

Conservation and Preservation of Library Material and Manuscripts in Gandhi Research Foundation Library and Archive, Jalgaon: An Observational Study

Ashok Nivrutti Chaudhari

Chief Librarian, Gandhi Research Foundation, Gandhi Teerth, Jain Hills, Jalgaon, MS, India

Abstract

Library and archive is the most valuable source for academic and scholarly development of each and every institution. But the main challenge faced by library and archive is deterioration of this precious treasure. In order to salvage these resources and the libraries from a colossal loss of its heritage, this study examines preservation and conservation of library materials and Manuscripts in the archive. It also investigate the various processes/techniques, tools which are used for its preservation and conservation at Gandhi Research Foundation Library (GRFL) and Gandhi Research Foundation's Archive (GRFA), Jalgaon. It also brings out the problems related to deterioration and conservation of Manuscripts and how it has been prevented in the GRF by examining the major causes of the deterioration of the manuscripts.

Keywords: Conservation, Preservation, Manuscripts, Deterioration, Tools and Techniques, GRFL, GRFA

Introduction:

Library is the treasure of knowledge. Conservation and preservation of valuable library material is an important function of the library. Deterioration of information materials is one of the basic challenges facing library materials which are prone to wear and tear, shrinkage, cracks, brittleness, warping, bio-infestation, discoloration, abrasion, hole, dust and dirt accumulation. External causes of deterioration of collections include poor handling or storage, theft or vandalism, fire and flood, pests, pollution, light and incorrect temperature and relative humidity^{1,2,3}. Almost all library collections are organic in nature, so they are in need of preservation and conservation. Books and other materials, manuscripts suffer damage or deterioration because of several groups of factors, some inherent in the materials and others beyond the control of the library. Each type of paper material, glue, plastic that goes into the manufacturing of a book, recording or optical media has its own combination of physical and chemical properties, and a life span. The other factors include all of the conditions surrounding the processing, storage and use of the materials. The study conducted in 2006 by Akussah shows that, deterioration of information materials is caused by either inherent chemical instability of the materials or the external environmental factors.

To avoid these heavy loose of materials in the library, preservation and conservation practices become imperative. Preservation and conservation practices are focused at ensuring that significant library and archive materials, published and unpublished, in all formats are preserved in accessible form for as long as possible⁴. Preservation and conservation is the practice of minimizing or reducing the physical and chemical

deterioration of documents. Jordan (2003) describes preservation and conservation as an umbrella term for an array of activities, principles, practices, and organizations that ensure the usability, longevity, and accessibility of recorded knowledge. These activities include; general collections repair, reformatting (microfilming, photocopying, and digitization), environmental monitoring and control, care and handling of materials, disaster preparedness and recovery, binding and preservation education and training⁵.

In Reader's Digest Great Illustrated dictionary Archives has been define as an organized body of records pertaining to an organization, institution, or the like. Traditionally, a manuscript is any document which is written by hand – or, once practical typewriters became available, typewritten — as opposed to being mechanically printed or reproduced in some indirect or automated way.⁶ More recently, the term has come to be understood to further include *any* written, typed, or word-processed copy of an author's work, as distinguished from its rendition as a printed version of the same.⁷ Before the arrival of printing, all documents and books were manuscripts.

This paper stresses the need for preservation and conservation of manuscripts in manuscript libraries/archive and library material. It also discusses the various techniques used in the preservation and conservation of library material and manuscripts. It examines the causes of deterioration, existing preservation and conservation techniques, and constraints limiting effective preservation and conservation and how it has been prevented in the GRFL and GRFA, Jalgaon, by examining the major causes of their deterioration. To give the practical aspect to it, a detailed study was conducted at the Gandhi Research Foundation library and archive.

Aims and objectives of the study:

- This study aims to discuss the various problems related to deterioration and conservation of library materials and paper manuscripts.
- To study the various internal and external factors which are responsible for deterioration of the library materials and paper manuscripts.
- To make a detailed study for a better understanding of the agents of deterioration.
- To study the various tools, techniques/methods of conservation of the library material and paper manuscripts.
- To study the various type of chemicals, which are using for conservation of the paper manuscripts.

1.2 Research Questions

- i. What are the preservation and conservation practices of library material and manuscripts in the GRF?
- ii. What are the causes of deterioration of library materials and manuscripts in the GRFL and GRFA respectively?
- iii. What are the techniques used in the preservation and conservation of library and archival materials and in the GRF?

1.3 Scope of the Study:

This study seeks to evaluate the preservation and conservation practices in the library so that it can come out in the form of some techniques or practices which in turn can help to conserve the important library material and manuscripts all over the world.

Brief Introduction of Gandhi Research Foundation’s library:

Gandhi Research Foundation, Jalgaon formulated by the Founder, Dr. Bhavarlal Jain, Padmashree on March 2012. The mission is strive to establish a world based on Truth and Nonviolence, Peaceful Co-existence, Conservation and Love for Labour – values cherished and practiced by Gandhiji. The Gandhi Research Foundation is committed to maintain this invaluable national treasure in line with its core objective of preserving for posterity of Gandhi’s legacy. GRF’s library contains most exhaustive collection of books and journals on Gandhi, his life, work and philosophy. Most of Gandhi’s writings are in the form of articles, speeches, letters and reports of interviews, mainly through either self-edited or sponsored periodicals. His writings comprise the most voluminous corpus in the history of human civilization so far. At present, there are 13000 books, 4368 periodicals, 4019 captioned photographs, 152 audios of Gandhi’s speeches, 70 films and 114 philately stamps of Gandhi in GRF’s possession.

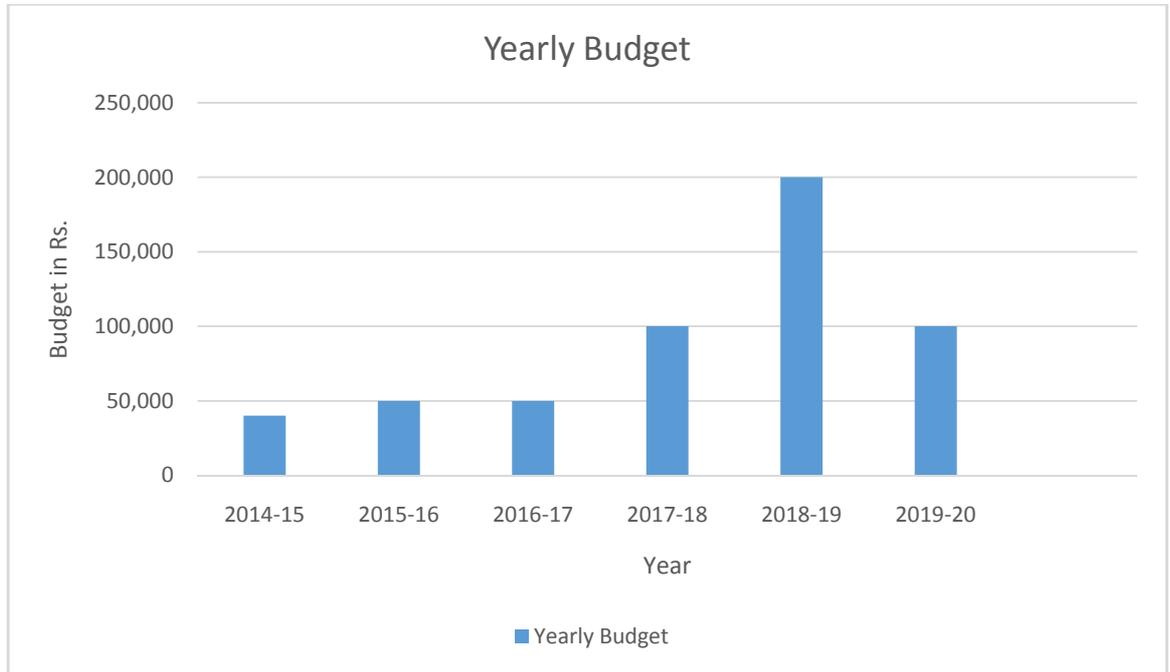
The Library, as an excellent resource base, can be used by academic scholars doing research projects on Gandhi or on historical topics related to the Indian Freedom Movement (including biographies of individual freedom fighters). The collection is interdisciplinary dealing not only with history, but also politics, economics, sociology, philosophy, religion and culture. Books are available in various languages, especially regarding translations of Gandhi’s principle writings. The reading room offers a comfortable, congenial, clean and quiet environment as well as technical facilities for quality study and research.

Brief Introduction of Gandhi Research Foundation’s Archive (store house of manuscripts):

Realizing the paramount importance of archiving as a crucial component of research, the GRF has created special facilities within the foundation building. GRFA is an air-conditioned vault of 2000 sq. ft. houses fire, climate and pilfer-proof, safes to preserve the archival material. The facility has strict humidity control norms. State-of-the-art reproduction and digitization technology has also been installed. This is the main store house for manuscripts.

Result/Data Analysis:

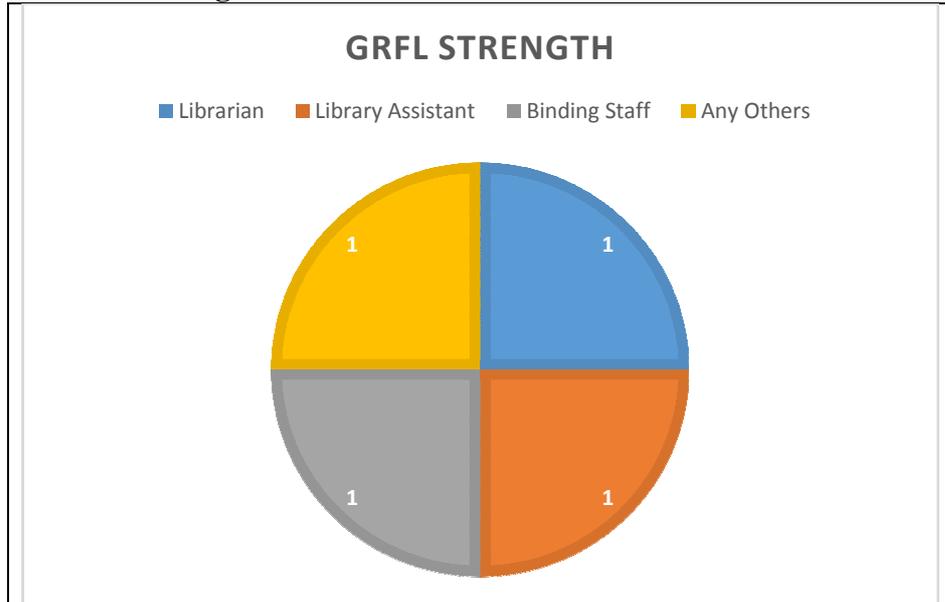
1. Diagram- 1: Budget of Gandhi Research Foundation Library (GRFL) and Archive (GRFA):



The above graph diagram shows the yearly library budget of GRFL and GRFA.

For the more appropriate analysis the budget of GRFL since last five years has been taken under consideration. The budget of the GRFL and GRFA in 2014-2015 was very low (Rs. 40,000) while it goes slowly up in the next two financial year (Rs. 50,000), meanwhile in 2017-18 the budget has been increase effectively and goes up to 1 Lakh, the incredible improvement has been observed in the year 2018-19, when the budget was 2 lakh. It shows the constant increase in the budget for the proper maintenance of libraries' valuable treasure and to make it up to date for the use of scholars. But due to the sudden pandemic attack the GRFL and GRFA also saw the tremendous loss in its last year budget which drop up to half, like all other institutional loss.

Chart 1:Strength of GRFL:



Above pie chart shows the information about the library staff of GRFL. GRFL is highly active with the help of its staff, which includes one Librarian, one Library Assistant, one binding staff and one others.

2. Chart 2:Strength of GRFA:

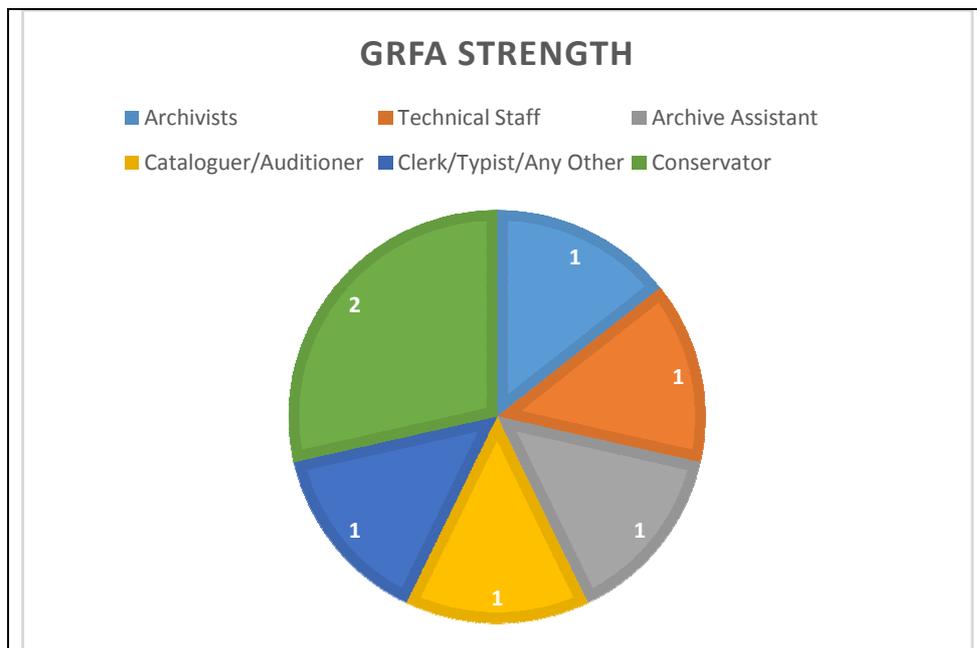


Chart2: The above pie chart shows the information about the archival staff of GRF, where there is availability of one person for each different necessary task along with 2 conservator.

3. **Equipment's available in the GRF Library and Archive:** Examination shows the followings equipment's availability in the GRFL.
 - i. Photocopier

- ii. Telephone
- iii. Scanner
- iv. Vacuum Cleaner
- v. Climate meter
- vi. Computer
- vii. CCTV
- viii. Air Conditioner
- ix. Ph Meter
- x. Temperature and Humidity Data Logger
- xi. Fire Fighting Tools
- xii. Microform Reader
- xiii. Book Scanner
- xiv. Cocoon Bag (for book fumigation)
- xv. Oxy (O₂) meter

4. **Table- 1: Services of the GRFL:**

Services	Yes/No
Reference Service	Y
Bibliographic Service	Y
Reprographic Service	Y
Translation Service	N
Indexing Service	N
Abstracting Service	N
Microfilming Service	Y
CD-Rom Service	Y
SDI	N
CAS	N
Interlibrary Loan	Y
Internet facility	Y

Table-1 give the information about the GRF library services. The GRFL provides Reference, Bibliographic, Reprographic, Microfilming, CD Rom, Interlibrary loan and Internet facility services to the library users.

5. **Table-2: Fire Extinguishers places in GRFL and GRF Archive:**

Places	GRF
Stack Room	Y
Office	Y
Entrance	Y
Bindery Section	Y
Reading Section	Y
Periodical Section	Y
Manuscript Section	Y

The table-2 gives the information of the places of places at GRFL and GRF archive building, where the fire extinguishers are installed. The GRF has installed fire extinguishers approximately every section of the library building and at archive.

6. Table-3: Details about Manuscripts collection in GRF archive:

Types of Manuscripts	Total number of Manuscripts	Manuscript's Language	Number of digitized Manuscripts
Paper Manuscripts	19865	English, Hindi, Gujarati, Sanskrit, Marathi	19865

Table-3 shows the manuscripts collection of GRF, which has only paper manuscripts in total 19865, in different languages such as English, Hindi, Gujarati, Sanskrit and Marathi and all manuscripts has been digitized.

7. Table-4: Nature of Deterioration of library material and Manuscripts in GRFL and Archive:

Physical	Chemical	Biological
Hole	Acidity	Fungus
Old Repair	Weakening	Termite
Deposition of Dust	Yellowing	
Folds	Brittleness	
	Darkening of paper	

Table-4 gives the information about the factors responsible for the deterioration of library material and manuscripts. In which the main physical factors are hole, old repair, stains, deposition of dust, chemical factors such as acidity, weakening, yellowing, brittleness, darkening of paper and Biological factors like fungus, termites are responsible for its deterioration.

8. Table- 5: Preservation and conservation techniques

Sr. No.	Preservation and conservation techniques
1	Binding
2	Lamination technique
3	Digitization
4	De-acidification
5	Cleaning and dusting
6	Shelving library materials to allow for free flow of air

7	Use of insecticide and insect repellent for library materials
8	Installing air – conditioners in archive
9	Provision of adequate security system to prevent theft mutilation and defacing of paper based materials
10	Use of Humidifier
11	Temperature control technique

Table-5 shows that there is total 11 different types of techniques are being used in GRFL for preservation and conservation of library material and manuscript.

9. Table- 6: Conservation and Preservation policy for The Manuscripts in GRFL: The information is gathered by asking a following questions to the relevant person as a blind participant of the study.

Questions	Answers
Is there any conservation and preservation laboratory in the organization?	Yes
Is it approached by any conservation agency?	No
What is the frequency of review for the physical condition of information sources?	Half Yearly
Is there any type of chemical treatment on walls of the stack room is used to control insects?	Yes
What types of chemical treatment on walls of the stack room is used to control insects?	Ko-thrine FLOW Spraying
Is there any type of de-acidification spray use, for the control of chemical factors?	No
Whether you have disaster management plan in your library and archive?	Yes
Does the library have preservation policy?	Yes
Is fumigation facility available?	Yes (Fumigators: Cocoon Bag)

Table-6 gives the information about the conservation and preservation policy for the library material and manuscripts in the GRFL and archive. Separate conservation and preservation laboratory is available, which uses chemical treatment on walls for stack room to control insects, as well as disaster

management plan is also available at building to avoid any hassle. GRFL has preservation policy, which help in the conservation and preservation activities of GRFL and GRF archive. GRFL also have a Fumigation Chamber, which is equip with Cocoon Bag. (Technique: The GrainPro® Cocoon™ Cargo zipper is located near the ground to facilitate handling bulk handling with forklifts. A sturdy and durable 1250 g/m² reinforced PVC enables outdoor storage and can handle extreme pressure. GrainPro® Cocoon™ Cargo is equipped with a CO₂ inlet and air outlet port. The gas tight chamber of GrainPro® Cocoon™ Cargo is ideal for fumigation. This 5 metric ton Rixin material bag is filled with 1500 books at once with proper filling in the corrugated boxes which have holes for proper flow of CO₂ gas. 15Kg Co₂ gas has been filled inside the bag for one time procedure and O₂ has been taken away from the upside cap of the bag. Daily oxygen level of bag is monitor to maintain the record. The oxygen level should be below 12%. In this way within 15 days 1500 books has been fumigated in the GRFL. The cycle has been repeated within 6 months of time period. The significance of this technique is that it's free from any kind of harmful chemical use.)

10. Table-7: Storage Method for the Manuscripts in GRF:

Types	GRFL
In cloth wrapper	Y
In bundles	N
In folders (Handmade paper)	Y
In carton box	N
In wood board	N
Wooden Almirha	N
Windo cut mount board (for photograph)	N
Use of book case	Y
Any other method...	

The table-7 shows the storage method or Manuscripts in the GRF. The GRF archive uses the cloth wrapper, handmade paper folder and book case for the storage of the manuscripts.

11. Obstacles for Preservation and Conservation of Library Materials:

The following causes has been detected, which are becoming an obstacle in the process of preservation and conservation of library material and manuscripts in the GRF.

- a. Lack of funding
- b. Lack of competent manpower
- c. Lack of preservation policy
- d. Lack of infrastructure
- e. Harsh environment conditions
- f. Obsolete hardware and software

12. Status of the Library Modernization: An important technique to preserve library material

Some points like;

- a special grants for modernization of the library,
- availability of computers,
- facility of own special library network (LAN cable network)
- automated library network availability,
- use of software in the library,

shows that the library is updated with a modern technique to provide needed technical support to its recipients.

Question related to Library Modernization	Response of GRFL
Did you receive any special grants for modernization of the library?	Y
How many computers are available in the library?	4
Do you have our own library network?	Y (Lan)
Nature of your library is automated?	Cable Network
Weather your library is automated?	Y (Partially)
Which of the following housekeeping operations are automated?	(Acquisition)
Is the library using any library Software?	Yes (Koha)

Conclusion:

Libraries are functioning to improve teaching, learning, provide quality education, scholarly work and research activities with a view to achieve the mission and vision of the institutions. This study shows that the lack of proper preservation and conservation practices is the main cause of resource loss and deterioration of library material and archival manuscripts. This is the main challenge faced by the libraries and archive.

The study investigated that the dust and other particulate matter is the greatest cause of resource deterioration in GRFL. Relative humidity, high acidity level, and high temperature level have significant effect on library material in GRFL. The study revealed that inadequate funding is the most severe inhibitor to effective preservation and conservation.

Along with this, the study concluded that the effective techniques such as dusting and cleaning, weather and environmental control evaluation, installation of air-conditioners, de-acidification, fumigation, modern preservation and conservation tools which are being practiced in the GRF, should be improve more, which in turn will aid adequate storage and increase the durability and longevity of library material and manuscripts in archive. Hence, the study recommended the strong use of modern preservation and conservation tools and techniques.

The Conservation and preservation and digitization of the documents have become an important aspects of the modern day society. It becomes more important when the manuscripts are available in the old libraries. The Futures research depends on the ability to preserving the information in digital form. Preservation keeps materials

alive and available. The next generation can use the heritage of our society authoritatively.

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