UNIT 3: LIBRARY BUILDING AND FURNITURE

UNIT STRUCTURE

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3.1 LEARNING OBJECTIVES

After going through this unit you will be able to

- Plan a library and information science centre;
- Explain the principles of library building construction;
- Know about the different library standards;
- Define and describe the library equipment and furniture;

3.2 INTRODUCTION

Library is a trinity considering of the reading materials of various kinds, the library users of various denominations and a good number of library personnel. Library building is a warehouse of books, a workshop for the reader, and business-home for the staff. The building should be designed to supply adequate and efficient accommodations of materials, readers, and staff.

The planning for a library and information science centres arises out of a need. A library operates in a complex, dynamic, ever-changing

and uncertain environment and as a social organization it has to take care of increasing government regulation, union activities and increasing community interest. It is always a growing organization and, with passage of time, some of the libraries grow into large and complex organizations. In view of the above, sound planning is highly essential for a library. It is through planning that a manger can deal with a potential problem before it can take an ugly shape.

3.3 PLANNING A LIBRARY AND INFORMATION SCIENCE CENTRE / LIBRARY

Plan is regarded as a projected course of action or the course of action to be done in near future. According to Koont'z and O'Donnell, "planning is deciding in advance what to do? How to do? When to do? And who is to do it?". After that planning is a continuous process requiring constant reappraisal. It is not an end in itself, but a means to an agreed aim and objective. It involves selecting from alternative future course of actions for the organization as a whole and for each of its department or section. It might be evaluated and revised in the light of developing situation, that is to say, a plan is always being brought up-to-date throughout the long or medium term in which it is based. The planning of library and information centre involves the following steps-

a) Formation of a Committee: A planning committee should be formed in the first step. The head of the parent institution, architect, librarian, library consultant, and interior designer and, if possible, representative from the user community should also be included.

Inclusion of the a librarian should be treated as one of the most important components in planning a library and information science centre because he / she is the best person for planning and equipping the library. He himself should also be very conscious about his responsibility in planning the library and information science centre. He should work closely with the building committee. He must identify each and every factor with reference to which planning has to be made.

The librarian should also consult other experienced librarians if there is any confusion as mistakes made at this stage could prove to be extremely serious.

b) **To be Accustomed to the Concept of Library:** The planning committee should be accustomed to the library. To do so they should read the existing literature on planning a library and information centre, visit some other library and information centre, and so on to assess the existing situation. They should also try to understand the present strength and weakness of the library in the light of where it stands.

c) **Functionality of the Parent Organization:** The committee should study the functionality of the parent organization, its resources and visualize its future direction and be aware about the changes and the consequent effect thereof.

d) **User's Identification and his / her Information Need:** Libraries and information centers are highly user oriented and so it should take care of the exact needs of the consumer. The experienced planner immediately asks for the evidence of the extent and the nature of demand for the libraries and information centre, going to be planned. Needs of the user may be ascertained by questioning or by carrying out potential user studies. The nature and extent of local demand will have to be checked by consultation, surveys and controlled test so that information activities are well directed on demand criteria.

e) **Establishment of Plan Premises or Forecasting**: Forecasting is estimating or predicting the future internal and external environment of the information centre. Premises refer to planning assumptions concerning the expected internal or external environment under which the plan will operate. Since planning is concerned with the objective to be attained in the future and the provision of the means for their attainment, it is imperative that various dimensions of the future are explored and estimated.

f) **Establishment of Objectives:** Objectives are the main factors on which the planning of a modern library depends. Depending upon the objectives it may be a public, special or academic library. The objective

should be established for the entire organization and then for each subordinate unit i.e. department or section of a library or information centres then the subordinate parts of the department or section and so on. Major department objectives in turn control the objectives of the subordinate departments and so on down the line. The objectives are divided and sub divided into successively smaller components until each department or section of the library has a definite set of goals for the short as well as long period.

g) Course of Action: The planners should search for and examine and evaluate the alternative course of action by weighting them in the light of various factors involved i.e cost, time, materials, manpower, equipment, etc. The use of operation research and mathematical and computing techniques may be helpful in this regard. Out of the alternatives, a suitable course of action should be selected.

h) Choice of the Site: Choice of the site should be the one conveniently accessible to the community to be served taking into consideration the future expansion.

i) Public Library: For public library, the site should be centrally located where everybody finds it convenient. This should be the place where normally public visit more often than any other place. Therefore a place where they go for shopping might be found suitable.

ii) University Library: The site should be centrally located within the campus.

iii) College and School Library: The location of the library does not matter very much if the distances are small, but if possible the library should be at the entrance path.

iv) Special Library: Library site in case of special library should be near the factory building or the factory canteen or staff canteen. The ground floor might be preferred for the library.

i) Organizational Structure: Organizing means the establishing of a formal structure of authority that is well defined and that can co-ordinate towards the attainment of the objectives. Proper job analysis and

assignment of job should be planned in such a manner that no overlapping in duties occur. This can be achieved by establishing various departments. The power, function and duties of various departmental heads must be clearly defined; similar jobs should be put under one department while the jobs which are dissimilar should be isolated from each other.

j) Financial and Cost Consideration: Without a proper source of finance an information centre will fail to provide the expected services to its user. It should not depend solely on the grants received from the parent organization. It should also make provisions for generation of funds by itself.

k) Determination of Requirement of Resources: In this stage the various kinds of resources that would be required for the implementation of objectives or planning are determined. The resources mainly consist of the following.

i) Library Building, Equipment and Other Similar Facilities: A library and information centre cannot exist without a proper building, without the furniture and equipment. So the construction of a library building is of first and foremost step for planning a library or information centre. The building should be well equipped and must be free from dust, dirt, cobwebs and also should be water proof, theft proof and equipped with noise prevention measures, the provision of drinking water, heating and cooling machine (air conditioned), proper lighting.

The basic aim of the design of a library building should be to achieve flexibility by using the modular system. The library building has to demonstrate a remarkable ability to grow, to adapt to changing conditions to meet new demands and to implement new technologies. If these aspects are taken care of then one need not give much weightage to the predictions made about their future expansion and existence. The space estimates for the library staff, documents, services, users and for other purposes i.e corridors, entrances, lobbies, toilet, etc should also be prepared.

ii) Library Staff: Library staff constitutes an important component of the library trinity. The entire staff structure of a library usually consists of certain ranks of employees of different grades. The ranking of employees is determined according to the types of work they perform; in other words, it relates to the number of posts at each level. All the employees in a library are divided into *three* categories i.e *professional*, *semi-professional*, and *non professional*.

The professional staff are engaged in performing professional duties whose minimum qualification should be graduation with at least one year training in library and information science leading to post graduate degree or diploma. The semi professional staff of the library employees are engaged in performing library routines and techniques under the guidance of the professional staff and have to receive alternatively training in library science. Also some non-professional (clerical) and unskilled workers are appointed to perform certain library works.

Planning for education and training in library and information science and technology is to be given utmost attention so that a high quality of man power at all levels in adequate quantity and with a variety of skills is constantly made available to take care of the ever increasing complex of the information institution and the system. There should also be scope for continuing education, training, and scholarship.

In order to promote exchange of experience, conference, seminar, workshop etc. should be organized. Adequate facility for research and development, innovation should be built-up.

iii) Information Technology (Hardware & Software Resources): A modern library and information centre should give thrust to the application of modern information technology, which involves computer hardware and software, telecommunication, reprographic, digitization, and micrographic equipment etc and should also create and develop facilities thereof; otherwise it will find itself handicapped to have access to the world of information.

iv) Document (information) Resources: A compressive collection of documentary information resources, whether primary or secondary or tertiary, should be built within the organization. The collection should be focused on the user's need. If it is a plan for a university library then importance should be given for post-graduate students as well as research scholars. Similarly a special library develops its collection and service according to the requirements of the parent organization.

v) Institutional Resources: A modern library or information centre, however resourceful, cannot be self-sufficient in respect of information due to the information explosion, so there must be some provision to link up similar type of institutional resources i.e. libraries or information centre, joining with other library network, and consortia.

l) Information Product and Services: A library or information centre should also have an option to bibliographic control, indexing and abstracting services relating to indigenous information, besides the traditional services. The scope should also be there to provide the service by on line and off line mode. The scope for document delivery service, translation service, reprographic service, accesses and repackage of information should also be there. Establishing database of indigenous information, establishing feed back mechanism and evaluation of the services and products should be made constantly.

m) Standardization: Standardization in terms of methods, procedures, hardware, software, services must be followed so that exchangeability of information is facilitated in the national network. Standardization will contribute to overall economy of cost time and effort.

n) Cooperation: Cooperation with other similar institutions and national information system should also be maintained in the information field to exchange information between institutions.

o) Preparation of Preliminary Plan: A preliminary plan should be prepared at this stage by considering all of the above considerations.

Besides the above steps the following steps are also required to be taken.

p) Publicity: Every plan has a movable horizon i.e. it is never definitive but can and should be improved in the light of experience and will inevitably have to be adopted. It is important, therefore, that the initial plan includes arrangement for education and amendments as necessary. The planning officer should encourage energetically such studies as help in improving the plan further before its submission to the competent authority. Considering this view, planning must be free to discussion and public should be asked for constructive criticism and suggestion regarding the aim, objectives and arrangements.

q) Preparation of Final Plan: In the light of open discussion / advice received the preliminary plan should be revised or modified and a final plan should be prepared. The final plan should state clearly the list of equipment needed, stating the sources of funds, budget estimates, time needed for completion of the project etc.

r) Numberizing Plan by Budgeting: The final step consists of numberizing the plans by converting them to budget. Each section of a library can have its own budget which may form part of the total budget.

s) Obtaining Approval from the Top Management: After the preparation of the final plan, if the library and information centre going to be established is a part of the parent institution then it is important to obtain general approval from the top management.

t) Execution and Evaluation: In course of execution the short term section of the plan will indicate the urgent and basic problem, legislative, staff training, setting up of executive bodies that must be disposed of in order to attain the medium and long term objectives. The information centre should have a continuous user-orientation programme to attract the new users to the system. After the full implementation of the project it should be periodically evaluated and maintained to keep it up-to-date with time.

3.4 BASIC PRINCIPLES OF LIBRARY BUILDING DESIGN

a) **Functional Design:** A library building should have functional design rather than a monumental one. There should be provision for documents, users, staff, and service areas. There should be areas for senior professional's rooms, library staff, seminar room, binding section, reprographic section, digital library section with additional areas for acquisition section, technical section, reference section, reading room, room for stack book, circulation section, etc.

b) **Open Access:** The availability of the number of library staff, the user demand and the type of collection are the deciding factors for a library to go for open access or closed access system. In a closed access library the users are prohibited to enter the library, they should write their demands in some slips. The building design for open access is also considered useful for closed access system. However, vice versa is not true. But, in both the closed and the open access systems, library property counter and some such a thing are a must, because the users are free to enter the reading room and the periodical section in both the cases. Both the systems require that the library building should have a single entrance and one exit point for keeping a proper control on incoming and outgoing users. The whole building should be accessible from the entrance to different parts of the building by means of simple and easy to understand plan requiring only a few directions or guides. Doors and windows should be protected by means of wire fabric to avoid any loss of books.

c) **Future Growth:** A library building should be planned for at least next 20 years, keeping in view the rate of collection development, number of readers, technology enhancements, etc. The building should be extendable to allow for future growth with minimum of disruption. There should also be adequate provision for future expansion, both horizontally and vertically.

d) **Flexible:** There should be the means of interchangeability of all major stack areas, service areas, reading room, and staff areas. The whole

design should be such that if any change in library function takes place in future it will be possible to adjust the layout without carrying out major structural operations. There should be no interior load bearing walls but the building should be able to bear the stack load anywhere.

e) **Air-conditioning, Lighting and Noise:** Uniform standards of lighting, heating, cooling, ventilation, noise prevention, communications, fumigation and flooring are necessary to meet the criteria of interchangeability. The natural light should come inside the whole building throughout the day time. Outside or background noises generally cannot be controlled except by double glazing which involves air conditioning. The inside noise of human voice, equipment and mechanical device, impact of footsteps, banging of doors should be reduced by using insulating materials and devices, use of acoustical material for walls and ceilings in corridors, reading rooms and work rooms. Use of proper floor coverings is also essential.

f) **Modular Design:** A building on modular system is the one which is supported by columns placed at regular interval. The basic dimensions of library building should be in multiples or submultiples of some module/column. Even while only the columns are load bearing inside the building, outside walls may also bear the load. Columns, stairways, lifts, hearing facilities, plumbing and ducts are all fixed and everything else is movable. Thus, the modular system leads to flexibility.

g) **Economic:** The design should be such that the operation of the library can be carried out with the minimum of staff and finance. The windows should be covered with net.

h) **Secure:** The building should be free from dust, dirt, and cobwebs. To deal with other vermin the best remedy would be to have a rat proof building. The water may not enter the stack room either through ventilators and windows or due to leakage of roof. The stacking material should be fire proof. Sufficient number of fire extinguishers and fire buckets should be fixed at various strategic places in the building. The library building should also be designed to guard against some detrimental habits of the readers, visitors and outsiders.

3.5 LIBRARY STANDARDS

It is desirable that a library should use standard specification. In this connection the following standards will be found useful.

i) Indian standard specification for library furniture and fittings: Part I Timber [IS: 1829 (Part I)-1978].

ii) Indian standard specification for library furniture and fittings: Part II Steel [IS: 1892 (Part I)-1977].

Indian Standard Recommendations relating to primary elements in the design of library building (first revision), Delhi, Indian Standards Institution, 1977 recommend the following

a) Documents: 150 volumes per square metre;

b) Library Staff

i) Librarian and deputy librarian=30 m^2

ii) Classifier, cataloguer, accession librarian and maintenance librarian= 9 m^2

iii) Administrative and professional staff not at service points = 5 m^2

c) Users: Average area per reader in the reading room=2.33 m^2

d) Services: Area required for services to users can be calculated on the basis of local requirements;

e) Others: According to Keyes D. Metcalf, Planning academic and research library buildings, New York, McGraw-Hill, 1965, P. 316 space for stairways, corridors, entrances, lobbies, toilet facilities, walls, columns, vertical communication and transportation, etc would consists of 30 percent to one-third of area for documents, readers, and service to readers and staff.

The dimension for table, chair, shelving and card catalogue cabinet can be taken from the Indian standard specification for library furniture and fittings: Part II Steel (IS: 1829 (Part II)-1977), New Delhi, Indian Standards Institution, 1978.

Stacks are required for reading room, staff's room, seminar and meeting hall, for non-book materials and so on. While selecting stacks for any kind of library, the main consideration should be to ensure

maximum space utilization, user convenience and easy movement with the stack room. The Indian Statistical Institution, Delhi has laid down a standard for wooden rack vide IS: 1829 (Part 1)-1961 Library Furniture and Fitting: Part 1 (Timber). These have been reaffirmed by the University Grants Commission's Library Committee. These are very much in use.

3.6 LIBRARY FURNITURE AND FITTINGS

The furniture and fittings can be made of metal, wood or plastic. The furniture and fittings should also be modular. This would be the case for tables, chairs, book racks, book trolleys, doors, windows, etc.

a) Book Racks: For normal shelving in general libraries, the standard racks or shelves made of either seasoned teak or sheesham wood can prove useful and functional. Book racks are used to store books, bound volumes of periodicals, reports and such other kinds of materials. Each individual rack is usually 180 cm wide, 195/225 cm high and 25/ 50 cm deep depending on whether it is a single-sided or double sided. The number of shelves in a rack is usually 5-6 depending on the high of the rack. A number of racks can be joined together to make one row. In general, the height of the unit book rack should be such that a person of normal height should be able to pick up books from top-most shelf. The popular kinds of stacks are:

i) Fixed Shelves with Double Row: They are normal fixed shelves where material can be arranged in double rows.

ii) Hinged Stacks: Here two shelves are joined together with hinges on one side and one shelf fixed while the other is mounted in front of the hinges.

iii) Rolling Stacks: These are metal stack units mounted on ball bearing wheel placed side by side.

iv) Compact Storage: This system consists of units of three stacks, the centre row of fixed double-sided stacks at each side. This helps in increasing the capacity of the storage space.

v) Multitier Stacks: This kind of stacking consists of stacks from the floor to the roof and it has become quite popular in very large libraries.

b) Periodical Display Rack: Double sided periodical racks are not recommended since the unit becomes too bulky. It is better to place two single sided racks back to back, if necessary. The following types of periodical display racks are generally available in the market.

i) Step or Gallery Type: In this type the periodicals are displayed stepwise, each step being 5 cm deep and 15cm high. Length of the rack is generally 90cm. There may be 4-5 steps and on each step 4-5 journals can be displayed and on a single sided rack 20-25 journals can be displayed.

ii) Pigeon Hole Type: This type of rack has two parts, one being a cupboard in the bottom and other pigeon holes at the top. The usual height and width are 7.5 feet by 6 feet. The depth is about one foot in the pigeon hole and about 1.5 feet in the lower cupboard portion. The cupboard portion is for storing the back volumes of the periodicals and the pigeons holes hold about 36 current periodicals.

iii) Inclined Type: This type of display rack is an improvement over the earlier pigeon hole type of rack. This is a box type rack with horizontal shelves, each covered with wooden planks with an inclination to the shelf plank. The shelves can be portioned into pigeon holes, each hole being provided with a wooden support for the periodicals. The inclined plank provides a way of displaying periodicals with the back issues in the space behind the inclined plank. Display space for 25-30 periodicals can be provided in one rack.

c) Catalogue Cabinet: The catalogue cabinet is a unit of drawers full of cards specially designed to hold library cards (5 x 3) and equipped with a metal holding rod. These units are available in a wide range of sizes starting from four drawers to about sixty drawers. For convenience and ease of consultation, the trays of drawers are placed on stands of eye level. Each tray can hold about 1,000 thick cards.

d) Charging Desk / Issue Counter: In most of the libraries the charging desk is specially designed to serve special need of the library, and it is not usually acquired from the open market that has predefined shape and size. The issue counter is usually designed for two people to work simultaneously. The height of the counter should be 4-5 foot and should have sufficient drawer space to accommodate all the issued documents records. The counter should also have sufficient shelving space for placing the books which are returned by the users. The common type of design used for issue counter is circular, L-shaped, rectangular, and U-shaped.

e) Computer Table / Reading table: Proper computer tables with drawers are required for the OPAC terminal, digital library section and such other. Some common type tables are also required for the technical staff of the library and for the readers to use as reading table in the reading room. The tables to be used in the reading room are large in size and without any drawers.

f) Chairs: The chairs are required for OPAC terminal, digital library section, technical staff and for the readers to use in the reading room.

g) Book Ends or Book Supports: These should be provided in large numbers. At least two book supports are required for one plank so that the books are made to stand erect.

h) Book-lifts and Trolleys: If the book stacks are spread over many floors, it is desirable that book lifts or dumb elevators, as these are called, should be provided. Similarly, to carry books from one end to the other end of each floor, there should be a book trolley so that the time and energy of the staff can be saved.

i) Record Keeping Equipment: In a modern library, most of the record keeping equipment is replaced by computerized record keeping databases. The record keeping equipment includes loan register, periodical record register, accession register, gate register, membership register and such others.

j) Filing Cabinets: There should be filing cabinets for correspondences, newspaper clippings, pamphlets, patents, standards, and other types

of materials with odd sizes. For filing of correspondences, vertical filing cabinets with drawers that can be pulled out can be used. Pamphlet boxes of various kinds are also available in the market for storing pamphlets, leaf-lets, standards and patents.

k) **Photocopiers / Printer:** In the libraries for various activities there will always be the need of multiple copies of a single document. The photocopiers will also be needed when readers of the library want to make Xerox copies of a chapter of a book or for such other activities. Several leading companies are manufacturing photocopiers with several variations like coloured copies, size enlargement or reduction and several copies at a time. Depending on the requirements of an individual library and availability of funds, suitable copier as per requirement can be purchased. In modern day libraries computer printer should also be procured.

l) **Typewriters / Computers:** Typewriters are gradually replaced by computers in most of the libraries. So, it's better to go for computer than typewriters. In an automated library bar-coding printer, bar-coding reader and such others should also be procured.

m) **Miscellaneous Items:** It will include stool or step ladder for reaching the roof for cleaning, for users in stack room for picking books from upper shelves, vacuum cleaners, air-conditioners, binding equipment, projectors, etc. Some other library furniture may include notice board, newspaper stand with sloping top, property counter or rack for keeping the users belongings.



CHECK YOUR PROGRESS

A) Find out True and False Sentences

a) Premises refer to planning assumption concerning expected internal or external environment under which plan will operate.

b) University library site should be centrally located.

c) A library building should have a repeated load bearing wall after some interval.



3.7 LET US SUM UP

Planning the library building is a team project and not exclusively the job of an architect. The basic aim of the design of a library building should be to achieve flexibility using modular system. In addition, open access and provision of future growth is an important consideration. The design should be functional rather than a monumental consisting of a rectangular area having pillars or modules.

The inclusion of the librarian in the library building committee is a crucial factor. He is the best person for planning and equipping the library and determines the exact functional relationship between the various parts of the structure. He will prepare a note on library building programme explaining the requirements of the library to the architect, management, etc. The architect on the basis of his note would propose a plan keeping in view the ways in which the users would use a library. He would be able to suggest the designing of a functional and attractive building within the budget allocated for the purpose. The decision of the library building committee must be finally approved by the competent authority.



3.8 FURTHER READING

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7) Rajagopalan, T. S. and Ranjan, T. M. (1986). National Information Policy for India: a perspective. In B.M. Gupta et al. ed. Handbook of libraries archives and Information Centres in India: New Delhi: Information Industry.
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3.9 ANSWERS TO CHECK YOUR PROGRESS

A) Find out True and False Sentences

a) True b) Truec) False



3.10 PROBABLE QUESTIONS

A) Short Answer Type Questions

a) Who are the members of the library planning committee?

b) What do you mean by modular design of a library building?

c) Write notes on library standards.

B) Essay Type Questions

a) Describe the different steps involved in planning a library and information science centre.

b) Write the principles of library building construction.

c) Write a descriptive note on library furniture and fittings.

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