of measuring costs and benefits. However, it provides us a framework for weighing the expenditure on information services. Effort should be made to regularly evaluate the system so as to ensure its usefulness to the users. In the age of globalisation, libraries and information centres have to compete with Internet regarding information search capabilities. The financial constraints are another threat to library system, hence "survival of the fittest" mantra has to be borne in mind and justify its existence by providing efficient and effective services.

2.2.14 SUMMARY

Evaluation is a performance measure to know the present functioning of the system and scope for its further improvement. Data about the various kinds of cost is required to analyse different types of cost studies that can be carried out in a library and information system, including the cost-effectiveness analysis for which steps are outlined. The cost-benefit analysis provides a systematic method for analysing choice among alternatives, relating costs and benefits to organisational goals and their impact. Although measuring cost benefit is difficult, yet a decision criterion has to be considered in order to compare the alternatives and benefits of library services.

2.2.15 GLOSSARY

Cost	:	It is a measure of what has to be given up to achieve an objective in terms of monetary units.
Cost-benefit	:	It is an evaluation of the worth of the system in terms of cost and benefit relationship.
Cost- Effectiveness	:	It is an evaluation in terms of how to satisfy user needs in the most efficient and economical way.

2.2.16 REFERENCES

1. Lancaster, F.W. Evaluation and Testing of Information Retrieval Systems, In: Allen Kent (Eds), Encyclopaedia of Library and Information Science, VoL8, New York: Marcel Dekker,1972.
2. Lancaster, F.W. The Measurement and Evaluation of Library Services, with the assistance of M.J. Joncich, Washington, D.C.: Information Resources Press, 1977
3. Raffel Jeffrey A. and Shishko, Robert. Systematic analysis of University Libraries: An Application of Cost- Benefit Analysis to the M.I. T. Libraries, Cambridge, Mass: The M.I. T. press, 1969.

LESSON NO. 2.3 **AUTHOR : DR. SEWA SINGH**

I. USER STUDIES : METHODS, TECHNIQUES
II. EVALUATION OF USER STUDIES

2.3.0 OBJECTIVES

After reading this lesson, the students will be able to

(i) Know about the need and purpose of user studies.
(ii) Understand how to design a user study.
(iii) Identify the various methods and techniques of user studies.
(iv) Learn how to plan a user study.
(v) Grasp the elements useful for evaluation of user studies.

2.3.1 INTRODUCTION

It is an acknowledged fact that a library is a trinity of **documents, users** and **staff.** Of the three, user is the focus around which all other activities of a library revolve so that pin-pointed, exhaustive and expeditious information is provided to him. The library staff works for the satisfaction of information needs of users for which it is essential to know about these needs. Understanding the user is half the battle won in providing information services. The user is not only the most important aspect, but is also a dynamic component of information system. To ensure that relevant and accurate information is promptly provided to the users, it is imperative to conduct user studies from time to time.

2.3.2 DEFINITION

The term 'user studies' is often not precisely defined. It has been named variously as information need studies, use studies, information behaviour studies, information transfer studies, and so on. But terminology depends much on the approach and angle of researcher. However, a simple linear approach is that, studies of information use behaviour of information needs are generally called *'user studies'.* According to Brittain, empirical studies of the use of, the demand or need for, information are usually called user studies. According to **David Bowden** the term *'user studies'* refers to ***"any systematic examination of the characteristics and behaviour of the users (and, if possible, of non users) of services and system."*** Thus it could be said to be a systematic study of information requirements of users in order to facilitate meaningful exchanges between information systems and users.

2.3.3 ORIGIN AND DEVELOPMENT

The history of user studies is often traced from 1948 when the **Royal Society Scientific Information Conference** was held wherein were reported two studies on the use of journal literature. These are considered the first significant user studies. A couple of more studies in 1940s, and research gained momentum during the late 1950s when in **Washington International Conference on Scientific Information** was held in 1958. The period of 1960s and 1970s witnessed a very large number of user studies. It is reported by Crawford that by 1977 more than 1000 important user studies were conducted.

An important landmark in the history of user studies was, however, the establishment of the **Centre for Research on User Studies (CRUS)** in 1975 at the

University of Sheffield. The purpose of this centre was promoting awareness of the value of understanding information seeking and using behaviour. User studies continued to be conducted on many significant and relevant topics during 1980s and 1990s.

Although **S.R. Ranganathan** provided a framework and foundation of user behaviour studies in India when he discussed the psychology and the nature of work of user, yet no serious attention was paid to this aspect in India until the 1960s. The Second IASLIC Seminar held in 1962 dealt with '**User and Library and Information Service.**' However, according to Sridhar, "not even a single paper presented in the seminar carried any hard survey data worth comparing with the user studies of that time in USA and UK". In 1960s a couple of more studies concerning users were reported with some statistical data making simple surveys.

From 1970s onwards more interest was generated in this area of librarianship. Besides a few seminars, individual researchers conducted some user surveys and collected some hard data. Such user studies are being reported in literature on different aspects of information in specific subjects, evaluation of specific services or systems, channels or media of communication used, pattern of information used, and so on.

2.3.4 NEED OF USER STUDIES

The following reasons have been identified by **Kawatra** for conducting various user studies.

(i) To identify the actual strengths and weaknesses of library resources and services;

(ii) To identify the levels and kinds of user studies;

(iii) To identify faculty and student priorities for library resources and services;

(iv) To identify the limitations or problems which seem to discourage the use of the library;

(v) To identify the level of involvement or participation of faculty and students in the library programme; and

(vi) To improve the organization and planning for library services at both the local and national level.

It is however, felt that to find the required information about user's need, user attitude must be studied, because user attitudes are essential considerations in the design of library services. For finding out the information seeking behaviour attitudes of users, the following questions may be asked.

(a) What does user require from the library in terms of type, quality and range of services to satisfy his/her needs ?

(b) What does user do about his/her needs ?

(c) How does the user select available resources ?

(d) How does the user carry out a search for information ?

2.3.5 PURPOSES

User studies are one of the available methods for measuring efficiency,

service, collection of the library etc. These studies are conducted for the benefit of librarians so that they could develop library resources and services to meet information needs of the users.

The purpose of a user study are as follows;

(i) to examine patterns of library use and identify gaps in use;
(ii) to make book selection systematic;
(iii) to evaluate the resources;
(iv) to introduce documentation and information services; and
(v) to evolve resource sharing with other libraries.

2.3.6 LIBRARY USERS AND USER STUDIES : CATEGORIES

Library users, in general, may constitute the following categories :

Students, teachers, researchers, scientists, scholars, authors, planners, bureaucrats, administrators, business managers, workers, entrepreneurs, industrialists, farmers, journalists, lawyers, doctors and the general public. It means that *a user is any person who visits the library for obtaining information or document from the library*. The demand for information by each of these groups may vary according to its specific needs which the library attempts to fulfil.

Herbert Menzel has grouped user studies into three categories. These are :

(i) ***Behaviour Studies :*** Those studies which are conducted to find out the pattern of overall interaction of the users' community with the communication system, without reference to any specific information receiving event, are called communication behaviour studies.

(ii) ***Use Studies :*** Those studies, which are conducted to find out the use of any communication medium/material such as primary periodical, a secondary periodical, etc. are called use studies.

(iii) ***Information Flow Studies :*** Those studies, which are conducted to find out the pattern of flow of information in the communication system, are called information flow studies.

However, grouping of user studies sometimes varies from author to author.

2.3.7 DESIGNING A USER STUDY

While designing a user study the following factors may be borne in mind :

2.3.7.1 Objectives of the Study

It is difficult and time-consuming job. However, the following general objectives, according to Kumar, may be taken into consideration :

(i) to obtain a detailed description of the use of a particular information center;
(ii) to develop a predictive model of information user behaviour;
(iii) to assess the probable effects of changes in information provision;
(iv) to increase understanding of the reason for using particular information resource; and

(v) to link information behaviour for which user studies can be undertaken.

Once the objectives are established, the researcher can relate topics to those objectives.

2.3.7.2 Population

Line has defined population merely as "the people who are subjected to the experiment or have been through the process." Similarly, Sellitz stated that : "A population is the aggregate of all the cases that conform to some designated set of specifications. Thus, by the specification people..... we define a population as consisting of all the people.....". In this way, we can say that all the boys in the given community under twenty who go to college are population. On this analogy all the public libraries in a city constitute population for a given user study. The researcher can, depending on the objectives, select an appropriate sample of population.

2.3.7.3 Resources

This is another important factor in the design of a new study. Various steps required in a user study like designing, visits, interview, data analysis etc. require financial resources, man power resources, documentary resources, and son on.

2.3.7.4 Organization

After establishing objectives, knowing the user population, and the available resources, the user study may be organized and implemented. The different stages in this process are given below :

(i) Defining the research objectives, sample population and resources;
(ii) Establishing the staff structure;
(iii) Selecting the method of data collection;
(iv) Preparing the timetable;
(v) Designing the data collection tools;
(vi) Preparing the other documents like interviewer's instructions, coding guides etc;
(vii) Preparing for the data analysis;
(viii) Selecting the sample;
(ix) Recruitment of field staff;
(x) Pilot survey;
(xi) Field work;
(xii) Editing and coding;p
(xiii) Data preparation;
(xiv) Tabulation and analysis;
(xv) Report writing;

2.3.8 METHODS AND TECHNIQUES

User studies mostly draw on methods and techniques from the social sciences and related disciplines. The methods available for collection of data are many. User groups being human factors, a single method or a definite procedure does not fulfill

the purpose. The methods and techniques used for one type of user group may not suit the other type of user group. Therefore, use of more than one method is suggested by many researchers like wood in his writings. The most commonly used methods are :

2.3.8.1 Questionnaire :

This is most freely used method in user studies. It includes obtaining answers directly from users by questioning about their behaviour, attitudes, values, conditions, and/or preferences. The purpose of questionnaire, according to line, is "to elicit information from human beings which would otherwise be difficult or impossible to obtain." On the other hand, Paisley terms questionnaire technique expedient to use when the sample is widely spread. The advantage of the questionnaire is that it is relatively flexible and can be used to reach a very large number of people. The questions being in consistent format and style, there is hardly any scope left for bias by different researchers. The questions can be open-ended, or multiple choices(poll), but the most important aspect in the design of questionnaire is the careful and appropriate wording of the questions be used. But the limitation of questionnaire method is in its low level of response. Other shortcomings of questionnaire include respondents' understanding and interpretation of the questions and inability to clarify incomplete responses. However, despite its limitations, questionnaire method is considered more sound and dependable method of survey.

2.3.8.2 Interview

This is another technique used in survey method though the most time-consuming one. Interview involves verbal interaction between the interviewer/ researcher and the respondent. Generally, interview is conducted face to face with one respondent at a time. Interview can be structured where a schedule of questions-which may almost be identical with a questionnaire-be prepared, and the responses noted on it. On the other hand are unstructured or informal interview which is like holding a conversation with the individual and trying to get a personal view point. Both have advantages and disadvantages of their own. According to Chen and Hernon, "Personal interview, allowing a high response rate, direct interaction between surveyor and surveyed, question clarification, and the elaboration of data through minimization of unclear answers, is conceptually the superior form of study technique."

2.3.8.3 Observation

The method of observation involves watching and recording the subject or phenomena. As a data collection technique, observation is used in user studies to watch how people behave, e.g. at the reference desk, at the circulation counter, or while consulting library catalogue, and so on. It is most appropriate only when questionnaire is not appropriate, and therefore can produce data, which the other methods cannot. This is because as Fox remarked that the raw material of observation is the reality itself. If it has advantages, it has limitations also, because data cannot

easily be quantified nor the validity can easily be established.

2.3.8.4 Diary

A diary is considered a specialized form of self-administered questionnaire. A respondent is expected to record information over a period of time. It is used to collect a detailed account about the behaviour of a respondent (user) involving his/her participation. Users may be asked to record each time they perform a certain activity such as reading, information search, discussion etc. Over a short period of time and mention the success or failure of these efforts. Diary, if accurately maintained, is a powerful research tool as it can provide data that is more specific than that provided by questionnaire or interview or observation.

2.3.8.5 Analysis of Library Records

This method involves analyzing the records maintained in different sections of library depending upon the nature of user study. It could be analysis of circulation data, or interlibrary loan record, or acquisition data, or reference queries, etc. used by the researchers.

It gives the first hand information about the users' needs of information, books, journals etc. However, it gives only a particular view of users needs.

2.3.8.6 Citation Analysis

It is an indirect method to assist the information needs of library users. In this technique citations given at the end of articles, theses and dissertations, are analyzed to find out the most frequently cited journals top ranking authors, institutions, and so on. The library accordingly, can build its collection around such an analysis. However, some scholars do not support the validity of citation analysis and biblometric laws, but on the other hand, some other writers favour this technique very much.

2.3.8.7 Choice of Technique

It can be said from the above discussion that methods and techniques for conducting user studies are to be chosen on the basis of the objectives of the study and the existing conditions and resources. The choice of technique must take into account the overall strategy, i.e., qualitative or quantitative approach to the subject. The technique chosen must be suitable for studying the problem within the available resources. But each method has its own merits and demerits. It may be mentioned that in some studies only one method or technique is not found to be sufficient, so the researcher can resort to two or more than two methods to draw comprehensive data for valid and reliable results.

2.3.9 PLANNING A USER STUDY

When the researcher needs to plan a user study, the following steps should be taken into consideration.

2.3.2.3.1 Objectives

In the first step the general objectives of the study are to be spelled out in clear terms. The objectives should be specific and attainable. It must be clearly

stated as to what type of information is sought from a user and what objectives are to be achieved.

2.3.2.3.2 Select Method/Technique

This is an important step because selecting a method and technique should reflect the objectives of the user study. As far as possible it should ensure the collection of comprehensive data on the subject of study. Selection of appropriate techniques of statistical analysis must be careful by done in order to analyze and interpret the data collected.

2.3.2.3.3 Sample of Study

The size of sample is to be considered carefully. A decision is to be taken whether a large sample or a smaller one will be useful for the purpose. The investigator has also to decide about the number of variables in the sample. The investigator has to know about the available resources, time, quality of data, etc.

2.3.2.3.4 Collection of Data

A very clear procedure for collecting the data with the help of various tools, should be laid down. It requires framing of questionnaire, and its testing by a pilot survey, mailing the questionnaire, sending the reminders etc. If possible, it can also be followed by interview to elicit more data. In case of indirect methods of data collection, the procedure must be clearly outlined.

2.3.2.3.5 Analysis and Interpretation of Data

Analysis is the process of bringing order into data collected. It enables to make sense of the data, to find answers to the research questions, and to communicate what data speaks and tells us. The process of deciding what data means is usually referred to as interpretation. Analysis and interpretation both are interwoven as one.

2.3.10 EVALUATION OF USER STUDIES

Evaluation is a key concept for the further development and improvement of information services and systems. It can ensure the provision of better information products and services, and therefore can also act as a justification of existing services. On the other hand, it can also provide a critical assessment of the system.

A number of criticism are levelled against the user studies, it has been observed that these studies represent lack of proper selection of population, limited sample for generalization, diverse classification of communication channels, lack of proper analysis etc. In view of these shortcomings, information scientists like Atkin, Brittain, Crawford and others, raised doubts about the credibility of user studies conducted up to 1970s.

An evaluation of user studies can also be made in the following way :

2.3.10.1 Studies not User Oriented

About twenty years ago, Brittain pointed out that the user studies had neglected potential users, information requirement assessed are of a more general nature, and few user studies have been concerned with the requirements of data or

information as such. The researchers generally tend to be library and document-oriented and much less the user-oriented.

2.3.10.2 Inadequate Methodology

It has been observed the researchers sometimes ignore the respondents while constructing the questions. They should ask those questions that users are able to answer. Brittain pointed out that relatively a few statistical tests of the significance to the findings have been applied. As a result, only a very small proportion of the large amount of data is worth reporting. There is, therefore, greater need for use of more imaginative methodologies and advanced statistical techniques in user research.

2.3.10.3 Need for Behavioural Science Studies

Critics of the user studies have observed a need for the behavioural science orientation to the user research. Many more information user characteristics like personality traits and psychological dimensions of users are yet to be identified and related to information behaviour of users. Psychological research is also necessary to test the behavioural assumptions of the system designers.

2.3.10.4 Human Dimension of Studies

Some reviewers have laid emphasis on human dimension of information needs of users. They are of the opinion that learning motivation, personality, and other kinds of psychological variables affect all behaviour which needs to be explored through more user Studies.

2.3.10.5 Lack of Emphasis on End Purpose

It has been pointed out that most of the user studies concentrate only on means, and not on the end purpose of the information seeking behaviour within the wider context of users totality of experiences.

2.3.10.6 Information Traits of Users

There is need to study the information traits of the users, as there occur many individual variations in the information use behaviour.

2.3.10.7 Lack of Integrated Approach

Reviewers point out that significant work in the area of user studies has been done by non-librarians. However, there is lack of an integrated and inter-disciplinary approach to user studies.

Some of the evaluative observations based on literature have been pointed out above so that other aspects of information use are taken into consideration. Sridhar points out that ***"the vast scope for further research in terms of different segments of users, different aspects of user behaviour and attitude with refined methodologies and rigorous analysis of data still remain unexplored."***

2.3.11. SUMMARY

This lesson briefly traces the origin and development of user studies in the US, the UK and India. The need and purposes of user studies are related to

different categories of users who are helpful in grouping of user studies. It not only explains the designing of user studies but also their methods including the conventional methods such as qeustionnaire, interview, observation etc. though it is difficult to select an appropriate technique for the purpose. Evaluation of user studies provides an opportunity to know about the drawbacks of the past surveys conducted, and shows the way for the future with refined methodology and new areas of survey.

2.3.12. GLOSSARY

Most of the term used in this lesson have already been defined in other related lessons.

1. Citation Analysis : It analyses references given in the document of an author to know the most popular journals, or authors among the subject specialists.

2.3.13. REFERENCES

1. Bawden, David. *User-oriented evaluation of information systems and services.* Hants : Gower, 1990.
2. Brittain, J.M. *Information and its users,* Bath : Bath University, 1970.
3. Kawatra, P.S. *Library user studies* : *A manual for librarians and information scientists,* Bombay Jaico, 1992.
4. Krishan Kumar. *Research methods in library and information science*, New Delhi : Vikas, 1992
5. P.S.G. Kumar : Library & Users : Theory and Practice, Delhi. B.R. Pub. 2004.

LESSON NO. 2.4 **Author : DR. AJIT SINGH**

USER EDUCATION : CONCEPT, GOALS, OBJECTIVES AND LEVELS

Structure of the Lesson

Knowledge about knowledge is deemed to be greatest source of power that one can possess, thus is a important segment of personal knowledge (knowledge of the mind of an individual). Social knowledge (knowledge possessed collectively by a society or social system) is essential source of personal knowledge. Both kinds of knowledge are not mutually exclusive. From personal knowledge, most of social knowledge is built. According to Alvin Toffler

a wider meaning of knowledge includes, data, information, image and imagery, as well as attitude, values and other symbolic products of society whether true, approximate or even false. The nature of knowledge, in principle is infinitely expandable. The control of knowledge is a crux of a world-wide struggle for power. To provide knowledge about knowledge or knowledge carrier (documents) is becoming important function of a library or information centre in this era of information. By this student/reader is able to prepare himself for taking full and active part in the new ways of learning. This is a basic source of the 'education for life.'

This lesson introduces the concept of 'User Education in its different dimensions to form a foundation to rest of lessons in this unit.

2.4.0 Objectives

After this discussion students will be able to :

(i) Understand the concept and meaning of user education ;

(ii) Define its goals and objectives ;

(iii) Identify different components of user education ; and

(iv) Plan, design and conduct user education for different levels of audience.

2.4.1. Introduction

Library is a trio of books, readers and staff. They are made for each other. Therefore, libraries and information systems are designed and build with the primary objective of meeting the information needs of a group of people who constitute their clientele. In the past 'the philosophy of library was collection oriented but now it is users oriented. In the past, library and information systems and services were developed based more on 'literary warrant' rather than 'users' warrant'.

Infact, the key or base to the aims, directions and contents of any and all library or information activity is the **USER.** According to P. L. Leggate, "Unlike retrieval systems and computer systems, users are human being and, therefore, difficult to classify. Unfortunately, one can say almost any thing and it will be true of some users. Any generalization which can be made will be true of atleast some users." Identification of users is a complex, costly and demanding processes. In this regard, there are two basic questions :

(i) What an information system or library can do to assist an information seeker (user) in identifying or solving a problem ?

(ii) What these system or library can do to raise the probability that a user will find himself relevant and useful information within a minimum cost or efforts ?

These questions provide guidelines and practical operational framework

for establishment of any effective library service system.

2.4.2. Users

The user is the focal point of all information and library activities at all levels. User is a broad concept which may include both producers as well as clients of information. There are a number of terms which have been used to signify users in the literature of library and information science. They are more or less near synonyms e.g. patron, client, member, customer. Whitaker defines user as a person, who uses one or more of services provided by a library. According to Guinchat, a user can be defined on basis of two sets of criteria :

(i) **Objective Criteria :** includes socio-professional category, specialized field, nature of activity for which the information is sought, reason for using the information ; and

(ii) **Social and Psychological Criteria :** refers to user's attitudes and values with regard to information in general and in him relations with information unit in particular.

On the basis of these criteria, Guinchat categories users into three major divisions :

(a) Users, not yet engaged in active life e.g. students ;

(b) Users with a job and whose information needs are related to their work ; and

(c) Ordinary citizen needing general information.

Therefore, users are those, for whom information systems are created i.e. the ultimate beneficiaries. In the context of their direct use of information systems, they are often referred to as *end-users* to distinguish them from the users in the sense of intermediaries (library or information centre personnel) who use or supply services on behalf of the end-users.

2.4.3. Education

Education is often regarded as a process which changes the learners, a process in which someone has to decide what changes are possible and desirable. Every teacher-learner interaction is based on some implicit conviction on the part of both teacher and taught about the possibility and desirability of certain changes.

2.4.4. User Education

Education is a life-long process. From elementary school to university level we get formal education and get knowledge about some discipline. Even in the past it was the belief that knowledge regarding the use of library was an essential part of 'informal education' or 'education for life'. It helps the students for continuing process of self education. In this process, we learn how to use

library and acquire a disinterested love of reading and make ourselves, self-dependent for continuing education, throughout the life.

In this area of information, the education for life aspect is more important due to explosion of knowledge and information. Greater stress is placed on the ability to continue to learn throughout life. Now students are encouraged and trained to develop logical, creative and critical approaches to the subject studied. In this direction they must be taught to be independent without relying upon the library staff assistance. For this users need knowledge and skills to find their own way.

To provide library service in its true sense an attempt should be made to attract all potential users into libraries of all types. In this modern information age it is no use buying literature, carefully processing and organizing it, if no one uses it. Therefore, it is believed that money spent on users education is good investment if this step increase the use of library materials. The purpose, the aim and objective of user's education is not merely to stimulate library use as this, but one of the source of information for the users.

User education is the whole information and communication process and one segment of this is the total interaction of the users with the library. User education is the nucleus of whole purpose of library and effective or efficient utilization of information sources.

2.4.5. Concept

After surveying the related studies pertaining to the users, conducted in the different parts of the world, it was deducted that only a few scientists make the maximum use of library and information centres and are aware of the various bibliographic tools of their specialized and related subject fields.

Training in the use of scientific information has been officially recommended by the Royal Society Scientific Conference. The survey recommended by Perry Committee Report showed that many students of undergraduate levels, were not active users of academic libraries. All these findings and factors establish firmly the need for importing training to the users, in the use of libraries and information resources. Many attempts have been made to design and develop programmes for user education, so that they can be trained and educated in the use of library and information resources. All these efforts are nothing but 'user education'.

2.4.6. Definitions

Gordon Wright opined that students cannot be taught the use of library in splendid isolation, but must be made to see it as continuous process of education in which the various facets of communication are inextricably mixed.

Mews defines this process as instructions given to readers to help them

make the best use of library.

UNESCO defines 'User Education' to include any effort or programme which will guide and instruct existing and potential users, individually or collectively with the objectives of facilitating :

(i) the recognition of their own information needs ;

(ii) the information of three needs ;

(iii) the effective and efficient use of information services; and

(iv) assessment of these services.

Therefore, user education may be defined as a process or programme through which the potential users (scientists, engineers, technologists, academics and students) of information are made aware of the value of information and are motivated to use information resources. User education is concerned with the whole information and communication process, and one part of this is the total interaction of the users with the library. This should be a continuous process beginning with school/public libraries and with the possibility of extension into academic and special libraries. The pattern of many academic user education programmes is almost similar to that proposed in the Royal Society Scientific Information Conference held in 1948.

2.4.7. Components of User Education

User education is certainly a continuous process and has two components, orientation and instruction, combined as necessary to the need of the user.

2.4.7.1 Orientation

Orientation is concerned with ways of introducing the use of library to the general methods of library usage and services available, and to the organization, layout and facilities of a particular library. Orientation is related to both cognitive (i.e. understanding) and affective (i.e. feeling and attitude) objectives. The creation of right type of environment is essential for effective communication between user and the library personnel. The image of the library should be presented as pleasant, friendly institution, where help can be obtained. As a result of orientation, the user should have good rapport with the library and should feel confident that library staff is competent and always willing to help them.

2.4.7.2 Instruction

It is the second component of user education and is concerned with learning to make use of the information resources available in a specific library. This is also known as bibliographic instruction, and is concerned with the problem of information retrieval and the techniques of exploiting information sources to the maximum extent. The bibliographic instruction can be given at

two stages : as an introductory course, and as an advanced course depending upon the level of the users.

The user education programme must be integrated with academic teaching programme involving close cooperation between the librarian and the teaching faculty. This cooperation will provide a chance to incorporate relevant practical work into user education in academic teaching programmes.

2.4.7.3 User's Education Proper

The library can replace the class-room as a place of learning by helping the readers to educate themselves through the medium of its vast resources. Louis Shores advocates the librarian to take over the duties of the teacher to a major extent, particularly in the process of course-related bibliographic instructions. His library-college concept advocates active student involvement through commitment to the principle of full personal responsibility for his own education, goal selection, self evaluation, and character development. In this learning process if the librarian undertakes to teach where a particular information is available and how it can be located and used, he has substantially contributed towards its success. This is user education in real sense. In fact Shore's Library-College concept has nowhere in the whole world taken a concrete shape.

2.4.7.4 Librarian's Function

The librarian's duty is not to teach a subject directly, but to guide a student to various sources where his subject is dealt with. He is to begin with such measures as inculcating among the students the library awareness, and to move on to the programme of bibliographic instruction and ultimately to take up the teaching of improvement of search strategy and subject analysis. He teaches a subject indirectly.

2.4.8. User Education : Goals and Objectives

For the success of user education programme a well planned educational programme needs clear and well defined goals and specific objectives for the user's course to be organized. Course content and timing of different stages/ levels, the teaching methods and the media of instruction, etc. must be decided in advance.

The planning of programme of user's education often begins with the verbal formulation of the possible and desirable changes in a so-called statement of goals and objectives. The term 'goal' will be used to express broad, general statement of purpose, where 'objectives' will be used to express specific short-term aims, in agreement with the main goals. The verbal formulation of goals and objectives does not, however, ensure that the goals expressed are the same as the implicit goals. It should also be realized that changes can occur which

have not been foreseen; some of these may be desirable, others may be undesirable. The changes will not be to the same extent, or even in the same way during all the readers as a result of user education.

At the same time it provides a focal point for evaluation, which is concerned, in part, with relating changes in a students behaviour to the purpose of educational programme.

The clear definition of changes desired as a result of a given user educational programmes in the form of goals and objectives, facilities the choice of course content, of media and methods of presenting this material alongwith the timing of different parts in the planning of user's education programmes.

Goals and objectives sensed in the form of changes can be grouped for the purpose of convenience into 3 main groups ; cognitive, affective and psychomotor. The objectives of user education, are to be found mainly in the cognitive and affective domains. Psychomotor goals/objectives are concerned with coordinated physical activity of the users.

2.4.8.1 Cognitive

Cognitive goals and objectives are concerned with understanding, assimilation of various concepts pertaining to the use of resources and bibliographical awareness. Within this cognitive domain the goals and objectives can be arranged in ascending and descending degree of complexity i.e. from complex to simple and from abstract to concrete.

2.4.8.2 Affective

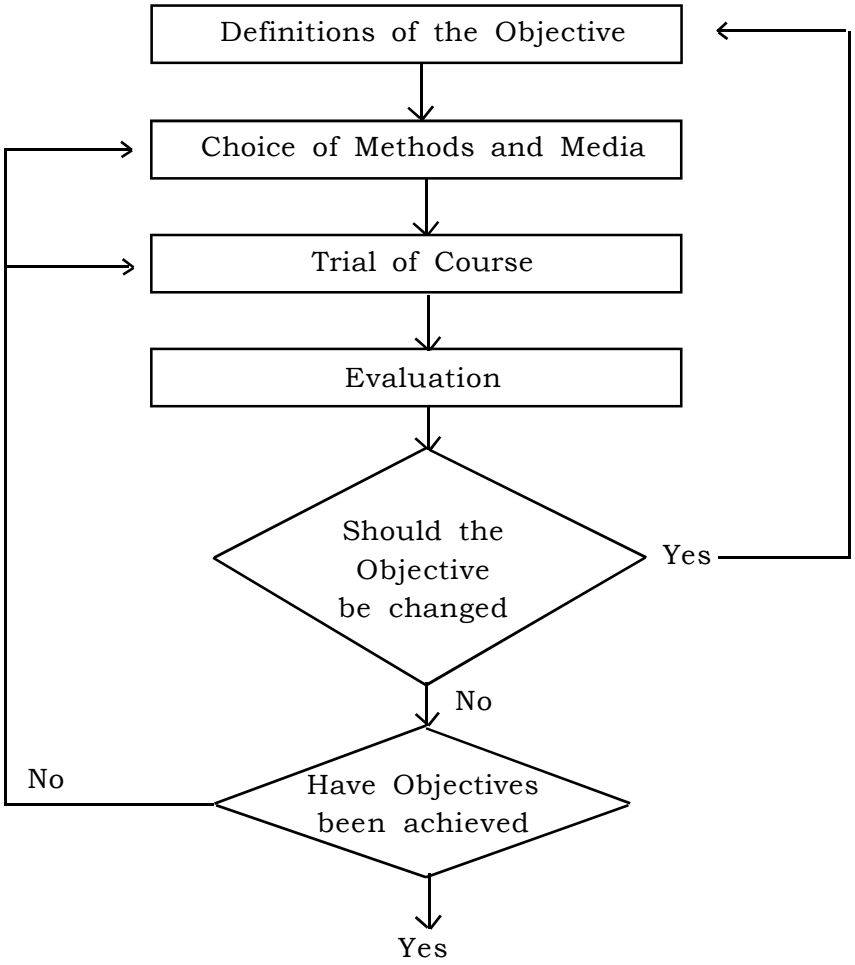
Affective goals and objectives are concerned with feelings, emotions and attitudes. Such as what students wants to and subsequently does, how they behave in various educationally desirable ways after training. Does they free pleasure in making use of library resources in order to find information. It helps in the establishment of warm rapport with the library and library staff.

2.4.8.3 Psychomotor

Psychomotor goals and objectives are concerned with coordinated physical activity such as the use of computer. There is a close relationship between first and second objectives.

There is usually a close inter-relationship between cognitive and affective objectives. The verbally expressed goals and objectives for a given course of library instruction tend to describe cognitive elements. There are, however, in many cases, affective components, implicit in these statements.

This in library user education is the cognitive domain the student should know how to make use of specific library tools such as catalogue, abstracts etc. when asked to do so. In the effective domain the student will make use of these resources, when appropriate in connection with his information needs, after he has learnt how to use them.



Development of Course of Education

Source : User Education in Library by Nancy Fjallbrant and Malcolam Stevenson.

Setting of goals and objectives of the user education is important. There are no guidelines for instruction in library skills. This has been clearly expressed by some authors like Lubans and Stevenson.

The goals and objectives for education programme must be in agreement with the general aims of the library ; these aims must in turn be related to the goals and aims of the higher education/self education. For a university library the aims and goals may be expressed as under :

(i) to contribute to the realization of the aims of the university, with regard to teaching, learning and research, by acquisition of printed and non-printed material necessary to cover present day and future information needs ;

(ii) to register and store the material acquired in such a way that it not only permits, but even actively stimulates the use of material.

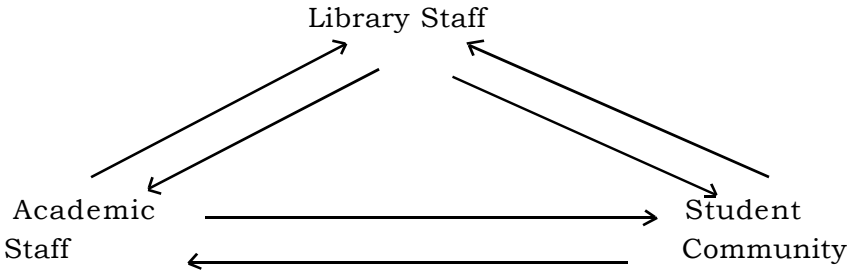
(iii) to adapt these information resources and services to the changing needs of the university and the social and

(iv) to contribute to the integration of both national and international information resources within the university.

It is obvious that one of the ways of stimulating the active use of information stored in the library is by teaching the library user how to obtain information from the material available in the library. The general goal for a programme of user education for any type of library, is likely to include an attempt to create an awareness of the resources available. In special libraries where the rate of growth of literature is very rapid the need of user education is particularly important.

2.4.9. Cooperation among Library Staff, Academic Staff and Students

Library user education is not a separate academic discipline. It consists of series of skills which can be made use of in connection with different academic studies. Hence education in library use should be closely integrated to with the teaching programmes which prevail in different academic disciplines through the cooperation between library staff, academic staff and the student community for a successful implementation. This is represented in the following figure :



There has been a prolonged debate relating to the goals and objectives for library user education in the past. Organizations like ACRL in the USA and ASLIB in UK have attempted to develop their own proposals and guidelines in the direction of user education. Information professional like Hutton, Scrivener and Hartz have different views on the subject. According to Scrivener the user education programme might aim to achieve :

(i) an understanding of library arrangements—physical, bibliographical and conceptual ;

(ii) knowledge of sources which will be appropriate in any given situation ;

(iii) the ability to interpret his own need so as to frame relevant questions; and

(iv) an awareness of search techniques including the ability to devise serviceable routines and finally the student needs skill in the art of evaluating his sources and presenting his materials.

The details will necessarily vary in different situations but teaching should establish and promote those traditional skills without which no student can make adequate use of the library.

2.4.10. Levels of User Education

Any information seeker/reader, is normally in a state of hazy connotation about his requirement. He is in an innovative process towards his expression of information needs. He needs some intellectual cues for his expression. Each searcher represents a unique combination of characteristics and purpose. To prepare an effective set of cues, it is therefore necessary to analyse **searcher behaviour** and style of searching. We may have to find answer to the following questions about the users to decide the levels of user education programmes :

(i) How much technical knowledge about the subject do they already have ?

(ii) What position, do they have in organization ?

(iii) What are their attitude about the subject or working or about searching information ?

(iv) How do they read the document ?

(v) What purpose do they have in using the document ?

Three levels of readers are :

(i) Expert levels (ii) Semi Expert (iii) Non-expert

Dr. S.R. Ranganathan has grouped users into various levels on the basis of types of services required by them. There are freshman, ordinary inquirer, specialist inquirer and general reader. Therefore, the user education programe may be according to the aforesaid categories.

On the basis of aforesaid discussion there are three levels of user education :

2.4.10.1 First Level—Library Orientation

Four purposes of classification, all library instruction program can be divided into three general levels. The first of these is commonly referred to as library orientation. This is the introduction to the library building itself. A few

resources such as the card catalog and some basic reference materials may be introduced. But library orientation generally has the following objectives :

(i) to introduce users to the physical facilities of the building itself;
(ii) to introduce the departments or service desks and the appropriate staff members;
(iii) to introduce specific services such as computer searches, book talks, or inter-library loan;
(iv) to introduce library policies such as overdue procedures, or the hours the library is open;
(v) to introduce the organization of the collection with the specific goal of reducing user anxiety about trying to locate materials;
(vi) to motivate users to come back and make use of the resources; and
(vii) to communicate an atmosphere of helpfulness and friendliness.

Practically all academic libraries have some form of library orientation. To what degree they claim or achieve all of the above objectives is questionable. But, at least it can be stated with confidence that this portion of the need for library instruction is being met to some extent.

There are many varied techniques available for effective library orientation. There is no reason why any library needs to confine itself to traditional large group librarian-guided tours. Several very appealing methods including audiovisual approaches, classroom lectures/demonstrations, workbooks, handout material, and self-guided tours have all been tried very successfully.

2.4.10.2. Second Level—Library Instruction

Library instruction is the more in-depth explanation of specific library materials. It includes techniques in using indexes, the card catalog, reference materials, and bibliographics tools. It often concentrates on specific subject areas to afford researchers an opportunity to learn about using library materials in their own fields. In many cases, it may be course-related and part of some research paper or project.

Units in library instruction may have many different types of objectives, such as :

(i) to learn to use the *Readers Guide to Periodical Literature;*
(ii) to be able to find books on a specific subject through the card catalog;
(iii) to be able to use microforms and the appropriate reading equipment;
(iv) to learn to use a specific reference tool such as the *Encyclopaedia Britannica or a Who's Who;*

(v) to locate a specific film and be able to operate the projector to view it;

(vi) to confirm the availability of resources in other libraries and be able to request an inter-library loan; and

(vii) to learn how to conduct a search in an indexing service such as *Educational Resources Information Centre* and be able to locate and use the resulting microfiche and other citations.

These are just a few examples of the enormous number of possible library instruction goals. Some extremely creative approaches have been used all over the world in library instruction programs. While library orientation has been more pervasive, library instruction has also been steadily gaining ground, especially in high school and academic libraries. The various techniques for library orientation also apply to library instruction. Furthermore, methods such as gaming, simulation, independent study, and computer-assisted instruction have been used for library instruction.

While library orientation programs should be evaluated to determine their effectiveness, library-instruction programs present an even greater set of problems in this regard. Do students learn from a specific lesson ? Which students in a group or class need to receive a given unit ? Will they use the instruction in a way that insures not only that they learned from the instruction but also that they can apply it ? Various techniques for diagnosis and course evaluation such as pre/post testing, surveys and questionnaires, and problem-solving tests will be presented.

2.4.10.3. Third Level--Bibliographic Instruction

The third level of library instruction is the offering of formal courses in bibliography. These may be offered for credit or non-credit and are sometimes required courses in a high school or academic program. Usually, however, they are elective courses taken by a small proportion of students. They are also often non-credit workshops for especially motivated students.

This form of library instruction has been even less commonly practiced than either of the first two levels. However, it too, has been gaining momentum. Many graduate programs include a required course or module in the bibliography of that subject area of help prepare the graduate students to do research. Nonetheless, some educators believe strongly that these required courses fail to accomplish the overriding objective of competency in library use.

Courses of this nature may range widely in terms of their depth of coverage as well as their method of presentation. Often they deal with material such as the following :

(i) information and its organization;

(ii) subject headings, vocabulary control in research, and definition of a research topic;
(iii) types of sources to consult;
(iv) outlining techniques and planning a research paper;
(v) note-taking techniques in research;
(vi) style, footnotes, references, and bibliographies;
(vii) search strategies, exhaustiveness in research, and library services pertinent to a given collection; and
(viii) Writing the research paper.

Course or workshops in bibliography might use a locally prepared textbook and /or a commercially available text such *as Bibliography for Beginners* by Gore or *Guide to the Use of Books and Libraries by Gates.* If a locally developed text is used, it often contains much needed information which is specific to a certain library and collection. Floor plans, specific library services, contact persons, policies, special collections, branch libraries , or especially pertinent material may all be included.

The teaching methods used may vary from traditional lectures to computer-assisted instruction. Many instructional approaches lend themselves to lessons in bibliography and, as with the other two levels of library instruction.

Evaluation should also play a major role in bibliographic instruction. Assessing student learning is only one aspect of this. Were presentations effective ? Was the course well organized ? Were objectives appropriate and were they met ? Were readings relevant ? Were assignments effective ? Several evaluation strategies will be presented later which can help to measure the success or failure of course in bibliography.

2.4.11. Conclusion

"If you give a man a fish
He will have a single meal ;
If you teach him how to caught fish
He will eat all his life."

—Chinese Proverb

2.4.12. Self Check Exercise

(i) What are the criteria set by Guinchat to define users ?
(ii) What do you understand by library instructions ?

2.4.13. References and Further Readings

(i) Fjallbrant, Nancy : Evaluation in a user education programme. *Journal of Librarianship* 9(2), 1977.
(ii) Fleming, High : User education in academic libraries. London : L.A., 1990.

(iii) Hardesty, L. : Evaluating library user instruction. *College and Research Libraries* 40 (1979).

(iv) Satyanarayana, N.R. ed. : User education in academic libraries. New Delhi : ESS ESS Publication, 1988.

(v) Rajgopalan, T.S. : Education and Training of information users. *Library Service.* 15 (1978).

(vi) Stevenson, M.B. : User Education Programmes : A study of their development, organization, methods in medical service. *Journal of Information Services.* 21(1), 1978.

(vii) Taylor, P.J. : User education and role of evaluation, *Unesco Bulletin for Libraries,* 3291.

(viii) P.S.G. Kumar : Library & Users: Theory & Practice : Delhi : B.R. Pub. 2004.

2.4.14. Answers to Self Check Exercise :

Question-1

(i) **Objective Criteria :** includes socio-professional category, specialized field, nature of activity for which the information is sought, reason for using the information; and

(ii) **Social and Psychological Criteria :** refers to user's attitudes and values with regard to information in general and in him relations with information unit in particular.

On the basis of these criteria, Guinchat categorises users into three major divisions :

(a) Users, not yet engaged in active life e.g. students.

(b) Users with a job and whose information needs are related to their work; and

(c) Ordinary citizen needing general information.

Question-2

Second Level—Library Instruction

Library instruction is the more in-depth explanation of specific library materials. It include techniques in using indexes, the card catalog, reference materials, and bibliographics tools. It often concentrates on specific subject areas to afford researchers an opportunity to learn about using library materials in their own fields. In many cases, it may be course- related and part of some research paper or project.

Units in library instruction may have many different types of objectives, such as :

(i) to learn to use the *Readers Guide to Periodical Literature;*

(ii) to be able to find books on a specific subject through the card catalog;

(iii) to be able to use microforms and the appropriate reading equipment;

(iv) to learn to use a specific reference tool such as the *Encyclopaedia Britannica* or a *Who's Who;*

(v) to locate a specific film and be able to operate the projector to view it;

(vi) to confirm the availability of resources in other libraries and be able to request an inter-library loan; and

(vii) to learn how to conduct a search in an indexing service such as *Educational Resources Information Centre* and be able to locate and use the resulting microfiche and other citations.

These are just a few examples of the enormous number of possible library instruction goals. Some extremely creative approaches have been used all over the world in library instruction programs. While library orientation has been more pervasive, library instruction has also been steadily gaining ground, especially in high school and academic libraries. The various techniques for library orientation also apply to library instruction. Furthermore, methods such as gaming, simulation, independent study, and computer-assisted instruction have been used for library instruction

While library orientation programs should be evaluated to determine their effectiveness, library-instruction programs present an even greater set of problems in this regard. Do students learn from a specific lesson ? Which students in a group or class need to receive a given unit ? Will they use the instruction in a way that insures not only that they learned from the instruction but also that they can apply it ? Various techniques for diagnosis and course evaluation such as pre/post testing, surveys and questionnaires, and problem-solving tests will be presented.

LESSON NO. 2.5 **Author : DR. AJIT SINGH**

USER EDUCATION : TECHNIQUES AND METHODS

Structure of the Lesson

The society of today is information society. Its very existence is dependent on the availability and intelligent use of information. The world of today stands

divided between information-rich and information-poor countries. Economic, political and technological process of a country are now judged by the extent of availability of its citizens and by their capacity and ability to use the information for development and well being of the society. But one of the important reasons for under utilization of information/library is lack of requisite level of working knowledge and consumption skills among the citizen/readers.

The present unit of user education is concerned with the techniques and methods used by different libraries is enable their clients/users to be efficient users.

2.5.0 Objectives :

After reading the lesson you will be able to :

— Identify different factors of learning.

— Identify suitable teaching methods and appropriate techniques for conducting user education programmes.

2.5.1. Introduction

One of the important reasons for under-utilization of information libraries is lack of requisite level of working knowledge and consumption skills among readers.

Mentally and technically preparing readers at all levels and their effective management are most fundamental for the successful dissemination and access of information. Regretfully, the general level of knowledge, skill and competence of readers of information seekers is quite low with probable exception of few readers or seekers working in advanced institutions where ample opportunities are available to gain hands on experience.

Skills in use of library can be gained only when one gets hand-on-training and experience in libraries under stimulated conditions or in real-life situations. The graduates and post-graduates turned out by colleges and university do not possess adequate skills and expertise to confidently interact with information sources, both conventional and non-conventional. The traditional educating skills are likely to tail off and many of traditional skills will not be required in future except in small selective areas in continued education or self education.

2.5.2. User-Education and Instruction Services

Traditional user-education and instruction services have almost remained on paper and most of it has fizzled out giving way to superficial and occasional user-orientation rather than imparting skills. In India, we are awfully inadequate and bad in providing systematic and regular user instructions services. There are hardly any locally developed user-education modules to

proudly present to an average user. Majority of the libraries do not have regular user-education and orientation programmes except providing a copy of rules and regulations of the library. Libraries are not only to find ways and means of inducing and including the marginal users and non-users but also make use of information technology along with conventional library instructions to take library to the users.

2.5.3. Teaching Environment

Education has been known as a process which being changes among the learners. The user education leads to cut down the number of enquiries at the reference desk as the users are trained to be self dependent by imparting training through different methods and techniques. These teaching methods may be proudly divided into those which are suitable for group instruction, those suitable for individual instructions, and those suitable for both.

2.5.4. Factors of learning Process

The process of learning can be affected by a wide variety of factors. There are four main factors that affect learning in practical situation : motivation, activity, understanding and feedback. These factors are also important in relation to programme of library education or user education.

2.5.4.1 Motivation : Motivation is an inner urge to do something. Therefore, users instruction should be given at a point of high motivation, i.e. when the user wants to obtain information in connection with a particular project in hand.

2.5.4.2 Activity : Involvement of the learner is important factor. Active work on a problem ; learning by doing—is likely to be more activity than simply being told how to do a particular piece of work.

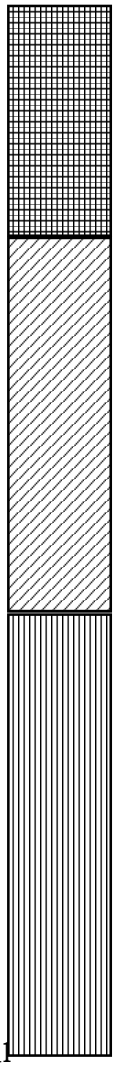
2.5.4.3 Understanding : Library education will be more effective if the student understands what he is doing and why he is doing it—that is, if new facts can be related to existing knowledge.

2.5.4.4 Feedback : If one knows the reaction of ones action, one can perform more effectively. Therefore, feedback information on the program being made should be available to the student.

In addition to aforesaid four factors, factors affecting the neuro-physiological sensory output can be considered. Teaching methods may, for example, use visual or auditory stimulation, or a combination of both-audiovisual. Methods which make use of combination of sensory inputs are likely to be more affective that those which rely on a single channel of communication. The possibility for the student to control the rate of flow of information—Capacity to learn—in a given learning situation, is another factor of the learning process.

International between library learners concerned in the teaching/ learning situation also affects the learning process. This interaction can be roughly divided into teacher-student and student-teacher interaction. Research data indicate that introverts learn more easily from programmed learning than extroverts.

In the diagram given below an attempt is made to consider various teaching methods for library education with respect to the factors affecting the learning process, the number of sensory inputs utilized, and student-teacher, teacher-student interaction.



Teaching Methods	*Type of Instruction*
lecture	GROUP INSTRUCTION
Seminar/tutorial/ demonstration	
guided tour	GROUP & INDIVIDUAL INSTRUCTION
film	
video tape	
tape/slide	
audio tape/illustration	INDIVIDUAL INSTRUCTION
audio tape	
book, printed guide etc. (micro media)	
practical exercise	
programmed instruction	
Self-instructional material (tours, signs etc.)	
individual help.	

Diagram : Teaching methods for group and individual instruction

Source : User Education in Libraries by Nancy Fjallbrant and Ian Malley.

From the description it might be observed that no single method is suitable for all learning/teaching situations or for all individuals. In fact, various methods and media should be used to supplement each other in any given programme of education. However, traditionally library instruction had made considerable use of the lecture method for large groups, the guided tour for smaller groups and individual help for those who ask for this at the information desk.

The different methods and media for library user education are discussed in brief.

2.5.5. Teaching Techniques and Methods :

Following are some important methods used for education of the users :

2.5.5.1 The Lecture

Lectures are the most common method of instruction. They are used for teaching large groups of students. In lecture method of teaching both auditory as well as visual sensory inputs (via blackboard or overhead projector) are made use of. The lecture as a form of communication in education has been strongly criticised. The great disadvantage of this method is that the speed of delivery of information can not be controlled by the receiver and repetition is not possible without the provision of printed hands outs. However, lectures provide an opportunity for personal interaction and some feedback could be obtained from the students. Lecture is an unsuitable method for conveying information about bibliographic data. It is only suitable for providing a general introduction to a course on information retrieval. The lecture method may be more advantageous to a mature group of audience rather than beginners.

2.5.5.2 Seminars, Tutorials and Demonstrations

These are organised for small groups of students/users. Compared to lecture method, seminars, tutorials and demonstrations are methods which provide opportunity for active involvement of users in learning process through greater interaction between the teaching staff and students. In seminars, the atmosphere tends to be less formal and more congenial for integration between the teacher and the taught. It is possible to provide motivation and to see that students are actively involved by means of practical exercises. During the practical sessions the students receive feedback as to their progress. For example, an attempt can be made to relate new information to existing knowledge. It is rather difficult to explain the use of various specific tools for information retrieval in absence of source materials. It will be ideal to conduct

seminars relating Library user education in libraries. This would facilitate demonstration of specific tools for information retrieval. Demonstrations might prove to be a good way of teaching small groups of students /users the use of various tools used for information retrieval. They may be provided with an opportunity for actively searching for information about some topic in which students/users are interested.

2.5.5.3 The Guided Tour

This is one of the traditional approaches commonly followed to orient the freshers to the use of the library. This type of orientation is often given when the students have title or no motivation actually to use the library. From the point of view of library administration the guided tour type of library orientation makes heavy demands on library staff time.

"A better programme for short library orientation is the self-paced printed or audio tour followed by appropriate exercises. This method brings library users into the actual building where they carry out a series of practical tasks concerned with the location of materials, photocopying, use of catalogues and other routines. Self guided tours have been used successfully in many libraries."

2.5.5.4 Audio-Visual Methods

In recent years, there has been an increasing interest in the use of audio-visual media in teaching and learning process in general and for library user education in particular. A catalogue of AV media and CAI(computer aided instruction) software for user education and librarianship have been published in 1982. They contain useful information in this field. It is stated that there are few areas in library education where it is necessary to use moving images. As a result, the information can be conveyed in a series of units such as slides or overhead transparencies or printed illustrations. This would suggest that the tape/slide medium or the use of audio-tape in conjunction with printed material would be suitable for library user education. The advantages of tape/ slide productions are : flexibility, constant availability, speed of presentation and the clarity associated with the exposition apart from being easy to update.

2.5.5.5 Video-tapes

Video-tapes like films can be used to convey both motion, and in some cases, colour. It is possible to re-use the tape thereby making an updation less expensive. However, updation of video tapes is a time consuming activity. Video-recording can be used to create an atmosphere of reality and convey moving images but these requirements are not usually met within library instruction. Video recording can make use of tape, film or discs for actual storage of record material. But, one of the problems facing libraries in the use of video materials

has been the lack of standardisation between different systems. It would appear that cassette systems are more appropriate in the context of library education. There are at present two types of TV cassette systems, for playback alone, and systems for both recording and playback. But the main problem is lack of compatibility between different systems. The advantages of these methods are that they allow for careful preparation of material and can make use of the best teachers repeatedly available as the recorded material can be used many times. Internet TV systems can use displays suitable for audiences of different sizes, whereas the personal contact of teacher or seminar is lost in this method. The students cannot stop in the middle of the programme and ask questions and discussions cannot be organised. In other words, the instruction tends to place the student in a passive atmosphere.

Advantages of Audio-Visual, tapes/slides :

(a) **Flexibility :** Tape/Slide production can be used for both group teaching or for individual tuition.

(b) **Constant availability :** The use of audio-visual material does not depend on the presence of a lecturer or librarian. It can be used by the students as and when need arises.

(c) **Simple presentation :** The presentation of the material is not complicated. The tape/slide material is easy to project and easy to store.

(d) **Speed of presentation can be controlled :** The presentation speed is under the control so that it can be repeated, slowed down or skipped over according to the need of the group or individual.

(e) There are easy to update with deletion and addition.

2.5.5.6. Programmed Instruction

The programmed instruction can be carried out by the use of a variety of media such as printed books, automatic projection of slides or by means of a computer-aided instruction (CAI). Programmed instruction is associated with many advantages for library instruction. For example : student/ users can work at their own pace. They can actively participate in the learning process and receive direct feedback in respect of their progress. It is also possible for the teaching staff to obtain a record of the student's progress. Of course, the disadvantage is that of the isolation factor on the part of the student. Extrovert students who like companionship and competition of the classroom might not prefer this method of learning. CAI instruction is largely developed in the USA.

2.5.5.7 Printed Guide/Book

Printed information in book, compendia, or guide form has the advantages that is available for use, as and when required. Individual students can work

at their own speed, repetition is possible, and visual display in the form diagrams is very easy to achieve. Many libraries provide printed guides on the use of library as part of their orientation programme. Such guides should always be written with the user in mind.

Printed material can be used for later situation of library instructions. The provision of printed subject based guides to the literature could provide a useful method of library instruction.

2.5.5.8 Practical Exercises

Students could be expected to learn well by actively carrying out practical exercise, which they understand and in which they are interested. The importance of subject-oriented practical exercises in library instruction has been pointed out by many professionals. According to Kolding Nielson, *"one principle for all forms of practical exercise must be that, there should be, and be felt to be relevant to the subject. Subject-oriented practical exercises are very suitable method for library instruction as student feel motivated for active study and constantly receive feedback on their progress.*

2.5.5.9 Signs and Informational Graphics or Self-Guiding Material

Sign systems and informational graphics are one of the most basic methods available for providing orientation about the use of the library. A study of British libraries conducted by Graphic Information Research unit at the Royal College of Art revealed that the general standard of graphics was poor, signs in particular tended to vary in design and construction. However, in the US, there has been a marked increase in this important aspect of user education in recent years and a number of handbooks and guides have been produced in this area.

"Librarians started to apply systems approach in which different types of signs are used to illustrate different functions such as orientation, direction, identification, instruction, prohibition or regulation or current awareness. These functions fall into two main types : signs related to direction finding and signs related to the use of library resources. If signs are to be effective for user orientation, they must be carefully planned with regard to position, content and presentation." Well designed signs are expensive but this expense becomes a good investment in that the signs will last for a long time and help to overcome the physical barriers of the library.

2.5.5.10. Individual Instruction at the Reference Desk

It is believed that the best form of library instruction can be imparted by personalised service at the reference desk. This is because a user asks a question about the use of some part of the library when he is motivated to learn that aspect. The student/user is actively involved in the learning process and is

receiving tuition from an expert. The difficulty associated with this type of individual help is that it may provide immediate relief to the students/users, but not necessarily the understanding and background knowledge to cope up with similar situations that the student/user might face in future.

In summary, it might be said that choice of teaching methods and media depends on the learning-teaching situation, the subject material and people to whom training has to be imparted and the staff involved in the training process. The methods and media for library user education should preferably involve the active participation of the student/user a point when he/she feels motivated. In practice, a combination of teaching methods and media might provide the ideal basis for programmes of library user education.

2.5.6. Information Technology and User Education

During the last two decades computers are increasingly being used for information activities. This has resulted in rapid growth of computer-based online information retrieval systems. Database and computer stored information files are produced by many organisations such as American Chemical Society (Chemical Abstracts) and the US National Library of Medicine (Index Medicus) etc. These databases are now widely accessible for information searching from local terminals which are linked to the central computer via a telecommunication network. Such efforts have resulted in the development of a number of online information retrieval systems. The use of these systems depends on the education of users and the availability and functioning of this method of information retrieval. The aim of this section of the lesson is to examine the goals and objectives for online user education and to suggest examples of methods, media and training programmes suitable for accomplishing these goals and objectives.

2.5.6.1. Groups Involved in Online Education

Different groups are concerned in online orientation, training and education. They are :

(a) Database producers
(b) System operators
(c) Institution responsible for terminal operation for example, libraries or information centres
(d) Library Schools
(e) Intermediaries
(f) End users

The motivation for each of these groups is expected to vary considerably. Generally, the motivation for taking part in such training programmes might be considered partly financial, and closely linked to the sale of a specific product—

database or information system. For the sake of convenience online education programme may again be divided into two components : orientation and instruction. Orientation is concerned with enabling the user to learn of the existence of computer-based information retrieval and the services available. On the other hand, instruction is concerned with enabling the user to learn in detail how to carry out computerised information retrieval. The goals and objectives for online user education may be categorised in terms of the two main groups namely the end-users and the intermediaries.

2.5.6.2. Main Goals

(i) The enable an end-user to carry out online information searches either himself or with the help of an intermediary, within his own subject field, as and when required, in connection with information needs; and

(ii) to enable an intermediary to carry out online information searches, for end-users, within many different subject field, from the available database, on the various information retrieval systems.

2.5.6.3. Methods

In the earlier part of the lesson, a detailed account has been provided on the teaching methods, and media appropriate to library user education in general. In addition to the methods discussed earlier, it must specially be noted that as online retrieval is an interactive process, particular attention needs to be paid to methods which permit the display and experience of this interaction.

In order to demonstrate online information retrieval, it is necessary to be able to show moving images generated in the computer search, thereby creating a feeling of reality. The ultimate aim of online instruction, for both end-users and intermediaries, is to be able to carry out online information searches. Therefore, it is essential to practise on a real system. This forms part of 'learning by doing' concept, which is also important in other forms of library user education. The need for live online instruction has been recognised by systems operators, who have provided various aids for teaching. In MEDLINE system, for example, the user can interactively ask for instructions at the beginning of the search, or for assistance during the search, when part of the instructions are given as requested. The SDC (System Development Corporation) provides an online database over database, DBI (Data Base Index) where the user can type in the subject area of interest and receive information as to the appropriate database ranked in order of suitability for searching.

One of the most common ways of providing training for intermediaries is by letting them observe and work with a trained searcher. This is considered to be an essential part of intermediary training.

Real 'hands-on' training in online searching is an important element in the education of end-users in computerised information retrieval. This would enable the students/users to be motivated and involve themselves actively in the learning process.

Choice of teaching method is often dependent, not only on the learning effects, but also on availability of equipment and cost of use.

2.5.7. Conclusion

Choice of teaching methods and media depends on the learning-teaching situation, the subject material, the students, and the teachers. The methods and media for library user education should preferably involve the active participation of the student, at a point where he/she feels motivated to use library. An opportunity must be provided for understanding— to relate new facts to existing knowledge. Students should be provided with information on their progress during their active problem-oriented situation/work.

A combination of teaching methods and techniques can be expected to provide the best basis for programmers of library user education, different methods being adapted to different parts of the programme and to the teachers and students concerned.

2.5.8. Self Check Exercise

Q. 1. : What are the different factors of learning ?

Q. 2. : What do you understand by individuals instructions at the reference desk.

2.5.9. References and Further Readings

(1) Satyanarayana, N.R. ed. : User education in academic libraries, New Delhi : ESS ESS Publication, 1988.

(2) Rajgopalan, T.S. : Education and Training of information users. *Library Service.* 15 (1978).

(3) Taylor, P.J. : User education and role of evaluation, *Unesco Bulletin for Libraries,* 3291.

(4) Tocatlian, Jacques : Training information users. Unesco Bulletin for Libraries 32 (1978).

(5) P.S.G. Kumar : Library & Users: Theory & Practice : Delhi : B.R. Pub. 2004.

2.5.10. Answers to the Self Check Exercises

Question-1

Factors of Learning Process

The process of learning can be affected by a wide variety of factors. There are four main factors that affect learning in practical situation : motivation, activity,

understanding and feedback. Those factors are also important in relation to programme of library education or user education.

4.1. Motivation : Motivation is an inner urge to do something. Therefore, users instruction should be given at a point of high motivation, i.e. when the user wants to obtain information in connection with a particularly project in hand.

4.2. Activity : Involvement of the learner is an important factor. Active work on a problem learning by doing— is likely to be more of an activity than simply being told how to do a particular piece of work.

4.3. Understanding : Library education will be more effective if the student understands what he is doing and why he is doing it— that is, if new facts can be related to existing knowledge.

4.4. Feedback : If one knows the reaction of ones action, one can perform more effectively. Therefore, feedback information on the program being made should be available to the student.

In addition to aforesaid four factors, factors affecting the neuro-physiological sensory output can be considered. Teaching methods may, for example, use visual or auditory stimulation, or a combination of both-audiovisual. Methods which make use of combination of sensory inputs are likely to be more effective than those which rely on a single channel of communication. The possibility for the student to control the rate of flow of information—Capacity to learn— in a given learning situation, is another factors of the learning process.

Interaction between library learners concerned in the teaching/learning situation also affects the learning process. This interaction can be roughly divided into teacher-student and student-teacher interaction. Research data indicate that introverts learn more easily from programmed learning than extroverts.

Question-2

Individual Instruction at the Reference Desk

It is believed that the best form of library instruction can be imparted by personalised service at the reference desk. This is because a user asks a question about the use of some part of the library when he is motivated to learn that aspect. The student/user is actively involved in the learning process and is receiving tuition from an expert. The difficulty associated with this type of individual help is that it may provide immediate relief to the students/users, but not necessarily the understanding and background knowledge to cope up with similar situations that the student/user might face in future.

In summary, it might be said that choice of teaching methods and media depends on the learning-teaching situation, the subject material and people to

whom training has to be imparted and the staff involved in the training process. The methods and media for library user education should preferably involve the active participation of the student/user at a point when he/she feels motivated. In practice, a combination of teaching methods and media might provide the ideal basis for programmes of library user education.

LESSON NO. 2.6 **Author : DR. AJIT SINGH**

EVALUATION OF USER EDUCATION PROGRAMMES

Structure of the Lesson

Evaluation of user education is a topic which is frequently mentioned and occasionally written about, but not often practised by the librarians involved with user education. Most librarians evaluate informally wherever they indulge in user education programme by discussing the students/users information needs, eliciting feedback, watching out for puzzled faces and testing what has been learnt. All this should be a natural activity for a sensitive and concerned teacher, but it is not sufficient for systematic monitoring and improving or for future planning of user education. This unit concerned with evaluation of user education programme.

2.6.0 Objectives

The objectives of the unit is as under :

(i) to assess the importance of evaluation of user education;

(ii) to throw light on different types of evaluation; and

(iii) to make aware of different methods and techniques of user education evaluation.

2.6.1. Introduction

At the heart of the library user's instruction movement is the conviction that the ability to find information is at least as important as the information itself. Educators should not restrict themselves to importing knowledge about a subject area. In every field of academic preparation, we should demand that all students learn how to continue to explore the universe of knowledge and how to stay up-to-date as the universe of knowledge increases due to explosion of information.

User education can be defined as various programmes of instructions, education and exploration provided by libraries to users to enable theme to make more effective, efficient and independent use of the information sources, resources and services to which these libraries provide access. The purpose of user education is three fold :

(i) to make the end user searching as easy as comfortable as possible ;

(ii) to minimize waiting time for assistance from library professionals; and

(iii) to avoid restoring to time consuming trial and error method of search.

Success of any education programme depends upon its effectiveness and timeliness. Therefore, evaluation and testing of these programmes is as important as user educational programmes itself to know whether the user education has achieved its aforesaid three fold objectives.

An education system may be used but not be useful; it may also be useful and not used. It may even be neither useful nor used. It is ideal if it is both used and useful.

2.6.2. Evaluation of User Education Programmes

Evaluation has been described and interpreted in different ways by educational research workers. Evaluation's is concerned with the collection of information about the effects of an educational course or programme. It involves the comparison of observed effects with expectations or intentions. It is important to consider why evaluation is carried out when trying to understand what evaluation is.

"Evaluation is concerned with the collection and analysis of information about the input, in terms of educational potential, the variables affecting the educational process, and the end product or output. Evaluation can be directed

towards the various aspects of the educational course or programme." The basic purpose of evaluation is to collect and analyse information that can be used for rational decision making. In the context of library user education, evaluation is also concerned with the economic use of 'specific libraries and information systems in general. The goals and objectives of a successful programme of library user education must be based on the synthesis of the needs of students, academic staff and library staff. Evaluation, based on attempts to measure the realisation of pre-specified goals and objectives, must be multifaceted, concerned with library use and information skills, attitudes to libraries, effects of various instructional programmes, and use of a given library or information resources.

Evaluation is a process of feedback against an investment in time, energy, money, knowledge and intelligence. It is measured from several angles. Each of them is on the basis of a set norms or viewpoints.

2.6.3. The Scope of Evaluation

"Evaluation might range from the study of details such as the use of given teaching methods or media, through the effects of specific courses, whole library instructional programmes to the extreme of general educational systems".

User education programmes are evaluated from several norms and viewpoints. They are as under :

(i) **User :** Evaluation of a user education programme must be done from the point of view of its beneficiaries i.e. users, their needs, knowledge, skills and behaviour;

(ii) **Economy :** Cost effectiveness as long range profit should be gauged;

(iii) **Coverage :** The quality and quantity of education programmes and its availability at different levels;

(iv) **Manpower :** The quality and quantity of the manpower to be used. Assessment regarding their use and skills.

(v) **Environment Conditions :** Type of users population, overall institutional policy and programmes and economy and other aspects in relation to overall systems of library services.

2.6.4. Need for the Evaluation of Library User Education

Of late, librarians have become more particular regarding the evaluation of programmes of library instruction. In 1976, **Brewer and Hills** observed that *"librarians should take evaluation more seriously and to think more professionally about their teaching commitment."* A critical examination of the bibliographies and handbooks on user education reveals that evaluation is not well documented as compared to other aspects. It might be mentioned that while there is a growing increase in awareness about the importance of evaluation in library user education programmes, not many examples of systematic

evaluation of library user education programmes are presently available.

One of the examples cited in this connection is that of the evaluation studies conducted at Chalmers University of Technology Library. A review of work done in library user education programme evaluation reveals that evaluation has been carried out in many different ways in an attempt to study the value of such programmes and the measurement of the effects of such educational programmes on those who participated in such programmes. It might be emphasised that evaluation and the feedback received in the process will lead to the improvement of such programmes.

2.6.5. The Purpose of Evaluation

The type of evaluation undertaken will depend on a number of factors : what exactly do we want to know, what criteria will be used in judging efficiency and effectiveness, who will see the results, what will be done with them, and how will they be used ? The purpose of the evaluation will obviously have a strong influence on the type of information gathered and how it is presented. If it is undertaken purely to provide feedback to the librarian involved regarding instructional methods and materials, timing or relevance, then the information should be collected frequently and informally. It should be gathered during rather than at the end of a course, and to be useful it must be sufficiently specific for the librarian to identify strengths and weaknesses. Perhaps he or she talks too quietly, stands in front of the overhead projector or assumes the students know more than they do. This kind of feedback can be very useful, but it is even more valuable when shared and discussed with a trusted colleague.

But there may well be other purposes behind the evaluation of a user education programme. It may be set up by a more senior member of the library staff to test whether the instructional programme is meeting its objectives, to compare instructional methods used by different staff members or to monitor the performance of library staff. The results may be made known within the library to aid decisions about the future development of user education. As staff appraisal systems are set up within UK academic institutions, there may will be a trend towards the inclusion of the results of student evaluations in such systems. Suitable results may also be made known more widely in the institution in order to prove the value and relevance of user education in the curriculum.

Finally, although the main purpose of an evaluation should never be public relations, improved PR (Public Relation) can be a useful side-effect. Students are not always asked for their views, and they appreciate an opportunity to comment on the value of a course. Their reflection on a particular programme, what they have learnt and how it has been useful to them, can also be a valuable

part of the learning process. A well-designed evaluation should therefore help in the improvement of both teaching and learning.

12.6. Types of Information Needed

When the purpose of the evaluation has been clarified, the next step is to decide exactly what information is required about the teaching, and what criteria are to serve as standards. Braskamp *et. al.* (1984) define three major emphases for defining good teaching : input, process and product. Measures of input include characteristics of the students, class size, nature and level of the course, and grade and salary of the teacher. An evaluation of user education would not normally be concerned solely with input, but a librarian interested in an overview of library teaching in the organization may well want answers to questions such as the following :- Which students are receiving user education and how much is it costing in terms of library staff time ? Would larger classes significantly reduce this cost ? Are some students receiving disproportionate amounts whilst others are excluded ? Most evaluations described in the literature of British librarianship tend to be concerned primarily with process. What goes on in the classroom ? Is the teaching clear, relevant, at the right level and interesting ? Does the teacher use audio-visual aids appropriately, make him or herself audible, invite questions and issue helpful hand-outs ? What techniques are used to help the students learn ? An article by Hanson ? (1984) contains three questionnaires designed to measure student attitudes. Two are concerned largely with process and contain questions such as 'How did you feel about the amount of information presented in this session ?' and 'Could you hear clearly what was said ?' The third questionnaire is more wide ranging and includes questions about the students' option stream (input), their feelings about the library teaching sessions (process) and their attitudes to and knowledge of the library (a possible product).

Whereas an evaluation emphasizing process is concerned mainly with the activity of the teacher, one which emphasizes product is concerned with the knowledge, skills and attitudes acquired by the student. This product may be measured in a variety of ways ; by means of tests, increases in the use of the library and of its services, changes in attitudes, evidence of increased use of the literature for assignments and projects or improved final results. Many American studies use pre-and post-testing, and concentrate exclusively on the increase in knowledge of the library demonstrated by the student. However, this increase in knowledge may not be a result simply of good teaching ; the students involved may be well motivated and hard working, and they may succeed despite bad teaching. Alternatively, they may be well taught but lack motivation or time to learn about the library since they have a heavy lecture

load and are expected to read only a few texts, all of which are available in the short loan collection.

2.6.7. Types of Evaluation

Two terms which are frequently used in the literature of evaluation are **formative** and **summative**. Although the aims and timing of these are different, the methods employed may well be the same. Formative evaluation is undertaken during a particular programme of teaching to check that the methods, content or workload are appropriate to a particular group of students. No group is the same, and user education which was successful with one group on one occasion may well require some adjustment in order to work well with a second set of students. Formative evaluation is therefore a way of keeping on course, and reflecting on the teaching and learning which has taken place and the goals yet to be achieved.

Summative evaluation usually involves a single comprehensive study of an entire programme as a final product. It provides information about the nature of the teaching and learning which has occurred. This information might be used in the development of new courses or for comparison with courses involving different staff, teaching methods or students.

Illuminative Evaluation in British libraries has tended to be formative. It is also generally of a type described as **illuminative.** Illuminative evaluation is likely to be more descriptive and subjective than evaluation which is done in terms of established goals and objectives. The views of all groups involved are often explored, and both the intended and the unintended results of a programme are recorded. A range of methods is used, often in combination—such as observation, interviews, questionnaires, tests, documents and a variety of background information. This type of evaluation then attempts to 'illuminate' all aspects of the course, rather than just the changes in students' knowledge and attitudes.

2.6.8. Methods of Evaluation

There are three methods which are normally used for evaluation purpose. They are : (i) the **psychometric,** (ii) the **sociological** or **management,** and (iii) the **illuminative** or **responsive.**

Psychometric evaluation is based on the assumption that it is possible to expose experimental and control groups to different treatments, while all other variables are controlled, and to measure the changes by means of psychometric tests, achievement tests or attitude scales. Thus, the experimental group may be exposed to a new type of course where as the control group follows the traditional course, in every other respect the two groups are exactly comparable. Pre-tests and post-tests are given to both groups and the analysis

is concerned with establishing significant differences in performance of the two groups. This evaluation procedure is concerned with measuring output in terms of pre-specified goals and no attention is paid to unexpected effects.

The **sociological evaluation** method is used in the study of changes in the structure of an organisation. This type of evaluation makes use of interviews and questionnaires. Attention is focused on the organisation undergoing the change, rather than on comparison with any control group.

The third type of evaluation has been called **illuminative evaluation** by Parlett and Hamilton. It is not limited by the initial formulation or aims, but always the expression of unexpected results. The actual implementation of an innovation is regarded as the most important part of the study, Research is focused on what is actually happening in response to the innovation, This type of evaluation is not concerned so much with testing of an educational programme, but with describing and understanding the conditions in which the programme works, and how the participants are affected by it. Observational studies and explorative interviews are used to obtain the information.

2.6.9. Evaluation Techniques

The techniques chosen for a particular study will depend both on its purpose and on the resources available. Although most published studies of evaluation involve the use of questionnaires or testing, there are many different methods of collecting information about teaching and learning. They include discussions and interviews, observation, assessments, questionnaires, diaries and various group activities. All are open to possible bias, which may be reduced through the use of more than one information, collector or observer. The greater the number of methods selected, the more complete the picture. Results of evaluation may vary tremendously according to the students and their particular background and perceptions.

2.6.9.1. Listening and Talking (Discussion)

There are few accounts of listening and talking techniques in the evaluation or user education. Yet these are extremely effective methods of gathering information, and can often be effectively integrated into the learning process. A structured group discussion, for example, on the value of a course of information sources can help the student by forcing him or her to reflect on what has been learnt. Different techniques might be used, such as snowballing, buzz groups and brain storming, in order to enliven and give some focus to the discussion. The personality of the librarian and his or her ability to steer the group to elicit useful information is obviously important here. If the discussion is led by an independent evaluator, then the comments are likely to be more honest and less positive; perhaps a sympathetic subject lecturer or someone

from the educational development unit might be entrusted to fill this role and to give feedback to the librarian. Recording information from a discussion can be a chore, but the participants can be asked to produce posters, acetates or checklists of their views. Alternatively, the session may be tape recorded or someone other than the discussion leader may be asked to take notes.

2.6.9.2 Interviews

Rather more labour intensive than group discussions, but sometimes more effective, are one-to-one interviews. Many students do not tend to speak out in groups, or they may allow themselves to be swayed in their views by more dominant personalities. A series skilfully conducted interviews will reveal an enormous amount about the learning experience of the individual student.

Partially structured interviews are probably the most effective method, the interviewer using a checklist to trigger discussion and probing further where issues raised seem interesting and relevant. Interviews such as this can be a very useful method of gathering information which might otherwise not emerge, but they are extremely labour intensive. In addition, interviews and discussions produce a vast amount of qualitative information which requires considerable analysis in order to be transformed into a digestible report. They are therefore perhaps best used in formative evaluation.

2.6.9.3 Observation

Most trainee teachers are observed in the classroom as part of their regular course assessment. This can also be a useful, if sometimes controversial and intimidating, method of evaluation. The observing may be done by a colleague or an independent evaluator, or it may be done by a video camera for later self-evaluation. One drawback is that colleagues are obviously at a different level of knowledge from the students being taught ; they may therefore be unaware when ideas are not appropriately explained or library jargon confuses the students. Another problem is that the presence of an observer in the classroom will obviously affect the whole interaction; both librarian and students are likely to behave differently.

Evaluation methods involving interviewing, discussion or observation tend to produce a large amount of qualitative data. The various types of assessment tests and questionnaires are generally less time consuming to complete, and the data they produce are easier to manipulate and analyse. Care must be taken before these methods are used, to ensure their validity and reliability. Is the instrument used an appropriate way of measuring the librarian's competence as a teacher and the changes in the students' skills and attitudes effected through a user education programme ? Are the results sufficiently reliable, so that they may be compared with the results of another evaluation using the

same technique; that is, are they replicable ?

2.6.9.4 Achievement Test

Tests of student achievement are an obvious means of checking the effectiveness of teaching. They are easily administered and scored, and large numbers of students can take them simultaneously. But there are many other factors which affect student performance : motivation, environment, workload and perceptions about the value of what is being taught. Assessment tests should, therefore, never be the only evaluation method employed, but used carefully they can be a useful contribution to the learning process, a major motivating factor, and a check on the improvement in student performance.

2.6.9.5 Questionnaire

The most frequently used evaluation instrument is probably the questionnaire. Very often this technique falls within the category, of assessment since it may be designed to measure the students' knowledge of the library and its contents, as well as their attitudes to the library and to the teaching which they have received. Although they are reasonably cheap methods of obtaining large amounts of information, and correlate with other measures or indicators of teaching competence, good questionnaires are difficult to design. It is important to be quite clear about the purpose and use of the results. The questions must be unambiguous and carefully tested, and the designer must be aware of the implications of closed and open questions and of sample size. Anonymity is more likely to guarantee honest results, and completion during time-tabled time will increase the response rate. Where attitudes are being measured, an attitude scale is generally used so that the respondent can indicate his or her level of agreement with a particular statement.

2.6.9.6 Student Diaries

Students may also be asked to keep diaries. Although time consuming, they can provide a useful record of changes in attitudes and information-seeking behaviour over a period of time. They are particularly appropriate in the evaluation of user education since an important objective is long-term usage rather than increased knowledge or skills which are never put into practice. Keeping a diary can also help students become more aware of their study habits and the way in which they find and use information. James *et. al* (1979) describe a longitudinal study of polytechnic science students' use of the library which involved diaries, amongst other methods. An example of a study diary which might be amended slightly for an evaluation of the changing use of information sources is illustrated in Gibbs *et. al.* (1988).

2.6.10. Conclusion

There are many combinations of evaluation methods using both written

and verbal techniques. Librarians should develop methods with which they feel happy and which suit local circumstances. If the technique chosen provides useful feedback and enhances the student learning then it is much better. But the task is not over once the data or information is collected. The raw data must be summarized, analysed and interpreted. The results must be skilfully assessed and themes extracted. The credibility, reliability and validity of the results must be judged. Finally, and most important of all, the result should be feedback into the re-design of the user education programme. Changes in timing, class size, teaching methods or delivery can be made and monitored by further evaluation.

2.6.11. Self Check Exercises

Q. 1. What are the three methods of user education evaluation ?

Q. 2. Questionnaire method of evaluation.

2.6.12. References and Further Readings.

(1) Hardesty, L. : Evaluating library user instruction. *College and Research Libraries.* 40 (1979).

(2) Satyanarayana, N.R. ed. : User education in academic libraries. New Delhi : ESS ESS Publication, 1988.

(3) Rajgopalan, T.S. : Education and Training of information users. *Library Service.* 15 (1978).

(4) Stevenson, M.B. : User Education Programmes : A study of their development, organization, methods in medical service. *Journal of Information Services.* 21(1), 1978.

Answers to the Self Check Exercise
Question-1
Methods of Evaluation

There are three methods which are normally used for evaluation purpose. They are : (i) the psychometric, (ii) the sociological or management, and (iii) the illuminative or responsive.

Psychometric evaluation is based on the assumption that it is possible to expose experimental and control groups of different treatments, while all other variables are controlled, and to measure the changes by means of psychometric tests, achievement tests or attitude scales. Thus, the experimental group may be exposed to a new type of course where as the control group follows the traditional course, in every other respect the two groups are exactly

comparable. Pre-tests and post-tests are given to both groups and the analysis is concerned with establishing significant differences in performance of the two groups. This evaluation procedure is concerned with measuring output in terms of pre-specified goals and no attention is paid to unexpected effects.

The sociological evaluation method is used in the study of changes in the structure of an organisation. This type of evaluation makes use of interviews and questionnaires. Attention is focused on the organisation undergoing the change, rather than on comparison with any control group.

The third type of evaluation has been called illuminative evaluation by Parlett and Hamilton. It is not limited by the initial formulation or aims, but allows the expression of unexpected results. The actual implementation of an innovation is regarded as the most important part of the study, Research is focused on what is actually happening in response to the innovation, This type of evaluation is not concerned so much with testing of an educational programme, but with describing and understanding the conditions in which the programme works, and how the participants are affected by it. Observational studies and explorative interviews are used to obtain the information.

Question-2

Questionnaire

The most frequently used evaluation instrument is probably the questionnaire. Very often this technique falls within the category, of assessment since it may be designed to measure the students' knowledge of the library and its contents, as well as their attitudes to the library and to the teaching which they have received. Although they are reasonably cheap methods of obtaining large amounts of information, and correlate with other measures or indicators of teaching competence, good questionnaires are difficult to design. It is important to be quite clear about the purpose and use of the results. The questions must be unambiguous and carefully tested, and the designer must be aware of the implications of closed and open questions and of sample size. Anonymity is more likely to guarantee honest results, and completion during time-tabled time will increase the response rate. Where attitudes are being measured, an attitude scale is generally used so that the respondent can indicate his or her level of agreement with a particular statement.

LESSON NO. 2.7 **Author : DR. AJIT SINGH**

INFORMATION LITERACY : DEFINITION, NEED, PURPOSE AND PROGRAMMES

Structure of the Lesson

With the advent of computerized database and information retrieval, all librarians would agree that the business of finding and retrieving useful and relevant information has become infinitely more complex than in the area of paper-based retrieval. While it is true that in some respects computer-based technologies have made retrieval faster and easier, they have also made the decision-making processes of individual information seekers more difficult. Not only must information seekers have at least a basic understanding of how to use various computer technologies, they also have to know which database best suits their needs. For instance, while the internet may be a suitable source for

some information requests, it is only one source within a universe of informational databases. To be successful using the Internet and other database products, information seekers often must know how particular search engines work, the peculiarities of various controlled vocabularies, and advanced searching strategies such as adjacency searching. Having retrieved a listing of relevant documents, information seekers must bring a high level of critical evaluation to the citations and be able to winnow out those that are not useful or relevant.

Contemporary information retrieval is made even more complex because not only do information seekers need to be able to find appropriate information in the electronic world, there are many instances in which they still must utilize paper and other sources of information not available in electronic form. Finally, with the documents in hand, information users need to be able to evaluate the usefulness, accuracy, and relevance of the information they have retrieved.

The kinds of skills noted above are described as those necessary for information literacy :

2.7.0 Objectives :

The main objectives of the lesson are given below :

(i) to throw light on the concept of information literacy;

(ii) to high light its importance; and

(iii) to discuss the different programmes launched to impart information literacy.

2.7.1. Introduction

Information is a commodity and a resource as well. It is the source which helps in decision-making, business, education, research or pursuing a vocation or a career in any profession. In fact, it is essential for survival and existence. Hence, it pervades the whole gamut of life. The importance of such an information and its centred and associated activities, such as communication, processing, organisation, management, storage and retrieval, transfer as the nucleus, that is, subject-matter of study makes the Library and Information Science profession inter-disciplinary, interesting and unique in the scheme of several disciplines.

The modern era witnessed new phenomena in the fields of literacy and mediacracy which have brought a sea-change in the attitudes and the thinking of the educators, elites, intellectuals and other concerned authorities. This step led to campaigns and movements for eradicating illiteracy and dispelling the darkness and providing the right channels of education, entertainment, persuasion (for adopting family, health and social welfare programmes) besides dissemination of information itself.

2.7.2. Concept

The term Information Literacy is composed of two rather common words which most people claim to understand. *Information* to most people means something associated with news, useful facts, or interpreted data. *Literacy* is generally associated with the ability to read and sometimes more specifically associated with the ability to understand or interpret certain phenomena. For example, *visual literacy* enables people to understand wordless no-smoking signs. There are also *computer* literacy, *numerical literacy* (numeracy), and *cultural literacy*.

In combination, however, the two words have a very special meaning to the advocates of Information Literacy. Those people have views of the information age and of the role information now plays in our lives which prompt theme to use the term Information Literacy to describe that assortment of abilities which they assert are essential survival and "thrival" abilities. If we are to flourish in an age where information is the new commodity—the new medium of exchange, and where good information empowers and bad information or no information disenfranchises, we must be Information Literate.

Information literacy is the ability to use information, but the term has a much broader meaning. Information literacy is a holistic concept that includes knowing that 'information matters', knowing where and how to get information, knowing how to interpret information, and knowing how to use and communicate information.

Considered individually, none of these is a new-skill, but Information Literacy is important and 'new' because of :

(i) the role information now plays and the fact that most Americans will earn their living creating, processing or transferring information;

(ii) the several related abilities which *in combination and in concert* empower the information literate person;

(iii) the new responsibilities librarians must undertake if they are to play a meaningful part in the promotion and spread of information literacy; and

(iv) The fact that regardless of the advances in information technology and information transfer, people embrace new concepts only if those new concepts achieve a fit with their own value systems.

2.7.3. Definition

The term '**Information Literacy**' has found its place in the recent literature. It aroused interest among the professional Librarians and Library and Information Science teachers not only in the **United Kingdom** but also in the **United States of America.** It is likely to spread its branches in the developing

countries, too. The ALA President's Committee on Information Literacy, one of the leading promoters of this concept, in their Final Report, an information literate person was described as some *one who could recognize when information is needed and have the ability to locate, evaluate and used effectively the needed information*, therefore, *"ultimately information literate people are those who have learned how to learn. They know how to learn because they know how knowledge is organized, how to find information and how to use information in a way that others can learn from them. They are people prepared for life long learning because they always find the information needed for any tasker decision".*

The definition of ALA addressed information literacy from the perspective of society in general.

Long has defined **Information Literacy** in the popular language as, *"teaching people about how to be more capable of finding their answer."* **The ALA User Instruction for Information Literacy Committee** at the 1990 ALA Midwinter Meeting has adopted the following definition :

"The ability to find, evaluate and use Information effectively in personal and professional lives."

"The real target of Information Literacy campaigns," according to **McCrank,** *"needs to be professional educators and academicians, to co-opt them, to enter into more effective partnerships with them, and thereby to educate people with better-developed skills in information retrieval and assessment."*

The above account reveals that it revolves around the methods of search, location, evaluation and use of information. Information Literacy promotes self-help among the community of users of Library and Information Centres. It is, indeed, an offshoot of the bibliographic instruction movement in academic libraries. It is also known as 'Informacy' and incorporates terms such as bibliographic instruction, library/information centre skills, library orientation, library promotion/publicity, library tour(s), and other extension activities.

Information Literacy consists of an assortment of interconnected abilities having to do with the use of information :

(i) the ability to know what information would help;
(ii) the ability to know where to go to get information;
(iii) the ability to retrieve information;
(iv) the ability to internet, evaluate, and organize information; and
(v) the ability to use and communicate information.

Throughout the 1990s, even with wide usage of the term information literacy, there continued to be controversy among librarian about the meaning of the term. There was—and still is—some confusion as to difference between information literacy (IL) and other terms such as bibliographic instruction (IB),

library instruction (LI) and user education. These latter terms are commonly used to describe the activities undertaken by academic librarians to educate students and faculty about both library resources and effective information seeking strategies. According to Hannelore Rader information literacy is a broader term than terms used to describe specific instructional activities.

Information Literacy does not mean knowing how to read. It does not mean knowing how to use the information place. It is not synonymous with either library instruction or computer literacy. All these are, of course, important links in the chain of abilities that is Information Literacy.

This is not mere semantic fussiness. Well-intentioned people are often confused on this issue. In their confusion they announce at meetings that their libraries are very heavily into Information Literacy because of some computer-assisted tour they have created.

Patricia Senn Breivik knows the important difference between *necessary* and *sufficient,* between ingredient and whole, and that these essential differences, plus the role that the librarian must play in helping to orchestrate the mesh of the five Abilities, give Information Literacy its unique character and freshness. Confusing an ingredient for the whole disconnects the system, short circuits the process and moves us all back to square one.

Despite such distinctions, information literacy has been used interchangeably with terms such as bibliographic instruction and user education, thus further confusing the issue. This interchangeability of the terminology compelled Snavely and Cooper to conclude that academic librarians have developed a common understanding of the term information. Literacy over the past decade, encompassing both information literacy a *societal goal* and the specific *instructional strategies* that librarians use to develop information literacy in library users. They advocated that *"librarian have embarked on a trend in instruction which recognizes the need to ensure that students are capable of independently or in groups recognizing and refining their information needs, finding information they need and evaluating and using the information they need throughout their life times. The trend also includes increased instruction in use of a wide variety of information formats (print/electronic) with in and outside of the library, and a shift from instruction which focuses on specific content to a resources-based and process approach, as well as shift to focus on the user."*

Therefore the conclude the **information literacy** is :

(i) set of abilities to locate, evaluate and use effectively the needed information;

(ii) it forms the basis for life long learning;

(iii) it is common to all disciplines, to all learning environments and

to all levels of education; and

(iv) it enables learners to master contents and extend their investigations, become more self-directed and assume greater control over their own learning.

2.7.4. Need

Followings are the needs of information literacy :

(i) to define and articulate the needs for information;

(ii) it facilitates educational reforms by introducing library resource based learning and developing life-long learning skills;

(iii) it is essential for transferability of learnt skills leading to life long self directed learning;

(iv) it enhances critical evaluation skills in the learners and make them well educated adults;

(v) it helps in shaping information—seeking strategy and information retrieval skills;

(vi) it is essential for imparting information consumption skills in the users; and

(vii) it assimilates bibliographical instruction, library instructions and user's education into one integrated whole which leads to establishment of a Personal Information System.

2.7.5. Purposes

After attaining information literacy the information literate students be able to :

(i) determine the nature and content of the information needed;

(ii) access needed information effectively and efficiently;

(iii) evaluate information and its sources critically and incorporate selected information into his/here knowledge base and value system;

(iv) use information effectively to accomplish a specific purpose; and

(v) understand many of economic, legal and social issues surrounding the use of information and access and use information ethically and legally.

For information literacy following delivery methods (programmes are to be adopted in the organizations/institutions.

2.7.6. Programmes

Despite the variability of institutional endorsement of curriculum-integrated information literacy, and despite the controversy over the incorporation of critical thinking, it is clear that academic librarians are moving forward with information literacy initiatives. The firm belief held by many librarians

of the importance of information literacy in higher education has led to an astonishing array of instructional programmes approaches, and methodologies.

2.7.6.1 Curriculum Related Programmes

The approach advocated as the best methodology for information literacy instruction is to have such instruction integrated into the curriculum of a particular discipline. Curriculum-integrated instruction has been particularly successful in such professional programmes as nursing and medicine, in which students have a known course of study that is planned far in advance. For each year of the programme, information literacy instruction is tied to a specific assignment in a core course taken by all of the students in the programme. The assignment and accompanying instruction are designed to match the cognitive level and information needs of the student. In this way, each year builds upon the previous year and higher-level information literacy skills are taught in the senior years. To successfully develop these programmes, librarians need to work closely with faculty or department curriculum planning committees.

2.7.6.2 Course Related Lectures/demonstrations

Curriculum-integrated instruction, while highly desirable, is relatively uncommon because of the high degree of coordination required between librarians and the teaching faculty. One of the most common instructional methodologies, as indicated through surveys of instructional librarians, is the course-related lecture or demonstration, undoubtedly because such a high degree of coordination is not required. Course-related instruction is given by a librarian in the classroom for a discipline-specific course (e.g. genetics, Canadian literature, cognitive psychology) or in a general course such as research methods, technical writing, or freshman composition. The content covered depends upon the student's assignment, which may be a term paper, an annotated bibliography, a Website for the general public, or other types of assignments.

Within the course-related lecture, the overall approach is usually to emphasize the informational search strategy, a step-by-step process moving from general resources (e.g. encyclopaedias and textbooks) to more specialized ones (e.g. review articles and periodical literature)

In an ideal world, academic librarians would prefer that their information literacy lectures would be course-integrated, where the instruction and the assignments are built into the course. Unfortunately, course-related instruction is often adhoc, offered at the request of a faculty member one year, and perhaps not the following year. Nevertheless, the course-related lecture, or some form of it, is such a common methodology for information literacy that librarians are

committed to doing what they can to improve upon it.

2.7.6.3. Library Skills Course

An instructional approach that offers more time for the student and the librarian to focus on all aspects of information literacy and one of the oldest methods used, is the stand-alone library skills course. Such courses may be required for credit but are frequently optional. Unfortunately, experience has shown that optional information literacy courses are very poorly attended by students. They are also labour-intensive to deliver, and benefit relatively few students. Faculty surveyed across the disciplines do not generally support these approaches, so unless such a course is already in place, it may be the least likely approach to adopt for a new information literacy program.

2.7.6.4 Informal Methods

Informal methods of instruction that support the self-directed learner include how-to guides, subject guides and bibliographies. These may be paper or Web-based. Research indicates that faculty members do tend to favour this kind of instruction for themselves as well as for their students. These aids are relatively simple to create but must be updated frequently to keep up with challenging resources.

2.7.6.5 Computer Technology

Of necessity, information literacy instruction has changed to keep pace with the use of computerized technologies for information storage and delivery. Since the 1999s, the number of libraries with either their own computer classroom for teaching purposes or access to one has grown enormously. In the last five years or so, the trend has thus been for hands-on instruction in a computer classroom to supplement or replace the classroom lecture, since actual practice ensures and reinforces better retention of skills. Unless these sessions are longer than the usual 50-minutes time slot, however, they frequently focus more on the mechanics of information searching at the expense of critical thinking and the development of evaluation skills.

2.7.6.6 Computer-Aided Instructions

Another less popular but often useful approach is that of **computer-assisted instruction (CAI),** which allows the student to become information-literate when and where it is more convenient—at home, in the dorm, in the library—wherever a computer work-station is available. While CAI can reduce the number of classes taught by librarians, the time to prepare the instruction increases significantly, and the software and programming knowledge demands a steep learning curve.

2.6.6.7 Internet

More recently, instructional librarians are increasingly using the Internet.

The World Wide Web has become the preferred platform for information literacy tutorials. Many of these tutorials include on-line exercises with a test that is graded on-line or submitted electronically to the librarian for grading. The best tutorials incorporate "what has been learned over many years of perfecting librarian instruction... are best used in connection with academic classes rather than in isolation and should not substitute completely from librarian interaction with students."

2.6.7. Administration of Informational Literacy Programmes

As noted previously, institutional support for information literacy programmes varies considerably. Often it is left to the academic libraries themselves to set priorities for information literacy instruction and to fund such activities as best they can from their budgets.

As a cost-saving, feature, the majority of academic libraries use existing staff, including reference librarians, to provide instruction, even though this may add to already heavy workloads. Librarians in reference or information services departments thus typically provide information literacy instruction, especially in those libraries that have a subject or liaison-librarian program.

Some academic libraries have chosen to hire a coordinator for instruction, whose responsibility it is to plan and deliver all the instruction, or at least all the general instruction. In other cases instructional work is carried out by a voluntary committee of librarians and other staff or, as in the case of a large library system such as that of Ohio State University, a separate user education unit may be created. Whether instruction, is handled by reference librarians, an instructional coordinator, or a committee, with the increasing reliance upon computer-aided or Web-based instruction, graphic designers and other technical staff may also be needed.

Considering all of the pedagogical approaches and methodologies that are used—from curriculum-integration to single lectures to on-line tutorials and subject bibliographies—and the considerable amount of staff time that is required, instrctional efforts are costly. In most cases, however, there is no budget line item to support information literacy, and the cost of providing instruction is often not reported in the library's annual report but is subsumed under other activities, such as reference services. This under-representation of the true cost of information literacy instruction is problematic for the realistic development of instructional programs and policies.

2.7.8. Evaluating Information Literacy Programmes

Even if academic librarians are successful in raising an awareness of the importance of information literacy on their campuses, one contentious issue that continues to be hotly debated in what to do about assessing instructional

efforts. Most of the assessment of student learning of concepts in information literacy takes the form of tests or surveys. Librarians test student knowledge about information retrieval before and after the instructional session, and compare the results to see what learning has occurred. The tests may be self-administered on-line tests or short questionnaires given out after the session. These short-term evaluative methods can provide useful feedback to improve librarian teaching effectiveness, but they do not measure student learning over the duration of their university programs. A few longitudinal studies exist, however. A comparison of seniors who had received information literacy instruction as freshman with those who had no instruction showed that the former benefited from the program and maintained a higher degree of library skills. Students' library usage, attitudes, and skills surveyed three years after they received library instruction at UCLA matched the same high level of skills and positive attitudes as those tested three weeks following the instruction.

Another evaluation approach is to analyze the bibliographies of student papers to examine the range and quality of resources chosen. A comparison of choices made by students performing in the A range and those is the D range may provide some insights as to the impact of evaluation may be problematic in that it is often difficult for librarians to accurately judge the quality of citations in specific disciplines, and although faculty involvement in assessing the bibliographies would enhance the information gained from the evaluation, this required a further level of coordination with faculty that may not be possible. A slight variation on this idea uses the marking scheme devised by faculty. If faculty can be encouraged of the assignment, then the grades assigned may help to reveal the impact of the instructional session.

Academic librarians have been experimenting with other methods of evaluation in order to gain more detailed insights into the best methods of information literacy instruction. For instance, focus groups with students have been used to understand how students carry out their research. In another study, students were asked to write a research diary while they completed their literature review. Their written reflections provided insight into their critical thinking capabilities and research strategies. Both of these evaluation methods may give very useful information into students' understandings and thought processes about various aspects of information seeking and use that can later be used to improve upon instructional programs.

Despite problems with funding, information literacy instruction continues to grow. For the librarians involved, keeping up with the trends is very important, and continuing education about what approaches work may save valuable staff time in planning instructional activities. Reading the professional literature and

attending conferences that focus on information literacy are the most obvious ways to learn about new approaches to information literacy.

2.7.9. Conclusion

In the information-intensive economies of today and the future, information literacy in education is a critical though often undervalued goal, although many information literacy initiatives have been put in place over the past decade. Fortunately students, academic librarians are not deterred by the lack of higher-level support for information literacy, and are more concerned with and proactive about information literacy efforts than perhaps at any other time in the history of education. Whether information literacy will become higher on the agendas of colleges and universities remain to be seen, as old approaches to education are very entrenched. Librarians will have to become more active—speaking out, and determining who makes decisions and why"—to move information literacy up among the competing agendas. Nevertheless, with the vast experience that academic librarians have now amassed with respect to information literacy, they will be well positioned to lead the way should information literacy be more widely embraced within institutions of education.

2.7.10. Self Check Exercise

Q. 1. Name the five abilities having to do with use of information.

Q. 2. What do you understand by Course Related Lecture/ Demonstrations.

2.7.11. References and Further Readings

1. A.L.A President Committee on information literary. Final Report Chicago : A.L.A., 1989.
2. Behrens, S. : A conceptual analysis and historical overview of information literacy. *College and Research Library,* 54(4), 1994.
3. Breivik, P.S. and Gee, G.E. : Information Literacy : Revolution in the library. N.Y. : Macmillan, 1989.
4. Curran, C. : Information Literacy and the public Librarian. Public Library 29 (348), Nov-Dec. 1990.

2.7.12. Answers to self Check Exercises

Question-1

1. The ability to know what information would help.
2. The ability to know where to go to get information.
3. The ability to retrieve information.
4. The ability to interpret, evaluate, and organize information.
5. The ability to use and communicate information.

Question-2

Course Related Lectures/Demonstrations

Curriculum-integrated instruction, while highly desirable, is relatively uncommon because of the high degree of coordination required between librarians and the teaching faculty. One of the most common instructional methodologies, as indicated through surveys of instructional librarians, is the course-related lecture or demonstration, undoubtedly because such a high degree of coordination is not required. Course-related instruction is given by a librarian in the classroom for a discipline-specific course (e.g. genetics, Canadian literature, cognitive psychology) or in a general course such as research methods, technical writing, or freshman composition. The content covered depends upon the student's assignment, which may be a term paper, an annotated bibliography, a Website for the general public, or other types of assignments.

Within the course-related lecture, the overall approach is usually to emphasize the informational search strategy, a step-by-step process moving from general resources (e.g. encyclopaedias and textbooks) to more specialized ones (e.g. review articles and periodical literature).

In an ideal world, academic librarians would prefer that their information literacy lectures would be course-integrated, where the instruction and the assignments are built into the course. Unfortunately, course-related instruction is often adhoc, offered at the request of a faculty member one year, and perhaps not the following year. Nevertheless, the course-related lecture, or some form of it, is such a common methodology for information literacy that librarians are committed to doing what they can to improve upon it.

Type Setting :
Department of Distance Education, Punjabi University, Patiala, 2020.