

Digital Museums and Repositories of Textile and Dress Heritage: A Study on Challenges and Opportunities

Ruby Kashyap Sood and Sudha Dhingra

Abstract

The COVID-19 pandemic has caused an unprecedented global shift in the way people live, adapt and communicate. The ongoing situational uncertainty of its impact, influence, direction and duration notwithstanding, rapid adaptability to technology indicates its increasingly pervasive significance in necessitating new paradigms and opportunities for continued learning, connecting and progressing in the near future. This mandates consideration of the challenges related to education that are being enacted with the likelihood of continued change in the post pandemic future. Domains of art, design, textiles and fashion that entail more visual content than the textual are likely to expand through digital portals where authentic and technologically enhanced virtual experiences could transform the expanse and mode of learning. Virtual trade shows, fashion shows and exhibitions that replaced physical shows during the pandemic, have been successful in increasing viewership. Museums too are taking the initiative to go online and provide an informative and interesting experience for the viewers. Digital repositories of varied knowledge domains are being designed to attract users from around the world. It is critical to understand the format in which digital technologies will play a significant role. Therefore, the two most pertinent questions are: Will digital museums and repositories replace physical spaces in the future? What are the significant parameters that can make the repositories of textiles, dress and crafts reliable and perhaps widely available for researchers, educators, designers and enthusiasts to gain knowledge? This research article attempts to highlight the opportunities and challenges of setting up a digital repository of textiles, dress and crafts. Besides content and technology, there are other factors that can enhance the virtual viewing experience and therefore, need to be taken into consideration while creating a digital knowledge portal. With the objective of deriving a wider perspective, views of experienced content creators and museum curators who have contributed to the repositories of textile crafts, art and culture, were taken. The changing roles of

museums and digital portals that enable enriching experiential learning of crafts and textile heritage, is also discussed.

Keywords: Digitization, repository, museum, textile heritage, preservation

Introduction

The COVID-19 pandemic has caused an unprecedented global shift in unforeseen ways. Extended lockdowns and norms of social distancing have urged people to adapt to the situation to work from home, socialize and engage with the larger world through innovative strategies. The digital gadget became the only means to connect with the outside world. Stanchev (2010) predicted that the computer and the environment would become artificial subjects and would communicate in an actual manner as real humans. In 2021, this has become the reality. In this scenario, digitalization of resources is the need of the hour making digital libraries, museums and repositories imperative.

Online viewing of cultural objects and arts has gained popularity during these challenging times of unpredicted lockdowns and stringent quarantine rules. According to Roth (2020), “Virtual museum exploration, a safe alternative to physical attendance, has therefore taken on new significance in light of the first post-internet pandemic”. The transition from physical to virtual display of museum collections became evident during the pandemic, with increased preference for virtual visits over physical visits. Nagender Reddy, Director, Salar Jung Museum, Hyderabad as cited in Bhavani and Gowri (2020) conveys that from June to August 2020, the museum received an average of 500 online visitors per day as compared to single-digit views prior to the lockdown. A report by UNESCO (2020) points to the new measures initiated by museums to connect with their viewers on a digital platform through virtual visits and social media. According to International Council of Museums, COVID-19 has motivated many institutions and museums to dematerialize their collections. The Smithsonian Institution made 2.8 million images of its collections available on an open access online platform. In 2021, museums in Paris released 100,000 digital reproductions of artwork on their portal. Panetta (2021) affirms that the pandemic has hastened digitization of the world’s cultural treasures. This phenomenon is reinforced by the most visited museum worldwide, Louvre Museum, Paris that has uploaded its entire collection online. People can access 482,000 pieces online including stored items that are not on view for in-person museum visitors.

Digitization of cultural heritage for conservation, protection and promotion was initiated by UNESCO in 2003. According to the UNESCO Charter for Preservation of Digital Heritage, digital heritage comprises human knowledge and expression: cultural, academic, scientific, administrative, technical, legal, medical and other categories of information that can be created digitally or converted into a digital form, and is valuable and significant enough to be preserved and protected for current and future generations. "The digital heritage is inherently unlimited by time, geography, culture or format. It is culture-specific, but potentially accessible to every person in the world. Minorities may speak to majorities, the individual to a global audience" (UNESCO, 2003, p.3).

Globally, there are several museums that are custodians of vast collections of historical and contemporary textiles and fashion. Textile museums are a treasure trove of information, but their primary objective is preservation and conservation of textiles, considering their fragile nature and degradation over a period of time. Museums also face challenges in terms of limited storage space and restricted scope to exhibit for public viewing. Morral and Guarini (2016) state that as fashion history gains momentum and is acknowledged for its cultural significance, more people would like to access more objects, more often. Kumar and Sathya (2015) are of the view that digitization of textiles enables users to search collections quickly and comprehensively from any place at any time. Thus the importance of digitization of textiles and dress is significant. Valetutti (2015) conveys that the wide scope of preservation of cultural heritage, both tangible and non-tangible assets via digital repositories is possible due to advancement in technology. Over the years, museums, cultural organizations and academic institutions are initiating mega projects to digitize heritage objects in an endeavor to preserve them and also to make them accessible to large numbers of viewers located in any part of the world.

There are leading museums of art and design that showcase digital collections online, though limited items. One of the biggest digital repositories of cultural objects is Europeana, funded by the European Commission and launched in 2008. The objective was to provide online access to cultural heritage material in multi-media formats and digital preservation across Europe. The Europeana portal brings together thousands of European museums, archives and libraries at one place. Online platform, Google Arts & Culture brings together content from more than 2000 reputed cultural institutions and archives that have collaborated with Google Cultural Institute. Initiated in 2011, the Google project enables users to virtually visit museum galleries and collections and also view artworks and artifacts in greater detail.

In light of the ongoing pandemic, the creation, usage and preservation of digital heritage by museums and cultural institutions would be the key to connect with their viewers. “The digital engagement and data practices followed by museums have changed and the digital methods for organizing and accessing collections by the museum staff and the general public have become more important” (Noehrer, et al., 2021, p.1). Increase in the multitude of online users has made it challenging for museums to maintain their digital platforms and remain connected with their audience in the post COVID environment.

Digitization refers to the conversion of material in varied formats such as actual objects, printed material, photographs etc. into a digital format with the help of electronic devices in order to process, store and transmit information on a digital platform. The process of digitization of cultural heritage entails several steps. Information related to cultural heritage available in multiple forms such as artwork, artifacts, images, sounds, videos, textual records etc. makes digitization a complex process. Following digitization, Navarrete (2020) states that digital collections require preservation and migration of all the data on an updated content management system. Constantopoulos and Dallas (2007, p.3) elucidate “Digital curation encompasses a number of processes geared to achieving (a) trustworthiness of digital resources, (b) organization, archiving and long-term preservation, and (c) added-value services and new uses for the resources”. Sotirova, et al. (2012) explain that access to digital collections is not just limited to ‘seeing’ an object by the user, but the efficacy of tools to discover resources by different users for different purposes. Thus, one of the key aspects is metadata, which is the structure of data crucial for effective digital management of materials available in varied formats. Patel, et al. (2004) state that objects need to be aptly described, classified and indexed using standard metadata elements and controlled vocabularies in order to facilitate search, recovery and sharing of information resources. The term ‘metadata’ refers to the description of information about a data that assists in quick discovery, usage and management of digital resources, globally. According to Barbuti (2020), the 4 Rs: Re-usable, Relevant, Reliable and Resilient are necessary to sustain and foster the usage and preservation of digital resources over a period.

Methodology

This research aims to study the challenges and opportunities to create a digital repository of textiles, crafts and dress. A semi-structured interview schedule was developed for deeper enquiry into different aspects of developing content, presentation and

update for an effective transaction. Experts including contributors to prominent digital repositories; founders of digital museums, online textile centric encyclopedias and museum curators engaged with digitization of textile heritage were contacted for inputs. Open ended questions were framed to get in-depth information from the respondents. Six respondents were selected, each representing different formats of online repositories. Purposive sampling technique was adopted to constitute a relevant sample of respondents with substantial experience in the domain of digitization of textile and craft heritage. The respondents were:

1. Ms. Jaya Jaitly: Author of books on textiles and crafts, policy advisor and founder chairperson of Dastkari Haat Samiti¹.
2. Ms. Ritu Sethi: Prolific writer, speaker and founder of Crafts Revival Trust² and Global-InCH³.
3. Ms. Mallika Verma Kashyap: Founder of Border&Fall⁴.
4. Ms. Preeti Bahadur, *PhD*: Art historian and academician
5. Mr. Sumiran Pandya: Founder of Gaatha⁵.
6. Ms. Smita Singh: Textile conservation consultant

Due to the pandemic related restrictions, interviews were conducted by emailing the questions and following up via telephonic communication. Of the four questions, two were framed differently in order to extract specific information, and two were common for all the six respondents based on their work profile.

Results and Discussion

The study was conducted to understand the challenges and opportunities faced by memory institutions like museums, archives, cultural heritage institutions and libraries to develop digital textile and craft repositories. Important parameters for the development of such a digital platform and pertinent concerns and future prospects were also examined. Responses received from the selected experts were interpreted and in-depth qualitative content analysis was carried out.

Digital versus physical

Textiles, crafts, costumes, and in fact all the artifacts displayed in the museum galleries offer a sensorial experience for the viewers. Museums around the world are going digital to reach out to a bigger audience. The pandemic has perhaps, hastened this process due to travel restrictions and limited access. The experts' views were taken on

the post-pandemic scenario, whether virtual visits are a fad or a growing trend that would evolve in the future. Jaya Jaitly has been working with design and marketing of textiles and crafts for the last 50 years and has authored several books. Her organization, Dastkari Haat Samiti was approached by Google to contribute 100 craft stories for their Art and Culture portal. In her opinion, the digital museum would be a parallel attraction through which museums can build more curiosity about the actual exhibits and generate more footfalls. The outreach of museums increases significantly if they have a digital presence. She recollected a Google meeting where creative technologists presented unique interactive experiences that allow viewers to bring art into their homes virtually, or change its positioning, or even play games with art objects. Ms. Jaitly opines, “While the pandemic restricts us, the museums have a wonderful opportunity to present themselves by using digital technology in exciting new ways”.

Ritu Sethi, founder of Crafts Revival Trust and Global-InCH is of the opinion that the world will never be the same post pandemic. Virtual museums and digital repositories are the way forward as travel restrictions can be countered by access to information that offers a virtual experience and enables unlimited learning.

Preeti Bahadur, who has contributed to Sahapedia⁶ on a project to aggregate material on tangible and intangible heritage of Chhattisgarh, does not consider virtual museums as a fad. She believes, “The digital media provides accessibility which is almost irreplaceable. It is not the experience *per se* that gives it value and staying power, even though it enables and supports curatorial exercises almost at par with physical museums, given its multimedia potential. For a sensorial experience, viewers would still prefer on-site experiences”.

Sumiran Pandya, one of the founders of Gaatha, affirms that the pandemic has pushed museums to go digital, an initiative that was long overdue. Gaatha was conceived in 2009 in an endeavor to showcase Indian textiles and crafts through storytelling and to connect artisans directly with the global audience. Mr. Pandya observes that it is interesting that museums where photography was prohibited or charged an extra ticket for the camera, have now gone digital and host an online open access repository of their collections. He further added that the behavior of visitors to ‘google’ available data will continue in the post-pandemic period. However, the richness of the digital repository will attract art and culture enthusiasts to physical museums, once the travel restrictions are lifted. “Digital can never replace the physical experience”, asserts Mr. Pandya.

Ms. Malika Verma Kashyap, founder of Border&Fall, a strategic and creative agency, carried out a digital project 'The Sari Series'⁷ for Good Earth, a premium Indian textile and craft brand. She feels that the pandemic has precipitated the trend for digital museums. She opines, "I do think digital immersive experiences will continue and ultimately, a 'phygital' version will exist as physical experiences will be valued, perhaps even more in the short-term post COVID".

Ms. Smita Singh, a textile conservation consultant is associated with the Maharana of Mewar Charitable Foundation, The City Palace Museum, Udaipur since 2014. She informs that the Gokul Niwas Gallery, a curtain raiser gallery at the City Palace, Udaipur displays limited number of objects whereas the documentation and digital image data of the entire collection has been uploaded on TMS, a specialized museum software of gallery systems, that will be available online soon. She envisions that the digital collections will assist in reaching out to a much bigger audience and will be helpful to researchers to prioritize their visit and take prior permissions to study the collection in the museum storage as well. The textile conservator explains, "Textiles and clothing are not like other mediums of artifacts like paintings, sculptures etc. which one can enjoy digitally as well. The texture, luminosity, three-dimensional structure and most importantly, feel and drape of the fabric and its hues under different lights cannot be experienced in a virtual exhibition. Virtual exhibitions are good for research which is based on visual observations; for technical examination, researchers prefer to examine physical objects. For this reason, the museum visits become necessary. Nevertheless, the visitors can use the digital media to prioritize their aims and objectives of the museum visit".

Impact and reach

The biggest advantage of a digital repository is its accessibility and wider reach across the world. An effort was made to examine the reach and overall impact of the existing textile and craft repositories. Ms. Jaya Jaitly ascertains the long-term benefits of including craft stories on Google Art and Culture platform. Several users including research scholars, academicians and museums across the globe have connected with her for permission to use images and content. Ms. Jaitly states, "Artisans are thrilled to download the free app and showcase their participation among their community and customers from India and abroad. This has meant major promotion and prestige for them. The Ministry of Tourism has also created a successful campaign 'Dekho Apna Desh', a series of webinars to promote travel to various places in India and the local

crafts practiced in the region. The content on digital portals seems to have encouraged marketing of craft products apart from tourism. One can never assess the financial benefits but its wide viewership is very satisfying”.

Dr. Bahadur believes that the digitization of the cultural heritage of Chhattisgarh state on Sahapedia has had a significant impact. The website increased the visibility of the artisans and an opportunity to circulate web links for greater reach, thus boosting their sales. Mr. Sumiran Pandya opines that a digital repository of crafts and artisans helps to generate more awareness about indigenous knowledge systems of the communities and their talent. It can be easily accessed by researchers and enthusiasts alike, unlike the limitations of a physical book. He adds, “Through the Gaatha portal, communities of students, professors, researchers and enthusiasts have reached out to the artisans and supported their endeavors of safeguarding their crafts and livelihoods”. Though Gaatha was originally created for research and documentation of Indian craft clusters and heritage that is experiencing rapid erosion, the team realized the need to restore pride and commercial opportunity in the craft ecosystem through digital media.

Critical parameters

The most important objective of a digital repository is the dissemination of a large amount of information to multiple users for different purposes. For a digital knowledge portal for textiles and crafts, both textual and visual content will be significant with easy navigation to access and facilitate relevant information and user experience. Ms. Ritu Sethi explains that content creation should be in accordance to the purpose of the repository and its relevance to the end user. She also emphasizes the importance of standardized vocabulary due to multiplicity of languages, metadata and tags for easy discovery of information. Interactive and engaging user experience adds value and can be achieved with the help of technology and human intelligence.

Ms. Jaya Jaitly is of the view that textual content may be kept minimal to keep the average viewer interested. Recalling her contribution to the Google Art and Culture, she maintains that good quality visuals and snippets of documentary videos embedded in the text increase user engagement. On the digital platform, the mode of navigation should enable the viewer to browse any element at random, rather than following a linear path. The success of Google platform lies in its creative and contemporary ways of showcasing art and craft through shopping ideas, color boards, engaging music etc., thus providing an interactive user experience. Dr. Bahadur explains the significance of metadata geared towards search engine optimization. In a craft repository, tags are

important to enable linking of content according to technique, raw material, process, motifs etc. Visual content with zoom-in facility for all the images have become essential to understand intricacies of the craft. According to Ms. Kashyap, visual content is most important in the digital world. The information should be relevant, clearly communicated and easily discovered in order to engage with a larger audience. Mr. Sumiran Pandya elucidates the importance of all aspects: content, navigation, access and user experience, in order to garner loyal viewership.

Challenges

One of the most critical inputs for a digital repository is content creation. Development of content for a textile and craft repository is a mammoth task. According to Ms. Jaitly, the process followed for contributing to Google Art and Culture, entailed the selection of crafts and their locations, devising a story line, identification of a team of photographers, researchers and content writers, coordination with artisans and field visits to gather data. The Dastkari Haat Samiti team shot more than 11,000 photographs, prepared metadata for 200 selected pictures for each story including captions and introductory write-ups for four 'exhibits' for each story. The four exhibits were community, culture and location; process of making the craft; range of products; and uses and marketing of the product. Editing of the content, selection of photographs and color corrections were time consuming. The main challenge was to develop a methodology for a smooth synchronization between the Google technical team and the content team. Dastkari Haat Samiti eventually developed more than 50 craft stories for the Google Art and Culture platform.

Dr. Bahadur is of the view that the biggest challenge for content creators of repositories is to understand the audience/users. The users of digital content are a much wider category than with print media, and therefore less easy to identify and target. The content providers, writers and resource persons need to be apprised of the ways in which the content can be used. This will impact, alter and shape the ways in which information is to be shared on the digital platform. Accordingly, decisions have to be taken on making information available for downloadable use. Conflicts between rights of the user and knowledge/resource provider require multiple rather than singular solutions.

Mr. Sumiran Pandya is of the opinion that in view of the logistics and financial constraints, documentation of a craft is challenging. Travelling to remote villages with poor road connectivity, constraints of suitable accommodation and field-based data collection

are time consuming and expensive. With the onset of COVID-19, travel restrictions, time frame and costs of craft documentation in a new state, has increased manifold.

Ms. Smita Singh states that museums adhere to the ICOM Code of Ethics⁸ for digital documentation of artifacts. The basic parameters used for documentation of the Mewar textiles and costume collections included assigning accession number to each object for easy access; taking measurements in terms of size and weight; articulating descriptive note for easy identification, and using English and local language vocabulary for consistent documentation. Interdisciplinary information is also added to related artifacts such as art history, conservation status, markings and inscriptions for comprehensive documentation followed by the digitization of data. Ms. Singh also emphasizes on issues pertaining to technical glitches and updating information on a digital portal. She also iterates documentation as an ongoing process and therefore, there should be ample space and features in the software to add or replace information in the future. Considering the fast-paced changes in digital technology, regular backup of data is extremely important and critical in order to prevent the loss of valuable documents.

Conclusion

Digital portals have advantages over a traditional museum setup. Generally, museums display fewer artifacts in order to minimize the exposure to light, variations in temperature and humidity. The other constraints are limited space and finances. Through the digital portals, museums can preserve, protect the heritage objects and yet reach out to wider audience.

Insights and reflections on the various aspects of digitization of Indian textiles and dress heritage offer a glimpse of challenges, opportunities and impact of repositories and museums. It is significant to note that the three fundamental tasks to create, use and maintain digital heritage are digitization, access and preservation. It is critical that for any digitization project, intellectual property rights, authorship and ownership of copyright need to be clearly defined. Advancements in information technology have propelled digitization of resources and materials, however creation of digital repositories is an arduous task.

Access to digital heritage is of prime importance. Easy retrieval of information by various users for different purposes is key to the success of a digital repository. Easy access to information and quick search through filters are important for wider reach

to the global viewers. Thus, content creation, metadata and sitemap of the web portal are critical for developing a digital repository. A good digital resource follows specific metadata schemas and standards in order to find, use, preserve and re-use data.

Digital preservation is of great significance as it ensures accessibility of digital materials in the future. Issues such as loss of digital material due to physical degradation and outdated technologies can be addressed if a robust digital preservation system is established. Considering that data expands constantly, there is a need for flexibility and scope to add on information on the digital platform in the coming times.

Setting up a textile and dress digital repository is an expensive proposition. Content creation necessitates writing, editing, validation of facts, and metadata creation. In case of a digital textile repository, good quality photographs with zoom-in and 360° view features, audio-visual material along with interactive attributes for an enhanced user experience are critical. Field visits to record living craft traditions add to the cost. Building integrated technology services and a digital platform involve financial outlay leading to substantial increase in overall exorbitant budgets.

It is thus recommended that the government as well as private organizations through CSR initiatives should come forward and support academic institutions and museums to develop digital platforms that endeavor to impart knowledge and promote Indian heritage worldwide.

Digital museums and repositories showcasing Indian textiles and crafts have an important role in promoting and preserving cultural heritage. They are providing a great learning experience and building interest and appreciation for Indian textile traditions amongst the younger generation. The online database of artisans available on digital repositories have given more visibility to the 'maker'. Such online platforms are leading to support and outreach by researchers, crafts enthusiasts and designers, in their endeavor to safeguard the languishing craft practices and sustain artisan livelihoods.

It is evident that digital museums and repositories of textiles and dress are the way forward. The pandemic has propelled museums, academic institutions and cultural organizations to make concerted efforts in digitizing their rich heritage for easy access across the globe. However, it is also viewed that textile as a material cannot be experienced only through a virtual mode. Thus, the future is expected to be 'phygital', where both digital and physical spaces co-exist. The digital platform will serve as a means to quick discovery of objects by a very large audience, and would inspire viewers to plan physical visits for better understanding and appreciation.

Notes

1. Dastkari Haat Samiti is a not-for-profit organization in India, working closely with craftspeople and handloom weavers, to design, exhibit and market products through craft bazaars. Dastkari Haat Samiti represents more than 30,000 direct and indirect beneficiaries from artisan families.
2. Crafts Revival Trust is a registered non-profit organization that is mandated on the principal that access to knowledge and its dissemination forms the vital core of safeguarding intangible cultural heritage. It's an encyclopedia of traditional arts, crafts and textiles of India and seven South East Asian Countries, offering a comprehensive database of 70,000 artisans, weavers and artists.
3. Global-InCH is an online international journal of intangible cultural heritage in the form of essays, views, analysis, commentary pieces, case-studies and photo-essays on traditional arts, crafts, textiles and practitioners across South Asia.
4. Border&Fall, founded in 2013 is a multi-disciplinary agency specializing in business development across branding, digital, retail and creative direction. The agency takes initiatives that focus on impact within craft and culture via digital.
5. Gaatha is an online repository created for researching and documenting the rapid erosion of Indian craft clusters and heritage. Gradually the portal included ways to bring social and commercial benefits to the artisan by connecting them with global audience and the resources which help craft sell not as objects but stories and ideologies.
6. Sahapedia is an open encyclopedic resource on the art, culture and history of India. Sahapedia offers digital content in multimedia format - articles and books, photo essays and videos, interviews and oral histories, maps and timelines, authored by scholars and curated by experts.
7. The Sari Series, an Anthology of Drape is a non-profit project by Border&Fall that documents the various regional sari drapes of India through short films. It includes over 80 how-to drape films and 3 independent art films.
8. ICOM Code of Ethics by the International Council of Museums sets the minimum professional standards and encourages the recognition of values shared by the international museum community.

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About the Authors

Ruby Kashyap Sood is a Professor in the Textile Design department, National Institute of Fashion Technology, New Delhi and Incharge of the Publication Unit. She has more than two decades of teaching experience. Her areas of specialization include surface design, craft studies and textile art. A Master's in Textiles and Clothing from Delhi University, she has done extensive research on traditional Indian textiles and costumes. Ruby has co-authored books titled 'Celebrating Dreams – Weddings in India' and 'Traditional Indian Textiles'. Her doctoral thesis titled 'A Study on the Metamorphosis of the Indian 'Choli' Blouse and the Development of a Readymade Sari Blouse' is an extensive body of work on the Indian blouse. She has presented research papers at prestigious conferences, and published several articles in reputed journals and periodicals. She is also a member of the core team at NIFT to develop a digital repository on Indian textiles and crafts.

ruby.sood@nift.ac.in

Dr. Sudha Dhingra is a Professor in the Textile Design department, National Institute of Fashion Technology, New Delhi. Recently she has been appointed the Director of Center of Excellence for Khadi, which will be set up at five NIFT campuses with the objective to assist the Khadi Institutions to design, produce and market high quality differentiated Khadi products for the Indian and global markets. Her doctoral work on 'Revival of Tribal Pata Handloom Weaving, using Natural Dye Aal (*Morindacitrifolia*) in Bastar and Koraput' included the documentation of sustainable practises followed by the Panika community. She has co-authored a book on 'Traditional Indian Textiles' for CBSE and co-edited the book 'Textile Crafts of India' covering the handloom traditions of North-Eastern Indian States. She is also a member of the core team at NIFT to develop a digital repository on Indian textiles and crafts.

sudha.dhingra@nift.ac.in