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Utilization of Library Space in University Libraries of Assam: A Study

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Abstract:

Objective: This study dealt with different academic library spaces like collection space, user seating space, service & staff work area space, non- assignable space etc. The main objective of the study was to identify the library spaces of four select State University libraries of Assam and how these spaces were being identified, organized and utilized by adopting different measures. It also emphasized on the weeding out policy of the University libraries as it was the key element of library space management.

Methods: For this study, both qualitative and quantitative approach for data collection had been used. A structured questionnaire was prepared and sent to the head of the libraries for collecting relevant information and personal interview with the librarians had also been done. For collecting proper measurement of the spaces, physical verification of the libraries was also carried out.

Results: The finding showed that the libraries had efficiently utilized its spaces and adopted different measures for optimum utilization. Different spaces were so organized that natural and artificial lighting facilities and natural air could take place. The libraries followed various guidelines or standards, keeping in mind of the institutional goals and objectives. But whenever it would create difficulties to agree with these standards, the libraries would follow its institutional guidelines.

Conclusion: This study is helpful for the upcoming library professionals or future library planners to cope-up with the changing environment due to the implementation of web-based technologies and future library space re-arrangement process in the libraries.

Keywords: Assam, Library Building, Library Space, Library Standards, Space Management, University Library.

1. Introduction:

Space Management deals with the management of an institution's physical space inventory, which includes tracking, control, supervision, utilization and planning of the space available. It is about the accurate recording of space, planning, using space modelling,

application of benchmarks to measure how well space is being used. It has been defined as the management, control and supervision of the physical spaces that an institution occupies. This could refer to a single floor, multiple floors or multiple floors in multiple buildings. It is a multi-step process that requires data gathering, analysis, forecasting and strategizing. Space management identifies who sits where, understanding how much space the organization has, and how it is being used and projecting and forecasting how much space it will need in the future. Library space management includes space arrangements such as floor loading requirements, book stack spacing, furniture and equipment section, as well as power and energy requirements. Conservation and utilization of space in the interior of the library is very important. It is the librarians' duty to arrange stacks in appropriate rows that facilitate easy access to library materials on the shelves. The interior designers and architects are concerned with the shape arrangements that encourage the workability of the spaces. This calls for collaboration among the librarians, interior designers, architects and administration in library building design and space management.

2. Review of Literature:

Space is a very important concept in designing and planning the academic library as a place. There are three basic elements such as functionality, usability and attractiveness which are considered as a provision and maintenance of space in the library. Moreover, a modern library should be openness, multifunctional, flexibility and artistry by its nature **(Ugwuanyi, Okwor & Ezeji, 2011).** As the collection and budget are resources, space is also considered as an important resource and hence it requires at least as much management attention as finances and personnel. Space is frequently a problem in academic libraries due to the introduction of modern technologies **(Bijle, 2013).** Planning for user space like collaborative space, sanctuary space, interaction space and community space in support of learning is a complex task as it needs to take into account the variety of users' needs and behavior. Before specifying the actual layout and design of users' spaces in academic libraries, it is important to consider all the major factors that affect the use of the intended library space **(Choy & Goh, 2016).**

Space management can monitor and record data about how the libraries utilize their spaces and facilities. To analyze the physical space management, the librarians must get the feedback via interviews and questionnaires from the library users and through personal observation. So, a GIS (Geographical Information Systems) should be introduced as a library space management tool because of its ability to analyze spatial data and interactive information

(Xia, 2004). The lack of space at libraries has resulted for different solutions, e.g., space-saving in the collection section, there is a need of compact shelves and perpendicular sliding compact racks as space management tools for any library or decentralization of the collection is a more acceptable approach, the transfer of part of the collection to the branch or departmental libraries has proved effective in diminishing shelving costs and saving space **(Arya, Singh & Mishra, 2009).**

For optimum utilization physical space in academic libraries, it is highly recommended for creation of digital space at the remote location to save the physical space of the libraries by adopting automated book drop box, self-charging and discharging facilities, use of mobile technology, audio tours of library etc. **(Gautam, 2014).** The collaboration of physical space with virtual space has happened with the rapid development of information technology, globalization, open access, cloud computing etc. The design concept of intelligence library such as intelligence service system, self-service system, automatic management system, large data analysis guide system, robot guide system etc. as a part of virtual space management system in the libraries **(Yuke, Pingping, Zhiwen & Yingfa, 2017).** The library standards serve as an indispensable aid to library authorities and librarians in developing adequate book stocks, in the functional and adequate building made, and in securing properly qualified personnel **(Singh, 2014).**

3. Objectives of the Study:

The basic objectives of the study are as follows-

   i) To identify the different library spaces available at selected University libraries of Assam.

   ii) To explore the proportionate amount of space utilized in different sections of the libraries.

   iii) To examine the strategies adopted for optimum utilization of the different library spaces.

4. Scope and Limitations:

The present study dealt with space management in University libraries of Assam. It revealed only the utilization of different spaces in the University library buildings. To undertake this study, four State Universities of Assam were purposively selected i.e., Cotton University, Dibrugarh University, Assam Agricultural University and Bodoland University.

5. Methodology:

To undertake this study, physical verification of the different library spaces was done and proper measurement of each space was carried out. A structured questionnaire was distributed among the library professionals to collect all other relevant information on the topic.

6. Results and Discussions:

The study is carried out with four select University libraries of Assam. The basic information of the libraries is as follows-

Table-1: Basic Information of the libraries

Name of the University	Nature of the University	Year of Establishment (Library)	Name of the Library
Cotton University (CU)	State	1901	Dr. Surya Kumar Bhuyan Library (SKBL)
Dibrugarh University (DU)	State	1967	Lakshminath Bezbaroa Library (LNB)
Assam Agricultural University (AAU)	State	1969	Rev. B. M. Pugh Library (RBMPL)
Bodoland University (BU)	State	2009	Padmashri Madaram Brahma Central Library (PMBCL)

Table-2: Information regarding Library Buildings

Name of the Library	Total Space (In square ft.)	Total Floors	Interior Library Construction (Fixed/Modular/Both)	Access Provided (Closed/ Open)

SKBL, CU	13000.00 (approx.)	3	Fixed	Closed Access
LNBL, DU	41,992.00 (approx.)	4	Fixed	Open Access
RBMPL, AAU	29062.56 (approx.)	2	Both Fixed and Modular	Open Access
PMBCL, BU	12000.00 (approx.)	1	Both Fixed and Modular	Open Access

6.1. Different Library Spaces available at different University Libraries of Assam:

There are various spaces which can be found at academic library environment such as collection space *(Stack and Almirah Spaces);* Public Electronic Workstation Space and Information on Automation Needs *(Internet Section, Digital Library etc.);* User Seating Space *(Reading Room, Study Carrels etc.);* Service Areas & Staff Work Area Space *(Circulation Section, Technical Section, Librarian's Room, Staff Room etc*.); Meeting Room Space *(Conference Room, lecture hall etc.);* Special-use Space *(Space for Newspaper rack, Photocopier, Staff locker, Atlas/ Dictionary Stand, Bulletin Board etc.);* and More Special-Use Areas like Cafeteria, Gallery, Local History and Genealogy Room, Literacy Volunteers Meeting Room, Relax Reading Room Space, Collection Sorting Space (*RFID*), Non-Assignable Space or Mechanical Space *(Store rooms, restrooms, server room, space for lift facility, etc.)* and Lavatory Space *(Bathroom, Washroom etc..* Following are some of the basic library spaces available at the University Libraries of Assam-

Table-3: Availability of Library Space

Sl. No.	Name of the Library Space	Name of the Library			
		SKBL CU	LNBL DU	RBMPL AAU	PMBCL BU

Sl. No.	Name of the Library Space	SKBL CU	LNBL DU	RBMPL AAU	PMBCL BU
1	Collection Space	√	√	√	√
2	Electronic Workstation Space and Information on Automation Needs	√	√	√	√
3	User Seating Space	√	√	√	√
4	Service Areas & Staff Work Area Space	√	√	√	√
5	Meeting Room Space	--	√	√	--
6	Special-Use Space	√	√	√	√
7	Cafeteria Space	--	√	--	--
8	Local History and Genealogy Room Space	√	√	--	--
9	Collection Sorting Space (RFID)	--	--	√	--
10	Relax Reading Room Space	--	√	--	--
11	Non-Assignable Space or Mechanical Space	√	√	√	√
12	Lavatory Space	√	√	√	√
13	Others	√	√	√	√
	Total Score (13)	**9 (69.23%)**	**12 (92.31%)**	**10 (76.92%)**	**8 (61.54%)**

Table-4: Distribution of Library Spaces

Sl. No.	Name of the Library Space	Distribution of Library Space (%)			
		SKBL CU	LNBL DU	RBMPL AAU	PMBCL BU

1	Collection Space	42.8%	40%	43.6%	45.8%
2	Electronic Workstation Space and Information on Automation Needs	3.57%	4%	6%	5.6%
3	User Seating Space	10.76%	10%	9.8%	12.3%
4	Service Areas & Staff Work Area Space	11.27%	8%	11%	9.2%
5	Meeting Room Space	--	0.8%	0.88%	--
6	Special-Use Space	0.73%	0.6%	1.2%	0.77%
7	Cafeteria Space	--	0.02%	--	--
8	Local History and Genealogy Room Space	0.38%	1.6%	--	--
9	Collection Sorting Space (RFID)	--	--	0.12%	--
10	Relax Reading Room Space	--	3%	--	--
11	Non-Assignable Space or Mechanical Space	11.2%	12%	14%	9.8%
12	Lavatory Space	1.28%	2%	1.4%	2.6%
13	Others	18.01%	17.98%	12%	13.93%
	Total	**100%**	**100%**	**100%**	**100%**

From the above table, it can be said that the University libraries have effectively utilized their different spaces. The major portion of space has been utilized for collection in all the libraries.

6.2. Different Strategies Adopted for Optimum Utilization of the Library Space:

Space problem of a large collection in a library is the obvious one. So, an effective

space utilization process helps to maximise the use of different spaces in a library. Following are the different strategies adopted for optimum utilization of library space-

Table-4: Strategies adopted for optimum utilization at different spaces

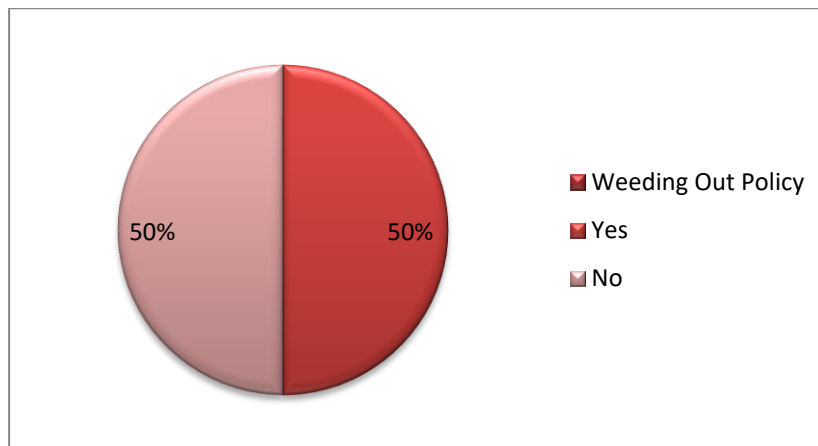| Sl No.	Strategies	SKBL CU	LNBL DU	RBMPL AAU	PMBL BU
1	Double-faced bookshelves are used	√	√	√	√
2	Two-way reading cabins are provided	√	√	√	√
3	Moveable periodical display racks containing boxes for earlier issues	√	√	√	√
4	Double-faced racks for bound volumes	√	√	√	√
5	Use of perpendicular sliding compact racks	--	√	√	--
6	Automated book dropbox	--	--	--	--
7	Self-service kiosk	--	--	--	--
8	Using glass walls instead of bricks in the interior	√	√	√	√
	Total Score (8)	**5 (62.5%)**	**6 (75%)**	**6 (75%)**	**5 (62.5%)**

The University libraries have used different measures so that they can optimize their available library space and maximise service delivery. But the libraries have missed some of the major automated library services like self-service kiosk, automated book drop box etc. by which somehow it can be reduced large portion of spaces in the library.

6.3.Weeding out of Library Materials:

Table-5: Weeding Out Policy

Name of the Library	Whether Weeding out Policy? (Yes or No)	Amount of Weeding out of materials (%)
SKBL, CU	√	2% or 3%

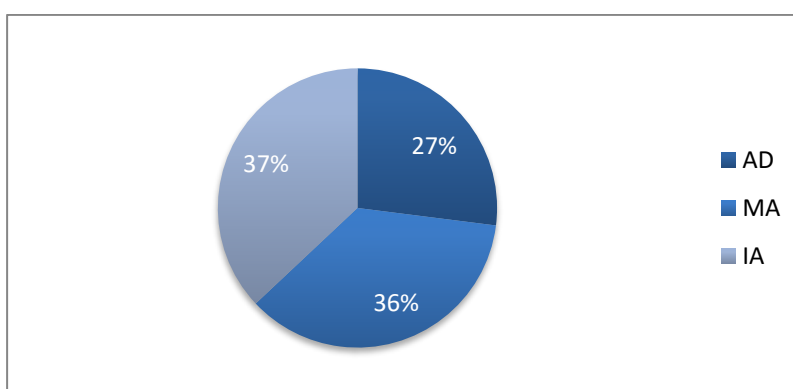|		
LNBL, DU	√	4% or 5%
RBMPL, AAU	--	--
PMBL, BU	--	--

Fig.-1: Weeding Out Policy

Weeding out is a very important task for managing the spaces allotted for print collection of a library. The libraries have to weed out some of the old and outdated version from its collection to manage the entire collection space. By considering the weeding out policy, Dr. Surya Kumar Bhuyan Library, Cotton University and Lakshminath Bezbaroa Library, Dibrugarh University will able to weed out almost 2%-3% and 4%- 5% respectively from the total collection in every year. But the Rev. B. M. Pugh (RBMP) library, Assam Agricultural University and Padmashri Madaram Brahma Central Library, Bodoland University have not such kind of weeding out policy yet (Table-5).

6.4. Library Furniture and Equipment at different Library Spaces:

The library furniture and equipment at different library spaces of the four select University libraries are shown below –

Fig.-2: Library Furniture and Equipment

6.5. Measures are taken for providing Good Ventilation and Lighting Facilities at different spaces:

The concept of space management not only considered the management of the different spaces in a library, but it also considered the ventilation, lighting, decoration, maintenance facilities of the library. The different spaces should be so organized that proper natural and internal lighting (artificial) techniques, the flow of natural air can take place. Following are some useful measures taken by the four University libraries of Assam-

Table-6: Measures taken for providing Good Ventilation and Lighting Facilities

Name of the Measures	SKBL CU	LNBL DU	RBMPL AAU	PMBCL BU
Using large glass windows for sufficient ventilation are provided	√	√	√	√
Library has adequate artificial and natural lighting	√	√	√	√
Corridors of the library have natural and artificial lighting	√	√	√	√
Using skylight at the top of the library building	--	√	--	--
Provided proper lighting at reading halls and stack areas	√	√	√	√
Total Score (5)	**4** **(80%)**	**5** **(100%)**	**4** **(80%)**	**4** **(80%)**

6.6. Safety Measures at different library spaces-

Table-7: Safety Measures

Safety Measures	SKBL CU	LNBL DU	RBMPL AAU	PMBCL BU
Protection from fire	√	√	√	√
Protection from dust	√	√	√	√
Protection from sun/ heat	√	√	√	√

Protection from rain/ water	√	√	√	√
Protection from moisture	√	√	√	√
Total Score (5)	**5 (100%)**	**5 (100%)**	**5 (100%)**	**5 (100%)**

6.7. Library Standards:

Different national and international standard organization like BIS (Bureau of Indian Standards), ISO (International Standard Organization) etc. have developed some standards for different criteria for quality enhancement of the libraries and revised them from time to time. Following are the library standards (Table-8) which are followed by the libraries-

Table-8: Library Standards

	Library Standards		
Name	**BIS**	**ISO**	**Any Other (Institutional)**
Planning and Designing of Library Building	2 (50%)	1 (25%)	1 (25%)
Library Furniture and Fittings	-	4 (100%)	-
Library Ventilations and Lightings	-	4 (100%)	-
Library Security	-	-	4 (100%)

These library standards are the basis for any library to ensure the various process of the library such as the construction of the library building, choosing of different furniture and machinery equipment, provided proper lighting and ventilation facilities and to secure the library resources.

6.8.Future Plan:

Following are some of the plan which will be adopted by the libraries for effective utilization of space in the libraries-

i) Future Expansion/Extension of the existing space;
ii) Subscription for more E-resources to reduce space requirements;
iii) Adoption of effective weeding out policy;
iv) Advanced automated library services to be introduced;

v) Space Re-organization/Re-arrangement process.

7. Conclusion:

      Space management of library is an essential and dynamic activity as it depends on the nature of physical growth and current situation in terms of the collection as well as the application of web-based technologies in the libraries. Many a time, library space management has been considered as one of the neglected areas of research because the library researchers do not think that library space management is a matter of interest as space is not a problem in the current scenario. But managing the existing spaces of a library is a tedious work due to the course of time and increasing demand of the users. In the changing environment, effective space re-arrangement procedures of the library can play a vital role in the smooth functioning of the library services. Libraries have to schedule sporadic space re-arrangements to accommodate the changes like collection growth, the introduction of new library services, use of web-based technology, changes in the nature of the library e.g., shifting to a hybrid library, space enhancement and so on. University libraries should also practice different tasks like weeding or discarding, decentralisation of library materials, compact shelving of library documents as the solutions for space management.

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