DIGITAL PRESERVATION OF LIBRARY MATERIALS IN DELHI UNIVERSITY: LAW FACULTY LIBRARY, AND CENTRAL SCIENCE LIBRARY, A CHALLENGE IN DIGITAL ERA

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Abstract
Digital preservation is likely to be involved process of copying and it is not clarify whether any global law will allow required copying. On the other hand the question of permission to copy for preservation purposes is supposed to be time consuming and also complex. Access prevails preservation whereas ownership creates hurdles and does not easily allow libraries proceed for preservation. There is a need for legal clarification and creating awareness. Impact of new trends in electronic publishing should also need to be investigated while fixing responsibilities in digital preservation.

I. INTRODUCTION
Digital preservation is one of the most important issues in human history, education culture, and economics, as well as in the development of our Civilization. While earliest information was recorded in carvings on wood, stone, bamboo, leather, ceramic, fiber, etc. The development of civilization paved the way for new storage media and techniques for recording information. Invention of paper and printing technology introduced writing on silk or printing on paper. Eventually we were able to put photographic images, films and music on records. A revolutionary change occurred in the information storage field with the invention of electronic storage media. (Gandhi and Mingappa 267).
Traditionally libraries have been playing a key role in preserving the cultural heritage, materialized in manuscript and publication. This cultural heritage consists of fiction and non-fiction publications as we find them in book shops, but also of published result of scientific research, in scientific journal books. Especially the publishing of scientific and non-fiction information is these days rapidly turning digital (Steen backers 89).

According to Jenkins on, the care of collection of books means protecting the collection from damages by the four enemies, viz, fire, water, insects and human being. Traditional techniques for safe guarding the library material are inadequate. The diversity and complexity of materials, ranging from ancient books to photographic and magnetic image, cannot be solved by older, purely empirical approaches (qtd in Sunil and Praveen Kumar 37).

Preservation of digital material is the active management of digitized information over long time to ensure its accessibility not only to the present users but also for the future. Preservation of digital material is a continuous process like other media. It requires constant input of efforts, time and money to handle rapid technological and organizational advances. No doubt we are able to read our written heritage from thousand years ago whereas the digital and tackling serious danger of being lost give birth to digital Dark Age. Digital dark age is a term used to describe a possible future situation where it will be difficult or impossible to read historical documents, because they have been stored in an obsolete format”. I would not hesitate to mention this period as 21st century which is also known as paperless society and the question of written record does not arise. Digital preservation is defined as long-term error-free storage of digitized information through means for retrieval and interpretation for a given period of time. Long-term is defined as “Long enough with the impacts of changing technologies or with a changing user community. Preservation of digital material has played an important role in library. It may be defined in the library context, as the process of keeping collection and the information they contained available for use as long as they are needed. It is very difficult task for library staff to preserve the treasure of knowledge for the future generation. Preservation deals with the regular maintenance aspect. This topic has been chosen because libraries are responsible for preserving the cultural heritage.
So preservation of library material is an essential activity of all the libraries. If library does not preserve the documents are well not know about the rare documents for example “Caryapada,” the first book written in Bengali language in 10th or 12th century A.D. If library does not preserve this book no one would have known about it.

For conducting the present study entitles as preservation of digital material in two libraries namely, Law Faculty Library and Central Science Library were chosen for the purpose. Both the libraries are special libraries of Delhi University Library System and actively involved in preservation of cultural heritage.

1. I Need for preservation

Now information is moving from print environment to an electronic one resulting new challenges for effective information delivery to the present users and consider measures required to preserve world’s knowledge for future generations. Human knowledge has been recorded as print on paper. Paper may be preserved for centuries subject to the right conditions of temperature and humidity. It is to be noted that paper will decay in the absence of suitable environmental conditions. Paper produced need to be De- acidified because acid speeds decay although acid free has become more storage devices such as diskettes have short life. Optical media (CD-ROM, DVD) last longer but the reports about their deterioration have already appeared. The world has already lost a lot of digital material on old websites. With the development and change of digital technologies it is important to copy digitized material into new form. There is no guarantee to encode and decode data from time to time and it is not sure to secure guarantee and understand whether software and commonly recently. Due to need of long term storage media for digital information, it is generally observed that magnetic media have been superseded. To preserve material for long term use data formats that are independent of specific hardware and software.

- Measure media quality
- Store in aspirate conditions
- Store digital objects in multiple copies and locations
- Refresh storage media
I.2. Concept of Digital preservation

Digital preservation consists of the processes aimed at ensuring the continued accessibility of digital materials. To do this involves finding ways to re-present what was originally presented to users by combination of software and hardware tools acting on data. To achieve this requires digital objects to be understood and managed at four levels: as physical phenomena, as logical encodings, as conceptual objects that have meaning to humans, and assets of essential elements that must be preserved in order to offer future users the essence of the object. Digital preservation can be seen as all those processes aimed at ensuring the continuity of digital heritage materials for as long as they are needed. The most significant threats to digital continuity concern loss of the means of access. Digital materials cannot be said to be preserved if the means of access have been lost and access becomes impossible. The purpose of preserving digital materials is to maintain accessibility: the ability to access their essential, authentic message or purpose. Digital preservation involves choosing and implementing an evolving range of strategies to achieve the kind of accessibility discussed above, addressing the preservation needs of the different layers of digital objects. The strategies include:

- Working with producers (creators and distributors) to apply standards that will prolong the effective life of the available means of access and reduce the range of unknown problems that must be managed.
- Recognizing that it is not practical to preserve everything, selecting what material should be preserved.
- Placing the material in a safe place.
- Controlling material, using structured metadata and other documentations to facilitate access and to support all preservation process.
- Protecting the integrity and identity of data.
- Choosing appropriate means of providing access in the face of technological change.
- Managing preservation programs to achieve their goals in cost-effective, timely, holistic, proactive and accountable ways. (United Nations Educational, Scientific and cultural organization)

I.3. Scope of the study

The study covers preservation work undertaken by two well established libraries of India which are very actively involved in the preservation of national cultural heritage of India. Following two libraries have been covered this study Law Faculty Library,
DU. It was established in 1924, the library with its rich resource on specialization of Law. Central Science Library, DU – It was established in 1984. This is another important library, known for preservation of the rare collections of all science subjects. All important issues regarding preservation policies and techniques employed by both libraries are to be critically examined. This study is limited to Law Faculty Library, DU and Central Science Library, DU. The study covers the need of preservation, problems, techniques, standards and strategies etc. Preservation is required in all types of libraries in order to add the longer life of documents acquired to be possessed by both the libraries. If libraries cannot do this work, the future generations cannot know about rare collection of given libraries.

I.4. Objective of the study.

The prime objective of the study is to investigate methods, techniques and strategies, which will ensure that the information resource typically included in library collections may, with other digital objects preserved over a longer period. In orders to achieve this aim the under mentioned things to be kept in mind:

1. To know what materials and methods are used for preservation of documents?
   To know about the types of material selected for preservation?
2. To have adequate know-how on modern equipment and accessories for setting up a small preservation unit.
3. To know what techniques are used for this purpose in these libraries?
4. To know how to protect the damage and deterioration of the physical media by ensuring an environmental control.
5. To learn how to conduct literature survey and prepare survey report.

II. METHODOLOGIES

The under mentioned methodologies are available.

II.1. Literature Search

The first step in a research project material on the topic is a systematic and exhaustive search for published materials bearing specific object, often using all available bibliographic finding tools, aimed at locating as much existing. An exhaustive search on the given published information on a subject conducted systematically.
II.2 Questionnaire

A list of written questions formulated to a selected group of people for the purpose of gathering information. Questionnaire designed to access the quality and usefulness of services and resources. The results are compiled and analyzed for use in self-assessment and planning.

II.3 Interview

It is used for personal interaction, and then the techniques available for questioning are an interview. The face to face conversation between the researcher and the respondents who have information in his mind or possession are also called an interview.

II.4 Observation

Observation includes the investigator watching the subject. Observation method is, “a data collection method in which a person observes subject and records information. In a strict sense, observation is restricted to watching.(http://lu.com/odlis/search.cfm).

III. LITERATURE REVIEW

III.1. Introduction

A comprehensive survey of the works published in a particular field of study usually over a specific period of time, in the form of an in-depth critical bibliographic essay or annotated list in which attention is drawn to the most significant work. A literature review is a critical and in depth evaluation of previous research. It is a summary and synopses of a particular area of research. A good literature review expands upon the reasons behind selecting a particular research question (http://lu.com/odlis/search.cfm). Our goal in providing this literature review is to provide a baseline understanding of the current state of research into and practice in the sustainability of digital preservation, particularly regarding the concrete components that drive costs in the area of digital preservation. Part of this endeavor includes determination whether any important gaps in the literature still exist and if so to high light those areas so that appropriate future work can be undertaken. Given this focus on costs, we included numerous excellent papers and studies that examine to technical aspects of individual projects, economic sustainability more broadly, and other related topics. Where possible, some of the more well-developed
bodies of literature (for example e-journals specifically or scholarly communication generally) are acknowledged by reference. But given focus on the sustainability of digital preservation, some very good work focusing on broader sustainability issues may not be reflected here or it may receive only cursory notice. This is not mean to diminish the value of that work but rather to define a sufficiently narrow scope for fruitful discussion of costs and to offer a set of concrete cost elements that can frame future research questions.

Although maintaining a sustainable preservation initiative admittedly requires more than just understanding costs (Curral and McKinney, 2006), understanding one's preservation cost structure is none the less paramount for managing sustainability issues. Costs influence incentives, and incentives determine who will be willing to support preservation initiatives in both the short and long term. Likewise, gaining control over the structure of incentives can ensure more successful business models and funding structures. Few are willing to pay for a preservation initiative without knowing how much it costs and how costs are distributed. Hence, costs are a necessary, if not sufficient, component of a viable sustainability plan. As per the discussion we consider the issues related to costs and incentives and summarize the early and more recent literature on costs, followed by a detailed comparison of available data and a discussion of the constraints on any comparative analysis. Finally, several observations, including a discussion of gaps in prior work, are offered in the concluding section.

III.2. Concept of digital preservation

Digital preservation consists of the processes aimed at ensuring the processes aimed at ensuring the continued accessibility of digital materials. To do these involve finding ways to re-present what was originally presented to users by combination of software and hardware tools acting on data? To achieve this requires digital objects to be understood and managed at four levels: as physical phenomena; as logical encodings as conceptual objects that have meaning to humans and assets of essential elements that must be preserved in order to offer future users the essence of the object. Digital preservation can be seen as all those processes aimed at ensuring the continuity of digital heritage materials for as long as they are needed. The most significant threats to digital continuity concern loss of the means of access.
Digital preservation involves choosing and implementing an evolving range of strategies to achieve the kind of accessibility discussed above, addressing preservation needs of the different layers of digital objects.

The strategies include:

- Working with producers (creators and distributors) to apply standards that will prolong the effective life of the available means of access and reduce the range of unknown problems that must be managed.
- Recognizing that it is not practical to try to preserve everything, selecting what material should be preserved.
- Placing the material in a safe place.
  - Controlling material, using structured metadata and other documentation to facilitate access and to support all preservation process.
- Protecting the integrity and identity of data.
- Choosing appropriate means of providing access in the face of technological change.
- Managing preservation programs to achieve their goals in cost-effective, timely, holistic, proactive and accountable ways.

III. Definitions

Technically it includes all the managerial and financial and conditions of use involved. Preservation is an act of “responsible custody,” On the other hand preservation involves controlling the considerations including storage and accommodation provisions, staffing levels, policies, techniques and methods environment in preserving library and archive materials. Preservation refers to the protection of cultural property through activities that minimize chemical and physical deterioration and damage to prevent loss. (According to the UNESCO)

III.4. Historical background

After world war-2, there has been a significant development in tropical and subtropical countries. With the invention of various new technologies in various sectors of economy has the best possible quality of services in periodicals, micro forms, charts, manuscripts etc. No doubt India has long history and rich cultural heritage, which is accessible through the manuscripts and much other printed or
non-printed literature for present as well as future generation. The introduction of preservation topic in Library and Information Science courses to train Library and Information Science Professionals in this area. Of course these are few decisions, which have to be taken keeping in view the need are:-

- What is to be preserved?
- How it is to be preserved?
- Duration of preservation?

IV. STRATEGIES FOR PRESERVATION OF DIGITAL MATERIALS

In 2006 online computer library Centre developed a four point strategy for long term preservation of digital materials under the given heads:-

- Assessing the risks for loss of content due to technology variables such as commonly used file formats and software applications.
- Evaluating of the digital objects to determine what type of format conversion or other preservation should be applied.
- Determining the appropriate metadata needed for each object.
- Providing access to the content.

(i) Refreshing

Refreshing is the transfer of data between two types of the same storage medium e.g. transferring census data from an old preservation CD to a new one. This strategy may need to be combined with migration when software or hardware required to read the data is no longer available or is unable to understand the format. Then refreshing will likely to be necessary due to deterioration of physical media.

(ii) Migration

Migration (e.g. windows to Linux) or from one programming language to another (e.g. to Java) so transferring of data to newer system environments. It may include conversion of resources from one file format to another (e.g. conversion of Microsoft Word to Pdf etc.) from one operating system to another resources remains fully accessible and functional resources that are migrated run the risk of losing some type of functionality of the original format.
(iii) Replication

Creating duplicate copies of data on one or more systems is called replication. Data which exists as a single copy in one location is highly vulnerable to software or hardware failure, intentional alteration and environmental hazards like fire, flood etc. Digital data is likely to survive if it is replicated in several locations.

(iv) Emulation

Emulation refers to the ability of a computer Programme or electronic device to imitate another Programme or device. Emulation is a strategy in digital preservation to combat obsolescence. Emulation Focuses on recreating on original computer environment which can be time consuming and difficult to achieve, but valuable because of its ability to maintain a closer connection to the authenticity of the digital object. Emulation addresses the original hardware and software environment of the digital object, and recreates it on a current machine. The emulator allows the user to have access to any kind of application or operating system on a current platform, while the software runs as it did in its original environment.

(v) Intellectual property right and preservation

The preservation of digital materials is dependent on the range of strategies. The issues of Intellectual property rights in digital materials are more complex than for traditional media. Copying digital materials into another medium to new hardware and software directly affect intellectual property right. It requires prior permission from the rights holders.

(vi) Other statutory requirements

Other statutory requirements may also influence preservation of digital materials. It includes public records act which apply to government records. Information within repository may be under Data Protection Act or similar privacy legislation protection information on individuals. How privacy and confidentiality may impact on digital materials within the repository or third parties.

V. CHALLENGES TO DIGITAL PRESERVATION

Presently in knowledge society everybody is eager to fulfill his desire of information from digital medium without any age groups. Information is being created and stored
digitally. For library and information professionals in big organizations especially national libraries and major research institutions, digital preservation are particularly a sirens concern. No doubt such organizations have already started active preservation measures. These efforts give right direction to tackle problems of preservation for other organizations.

(a) Ingest

It is a term used in broadcast that refers to the process of transferring content to a digital editing or storage system. From the consumer point of view, it means recording video material on to a hard disk recorder. The whole process includes digitizing signals, compressing the digital data stream to reduce the amount of data stored and finally, storing the data as a file on a hard disk.

(b) Data Management

Data management is the development and execution of architectures, policies, practices and procedures in order to manage the information lifecycle needs of enterprise in an effective manner.

(c) Preservation Planning

Preservation planning is a process that organizes preservation activities in a logical sequence. The standards for planning discuss the relationship among these activities while the remaining activity standards consider how each activity should be carried out.

VI. DIGITAL PRESERVATION IN INDIA:-

Preservation of digital material has not received the attention for which it deserves. Neither a regulatory framework for digital preservation nor it is pursued with any seriousness under the national e-governance plan undertaken by the department of Information technology, India. Due to lack of information communication technology Policy and launching of national digital preservation Programme remain stagnated with no further development in India. The problems of intellectual property rights are found during digital preservation Initiatives. With the advancement of technology day by day, old applications and methods are becoming obsolete. It always require up gradation. The issue of intellectual property rights in digital era and cyber space are difficult to manage and both need good policies and laws to protect the same. According to Praveen Dalal, advocate Supreme Court of India and Cyber law expert
of India, digital preservation issues would become more complicated. Efforts are going on for adoption of digital rights management system in India. With the stagnation of national digital preservation programme cannot be removed until or unless the government of India takes positive steps in required direction of availing the services of experts who are very much familiar with this. No doubt that till now no such serious efforts have been under taken by Indian government.

VII. PROFILE OF LIBRARIES

Law Faculty Library, University of Delhi

1. Introduction

The law faculty library, University of Delhi was established in July 1924. It is one of the pioneers of legal education. To meet the needs of more and more people eager to take legal education, the faculty decided to add two centers namely Law Centre No-I in the year 1970 at Government school, Mandir Marg and New Delhi which was
later on shifted to new building in Law faculty and Law Centre No-II at ARSD College building, Dhaula Kuan, New Delhi in the year 1971. Both the centers function in evening shift. Law faculty library serves the students of LLB (Three Years), LLM/MCL, research scholars, faculty members of all the three centers and special reference serves are provided to all the researchers through proper written approval from their institution’s guides. Law faculty library contains the best infrastructure in their field which includes latest books, rare books, Journals (hard copies and soft copies), dissertations, theses etc. All the faculty materials are fully automated.

2. Library hours
The library remains open throughout the year except national holiday’s i.e. Republic day, Independence Day, Gandhi Jayanty, holy festival etc. It opens on week days from 9AM to 8PM and Saturday from 9AM to 5.30PM. It also remains open on Sundays and holidays during examination period.

3. Library staff
Faculty library has one sanctioned post of Dy Librarian, Three Professional Assistants, four Semi-Professional Assistants, One Assistant, Three Junior Assistants, Six Library Attendants, and two Safai Karamcharies.

4. Library services
(a) E- Circulation & Reference services
It provides services of issue return and re-issue of books to LLB/LLM/MCL/Research scholars/faculty members as per their entitlement. Reference services like consultation of theses/dissertations within the library. OPAC services are available throughout the working hours to all users of the library.

(b) Information technology services
Circulation department has set up well established independent lab for accessing members their desired e-resources according to the status i.e. LLB/LLM/MCL/Research scholars/faculty members/PH etc.

(c) E-Membership and Clarence services
It provides membership to all students through generating unique ID Number to all LLB/LLM/MCL /research scholars/ PH/faculty members and allows getting their desired documents according to their entitlement.
(d) Photo copying services

It also provides photocopying services to all library members, irrespective of their status against valid Identity card/library ID from outside library within the campus at the subsidized rates.

(e) Inter library loan services

Law faculty library makes available required materials from other libraries on inter library loan basis for a specific period and assure to return as and when the work will have to be completed.

(f) E-Periodical Services

It provides print as well as online services to all members of the library irrespective of status of the members. At present this library subscribes about 150 Indian and foreign journals. It also subscribes all the daily newspapers in English and Hindi language. It also subscribes 17 online journals. The periodical section has a sanctioned budget of Rs.11, 60,000.

(G) E-Acquisition Services

This section performs their duties to acquire Indian and foreign documents. The section has a sanctioned budget of Rs.10, 00,000 for purchase of books in a given financial year from their approved vendors at the given terms and conditions of the purchase policy and approved by the library committee. It receives recommendations from the teaching faculty and prepares orders along with the number of copies and sent the same at the vendor’s address to procure documents.

Central Science Library, University of Delhi

1. Introduction

The emergence of Central Science Library (CSL) dates back to 1981 prior to that, it was a part of Central Reference Library (CRL), Delhi. However, the need to have a separate Science Library was shown much earlier by Carl M. White in 1966 who recommended "that a Science Library be created to serve the departments, which consist of Faculty of Science and that the collection now maintained by these departments and related material in the main library be used to form the nucleus of the new library. A Science Librarian of outstanding ability be employed to take charge of it and that a new building be erected to house the library". With the growth of the University, the membership of Central Library was also increasing.
continuously, as a result in due course of time with increasing membership and their changing information needs, it became inconvenient for Central Library to serve the users, belonging to the faculty of science effectively. So CSL was separated from CRL and housed in a separate building to serve members of science faculty. The three-storied building having a carpet area of 22,595 sq. feet with a sitting capacity of 185 seats started functioning independently with effect from 8th April 1981. The administration of CSL is under the Dean of the faculty of science. Central Science Library is known to be the most prestigious library which is situated in the heart Faculty of Science, University of Delhi to serve the needs of departments and Centre under Faculty of Science and Mathematical Science.

2. Library hours

The Library functions for nearly twelve hours during most of academic session. Library hours are subject to change and all changes in timings are notified on the notice board well in advance. The Library remains open round the year except Republic Day, Holy, Independence Day and Gandhi Jayanty.

3. Library staff

The library has a sanctioned post of a Dy Librarian, three Assistant Librarians, five Professional Assistants, five Semi-Professional Assistants, and five Library Attendants, two Safai Karamcharies and one frash.

4. Library services

(a) Circulation section

It serves to all members of post graduate in all the science streams like Botany, Zoology, Chemistry, Physics, Biology, Mathematics, Computer Science, Nano Science etc. Books are issued to all members of the library including faculty teachers according to their entitlement. Reference services are also providing from the reference collection. All the services are available during the working hours. OPAC services are also available during library hours.

(b) Internet services

It has a well-established lab for the users of the library. Members are allowed to use computers after verification by system administrator which allows the user to use the lab terminal from a given specific time up to given time period in the register
maintained in the lab itself. All the online e-journals can also be accessed with the help of professional staff.

(c) Membership

All the students from different streams have to take the membership of the library after filling the requisite application form and get it attested from their head of the department and deposit with the section to get the library reader tickets according to their entitlement after a given period of time.

(d) Photocopying services

It also provides photocopying services to those who required the same against their valid identity card for a short period of time either within the library or outside the library gate at the reasonable cost per page.

(e) Inter library loan services

Central science library provides required materials from other libraries on inter-library loan basis which are not available within their own library for limited period of time.

VIII. DATA ANALYSIS

1. Basic information

<table>
<thead>
<tr>
<th>S.No</th>
<th>Information</th>
<th>LFLDU</th>
<th>CSLDU</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Year of establish</td>
<td>1924</td>
<td>1981</td>
</tr>
<tr>
<td>2.</td>
<td>Type of Library</td>
<td>Special</td>
<td>Special Library</td>
</tr>
<tr>
<td>3.</td>
<td>Website</td>
<td><a href="mailto:law@duls.ac.in">law@duls.ac.in</a></td>
<td><a href="mailto:csl@duls.ac.in">csl@duls.ac.in</a></td>
</tr>
<tr>
<td>4.</td>
<td>Telephone</td>
<td>27662040</td>
<td>27667911</td>
</tr>
<tr>
<td>5.</td>
<td>Fax</td>
<td>27667483</td>
<td>27667911</td>
</tr>
</tbody>
</table>

2. Reasons for deterioration of library material

<table>
<thead>
<tr>
<th>S.No</th>
<th>Type of material</th>
<th>LFLDU</th>
<th>CSLDU</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>High acidity level</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td></td>
<td>(Great extent)</td>
<td></td>
<td>(Little extent)</td>
</tr>
<tr>
<td>2.</td>
<td>Wear &amp; tear due to Photocopying</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td></td>
<td>(Some extent)</td>
<td></td>
<td>(Little extent)</td>
</tr>
</tbody>
</table>
3. Air pollution  
   Yes  
   (Some extent)  

4. High temperature  
   Level  
   Yes  
   (Some extent)  

5. Relative Humidity  
   Yes  
   (Some extent)  

6. Dust & particulate matters  
   Yes  
   (Great extent)  

**Non Print Materials**

1. Oxidation  
   Yes  
   (Great extent)  

2. Magnetism  
   Yes  
   (Some extent)  

3. Heat and high Humidity  
   Yes  
   (Great extent)  

4. Moisture  
   Yes  
   (Great extent)  

5. Dust  
   Yes  
   (Great extent)  

**3. Preservation techniques**

<table>
<thead>
<tr>
<th>S.No</th>
<th>Preservation techniques</th>
<th>LFLDU</th>
<th>CSLDU</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Cleaning and dusting of Library materials</td>
<td>(very often)</td>
<td>(Occasionally)</td>
</tr>
<tr>
<td>2.</td>
<td>Binding</td>
<td>(Once in year)</td>
<td>(Once in year)</td>
</tr>
<tr>
<td>3.</td>
<td>Lamination</td>
<td>(very often)</td>
<td>(very often)</td>
</tr>
<tr>
<td>4.</td>
<td>Encapsulation</td>
<td>“</td>
<td>“</td>
</tr>
<tr>
<td>5.</td>
<td>De-acidification</td>
<td>“</td>
<td>“</td>
</tr>
<tr>
<td>6.</td>
<td>Photocopying</td>
<td>(regularly)</td>
<td>(regularly)</td>
</tr>
</tbody>
</table>
7. Shelving library materials to allow free flow

4. Use of digital preservation techniques

<table>
<thead>
<tr>
<th>S.No</th>
<th>Preservation techniques</th>
<th>LFLDU</th>
<th>CSLDU</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Refreshing (Periodic) (very often)</td>
<td>“</td>
<td>“</td>
</tr>
<tr>
<td></td>
<td>(Copying from one physical medium to another)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2.</td>
<td>Technology preservation (very often)</td>
<td>“</td>
<td>“</td>
</tr>
<tr>
<td>3.</td>
<td>Emulation</td>
<td>“</td>
<td>Yes</td>
</tr>
<tr>
<td></td>
<td>(Preserving the original application program)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4.</td>
<td>Encapsulation</td>
<td>“</td>
<td>“</td>
</tr>
<tr>
<td></td>
<td>(It is the procedure of covering up of data functions into a single unit)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

5. Policies for preservation

<table>
<thead>
<tr>
<th>S.No</th>
<th>Preservation policies provision</th>
<th>LFLDU</th>
<th>CSLDU</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Security of library materials</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>2.</td>
<td>Disaster recovery procedure</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>3.</td>
<td>Use of library materials</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>4.</td>
<td>Handling of library materials</td>
<td>No</td>
<td>Yes</td>
</tr>
<tr>
<td>5.</td>
<td>Training of staff on preservation of library materials</td>
<td>No</td>
<td>Yes</td>
</tr>
</tbody>
</table>

6. Effective preservation of materials

<table>
<thead>
<tr>
<th>S. No</th>
<th>Possible constraints</th>
<th>LFLDU</th>
<th>CSLD</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Inadequate funding of library</td>
<td>(Little extent)</td>
<td>(Little extent)</td>
</tr>
<tr>
<td>2.</td>
<td>Lack of preservation</td>
<td>“</td>
<td>(Great extent)</td>
</tr>
<tr>
<td>3.</td>
<td>Inadequate infrastructure</td>
<td>“</td>
<td>(Little extent)</td>
</tr>
<tr>
<td>4.</td>
<td>Administrative bottlenecks</td>
<td>“</td>
<td>(Great extent)</td>
</tr>
<tr>
<td>5.</td>
<td>Harsh environment conditions accelerating</td>
<td>“</td>
<td>“</td>
</tr>
</tbody>
</table>
6. Lack of competent manpower in preservation

IX. FUTURE PLAN

If we talk about the future plan in both the libraries LFLDU have an infrastructure development plan but lack of efforts for staff training for preservation of digital libraries whereas CSLDU has more infrastructure, better lab users to facilitate at the most possible facilities. CSLDU has trained to look professional staff especially for preservation of digital materials along with well qualified system administrator after all. It also organizes problems face in routine day to day work. It applies all latest techniques being followed as and when required Workshops/seminars/professional training for preservation of digital library materials from time to time. No doubt LFLDU was established in the year 1924 whereas CSLDU was established in 1981. The LFLDU’s is the older library not only in terms of rare collection but also library has been fully computerized and in future professional staff will be sponsored to train for preservation of digital materials. It also requires making provision in creating budget head for digital materials in order to safeguard the digital heritage for the future generations.

X. FINDINGS, SUGGESTIONS AND CONCLUSIONS:-

(1) Findings

Through this study it was found that LFLDU and CSLDU are the best libraries in terms of collection and preservation techniques used for preserving the heritage materials etc. LFLDU and CSLDU are both special libraries. LFLDU for the users of law subjects. It contains the best library materials including rare not only for the faculty users but also from outside researchers/faculty members who visit the said library from their law college to consult the library materials from time to time. CSLDU is also a special library for science subjects. No doubt it was established in 1981, previously it occupied place in central library. It contains the best reading materials for post graduate, researchers, faculty members from all science branches. It also contains e-books, the best possible lab of almost more than sixty terminals on the ground floor along with professional as network administrator from computer science background to look after the whole activities/problems faced during the library working hours.
Library collection (as on 31st March 2013)

**LFLDU**
- Books: 1, 50, 000
- Journals: 150 (Including 17 journals are on-line)
- Rare books: 200
- Theses/dissertations: 250
- Total collection: 1, 50,600

**CSLDU**
- Books: 90,000
- Journals: 331 (Most of journals are on-line)
- Rare books: 200
- Theses/dissertations: 150
- Total collection: 90,531

2. Preservation policies

1. Security of library materials
2. Disaster recovery procedure
3. Use of library materials
4. Handling of library materials

CSLDU uses all the policies listed from 1-4 whereas LFLDU used two or three out of four preservation of digital policies. CSLDU also arranges staff training for preservation of digital materials occasionally.

3. Additional preservation techniques used in both libraries.

   a. Cleaning and dusting of library materials
   b. Binding
   c. Lamination
   d. Photocopying
   e. De-acidification

Both the libraries are using all the above traditional techniques except (e) technique.

3.1 Digital techniques

   a. Refreshing
   b. Technology preservation
   c. Migration
d. Emulation

e. Encapsulation

Both the libraries are using above mentioned digital techniques occasionally. 3.2

Transference of non-print materials information

a. Microforms
b. CD-ROM
c. Video discs

Both the libraries transfer the information from print to non-print like microforms, CD-ROM, Video discs etc.

4. Conclusion

Libraries are keen to find out the causes for deterioration of library materials and so that necessary steps can be taken to protect their material. Every library/institution/individual has to take some steps and methodologies towards preservation of information materials. Preservation is the oldest and most fundamental function of libraries and archives. Traditionally libraries have been responsible for the collection preservation along with provision of information in print format at a specific location. In the present era of digital whole the information has to be preserved by using all latest digital preservation techniques available. No doubt preservation of library materials is an essential and challenging task of the library and information professionals in present era. It has become a global issue today which requires attention throughout the world. The future of library and information services is closely associated with preservation and application of new technologies to create, collect, store, process and retrieve information and deliver the same as and when demanded.

Preservation of digital material is a very challenging task before library and information science professionals. Libraries are keen to find out the causes for deterioration of library materials and so that necessary steps can be taken to protect their materials. Every library has to take some steps and methodologies towards preservation of information materials.

5. Suggestions

1. No food should be allowed or eaten near the collection either to library staff or the users in any case.
2. Proper circulation of air should be maintained.
3. Insecticide should be kept away at climbing points.
4. Red or yellow color starch free cotton cloth must be used to wrap the documents.
5. Proper light intensity must be maintained at 40 Lux.
6. Temperature also affect the paper materials therefore, it should be maintained at 20-23 degrees centigrade.
7. Relative humidity is most effective for preservation of library materials. RH 40-55% is suitable for preservation of library materials like books, dissertations, theses journals (lose & bound) etc.
8. Clean and dust free atmosphere should be maintained in the library.
9. Readers and staff may be asked to remove their foot wear before entering the stack area.
10. Regular inspect the collection must be done to identify damaged materials.
11. To protect the documents from termite, drill of 5-7cm holes in ground floor and walls must be done or routine spray of termite chemical applied from time to time.
12. Fully automation of both libraries should be carried out to give more efficient services to their users.
13. Provision for staff training for preservation of digital materials in both libraries.
14. Budget provision should be suggested for future requirements.

XI. REFERENCES:-


• Website(http://lu.com/odlis/search.cfm)


• GLOBALIZATING ACADEMIC LIBRARIES; VISION 2020-INTERNATIONAL CONFERENCE ON ACADEMIC LIBRARIES. Mittal Publications. New Delhi 2009:90.


