



Chapter- 8

*Standards for Library
Buildings*



Standards may be defined as officially adopted and widely accepted quantitative and qualitative norms which have been variously interpreted as the pattern of an ideal, a model procedure, a measure for appraisal, a stimulus for future development and improvement and as an instrument to assist decision and action. In the context of libraries the standards are based on criteria which can be instrumental in the measurements or assessment of the library services. These criteria are determined by the professional librarians in order to attain and maintain the objectives they set unto themselves. Library standards are not only helpful in the library work but they also serve administrators and heads of the institutions in planning and administering of libraries. The standards as acknowledged criteria serve the dual functions of the evaluation of the non-going services as well as of planning better and improved services for the future. The standards serve as indispensable aid to library authorities and librarians in the developing of adequate book stocks, in functional and adequate building made and in securing properly qualified personal. These bring uniformity and order without which library is merely a store house of hidden riches. Various national and international organisations have worked out standards which are instrumental not only in removing deficiencies in the existing library buildings but also in improving designs of library buildings of the future. The Indian Standards Institution, Canadian Association of College and University Libraries, American Library Association, the University Grants Committee of United Kingdom etc. have formulated various standards for planning and designing of library buildings.

Indian Standards

Ranganathan was the protagonist in the propagation of standards in the field of librarianship and library science in India. Indian Standards Institution appointed him the Chairman of its Documentation Sectional Committee. This committee took upon itself the onerous responsibility of examining and identifying the areas in librarianship and documentation which admitted of standardisation. The documentation sectional committee accorded priority to the areas of library buildings, furniture and fittings. The reasons for this kind of priority were many. Firstly many university libraries in India were on the threshold of their library building programmes. University Grants Commission started investing huge amounts of grants in the universities for library

buildings. But the more giving of grants was not sufficient by itself. India had hardly any tradition in regard to the design of library buildings in correlation to functional requirements. The University authorities could not get proper guidance in the making of the really functional designs. The need for authoritative standards was felt at this juncture. It also came to be observed that Indian librarians had not yet shed off their obsession with foreign designs of library buildings. This danger was becoming very pronounced as a result of many of young Indian librarians taken round certain foreign countries for a few months and on their return they preached unadulterated adoption of the foreign designs. It was desirable that the experience brought from abroad should be carefully wetted by an authority on standards like the Indian Standards Institution. It is for these reasons that the documentation sectional committee desired to take up this matter of standardisation with a sense of urgency. The committee met various times and on 25th March, 1960, after the draft was finalized, the Indian standard IS. 1553-1960 code of practice relating to primary elements in the Design of library Buildings was adopted by the Indian Standards Institution and since then following more standards have been developed by Indian Standards Institution.

1. IS: 2672-1966
Code of Practice for Library Lighting.
2. IS: 1829 (Part I)-1977
Specifications for Library Furniture and Fittings, Part I, Timber (First Revision)
3. IS: 1829 (Part II)-1993 Specifications for Library Furniture and Fittings, Part II, Steel
4. IS: 1233-1958
Recommendations for Modular Coordination of Dimensions in the Building Industry.
5. IS: 1172-1957
Code of Basic Requirements for water Supply, Drainage and Sanitation.
6. IS: 1883-1975
Metal Shelving Racks (Adjustable Type)
(Second Revision).

7. IS: 8338-1976
Recommendations relating to Primary Elements in the Design of School Library Buildings.
8. IS: 3312
Steel Shelving cabinets (Adjustable Type) (First Revision)
9. IS: 4116-1976
Wooden shelving cabinets (Adjustable type) (First Revision).
10. IS: 1553-1989
Arrangement of gangway second revision reprint Dec. 1992.
11. IS: 766- 2(Part-I)
Orientation of Libraries 1974 IInd Revision. Second reprint December, 1992.
12. IS: 1642-1988
Type -I Construction fire resistance IInd Revision Second reprint Dec. 1992.
13. IS: 11460 - 1985
Details of fire protection and safety IInd Revision second reprint Dec. 1992.
14. IS: 2672 - 1966
Levels of illumination second Revision IInd reprint Dec. 1992.
15. IS: 7942-1976
For daylighting reference second revision IInd Reprint Dec. 1992.
16. IS: 7942 - 1976
Method for achieving noise reduction and sound insulation second revision IInd reprint Dec. 1992
17. IS: 2661-1978
Specification for mobile library Van. (First revision)

It may be pointed out here that only essential dimensions for proper functioning of the fittings and furniture have been generally laid in these standards. Otherwise full freedom is given to the architect to plan and design the library building according to the best of his creative ability.

In view of the fast-developing economy and technology, especially applications of computers and other turn-key devices in various library processes and

the increased use of microforms in place of the printed material, it is recognized that the library standards be subjected to revision from time to time taking into account the changes in the allied and peripheral areas. Indian standards are periodically revised to maintain their viable character and to keep in step with the developments in the subject area since the time of first publication. As hitherto the Indian standards have found very few users. Even the practicing architects and librarians associated with the formulation of Indian Standards for library buildings have shown little interest in adopting them while designing the new library buildings. As a consequence of disregard of Indian standards, a few newly built university library buildings are not well designed and may be termed as virtually non-functional. Although some universities have adopted Indian standards but there is no feed back to the Indian Standards Institution. For the want of applied information, the revised standards are not much different from the original. In 1976, the Library Buildings, Fittings and Furniture, Sectional committee of ISI decided to revise the IS. 1553 pertaining to code of practice relating the primary elements in the design of library buildings which was formulated about sixteen years ago. This revised standard IS. 1553- 1976 has been issued with a view to incorporate a few modifications as decided by the documentation sectional committee. In this, the main modification related to the provision of minimum average reading area per reader in the university libraries. The layout of the stack room and reading room have also been changed keeping in view the modular-coordination of dimensions in buildings. The IS. 1829 (Part I)-1978 Specifications for Library furniture and fittings, Part-I, Timber has also been revised recently and has incorporated any new ideas and norms for library furniture.

The Neglect of Indian Standards

A study of standards of other countries reveals that India is perhaps the only country where national standards have been formulated and published on the library buildings furniture etc. But the experience has revealed that nobody has taken keen interest in adopting these standards seriously. Recently built library buildings of some universities probably did not consult the Indian standards available for the purpose. Lamenting the state of neglect of Indian standards in practical use. Ranganathan, in 1965 observed that the buildings of the university libraries which were erected at a

great coat since 1960 show a considerable deviation from the recommendations made in Indian standards. Ranganathan attempted to identify the reasons for a non-compliance with the Indian standards. Probably many of the library authorities, librarians, architects and engineers may not be aware of the existence of these standards and in many a cases the standards might have been ignored intentionally. It is also possible that concerned persons may not have understood the rationale behind various details. Even if they did not want to ignore them, the standards might have been found to be faulty and unhelpful. With a view to bring the standards in limelight, Ranganathan ⁽¹⁾ suggests.

- (i) That a questionnaire be sent to the library authorities and architects of all the newly constructed buildings soliciting from them the information as to where they have deviated from the standards and for what reasons. If all of them would send their replies to the questionnaire, it will go a long way in improving the standards as well as in minimizing unhelpful deviations from it.
- (ii) That a few architects and librarians seem to be allergic to the standards put up by the Indian Standards Institution. If it is purely temperamental, there are no means of redress. If it is due to the reasons for each item in the standard not being understood, remedies for the removal of ambiguities are possible.
- (iii) That in the revised edition, ISI can add connotation on each point in the standard explaining the reason for it.
- (iv) That in addition to above, it may be helpful to follow the modern vogue and arrange for a seminar-one for each region in the country on library housing in which the reasons may be discussed and the standards may be improved.
- (v) That the library science schools should bring to the notice of the students the existence of ISI standards on library housing. They should also introduce a comparative study. Then only the merit of Indian standards can be rightly understood.
- (vi) The library authorities should give full opportunity to the librarians not only to have a say in the matter but also to cooperate with the architect.
- (vii) The Civil Engineering Department and the Implementation Department of ISI should be all eyes and ears to get advance information about any library buildings programme being taken up anywhere in the country. Then the

concerned authority should be approached personally and all endeavour should be made to secure conformity to be the standards.

Ranganathan called upon practitioners in all areas to apply collective thoughts to examine the provisions in the Indian standards already published on library housing. Every one should feel duty bound to help ISI to revise the standards to the necessary extent. It deserves to be seen that the buildings will not obstruct developments in library outlook and library services. In the larger interests personal prejudices should be overcome and get an agreed architectural tradition of our country without violence to our getting the full benefits of simplified standard practices whose value is now universally recognized.

Standards from Abroad

Harvard-Willians ⁽²⁾ has enunciated some basic standards for university libraries. The University library buildings at present are planned for a minimum life of 10 years from the date of opening but Harvard-Willans suggested that these buildings should preferably be planned for upto 25 and must normally be capable of extension. Secondly he suggests that the library buildings should be planned with a minimum of pillars and partition walls and a minimum floor loading of 125 lbs per square foot or 600 kg per square meter. The prescribed standard floor loading in United States and United Kingdom is 150 lbs per sq. ft. or 750 kg per square meter. Thirdly he suggests that for each reader place minimum 25 sq. ft. or two to three square meters should be allowed. For graduate readers 30 sq. ft. or 2.8 sq. meters, for professors 40 sq. ft. or 3.7 sq. meter should be allowed. The number of places will depend on practices in the country concerned. A generally acceptable standard in English speaking countries is one reader place for every four students. Fourthly, he suggests that stack areas should be able to accommodate 160 v per square meter or 10,000 v per 60 sq. meter.

An allowance for future development of the collections must be included for a minimum of 10 years from opening and preferably for a period of 25 years to allow for unforeseen expansion. All these standards assume shelving in bays of 7'-6" × 3'-long × 8" wide (or 2.3m × 1m × 0.20m). An allowance of 120 sq. ft. or 11 square meter per member of library staff should be made, including an area for an

appropriate number of staff envisaged as necessary for the development of the library during the period for which the building is planned and lastly non-assignable space or balance area should not be less than $33\frac{1}{3}$ of the area devoted to library accommodation.

Standards for Reading Area

In United States, the standards for college libraries have been in existence for many years whereas the standards for larger University libraries have yet to be developed. India began with standards for all types of university and college libraries. All of these standards have been approved by the University Grants Commission. About the reading area the Indian standards ⁽³⁾ prescribes that the average area per reader in the reading room should be 2.33 sq. meter minimum. The Candian standards ⁽⁴⁾ recommends 25 sq. ft. (2.3 square meter) per undergraduate reader (reading table accommodation) 35 sq. ft. (3.3 square meter) per graduate reader and 75 sq. ft. (7.0 square meter) per faculty reader (accommodation in individual carrels). Further it was suggested that 25-40 percent of total student enrolment should be taken as the number of seats to be provided for students. In France, the standard of 1.5 sq. meter per student remains the average standard for university library buildings. Nevertheless it has become apparent in practices that this standard must be modified according to the number of students and the subjects studied. In fact a number of students below 1,500 requires a higher standard of about 2 square meter, which can be reduced to 1.20 square meter when the number of students reaches about 10,000. At the research level the area needed for a research worker is evaluated at 6 square meter. The number of research workers is calculated in relation to the students ⁽⁵⁾. Lodewycks ⁽⁶⁾ while recommending standards for Australian University Libraries, states that the overall provision per reader in general reading area as 20 sq. ft. (2 sq. meter). However, Metcalf ⁽⁷⁾ suggests that at least 25 sq. ft. (2.3 square meter) per undergraduate student to be housed in a reading area be used in estimating preliminary space requirements and that careful planning should make that figure possible and 30 sq. ft. (2.8 square meter) is recommended for graduate student who makes more use of the library than the under-graduate student and they need rather more reading accommodation per reader.

A working party which was set up in 1964 within the University Grants Committee ⁽⁸⁾ of the United Kingdom, recommended that the total number of reader and study place throughout the university should not normally exceed:

One seat for every three Arts under-graduate students.

One seat for every five Science under-graduate students.

One seat for each Arts postgraduate student

One seat for every three Science postgraduate students.

Lastly, whither ⁽⁹⁾ suggests that the seating capacity should be based on anticipated growth over a twenty year period. Accommodation for at least one third of the student body will be essential.

Standards for Book Space

The Canadian standards ⁽¹⁰⁾ prescribe that while using the space formulas for reader accommodation as constant, ten volumes per square foot for open access stacks should be allowed with some interspersed reader accommodation and spacing between ranges upto 5 ft. (one centres). One should allow 12.5 volumes per square foot for stacks planned as book-storage areas with narrow aisles, spacing between ranges down to 4 ft. 2 inch (on centres). According to French standards ⁽¹¹⁾, the standard accepted for book stacks is 60 square meter per 10,000 volumes when the collection have open access system. Ellsworth ⁽¹²⁾ proposes 10 volumes per square foot (or 108 volumes per square meter). According to Metcalf ⁽¹³⁾, every foot of space in stacks should accommodate a book of Economics and 7 books of literature, history and Arts. Technical books and medical Books get accommodated at the rate of 6 and 5 per foot respectively. A foot of shelving space can accommodate 5 volumes of public documents and 5 volumes of bound periodicals. The general obesity of books in law allows only 4 books to be shelved in foot.

While the British standards ⁽¹⁴⁾ prescribe that book storage in the university library buildings should be on the following scale:

Open Access:

Books - 213 vols/ m^2 , 4.7 m^2 /1000 vols (19.8 vols/ f^2).

Bound journals = 106 bjs/ m^2 , 9.4 m^2 /1000 bjs (9.8 bjs/fs).

Closed Access:

Book = 248 vols/m^2 (23 vols/fs)

Bound journals = 122 bjs/m^2 (11.3 bjs/fs).

With a typical mix, the British standards suggest some 5.83 square meter per 1000 volumes over all. These figures include provision for the margin needed for the reorganization of space or return of borrowed material i.e. assume that a shelf 85 percent occupied is effectively full. For housing books collection the Indian standards⁽¹⁵⁾ prescribes 150 volumes per sq. meter, while each unit book rack 2m long may be assumed to house 700-750 volumes.

Standards for Staff Areas

Indian Standard 1553-1976⁽¹⁶⁾ prescribes the following sizes of various rooms required for this staff of the library.

i)	Librarian and Deputy Librarian	30 square meters
ii)	Classifier, Cataloguer, Accession Librarian and Maintenance Librarian	9 square meter per person
iii)	Secretary to the Librarian	9 square meter
iv)	Visitor's room	15 square meter
v)	Administrative and professional staff not at service points and other than those mentioned in (ii)	5 square meter per person
vi)	Group discussion room	2 square meter per person
vii)	Conference room	2 square meter per person
viii)	Seminar room	2 square meter per person
ix)	Committee room	2 square meter per person
x)	Cubicals	7 square meter per person

While the British Standards⁽¹⁷⁾ suggest the following:

i)	Librarian	22 square meter
ii)	Deputy Librarian	13.5 square meter
iii)	Assistant Librarian	9 square meter
iv)	Secretary/Typist	9 or 7 square meter if shared.
v)	Cataloguers	9 square meter each

Canadian standards ⁽¹⁸⁾ recommend that office areas 100 square feet (9.3 square meter) per staff member in general office accommodation should be allowed, 125 sq. ft. (11.2 square meter) in processing departments, 150 sq. ft. (14 square meter) per senior staff member in a private office. These areas were minima, extra space should be allowed for special mechanical equipment. French standard as quoted by whithers⁽¹⁹⁾ do not suggest separate specifications for various categories of staff members. However, for technical service staff it suggest 8 to 10 square meter on an average needed for each person. A comparative account of there standards is tabulated in Table.

**VARIOUS NATIONAL STANDARDS ON READING AREA,
BOOK SPACE AND STAFF AREA.**

Country	Reading Area	Book Space	Staff Area
Indian Standards Institution	2.33 m ² per Reader	150 volumes/m ²	Librarian and Dy. Librarian - 30m ² . Asstt. Librarian and Secretary to Librarian- 9m ² .
University Grants Committee (UK)	2.3 m ² per seat	<u>Open/Access</u> Books 213 vols/m ² Bound journals 106/m ² <u>Closed Access</u> Books 248 vols/m ² Bound journals 122 vols/m ²	Librarian-22 m ² Dy. Librarian 13.5 m ² Asstt. Librarian and secretary to Librarian 9m ²
American Library Association	Undergraduate 25 sq. ft. Graduate 30 sq. ft Teacher 40 sq. ft.	160 vols/m ²	120 sq. ft. (11.3m ²) per person
Canadian Lib. Assoc.	Undergraduate 25 sq. ft. (2.33 m ²)	<u>Open Access</u> 10 vols/sq. ft.	a) 125 sq. ft. per staff member in processing Dept.

	Graduate 35 sq. ft. (3.3 m ²)	<u>Closed Access</u> 12.5 vols/sq.ft.	b) 150 sq. ft. (14m ²) per senior staff member
	Faculty Member 75 sq. ft. (7m ²)		
French	1.5m ² per reader	<u>Open Access</u> 10,000 vols/60m ²	8 to 10m ² person in the Technical section
Australian	20 sq. ft. (2m ²) per reader		

It is evident from the above data that 2 to 2.3 square meter should be the minimum reading area per reader. French standard 1.5 square meter per reader does not meet present day requirement. For storing books an average between 150 to 200 volumes per square meter may be considered adequate as the basis of planning the stacks in the University libraries for staff area, the Indian standard has prescribed 30 square meter both for librarian and deputy librarian, whereas unlike British standards (librarian 22 square meter and Deputy librarian 13.5 square meter), it should have made separate allocations for these areas. It appears that the Indian standards are more comprehensive than the norms and specifications of other countries.

Lastly, it is suggested that while planning and designing the new library buildings or extending the existing ones, it should be the prime endeavour of the university librarians that the standards formulated by the Indian standards Institution be implemented with greater best. It is an important principle in standardisation that the standards will develop only in the hands of its users. Therefore, it is only through implementation of these standards at all level, the library standards can be realistically modified, developed, and rationalised for this, feedback to ISI is a must. Librarians who have got some experience in designing their library buildings should be brought into the notice of ISI authorities regarding a few inadequacies observed by them in the Indian standards. The University Grants Commission and the library associations like ILA, INDAAL, IASLIC etc. should make vigorous efforts to see that the future library buildings be designed and constructed keeping in view the Indian standards strictly since the Indian standards are in the metres, the librarians should ask the architects to prepare the blue prints in metric system only.

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