

DIGITIZATION OF MANUSCRIPT AND ITS ACCESSIBILITY CENTRAL LIBRARY, BANARAS HINDU UNIVERSITY : AN OVERVIEW

Dharade, Sangeeta

Dept. of Library and Information Science. M.P Bhoj (open) University, Bhopal(M.P.)INDIA

ABSTRACT

The paper enlightens how to preserve the manuscript collections in digital environment. Considering the importance of manuscript as a source of historical & cultural information it is important to initiate projects aimed to preserving them and making them accessible in ICT environment to information seekers. Information technology has stretched new possibilities in preserving manuscripts when we were scared of the end of those traditional reading materials. Internet has emerged the best medium for this purpose and through the provision of web; manuscripts may be made available to the outside world without compromising o their safety. Manuscripts are rare publications they play an important role in human scholarship. Library professionals need to have knowledge about the new technological advancements and how to provide information effectively to the users at right time. Digital preservation, or the archiving of manuscripts for preservation and access, is an issue that must be resolved to ensure the retention of human heritage in perpetuity. 'Digital information occupies a vast portion of the collections of all libraries in the 21st century. The need to access and use digitized information is tremendously.

KEYWORDS: Digitization, Digital Preservation, Manuscripts,

INTRODUCTION

The Banaras Hindu University is an internationally reputed temple of learning, situated in the holy city of Varanasi (Uttar Pradesh). This creative and innovative University was founded by the great nationalist leader, Pandit Madan Mohan Malaviya, in 1916. The Central Library, Ban&ras Hindu University, one of the largest university library system in the country. University library established in 1916 at the Central Hindu College, Kamach'na, it shifted to the Central Hall of the Arts College (now Faculty of Arts) in 1921 It moved 'y the present building in 1941. The present majestic building was founded in 1927 and built with a very generous donation of Rs. 2.0 lakhs from Maharaja Sayajirao Gaekwad of Baroda, after whom it has been named.

The Library's responsibility is to collect, disseminate and preserve the printed heritage of the country. It's also one of the oldest institutions of the country focused on the conservation and Maintenance of the bibliographic documents in various fields of knowledge. Digitization of manuscripts is one such initiative the library has taken up responding to the growing use and adaptability of information technology to library-related activities.

Information technology has stretched new possibilities in preserving manuscripts when we were scared of the end of those traditional reading materials. Internet has emerged the best medium for this purpose and through the provision of web; manuscripts may be made available to the outside world without compromising on their safety.

MANUSCRIPTS

A manuscript is a handwritten composition on paper, bark, cloth, metal, palm leaf or any other material dating back at least seventy-five years that has significant scientific, historical or aesthetic value. Lithographs and printed volumes are not manuscripts. Manuscripts are found in hundreds of different languages and scripts. Often, one language is written in a number of different scripts. For example, Sanskrit is written in Oriya script, Grantha script, Devanagari script and many other scripts. Manuscripts are distinct from historical records such as epigraphs on rocks, firmans, revenue records which provide direct information on events or processes in history. Manuscripts have knowledge content.

Manuscripts constitute an important part of the rich Indian Cultural Heritage. These are the major repositories of the contribution that our predecessors made in the diverse fields of religion, philosophy, astronomy, literature, history, medicine and science. They constitute the primary source of reconstruction of India's past. Manuscripts is the wealth and heritage of our culture, history, language, 'literature and of course civilization and; it could be the better source of knowledge. It has its importance in field of education and research of Indian history, culture and civilization. Manuscript is a type of resource for study and research are found in many old libraries, especially in those attached to the institutions of Indological Studies all over the world. Such Institutions are designed as Oriental Institutions and their libraries Oriental libraries. Manuscripts are the most valuable documents because of rare and primary source of knowledge, culture and history of human development.

Strength of Manuscripts in Banaras Hindu University :

S.NO.	Name Of Library	Strength of Manuscripts
1	Sayaji Rao Gaekwad Library (Central Library)	7227
2	Bharat Kala Bhawan	5020
3	Faculty of Sanskrit Vidya Dharma Vigyan	70
4	Ranvir Sanskrit Pathashala	75
5	Faculty of Indian Medicine	16

Material wise Collections of Manuscripts in Central Library:

S. NO.	Name Of Material	Collections of Manuscripts
1	Paper	7196
2	Bhoja Patra	12
3	Tada Patra	19
4	Manuscripts with Illustrations	512

Oldest Manuscripts in the collection

Title: Bhagwat Saptam Skandha commentary of: Govindbhatt, Dated- 1375 A.D.
Script Wise Collection of Manuscripts in Central Library:

S. NO.	Name Of Script	Collection
1	Devnagari	3340
2	Sharda	2160
3	Persian	937
4	Bangla	545
5	Urdu	140
6	Arabic	79
7	Grantha	12
8	Newari	8
9	Telgu	4
10	Tibbati	2

Collection Includes Manuscripts if following languages:

S.NO.	Name Of Languages
1	Sanskrit
2	Tamil
3	Telugu
4	Bengali
5	Urdu
6	Persian
7	Arabic
8	Marathi

No, of Manuscripts, Rare Documents and Thesis Digitized (2006-2011):

S.NO.	Years	Digitized Documents
1	2006-07	2138
2	2007-08	3288
3	2008-09	3518
4	2009-10	12310
5	2010- 11	15200

Source: Library Annual Reports.

DIGITIZATION CONCEPT:

Digitization means acquiring, converting, storing and providing information in a computer format that is standardized, organised and available on demand from common system. Manuscripts are converted into compressed digital formats with specialized scanners and stored systematically for future reference.

Digitization of Information basically means the process of converting paper documents such as text, graphics etc. into digital image, which can be made accessible through electronic network.

We can say digitization means process which is meant to eliminate paperwork and make a transition to a paperless environment with the help of software technology.

The issue has become important in recent time due to the advancement of information technology and its application in all phase of life. The libraries, both public and research need to adapt to the emerging scenario and take full advantage of this technology. One of the major activities listed for the tenth five-year plan of the country for the library sector is automation, modernization and networking of libraries. Digitization is seen to be one such job to achieve this target. Barring some isolated attempts by some institutions, organizations, libraries on a small scale, no major initiative has been taken so far in this direction.

Digital libraries have three principal advantages over conventional ones: they are easier to access remotely, they offer more powerful searching and browsing facilities, and they serve as a foundation for new value added services. In context where the collections are rare and unique, the digitization also serves as a preservation tool.

Why digitize?

- To promote access to manuscripts.
- For preservation in a longer lasting medium and creating a back up copy with as close a resemblance to the original as possible.
- To reduce handling of very fragile or frequently used original manuscripts.
- This vast archival resource will be accessible to users through the National Manuscripts Library

to be eventually set up by the Mission.

Goals of Digitization:

The digitization enables to complete preservation of the basic image data and part of the secondary image data. From the physical data it is possible to preserve only information about brightness and colors of the original. However, this information is deformed by the attributes of all of the used techniques. Certain exactitude can be reached by digitizing the calibrated areas with defined colors along with the originals.

The digital facsimile can be considered as a certain safety archival dimension of this original, of its image. The further development, experience and measures, which will be available, will show how much and at what price the secondary image data should be preserved. However, it is to be emphasized again that the originals are irreplaceable, and therefore, access to them should be limited as quickly and as widely as possible.

Digitization Requirements 4M's:

1. Man

- Staff
- User

2. Machine
 - Hardware
 - Software
3. Material
 - Print
 - Non-Print
4. Motivation
 - Manual to Machine

Why we need Digitization of Manuscript In the globalization

The world has witnessed rapid changes over the last decade, increased competition and technological advances. The development of information technology and communicating system has brought revolutionary changes in the organization and management of information. Digitization is a process through which extension and enhancement of information storage and retrieval systems that manipulates digital data in any medium (text, images, sounds, static or dynamic images) and exist in distributed networks. Digitization is necessitated for both accessibility and preservation. In this sense, we can say that, digitization of manuscripts is the only way to exchange cultural heritage to the communities.

Tools required for digitization of manuscripts:

Primary tools required for digitization of manuscripts are:

- Hardware
- Software

Hardware

a) Computer: Since the power of digital image creation lies in computer, speed of computer is of vital concern.

i. **CPU:** It is the computer's brain. Primary task of CPU is to receive programme instructions, process and send them. CPU's speed and sophistication in managing information is crucial to the efficient use of programmes like Adobe Photoshop. Most sophisticated CPU is Pentium III with 733-800 MHz.

ii. **PCI Bus:** Computer does not work alone. It processes the information flowing to and from it over a data highway called BUS. Now a day's bus speed is increasing faster.

iii. **Ethernet:** - It is a network protocol. It allows data to be transferred to Printers and other computers faster, than data sent over standard serial port.

It speeds up the process 3-5 times faster.

iv. **Silicon Graphics:** Prepress house can be used to have high quality output. It is used for effects. It can transform a wire-framed model into photo realistic 3D object.

v. **RAM:** Digital images and digital imaging software can quickly gobble up the entire RAM in the system. It must be realized that without enough RAM, it is not possible to load or create digital image of the size and number of colors we wish.

b) Storage devices

Digital images are voracious. In no time they eat up all the space on the system disk. For working in digital imaging field, one has to have enough capacity for storage, editing, Backup, archive etc.

i. **Hard drives:** Graphic professionals recommend a minimum of 500MB storage space for graphic system depending on the type of work. Speed of hard drive is measured by seek time and by transfer rate. Faster the hard drive lower the seek time.

ii. **Removable hard drive:** It can be used for backing up digital images & storing files.

iii. **Optical drive:** It can store data between 500MB - 1.3 GB.

iv. **DAT drive (Digital Audio Tape):** It is one of the most economical media to store data. It can be 60, 90, or 120 meter in size. It can store 1-2 GB data. Newer models can store up to 8 GB data. With DAT archiving and retrieving data is not fast because information is recorded and accessed sequentially.

v. **CD ROM drive:** It is an essential peripheral for digitization. To use a CD ROM, to view photo images, XA (extended architecture) is needed, which enables to add new photo CD images on CD ROM until its storage capacity is full. While purchasing CD ROM drive, speed needs to be considered. At present various speed models are available in market.

c. Monitors

Monitor's sharpness, size and clarity of colors are crucial to create professional looking digital images. It is suggested to have a 15" monitor with 24 bit color card.

d. Digitizing devices

Digitizing devices convert photos, artwork and raw materials of the real world into digital data that can be edited by graphics programmes. The most common digitizing devices are:

Scanners

Digital Cameras

i. Scanners

Scanners are primarily used to digitize photographs, artwork and slides. They come in all shapes and sizes. Some produce sharp, high quality images while others produce only acceptable images for positioning purposes. There are many types of scanners like Flat bed scanner, Slide scanner, Rotary drum, Quick document scanner, etc.

ii. Digital Camera

Digital camera digitizes image on a click of button, often storing image to a tiny hard disk or battery powered memory chips. The images are then downloaded to a computer through a cable connected to its SCSI or serial port or they can be sent to a computer over the phone lines.

e. Output devices

Printers, Modem and CD Writer are the output devices

Software

There are numbers of softwares, which can be used for different functions as follows:

For editing images

- . For page layout programmes : to integrate text and graphics
- . File transferring utilities: to share files between computer platforms
- . File translation programmes: to convert files from graphics
- . File compression software

The recommended software's are Adobe Photoshop, Paint shop Pro, FrontPage, Imaging professional software, etc.

Benefits of Digitization:

1. Remote Access

Digitization facilitates anywhere access to its collections according to the user need.

2. Multiple Accesses

One of the most important advantage digitization is multiple access documents. If a book is in physical format, then it can be handled by only one person in the specified period, but through the digitization process, it can access the specified document by several users at a time.

3. Preservation and Conservation

Digital reproduction and visually immortal, minimizes handling of originals, reconstruction using image processing techniques, use of life size print reproductions for conservation.

4. Dissemination and Promotion

Dissemination of information, knowledge and culture via the internet is a 21st century phenomenon.

Barriers of Digitizing Manuscripts

Lack of interest about the digitization of the concerned authority.

. Lack of knowledge of library personnel about digitization.

Lack of trained manpower

. Lack of fund.

Access to manuscripts in Central Library, B.H.U:

A libraries manuscript is enhanced by their scope, size and concentration in one place. They are the primary sources upon which the writing of history is based. They permit scholars to reconstruct and understand the past; interpret the national character, and set the record straight about events and personalities often shrouded in mystery and steeped in controversy. Manuscripts are one of the precious materials of our cultural heritage. They are valuable sources for the reconstruction of the history and culture of a country.

In Central Library B.H.U. original manuscripts are accessible to faculty members, non-teaching staffs, research scholars, undergraduates and post graduates student and outsider visitors, Therefore by digitization of manuscripts they provide access in the library collection. Digitized manuscripts are not available on university website for the access.

CONCLUSION

Digital preservation of manuscripts and rare documents is very much essential because it contains valuable information about our culture civilization which is useful for present as-well as-future generation. Most of the rare materials housed in various libraries of the world are not good shape and required special preservation techniques, Digital preservation needs the availability of appropriate infrastructure tools and techniques and also manpower.

Vision 2020:

By 2020 the foremost cultural heritage in museums, archives and libraries should be digitized according to priorities plans. The rare materials should be universally accessibly to all through information networks, providing access to and promoting knowledge of Indian civilization at the national and international levels. The cultural heritage materials should emerge to constitute an important resource for research, education and content creation.

REFERENCES:

- Vaishnav .A.A and Sonwane,S.S. “Information requirement for digitization of manuscript at BAMUL” <http://www.irinflibnet.ac.in>
- saikia , rekha rani and kalita., Binita “Prospects of Digitizing Manuscript collections in KKH Library : A Model “ P313-18. <http://www.inflibnet.ac>.
- National Mission for Manuscript: Guidelines for Digitization of Manuscript. P2-5
- http://www.ted.com.vn/TED/2007/Download/Guidelines_for_digitization_of_manuscripts.pdf Psohlavee, Stanislav “Digitization of old manuscripts: A technical point of view”
- [http// digit.nkp.cz/stp.htm](http://digit.nkp.cz/stp.htm)
- Ishrat, Amrit LaI.com. & ed. “A Descriptive Catalogue of the Persian Manuscripts in the Banaras Hindu University”
- Bouche, Nicole “Digitization for scholarly use” (March 1999). http://www.clir.ori.:/pub./reports/pub81-bouche/pub81_text.htr.il
- Tripathi, Rama Shankar.compld and..Sharma,P.V edited. “A Descriptive Catalogue of Manuscripts on Aurveda in the Banaras Hindu University “1984.
- Ishrat, Amrit LaI .compiled and edited “A Descriptive Catalogue of the Persian Manuscripts in the Banaras Hindu University”
- “ Digitization of the manuscripts of the National Library of India” CDNLAO Newsletter.No.47; Jul 2003.
- www.inflibnet.ac.in
- www.infolibrarian.com
- <http://www.namami.org/digitization%20concept.htm>
- Ivan, Boserup, “The manuscripts & the Internet: Digital repatriation of cultural heritage” IFLA Journal, vol.31 No. 2, 2005.
- Nair, R.Raman “Internet for library and Information services”
- Das, Bhagwan.” Successful Glossary of Common Library Terms”.