3.1 Brief History

The history of Karnatak University goes back to the year 1917 with the establishment of Karnataka College at Dharwad, with the efforts of Artal Rudra Gowda and Rodda Srinivas Rao and others. This college could not satisfy the aspirations of the people of the region which was then under the jurisdiction of the Bombay Presidency. For university education the people of the region had to go for Bombay University which naturally restricted the number of aspirants for higher education. This feeling gradually led to a demand for an independent University and hence the creation of Karnatak University.

Like other linguistic groups in the country the Kannada speaking people had, for number of centuries lost their integrated cultural life. This dismemberment of the Kannada region and its dispersal under different administrations added and aggravated this disintegration and led to a state of cultural compartmentalisation. With the growing of the national consciousness towards the end of the 19th century, the Kannada people naturally felt the urge to develop their own independent university. Later, even protagonists of the indian national movement viz., the Indian National Congress also recognised the principle of linguistic states. Meanwhile, it has to be noted in this context that the principle underlying the establishment of regional

1. Karnataka University Committee:
   Report (Reprint) Dharwad, Karnatak University, 1973, P. 7
universities had already been recognised at the Bombay Presidency Educational Conference of 1917, which was accepted by the Sadler Commission in 1920. Further, the same principle was endorsed in the Sadler's Committee Report, which was published in 1924.

The principle of establishing regional universities was officially recognised and thus the University of Mysore was established in 1916. But nothing was actually done to promote the establishment of such universities in the Bombay-Karnataka province. The long awaited aspirations of the Kannada speaking people in the Bombay presidency for an independent university received a sudden impetus when the Andhra University Bill, contemplating the inclusion of Bellary district (which was until then affiliated to the Madras University), within the jurisdiction of Andhra University was introduced in the Madras Legislative Assembly in 1920\(^2\). It was in this background that the public of Bellary and Kannada Sahitya Parishad launched a vigorous protest against the attempt to include a Kannada district within the jurisdiction of a non-Kannada regional university. The protagonists of this movement were strongly supported by the Mysore District Congress Committee and the Karnataka Unification League.

As a result Bellary district was not included under Andhra University and the first Karnataka University Association was formed, with the object of bringing into existence a separate University for Kannada speaking

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2. Ibid P. 9
areas. The movement further received an additional impetus after the appointment of Maharashtra University Committee, which emphasized the need for establishing regional universities. This proposition, in principle, had already been accepted by the Bombay Legislative Council as early as 1937.

Karnataka University Association was formed in Dharwad and was then amalgamated with the similar Association established in Belgaum subsequently. The newly formed association launched a campaign for the establishment of Karnatak University and 28th September 1946 was observed as 'Karnatak University Day' all over the region. As a result the Government accepted to appoint a committee to work out the details for the establishment of an university.

The Government of Bombay constituted the Karnatak University Committee on 17th April 1947 under the Chairmanship of Justice Sri N.S. Lokur. The terms of reference of the Committee were:

i) To make recommendations as to the form, scope, constitution and jurisdiction of an University for Karnataka, including the question of granting affiliation to institutions outside the limits of Bombay province;

ii) To report on the cost of establishment and maintenance of the university and to make proposals for raising the necessary funds; and
iii) To make any other recommendations germane to the subject.\footnote{3}.

Consequent to the appointment of this committee the Karnatak University Bill was passed by the Bombay Legislature in April 1949.

The Karnatak University started functioning from August 1949 with Bombay as its initial headquarters and then shifted to Dharwad in October 1949. It started serving the needs of higher education in four kannada speaking districts of Bombay province viz., Belgaum, Bijapur, Dharwad and North Canara from 1st March 1950. Till 1951-52, the University was functioning only as an affiliating body. Later it started offering post-graduate instructions in two subjects, viz., Kannada and Statistics.

The University started functioning on the new campus in the year 1953. The construction of the main building, accommodating all the Departments of the University was completed by 1959. At present, the University campus has 800 acres of land. The University campus is named as 'Pavate Nagar' after Dr. D.C. Pavate, the then Vice-Chancellor and the architect of this University.

After the reorganisation of states in the year 1956, the districts of Bidar, Gulbarga and Raichur were

\footnote{3. Karnatak University Committee: Report of the Karnatak University Committee (Reprint) Dharwad, Karnatak University, 1973, P.1-2}
added to Karnataka University's jurisdiction. In 1965 the jurisdiction of the university was further extended to include Bellary district.

During the year 1980-81, the P G Centre of the Karnataka University at Gulbarga emerged as an independent University. The colleges in the districts of Bellary, Bidar, Gulbarga and Raichur are now affiliated to Gulbarga University. There are 34 P G Departments at Karnataka University campus, Dharwad and also P G Department of Marine Biology at Karwar affiliated to this University. Further, the university has started P G courses at Belgaum campus since 1982-83. By the end of 1987-88 the University had 133 affiliated colleges under its jurisdiction (Annual Reports of the University).

3.2 Karnataka University Library Building

As noted earlier the Karnataka University started to serve the needs of higher education since 1st March 1950, and along with the University, the university library also came into existence. In the early stages i.e., during 1950-59 the Library did not have a separate building but was housed in the building of the Teachers' Training College for men.

It was in the year 1954, when Dr. D.C. Pavate was the Vice-Chancellor of Karnataka University, proposals were sent to the U G C for the construction of various buildings on the campus for housing the different departments including the Library. A separate building for the library initially costing about Rs. 6.00 lakhs and capable of future expansion as prescribed by then
Librarian was included in the proposals. Later, however, it was decided to pool all the allocations made by the U G C for the construction of the various departmental buildings and go in for a composite and monumental building. A separate wing was reserved in this composite building for the library. The library moved into this new wing in June 1959. The total carpet area of the three floors in this wing, which was released to the Library gradually accounted for 25,000 sq.ft., The book capacity was about one lakh volumes and readers capacity about 200 at a time. The Library outgrew this meagre space allocated to it by 1964-65.

The library committee of the University, which was keenly conscious of the acute shortage of space, had been asking for a functionally planned independent building for the library. It sent detailed proposals to the university under its resolutions No. 11 of 19-2-1964 and No. VIII of 22-3-1974.

The late Smt. M. Jayalakshammanni, the then Vice-Chancellor (1973-75) placed the library building as an item of first priority in the 5th plan proposals. Dr. R.C. Hiremath, the successor Vice-Chancellor (1975-78) saw to it that the site for the building was chosen, and the construction made steady progress during Sri S.S. Wodeyar's tenure as Vice-Chancellor (1978-81). The construction of the independent library building was completed in early 1981 at the cost of Rs. 26,00 lakhs and the library moved into it by the end of August 1981.

With this brief background, an attempt is made in the succeeding pages to present a study of planning of
the Karnatak University Library building, its space allocation and space utilisation - the central theme of the research work.

3.3 Planning Of The Library Building

A university library has a vital role to play in the modern world, meeting the requirements of the different classes of people. These different classes of user-groups include faculty members, students, researchers and staff of the library.

Since the university library is a centre for advanced learning, which shape the course of historical development, the library building has to be conceived meeting these requirements in a scientific way. A building is infact the expression of its functions. The functional character of the library provides for functions like acquisition, processing, dissemination and maintenance of information materials of varied kind.

University library functions can be broadly grouped into the following:

1. Functions related to serve the readers.
2. Functions related to technical processing of the materials, and
3. Functions related to administrative services.

The latter two categories of functions are a prelude to first one, only an efficient collaboration of these two could provide for a better service to the readers. In the areas of technical processing and administrative wing certain amount of provision has to
be made for conversation and loud thinking. Hence, these two areas should be little away from the reader service areas, where contrary to them quietness becomes a sine-qua-non.

The reader service areas like reading halls and Stack rooms need to be so oriented in such a way that it fetches maximum natural light and ventilation.

Recent information explosion, the population explosion, quantitative and qualitative changes in educational systems have necessitated the university library buildings to accommodate varied information packages like books, microforms, sound recording, etc., to serve the different categories of users such as students, researchers, faculty members and other staff members.

Again, there is a need to bridge the gap between the storage of mass of documents and their extensive use, so that the functional efficiency of the library building is enhanced. Library building planning prescribes the forecasting of library requirements in terms of space, keeping in mind the present and the future growth of the library.

3.4 Building Programme

Sri. K.S. Deshpande, the then Librarian compiled the written programme of the proposed library building of the Karnatak University. The tentative blue prints indicating the location of the building and size of various areas of work were also prepared with the help of Engineering Department of the University.
Unfortunately, these tentative blue prints could not be traced out during the course of this study. The K U L building was proposed to have one lakh sq.ft., and proposed to be built in three phases.

M/s R.S. BERI & SONS, Architects and Engineers, Kolhapur were appointed as the architects of the proposed library building on the campus. The blue prints were prepared on the basis of the written programme, and also on the discussions had with the Librarian, fellow Librarians and the faculty members of the University who were frequently visiting the library. Further, while finalising the blue prints Prof. D.N.Marshall, Professor Emeritus in Library Science, University of Bombay was consulted.

The written programme provides for:

a) The various halls/wings required within the building;
b) Their dimensions;
c) The functions to be performed;
d) The furniture and other special gadgets, if any, required to be installed; and
e) Their precise location.

Generally, the space requirements of the various areas in a library building are determined by the purpose to which it is put, functions to be discharged and the services to be rendered. Therefore, the major space allocation would be for staff, book resources, readers, equipments and over-heads or miscellaneous aspects of the library. The allocation of space should
be adequate for each purpose and functionally suitable to render the services expected.

In the light of the written programme, it could be said that while preparing the written programme and allocating space for different functional areas, ISI standards should have been taken into consideration. The KUL building should have been planned to accommodate 1/5 of the students strength and 1/10 of the teaching faculty, the maximum book collection to be accommodated, and the maximum staff strength of the library along with future developmental plans. But no report was available in the Karnatak University to explain the basis for the amount of space presently allocated for each of the functional areas in this university library building.

ISI has prescribed a number of separate rooms required in a university central library (see Appendix-B, Table -3, p.8). But here, catalogue room, special reading room, group study room, committee room and microfilm reading room are not provided for in the written programme. On the other hand, the rooms which are not required as per the ISI are provided for in the written programme, e.g., photography room, seminar room and audio-visual room.

Although the written programme provided for the construction of a new library building on a phased basis, it has failed to prescribe different functional areas to be covered in each phase.
3.5 Blue Prints (Copies enclosed)

According to the blue print plans, the first phase covers the construction of the following areas:

a) Entrance hall;
b) Browsing hall;
c) Stack-cum-Reading halls;
d) Administrative wing.

It is an irregular shaped building and in two floors. The ground floor plan covers functional areas like - Entrance hall, Librarian's room, Deputy Librarian's room, Library office, Technical section on the Eastern side, a circular browsing area on the North-eastern side and Stack-cum-Reading halls on the South-western side along with courtyard, lobbies, corridors and toilet area (see the Blue print on page 30a-b). The first floor plan covers functional areas such as two Stack rooms, one on the first floor and the other on the mezzanine of the first floor and one Reading hall on the Southern side of the first floor Stack room.

The blue prints highlight that the Technical section, Library office, Librarian's room and Deputy Librarian's room are kept away from the Stack-cum-Reading halls. There are 3 lobbies, one between the Technical section and Librarian's room, the second between the Technical section and Browsing hall and the third one between Browsing hall and Stack-cum-Reading hall. There are two courtyards, one between the Browsing hall and the Librarian's room and the other between the Stack room and Reading hall. Just besides the courtyard and between the Browsing hall and Librarian's room are the public toilets.
ISI emphasizes the relative position of rooms in item No.9.

9.1 The stack should be so placed that it is easily accessible from and proximate to every part of the library.

9.2 The catalogue room should be like an ante-room to the Stack room on the way from the general reading room to the Stack room.

9.3 The general reading room should be close to the entrance.

9.4 Periodicals room may be further removed from the general reading room. But independent access to it shall be possible when the other rooms in the library are closed.

9.5 Special reading rooms may be still further removed from the general reading room.

9.6. The Librarian or the Deputy Librarian should have his room in close proximity to the general reading room.

9.7 The rooms of the technical and administrative staff should be placed in close proximity to the rooms of the Librarian and the Deputy Librarian.

9.8 The technical staff shall have independent access to the stack and catalogue areas.

9.9 The cubicles, the rooms for group study, the committee room, etc., may be in a separate wing or on a separate floor.

9.10 The exhibition room may be combined with the entrance lobby or placed as close to it as possible.
Interestingly, among these general conditions specified, none of them are followed in the case of Karnatak University Library blue print plan excepting the only condition followed is the item No 9.7.

3.6 Location Of The Site

Location of the library site on the university camps plays a very vital role in enhancing the functional efficiency of the library building. In the words of S. R. Ranganathan "the orientation of the university library building can be so made that all departments virtually have the whole library system at their elbow". While P.N. Kaula puts the idea in such a way that the selection of the library location is to be in relation to other university buildings, to see that it serves as a central unit for the whole university system.

It may be stressed that the primary guiding principle in the library location should be the criterion of centrality and this central position should be in relation to not only the existing buildings on the campus but also to the planned future academic and physical development of the university campus as a whole. The concept of centrality does not confine only

4. Ranganathan S.R.,

5. Kaula P.N.,
to the geographical position, more than that it stresses on the easier accessibility from different ends of the campus.

In the case of KUL the site chosen is of one lakh sq.ft., placed on an elevated spot with an uneven surface. On the North-western side are the Department of Mass Communication and students hostel; on the South-eastern side are the Departments of Botany, Physics, Social sciences and Humanities; on the South-western side are the Post Office, State Bank of Mysore, Engineering Division. However, the campus layout plan enclosed shows that even the site chosen for the library is not geographically central.

The first phase construction has 41,512.40 sq.ft., area as per the document available in the university. However, had the Library at present been nearer to the main building, it would have been almost central keeping in relation the present academic establishments and public utility centres those of them including the administrative establishments, hostels, quarters from where the users could have had an easy access to the library. But considering the fact that the University has acquired 250 acres of land on the North-eastern side of the present library with plans of establishing few more Departments the present location then becomes relatively geographically central.

3.7 Allocation Of Space For Different Functional Areas

In any library, certain amount of space is very essential to perform its functions efficiently and effectively. The amount of space allocated to libraries shall always be limited due to the fact that the trinity of the library (i.e., books, staff and users) is continuously growing. Therefore, the available limited space need to be so allocated among the competing claims of different sections of the library so as to enable optimum use of the space and at the same time, discharging the functions of the library efficiently.

KUL building is of divisional pattern and it is in two floors—ground floor and first floor. The first phase of the building which has been completed consists of the following areas with their dimensions as mentioned below:

<table>
<thead>
<tr>
<th>Areas</th>
<th>Proposed Space</th>
<th>Actual Space</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Entrance hall</td>
<td>2933 sq.ft.,</td>
<td>1989 sq.ft.,</td>
</tr>
<tr>
<td>2. Browsing hall</td>
<td>2252 &quot;</td>
<td>2164 &quot;</td>
</tr>
<tr>
<td>3. Stack-cum-Readings:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>i) Reading hall (ground floor)</td>
<td>4906 &quot;</td>
<td>2583 &quot;</td>
</tr>
<tr>
<td>ii) Reading hall (First floor)</td>
<td>Not mentioned</td>
<td>1744 &quot;</td>
</tr>
<tr>
<td>iii) Stack I (Ground floor)</td>
<td>17975 sq.ft.,</td>
<td>4220 &quot;</td>
</tr>
<tr>
<td>iv) Stack II (Mezzanine)</td>
<td>Not mentioned</td>
<td>4004 &quot;</td>
</tr>
<tr>
<td>v) Stack III (First floor)</td>
<td>Not mentioned</td>
<td>4220 &quot;</td>
</tr>
<tr>
<td>vi) Stack IV (Mezzanine)</td>
<td>Not mentioned</td>
<td>4004 &quot;</td>
</tr>
<tr>
<td>4. Administration wing</td>
<td>4843 sq.ft.,</td>
<td>4733 &quot;</td>
</tr>
</tbody>
</table>
The space allocation here has been construed as the total usable carpet area provided for each of the functional units, after the completion of the construction of the building.

3.7.1 Ground Floor: Entrance platform and steps cover 323 sq.ft., (which is not in the original plan). Entrance platform is rectangular in shape and which has enhanced the aesthetic appearance of the library entrance to a little extent.

3.7.1a Entrance Hall: Entrance hall should be placed as nearer to the principal pedestrian traffic as possible to avoid a long walk from the door. Also the entrance hall should be inviting to all concerned and should be easily accessible to all types of readers. Further it should accommodate circulation counter, property counter, check-out counter etc., within it.

The entrance hall of the KUL building accommodates as one enters it, on the left side (1) a property counter of 438 sq.ft., presently used as Xerox room and a portion of it as property counter, (2) a waiting hall at the right side, of 438 sq.ft., (3) a circulation counter just in front of the entrance door covering 215 sq.ft., and (4) at the back of the circulation counter is the information desk covering 218 sq.ft and left to the information desk is the catalogue area of 65 sq.ft. These dimensions include movement areas also.

3.7.1b Browsing Hall: Behind the entrance hall is the circular Browsing hall, which can be approached through the passage (right of the information desk, a door leads
through a ramp (slope) and a corridor. Right side is the public toilets area and the stair case at the left leads to the first floor:

<table>
<thead>
<tr>
<th>Area</th>
<th>Square Feet</th>
</tr>
</thead>
<tbody>
<tr>
<td>Corridor</td>
<td>543 sq.ft.</td>
</tr>
<tr>
<td>Ramp and Stair case</td>
<td>689 sq.ft.</td>
</tr>
<tr>
<td>Toilet area</td>
<td>603 sq.ft.</td>
</tr>
<tr>
<td>Browsing hall</td>
<td>2164 sq.ft.</td>
</tr>
</tbody>
</table>

Right to the Browsing hall, on the western side is a corridor that leads to Stack-cum-Reading hall.

3.7.1c Stack-Cum-Reading Hall: Space allocation in stack areas and reading areas should be considered on the basis of the following requirements:

a) Number of documents to be housed;
b) Number of users to be provided for seating in the Reading room
c) Number of library personnel;
d) Number and nature of equipments needing space;
e) The magnitude of other activities envisaged like user orientation programme, visitors services.

Individual areas of stacks and reading halls are already mentioned.

A courtyard separating the stacks and the reading halls measures 2269 sq.ft. On each side of the courtyard and between the stack and reading hall are two lobbies measuring 646 sq.ft. Rightside the entrance hall a small passage leads to the administrative wing.
3.7.1d The Administrative Wing: It would be helpful to understand if recognized the different categories of functions in specifying space for their use in the administrative wing. These could be technical work area, equipments area, management area and balance area.

Technical work area: It includes space for those library staff who are concerned with the acquisition and technical processing of documents. This area is to be provided nearer to the area, where loading and unloading facilities are available and the store room is also situated. In a building with more than one floor, this area is to be provided on the ground floor.

Equipment Area: It includes space for housing equipments like reprographic equipment, printing equipments and micro-computers etc., along with space for staff to handle them. This area has to be little away from other areas.

Management Area: It consists of space for library administrators or managers such as Librarian and Deputy Librarian to enable over all supervision of all the functions.

Balance Area: It includes rooms like visitors room, seminar room, committee room etc., which are to be provided away from the study areas. A standing provision of space has to be made for accommodating the near future additions.
The administrative wing in KUL accommodates:

a) Librarian's room 775 sq.ft.
b) Deputy Librarian's room 665 "
c) Technical section 1841 "
d) Courtyard 947 "
e) Lobby between Technical section and Librarian's room 323 "
f) Passage to Technical section 258 "
g) Lobby (two in number) (1 between Browsing and Toilets and other between Browsing and Technical section) 871 "

As already mentioned under the title 'Location of the Site' the total area constructed is about 41,512 sq.ft., as per the University note in the first phase (the source for these figures is not specified in the document).

In fact, the study has revealed that the total area of the first phase construction is only 35,358 sq.ft. Individual allocation of space for different functional units has been discussed in the preceding pages. Based on which it may be summarised that the constructed area has been categorised into entrance area, browsing area, stack area, reading area, administrative area and other open spaces including toilet area. The percentage of space allocated for different functional units is as follows:
Entrance and Browsing area  12%
Stack area (both floors)  47%
Reading area (both floors)  12%
Administration area  16%
Other open spaces (including toilet area)  13%
Total  100%

The percentage of space allocation shows that larger percentage (47%) of space is allocated for stacking of library materials, next is the administration area which has more space allocation (16%) than the space allocated for reading purpose (12%). Percentage of space allocation for toilets and other open spaces is higher than the percentage of allocation for reading. Minimum amount of allocation is made towards browsing and entrance area. No basis or reasons are provided in the written programme or blue print plans for the percentage of space allocations made in the first phase construction and there is no balance space left for any immediate accommodation.

3.8 Utilisation Of Space At Different Functional Points

If intelligent allocation of available space is indicative of the skill and expertise of the library planner, intelligent use of the allocated space indicates the skill and expertise of the Librarian. Let us now, therefore, consider the utilisation of space at Karnatak University Library.
Here, the concept of 'utilisation' has been constructed as how best the allocated space has been used for the purpose for which it was meant.

There has been no plan details for the entrance platform. This library building has a rectangular platform with few steps which discharge the function of receiving and leading users to the entrance hall.

3.8.1 Entrance Hall: It is meant for receiving visitors, collecting their belongings and storing them (Property counter), placement of catalogue cabinets, charging desk and check-out counter.

The entrance hall at KUL is rectangular in shape having total carpet area of 1989 sq.ft., apart from this 438 sq.ft., has been provided for property counter which is to the left of the entrance door and another 438 sq.ft., has been provided for waiting hall at the right side of the entrance door.

At present the property counter having a temporary partition is used as Xerox room (which was not thought of in the original plan) along with a small area of about 20 sq.ft., as property counter.

The entrance hall also houses a circulation counter which is used for charging and discharging of documents needed by the users. It is hexagonal in shape and covers 388 sq.ft., of space including movement area.

General catalogue cabinets have occupied an area of 65 sq.ft., all along the wall.
The original plan provides a space of 438 sq.ft., for waiting hall. But in reality this space has been used for accommodating a stenographer along with his equipment.

As it stands at present, information desk which is just behind the circulation counter is not a separate enclosure. It is just an open desk with a table and chair for an Assistant Librarian who mans this desk, occupying 202 sq.ft., including movement space. Information desk was not mentioned in the original plan. Just besides the information desk on the right side is the statue of Goddess Saraswathi installed.

Instead of a separate information desk it is advisable to have it combined with the circulation counter so that the space occupied by information desk could have been used for displaying of new arrivals of the library. A Lounge facility could also have been easily made within this entrance hall.

The very purpose of the entrance hall is marred by converting property counter as Xerox room and waiting hall as Stenographer's room.

ISI does not provide any specification for entrance hall, hence no application to this aspect.

3.8.2 Browsing Hall: It is one in which light reading collection covering a wide variety of subjects is selected and displayed for the purpose. Normally, the
seeker of information in such collection does not prepare a formal searching strategy before he begins his search.

Materials like newspapers, popular magazines and light literature, fine arts books make more suitable to be displayed in this area.

ISI has not specified 'Browsing hall' as such, but, in its clause No.9.3. makes a mention that "the entrance to the library should open into the general reading room" and IS 1553-1976, the same clause reads as "the general reading room should be close to the entrance" which may be regarded as the room where general reading materials are displayed. Hence the meaning of 'General reading room' is synonymously used to 'Browsing hall' in this study.

While planning the Browsing hall in an university library, greater attention need to be paid to make it functionally efficient unit. Browsing hall attracts both general information seekers and serious specific information seekers very frequently. The readers or the users who wish to get acquainted themselves with the current affairs in and around the society in different walks of life would visit this section very often than

7. IS :1553-1960, P-9
8. IS :1553-1976, P-9
the other sections of the library. And also specific information seekers who are busy in other sections like Periodicals and reference areas for longer hours would visit the Browsing area to get themselves refreshed by reading general literature. Hence, the space in this hall need to be used most efficiently.

In KUL, Browsing hall marked in the original plan is being used as U.N. Depository Centre, which is not an essential collection for many. This collection should have been kept along stack collection and space should have been used for browsing purpose.

3.8.3 Stack-Cum-Reading Halls: These are meant to provide stack-cum-reading space for the patrons, books, periodicals, current as well as back volumes (as there is no separate Periodicals section) and reports relating to all areas of knowledge. There are four Stack rooms and two Reading halls (dimension of each is already mentioned in the earlier section).

Stack I: Stack I is on the ground floor, accommodating 26 rows of racks with 2 units (each unit has 2 mt. length) and another 16 rows of racks with 2 units and 10 rows with 1.5 units. All these occupy an area of 4,204 sq.ft., and the remaining 16 sq.ft., of space is occupied by an Assistant Librarian incharge of the section, leaving no space un-used and ceases the chances of any future accommodation in this hall. The space provision for arrangement of racks is in accordance with the ISI standards.
Stack II: Stack II is on the mezzanine floor supporting itself on the ground floor base and has a total area of 4,004 sq.ft. This room accommodates 18 rows of racks with 3 units each, another 9 rows with 2 units and 7 rows with 2 units each, totally occupying an area of 2,848 sq.ft. Apart from these racks there are 12 reading tables with four chairs each and another 3 tables with 6 chairs each, which occupy an area of 1,156 sq.ft.

As per ISI standards in order to accommodate the above said number of racks, the area required is 3,800 sq.ft., and for reading tables required space is 1,665 sq.ft. Total space required for accommodating the said number of racks and tables is 5,465 sq.ft. The comparison of what has been existing and what ISI prescribes speaks of the degree of congestion for itself.

Stack III: Stack III is on the first floor, with a carpet area of 4,220 sq.ft., where 27 rows of racks of 3 units, 14 rows of 2 units each and 16 rows of 2 units each, have been arranged occupying 4,203 sq.ft. As per ISI standards the required area to accommodate the above said number of racks is 5,930 sq.ft. Moreover in addition to the above said placement one Assistant Librarian is also accommodated in this room.

Hence, it is needless to say that while arranging the racks, no standards have been followed relating to space and it is infact over used.
Stack IV: Stack IV is on the mezzanine, has the carpet area of 4,004 sq.ft., providing accommodation for 22 rows of racks of 2.5 units each and 16 rows of 3 units each, occupying 4,003 sq.ft. But as per ISI, required area is 4,358 sq.ft.

It has to be noted at this stage that while arranging racks on Stack II, Stack III and Stack IV, ISI standard is not followed.

Just besides the stack room separated by a courtyard of 2,269 sq.ft., is the Reading hall. One on the ground floor and the other Reading hall is on the first floor having carpet area of 2,583 sq.ft., and 1,743 sq.ft., respectively. The ground floor Reading hall has 120 readers seats and first floor Reading hall has 84 readers seats. However, the required space for accommodating above said number of seats on the ground floor and the first floor is 3,010 sq.ft., and 2,107 sq.ft., respectively.

ISI prescribes a space of 2.33 m\(^2\) per person and suggests the arrangements of chairs on only one side of the table (as shown in the diagram 1,p.13). In KUL reading hall, the space provided per reader is only 21 sq.ft., as against ISI prescription of 25 sq.ft. The arrangement of chairs is on both the sides of the table, which means that the ISI standard is not followed while making seating arrangements.
3.8.4 Administrative Wing

Administrative wing is like a green room of the library, where quite a lot of administrative activities and processing of materials would be performed. In this wing it would be convenient to recognise different categories of staff and then specify the areas for their use as noted earlier under planning aspect.

The administrative wing in Karnatak University Library accommodates:

- a) Librarian's room 775 sq.ft.
- b) Deputy Librarian's room 665 "
- c) Technical section 1841 "
- d) Courtyard 947 "
- e) Lobby between Technical section and Librarian and Deputy Librarian 323 "
- f) Passage to Technical section 258 "
- g) Lobby, two in number (one and the other between Browsing and Technical section) 871 "

ISI Prescribes in its table number 2 different room required for an university library and necessary dimensions for those rooms in its clause number 10.4.9.

As per ISI standard, University Librarian and Deputy Librarian shall have 322 sq.ft., per person. At present available space for university Librarian is

775 sq.ft., i.e., an additional space of 452 sq.ft., has been provided for. The Deputy Librarian's room is also double the space than what is required as per ISI. Incidentally it may be noted that at present the Deputy Librarian's room is being used as bindary.

There are 18 Assistant Librarians at present in KUL, of which 10 Assistant Librarians are accommodated in the Technical section. ISI suggests that 9 sq.mts., per person is to be allocated for professional staff in Technical section, accordingly the required space is 969 sq.ft.

Accommodation of 10 qualified Assistant Librarians is not necessary in Technical section, where the rate of acquisition has declined as per the library records due to budget cut since recent past. Lot of space has been wasted for these personnel, instead they (staff) could have been assigned to reader service points and space could have been used for some other purpose. Accommodation of superintendent and a typist and his equipment is not an appreciable feature in the technical section where the equipment creates lot of disturbance to the technical staff.

There is no separate library office in KUL, a portion of the Technical section which is temporarily partitioned by cup-boards is being used as library office. In this office are placed the superintendent and a typist.
ISI prescribes that 5 sq.mts. per person is to be provided for administrative and the professional staff other than those at the service points, accordingly the required space for two administrative staff is 108 sq.ft.

Technical section has also provided accommodation for binding materials and few cupboards of unused and obsolete materials, occupying about 700 sq.ft., which does not come under the purview of Technical section, leaving 64 sq.ft., of space as unused. However, it has to be said that the space allocated for technical functions is not properly used.

The other areas in the administrative wing are 3 lobbies of 1194 sq.ft., each and passage to Technical section of 258 sq.ft., which does the function of allowing staff and materials from one section to other. This function of movement of staff and books through lobbies, instead could have been easily achieved only through the passage itself.

In the light of the above discussion on the allocation of space and utilisation of it for different functions, it could be inferred that:

1. The location of library though not geographically central at present but easily accessible from all corners of the campus. And it will become geographically central when the campus is fully developed.
2. The entrance of library has a platform which is neither in the original plan nor the ISI prescribes.

3. The entrance hall houses a circulation counter of hexagonal shape. Both the entrance and exit of the library is through only one gate which is to the right side of the circulation counter.

4. Property counter which is basically meant to house the personal belongings of library users, is used as both check-out counter and also property counter and hence it may be said that the purpose of it is being lost.

5. The placement of xerox in the place of property counter is not an advisable feature.

6. Information desk is a novel idea but it could have been incorporated within the circulation counter itself.

7. Another noteworthy feature of entrance hall is the placement of a Saraswathi statue, which is an unwarranted feature in a country like India, which believes in secularism.

8. Placement of the catalogue in the entrance hall has added to the distance between the catalogue and the stack-cum-reading halls.

9. Waiting hall not used for the purpose.
10. Concept of "Browsing area" is marred by converting it into a U.N. Depository centre.

11. Slopes, lobbies and courtyards have occupied lot of floor space.

12. Allocation of space for reading and stacking does not indicate any scientific norm being followed. Whatever the space allocated for stacks and reading, only in the Stack I, ISI specification of space provision is followed in arranging racks, in other stacks and reading halls space has been overused.

13. Lot of space is wasted in the form of courtyard or 'light well' (as mentioned by the planner) between the stack and reading halls, violating the present trend of combining stack and reading hall.

14. Percentage of space allocation for reading is not sufficient in relation to the amount of space allocated for stacking i.e., 12% and 47% respectively.

15. Open spaces like courtyards, lobbies, passages etc., have greater significance in this building occupying 13% of space than the reading area of 12%.

16. Administrative wing occupies quite an amount of area i.e., 16% of the total space which is greater than the amount allocated for reading purpose.
17. The amount of space allocated for Librarian and Deputy Librarian is more than the ISI specification. Further Deputy Librarian's room is used as bindary section at present.

18. There is no provision for the most important parts of the university library i.e., Periodicals section, research cubicles and space for group study, room for special reading, microfilms reading area and committee room are not thought of while allocating space in Karnatak University Library.

19. Further, the total cost of construction of this library building was Rs. 26 lakhs. The total unutilised built in area in the library is about 7780 sq.ft. Here, there are two aspects which are striking.

   a) The amount spent for the construction of the un-used space is sheer waste.
   b) Similarly, the amount spent and manpower used for its regular maintenance are also a waste.

3.9 Utilisation Of Space: User Opinion

Having studied the utilisation of space in the light of ISI standards, an attempt is now made to present the results of the opinion survey of users of the library regarding the same. Users of the library are the beneficiaries of the amenities/services of a
library. space is a vital element for making provision for such amenities/services and hence the presentation of their opinion here.

In this study opinions have been gathered from four types of users viz., students, researchers, faculty members and professional library staff. In the case of former two types of users opinion was gathered by serving questionnaire (vide appendix-C) where as in the case of later two interview (vide appendix-D) method was employed.

In the case of KUL the average number of regular student users from 1986-1990 was about 1,000, of which 20% of the users were selected for the study which comes to 200. The sample group of these 200 users were drawn from 1987-88, 1988-89 and 1989-90 batches. 200 questionnaires were distributed to them for eliciting their opinion (Registered members of the library alone have been considered in the sample group).

The average number of regular researchers for the same period was about 325, of which about 30% i.e., 100 users were selected for the study. 100 questionnaires were distributed to them to seek information regarding the utilisation of space in the KUL building.

The sample selected from faculty user category was 56 which forms 50% of the regular users of the library in 'faculty users' category, who were interviewed to collect necessary information. All professional library staff (who possessed B L I Sc and above professional...
qualifications) of the library were interviewed to have the required information.

**TABLE 1 : Rate Of Response From Respondents**

<table>
<thead>
<tr>
<th>User category</th>
<th>No.of Questionnaires Administered</th>
<th>No.of Response</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Students</td>
<td>200</td>
<td>169</td>
<td>85</td>
</tr>
<tr>
<td>Researchers</td>
<td>100</td>
<td>78</td>
<td>78</td>
</tr>
<tr>
<td>Faculty members</td>
<td>56</td>
<td>48</td>
<td>85</td>
</tr>
<tr>
<td>Professional Library staff</td>
<td>19</td>
<td>18</td>
<td>95</td>
</tr>
</tbody>
</table>

This table shows that 85% of students and 78% of researchers responded to the questionnaire and therefore the response rate can be considered as significant.

The rate of response of the other categories of users such as faculty and professional library staff as shown in the Table 1, is 85% and 95% respectively which is again quite significant for drawing inferences.
3.9.1 Location Of The Library

It was intended to seek user opinion regarding the distance between the library building and residential places of the users, and the distance between the Departments in which they study or work and the library building. For this purpose, the respondents were further classified as:

i) on campus residents; and
ii) off campus residents.

TABLE 2: Response Percentage of Respondents
(figures in percent)

<table>
<thead>
<tr>
<th>Category</th>
<th>On Campus</th>
<th>Off Campus</th>
</tr>
</thead>
<tbody>
<tr>
<td>Students</td>
<td>59</td>
<td>41</td>
</tr>
<tr>
<td>Researchers</td>
<td>92</td>
<td>08</td>
</tr>
</tbody>
</table>

Here, before analysing the user opinion the user group has been classified into two. This categorisation of the group into on campus and off campus residents is based on the presumption that the off campus resident users visit the library frequently from the departments in which they study or work, due to the proximity between the library and their residential establishments, which are quite away from the university campus.
And those who reside on the campus may visit the library not only from departments, but also from their residential establishments like hostels and quarters, due to their vicinity and hence the division.

The table 2 shows that difference of percentage between on campus and off campus residents in case of students group is not very wide but in case of researchers there is a wider gap between the two i.e., 92% and 8%.

It may be said that there is a fair percentage of representation of on campus and off campus residents who visit the library in the students group, but in the case of researcher group, the on campus residents rate their percentage more in the sample taken for the study, because the sample is drawn from regular user list of the library.

However, irrespective of the numerical variation in the percentage of both the categories, their opinion with regard to the utilisation of space in KUL do no change much.

**TABLE 3 : Distance Between Residence and The Library: Opinion Of On Campus Respondents**

(figures in percent).

<table>
<thead>
<tr>
<th>Students</th>
<th>&lt; 1km</th>
<th>75</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>= 2 km</td>
<td>16</td>
</tr>
<tr>
<td></td>
<td>&gt; 2 km</td>
<td>9</td>
</tr>
<tr>
<td>Researchers</td>
<td>&lt; 1 km</td>
<td>67</td>
</tr>
<tr>
<td></td>
<td>= 2 km</td>
<td>33</td>
</tr>
</tbody>
</table>
There is no significant difference between the opinion of two categories of users regarding distance between the residential establishments and the Library. Majority have indicated that the distance is less than one kilometer.

TABLE 3 A: Distance Between Academic Departments And The Library: Opinion Of Off Campus Residents (figures in per cent).

<table>
<thead>
<tr>
<th></th>
<th>&lt; 1 km</th>
<th>= 2 km</th>
<th>&gt; 2 km</th>
</tr>
</thead>
<tbody>
<tr>
<td>Students</td>
<td>61</td>
<td>27</td>
<td>12</td>
</tr>
<tr>
<td>Researchers</td>
<td>&lt; 1 km</td>
<td>100</td>
<td></td>
</tr>
</tbody>
</table>

As per the table 3A, majority of both categories of users have expressed the view that the distance between academic Departments and the Library is less than one kilometer. However, 27% of students say that it is equal to 2 kms.

The present location of the library building is such that, the distance between the academic Departments and the Library is less than or equal to one kilometer only. Whereas, the distance between the men's hostel and the Library is less than 1 1/2 kms. But other residential locations like quarters (in few cases) and ladies hostel are at a distance equal to 2 kms.
As shown in table 3 and 3A, significant percent of users have very clearly indicated that the distance between residential locations and Library is less than one km., which may be considered as a normal distance that any user could cover easily and without much loss of time. Except the ladies' hostel, other units like men's hostel, quarters and academic departments are located in such a way that the distance may easily be covered by walk. Even in the case of ladies, it is a problem only when they have to foot the distance late in the evenings.

Later, it was intended to seek information regarding the location of the library building on the campus in relation to all the buildings whether academic departments or residential establishments, which helps in knowing the impact of distance on the library use. As has been already mentioned the library building need to be located centrally with respect to class rooms, research rooms, laboratories and other places from where people converge towards the Library. It is expected that the frequency of visits enhance the authenticity of observations made by the users with regard to the physical aspects of the library.

After knowing the information regarding the distance between the library and other buildings on the campus it was desired to know the centrality of library building on the campus.
Centrality Of The Building: Respondent View

The library building has to be located in the very heart of the campus in which it is supposed to serve. It should be within the easy reach of all the other departments which have to make use of its resources. It should be made the focal point of the campus, clustering around it are a complex of buildings housing the various departments, and residential establishments. The proper location of the library building will substantially influence the extent to which its services will be made use of by its users.

<table>
<thead>
<tr>
<th>Category</th>
<th>Central</th>
<th>Not Central</th>
</tr>
</thead>
<tbody>
<tr>
<td>Students</td>
<td>46</td>
<td>54</td>
</tr>
<tr>
<td>Researchers</td>
<td>15</td>
<td>85</td>
</tr>
</tbody>
</table>

\[ x^2 \] significant at 5\% level

This table exhibits that majority of the respondents have opined negatively with regard to location of the building on the campus, although they differ in degree. The degree of difference is quite significant.

As far as the centrality of the building is concerned the users do not have a favorable opinion. However, this opinion is in contrary to the opinion expressed by them earlier. The reasons may be that they might have considered the geographical placement of the building on the campus than its physical accessibility.
However, it can be said that the library building though not geographically central but easily accessible with normal walking distance and this idea is supported by the user expressions too while specifying the distance.

The interview data from faculty members and professional library staff (83% and 100% respectively) on this issue indicate that the library building is not centrally located, whereas 17% of faculty members have expressed their views keeping in mind the future growth of the university campus that "The present location would become central when the university is fully expanded". Professional library staff say that as the library warrants for 10 minutes of walk from the present bus stop and 15 minutes walk from certain academic departments, it cannot be said that it is centrally located.

After going through the data and also on the personal observation and discussions with different categories of library users, it may be inferred that the present library building is not geographically central, but easily accessible through short cut ways and also by main roads. However, the University has acquired 250 acres of land on the north-western side of the present library building and has plans of establishing few more departments. When this plan is fully materialised, the location of library building could be considered geographically central. Hence, it may be said that the present building is not geographically central but easily accessible through short avenues to the library.
3.9.2 Library Space Allocation

A library is a trinity of books, staff and readers, and there should be space earmarked for each one of these. The term 'books' includes a variety of materials like conventional books, periodicals, reports, standards, maps, atlases, micro-films, microfische, tapes, etc., and as such convenient storage space should be provided for each type of materials. The work areas of the staff should be so designed as to promote smooth and efficient work flow. Considering the fact that many readers would stay for long hours in the library, basic comforts should be ensured within the library premises with special emphasis being given to the toilet facilities, water and refreshment facilities.

Generally, space allocation would be made on the kind of activities which are to be undertaken in it. Broadly, it would be on the lines of reader services, technical services and the administrative services. Readers services area encompasses the stack space, reading space, space for extension activities and space for use of audio-visual materials.

It would be advisable to have close proximity between technical service area and administrative service area and these two must be kept a little away from reader service areas where quietness becomes a sine-qua-non. Here it is intended to know the opinion of users with regard to the adequacy or otherwise of space allocated for different functions as listed above in different sections of the library building.
In order to have proper understanding of user opinion regarding utilisation of space individual sections of the library have been considered separately.

**Space For Stacking**

**TABLE 5: Adequacy of space in stack areas:**
(figures in percent)

<table>
<thead>
<tr>
<th>Sections</th>
<th>Category</th>
<th>Adequate</th>
<th>Moderately adequate</th>
<th>Inadequate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Stack-I</td>
<td>Students</td>
<td>76</td>
<td>20</td>
<td>4</td>
</tr>
<tr>
<td></td>
<td>Researchers</td>
<td>50</td>
<td>50</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td><em>X^2</em> significant at 5% level</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Stack-II</td>
<td>Students</td>
<td>31</td>
<td>50</td>
<td>19</td>
</tr>
<tr>
<td></td>
<td>Researchers</td>
<td>15</td>
<td>69</td>
<td>16</td>
</tr>
<tr>
<td></td>
<td><em>X^2</em> significant at 5% level</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Stack-III</td>
<td>Students</td>
<td>51</td>
<td>21</td>
<td>28</td>
</tr>
<tr>
<td></td>
<td>Researchers</td>
<td>9</td>
<td>46</td>
<td>45</td>
</tr>
<tr>
<td></td>
<td><em>X^2</em> significant at 5% level</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Stack-IV</td>
<td>Students</td>
<td>40</td>
<td>40</td>
<td>20</td>
</tr>
<tr>
<td></td>
<td>Researchers</td>
<td>0</td>
<td>23</td>
<td>77</td>
</tr>
<tr>
<td></td>
<td><em>X^2</em> significant at 5% level</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
There is a significant difference between the opinions of two categories of users with regard to adequacy of space in different stacks. Considering together 'adequate' and 'moderately adequate' values, it may be said that both the categories have expressed positively excepting researchers in case Stack IV. In consonance with this opinion, the faculty members and professional library staff have also said that the space in Stack-I is adequate at present for the accommodation of existing collection stocked there. But at the same time they say that space would be inadequate for additional collections made in future. With reference to Stack-II it should be said that it would be difficult to have proper assessment of space adequacy as there is frequent transfer of racks from one floor to another.

It may be inferred from the available information that in the arrangement of racks in this section, the University Library has not followed the ISI standard (item no. 10.2)\(^\text{10}\) i.e. the occupied space for stacking is 2,848 sq.ft., as against the required area of 3,800 sq.ft., which clearly shows the inadequacy of space.

However, contrary to the opinions of the students and researchers, the faculty members and library staff have emphasized that the space is not adequate for shelving in the Stack-III.

Although the number of staff and faculty members is small, their opinion becomes highly significant in the light of what ISI has prescribed for stacking. Perhaps

\(^{10}\) IS: 1553 - 1976 P. 10
the longtime association of the faculty members in the use of library and secondly the day to day experience of the library staff with storage and retrieval of books may have determined their opinions. Hence, their opinions are quite noteworthy.

It may be appropriate here to peep back to the 'utilisation' part, that the arrangement of racks within 4,203 sq.ft., as against required area of 5,930 sq.ft., itself clearly speaks the congested arrangement and supports the views of professional library staff and faculty members. Hence, it can be said that the space in 3rd Stack is not adequate and on the other hand, the available space has not been properly used.

The Stack IV which is on the mezzanine of the first floor has the accommodation as already indicated in 'Utilisation of Space' part.

And, in particular researchers have highly negative opinion on the adequacy of space in Stack IV. In addition, the faculty members and library staff together have felt that space is not sufficient in Stack IV too.

The required area for accommodating the said number of racks in Stack IV is 4,358 sq.ft., as against the available area of 4,003 sq.ft., which clearly indicates the congestion in the arrangement of racks in this stack. Therefore, it has to be said that the space in Stack IV for shelving is not adequate.
On the whole it could be noted that except the Stack I, the other stacks i.e., II, III & IV were scored negatively by library staff and faculty members group, and few have said that "one may consider them as moderately adequate at present due to the low rate of acquisitions in the library. But the fact remains that the percentage of this category is negligible as against those of students and researchers.

The Investigator in the light of information collected during the course of the study as mentioned earlier, finds that there is acute shortage of space in Stacks II, III & IV. As regard Stack I, at best, it could be considered as having adequate space for accommodating present collection and in near future it may reach a saturation point.

3.9.2.2 Space For Reading

As already discussed, all library functions require some degree of space allocation in the library building. An university library grows in terms of books, readers and staff, which need to be accommodated in a library building. Unless the building is planned keeping in view the growth rate that has been going on it would become impossible to provide necessary services to users. While planning the library building, planners should take into account both the space required for present users and also to comfortably accommodate the growth to take place at least for 20 years to come.

Again efficiency of reading areas depends on the reading environment attained by the physical lay out, acoustical properties, level of illumination and quality
of serenity. In general it is accepted and advocated by many that 10% of the total reading population of the university need to be provided with reading space, with a provision of 25 sq.ft., of space per reader.

Here, an effort has been made to assess the space provided in KUL building for seating accommodation in the light of what ISI has prescribed.

ISI specifies that the average area per reader in the reading hall should be 2.33 m$^2$ minimum (with the size of the reading table 2.4 x 0.6 m. The centre to centre distance between two consecutive rows of reading room tables is 1.8 m with seating arrangement on one side of the table only)$^{11}$.

Karnatak University Library has two reading halls, one on the ground floor and the other on the first floor. And seating arrangement has been provided on both sides of the tables. The number of seats on the ground floor reading hall is 120 and on the first floor reading hall is 84. In addition to the reading seats provided in these two reading halls, 66 seats have been provided in the Stack II.

When inquired about the adequacy or otherwise of reading seats, the users have expressed different opinions in respect of the two reading halls.

$^{11}$ IS: 1553 - 1976, P. 10
Table 6: Space For Reading (figures in percent)

<table>
<thead>
<tr>
<th>Section</th>
<th>Category</th>
<th>Adequate</th>
<th>Moderately Adequate</th>
<th>Inadequate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reading</td>
<td>Students</td>
<td>73</td>
<td>23</td>
<td>4</td>
</tr>
<tr>
<td>Hall-I</td>
<td>Researchers</td>
<td>61</td>
<td>21</td>
<td>18</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(x^2) significant at 5% level</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Reading</td>
<td>Students</td>
<td>37</td>
<td>44</td>
<td>19</td>
</tr>
<tr>
<td>Hall-II</td>
<td>Researchers</td>
<td>9</td>
<td>33</td>
<td>58</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(x^2) significant at 5% level</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

There is not much of a difference between the opinion of students and researchers regarding adequacy of space in reading hall-I. But there is a significant difference between the two in case of reading hall-II. However taking together the values of 'adequate' and 'moderately adequate' opinion, it could be said that majority of both the categories of users have expressed positive opinion towards adequacy of space in two reading halls, with an exception of researchers scoring negatively for reading hall-II.

Faculty members and professional library staff discussed this aspect at length and said that the space is "generally insufficient and particular during examination time it will be worse and one can see users sitting on the bare floor and reading". Some others have said "seating accommodation is sufficient during July to December and only during examination time it will be insufficient". And professional library staff, who are at the service points have said that the seating accommodation is insufficient.
According to ISI recommendation an university library having collection of one to three lakhs of volumes shall have seating accommodation for 1/5 of the number of students and 1/10 of the number of faculty, with the provision for accommodation for 20 to 100 administrative staff\textsuperscript{12}.

At present there are about 2,000 students, 350 faculty members and 150 research students making use of Karnatak University Library. As per ISI about 430 seats for students and researchers and 35 seats for faculty members should have been provided while planning the library building.

As mentioned earlier, the seating arrangement in the reading hall is on both sides of the table which is contrary to the recommendation made by ISI. While arranging the seats also the library has not followed the standard in making space provision per seat which is 2.33m\textsuperscript{2}.

In the light of the above considerations, it would not be fair to conclude that the space utilised for seating is adequate or inadequate because of the following reasons:

1) The KUL building has been planned to be constructed on phased basis.

\textsuperscript{12} IS: 1553 - 1976, P. 7
2) Only one phase of it has been completed now and two more phases are yet to be materialised. Hence, one cannot say that the building is complete. Any conclusion must be subject to this provision.

However, based on the users opinion and the Investigator's own observations, it can be said that the present seating capacity of the library is not meeting the requirements of the users.

3.9.2.3 Space For Researchers

The modern researcher necessarily wishes to work in a place specially designed for him which provides privacy and quietness. ISI has recommended that research cubicles are necessary in an university library and the dimension of each cubicle should be $7 \text{ m}^2$ per individual, but it is silent with regard to the number of cubicles to be provided and also the alternative facility in the absence of adequate number of cubicles in relation to the total number of researchers in the university. However, under the title 'Basic Principles of Design', ISI mentions that "provision should be made for research cubicles, one for each reader, to have a quiet enclosure, all for himself, in which he can keep his reading materials for several days".

At present KUL does not have cubicle facility for researchers. There may be provision for this, when II or III phase of the construction of the building is taken up.

13. IS: 1553 - 1976, P. 16
3.9.2.4 Space For Audio-Visual And Microform Materials

At present the trend is towards the acquisition of non-book material forms like Microfisch, Microfilm, Sound Recordings, Discs, Slides and so on. These non-book materials warrant different environment for their placement and use within the library. Hence, separate and adequate space need to be provided for, while planning the library building.

According to ISI, microfilm reading room is a requirement in a university library. However, dimensions of such rooms are not mentioned in the ISI standards as it depends on the amount of microform materials available and also upon the policies of library administration regarding the acquisition of such materials.

In KUL the written programme makes a mention regarding the audio-visual room, but not for microfilm reading room. Again, no such space/room exists at present in KUL.

3.9.2.5 Space For Relaxation

In modern university libraries a lounge is not a luxury but a necessity. Because, large number of readers like researchers and other serious readers spend long hours studying within the library premises which calls for periodical relaxation. Normally an open space or lounge or rest room is to be provided for both readers and staff members. So that they can have little
diversion from continuous reading and relax for some time and can go back to their reading seats to continue their reading/reference work.

ISI has recommended that adequate provision should be made for rest rooms for the readers and the staff within the premises of the library, where necessary and their dimension should be in accordance with IS: 1233-1969.

However, as a matter of fact lounge facility or rest rooms are not provided within the premises of the KUL either in the original plan or in the constructed portion of the present building.

3.9.2.6 Space For Extension Activities

Extension work is yet another important function of an university library, wherein it provides space, furniture and equipment to organise lectures, seminars, symposia, book exhibition etc.

ISI prescribes a list of rooms required in different types of libraries. For an university library particularly for extension work, seminar rooms and exhibition rooms are a necessity. The dimensions of

14. IS: 1553 - 1976, P. 12

15. IS: 1233 - 1969, Recommendations for Modular Coordination of dimensions in the building industry (first revision)
such rooms shall depend upon the actual requirements of the library. No provision has been made for such activities in the library building. Hence, this concept is not inquired with the users.

3.9.3 Other Aspects Of Space Allocation

Other than the aspects discussed above, there are some miscellaneous aspects which warrant due consideration.

3.9.3.1 Spatial Relationship Of The Different Sections

An university library has generally different functional units, such as acquisition, technical, circulation etc. These units need to be spatially located in such a way that the staff is able to discharge their duties and render effective and efficient library services to the readers by the deployment of available resources. For this purpose functionally related areas need to be as close to one another as possible so that the movement of books, staff and readers would be smoother and easier.

ISI also emphasizes that the functional relationship should be given greater weightage in the design of the building.

After having made an inquiry into the adequacy or otherwise of space in different sections of the library

16. IS: 1553 - 1976, P. 15
17. Ibid.
for different functions, it was intended to know the opinion of the users on other aspects which have an impact on the functional efficiency of the library building, one such factor is the spatial relationship of different sections brought out in KUL building over which we have the following percentage of opinions.

Table-7: Spatial Relationship (figures in percent)

<table>
<thead>
<tr>
<th>Category</th>
<th>Functional</th>
<th>Partly functional</th>
<th>Not functional</th>
</tr>
</thead>
<tbody>
<tr>
<td>Students</td>
<td>43</td>
<td>46</td>
<td>11</td>
</tr>
<tr>
<td>Researchers</td>
<td>23</td>
<td>62</td>
<td>15</td>
</tr>
</tbody>
</table>

\[ x^2 \] significant at 5% level

Table 7 indicates a mixed expression of two categories of users regarding functional relationships of different sections of the library building. However putting together the 'functional' and 'partly functional' opinions it may be inferred that they have positively responded to the issue.

A further inquiry with those users who had said that different sections are 'partly functionally related' and 'not functionally related' to give reasons for substantiating their earlier answers, none of the users substantiated their opinion in this regard.

It has already been discussed in 'planning and utilisation' part of this chapter that the KUL building plan is in such a way that different sections which are
to be in close proximity to each other are separated from each other. Stacks and reading halls are separated by a courtyard, catalogue area and stacks are quite far away from each other. Both the users and the staff are to make long distance walk to reach from one section to the other. It is pertinent to observe here that faculty members and 50% of library staff felt that the present placement of different sections is not suitable for a library, a lot of time and energy would be wasted only in moving from one section to other when required. One important feature of this building is that the administrative wing is completely separated from stacks and reading areas.

There is no doubt that the opinions expressed by the students and researchers are to a great extent instinctive and not based on any sound reasoning. The library building under reference may be considered non-functional mainly because of the fact that stacks and reading areas are completely separated and stacks and catalogue area is quite at a distance from each other, a feature which is contrary to the present trend of narrowing down the proximity between and among the different sections.

3.9.3.2 Movement Of Users

Another aspect inquired into was relating to the space for easier movement of users from one section to another. They were also asked to give reasons for hardships, if any, they had faced. Most of the students and researchers have expressed the opinion that the movement is not easier.
Table 8: Movement Of Users (figures in percent)

<table>
<thead>
<tr>
<th>Category</th>
<th>Easy</th>
<th>Partly easy</th>
<th>Not easy</th>
</tr>
</thead>
<tbody>
<tr>
<td>Students</td>
<td>44</td>
<td>44</td>
<td>12</td>
</tr>
<tr>
<td>Researchers</td>
<td>31</td>
<td>38</td>
<td>31</td>
</tr>
</tbody>
</table>

\[ x^2 \] significant at 5% level

As can be observed from table 8, that a low percent of users opine that it is 'easy' to move from one section to another. Taking together the 'easy' and 'partly easy' opinions, it could be inferred that majority have viewed it as easy or partly easy to move from one section to another.

The faculty and library staff members have strongly felt about this issue and almost unanimously opined that the movement is not easy due to improper planning. Both the categories have stressed that both the categories have horizontal and vertical distances are quite long to feel comfortable.

At this level it may be inferred that the movement of users from one section to other is not smooth, due to the distance between different sections of the library for instance the catalogue and the stacks (such as 2nd, 3rd and 4th Stacks) and reading hall-I and Technical Section and the library stacks.

Thus, the movement from one section to another makes users and the staff easily tiresome.
Internal Environment

Library is a place where quietness has a greater role to play. However, some amount of noise is inevitable, especially at the issue counter and reference desk. The movement of furniture items like chairs, tables and even walking over the steps would cause noise. Such noise disturbs and distract the attention of users in the library. This is all the more evident in reading hall. Hence, the floors should be noise absorbent or floor coverings may have to be provided to avoid such noise.

ISI warns that these disturbances should be controlled effectively by suitable location and appropriate methods as per its recommendations in 14 to 14.4.18.

The floors, ceilings, book racks, reading tables and chairs are to be maintained clean, otherwise dust accumulated may affect the health of both users, staff and books.

Interior decorations like maintaining internal plants, wall panels, pleasing colours on the walls and ceiling would enhance the aesthetic appearance of the building which would be inviting and pleasing to the eyes of the readers, but it should be done without affecting its functional aspect.

18. IS: 1553 - 1976, P. 14
Opinion of the users on the location of the building has been discussed earlier (vide section 3.9.1). Now, it would be appropriate to consider the opinion of users on internal environment of the library and the reasons for their disturbances, which ultimately involves the orientation and planning of the building.

All researchers and students (100%) have opined that they have been disturbed while using library materials in the library premises.

3.9.3.3 Reasons For Their Disturbances

Table 9: Reasons For Their Disturbance (figures in percent)

<table>
<thead>
<tr>
<th>Category</th>
<th>Vehicular traffic</th>
<th>Movement of book of fur-trolleys of furniture of users</th>
</tr>
</thead>
<tbody>
<tr>
<td>Students</td>
<td>27</td>
<td>28</td>
</tr>
<tr>
<td>Researchers</td>
<td>24</td>
<td>28</td>
</tr>
</tbody>
</table>

X² significant at 5% level

The users have identified four causes for their disturbances. They are vehicular traffic, movement of book trolleys, movement of furniture and movement of the people. And the first reason identified here refers to the two wheelers used by the library users and library staff members. In relation to these causes, the Investigator feels that the location of reading halls
are not on the road side and the distance between them is quite long and traffic sound needs to pass through the stacks to reach the reading halls. Hence, this reason may not be given much credence, moreover, their percentage is not that significant.

...
9.3.3.4 Aesthetics

In addition, it was intended to know the opinion of the users on the aesthetic appearance of the building.

Table 10: Aesthetic Appearance Of The Building
(figures in percent)

<table>
<thead>
<tr>
<th>Category</th>
<th>Appealing</th>
<th>Partly appealing</th>
<th>Not appealing</th>
</tr>
</thead>
<tbody>
<tr>
<td>Students</td>
<td>65</td>
<td>30</td>
<td>5</td>
</tr>
<tr>
<td>Researchers</td>
<td>41</td>
<td>41</td>
<td>18</td>
</tr>
</tbody>
</table>

\( x^2 \) significant at 5% level

As can be gathered from the data, the percent of negative opinion is considerably less in both the categories of users. A significant observation is that 65% of students find the library building 'appealing'.

Faculty and library staff members are unanimous in their viewpoint that the building is not aesthetically appealing.

The Investigator's perception is that the external features of the building like entrance of the building, shape of the building are not attractive and gives a dull look. However, the internal features are moderately appealing, particularly the entrance hall, where circulation counter and Goddess Saraswathi statue are installed. Apart from this, other sections like reading halls, stacks and administrative wing are not at all inviting or attractive. The reading hall could be
made little more attractive by providing wall panels and pot plants. In addition the dull black colour of the floors in stacks has created an uninviting atmosphere and caused further darkness.

In the administrative wing, particularly the technical section does not have proper organisation. Ten assistant librarians, few administrative staff, binding materials and unused materials have been huddled together which gives an odd look to the technical section.

In the light of the above information, it may be said that neither the external features are attractive nor the internal environment is inviting. But there are ample chances to enhance the internal aesthetic appearance by way of maintaining wall posters, wall paintings, pot plants, portraits of eminent scholars etc., which make people to get motivated and remain in the library for longer hours. It is generally accepted that greenery is healthy for eyes and hence, special efforts need to be made to maintain it in the libraries.

3.9.3.5 Lighting

The main activities in a library, from the point of view of users, is reading and writing both of which necessitate proper lighting. If the lighting is poor it will make reading a burdensome exercise because it will strain the eyes of the readers. On the other hand, if the lighting is good and based on scientific principles, reading would be a pleasure. Lighting could be provided in the following ways:
3.9.3.5.1 Natural Lighting

Natural light is the cheapest source of light and if properly controlled is best suited for reading. Particularly in a tropical country like India, natural light is in abundance, and needs to be made use of properly. The main source of natural light in a library are the windows, doors and other open spaces. While planning for windows etc., proper provision need to be made for proper placement of them, so as to allow natural light, but not solar radiation and dust. Provision need to be made in planning and construction of the building as to allow for adequate day light into the library, which in turn reduces the cost of artificial lighting and ventilation too.

ISI recommends that the placement of windows in the side walls of the stack rooms should be opposite to each cross gangway and each window should be provided with glass shutters and protected with wire-fabric having its aperture sufficiently small to prevent squirrels, rats etc., from getting in. All windows and ventilators in other rooms, accessible from outside should be provided with wire fabric to prevent books, pamphlets etc., being passed through them.

Lighting is one of the important determinant factors which influences the inhouse use of library materials to great extent.

16. IS: 1553-1976, P.12
Before going into the details of lighting and ventilation facilities in different sections of the library the users were inquired about the placement windows and doors etc. On this issue, the users response is given in the table 11 below.

Table 11 : Placement Of Windows And Doors etc
(figures in percent)

<table>
<thead>
<tr>
<th>Category</th>
<th>Appropriate</th>
<th>Partly appropriate</th>
<th>Not appropriate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Students</td>
<td>50</td>
<td>30</td>
<td>20</td>
</tr>
<tr>
<td>Researchers</td>
<td>38</td>
<td>46</td>
<td>16</td>
</tr>
</tbody>
</table>

x^2 not significant at 5% level

Placement of windows, doors and other open places have been positively viewed by both the categories of users as shown above.

The Investigator finds that placement of the windows is appropriate in stacks and reading halls, but the arrangement of racks in the stacks has created an impression in the minds of the users as 'not appropriate' or 'partly appropriate'. This is mainly because some of the windows in the stack sections are blocked by the racks placed against them. In addition, the size (4'X6') of the windows is smaller in relation to the size of the halls (4,220 sq.ft.,)(4.004 sq.ft.).
Table 12: Natural Lighting In Stack Areas
(figures in percent)

<table>
<thead>
<tr>
<th>Sections</th>
<th>Category</th>
<th>Satisfactory</th>
<th>Not satisfactory</th>
</tr>
</thead>
<tbody>
<tr>
<td>Stack-I</td>
<td>Students</td>
<td>62</td>
<td>38</td>
</tr>
<tr>
<td></td>
<td>Researchers</td>
<td>85</td>
<td>15</td>
</tr>
<tr>
<td></td>
<td>(X^2) significant at 5% level</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Stack-II</td>
<td>Students</td>
<td>44</td>
<td>56</td>
</tr>
<tr>
<td></td>
<td>Researchers</td>
<td>38</td>
<td>62</td>
</tr>
<tr>
<td></td>
<td>(X^2) not significant at 5% level</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Stack-III</td>
<td>Students</td>
<td>53</td>
<td>47</td>
</tr>
<tr>
<td></td>
<td>Researchers</td>
<td>77</td>
<td>23</td>
</tr>
<tr>
<td></td>
<td>(X^2) Significant at 5% level</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Stack-IV</td>
<td>Students</td>
<td>73</td>
<td>27</td>
</tr>
<tr>
<td></td>
<td>Researchers</td>
<td>50</td>
<td>50</td>
</tr>
<tr>
<td></td>
<td>(X^2) Significant at 5% level</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Natural light is a very vital resource as well as an essential amenity. The library building should have large windows & glass panels etc., so as to fetch sufficient day light into it. The respondents were asked about the adequacy or otherwise of lighting facilities in stack areas. Majority of researchers and students, as shown in Table-12, say that lighting facility provided in Stack-I, III and IV are satisfactory, but larger percentage i.e., 62% and 56% of researchers and students respectively felt that in Stack-II lighting facility is not satisfactory.
However, 73% of faculty members and 80% of professional library staff have commented on the provision of natural lighting facility in detail and said that in all the four stack rooms the natural light is not fully tapped. Particularly, during rainy season and cloudy days, natural light would be highly insufficient. It has been supplemented by artificial lighting, which cannot be relied on, as there tend to be frequent power cuts.

The Investigator finds that the natural lighting facility is not adequate for the purpose of locating the documents on the shelves, in the stack areas. One of the reasons for such inadequacy of light is arisen due to blocking of few windows by placement of the racks, the other being (as already mentioned) the smaller size (4' X 6') of the windows. Thirdly, the most important reason is the low level box type ceiling (ceiling level is 8 feet and the box height is 1 feet 8 inches). They have even broken the box slabs to place racks below them (vide. photo).

Table 13: Natural Lighting In Reading Areas
(figures in percent)

<table>
<thead>
<tr>
<th>Areas</th>
<th>Category</th>
<th>Sufficient</th>
<th>Not sufficient</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reading Hall-I</td>
<td>Students</td>
<td>82</td>
<td>18</td>
</tr>
<tr>
<td></td>
<td>Researchers</td>
<td>62</td>
<td>38</td>
</tr>
<tr>
<td></td>
<td>$X^2$</td>
<td>significant at 5% level</td>
<td></td>
</tr>
<tr>
<td>Reading Hall-II</td>
<td>students</td>
<td>53</td>
<td>47</td>
</tr>
<tr>
<td></td>
<td>Researchers</td>
<td>62</td>
<td>38</td>
</tr>
<tr>
<td></td>
<td>$X^2$</td>
<td>not significant at 5% level</td>
<td></td>
</tr>
</tbody>
</table>
In library building planning reading areas assume considerable importance because of their functions. The reading areas need to be well planned, attractive and comfortable, and only then can such areas tempt readers to sit for longer hours in the library and thus prove to be a source of inspiration to readers. Lighting is one of such factors which makes the reading areas attractive and comfortable for reading purposes.

Scoring of the data relating to the lighting facility in different reading areas brings home that average 62% of researchers are of the opinion that there is sufficiency of natural lighting facility in both the Reading halls. And an average of 67% of students have said lighting facility in Reading halls I and II is sufficient (pl.vide table-13).

However, a smaller percentage of researchers have felt the insufficiency of lighting facility in reading halls I and II respectively. Faculty members (72%) and professional library staff are of the view that natural lighting facility is sufficient in Reading hall-I, but insufficient in Reading hall-II.

The Investigator is of the opinion that the Reading hall-I will have enough of light only during non manson season, during monsoon due to clouds and rain, the reading hall will not get required amount of light. In the case of Reading hall-II, in consonance with the faculty members and library staff, it has to be said that natural lighting facility is insufficient for reading purposes.
This situation may be due to smaller size of the windows and the number of windows provided in Reading hall-II in relation to the size of the hall is not adequate. Hence, it has to be supplemented by artificial lighting.

3.9.3.5.2 Artificial Lighting

The majority of the libraries in India, particularly university libraries are kept open till late night. During cloudy days natural light becomes insufficient and hence need to be supplemented by electric light.

Further, the day light cannot be depended upon exclusively for well lighting of a library the whole of a day, in all seasons. There are many sources of artificial lighting such as fluorescent lamps and incandescent lamps etc. It is always desirable to have artificial lighting to supplement natural lighting.

Table-14 Artificial Lighting In Stacks
(figures in percent)

<table>
<thead>
<tr>
<th>Sections</th>
<th>Category</th>
<th>Sufficient</th>
<th>Not sufficient</th>
</tr>
</thead>
<tbody>
<tr>
<td>Stack-I</td>
<td>Students</td>
<td>81</td>
<td>19</td>
</tr>
<tr>
<td></td>
<td>Researchers</td>
<td>71</td>
<td>29</td>
</tr>
<tr>
<td></td>
<td>$X^2$ not significant at 5% level</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Stack-II</td>
<td>Students</td>
<td>77</td>
<td>23</td>
</tr>
<tr>
<td></td>
<td>Researchers</td>
<td>60</td>
<td>40</td>
</tr>
<tr>
<td></td>
<td>$X^2$ significant at 5% level</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
There is no significant difference between the opinion of students and researchers with regard to artificial lighting facility in stack areas, excepting in degree. And both the categories of users have expressed positive opinion towards the issue.

Among the faculty users only a smaller percent of them (42%) were able to discuss the issue and the remaining did not comment on the facility as they were not using the library during night times. However professional library staff were satisfied with the artificial lighting facility in all the four stack rooms.

It need to be said at this point that the light sources (which are 80 in number in each stack) are embedded in the boxe of the ceiling which restrict the light only to the boxes and below that. Investigator strongly feels that the inadequacy of artificial lighting in stacks is due to low level ceiling and their placement within the boxes which has resulted in no uniformity in lighting facility (Vide. PhotoK-2).
It can be gathered from table 15 that there is significant difference between the opinion of students and researchers with regard to artificial lighting in reading areas, particularly in respect of Reading hall-I. However in case of Reading hall-II they differ only in degree.

About 42% of faculty members have said that artificial lighting facility in both the reading halls is insufficient and remaining did not comment on the artificial lighting facility as they were not visiting the library during the night times and further opined that during cloudy days, they had experienced insufficiency of artificial lighting in both reading halls.

It may be gathered that the artificial lighting facility provided in reading halls is not up to the
expected level of the users. The reason for their dissatisfaction may be due to the frequent power cut in the area.

3.9.3.6 Ventilation

Ventilation is another factor which influences and enhances the use of materials within the premises of the library.

Ventilation facility can be provided in two ways (a) Natural ventilation by provision of open spaces like doors, windows, ventilators etc., and (b) artificial ventilation by electric fans of different types and heating equipments, to maintain the proper temperature in stack areas and reading areas of the library for maintenance of the physical atmosphere for the readers. Otherwise, an ill-ventilated building is going to affect both books and the readers.

A library building which is designed to provide an 'open access system', the windows in stack room should be large enough to admit maximum possible natural air into the cross gangways facing it.

Each window in reading rooms should be so placed that they throw sufficient light and air on the reading tables.

3.9.3.6.1 Natural Ventilation

Opinion of the users with regard to the natural ventilation facility in stacks and reading areas is given in a tabulated form below in table 16.
TABLE 16: Natural Ventilation In Stack And Reading Areas
(figures in percent)

<table>
<thead>
<tr>
<th>Sections</th>
<th>Category</th>
<th>Sufficient</th>
<th>Not sufficient</th>
</tr>
</thead>
<tbody>
<tr>
<td>Stack-I</td>
<td>Students</td>
<td>81</td>
<td>19</td>
</tr>
<tr>
<td></td>
<td>Researchers</td>
<td>83</td>
<td>17</td>
</tr>
<tr>
<td></td>
<td></td>
<td>$X^2$ not significant at 5% level</td>
<td></td>
</tr>
<tr>
<td>Stack-II</td>
<td>Students</td>
<td>59</td>
<td>41</td>
</tr>
<tr>
<td></td>
<td>Researchers</td>
<td>36</td>
<td>64</td>
</tr>
<tr>
<td></td>
<td></td>
<td>$X^2$ significant at 5% level</td>
<td></td>
</tr>
<tr>
<td>Stack-III</td>
<td>Students</td>
<td>65</td>
<td>35</td>
</tr>
<tr>
<td></td>
<td>Researchers</td>
<td>27</td>
<td>73</td>
</tr>
<tr>
<td></td>
<td></td>
<td>$X^2$ significant at 5% level</td>
<td></td>
</tr>
<tr>
<td>Stack IV</td>
<td>Students</td>
<td>59</td>
<td>41</td>
</tr>
<tr>
<td></td>
<td>Researchers</td>
<td>40</td>
<td>60</td>
</tr>
<tr>
<td></td>
<td></td>
<td>$X^2$ significant at 5% level</td>
<td></td>
</tr>
<tr>
<td>Reading</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hall-I</td>
<td>Students</td>
<td>76</td>
<td>24</td>
</tr>
<tr>
<td></td>
<td>Researchers</td>
<td>62</td>
<td>38</td>
</tr>
<tr>
<td></td>
<td></td>
<td>$X^2$ significant at 5% level</td>
<td></td>
</tr>
<tr>
<td>Reading</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hall-II</td>
<td>Students</td>
<td>65</td>
<td>35</td>
</tr>
<tr>
<td></td>
<td>Researchers</td>
<td>45</td>
<td>55</td>
</tr>
<tr>
<td></td>
<td></td>
<td>$X^2$ significant at 5% level</td>
<td></td>
</tr>
</tbody>
</table>
A significant difference can be observed between the opinion of students and researchers with regard to natural ventilation in Stack II, III, IV and Reading hall II. However, both categories have a positive view towards Stack I and Reading hall I. And it can also be seen from the table-16 that majority of students have expressed favorable opinion towards all sections listed above. In contrast to the opinion of researchers, faculty members and the library staff too have expressed similar opinion. According to them, only in Stack I, the ventilation facility is sufficient but in other stacks, the facility provided is not sufficient. The reasons attributed for this state of being are the small size of the windows, placement of racks against few windows and thirdly, the slanted structure of the building and low level ceiling as already discussed under lighting facility. (Vide Photo K-3).

3.9.3.6.2 Artificial Ventilation

TABLE 17 Artificial Ventilation In Stack And Reading Areas (figures in percent)

<table>
<thead>
<tr>
<th>Sections</th>
<th>Category</th>
<th>Sufficient</th>
<th>Not sufficient</th>
</tr>
</thead>
<tbody>
<tr>
<td>Stack-I</td>
<td>Students</td>
<td>78</td>
<td>22</td>
</tr>
<tr>
<td></td>
<td>Researchers</td>
<td>81</td>
<td>19</td>
</tr>
<tr>
<td></td>
<td>$X^2$ not significant at 5% level</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Stack-II</td>
<td>Students</td>
<td>60</td>
<td>40</td>
</tr>
<tr>
<td></td>
<td>Researchers</td>
<td>71</td>
<td>29</td>
</tr>
<tr>
<td></td>
<td>$X^2$ not significant at 5% level</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Artificial ventilation is an essential facility in any library. Hundred percent natural ventilation cannot be provided, because natural ventilation along with light and air brings in dust, heat (in summer) and cold (in winter) etc., into the library. Hence, too many windows and open spaces cannot be provided for fetching natural ventilation. However, it can be supplemented by artificial ventilation to have change of air rapid enough to counteract odours and pollution of any kind.

Opinion survey with regard to the artificial lighting facility in KUL, as presented in the table 17 shows that majority of both the categories of users have
experienced the sufficiency of artificial ventilation in all the stack rooms and reading halls, though they differ in degree of opinion. Individual percentages of users saying sufficient in different stack rooms and reading halls have been shown in the table 17.

However, faculty members and library staff are of the opinion that artificial ventilation facilities mainly the fans are not appropriately fixed in stacks because of their placement within the boxes of the ceiling, air will rotate within the box (Photo-K4). Hence, the stacks are stuffy. As far as the reading halls are concerned the general opinion is that the artificial ventilation provided is sufficient.

The Investigator is of the view that the number of artificial ventilation sources provided in the stack areas is sufficient but due to the box type ceiling, air does not get circulated evenly in the stacks, which gives the impression that the stacks are stuffy. But in case of reading halls, artificial ventilation facility is sufficient.

3.9.3.7 Colour Pattern

Colour pattern is one of the important aspects of the library. One has to give due consideration to the colour pattern of ceiling, walls, floors and furniture of the library, which ultimately affect the quality of light and therefore, reading. Lighter surfaces reflect more light than darker ones. Therefore, in the opinion of H.D. Sharma it is of utmost importance that the colours of ceilings in a library should always be white.
and those of walls creamy white or yellow. If proper
colour touch is given to walls, ceiling, floors and
furniture, it would maximise the light effect in the
library. Further, it reduces the cost of artificial
lighting. Psychologically also it pleases the readers
and makes them remain in the library for longer hours.
Scientifically also, it is always advisable to have
light and pleasing colour which will have soothing
effect on the readers and give them a kind of relief
whenever they lift their sight from the printed matter.

TABLE 18 : Colour Pattern(figures in percent)

<table>
<thead>
<tr>
<th>Category</th>
<th>Appropriate</th>
<th>Not Appropriate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Students</td>
<td>76</td>
<td>24</td>
</tr>
<tr>
<td>Researchers</td>
<td>77</td>
<td>23</td>
</tr>
</tbody>
</table>

$X^2$ not significant at 5% level

Table 18 indicates that there is no difference between
the opinion of two categories of users and both of them
have expressed positively towards the colour pattern in
the library. However, the faculty and professional
library staff are of the opinion that the colour pattern
on walls and ceilings is appropriate excepting the floor
colour, particularly in stack rooms (which is dull
black) which is not advisable in a library.

20. H.D.Sharma.
"Library Building and Furniture", Varanasi, Indian
Bibliographic Center, 1970, P.71.
Colour pattern is looked at from the functional point of view like reading, writing, shelving, etc., it is found especially in reading areas that light and pleasant colours enhance both natural and artificial lighting and make reading room more attractive and appropriate for reading purposes. However, in stack areas colour pattern adopted for ceiling and floors is more important as the walls will be covered by racks. The light coming through the windows falls on to the floor and the ceiling and then it is reflected on to the shelves, by virtue of which one can read the book labels clearly. In administrative areas too light colour pattern need to be adopted to suit the nature of the work.

The Investigator has similar opinion as that of faculty and library staff members. Except the floor colour in stacks, the colour pattern in other areas is quite appropriate for library purposes.

3.9.3.8 Hygiene

A functional library building should ensure that its surfaces like walls, floors, ceilings, shelves, reading chairs and reading tables are as dust free as possible. Similarly, it should ensure especially in rainy season that water does not accumulate on the top of the ceiling, or get clogged in the water pipes or enters the premises of the building. Again, the location of toilets and provision of running water are important from the hygienic point of view. Odorless toilets suitably located away from the reading rooms enhance the use of library resources. Thus, the term 'hygienic'
has been construed here as providing cleanliness of all surface areas, provision for non-accumulation of rainy water and suitable location of toilets with adequate and continuous running water. Information collected from the users is tabulated and given below in the table 19.

Table 19: Cleanliness
(figures in Percent)

<table>
<thead>
<tr>
<th>Category</th>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td>Students</td>
<td>64</td>
<td>36</td>
</tr>
<tr>
<td>Researchers</td>
<td>54</td>
<td>46</td>
</tr>
</tbody>
</table>

\[X^2\] not significant at 5% level

Majority of both the categories of users have viewed the cleanliness maintained in the library positively. And certain percent of the both types of users have negatively experienced the idea of cleanliness with in the premises.

Further inquiry was made to know the reasons for their dissatisfaction. The reasons attributed by the users are as follows:

50% of researchers and students have said that it is due to larger rooms and another 50% of researchers have attributed it to insufficient staff. In case of students, only 38% have said that it is due to insufficiency of staff and remaining 12% have not responded to this part of the query.
However, faculty respondents were of the view that maintenance of cleanliness is very poor and reasons are many. Mainly improper attention by the Administration and defective planning are the reasons for uncleanliness in KUL.

It has been observed by the Investigator that due to defective construction water enters during rainy season, both through the ceiling and windows and has spoiled much of the stack areas. Due to dampness fungal formation can be seen on few places on walls and also on the ceilings of the stack areas. And in reading halls, the Investigator has observed during many visits made to the library, dust accumulation on tables, floors and windows. Therefore, it may be concluded that the maintenance of cleanliness is very poor and needs immediate improvement.

3.9.3.8.1 Sanitation

IS: 1553-1976 recommends that water closets and urinals and other similar facilities shall be provided in accordance with the requirements laid down in IS: 1972-1971, page 11 which is revised and provided in IS: 1972-1983.

Sanitary blocks are to be placed in such a manner that they are within the easy reach of users and care should be taken to see that their provision is not a nuisance for readers and library staff, either in the reading hall or in their work places.
Opinion gathered from the users on the provision of sanitary blocks has been noted in table 20.

TABLE 20: Provision Of Sanitary Blocks
(figures in percent)

<table>
<thead>
<tr>
<th>Category</th>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td>Students</td>
<td>57</td>
<td>43</td>
</tr>
<tr>
<td>Researchers</td>
<td>67</td>
<td>33</td>
</tr>
</tbody>
</table>

$X^2$ not significant at 5% level

Table 20a: Placement Of Sanitary Blocks
(figures in percent)

<table>
<thead>
<tr>
<th>Category</th>
<th>Appropriate</th>
<th>Not Appropriate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Students</td>
<td>0</td>
<td>100</td>
</tr>
<tr>
<td>Researchers</td>
<td>0</td>
<td>100</td>
</tr>
</tbody>
</table>

The data with regard to the provision of toilet facility within the building show that the users have mixed reactions. Though as shown in Table-20 majority accepted that there is toilet facility, but (as shown in Table 20 a ) none of the users have approved the placement of it in KUL as appropriate and convenient.

Faculty and library staff members are much against the present placement of cloak rooms which is just behind the entrance hall and their maintenance is very
poor, particularly when there is water scarcity such a provision is more a nuisance rather than a facility for the readers and the staff.

The Investigator has similar opinion as that of faculty and library staff members, excepting the satisfaction of its presence, neither the placement nor the maintenance appreciable.

3.9.3.8.2 Drinking Water Facility

Another important facility to be provided within the library building is drinking water facility. Particularly in tropical climates it has a greater significance. It is necessary to provide such facility at vantage points by way of electric coolers and/or clean earthen pots. These should be so located as to avoid direct sun-light following on them.

Further, users were inquired to know their opinion on the availability of drinking water facility in KUL

Table 21: Provision Of Drinking Water Facility
(figures in percent)

<table>
<thead>
<tr>
<th>Category</th>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td>Students</td>
<td>100</td>
<td>0</td>
</tr>
<tr>
<td>Researchers</td>
<td>98</td>
<td>2</td>
</tr>
</tbody>
</table>

\[ X^2 \text{ not significant at 5\% level} \]
Table 21a: Placement Of Drinking Water Facility

<table>
<thead>
<tr>
<th>Category</th>
<th>Convenient</th>
<th>Not convenient</th>
</tr>
</thead>
<tbody>
<tr>
<td>Students</td>
<td>91</td>
<td>9</td>
</tr>
<tr>
<td>Researchers</td>
<td>91</td>
<td>9</td>
</tr>
</tbody>
</table>

$X^2$ not significant at 5% level

The opinion of the researchers and students relating to water facility in the library premises exhibits that large majority of users opine that there is drinking water facility in the library and they have also said that it is appropriately placed. However, only a negligible percentage of researchers have mentioned that there is no such facility.

Faculty members and library staff are of the view that the library does provide such facility but it is not sufficient and need to be provided on all the floors.

Investigator strongly supports the opinion of the faculty members and library staff. Drinking water facility is provided only at the entrance, which demands for long distance walk from stacks and reading halls to reach it. Hence, it is desirable to have such facility on each floor.
3.9.3.9 Facility For Refreshments

A small refreshment room or canteen where beverages like tea, coffee and milk, sandwiches and snacks could be had to refresh oneself after long hours of study within the library is considered a necessity rather than a luxury. Besides, such provision may serve as a meeting place for users as well as staff. If a canteen is found unnecessary because of the proximity of a full-fledged canteen near the library building on the campus, such a facility within the library may be avoided.

In the Karnatak University campus, canteen facility has been provided, but it is situated half a kilometer away from KUL building and hence, there is need for refreshment facility.

However, in the planning of the KUL building, no provision has been made for refreshment either within the premises or outside it.

ISI also recommends that adequate provision should be made for canteen for the readers and the staff members.

When inquired with the users regarding the feasibility of a canteen or refreshment room within the library, majority of them wished to have one and it is essential. Their opinions have been given in table 22.
### TABLE 22: Feasibility Of Refreshments Room

<table>
<thead>
<tr>
<th>Category</th>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td>Students</td>
<td>94</td>
<td>6</td>
</tr>
<tr>
<td>Researchers</td>
<td>91</td>
<td>9</td>
</tr>
</tbody>
</table>

$x^2$ not significant at 5% level

However, faculty members and library staff were very much against the idea of refreshments facility within the premises and said such facility would create lot of noise and disturbance to the users and staff members.

The Investigator views that in the absence of a nearby canteen, refreshments facility is a necessity in the library, not necessarily within the premises, but attached to library building and entrance may be from outside the library, so that there will not be any disturbance due to noise created in it or due to frequent movement of users and staff.

3.9.4 Other Comments On The Library Building By The Users

Further, the users were asked to comment on any other aspect of the library building which is not dealt within the earlier part.

Some of the comments are as follows:

1. "This building suits a temperate region than tropical region like ours. Design is useless and during rainy season it will become impossible to stay in the building because of leakage".
"The building is not appropriate for housing a library and not an attractive building too".

"Space is unnecessarily wasted and separation of stacks and reading halls is the major defect of the building plan. So also the construction of ceiling. Too much of space is occupied by administration".

"Bad planning, no aesthetic appeal, faulty construction" etc.,

The general impression of the users on the library building of Karnatak University is not favourable. They have expressed their dissatisfaction on many aspects of the building and its utilisation, like structure, lighting, ventilation, functional relationship of different sections etc.

The Investigator has attached greater significance to the opinions expressed by faculty and library staff members than to the opinions of the researchers and students, because of the formers experience in and exposure to the library environment in day to day affairs for over a period of time.

The opinion survey indicates that there are certain aspects in which, both the students and researchers of KUL have expressed almost similar opinions; the aspects are:

1) Placement of windows and doors;
2) Natural and artificial lighting in Stack II and Reading area I;
3) Natural and artificial ventilation;
4) Colour pattern, hygiene and refreshment facility.

In relation to other aspects like, location of the building, adequacy of space for stacking and reading, user movement, aesthetics etc., their opinions differ significantly.

3.9.5 Summary Of Inferences

The analysis of each of the aspect of the library concept in the context of the KUL has led to certain inferences. Here, an attempt is made to summarise briefly an overview of what the study has revealed.

Firstly, with regard to the location of the library building centrality is adhered to, keeping in mind, the future developments of the university campus. However, it should be noted that certain areas maintained in the written programme are not seen in the blue prints. For eg., seminar room, group discussion room, research cubicles and Department of Library and Information Science. Secondly, as regards to the shelving space it is found that there is a difference between the proposed amount of space and actual space provided as shown in page ..... Either the proposed amount of space or the actual space provided for, are not justified at any stage.

Thirdly, in the written programme a provision has been made for research cubicles, room for refreshments (within the premises), room for relaxation (lounge), seminar room, special reading room and discussion room.
But interestingly none of them have been provided for in the blue prints of the first phase.

Fourthly, coming to the most important part of the study viz., utilisation of available space in the KUL, it may be said that the available space is not appropriately used. In some of the cases the portions built for a specific purpose have been utilised for completely a different purpose thereby diluting the very purpose of its construction. For e.g., Browsing hall being used as U N Depository centre, Microfilm room being used by Stenographer, Deputy Librarian's room is being used for binding section.

Further, those areas which were built for specific purposes have been used for the same. But due to the explosion in the number of students, researchers, faculty and staff members and also due do the continued growth of collection over a period of time, a point of saturation is reached in these sections. Whereby an optimum level of utilisation has gone for beyond the reach. The existing reality of how arrangement of racks in the stack areas and reading seats in the reading halls have been made to speak for themselves of this situation.

Another important aspect of the KUL is the structure of the building. In the light of the opinions collected and the ISI specifications, it may be inferred that the very structure does not suit the climate of tropical countries like India. The stack height is not suitable for housing standard rack of 7 feet height.
The other aspects like lighting, ventilation and toilet location, have not been properly taken view of. Proper care is not taken while providing these basic facilities. While approving the present placement of drinking water facility the respondents feel that it should have been provided on each of the floors.

This study is done keeping in mind the present structure of the library building in relation to the present development of the campus. With the completion of remaining two phases the stress that has been on this present building will be considerably reduced. Therefore, the present study is only a partial evaluation of a partially built library building.