Heritage and Sustainability: Leveraging Heritage Skills for Environmental and Emotional Well-being

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ABSTRACT

Sustainability, defined as the harmonious coexistence of nature and human beings, emphasizes the necessity of using renewable resources while preserving the environment for future generations. Ancient cultures, particularly in the Indian subcontinent, inherently practiced sustainability by adhering to natural production cycles, minimizing waste, and respecting the earth as a maternal figure, as illustrated by the 'Indian Ancient Poetic Stanza', 'Vedic shloka' a narrative of wisdom.

Due to the continuous growth of global population, we have started experiencing the long-term consequences of excessive energy use and industrialization that has led to a significant deviation from our ancient principles and wisdom, leading to severe environmental impacts such as greenhouse gas emissions. While India is the third-largest global emitter, it maintains relatively low per capita emissions compared to the global average. The influence of fashion on social, environmental, and emotional aspects has escalated with globalization and industrialization, driven by marketing strategies that often overlook sustainability.

Historically, Ancient Indian heritage emphasized skill-oriented activities like culinary arts, embroidery, and hand-weaving, which promoted meditation and concentration while adhering to ethical and sustainable practices. The decline of these traditional skills has contributed to modern society's struggle for ethical, stress-free life and a sustainable environment. Reviving and integrating these heritage skills with the modern world could positively impact society keeping the ethics and the environment intact, aligning contemporary practices with age-old sustainable principles.

The dilution of environmentally and emotionally sound practices for cost and ease of production has led to the unethical practices using non-green/unsustainable methods that mimic traditional aesthetics, fooling consumers by naming the products as authentic and original.

It is essential to repurpose such practices by combining innovations with the ancient Indian craft, without hampering the ease and authenticity of the process for artisans. At the same time, it is essential to inform consumers about the product's genuineness.

Design innovations shall enhance the price point, providing commercial benefits to craftsmen and motivating them to adhere to original processes, contributing to ethical practices, environmental and emotional well-being.

This paper discusses strategies implemented through experimental and exploratory research to develop collaborative products with commercial value. This product development included use of technology and collaborative combinations of different crafts from the same region, without affecting the authenticity and exclusivity.

Keywords: Ancient Heritage Skills, Sustainable Development, Ethical Practices, Environment Preservation, Empowering Craft and Craftsmen

INTRODUCTION

Fashion includes – Materials, Creators, Skills and Design (An outcome of Artistic, Cultural, Social, Economic and Political forces) and the direct impact of the right or wrong materials is seen on environment. At the same time working conditions of creators are responsible for the social impact and skills support economic sustainability.

Sustainability, rooted in the harmonious coexistence of nature and humanity, underscores the importance of utilizing renewable resources while safeguarding the environment for future generations. The concept, first introduced in the 1987 Brundtland Commission Report, emphasizes meeting the needs of the present without jeopardizing the ability of future generations to meet their own. ‘Sustainable Fashion’: That takes into consideration ‘Environment’ Health of the Consumer’ ‘Working Conditions of People and Economic empowerment.

Ancient Indian heritage placed great importance on skill-oriented activities such as culinary arts, embroidery, and hand-weaving. These practices not only fostered meditation and concentration but also upheld ethical and sustainable principles. The gradual decline of these traditional skills has significantly impacted modern society, contributing to challenges in achieving an ethical, stress-free lifestyle and a sustainable environment.

The shift away from environmentally and emotionally conscious practices in favor of cost-effective and convenient production methods has resulted in unethical practices. Non-sustainable techniques are often used to replicate traditional aesthetics, misleading consumers by falsely labeling such products as authentic and original. Reviving and integrating these heritage skills with the modern world could positively impact society keeping ethics and the environment intact, aligning contemporary practices with age-old sustainable principles.

Revitalizing ancient Indian crafts requires integrating innovations while preserving the ease and authenticity of the artisans' processes. Equally important is educating consumers about the genuineness of these products.

Design innovations can elevate the value of these crafts, offering commercial benefits to artisans and encouraging them to maintain traditional techniques. This approach supports ethical practices and promotes environmental and emotional well-being. This paper unfolds the strategies derived from experimental and exploratory research aimed at developing collaborative products with significant commercial potential.

Objective

Develop and implement strategies through experimental and exploratory research to create collaborative, commercially viable products that empower artisans, uphold ethical standards, and contribute to environmental and emotional well-being.

Significance of the study

This study underscores the critical role of ancient Indian crafts and sustainable practices in addressing the environmental, social, and economic challenges of contemporary fashion and design. Its significance lies in the following aspects:

- Advocating sustainable material choices and production methods minimizes environmental degradation and promotes the use of renewable resources, aligning with global sustainability goals.
- Aligning contemporary practices with ancient sustainable principles promotes ethical production and consumption while fostering a deeper emotional connection to cultural and environmental

LITERATURE REVIEW

The tradition of woven textiles can be traced back to the Indus Valley Civilization. The discovery of large quantities of cotton seeds dating back to approximately 5000 B.C.E.A fragment of madder-dyed cotton fabric was found adhered to a silver vase during excavation. The unearthing of a well-equipped dyer’s workshop at Mohenjo-daro highlights the advanced textile processing techniques of that period. The iconic bust of the bearded man wearing a shawl, also excavated from Mohenjo-daro, which provides further confirmation of the use and significance of textiles in that era.

The knowledge of natural dyeing substances dates to the Vedic era, particularly in the Atharva Veda. Some of the substances identified include kala or asikni (possibly indigo), maharanjana (safflower), manjistha (madder), lodhar (Symplocos racemosa), and haridra (turmeric). Additionally, lac is acknowledged as a significant insect-based dye.

A significant milestone for Indian textiles during the medieval period was the discovery of alum (tuvarl) as a color fixative. This breakthrough also enabled the effective extraction of coloring principles from various dyeing materials.

Barnes' study of the Newberry Collection at the Ashmolean Museum provides valuable insights into the scope of Indian textile trade during that period. The collection includes 1,225 pieces of Indian-origin textiles discovered at Fustat, most of which are block-printed cotton fabrics. These textiles were traded to Egypt, likely originating from Gujarat, Rajasthan, and possibly Sind.

Ajrakh is a fascinating craft where nature plays a pivotal role in its creation. Artisans work in harmony with natural elements such as the sun, river, animals, trees, and mud, which are integral to the process. Water is a key ingredient in achieving the perfect colors. The dyeing and printing involve 15-16 intricate stages, taking approximately 15-21 days to complete.

Artisans use multiple blocks with complex patterns, often floral or abstract, to create diverse designs. Ajrakh products are crafted with all-natural dyes, including vegetable and mineral dyes. The resist printing technique ensures that only the desired portions of the fabric are adorned with art, leaving the rest plain or uncolored. Commonly used materials in Ajrakh printing include indigo, iron, jaggery, spices, fruits, flowers, and mud, while alum is used to fix the colors. In addition, artisans showcase their creativity by inventing new colors through innovative mixing techniques.

Globalization brought interconnectedness but also challenges, especially to the textile industry. The shift from traditional methods to “fast fashion” practices, driven by cost-cutting and mass production, led to the environmental harm and a departure from heritage skills, contributing to the loss of craftsmanship, cultural identity, and increased environmental impact, especially in dyeing and colouring practices.

Fibre to Fashion a renowned Fashion Publication in its article (1856/textile-printing-in-india-traditional-approach) mentions that ‘Sodium dichromate and bichromate of potash or potassium are common chrome mordants and are used for dyeing of cotton.’ And ‘Copper sulphate, which is known as blue vitriol, is also used for dyeing since long. It is poisonous, so extra care is needed while using it’.

The below mentioned website screen shot mentions about screen printed ajrakh fabric which in a way is unethical as referred by Geographical Indication of India.

Figure 1 Screen Printed Ajrakh Fabric

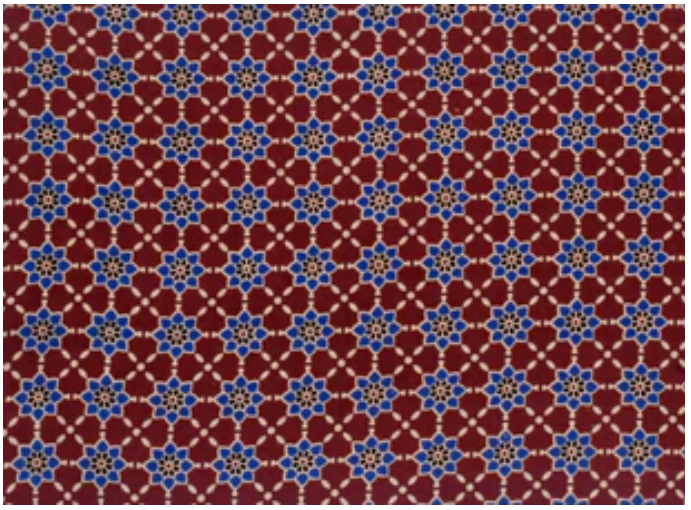

Figure 2 Screen Printed Ajrakh Fabric

Image courtesy- https://www.ssethnics.com/collections/ajrakh-screen-print-fabric?srsltid=AfmBOoqEH85nPcNlpP-fJh_v5n7DOsSIFAPCqZSxgTkF8DFczIuNIc3I

Geographical Indications (GIs) of Goods represent a facet of intellectual property that identifies a product as originating from a specific country, region, or locality. This designation signifies that the product's quality and uniqueness are inherently linked to its geographical origin.

As defined under Articles 1(2) and 10 of the Paris Convention for the Protection of Industrial Property, GIs are recognized as an integral component of Intellectual Property Rights (IPRs). Furthermore, they are addressed in Articles 22 to 24 of the Trade-Related Aspects of Intellectual Property Rights (TRIPS) Agreement, established during the Uruguay Round of GATT negotiations. These provisions ensure the protection and recognition of products with distinct geographical origins, offering consumers an assurance of quality and authenticity.

METHODOLOGY

The methodology involved conducting personal visits to traditional block printing units to assess the materials and processes being used. In order to maintain the authenticity of the block printing process, Master Abdul Aziz Khatri from **Dhamadka,** Master Artisan Yasin Shahabuddin Chippa from Pipad district in Jodhpur, Rajasthan, were selected for this research. Yasin Shahabuddin Chippa is known for his expertise in natural dyes and is highly respected within the craft community for his contributions to preserving traditional printing techniques.

The processes observed during the visits were carefully compared and assessed against the original traditional methods to identify any changes or alterations. The current printing methods were also evaluated in terms of their adherence to ethical practices and their environmental impact, ensuring that sustainable and responsible practices were maintained.

Personal interviews were conducted with artisans to gain insights into any deviations from the original printing practices and to better understand the challenges they face in maintaining traditional methods.

Artisans were then selected to participate in experimental research focused on traditional printing processes, allowing for hands-on exploration of sustainable and authentic printing techniques.

Finally, strategies were developed and implemented to retain ethical practices, with workshops, guidelines, and collaborative efforts designed to promote sustainability, uphold craftsmanship, and support the preservation of traditional block printing within the craft community.

RESULTS AND DISCUSSIONS

The authors conducted field visits to two Indian states to gain a deeper understanding of traditional textile printing techniques. In Gujarat, they explored the intricate art of Ajrakh printing by visiting two renowned practitioners: Mr. Abdul Aziz Khatri in Dhamadka. These visits provided valuable insights into the methods, materials, and cultural significance of Ajrakh printing in this region.

In Rajasthan, the focus shifted to studying both Ajrakh and Daboo printing practices. The authors visited Mr. Rana Mal Khatri in Barmer to examine the region's unique approach to Ajrakh printing, which carries its distinct stylistic and procedural variations. Additionally, they met Mr. Yasin Shahbuddin in Pipad, a skilled artisan specializing in Daboo printing, a traditional resist-dye technique. These visits offered a comprehensive perspective on the diversity and richness of textile printing traditions across the two states.

Figure 3 Visit to the artisans of Gujarat

Figure 4 Visit to the artisans from Rajasthan

During the visit to the artisans practising ajrakh printing in Gujarat and Rajasthan it was observed that they use fabrics like Power loom Cotton,Cotton Voils, Cotton Muslins, GajjiSilk (Local Spun silk with satin weave) Modal for printing the fabric. The commonly used dyes are Synthetic Indigo, Natural Indigo, Alizarine, Myrobalan, Alum, Iron. There are various steps of printing where Babool Gum, Jaggary, Sodium Carbonate, Local Fullers Earth are also used.

It was also observed that in Barmer the Ajrakh Printing is also done using Screen Printing which makes the method more cost-effective and cheaper.

In case of Daboo the Materials Used is Power loom Cotton, Cotton Voils, Cotton Muslins, Crepe Silk, Georgette Silk and Modal etc.They are commonly dyed with Natural Indigo, Alizarine, Myrobalan, Alum, Iron. Daboo is a resist paste made up with a mixture of mud or mitti, Hydrate lime or chuna, Jaggery or gud and gum or gond. Indigo is procured from Pondicherry in the form of cake. The cake is then converted into a slurry that is being added in the indigo vat. The dyer used hydro (sodium hydro sulphite) for reduction of indigo dye. For dyeing of the fabric harda treatment is

important for the development of colour. Other than indigo, commonly used dyes are- Kashish, Alizarine, Myrobalan, Alum, Iron, Pomegranate Skin.

Figure 5 Printing of fabric with daboo and Vats used for Indigo dyeing of fabric

The Ajrakh artisans have practiced Traditional Methos of Printing, however with the market competition and survival they have opted for few diluted methods. They are willing to stay with original tradional methods. Daboo artisan holds very strong ethical connect and has refused to use synthetic Indigo.

DISCUSSION

The study revealed significant changes and challenges in traditional printing practices: The preparatory process, traditionally involving camel dung and castor oil, is no longer in use due to the specialized skills and high costs associated with it.

- Natural indigo has largely been replaced by synthetic indigo, while manjistha, a natural dye, has been substituted with alizarin.
- The use of locally sourced sustainable fabrics was notably absent in the observed practices.
- Despite these substitutions, the overall sustainability of the processes remains relatively high, although some traditional authenticity has been compromised.
- Screen printing, a modern alternative, is often viewed as an unethical deviation from traditional methods.
- Certain dyeing practices were observed to be unhygienic, particularly in terms of effluent management, raising concerns about environmental impacts.

To address these issues, strategies were implemented through experimental and exploratory research aimed at developing collaborative products with commercial value. A key focus was on fostering knowledge exchange and collaboration with various external partners, which facilitated innovation while preserving traditional authenticity.

Figure 6 Development of sample using authentic Ajrakh process and value addition using local partnerships

Products created through authentic processes were enhanced with value-added elements derived from local partnerships. This approach not only preserved the heritage of traditional practices but also strengthened their commercial viability, demonstrating the potential for sustainable and ethical craftsmanship in contemporary markets.

Partnerships with businesses, suppliers, and industry players often lead to incremental innovations by enhancing existing products or refining processes. These collaborations typically emphasize practical knowledge exchange, with a focus on application and implementation. In this context, a strategic partnership was established with a bag exporter, enabling the development of a product that incorporated traditional printing techniques. This approach not only preserved the heritage of traditional craftsmanship but also added value to the final product through innovation and collaboration.

Figure 7 Development of commercial product using authentic ajrakh and daboo fabric with value addition and Development of sample using authentic Daboo process and value addition using local partnerships

CONCLUSION

The study sheds light on both the challenges and opportunities that artisans face while practicing traditional printing methods such as Ajrakh and Daboo. These traditional methods, known for their rich cultural significance and intricate craftsmanship, are increasingly at risk due to market pressures and the demand for faster and cheaper production. While some artisans have been compelled to adopt diluted or modified techniques to meet these pressures, there remains a strong commitment among artisans to preserving their cultural heritage and traditional knowledge. For example, Ajrakh artisans continue to seek ways to revive original techniques despite modern constraints, while Daboo artisans demonstrate their commitment to sustainability and ethical practices by refusing synthetic indigo, a choice that upholds both tradition and environmental responsibility.

The findings of this study highlight a gradual shift away from authentic traditional practices due to factors such as cost constraints, skill limitations, and the availability of cheaper alternatives. This includes the replacement of natural indigo with synthetic substitutes and manjishtha with alizarin, which, while cost-effective, compromise traditional authenticity. Furthermore, practices like the preparatory use of camel dung and castor oil, essential for the original printing methods, have declined due to their complexity and time-consuming nature. Despite these shifts, it is noteworthy that the sustainability quotient of the products remains considerably high in comparison to industrial printing alternatives, reflecting the resilience of artisanal knowledge and eco-friendly practices inherent in traditional methods.

Through the course of experimental and exploratory research, the study successfully implemented innovative strategies that aimed to bridge the gap between traditional craftsmanship and commercial viability. Collaborative partnerships with local stakeholders, businesses, and bag exporters played a crucial role in preserving authenticity while introducing value-added elements. Such collaborations facilitated knowledge exchange, incremental innovations, and new product development that respected traditional methods while addressing modern market demands. For example, these partnerships resulted in products that maintained the original printing techniques but were also designed to appeal to global markets, ensuring both preservation of culture and profitability.

Ultimately, this research underscores the critical need to preserve traditional practices while adapting to contemporary market challenges through collaboration and strategic innovation. By promoting authentic printing processes, sustainable material usage, and ethical production methods, artisans can not only protect their cultural heritage but also enhance the market value of their crafts. Such efforts ensure that these traditional printing methods remain relevant, viable, and economically sustainable, allowing artisans to secure their livelihoods and continue their invaluable contributions to the craft community. It is a call to action for all stakeholders—craft communities,

policymakers, businesses, and consumers—to invest in the preservation, support, and development of traditional crafts in a way that celebrates authenticity, sustainability, and innovation, ensuring these practices remain a vibrant and respected part of our cultural and economic landscape for generations to come.

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