

# Preservation Management in Libraries -A study

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## ABSTRACT

A library is a repository of the knowledge and wisdom of great thinkers of the past and the present. The documents of the libraries are the priceless heritage of mankind as they preserve facts, ideas, thoughts, accomplishments, and evidence of human development in multifarious areas, ages & directions. The very old records constitute a natural resource and are indispensable to the present generation as well as to the generations to come. Any loss to such materials is simply irreplaceable. Therefore, preserving this intellectual, cultural heritage becomes not only the academic commitment but also the moral responsibility of the librarians/information scientists, who are in charge of these repositories.

**Keywords:** Library, Preservation, Repository, culture, ideas, digitization

## INTRODUCTION

There exist three types of libraries- academic, public and special. Special libraries are libraries that are not academic, public or national libraries. These libraries are not usually open to the general public, though many are available to specific elements of the public or by scheduled appointments. Special libraries are generally staffed by librarians, although many librarians employed in special libraries are specialists in the library's field rather than generally trained librarians, and often are not required to have advanced degrees in a specifically library-related field due to the specialized content and clientele of the library ([http://en.wikipedia.org/wiki/Special\\_libraries](http://en.wikipedia.org/wiki/Special_libraries)). Special libraries include corporate libraries, law libraries, medical libraries, museum libraries, news libraries, and nonprofit libraries.

## 2. What is Preservation?

Preservation is a process that prevents damage to the paper based and media collections. Eden et al. (1998) have defined preservation as 'all managerial, technical and financial considerations applied to retard deterioration and extend the useful life of (collection) materials to ensure their continued availability'. It includes all the managerial and financial considerations, including storage and accommodation provisions, staffing levels, policies, techniques, and methods involved in preserving library and archival material and the information contained in them.

Preservation faces through a wide range of activities that prevent damage to paper-based and media collections, such as proper housing, environmental control, and disaster planning; and such as treatment, replacement, or reformatting that address existing damage. It involves keeping a balance between collection-level activities, like – environmental control, which can be difficult and/or costly to manage but provide the greatest long-term benefit for the most materials, and item-level activities, like the conservation treatment, which are often more easily understood and managed but can have limited effect, especially if the items are returned to a damaging environment.

## 3. Difference between Preservation and Conservation

Preservation and Conservation are the terms which very often are used interchangeably to mean the process of keeping an object safe from harm or loss, damage, destruction or decay, and maintaining it in a reasonably sound condition for present and future use. Library community have been using "preservation" as an umbrella term for

activities which reduce or prevent damage to extend the life expectancy of collections; and also the “conservation” which refers more specifically to the physical treatment of individual damaged items.

### **Conservation has three aspects:**

- Examination: To determine the nature/properties of materials and causes of deterioration and alteration.
- Preservation: Adoption of appropriate prophylactic and prospective measures to maintain the specimen in as good a condition as possible, and to prolong its life to whatever extent possible.
- Restoration: Appropriate remedial treatment of an already affected specimen. However, the term “restoration” is used mostly in the context of museum objects or motion picture films. It generally refers to the process of returning an object to its original state, or what is thought to have been its original state. Thus, preservation is the part of conservation that is concerned with maintaining or restoring access to artifacts, documents and records through the study, diagnosis, treatment and prevention of decay and damage. While the conservation refers to the treatment and repair of individual items to slow decay or restore them to a usable state.

### **4. Need of Preservation and Conservation**

Most of the libraries have paper based reading materials in the form of manuscripts, books, periodicals, paintings, drawings, charts, maps etc. The basic materials and constituents of the physical entity contain a wide range of organic materials, including paper, cloth, animal skins, and adhesives. Such organic substances undergo a continual and inevitable natural ageing process. Besides in the books, apart from paper the other materials like board, cloth, leather, thread, ink, adhesive etc. are used. All these materials used are nutrition to some living organisms and thus they decay easily.

- So, the libraries need to preserve and conserve the library materials from factors of deterioration and, if possible, restore their local history and local genealogical materials. Preventive measures can considerably extend the useful life of collections, and are usually much more cost-effective than interventive measures taken to remedy damage after deterioration has taken place.

### **5. Factors for Deterioration of Documents in Libraries**

Generally poor handling or storage; theft or vandalism; fire and flood; pests; pollution; light and incorrect temperature and relative humidity are some of the factors responsible for the deterioration of the documents in a library. These may broadly be categorized into following factors:

- Climatic factors
- Chemical Factors
- Different types of Insects and Rodents
- Human beings
- Disasters

- 5.1. Climatic Factors: Sudden variations in temperature and moisture are two important climatic factors. So there should be uniform temperature and dry place for stacking the documents. Direct sunlight is to be avoided to reduce the softness of the paper and binding.

- Moisture, humidity and dampness can also damage the paper based documents – books and journals etc. Dampness can ruin the paper and provide the opportunity of breeding for many injurious insects. Therefore, moisture, humidity and dampness are to be removed by proper ventilation in the stack rooms. Besides, dust is hygroscopic in nature and when it is mixed with high humidity, it is transformed into dirt and if this dirt sticks to the surface of the books, it becomes difficult to remove. Dust and dirt are sources of both physical and

chemical degradation of the library collection. Dust acts as a nucleus around which moisture collects and this moisture provides the necessary humidity for the growth of fungus and for chemical reaction, which lead to the formation of acids. Since dust and dirt are solid particles of varying size and hardness they exert abrasion on the surface of the books. Dust and dirt can be removed by providing warm and dry environment in the stack rooms.

5.2. Chemical Factors : The fibers with low cellulose contents are used in paper making and also the chemical compounds like alum, rosin etc. for sizing of paper which cause acidic effect and facilitate chemical deterioration of the paper with the passage of time. Besides, in the various unwanted materials such as oxides of carbon, sulphur, nitrogen and hydrogen sulphides are also present in the atmosphere, which get absorbed by the paper in moisture and library materials get affected. The main deleterious substances include – sulphur dioxides, oxides of nitrogen and ozone. Sulphur dioxide is harmful to cellulose materials like paper and cloth. The most familiar effect in libraries is the brown and brittle edges of books which is caused by sulphur dioxide. Besides, most of the nitrogen dioxide comes from automobile exhausts and when it combines with oxygen and water turns into nitric acid, which attacks the dyes in ink, cloth, paper and leather.

Humidity and Moisture: - Humidity is the amount of moisture in the atmospheric air. The moisture is measured in terms of relative humidity. All organic objects absorb water to a greater or lower extent and the water goes inside the object through surrounding air. Because of this absorbency property, the paper absorbs more moisture when there is high humidity. Certain amount of humidity is necessary for the flexibility of paper but in prolonged high humid condition, paper becomes soggy and the moisture weakens the fibers of paper. Moisture is the root cause of various types of physical, chemical and biological deterioration of library materials. It weakens the adhesive and makes the book binding loose. It also weakens the sizing elements of paper and causes spreading of ink. Moistened pages of book often stuck together. It also accelerates various types of chemical deterioration as a result of which paper becomes yellow and stained with spots. Moisture also promotes the growth of fungus, which cause damage to paper and book binding materials

Water :- Water occurs in all the normal state of matter- solid, liquid and gas. It acts as a physical agent of deterioration by causing hygroscopic materials to undergo dimensional changes. Water, which is harmful for the library collection may come from sources like natural calamities, human negligence, from leaking roofs, defective plumbing and through open windows at the time of raining. Excessive water brings about biological attack on paper, which is usually manifested as the growth of fungus or mildew. The effects of water are stained paper, rotted leather, smeared ink, weaken adhesive, sustained fungi etc. Water also does injury to the steel furniture due to rusting

6. Insects and Rodents: Several types of insects, like – cockroach or black beetles, termites or white ants, silver fishes, book lice and book worms are found in the stack room of the libraries, which can easily harm the housed documents.

Cockroach or black beetles are generally found in warm countries. They eat away the binding and other gummed parts of the documents. DDT powder may be used to kill them. Alternatively, camphor or naphthalene tablets can be used. Fumigation and naphthalene bricks are more effective to kill bookworms.

Termites or white ants are also most injurious enemies of books and other paper based reading materials. They eat easily books, files and even the catalogue cards, if they are not used for a long time. Once the termites start destroying the documents, it becomes very difficult to stop them. Basically there are two types of termites – earth dwelling termites and wood dwelling termites. Carbon disulphide or carbon tetrachloride can be used to eliminate the termites. So lignum oil may also be used in stack rooms as precaution.

7. Silverfish – The main source of these insects are food materials like starch, glue and gelatin which are used in paper as sizing materials. Dust and dirt also attract this insects. They're fond of dark places and are active in nights only. Silverfish do not have wings and are silvery or pearl gray in colour and about 8 to 10 mm. in length. They eat the surface of the paper and also eat gum from postage stamps, envelopes etc. They grow holes in paper, prints, photographs, catalogue cards and cardboard boxes. The dark spaces on the library racks, catalogue cabinets, drawers are the places for their egg laying.

8. Human Beings: Human beings, the readers and sometimes the staff may also damage the library reading materials by misplacing, mutilating and theft of the documents. Librarians in charge of the documentary heritage are directly responsible for the overall conservation and preservation of their collections. But they are not always aware how to handle, store and use collections carefully to minimize damage and help preservation.

Misplacing is the habit of placing of the books by some readers at places other than the shelves they are supposed to be, thus other will not find the desired books at the right time and place.

Mutilation of the documents is related to dog earing of the pages, plates and pictures in the documents due to one or several reasons. This may be due to sluggishness, vengeance and mental ill health of the readers.

9. Disasters: Disasters may be natural or man-made disasters. In libraries, archives and museums there is a likelihood of fire as the collections are mostly organic in nature. Once fire starts, it is difficult to save those materials which get fire. Items not directly engulfed in flames can be charred by soot and smoke. Heat emitted from fire causes bindings to shrink and warp and plastic base materials to melt. Water used for fighting fire can cause enormous damage. Besides fire, floods, high winds, cyclones, earth quakes are also agents of deterioration for the library collections. These will lead documents to absorb water, swell, warp and become extremely vulnerable to physical damage.

#### 10. Points to be kept in View for Preservation

Preservation includes prevention as well the curative measures taken for materials after its deterioration. Preventive measures have already been discussed with in the factors causing deterioration.

- Evaluation of heavily used, fragile, and rare local history and local genealogical materials should be made to determine what materials need to be preserved.
- Fragile materials are most often works printed on acidic paper and usually include most newspapers, city directories, telephone directories, and some books. Damaged bindings with inside margins too narrow to rebind may also be considered fragile materials.
- Rare local genealogy or local history materials are usually works of which a limited number of copies were printed and/or the monetary value has escalated since their publication. Most land ownership maps and manuscript copies of fire insurance maps fall into this category.
- Photographic prints and negatives require special attention as they may be damaged by their emulsions, bases, mountings, display, or storage..

#### 11. Preservation of Library Materials

Preservation of the library's manifold collections has always been a concern, but it is perhaps only in the last two decades that librarians have come to fully appreciate the staggering nature of the preservation problem. The processes of preservation, conservation, and restoration are applied to safeguard the library materials from further decay and deterioration. As already been mentioned, preservation is the process in which all actions are taken to check and retard deterioration, whereas conservation includes proper diagnosis of the decayed material, timely curative treatment, and appropriate prevention from further decay. Thus, basically saying, there are two types of preservation:

- Preventive preservation, which includes all forms of indirect actions aimed at increasing the life expectancy of undamaged or damaged elements of cultural property. It comprises of all the methods of good house-keeping, caretaking, dusting, periodical supervision and prevention of any possibility of damage by physical, chemical, biological and other factors.
- Curative preservation that consists of all forms of direct actions aimed at increasing the life expectancy of undamaged or damaged elements of cultural property. It includes binding fumigation, deacidification,

lamination, and other jobs which are to be carried out depending upon the physical condition of the individual document.

## 12. Developing a Preservation Plan

- A priority list of heavily used, fragile, and rare local history and local genealogical materials should be prepared for materials in need of preservation. Because a commitment to indefinite or permanent retention involves considerable financial expenditure on accommodation, special storage conditions, and possibly reformatting. Therefore, Adcock (1998) rightly mentions that the decisions have to be made as to what will be collected and preserved.
- In locales where more than one library may be collecting the same materials it is advisable to develop cooperative preservation programs.

### Techniques of Preservation and Conservation

- There are various techniques which can be applied to cure the documents, but their implications depend upon the nature and conditions of the particular document. The main preservative techniques are discussed below:

#### **Binding**

- Binding is an art of arranging, fastening together and carving sheets of paper composing a book, including ornamentation and decoration of the cover. Library binding is a way to increase the life of books and periodicals used in libraries. This is done by sewing the pages in place and by reinforcing the spine for each volume. Old books and manuscripts need special consideration so they need binding. Binding may be full leather binding, half-leather binding, full cloth binding or the half cloth binding depending upon the quality and utility aspects of the documents in a library. Generally, full leather binding is done for reference books and the books of historical importance. However, Dr. Ranganathan has recommended half-leather binding for the library documents.

- Binding may include the following aspects:
- Mending – It is major restoration not involving replacement with any new material or the separation of books from cover.
- Repairing – It is partial rehabilitation of a worn volume, the amount of work done being less than the minimum involved in rebinding and more than maximum involved in mending.
- Reinforcing – It is the strengthening of the structure of weakened volume usually adding material.

#### **Fumigation.**

Fumigation is a gaseous process carried out under controlled conditions, to inhibit microbiological growth and insect infestation of reading materials. Effective fumigation is achieved by enclosing the objects to be treated in an atmosphere of thymol vapor generated by gentle heating of the thymol crystals for a sufficiently long period to assure exposure of all parts of the objects. Generally, it is used as a preventive preservation technique to control fungi and also to kill book worms etc.

#### **Lamination**

Lamination is the process that includes the fusion or sticking of sheets of tissue, paper or film to one or both sides of a sheet of paper. It is the technique of manufacturing a material in multiple layers, so that the composite material achieves improved strength, stability, sound insulation, appearance or other properties from the use of differing materials. A laminate is usually permanently assembled by heat, pressure, welding, or adhesives.

Generally, manuscripts and old books whose pages become brittle are preserved through lamination.

### **Photocopying of Documents**

Photocopying of the old documents is a least expensive method and is acceptable for most archival records. It is also safe and acceptable for most researchers' needs. But one should avoid repeated photocopying of any item as the exposure to the intense light causes fading and added handling increases the risk of damage. So better is to make one high-quality photocopy or photograph and it can be used as a master for all further copying.

### **Digitization**

Digitization is the process of conversion of an item – be it printed text, manuscript, image, or sound, film and video recording – from print or analogue to digital. Digitization basically involves taking two types of the process –rekeying of the documents or scanning of the reading materials.

In rekeying, the documents are totally retyped in computer format and then stored for future use. In this process, the actual format of the documents is not retained, rather it takes a new shape. While in scanning, a physical object is taken for scanning, and its image is captured by using a scanner or digital camera. Then, it is converted to a digital format, which can be stored electronically and accessed via a computer. Here, the actual format of the documents is retained in its original shape.

**Weeding Out of Library Materials Procedure:** Many institutions' libraries have huge collections. The main task is managing, preserving, and restoring the library materials. Many times, libraries should adopt a set of procedures for the smooth functioning of library work. Hence, the author summarizes the basic procedure for any type of library to follow for the Withdrawal and weeding out of the library materials.

### **Fund Management for Library Preservation:**

Fund management for library articles preservation involves securing diverse, sustainable, and consistent funding—from government grants and UGC, RUSA, endowments to specialized, external social outreach grants—to protect, repair, and digitize collections. Effective management requires strategic, multi-year budgeting, meticulous allocation of resources between routine maintenance and emergency repairs, and justifying expenditures to stakeholders, particularly when preservation competes with new acquisitions. Financial management follow certain guidelines to achieve its objectives. Some of the guidelines include – effective control, simplicity, regularity and foresight, economy and flexibility.

### **Benefits of Preservation**

Rare books and the documents of historical & cultural importance are considered as an important means of information. If they are not made available or lost from the collection, a major loss can occur to the present society. Such types of the documents can be seen in many of the libraries and museum all over the world in preserved forms. Thus, preservation provides the opportunity to a library to preserve and conserve them for the use of future generations.

Additionally, if preservation becomes successful then the curative measurements can be delayed for a long time and the occurring expenditure on such types of curative measurements can be used for other works in the libraries. Thus, spending time and resources on preventing damage to library material is almost always cheaper than repairing or replacing it.

## **METHODOLOGY**

The methodology used for this study was literature search, questionnaire, observation, interview etc. Literature search was done by referring various types of primary and secondary sources of information such as standard textbooks, journal articles etc. Questionnaire method has been used for the collection of data required for study.

A structured questionnaire was developed for the purpose of data collection and was distributed personally among the faculty members of the institutes.

## **FINDINGS:-**

1. Preservation of library materials are very important.
2. Digitization of rare materials is very much important
3. Skill and expertise is needed for preserving manuscripts
4. Costly and rare books are to be kept in digitized or laminated methods
5. Pest control system is maximum avoided with substitute of natural pest control system with chamber and neem oils.

## **CONCLUSION**

There is an old adage that “Prevention is better than Cure”. The same is true for the science of preservation. The concept of preservation is now gradually becoming a central issue in modern librarianship and preventive conservation, plays a key role in preserving the documentary heritage for Posterity.

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