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Safeguarding the Indigenous Knowledge from Past: a Case Study in Kolkata Region

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Abstract-

A manuscript is a handwritten document. It contains thousands of years of information. There are so many unrecognized histories of the year is hidden in these manuscripts. For that reason, we need to preserve and conserve this treasure of knowledge. There are numerous study has been done which deal with preservation and conservation of manuscripts of many regions. As we all know that Bengal has a rich heritage of literature, so it is our liability to protect that precious information from decay or damage, which is in the form of manuscripts. Hence, a study named " Safeguarding the Indigenous Knowledge from Past: a Case Study in Kolkata Region" has been carried out. This study covers seven out of ten centers that deal with manuscripts. In this article, we want to portray the existing preservation and conservation approach followed by the Manuscript libraries in the Kolkata region, and suggest possible solutions for the betterment of the situation. In this study we find that Asiatic Society Kolkata has the majority of the manuscript collection among all the centers in Kolkata region. For preservation purpose most of the centers use brushing method, naphthalene bricks, some indigenous methods, spraying insecticide in monthly basis etc. Lastly, this study finds that for conservation of manuscripts, deacidification, fumigation with paradichlorobenzene, and some commonly used preventive conservation methods are used.

Keywords- Manuscripts, Conservation, Kolkata, Preservation

• Introduction-

The word "Manuscript" (from manus 'by hand' + Scriptus 'Written') is derived from the late 16th century, which is a medieval Latin word ("Meaning of manuscript," n.d.). Generally, any document written by hand may be in a book form, scrolls, or codex format. Before creating woodblock

printing in China or the printing press in Europe, all written documents had to be written by hand ("Manuscript," 2019). The knowledge, ideas, expression were transmitted through the verbal conversations 'Sruti' and 'Smriti'(Chakraborty and Chakrabarti, 2011). Before the advent of paper in Europe by the 14th century, diverse materials were used as writing surfaces in different periods. The earliest writing material was stone, and then clay, papyrus, bark, palm leaves, wood, ivory and bone, metal sheets, leather, parchment/vellum, and cloth were used. In India, the printing press came into India in the year 1556, on the west coast of Goa. The manuscript was stored in shrines, temples, Buddhist monasteries, and palaces in old age. The collection of manuscripts was often called "Saraswati Bhandar." Significantly, the temple was the treasure of manuscripts in the Gupta age. In 650-1000, many people donate their manuscripts to the temple for the sake of virtue. The most commonly used materials for writing in India are Palm leaves, Bhurjapatra (Bhattacharya and Sengupta, 2008). To preserve this literary heritage, we need to safeguard the manuscripts in preventive, curative, and restorative measures. The study "**Safeguarding the Indigenous Knowledge from Past: a Case Study in Kolkata Region**" describes the present conditions of libraries and the conservation techniques used by the different manuscript libraries for minimizing the deterioration of manuscripts.

- **Objectives**

- ✓ To identify the highest holding of manuscript center in Kolkata region
- ✓ To investigate the preservation techniques used by the different manuscript centers
- ✓ To investigate the conservation techniques used by the different manuscript centers; and
- ✓ To suggest some possible solutions to protect the manuscripts.

- **Importance**

Bengal has a rich heritage of literature. From ancient times, knowledge, ideas, and expressions are jot down by hand, reflecting the culture of that time. It has an immense value in our civilization. Therefore, we need to preserve and conserve this literary heritage. For this reason, preservation and conservation of manuscripts has been carried out in the Kolkata region to show the present

conservation status of those centers, identify the possible causes for deterioration and suggest some possible solutions to protect the manuscripts.

- **Review of Related Literature**

The literature review is an intrinsic part of the research process, making a valuable contribution to almost every operational step of research. It can be valued even before the first research stage; even when we are simply thinking about research questions, we should consult some literature to build up a solid idea in our idea plane. In the embryonic stages, it helps the researcher to build their concept about the topic. Then, the researcher can get an overall idea of that topic to consult the literature that has been carried out. After consulting, the researcher can find out the gap of that particular study. Then the further research can be carried out (Kumar, 2011).

Mahawar and Kuriya (2013) discussed the conservation and preservation of manuscripts in the Saulat Public Library Rampur, Uttar Pradesh. It explores the condition and management of collections, staff, services, budget, and different policies for preserving and conserving the collection in Saulat Public Library. They identified that the library holds 1,04,000 collections, but there is no Curator, Restorer, and Conservator to handle the collection appropriately. They also notice that the library is not well equipped with modern apparatus such as air conditioning, vacuum cleaner, climate meter, fumigation chamber, theft detector. They identified different deteriorating factors of manuscripts like fungus, termites, bookworms, silverfish, wood borers. Devi (2014) attempted to explore the trends of the conservation and preservation of the manuscripts in the Manipur region. The researcher had grown an interest in the local manuscripts called Puya, which is written in an archaic script to rescue the rich heritage of Manipur with a different scientific and indigenous method. The researcher identified possible deterioration factors of the manuscript such as biological, geographical, environmental. The researcher also lists out some methods of keeping manuscripts intact which are being used in Manipur. Narang and Singh (2014) had studied the possible elements for degradation of the rare manuscripts in the Sikh Reference Library at Golden Temple in Amritsar. Safeguarding techniques to restrain further destruction to these rare documents have also been discussed in this article. This study also reflects the current situation and condition of the building and the possible ways it serves to maintain the valuable and rare

scriptures. Nazir (2014) wanted to discover some of the Kashmiri Marsiya manuscripts that are at the edge of disappearance due to the lack of preservation and conservation. The researcher stated that Marsiya is an Urdu-Persian poetry form that is normally recited and written on the death of a dear one. It was first originated in Iran and usually consisted of six-line units with a rhyming quatrain. In Iran, it was traditional to recite Marsiya in order to pay homage to the death of Hazrat Hussein and his 72 comrades. Kashmiri Marsiya manuscripts have been written for almost 600 years and contain rich and valuable information during different periods. This study tries to portray some of these manuscripts to show that preservation and conservation of these manuscripts are essential to safeguard the rich cultural heritage. Qutab, Bhatti and Ullah (2014) tried to investigate the preservation and conservation facilities of intellectual heritage in Pakistan. This article's main motto is to review the current situations of the manuscripts in Pakistan, understand the physical conditions of manuscripts, observe the preservation and conservation situation and procedure, access human resource skills, and analyze the digitization activities of manuscripts. This study is based on 13 selective Pakistan institutions located in Lahore, Karachi, Islamabad, and Bahawalpur. The study's findings say that the overall condition of conservation and preservation of manuscripts is not at all adequate. Lack of staff, equipment and facilities are the main problems. Sageer, Mohamed, and Francis (2014) tried to highlight some important reasons for decaying Palm leaf manuscripts in Kerala, preservation procedures, and some important factors necessitating digital archiving. They carried out a study to find out whether digital archiving is the only solution for preserving Palm leaf manuscripts for the near future. Mazumdar (2015) helped us to find out the status of the repositories of Assam, to show the prospect of using ICT for their management, and develop a plan to design a database of manuscripts in Assam. A survey has been conducted followed by an interview and questionnaire method to conduct this study. In this study, the researcher portrays an outline to design a database and a practical approach using google sites to fetch the required manuscript information. Sahoo (2016) stated that careful analysis of different facets of Palm leaf manuscript. This article highlights the ancient past of Palm leaf manuscript, different seasoning, and writing over manuscripts. The researcher also tried to explore the different reasons for the deterioration of manuscripts, such as physical, biological, and chemical factors. This article can overview of different indigenous methods and digitization procedures to preserve and conserve manuscripts for preserving cultural heritage. Ghosh, Mahajan, and Banerjee (2017) pointed out the modern as well as ancient techniques of preservation, the writing techniques on

Palm Leaf manuscripts, the process of preparation of writing on manuscripts, the possible deterioration factors such as fungal effect, insect damage, stains and spots, Indian scenario of Palm Leaf manuscripts conservation and lastly a case study has shown on the total Palm Leaf manuscripts collection and preservation process of Thanjavur Saraswati Mahal Library, Thanjavur. Kalita (2017) studied the preservation and conservation of manuscripts in the Assam region. The researcher explored the techniques of Sancipat manuscript conservation, various types of preservation techniques, the insect repellent formula to protect the manuscripts from insect attack, causes of deterioration of manuscripts, methods, and practices that are being followed for the preservation of manuscripts. The researcher also tries to highlight the digital archiving and digital preservation of manuscripts and the role of the National Manuscript Mission for the preservation and conservation of manuscripts. Singh (2018), in his comprehensive study of preservation and conservation of archival materials in the National archives of India, tried to find out the commendable job which is done by the National archives of India to protect the literary heritage from the destructive attack of climatic conditions, worms. From this article, we can know that NAI uses both traditional and latest methods to protect its treasure. Anoop, Sabu, and Bindu (2019) tried to write an article on manuscriptology. He stated that manuscript is the process of conserving our literary heritage. By conserving it and using that information, we can open a horizon of knowledge. This article highlights the different types of writing material, scribes, various scripts, writing techniques of manuscripts, and different steps associated with manuscriptology. This article also covers the entire conservation and restoration procedures carried out to protect the manuscripts from damage.

- **Scope and coverage**

It gives a vast idea of techniques to the librarians which they can use to tackle problems. In addition, the researchers are hopeful that it will create awareness among the librarians; they will feel more confident in convincing the authorities about the issues of documents and their treatment.

This thesis covers seven manuscript centers in the Kolkata region, i.e., The Asiatic Society Kolkata, The National Library Kolkata, Bangiya Sahitya Parishat, Calcutta University Manuscript Centre, Bhaktivedanta Research Centre, The School of Vedic Studies, and The National Council of Education, Bengal.

- **Methods of data collection**

Collections of Primary data-

The collection of primary data in this study is based on surveys through questionnaires. The interview method of collecting data involves presenting oral-verbal stimuli and reply in oral verbal responses. This method is done through personal interviews.

Collections of secondary data-

This study gathers secondary data from different primary and secondary sources listed below in the Bibliographical References. The references are as follows American Psychological Association 6th edition. In addition, the review of related literature is arranged in chronological format.

- **An Introduction to the Notable Centres in Kolkata concerning their Manuscript collection and Conservation techniques**

While introducing to the notable centers in Kolkata, the researcher tries to discuss the manuscripts centers. This study covers the following centers-

Table 1.1 Name of the ten centers

Sl.No	Name of the Centers
1	The Asiatic Society Kolkata
2	The National Library Kolkata
3	Bangiya Sahitya Parishat
4	Calcutta University Manuscript Centre
5	Bhaktivedanta Research Centre
6	The School of Vedic Studies
7	The National Council of Education, Bengal
8	Rabindra Bharati University Museum

9	Sanskrit Sahitya Parisad
10	The Sanskrit College and University

This Table 1.1 describes those ten Centres which deal with manuscripts in Kolkata Region. Those ten centers are The Asiatic Society Kolkata, The National Library Kolkata, Bangiya Sahitya Parishat, Calcutta University Manuscript Centre, Bhaktivedanta Research Centre, The School of Vedic Studies, The National Council of Education Bengal, Rabindra Bharati University Museum, Sanskrit Sahitya Parisad, and The Sanskrit College and University.

Among those ten centers researcher tries to cover seven centers that have been covered in this study.

This study is based on the following seven centers.

Table 1.2: Acronym of the Centres

Sl.No	Name of the Centre	Acronym
1	The Asiatic Society Kolkata	ASK
2	The National Library Kolkata	NLK
3	Bangiya Sahitya Parishat	BSP
4	Calcutta University Manuscript Centre	CUMC
5	Bhaktivedanta Research Centre	BVRC
6	The School of Vedic Studies	SVS
7	The National Council of Education, Bengal	NCE

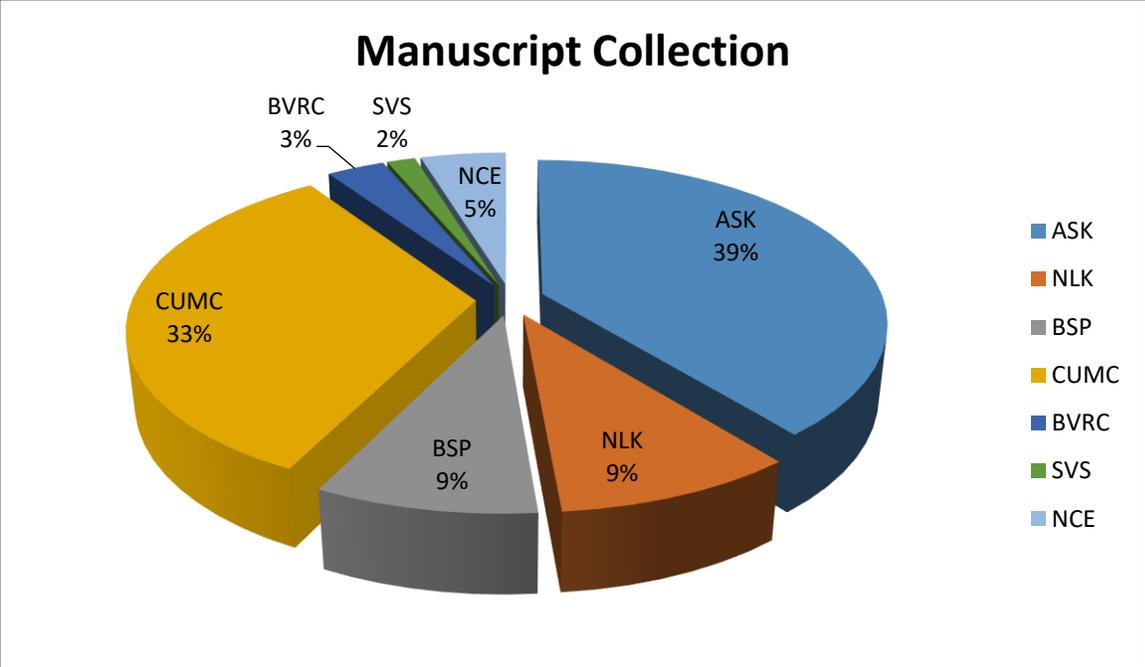
From Table 1.2, we can see that, The Asiatic Society Kolkata is termed as ASK, The National Library Kolkata is termed as NLK. BSP & CUMC are termed as follows Bangiya Sahitya Parishat and Calcutta University Manuscript Centre. Lastly, Bhaktivedanta Research Centre, The School

of Vedic Studies, and The National Council of Education Bengal are termed as BVRC, SVS, and NCE.

Table 1.3: Total Manuscript Collections by different Centers

Sl.No	Acronym	Total Manuscript Collection
1	ASK	49616
2	NLK	12000
3	BSP	11000
4	CUMC	42000
5	BVRC	4065
6	SVS	2000
7	NCE	6000
8	Total	1,26,681

From the Table 1.3, we can see that the total manuscript collection is 1, 26,681. ASK has a collection of 49616 manuscripts, NLK with a collection of 12000, BSP with a collection of 11000, CUMC has a collection of 42000, BVRC has a collection of 4065; lastly, SVS and NCE both have a collection of 2000 and 6000.



Graph 1.1- Total Manuscript Collections

From graph 1.1, we can see that, ASK has the lion share of the manuscript collection with 39% of manuscript. Then CUMC has 33% of the manuscript collection. NLI and BSP both have the 9% share of the manuscript collection. NCE has 5 % and BVRC and SVS has 3% and 2 % of manuscript collection respectively.

- Preservation Facilities provided by different centres**

Table 1.4: General Preservation facilities provided by different centres

Sl. No.	Acronym	Brushing	Vaccum Cleaner	Others

1	ASK	✓	✓	Use of naphthalene bricks in the stack area of the library, Spraying insecticide in monthly basis
2	NLK	✓	×	
3	BSP	✓	×	Herbal, Chemical
4	CUMC	✓	✓	
5	BRC	✓	×	
6	SVS	✓	×	Citronella Oil
7	NCE	✓	×	

From table 1.4, we know that brushing is done in almost all the centers; vaccum cleaner is used in ASK and CUMC Only. In addition to that, ASK also use naphthalene bricks in the stack area of the library, spraying insecticide monthly. BSP also uses the Herbal and Chemical method. Finally, SVS uses citronella oil to increase the longevity of manuscripts.

Table 1.5: Protection of manuscripts from Dust, Dirt, macro and micro organism

Sl.No	Acronym	Protection of manuscripts from Dust, Dirt, macro and micro organism
1	ASK	Arsenic used for Rodent Control, Insecticide spray for Termite, Thymal spray if Fungus is spread widely
2	NLK	Regular cleaning, Chemical Spraying, Fumigation, Fridge Drying
3	BSP	Indigenous method, cleaning
4	CUMC	Wrapping in 2/3 layers of acid free paper and cloth
5	BVRC	Regular Cleaning
6	SVS	Dry Brush cleaning, Wrapped with acid free paper and red cloth, Fumigation for fungi and Insect, Use Insect repellent
7	NCE	Cleaning (not regularly)

From Table 1.5, we can see that for protection of manuscripts from dust, dirt, macro, and microorganism ASK use arsenic for rodent control, insecticide spray for termite and thymol is sprayed if fungus is spread widely. Regular cleaning, Chemical Spraying, Fumigation, Fridge drying are done in NLK. BSP have applied indigenous methods, and regular cleaning is done to get rid of dust, dirt, macro, and microorganism. Only cleaning is done in BVRC and NCE. Cleaning is not done every day in NCE. CUMC and SVS have wrapped their manuscripts in 2/3 layers of acid-free paper and cloth. Dry brush cleaning, fumigation is done for fungi and insect in SVS.

Table 1.6: Protection methods used to face Climatic Condition

Sl.No	Acronym	Protection methods used to face Climatic Condition		
		Air Conditioning	Use of Silica Gel	Other methods
1	ASK	✓	✓	
2	NLK	✓	✓	
3	BSP	✓	×	
4	CUMC	×	✓	Indigenous Indian herbal materials
5	BRC	✓	×	
6	SVS			×
7	NCE	✓	×	

In this table 1.6, we can see that, air condition is used almost all the centers except CUMC and SVS. Silica gel is used in ASK, NLK and CUMC. CUMC also use some indigenous Indian herbal materials.

- **Conservation Facilities in the library provided by different centers**

Table 1.7: Conservation facilities in the library

Sl.No	Acronym	Conservation facilities in the library
1	ASK	<ul style="list-style-type: none"> • Neutrilisation of acid by three process PH 6.5>8.5 • Aquous • Non Aquous • Gaseous • Use of LPM Leather Preservation mixture for removing fungus for leather bound books • Fumigation with the help of Paradichlorobenzine for complete destruction of insects. This is done within airtight chamber or almirah
2	NLK	<ul style="list-style-type: none"> • Deacidification • Fumigation • All Preventive, restorative and Duplicative processes • Aquous • Non Aquous
3	BSP	Traditional methods
4	CUMC	Preventive Conservation with herbal materials like powder Vacha, Cloves, Black Pepper, Camphor, Black Cummin (Kalojeera), Turmeric (Haldi),

		Neem leaves, Citronella oil, Fumigation by Thymol and Paradichlorobenzine
5	BVRC	×
6	SVS	Don't have required equipments and chemicals for conservation of manuscripts
7	NCE	×

- **Conservation Facilities in the Library**

From Table 1.7, we can know the detailed conservation facilities which different centers offer.

ASK

ASK uses the deacidification process to neutralize acid for the conservation procedure, using LPM (Leather Preservation mixture) to remove fungus for leather-bound books. This center also uses fumigation with the help of Paradichlorobenzine for the destruction of insects. This is done within an airtight chamber or almira

NLK

For the conservation of manuscripts, NLK uses deacidification (aqueous, non-aqueous), fumigation both. Apart from these, all other preventive, restorative, and duplicative processes have been followed by NLK.

BSP

BSP for the conservation of manuscripts has followed all the traditional methods.

CUMC

Preventive Conservation with herbal materials like powder Vacha, Cloves, Black Pepper, Camphor, Black Cummin (Kalojeera), Turmeric (Haldi), Neem leaves, Citronella oil. The fumigation process is followed by Thymol and Paradichlorobenzene

BVRC

BVRC does not use any conservation procedures directly in its centers. Instead, they go to different places where manuscripts of Gaudiya Sastra, tantra, shakti, naya are found. They preserve and conserve those manuscripts and make those preserved manuscripts digitally (CD form). Then those CDs are handed over to the concerned librarians. They wrote the name and author of the manuscript on the colophon of the manuscripts.

SVS

SVS does not have the required equipment and chemicals for the conservation of manuscripts

NCE

NCE does not have the proper infrastructure which is required for the conservation of manuscripts.

- **Findings-**

- ✓ ASK has the lion's share of the manuscript collection with 39% of the manuscript. Then CUMC has 33% of the manuscript collection. NLI and BSP both have a 9% share of the manuscript collection. NCE has 5 %, and BVRC and SVS have 3% and 2 % of the manuscript collection, respectively. (Vide Table 1.3, Graph 1.1)
- ✓ Almost all the centers' brushing is done, the vacuum cleaner is used in ASK and CUMC Only. In addition to that, ASK also use naphthalene bricks in the stack area of the library, spraying insecticide monthly. BSP also uses the Herbal and Chemical method. SVS uses citronella oil to increase the longevity of manuscripts. (Vide Table 1.4)
- ✓ For the protection of manuscripts from dust, dirt, macro, and microorganism ASK use arsenic for rodent control, insecticide spray for termite and thymal is sprayed if fungus is spread widely. Regular cleaning, Chemical Spraying, Fumigation, Fridge drying are done in NLK. BSP has applied indigenous methods and regular cleaning to get rid of dust, dirt, macro, and microorganism. Only cleaning is done in BVRC and NCE. Though cleaning is not customary in NCE. CUMC and SVS have wrapped their manuscripts in 2/3 layers of acid-free paper and cloth. Dry brush cleaning, fumigation is done for fungi and insect in SVS. (Vide Table 1.5)

- ✓ Air-condition is used in almost all the centers except CUMC and SVS. Silica gel is used in ASK, NLK, and CUMC. CUMC also uses some indigenous Indian herbal materials. (Vide Table 1.6)
- ✓ Some centers like ASK, NLK, and BSP use the deacidification process to neutralize the acid to conserve manuscripts. ASK, NLK use all preventive, restorative, and duplicative methods to prevent their manuscripts from damage. ASK uses gaseous fumigation with paradichlorobenzene's help to destroy insects, but NLK also uses vacuum fumigation and fridge drying. CUMC uses all the preventive conservation methods with herbal materials like powder Vacha, cloves, black pepper, camphor, black cumin, turmeric, neem leaves, citronella oil. BSP uses all traditional methods for the conservation of manuscripts. SVS and NCE do not have the proper infrastructure to conserve their manuscript. NCE also has a lack of funds. (Vide Table 1.7)

- **Suggestions-**

- ✓ The concerned center should send their staff to a foreign country to learn the modern conservation and preservation techniques and apply them in their respective fields.
- ✓ Regular provision of funds is needed to support the preservation and conservation program.
- ✓ Sufficient and trained working hands are needed to implement the proper plan.
- ✓ Those centers don't have air condition system, should use dehumidifier, to control the humidity of the atmosphere.
- ✓ Proper consultation with conservators is needed.
- ✓ Proper documentation of manuscripts should be needed.
- ✓ Manuscripts should be handled with proper care; brittle and discolored manuscripts should be preserved or conserved accordingly by wearing gloves.
- ✓ Digitization of manuscripts is essential to treasure that precious knowledge of manuscripts.

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