

CHAPTER-2

REVIEW OF LITERATURE

The goal of this chapter is to set the context and rationale for the study project. The significance of resurrecting Indian Chintz design for environmental concerns is examined, along with its history. Current research relevant to the revival of Indian Chintz design is critically examined in this chapter. It aims to summarize pertinent studies while evaluating the gathered body of work. By analyzing the connections between the research conducted by various authors, this section looks at how their findings and methodologies relate to and support the objectives of the current study. The review of literature is presented with following sub-heads

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2.1. Theoretical Review

Global cultures are interwoven with the deep rooted and rich history of textile making and their narratives. An in-depth historical study of the global development of textile craft is provided in this theoretical assessment. This investigation beautifully depicts the spirit of the textile craft journey, from the complex trade channels in Southeast

Asia throughout the 17th, 18th, and 19th centuries to the colourful legacy of painted and printed textiles in India. Since printing and painting is surface decoration techniques, and is incomplete without the knowledge and techniques that goes into the allied textile and textile dyeing and colour technology and how it evolved over a period of time across the globe. Hence here is an overview of the development of textile craft across the globe: Textile craft has its roots in prehistoric times, where textiles were made for practical purposes such as clothing and shelter

2.1.1. Historical overview of textile craft development across the globe.

Textile industry has a rich and diverse history dating back to prehistoric times. From ancient times to the present day, methods of textile production have continually evolved. This offers choices of textiles available and has influenced how people carried their possessions, clothed themselves, and decorated their surroundings. Global textile craft development offers an insight into a rich and diverse tapestry that reflects human ingenuity, technology, and culture. The development of methods, materials, and techniques, all connected with the socio-economic effects on various locales, can be used to investigate this history. It offers an understanding of how – textiles, their design, and the technique all network into the connectedness of the socio-cultural aspect of a region, imparting it with a distinct identity. From prehistoric times, early textile production involved the conversion of fibers to yarn, fabric construction, finishing operations applied to textiles, and the relationship between the producer and the consumer.

Textile making is one of the oldest artistic practices and has been used for practical purposes such as making clothes.

The earliest excavation of Mohenjodaro discovered cotton which was considered to be the primary fabric. This was evident from the fossil fragments recovered of dyed cotton found at Mohenjo-Daro indicating sophistication in weaving and textile dyeing techniques. This marks the development of weaving as age old practice. In the period around Vedic and Post-Vedic Periods (1500 BCE - 600 BCE), the textual evidence of Rigveda and Atharvaveda mentioned various types of clothing and fabrics, highlighting the importance of textiles in daily life and rituals. This marks the early societal usage and evidence of the existence spinning wheel or charkha and of handloom fabrics in Indian Society.

The old Egyptians were also very good at making cloth. Cloth pieces from 5000 B.C. show that Egyptians did this in ancient Neolithic times. Linen fabrics dating back to 5000 BCE found in Egyptian tombs, indicating advanced spinning and weaving skills in Egyptian civilisation. The making of linen requires a lot of work. This process involved soaking flax, hitting it hard to separate the fibers, twisting them together, and spinning them into threads before finally weaving them into the fabric. But early Egyptians had mastered this craft and were able to produce the finest variety of fabrics. The mummies of ancient Egypt were wrapped in fine linen cloths. The early Mesopotamia traded wool textiles extensively throughout the north east. This shows the hard work and sophistication of earlier techniques involved in textile crafts.

While Chinese civilization flourished in art of cocoon cultivation and kept it as a secret for more than 300 hundred years. mention the evidences of silk production during the Han Dynasty (206 BCE - 220 CE).

The finding of Tutankhamun's burial room in 1922 showed a big collection of decorated clothes. These included linen outfits, coverings like shawls, and even socks made from the same colored and patterned material. They used different ways like print-block and dye-resisting to put fancy patterns on their fabrics (DeYoung, 2014).

Textiles collection in the Ashmolean Museum by Egyptologist P.E. Newberry (1869-1949) acquired for his own personal collection. He was the first Brunner Professor of Egyptology at the University of Liverpool and late held the Chair of the Department of History and Archeology of Ancient Egypt in Cairo from 1929 to 1933. It was clear that he had an interest, especially in historic textiles. His collection arrived in the Ashmolean in 1946. (Barnes, R. 1990). This collection marked the development of resist, printed and painted textiles across the globe. The most earliest pieces were from earliest eleventh century which marks the development of colouring technology since ancient times.

Painting as an art form flourished in India very early, as evidenced by cave remains and documentary evidence. Painting as an art form flourished in India very early, as evidenced by cave remains and documentary evidence.

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because of patronage of rich Jain merchants. Mandu in MP, Jaunpur in Eastern Uttar Pradesh, Bengal in Eastern India was another great center of pictorial manuscripts.

It developed in Bengal, Bihar, and Orissa in the East India during the 9th-10th century Kingdom of Pala. AD century, new type of painting, miniature painting. As the name suggests, miniatures are small works of art made from perishable materials. In this category, Buddhist, Jain and Hindu manuscripts were depicted on palm leaves. These are similar to the Ajanta style but on a miniature scale. These were commissioned by merchants and donated to temples and monasteries. From the 13th century onwards, the Turkish sultans of northern India brought important features of Persian court culture. From the 15th century to his 16th century, illustrated manuscripts with Persian influence were produced in Marwa, Bengal, Delhi, Jaunpur, Gujarat and Deccan. The interaction between Indian painters and the Persian tradition united two styles evident in 16th-century work. During the early Sultanate period, the Jain community of the West Indies made significant contributions to the art of painting. Illustrated manuscripts of Jain scriptures have been donated to the temple library. These manuscripts showed the life and deeds of Tirthankar.

Under the Mughal Empire, the art of text illustration took on a new dimension. Akbar and his successors revolutionized painting and erotic illustration. From this time on, book lighting and individual miniatures replaced murals as the most important art form. Emperor Akbar patronized artists from Kashmir and Gujarat. Humayun brought two Persian painters to his court. For the first time the artist's name was recorded in an inscription.

Within a few years, the Persian and Indian styles merged, giving rise to an integrated dynamic style and an independent style of Mughal painting. Between 1562 and 1577, a series of about 1400 cloth paintings representing the new style was created and kept in the Imperial studio. Akbar also encouraged the art of portraiture. The art of painting reached its peak during the time of Jahangir. He was himself a great painter and art connoisseur. Artists began to use bright colors such as peacock blue and red to add dimension to their paintings. Mansur, Bishan Das and Manohar were among the most talented painters of Jahangir's time. Mansur produced excellent portraits by the artist Abul Hassan and specialized in painting birds and animals. Shah Jahan was more interested in architectural excellence, but his eldest son Dara Shikoh, like his father, encouraged painting. He preferred to depict natural elements such as plants and animals in his paintings. However, the withdrawal of royal patronage to painting

under Aurangzeb's government led to the artist's dispersion to different parts of the country. This contributed to the development of painting in Rajasthan and the Punjab Highlands, leading to the emergence of various schools of painting such as the Rajasthani and Pahari schools. During the 14th and 15th centuries AD, miniature painting developed into a powerful movement in Gujarat and Rajasthan and spread to central, northern and eastern India because of patronage of rich Jain merchants. The painting was immensely motivated during Mughal era. Akbar also encouraged the art of portraiture. The art of painting reached its peak during the time of Jahangir. He was himself a great painter and art connoisseur.

Indian cloth has a long history from the old days. Techniques like block printing, using a dye that doesn't spread when tied (like in Bandhani or tie-dye) and hand painting were often used there. Block printing in India has been done for over 4,500 years and is still used a lot today (Dayalan. 2021). The pieces are made of wood or metal and have detailed drawings on them. These designs are then placed onto cloth using natural colors from plants. Resist dyeing or tie-dye is another common method that includes tying the cloth in some parts to get a design and then making it colored. This method is used to make the popular Bandhani fabrics from Gujarat. These are famous for their bright colors and complicated designs. This method is used to make the popular Bandhani fabrics from Gujarat. These are famous for their bright colors and complicated designs. For a long time in India, they have been using hand painting to make pretty patterns on cloth.

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The method of batik, where wax is added to cloth before coloring it in Indonesia has a long history. This method started in Java Island and has been used to make fancy patterns on clothes for many years. Batik is made by making marks of wax with a tool called canting or using a copper stamp to put the wax on. The used wax stops the color from going in and lets the person doing crafts choose which parts to change (Pegah, 2017). This is done by making cloth things a certain shade with water, taking

off wax using hot liquid after that making more colors if needed. Batik is an old art form in Indonesia that uses wax-resistant dye on cloth materials. Java island's Indonesian edge batik (batik near the shore) has been influenced by mixing local and foreign cultures in its history.

Making cloth in old Europe involved applying paints or dyes by hand to materials like wool and linen. The hand printing of traditional textiles prepared with the use of wooden blocks was of three kinds: Hand painting is made better by adding direct printing, resist printing, and outline block print methods (Gleba & Mannering, 2012). It started making patterns on simple cloth because of the big demand for “chintz” materials brought from India into Europe. This began around 1600 years ago. These nice cotton fabrics had colorful painted and dyed patterns of wild plants and animals. When washed in water, the colors did not fade or run. Imported cotton quickly became famous all over Europe and was seen to be a danger to the strong silk-making businesses. So, big-scale printing of clothes didn't work in Europe until the 1700s. This is even though a way was made to permanently dye cloth around here by about 1670.

Fabric making in Persia and Central Asia usually had fancy designs, like geometric shapes or flowers. Persian rugs are famous for their detailed patterns and some of the best carpets in the world (Norouzianpour, 2022). Carpets are made in different ways like tying knots, weaving, and sewing. They are usually decorated with detailed patterns or designs. The designs on Persian carpets usually come from nature. They often have flowers, leaves, and other shapes found in plants. The colors used in Persian rugs also matter a lot. Each color stands for a different part of life.

Japan has a long tradition of creating textile arts, and among the widely used methods are shibori and katazome (Hall, 2020). Shibori is a form of tie-dye, with elaborate patterns and designs being made by binding, sewing, folding, twisting, or compressing fabric. However, katazome is a type of stencil dyeing in which repetitive patterns are made by applying resist paste through a screen. These techniques are commonly used to decorate fabrics, which usually constitute kimonos and other articles of clothing.

2.1.2 Textile craft and trade routes in Southeast Asia during the 17th ,18th and 19th centuries.

Southeast Asia's painted and printed textile crafts were not only a thriving local business during the 17th, 18th, and 19th centuries, but they also played a significant part in commerce with other regions. Many Southeast Asian nations, like Thailand, Malaysia, and Indonesia, were well known for their beautiful textiles, which were in high demand along the maritime trade routes (Smend & Harper, 2011). Below is a summary of Southeast Asia's textile trade channels and crafts during this time. The Indonesian dyeing technique known as batik, which uses wax resist, was highly popular on the islands of Java and Sumatra.

Originating in Java, the word batik means “writing” or “drawing.” Wax is applied to the fabric before it is dyed in batik, producing incredibly detailed patterns and designs. The method was developed years ago on the Javanese island and has been used to produce exquisite fabrics (Smend & Harper, 2011). Indonesian batik is a traditional art style that uses dye that is resistant to wax on textiles. Acculturation, or the blending of indigenous and foreign cultures, is the history of the coastal batik produced on the island of Java. For Indonesians, batik is very important, and many wear it to formal or informal gatherings. Indonesians frequently employ batik in a variety of ceremonies, rituals, customs, and festivities.

The Maritime Silk Road was a series of canals joining Southeast Asia to Europe, China, India, and the Middle East. Such a trade relied upon Southeast Asian textiles, which facilitated intercultural dialogue and helped the local economy grow (Chung, 2018). Indian fabrics were very valuable and traded for expensive spices. Indonesians considered Indian textiles as spiritually significant items that they passed down the generations in their families. 2500 BCE is when the oldest known archeological evidence of colored textiles was discovered in India. The Maritime Silk Road was a major trade route that promoted the movement of goods, ideas, and cultural expression between various regions across different parts of the world.

Southeast Asia played a significant role in the spice trade, and textiles were frequently sold in addition to spices. The network of sea routes connecting the East and the West is referred to as the Spice Routes or Maritime Silk Roads (Averbuch, 2022). They

extend from Japan's west coast to Indonesia's islands, past India, and into the Middle East, from where they reach the Mediterranean to Europe. The primary purpose of the Spice Routes was and continues to be trade. Trade has always played a significant part in human existence. We trade, exchanging one thing (typically money) for another when we make a purchase.

The Malay Peninsula was well-known for producing songket, an opulent handwoven cloth frequently adorned with threads of gold or silver. A songket was a piece of ceremonial and regal clothing that represented riches and rank (Aris, 2014). Traditional Malaysian songket is a handwoven cloth made by women in Sarawak and the Malay Peninsula. The ornate weaving method used to create the cloth, which comprises weaving silver or gold thread in between the base threads, is referred to as songket. Because of this, the additional threads provide an ornamental appearance where they appear to float over a beautiful woven background. Akek is a classic two-pedal floor loom used to weave songkets.

Southeast Asia's textile trade was greatly affected by the British and French colonial powers. The British presence in territories such as Penang and Singapore led to the economic dynamics of the region (Sen, 1962). The British and the Dutch were keen to control the textile trade of Southeast Asia and took measures like wars, and intimidation through armed forces on local realized rulers as well economically pressurized Indians out of the business. Indian textiles were the principal medium of exchange in Southeast Asia and all their markets were interested in this product.

As far as the array of textiles that were available in Southeast Asia is concerned, it needs to be understood also concerning the effects Chinese merchants and populations had on the region's textile trade (Koh, 2021) So, their involvement in both production and distribution made their input to the development of the Southeast Asian textile industry priceless. The Chinese minority in Southeast Asia is a group that has long been recognized and studied for their success as entrepreneurs

The history of Indian textiles dates back to ancient times and is rich in diversity. For centuries, the country's textile industry has been a key player in the global trade of textiles. Indian textiles are famous for their detailed patterns, bright colors, and fine workmanship.

Southeast Asia's rich tapestry of textile cultures owes much to the inter-island trade. The interchange of textiles between diverse local cultures was made easier by the commercial routes that linked different islands (Varadarajan, 2018). The growth of the textile traditions in the area was greatly aided by this intraregional trade. Indian textiles were used extensively in this. The ritual traditions of South Asians and Chinese people involved the use of textiles. India has long been the hub of the Indian Ocean textile trade, and its textiles have played a significant role in trade across the Arabian Sea with West Asia and the Mediterranean as well as the Bay of Bengal with mainland and island Southeast Asia.

2.1.3. Painted and Printed textiles in India

The marvellous history of painted and printed textiles in India is the best reflection of the country's diversity of cultures available. Within these approaches, wood-block printing is the most esteemed method, and it has this reputation especially in the state of Rajasthan the South of the state, in the city of Jaipur.

Highly acclaimed for its patterns that are embossed on fabric using wood blocks, block printing has become popular in both the local and international community of people who appreciated its lasting elegance (Ronald, 2021). At the centre of the attractiveness of block printing lies the religious application of natural dyes and pigments for the fabrics. Therefore, the textiles generated usually have a very attractive diversity of natural colors and depth.

Within Rajasthan, a prominent fabric of this traditional art takes place in several villages, and cities like Bagru, Sanganer, Akola, Barmer, and Jodhpur to name but a few. One of the places with a longer significant history of block printing is Bagru which, in total, about 2 sq. km, is well-known for being the prominent centre of this centuries-old tradition (Tokas et al., 2020).

In Jaipur city, where diversity and innovation are the defining factors, the Jaipur block is a symbol of innovation and sustainability for cloth industries. Of nature, this enclave just consists of a unit intended for the block printing method and also aims at using eco-friendly practices and infrastructure to ensure the prolonging of the Indian textile heritage. On the other hand, "*Jilani Hand Block Print*" between Jodhpur's artisanal community takes pride in hand block printing with natural colors to produce

outstanding artworks which convey to their viewers the originality and the craftsmanship which symbolizes this particular art.

Ronald (2012) states effectively, that hand block printed textiles in rural Rajasthan are symbolic manifestations of identity and tradition; they are intricate webs of patterns that are unique to the place and culture. The migration of block printing from an ancient tradition to a divisible business is the journey that is followed by the numerous artisanal communities of Rajasthan regarding the same (Tokas et al., 2020).

The age-old "*Sanganeri prints*" technique of hand-block printing can be traced to the ancient Rajasthani town of Sanganer, a small nearby town of Jaipur. The Sanganeri printing method saw its high periods during the 16th and 17th centuries with considerable progress in and around the area. These expansions were largely facilitated by the craftsmen from Gujarat who migrated to Rajasthan as a consequence of widely known conflicts between the Mughal and the Maratha empires (Mathur, 2019).

Leaving the violence behind, the craftsmen were fortunate to have Sanganer offer them a calm and peaceful environment in which they found space to further strengthen their profession. East India Company had assumed that Sanganeri prints were commercially viable and incorporated them in its choice of exports. The exclusive dyings that were being used to produce the designs became synonymous with the Sanganeri tradition, gaining recognition and popularity not only around the Indian subcontinent but also spreading across the borders to European cultures. The dye in the original print which produced such unique effects and color combinations became extremely popular in foreign markets, contributing to the spread of the fame of Sanganeri prints.

The potters who used the useful tedious procedure of Sanganeri printing came from the Panjab and were mostly of the "*Khatiri*" class of people who were predominantly Muslim. The skills and knowledge possessed by the artisans and craftsmen had a lot to do with the rise and growth of Sanganeri blocks, both culturally and economically. Weaving is a family affair and everyone, including kids, is part of the production process. This family involvement, not only helps in preserving traditional skills but also creates a sense of belonging and tradition within this craft. Currently, Sanganeri

printing is maintaining a viable workforce of around 3000 workers which attests to its lasting importance and input into the local economy (Mathur, 2019).

The literary work carried out by Mathur (2019) illuminated the situation of *Chhipa*, the Sanganer hand-block printers, offering important insights into their way of life and the wider influence of Sanganeri prints on the social fabric of the area. This study emphasized how tradition, industry, and society have interacted in a complex way to shape Sanganeri printing's development into a treasured Rajasthani cultural legacy.

Block makers come from the carpentry community, but many are solely dedicated to creating printed blocks, which requires great skill. An old block producer family still exists in Pethapur, Gujarat. For generations, they have prepared fine blocks for printed fabric for export to Thailand, called Saudagiri, the commercial fabric. Farrukhabad, an important center for printing the great Tree of Life known as palampore in the 19th century, also has professional block carvers. (Textiles: Early Painted and Printed | Encyclopedia.com) Ajrakh, a distinguished block printing, is from the Indian state of Gujarat and is staying strong in the Pakistani district of Sindh. The name "*Ajrakh*" is drawn from the Sindhi language, literally built from the word "*ajrak*" meaning a brick (Clifford, 2012). In this highly professional craft, there is a rich tradition reaching back to the old Indus Valley civilizations which lasted from 2500-1500 B.C. Impressive *Ajrakh* garments and shawls with fascinating stamp prints are made using blocks.

The essence of *Ajrakh* is witnessed in the geometrical and floral patterns, imprinted in a very detailed and precise manner through traditional block printing techniques. A truly different design including motifs and color schemes is not only visually attractive but also has the cultural meanings and craftsmanship of the places where *Ajrakh* is.

Different *Ajrakh* textiles stand out for the natural dyes, made from plants and minerals, that endow the fabric with a specific intensity and luster. This focus on the traditional method of dyeing is a great addition to the aesthetics of *Ajrakh*, and also suits the green practices in keeping with sustainable and environmentally friendly ideas, which connect with modern customers.

Through the investigations of Clifford (2012) the manufacturing process of the traditional Indian textile prints, with a focus on Gujarat's *Ajrakh* block printing is illustrated. He approaches his investigation through scrupulous research, venturing into the delicate process of adapting traditional markets to modern times without compromising their purity.

Kalamkari, inherited from what is now Andhra Pradesh and Telangana in India, is a traditional form of art that nowadays is valued for its cultural significance and craftsmanship. The word "*Kalamkari*" itself derives from the Persian language, in which "*kalam*" means pen and "*kari*" is the word for craftsmanship (Samyukta, 2021). Kalamkari is also known for its elaborate stories, usually inspired by mythology, and the painstakingly meticulous hand painting or block printing on fabric. With its origin tracing back to around 4000 years ago, Kalamkari was used for depicting sacred texts stories including the Mahabharata, Ramayana and Bhagavatam. Telling the stories through art this way also helps to preserve the cultural myths and at the same time symbolizes the continuous applicability of the mythological concepts in Indian society.

In India, a unique style is observed in the Kalamkari art, like the Machilipatnam style and the Srikalahasti style. The main characteristics of the Machilipatnam style involve vegetable dyeing and hand block printing on fabric which give the texture to the paintings and the patterns. On the contrary, the Srikalahasti style involves the usage of a pen-like instrument for freehand drawing with the colors being filled in manually to create a specific handmade quality. The essence of Kalamkari goes beyond merely representing aestheticism, rather it is a powerful bond with our cultural identity and heritage. Kalamkari stands as a visual representation of India's cultural tradition with its vibrant colors, delicate designs, and time-honored stories explaining the craft in every detail. The study of Samyukta (2021) unfolds the peculiar features of Kalamkari paintings that give us some knowledge about its exceptional styles and techniques. Herewith, this investigation sheds light on the intricacies of the south Indian Kalamkari from the states of Telangana and Andhra Pradesh which are the main centers of this art throughout India's history.

Gujarat, an exhilarating Indian state, steals the limelight as the start-up hub for the ancient tie-dye technique called "*bandhani*." The origin of the word "*Bandhani*" can

be traced in Sanskrit, the language source of which is "*bandhana*," which means "to tie." This method involves putting and tying small sections of cloth using thread before d The Native Indian dresses such as sarees, salwar kameez, dupattas, and turbans are made from the fabrics obtained using the bandhani process (Acharya & Samani, 2017).

The history of Bandhani ranges back over 5,000 years to the ancient period of the Indus Valley Civilization, which was the golden era of its existence. Excavations at the archaeological sites of Mohenjo-daro and Harappa, among others, have made it possible to find pieces of tie-dye fabrics, specifying that the technique is quite old. The Kutch region is also the homeland of a Muslim community known as the Khatris. According to Datt (2018), these people are believed to be the earliest ones who adopt this dyeing technique.

Through the everlasting trend and value of *Samarkand*, the deep underpinnings of its cultural roots and timeless feel have been revealed. Through many generations, artisans kept their skills inherited and protected the traditional motives and techniques, but also adjusted according to modern trends. Weaving the magic of Bandhani textiles into every thread, their impeccable workmanship and bright colors still spellbind fans across the world as they speak for the rich heritage of Indian textile art.

Literary references like Acharya and Samani (2017), and Datt (2018) are very important in that they give us details of the designs and techniques of traditional bandhani. Such studies aren't just documenting the history of Bandhani but also illustrating its continued prominence and growth from the past times to the present day.

Chintzes, the clairvoyance of India that became popular during the sixteenth century, are known for their glorious colors and dainty patterns. The word, "*chintz*," which is derived from the Hindi term "*chhint*," which stands for "*spotted*" and "*sprinkled*," pictures the typical patterns of these textiles nicely (Shah & Sharan, 2023). Famous for its floral print, chintz is created by painting or block-printing methods. One of the regions where chintz developed to have the maximum exposure was India's Coromandel Coast which is situated parallel to the Bay of Bengal. Chintz cloth from

this area was notably valued in international trade and the art of making chintz continued for many generations along this coastal belt. The chintz fabric which we know today, has been in existence for the past 5000 years since the ancient Indus Valley Civilization, and it is a testimony to its lasting reputation and cultural legacy.

In modern times, the manufacturing of chintzes involves a combination of block printing and hand painting, which is an indication of the heritage and expertise of this traditional art. Craftsmen blend traditional techniques with modern adjustments that result in textiles that entertain with the timeless beauty and sophisticated skills they are made out of.

The literary work of Shah and Sharan (2023) demonstrates the importance of chintz as an exquisitely hand-painted, traditional textile. The craft identification part of their study gives ability to the researchers to have a deeper understanding of the process of chintz-making and the artistic nuances involved in it, thus, enhancing our knowledge of this celebrated art.

The word "*Phulkari*," which originates from the Punjab region of India and Pakistan, means "*flower*" in Punjabi. The word itself is derived from the words "*phul*," which means "*flower*," and "*kari*," which means "*work*." This art incorporates a type of counted-thread embroidery that is well-known for its attention to detail in producing symmetrical designs embellished with both organic and geometric motifs (Gupta & Mehta, 2014).

The embroidery technique involves using colorful silken thread to create a darn stitch on the back of rough cotton fabric. Notably, the ancestors of this highly esteemed tradition are the customs passed down through generations of women living in the Punjab region (Kaur, 2021). The custom is believed to have started in the fifteenth century and was associated with Sikh culture, though Muslims and Hindus also adopted it. The art form itself initially surfaced in 18th-century Punjabi literature. Mothers and grandmothers would start stitching elaborate Phulkari embroidery the moment a girl was born. the Phulkari embroidery is incredibly vivid and bright, adding color to people's lives.

Observing the modern development of Indian textile design is incredibly fascinating, as designers and artists explore new territories and combine conventional techniques

with avant-garde ideas (Morris, 1927). In India's busy metropolises, a vibrant textile scene has developed, defined by the combination of traditional methods and modern approaches.

The introduction of digital printing technology, which has transformed textile design by providing designers with previously unheard-of creative possibilities, is one noteworthy development in this area. With the use of this technology, complex and elaborate patterns that were previously thought to be impossible to create using traditional methods are now possible. The seamless adoption of digital printing by the textile industry has broadened design possibilities and made it possible to produce textiles that are both technically accurate and aesthetically pleasing.

The field of textile design has benefited greatly from the use of contemporary processes like digital printing as well as screen, heat transfer, and roller printing. These techniques give textile designers a flexible toolkit to play with various patterns, colors, and textures, resulting in the creation of remarkable and creative textile designs. The Indian textile industry is still thriving today because of this fusion of old-world craftsmanship and cutting-edge innovation, enthralling viewers with its wide range of patterns and designs. India is leading the world in textile innovation thanks to its exploration of new styles and techniques, which exhibit a lively spirit of creativity and experimentation.

The literary work of Morris (1927) provided valuable insights into Indian textiles, emphasizing the lasting significance of skilled craftsmanship and the adaptability and inventiveness of modern designers. Indian textile designers are reshaping the textile industry and opening up countless opportunities for textile design and production by embracing innovation while respecting tradition.

2.1.4. Indian Chintz Textiles

Textile samples from hand-printed and block-printed chintz fabrics have dated way back to the 10th century thus, establishing the longevity of this craft. Chintz fabrics, a delightful combination of intricate motifs and bright colors, found their way to the center of the stage with the city of Hyderabad becoming the undisputed star of the show for creativity and craftsmanship. Dexterous handloom weavers painstakingly

fashioned chintz fabrics bringing them to life with vivid colors and intricate knot patterns reflecting their natural surroundings, mythical tales, and cultural heritage.

As Indian chintz gained worldwide recognition it became increasingly famous not only for its beautiful looks but also its strength and softness. People from all classes, be it the landowners or the society as a whole, appreciated the chintz fabrics for interior decoration which made the space pretty and more superior.

Chintz-making, which originated in the ancient region of Golconda near Hyderabad, has an interesting historicity that dates back to the 15th century when it became the Indian Ocean trademark (Scammell, 2000). Through Vasco da Gama when he first came to Calicut India, Europe met with this unique fabric and a following demand for chintz was developed in the common markets of the West. The manufacture of chintz is a complex process usually involving mordant dyeing and resist dyeing.

Mordants, the chemical compounds, are necessary for the dyeing process, as they serve to give the fabric its color and make it weatherproof and fade-resistant. Resist dyeing is one of the techniques that allow artisans to expertly restrict the chemical process of dye penetration in definite parts of the fabric to create impressive patterns and designs. These techniques demand to be precise and professional. Tacing is in the building of Chintz.

The work of skilled artisans is pivotal in chintz production, as they have been using and perfecting those traditional techniques that have been inherited for many generations and produced quality and elaborate designs. Every stage of the process, starting with ready the fabric to dye and wed, includes minute attention to detail and deep knowledge of the materials and methods.

The fact that chintz has persisted with its impressive beauty and inherent refinement is one of the reasons why it has remained so popular and sought-after throughout the years. From its emergence in Golconda to its move across the Indian Ocean and later into the European market, the chintz prints enthralled people with their uniquely colorful details and designs. Even today, this textile tradition remains resilient, transmitted from one votary to another in the same manner as before, but modernizes itself in design and technology.

Among textiles, India chintz holds a well-deserved place thanks to its great tradition and cultural importance. While the chintz has evolved and absorbed several civilizations and cultures, which contributed to its development into a worldwide artistic craft. They (*Arab and Persian traders*) significantly influenced the new techniques and designs of Indian chintz through their interactions of with Indian artisans and craftsmen (Sabs, 2013).

One of the most admirable attributes of the Indian chintz is the precision and exquisiteness of its designs which are displayed on the products and are preserved to date. The subtlety and complexity in chintz texture with patterns and motifs usually capture the inspirations of the evolving multicultural Indian textile art. Along with that, the process of making chintz fabric has been altered because of various cultural interactions.

Among the wide collection of fabrics at the *Royal Ontario Museum*, the Western India textile, considered to have been made during the 14th century, is for the Egyptian market. What I found amazing about this work of art was not only the way the birds were stylized, but also the evident skills and craftsmanship of the Indian manufacturers of chintz from the times long gone. In recognition of its technical prowess, inventiveness, and global impact, Indian chintz is celebrated in exhibitions such as "*Cloth that Changed the World: The club exhibited a new display titled*"; "*The Art and Fashion of Indian Chintz*".

By the 17th century, the *Coromandel Coast of India*, especially the regions near Masulipatnam and Golconda, became well-known for producing chintz (Brennig, 1986). Chintz is a kind of calico fabric that dates back to the 16th century and was first made in Golconda, which is now Hyderabad, India (Brennig, 1986). These fabrics were distinguished by their elaborate patterns and floral designs, which were usually printed in several colors on a light, plain background.

When chintz was originally produced, it was a very complex process carried out by expert Indian artisans. Depending on the colors chosen, it required several steps like designing, resisting, dyeing, and mordanting (*which fixes a dye*) (Chintz | Encyclopedia of Art | Textiles, 2022).

Major cultural and economic exchanges occurred in India in the 17th century with the arrival of European traders. These traders were drawn to a variety of goods, including the hand-block printed Chintz textiles that were rapidly becoming well-known throughout Europe. Chintz fabrics were very popular in the European market because they were decorated with intricate designs and vivid colors, and they were dyed using natural dyes (Wills, 2013).

In a world full of textiles, the sense of beauty was greatly influenced by the chintzes traded between India and Europe. Indian chintz calicoes were a favorite of the English nobility and royalty. Another major innovation that has secured a special place in the world is chintzes, which are permanent colors dyed onto cotton by Indian artisans who were influenced by foreign cultures (Douglas, 1969).

Chintz designs from India were highly sought after in Europe. In addition, these designs led to replication in Europe as well. Europe-style fabrics started being manufactured by some important textile centers of that time, for instance, in England and France (Martinsen, 2015). Chintz at this time not only was the name given to this fabric, but it was also used to describe a large range of fabrics from the family. Sarah Fee, the curator of the fabrics exhibition in the ROM said, *“The term was indiscriminately used for the chintz before it became designated for domestically manufactured industrial cottons in the eighteenth century”*.

The Calico Acts, otherwise known as the yearly laws passed by the English Parliament in the 18th century against competition in the textile domestic industry, especially from the Indian chintz. These Acts prohibited the sales and importation of most cotton cloth to Britain; therefore, an oligopoly arose in the British textile industry.

The Calico Acts, which placed restrictions on foreign competition to promote and strengthen home industries, can be considered an early example of economic protectionism. England aimed to support economic expansion and strengthen its textile industry by limiting the importation of Indian textiles. It's crucial to remember that these Acts had a big influence on how the Industrial Revolution in Britain developed. The English textile industry flourished as a result of the Calico Acts, which safeguarded domestic industries and fostered an atmosphere that encouraged

investment and innovation. This paved the way for the Industrial Revolution, which in the 19th century helped Britain rise to prominence as the world's most powerful industrial and economic force (Eacott, 2012).

In the twentieth century, there was a resurgence of interest in traditional Indian textiles, particularly chintz. Known for its vivid colors and complex patterns, chintz was a popular fabric in the 17th and 18th centuries. Indian textile manufacturers and designers aimed to modernize these age-old materials and methods by giving them new vitality (Shah, & Sharan, 2023).

Today, chintz is once again gathering devotees and designers as it provides continuity of both traditional and futuristic motives for contemporary textile designs. Though modern manufacturing technologies might be the ultimate way to ensure precision in fabrication, chintz fabric origin always stays in roots, and artisans responsible for these fabrics pursued ancient craft methods inherited from their ancestors.

2.1.5 Establishments of Global textile trade and trade routes for exports of Indian Chintz

The development of international textile trade and trade routes for the export of Indian chintz was a major factor in the development of the Indian subcontinent's economy and culture, as well as that of the larger world.

The Silk Road was a sort of trade route that functioned between the middle of the 15th century and the second century. It played an essential role in promoting contacts between the East and West in political, cultural, religious, and economic spheres. The name Silk Road arose from the extremely profitable trade of silk textiles that were made primarily in China. Silk was a huge commodity but this trade also included other items like Indian textiles, and chintz (Pradt, 2020).

The Silk Road was not one road but a series of connected trade routes running across China and India, the Middle East, and Central Asia through to Europe. The northern route began at Chang'an, another name for the ancient capital of China that was relocated to Luoyang in the Eastern Han dynasty. It then headed off westwards, but with southward spurs so that travelers could continue by sea from the ports of Guangzhou and other seaports. The southwestern route is believed to be the Ganges

Brahmaputra Delta, which was an ancient center of trade. The southern route entered India through the Karakoram Pass in Pakistan then this split into two western routes across the Hindu Kush; one to the Iranian plateau and the other reached Levant and Egypt (Chan, 2018).

The Silk Road was instrumental in facilitating an exchange of many goods including silk, tea, dyes, perfumes porcelain horses camels honey wine, and gold. The network also allowed for an unparalleled transfer of ideas, religions – especially Buddhism; philosophies, and scientific discoveries many of which were either syncretized or adapted to the societies that received them. The Silk Road was important in the history of civilizations that it united.

Indian textiles such as chintz were one of the commodities being traded through the Silk Road. Chintzes were produced in India as block printed, painted, or stained calico and initially sent to the Middle East and Southeast Asia. In the 16th century, small quantities of these samples reached England, France, and The Netherlands through early Dutch and Portuguese traders (Lally, 2022). The Indian goods were sent to countries such as Afghanistan, Uzbekistan, and Turkmenistan. Central Asia Trade with this region was mainly conducted through land routes

the Silk Road. The popularity of Indian textiles is evidenced in the number of words that have made their way into English: calico, pajama gingham dungaree chintz, and khaki.

At the end of 15 th century, a group of Europeans called Portuguese opened direct sea routes to India and this allowed for considerable growth in trade between India and Europe. The Portuguese made Asian textiles globalize through regular trading between Portugal and Asia since the 1500s. This trade transformed the supply of textiles to the Atlantic world including Europe, Africa, and America, introducing new consumer trends. In the seventeenth century, Portuguese merchants found themselves establishing a niche in the South Atlantic as connections between Goa and Brazil – Bahia at first, before Rio de Janeiro during the eighteenth century. Overnight stops by ships of the *Carreira da Índia*, formerly tolerated and then legalized (1698) have helped to revive the Goan trade in Asian textiles for the Atlantic World. The transcription of this Asian textiles' commerce was also associated with the slave trade,

where cheap Indian cotton eventually emerged as one among other staples to buy African slaves in the 16th Century (Cunha & Ferreira, 2021).

The VOC had a pivotal role to play in the Indian textile trade when it exported lots of chintz for Europe. Established at the Coromandel Coast, a southeastern coast of India, VOC trading posts spread Indian chintz around many parts of the world. Chintz was a sort of cotton fabric, printed in India and exported to Europe with great demand (Prakash, 2009). 1600- 1780 VOC traded in textiles from India to Indonesia. The VOC imported textiles in order of India and, the Indian Coromandel Coast and traded ceramics with China or Japan. With economic and military domination, the VOC's operations relied on their ability to control craft production as well as trade to establish captive markets that could easily be plundered by them.

The vibrant colors and intricate floral patterns of Indian chintz fabrics became fashionable in Europe, especially in England and France, during the 17th and 18th centuries. The demand for Indian chintz peaked during this period, and it was exported to various countries like Japan, Thailand, Africa, and most importantly to European countries. The popularity of Indian chintz in Europe revolutionized the "Chintz Craze" with drastically increased demand (Divakala & Muthian, 2014). Indian chintz was a key trade good for acquiring the highly coveted spices from the Indonesian islands. From the 16th to early 19th centuries, these luxury fabrics, of novel color and design, were some of the most highly desired objects in the world. The exotic textile arrived in Europe during the 17th and 18th centuries on the ships of the East India Companies, all the way from the Coromandel coast in South-East India. It concerned sturdy but shiny cotton fabrics splendidly decorated with floral patterns. It also hardly stained and resisted washing treatments. Large amounts of chintz were imported into England in large part by English traders, notably the East India Company. Chintz, a kind of calico fabric, was first produced in the sixteenth century in Golconda, which is now Hyderabad, India. The textiles were employed in upholstery, clothes, and home décor. When English law forbade the importation of Indian chintz by the early 1700s, British mills developed their chintz fabrics by imitating the techniques and patterns of the real chintz mills in India. This resulted in the production of replica fabrics at a fraction of the price (Chaudhuri, 2006).

To safeguard the home textile industry, the English government enacted the Calico Acts at the beginning of the eighteenth century. Chintz and other printed cotton fabrics were forbidden from being imported into and used in England by these acts¹. In reaction to India, especially Bengal, which at the time controlled the world's cotton textile markets, the Calico Acts were a type of economic protectionism. When Britain finally overtook India as the world's top producer of textiles in the 19th century, the Acts served as a forerunner to the Industrial Revolution (Eacott, 2012).

Chintz exports to Europe were, however, outlawed in 1720 by the British East India Company, which held a monopoly on the trade of Indian textiles. The illicit chintz trade was very much alive and well despite this prohibition. When the ban was lifted in 1759, British factories had overruled international markets with low-cost chintz imitations. This industrial ripoff made chintz widely accessible to the general public and dissociated it from its original association with luxury (Evans, 2014).

Global textile trade and trade routes for Indian chintz influenced fashion and design trends worldwide, stimulating economic growth and facilitating cross-cultural exchanges. Indian chintz's enduring appeal and ongoing presence in the global textile market are clear testaments to the trade's legacy.

2.1.6. Historical technique for color development with natural dyes

Color extraction from plant, animal, or mineral sources has been a part of historical methods for color development using natural dyes for centuries. For centuries, roots, leaves, flowers, bark, and fruits of the various parts of plants have been a great source of natural dyes. The process of taking color away from these botanical sources is something traditionally practiced which in turn helps produce bright and green dyes. There are many plants used for this purpose, out of which some noteworthy ones would be indigo obtained from the plant *Indigofera*; madder – sourced from the roots of *Rubia tinctorum*, and turmeric obtained through the *Curcuma longa* plant (Loum, et al., 2021).

In essence, the process of removing color from plants is known as “natural dyeing”. It is an ancient practice that involves steeping plant material in water or different solvents to liberate the pigments contained therein. These collected pigments are then

used for dying different types of materials, from fabrics to yarns and so on that produce a multitude of colorations.

One of the most iconic natural dyes is indigo derived from the *indigofera* plant. With a deep blue color valued all over the world and generations of refining by highly skilled dyers, this was one of Japan's great contributions to textile history. The leaves of the plant *indigofera* are subjected to a fermentation and oxidization process, which produces vat dye that gives textiles their characteristic color (Yusuf, et al., 2017).

Madder made from the roots of the *Rubia tinctorum* plant produces a range of red and orange colors. As a rule, the roots are dried, crushed, and subjected to an intricate procedure of extracting dye from them. Madder is of great importance to any historical textile tradition and its variety of warm shades is still appreciated (Jahangiri, et al., 2018).

Turmeric, derived from the *Curcuma longa* plant is famous for its bright yellow color. Turmeric plant's rhizomes are ground to powder and used for dyeing. Turmeric has long been used in traditional dyeing procedures, and it adds more weight to its cultural connotations (Popuri & Pagala, 2013).

However, beyond the well-known examples, natural dyeing covers a wide range of other plants. For instance, aloe vera leaves can be used in the production of a yellow dye whilst blackberries with their deep hue have great potential for creating rich purple pigments. These variations show the broad scale of colors that nature has in its possession and are eager to be opened up by art through natural dyeing techniques (Yusuf, et al., 2017).

When people prefer natural dyes over synthetic ones, it is mainly because they are friendly to the environment and sustainable. Unlike artificial dyes that frequently involve a dangerous, highly polluting chemical process, natural ones are all eco-friendly by nature. Generally, the process of extraction uses water as a solvent so that environmental impacts are kept to a minimum. Eventually, natural dyes form a part of creating unique and lovely colors that have an intrinsic authenticity, along with some characters that cannot be duplicated by artificial substitutes.

The resurgence of natural dyeing techniques shows that we are returning to traditional practices which prove acceptable for an environmentally-conscious world. The beauty of natural dyes, their cultural significance, and their environmental sustainability still enchant artisans' designers as well as consumers globally generating a revival in the appreciation for our rich heritage from that source.

Red and purple dyes are derived from certain insects like cochineal insects. The cochineal insect is a scale insect that lives on cactus species in the genus *Opuntia*, mainly from tropics and subtropics such as South America down to North American countries like Mexico and also some states within the southwest United States (Saltzman, 1992). The insect makes carminic acid that keeps away other insects as well. This acid makes insoluble aluminum and calcium salts which form dyes of a red and purple color known as "carmine".

Mollusks are another form of purple dye. Tyrian purple, or royal purple, imperial dye, and the Murex-group sea snail secretion is a reddish-purple natural dye obtained from several types of predatory marine gastropods in another subfamily called Muricidae. For many centuries these mollusks were known by their colloquial name – "rock shell." Pigment was costly and took a lot of time to manufacture, so items dyed with it became symbols of power and wealth (Yusuf, et al., 2017). Apart from offering information about technological achievements, fashion, and social stratification the color of textiles from this period also reflects the socio-cultural relationship occurring in ancient societies as well as agriculture and trade connections.

The ability of artists to take color from insects and Animals for use in Dyeing purposes not only revealed the creativity of traditional artisans but also demonstrated complex links between nature and culture (Kok, 1966). The bright reds and majestic purples obtained from cochineal insects and mollusks formed a significant part of natural dyes, which greatly shaped the course of development in textile arts as well as dyed methods (Phipps, 2010). With the availability of synthetic alternatives in our modern era, natural dyes continue to carry historical significance and unique qualities that captivate those who appreciate the art or science behind traditional dyeing.

Mordants are the substances that facilitate dye attachment to fabric, improving colorfastness. They are usually used to enhance the longevity and luster of the color.

The process of applying mordants to fabrics before dyeing is known as mordanting. Some of the commonest mordants used in dyeing are alum, iron, copper, and tin. Alum is a white crystalline powder that can be dissolved in water and used as a color fixative for natural dyes. Iron mordants are incorporated to create grey, black, and brown shades. Copper mordants are used to create blue shades and green. Tin mordants are used to make yellow and orange shades (Islam et al., 2016).

These age-old implements are a testament to the craftspeople's inventiveness and practicality in making use of locally accessible supplies for the natural dyeing process. The particular properties of the natural dyes used and the intended result of the dyeing process frequently influence the choice of instruments and supplies.

Natural dyeing methods have a long history that crosses many cultures and geographical areas. Each has its distinctive method that is influenced by particular cultural traditions and the availability of local plants. The use of henna to dye fabrics is a unique and culturally significant practice in South Asia, a region known for its vibrant textile heritage. For centuries, henna, or *Lawsonia inermis* as it is scientifically named, has been an essential component of South Asian customs. Henna is used in textile dyeing, which has its roots in artistic expression, cultural customs, and a bond with the natural world. The complex designs and vivid hues produced by henna dyeing are a reflection of the diverse spectrum of South Asian aesthetics (Alebeid et al., 2020).

Several steps in the henna natural dyeing process are carefully followed, demonstrating the meticulous craftsmanship found in South Asian textile traditions. Making the henna paste is the first and most important step. To make a thick, smooth paste, henna leaves are dried, ground into a fine powder, and combined with water, lemon juice, or other acidic ingredients. This paste is carefully applied to fabrics using various methods such as hand painting, block printing, or stenciling, depending on the desired patterns.

Both the intricate designs and the method of application are often symbolic and culturally significant. Fabrics dyed with henna frequently feature designs derived from nature, such as geometric shapes, floral motifs, and vines. These designs have

deeper meanings associated with spirituality, celebrations, and rituals, in addition to showcasing the artistic prowess of South Asian craftsmen.

The ability of henna dyeing to produce a variety of colors on various fabrics is one of its unique features. Although henna is known to impart a rich reddish-brown hue, other factors that may affect the final color include the type of fabric, the length of time the henna paste is applied, and the post-treatment procedures. The color intensity of cotton, silk, and wool can vary, resulting in a varied palette of earthy tones (Bhuiyan et al., 2017).

The application of paste is followed by an important step where the henna-dyed fabrics are allowed to dry and become attached to the fibers. After drying, the fabric is usually covered or wrapped to keep moisture in and enable the henna to penetrate the fibers and form a bond during the curing phase. For colorfastness and durability to be achieved, this curing process is necessary.

Beyond its technical aspects, South Asian culture attaches cultural significance to the use of henna in textile dyeing. Henna's symbolic meaning extends to textiles; it is typically associated with body art during celebrations and ceremonies. Henna-dyed textiles are frequently used as a visual depiction of cultural identity and tradition at important events like weddings, festivals, and religious ceremonies.

Textiles dyed with henna from South Asia have become well-known and appreciated internationally, which has led to a renewed interest in natural dyeing methods across the globe. Henna dyeing is environmentally friendly, which is in line with modern tastes for textiles made ethically and sustainably. In a time when environmental awareness is crucial, South Asian natural dyeing customs—such as henna dyeing—serve as models of how art, culture, and environment can coexist peacefully.

2.2. Research Review

The significance of resurrecting Indian Chintz design for environmental concerns is examined, along with its history. Current research relevant to the revival of Indian Chintz design is critically examined in this chapter. It aims to summarize pertinent studies while evaluating the gathered body of work. By analyzing the connections

between the research conducted by various authors, this section looks at how their findings and methodologies relate to and support the objectives of the current study.

Indian textiles represent centuries of artistic expression, cultural relevance, and traditional skill woven including: painted and printed textiles, motif and design studies, natural dye use, craft revival, and sustainable practices. The following sub units present the review of the researches undertaken to understand the process, document it, and revive the Indian traditional textiles.

2.2.1 Indian painted and printed Textiles

2.2.2 Design and motif studies (Interpretation and symbolism)

2.2.3 Painting and printing with natural dyes

2.2.4 Indian textile craft revival and design intervention process.

2.2.5 Sustainable strategies for crafts

2.2.1. Indian Painted and Printed Textiles

Divakala, M., and Vasantha, M. (2018) conducted a study of “*Kalamkari-The painted temple cloths Kalamkari-The painted temple cloths*” delved into the world of Kalamkari, the traditional art of painted temple cloths. The main aim was to document the tools, dyes, technique and motifs of Kalamkari. Researchers visited Srikalahasti, a temple town within the Chittoor District of Andhra Pradesh, India. It is considered as a home of Kalamkari painted textiles. The tool used for the painting was “*kalam*” . Kalam, is a brush made of bamboo stick pointed at one end and thick at the other. In the middle are wool or jute yarn is tied around in the form of a ball and held by wrapping twine around it in a crisscross manner. The dye is taken in a small pot and with the pointed end of the brush dipped from time to time , the dye is painted on the fabric as per the pattern. The thickness of the brush tip is decided as per the fineness require in painting. Vegetable, mineral and synthetic dyes were used for painting. The painting was done in total nine steps: 1). Preparation of grey cloth 2). Treatment of the grey cloth with myrobalan fruit and milk solution 3). Outlining in Black 4). Painting in Black 5). Painting in the mordant alum solution for red color 6). Red Dyeing 7). Bleaching 8). Painting in yellow 9). Painting in Blue and green color. The motifs were generally inspired from the pictorial glory of Indian mythology.

Pandya, A., & Vishwakarma, A. (2010) conducted a study on “Rogan, the traditional hand painted textile of Gujarat”. The objectives were to document the craft of Rogan painting in detail which includes: history, manufacturing process, colours, motifs and products. The descriptive research design was framed. To collect the information, interview schedule and participatory observation technique was used. The schedule consists of open and closed ended questions. The questions were related to the demographic details, history of the craft, process (both traditional and present), colour, motifs and products produced. Purposive sampling method was used for the sample selection. The sample size consists of five families: two were from village Nirona of Kutch and three families were from the village of Viramgam, Wadhvan and Ahmedabad that is one family from each village.

Results revealed that according to local legend this art came in India from the *Afridis* originating in Syria. Rogan art concentrated in the north western part of India and it is practised mainly by the Muslim descendants of the *Afridis*. Later it was seen that Rogan was also practised by the Peshawar, Lahore and Pathan. In these three places, linseed oil was used and in Kutch Castor oil was used. According to the respondents, this particular art was practiced by the men belonging to the khatri muslim and hindus. It was found that rogan painting served as a major source of income for all the craftsmen. Tools and equipment used in this art were traditionally handmade. The tools and equipments includes: Dandi (stirrer), Handio (aluminium container) traditionally containers were made from clay, Suya (iron rod), Dhakni (covering plate made up of mud), Parrat (wide mounted iron vessel), Chulah(furnance), Kanno (plastic bowl used for keeping rogan colour paste) and Kharal (manual stone grinder) were used. Ingredients used during the entire process of rogan was – castor oil, wood, kerosene oil and dyes. Natural dyes were used for colouration. Colours were produced from the stones and different plant sources. Earlier only natural dyes were used but today crafts man are shifted to Naphthol dyes. The colours used were Pavadi (yellow), Lal (Red), Vadadi (blue), Safad (white), Bhuro (Brown) and green (Leelo). Floral, geometrical and calligraphy motifs were used traditionally. Majorly two types of two types of border layout are used that is border and all over. Traditionally rogan painting was used in ghaghara, odhana, bedsheets, quilts and wall hangings. Nowadays rogan painting products are developed only on the order basis. It was concluded from the

study that traditional method and natural ingredients was changed to meet the growing demand of market.

Hashmi et al., (2022) conducted a study “*Hand Block Printing: The Ancient Craft of South Asia.*” The main goal was to identify where the splendid Hand Block Printing craft came from. One of the major goals of the study was to trace its development through the ages, from its infancy to its present form. The methodology for this study was qualitative. It touched upon the topics of material analysis and the aesthetics of Hand Block Printing designs and forms. Interviews with these oldest shop owners working in block printing were conducted to have direct information come in. Furthermore, the result helped to understand that Hand Block Printing had been developed more than a century ago. It symbolized the prevailing cultural and social norms by uniting the past with the present. Finally, the research stated that Hand Block Printing may have the ability to rise to a higher level. For its progress, the support of the government and society was the biggest requirement.

Karolia A., & Buch, H. (2007) documented the magnificent resist printed textiles - Ajrakh of Gujarat. The objectives of the study were to document the craft of Ajrakh printing in detail and record the changes that have come about in its manufacturing process, colours and motifs. The study was descriptive in nature. To fulfil the objectives, structured questionnaire was developed consist of open and closed ended questionnaire regarding the demographic details, history of craft, process of producing the craft (both traditional and present), colour, motif, products. For the data collection, multi-visit interview method was used. Researchers visited four craftsman who were still practicing the crafts two were from village Ajrakhpur and another two were from the village of Dhamadka.

Results revealed that all the respondents were Khatri muslims. All the 4 respondents had a sole proprietorship type of business. It was observed that the craft of printing served as a major source of income for them. The craft is carried out only by the men belonging to the Khatri community. It was mentioned by respondents that Raja Bharmalji I of Bhuj had brought the artisans from Sindh, Pakistan to this part of Gujarat. Equipments and tools for developing the Ajrakh print were traditionally handmade. Tools were made of locally available wood and clay . The equipments used were blocks, danda (stirrer), ghod (wooden stand), printing table, budho

(wooden beater), etc. The entire process of Ajrakh printing is laborious and it includes 14 stages : 1). Saaj no Marhalo 2). Kasanu/Harda treatment 3). Rekh (outline) printing 4). Drying of rekh printed fabric 5). Kat (black) printing 6). Phulli/Kan printing 7). Gach/ Khor printing 8). Indigo dyeing - I 9). Vichharnu 10). Rang. Steps 7 to 10 are repeated once again to get brighter and more brilliant shades of red and blue. Traditionally Ajrakh is called bi-poti in which two fabrics are stitched together from the centre. Ajrakh fabric are of two types – bipuri (printed only on one side) and ekpuri (printed on both sides). Colours used in printing are – green, yellow, white , black and light blue. Motifs used in the Ajrakh

Dua S. (2014) studied the tradition and evolution of ornamentation style and motif vocabulary of Gujarati printed textiles. From the present perspective and to understand the role of various factors that have contributed to the preservation of traditional skills and experience for the future, emphasis was kept on documenting traditional textile motifs of ajrakh and recording the changes that have occurred in them over time. Case study methodology and qualitative research were both used to accomplish the goal. The resulting data was subsequently collected and examined in order to draw conclusions using a theory-building and testing approach. The study produced a number of theoretical results, including the idea that the symbolic imagery of traditional textile cultures is vulnerable to change over time and under the impact of external factors. Instead of fully changing the classic forms, artists of the present day combined the new ideas into them to produce new designs. Ajrakh is a traditional craft that has seen a lot of work, and the researcher also stated that it was necessary at the time to expand the design directory and innovate on the craft's techniques.

2.2.2. Design and Motif Studies. (Interpreting and Symbolism)

Dereje & Zhou (2013) conducted a study “*Analyzing the cultural background of textile designers' on their innovative thinking*”. The main purpose was to study how cultural backgrounds influence the creative as well as innovative processes of textile designers. The research adopted qualitative methods and heroines in textile design from China, Africa, and Muslim societies and analyzed their all-innovative actions. The study noted that the issues of designers’ creativity are posed by the cultural diversity of the backgrounds. Clothing lines that drew from their tribal heritage gave the apparel world amazing designs that the end user could relate to. The study mostly

highlighted that the fact the incorporation and assimilation of cultural diversity in textile design is crucial. The cultural richness that ranges from iconic designs to textile patterns served designers as an endless source of inspiration. They came up with innovative and powerful textile art.

Kipoz & Himam (2014) conducted a study “*Re-invention of Traditional Textiles for the Contemporary Design Culture.*” The primary objective is the incorporate novel designs into textiles that can be worn to stay rooted in the traditional style and a modern requirement. Through the illustration of sustainable and ecological thinking, which is inherent in the modern design culture, the study managed to draw attention to the mentioned issues. Due to the heroes of traditional textiles that just occasionally played a tiny role in design culture, designers hardly used them. The research illustrated the necessity of applying the textile traditions’ preservation to textile reinterpretation. Bringing traditional textiles into the mainstream art sector would help to create a niche market that could be appreciated for the heritage and modernism aspects at the same time. Finally, the traditional handwork of a small country gave them space for maneuver in the environment of changable design conditions. In the past, these fabrics represented different areas and sometimes they are adapted to the current tastes. This has led to the growth of these fabrics from being merely background fabric for ordinary clothing to tastefully designed textiles of high quality.

In the study by Garg, V and Katara.C- Transition of Phulkari traditional folk art of Punjab and its revival through artistic and expressive compromises (2017), The folk embroidery of Punjab -phulkari was made by women who use their own perspectives on life to fill the canvas of home-spun, hand-woven khaddar with untwisted silken thread in the hues of their hopes and desires, interpretations, and orientations of mythology and culture. However, due to rising urbanization and the accessibility of obtaining inexpensive, machine-made goods, phulkari is no longer practiced in its original form. Instead, it has evolved into an income generation source. Many years of commercialization have weakened the original labor-intensive, time-consuming phulkari form by causing a gap between the traditional, motifs, and craftspeople. The goal of the current study was to learn and document about Phulkari in its traditional form with reference to the stitches, colors, tools and techniques using CAD so the traditional identity is retained and can serve as a further reference by future embroidery practitioners to use it in its original form.. This was done by

documentation of embroidery in the traditional form and comparing and studying the differences that occurred while commercializing the original form.

Lemire, B. (2003). Domesticating the Exotic: Floral Culture and the East India Calico Trade with England, c. 1600–1800. In the seventeenth century, Europe's expanding trade brought fascinating new textiles from Asia to the West, while newly imported flora sparked a frenzy among botanists, collectors, gardeners, and speculators. Gardens were reimagined between 1600 and 1800, while interior residential areas were also being remodeled during the same period. The painted and printed fabrics from India were utilized to recreate interior spaces based on envisioned landscapes of far-off places. A vivid flow of designed products in, silk, and linen were unleashed to adorn the walls and furnish the homes of both affluent and ordinary individuals. Asian-inspired clothing also piqued the interest of males from middle-class to affluent social classes, who were seduced by the decorative banyans or dressing gowns made of printed and painted silks and cotton. Amongst these, the most popular dresses were robes and banyans in floral designs. Over the course of two centuries, calicos were domesticated, becoming a consistent part of English domestic décor and personal decoration. They also evolved to become a representation of male intimacy and genteel rest, becoming an integral part of Western material culture, and fashion and playing an important role in reshaping the home décor.

2.2.3 Painting and Printing with Natural dyes

The chay root, scientifically known as *Oldenlandia umbellata* or *Hedyotis umbellata*, is an ancient plant traditionally used to produce a red dye. This natural dyeing practice has deep historical roots and cultural significance, particularly in regions of India and Southeast Asia. Known as chay root in English, it is called "chei" in Tamil. The root yields a red pigment that was widely used to dye cotton and silk fabrics, producing shades ranging from pink to deep red depending on the mordant and dyeing technique used. It was a species of a native of sections of Bengal, Puri, Odisha, Golconda, Telangana, the banks of the Krishna delta in Andhra Pradesh, and northern Sri Lanka. It is the source of chay root dye, a natural red colourant. Chay is a small plant with a long tap-root which grows on sandy ground near the shore in the area of the Coromandel Coast. The colouring principle is contained in the root, and was considered of finer quality than madder, the plants from the Kistna delta being the

finest of all. The botanist William Roxburgh, in his account of the chay in *Plants of the Coast of Coromandel*, 1799, describes the cultivation of the plant, and the care with which it was gathered by trenching of the soil so that the delicate roots were not damaged in pulling them from the ground. Roxburgh adds a long account of the processes of preparing the cloth, and dyeing. The dye was first applied to kalamkari and chintz cloth in the southern states of Andhra Pradesh and Tamil Nadu at least in the seventeenth century.

Bessie Cecil's work is instrumental in preserving the knowledge of traditional dyeing practices involving chay root. She has contributed to the scientific understanding of natural dyes and promote the preservation of traditional dyeing practices. She had collaborated with local artisans and dye practitioners to document their practices, providing a contemporary perspective on how traditional methods can be adapted today. Her research serves as a bridge between historical practices and modern applications, ensuring that the valuable cultural heritage of natural dyes is not lost. Her books and articles continue to be key references for those interested in ethnobotany, natural dyes, and sustainable textile production.

Houghteling, S. and Shibayama .N (2019) discusses the examination of the colours utilized in painted cotton textiles from India in the seventeenth and eighteenth centuries that were housed in the Metropolitan Museum of Art's collections. The main aim of the study was to determine which red dyes were utilised to make the chintz textiles, and to ascertain whether dyers employed less expensive replacements as dyeing agents. Our preliminary research indicates that chay root was traded and overland for textile dyeing in central India, in addition to being employed as a dye material along the Coromandel Coast. The findings suggests the usage of dye specialisations around the region . More generally, this research demonstrated the mobility of dye ingredients and the autonomy South Asian dyers had in selecting their dye sources.

The study on "Bagru , The traditional hand printed textiles of Jaipur was conducted by Batham, M. (2014) Main aim of the study was to analyse the various aspects of printing process on fabric practised by the artisans in the Bagru village of Rajasthan. Descriptive research design was planned. The interview schedule consists of closed and open ended questions. The question dealt with demographic details, history of

craft and process of producing the craft. Observations were recorded by taking photographs. The study was carried out to understand the process followed by the artisan to create a bagru printed fabric.

Result revealed that raw material used for the printing for dyeing and printing was cotton fabric, harda, iron junk, Jaggery and chhiya (tamarind seed powder), Alizarin, phittkari and natural gum (guar gum). The grey fabric for printing was prewashed and soaked for 24 hours in water for the removal of starch, oil and other contaminants. The prewashed fabric was treated with Harda prior to printing. The myrobalan treated fabric was spread and smoothened on long padded printing table. Traditional printing was mainly done by using black and red colours. For producing other colors, synthetic pigments were used in printing paste.

For developing the paste of Black color - iron junks like nails, pieces of iron was soaked in water for one month. Jaggery and chhiya (tamarind seed powder) was added to above solution and heated together till a thick paste was formed. This paste was applied onto the fabric with blocks. For developing Red color - Alizarin was mixed with phittkari and natural gum (guar gum) and soaked for 24 hours. This paste was used for printing and red colour was created. After printing fabrics were dried on the sand in the sunlight for 3-4 hours followed by steaming for the better penetration of the color. It was concluded from the study that Bagru printing is one of the unique printing style where natural sources like harda, tamarind etc were used till date. But now they have begun to shift on synthetic pigment colour rather than natural color. The method has changed to a great extent in order to meet the growing demand of the market. The production process has not changed but there are changes in the natural ingredients used at different stages.

2.2.4 Indian textile craft revival and design intervention process.

In 2020, Tiwari and Dhakad conducted a study *“Design Intervention & Craft Revival with Reference to Pichwai Paintings: A Contemporise Approach”*. The purpose of this study was to ascertain whether design intervention helped in the revival of a dying craft by introducing novel ideas and new intervention models, leading to the creation of a new range of products. This study was based on a review of the literature and adopted a case study approach. The study aimed to suggest interventions as a bridge

between designers and craftspeople to enhance and expand the craft vocabulary, reviving the dying craft tradition, and opening new avenues in the global market

In 2017, SAREEN conducted a study “*From Loom to Legacy: Assessing Interventions and Sustainable Strategies for Safeguarding India’s Traditional Textile Crafts.*”. This review article examined various interventions and sustainable strategies that were implemented to safeguard India’s traditional textile crafts and ensure their legacy for future generations. It discussed skill development programs that equipped artisans with new techniques, design inputs, and business knowledge to enhance their craftsmanship and marketability. The role of design innovation and collaboration with renowned designers and fashion houses was examined, showcasing successful examples where artisans benefited from these partnerships.

Gupta, M., & Gangwar, S. (2016) did the study on Adaptation of designs for the textile products inspired from Madhubani painting. The objective of the study was to create a design Sheets, by the adaption of Madhubani designs of Bihar region for textile designing through hand painting. For the study the traditional designs of Madhubani painting of the Bihar region were collected from various secondary sources like books, cards, internet and library. Design sheets of selected thirty six motifs were developed keeping in mind their suitability for articles like cushion cover, folder and table cloth. The developed design sheets were shown to 30 respondents which fall under the age group of 20-35 years, selected randomly which included faculty members of the college. Weighted mean scores (WMS) was used and ranks were assigned to the developed designs. The articles which has obtained highest rank was considered best for preparing articles. Finally three articles were prepared – that is cushion covers, folders and table cloth. The articles were developed by 30 consumers to assess the acceptability, colour combination, innovativeness, overall appearance using three point rating scale. It was found that in terms of color combinations, innovativeness and overall appeal table cloth has obtained highest weighted mean score. It was concluded from the study that adapted design can be used through the surface enrichment for product diversification and value addition.

India is famous for its beautiful, innovative and attractive fabric arts. Sanganer is the jewel in the crown of Indian Art with its mesmerizing hand block printing. Sanganer of Rajasthan is the traditional Centre of block printing, where motifs are produced

with vegetable dyes. The Sanganer printing is practised by Chhippa community of Rajasthan. Kaur, J. (2017) documented history, flora and fauna motifs and printing process of Sanganer block print of Rajasthan. Historical evidence includes that Sanganeri vegetable print has more than five hundred years old history. These artisans draw their lineage from the artisans of Kathiawar in Gujarat and historical records also support their Gujarat connection. They are said to be the followers of famous saint Namdev and are known as ‘*Chhippa*’ or ‘*Namdev Chhippa*’

Motifs of Sangener print is conventionally called as *Bhant* in Hindi. Bhants are the fine composition of flower, leaves, trees and plants. Sanganeri print has a collection of more than 400 (four hundred) types of *bhants* in its treasure.

Sanganer is famous for its small decorative and delicate floral patterns, known as *Buta* & *Buti*, *Bel* (creepers) & *Jal* (floral net) printed on fine cotton fabric. The pattern consists of the motifs that includes different types of flowers, leaves, trees, plants, animals & birds. Motifs of Sangener printing includes - *Buta* & *Buti* (that consist of natural and decorative style) and *Bel*.

Sanganeri Chippas compose *buta* and *buti* in two ways – natural and decorative ways. Natural style of buti and buta includes *Kamal Buti* (composition of lotus flowers & buds), *Genda Buti* (composition of marigold flower) and *More Buti* (composition of peacock). Decorative style of buti and buta consist of artistic imagination which includes *Bichoo Buti* (flower and leaves arranged in Scorpio shape), *Singh-Bal Buti* (composition to give impression of the hairs on the lion’s face), *Keri Buti* (Mango Shape), *Pan Buti* (Beetle Leaf Shape), *Katar Buti* (Dagger Shape) and *Badam Buti* (Almond Shape), *Dakh Buti* (grapes) and *Kharbuja Buti* (Mesh melon). Composition of Rose, Rosette, Lotus, Lotus bud, Sunflower, Lily, Champa, Cannas, Canner, Narcissus, and Marigold etc. are used in Sanganeri print. Elephant, horses, camel, peacock, and human shapes were also made in Sanganeri Bhants.

Bel are the running patterns of leaves and flowers work. It is made of flowers, leaves and flower buds, composed and set between two parallel running strips in an Interlace manner. Some of the traditionally made Bels are known as: *Kangura bel*, *Sugga bel*, *Dakh bel*, *Keri bel*, *Belpatra bel*, *Machali bel*, *Morani bel* etc. *Jal* (Floral net motifs includes- *Keri Jal* (mango), *Gulab Jal* (rose), *Patti Jal* (leave), *Hiran Jal* (Deer), *Sher Jal* (lion). Various *Buta*, *Buti*, and *Bel* have been named according to their shapes that

is *Sosan Buti*, *Genda Buti*, *Gulmehendi*, *Javakusum*, *Jatadari lily*, *Guldaudi*, *Kachnar*, *Kaner*, *Gullalla* etc. These are the locally grown flowers.

Artisans of Sangener includes three different types of patrons - General clients, Temple devotees, Royals and courtiers. For the general client - Syahi- beggar or black and red design on gossamer white cloth are used. For the royal people and courtiers, Butis sprigged floral motifs stamped with soft colours on white background. The Indo-European cultural exchange gave artisans new style and designs to suit their new clientele. In this time the artisans got some new style of universal motif of beautiful rose and the European motifs called as “cabbage rose” made its way to Indian textiles. It was concluded from the study that fast moving & mechanized world, Sanganeri art of hand block printing was struggling for its survival. But its peculiar procedure which includes a lot of the local natural resources finally helped this art to win Geographical Identification mark.

Boṭa M and Schreiber R, (2021), *Rebranding “Made in india” through cultural sustainability – exploring and expanding Indian perspectives*. This exploratory study was an attempt to understand the sociocultural and legal environment of Indian culture by determining the values associated with Indian Traditional textile craftsmanship by the Indian Fashion industry. The level of skill displayed by Indian textile and fashion industry participants and how their viewpoint is impacted by the international recognition and perception of Indian textile crafts and connotation of India-made is stated. The study also explores the definition of "sustainability" in the context of Indian culture as it relates to textile artistry and how this compares to the Western idea of "sustainability." This study demonstrates that Cultural Sustainability is the dominant narrative in the Indian cultural setting due to the prevalence of culturally embedded sustainability practises and the combination of field research and in-depth unstructured interviews.

2.4.5. Sustainable strategies for crafts

Sengupta, R (2021) discusses the agency of kalamkari textile makers in the Coromandel region of India, who produced masterfully crafted cottons during the early modern era. These fabrics, known as 'pen work', were integral to trade networks connecting India with Asia and Europe. The author uses an interdisciplinary approach and set a search for the analysis to explore the multifaceted practice of contemporary

kalamkari makers, arguing that agency is a fluid notion embodied by a series of complex processes. His sustained engagement with block makers of Pedana, dyers in Polavaram and Hyderabad, and other artisans of the Coromandel has formed the understanding of agency. Through repeating the practice of their masters and ancestors, the textile makers produce, sustain, and transform craft making. He emphasizes that kalamkari making is the practice of continuously reconfiguring artisanal subject position by signaling the entanglement of agency and bodily actions—the repository of historically informed knowledge of the craftspeople.

According to Kapur H and Suruchi M, (2014), efficient design intervention with a systematic approach in collaborations with various crafts agencies and governmental bodies can aid in craft revival. A very important strategy according to her is the incorporation of goal-oriented innovative ideas and newer design intervention models that can greatly contribute to reviving a craft that is in decline. This can be done by several carefully planned strategies, especially creating a new product line that can equally support artisanal livelihoods. The designer and the artisanal collaborative approach can bring in a new life. A designer with effective design thinking can expand the craft design vocabulary without losing the craft identity. He can play a significant role in effectively integrating the craft and design well according to the present market concept. His thorough combination of economic, cultural, and ecological aspects into a well-accepted consumable and marketable product can transform the craft into a more sustainable business story.

Betham M and Arora Chitra (2014) in their study *Journey of Rogan Painting from Kutch, India*, The aim was to raise awareness and value of Rogan painting on fabric. This ancient craft of priceless value is rapidly going extinct and steadily losing value. This study would advance the economic and social standing of the artisans involved and thus aid in protecting our nation's cultural heritage. According to the Craftsmen, the current method and the traditional method were contrasted. The study's goals were to examine many facets of the tradition of Roghan painting on cloth, as it is currently practiced, including its history, the raw materials utilized, the motifs and patterns used, and the preparation and application of the Roghan paste in the traditional manner. The technique of purposeful sampling was employed. The artisans revealed a priceless value attached to the craft and their willingness for its continual perusal. Yet

they added the craft was very elaborate and required special skills and techniques that contributed to more time and hence added cost of making, which brings less artisanal revenue. So there was a need felt for creating the craft awareness and to simplify the process to make it more lucrative and sustainable in the future.

Boṭa M and Schreiber R, (2021), *Rebranding “Made in india” through cultural sustainability – exploring and expanding Indian perspectives*. This exploratory study was an attempt to understand the sociocultural and legal environment of Indian culture by determining the values associated with Indian Traditional textile craftsmanship by the Indian Fashion industry. The level of skill displayed by Indian textile and fashion industry participants and how their viewpoint is impacted by the international recognition and perception of Indian textile crafts and connotation of India-made is stated. The study also explores the definition of "sustainability" in the context of Indian culture as it relates to textile artistry and how this compares to the Western idea of "sustainability." This study demonstrates that Cultural Sustainability is the dominant narrative in the Indian cultural setting due to the prevalence of culturally embedded sustainability practises and the combination of field research and in-depth unstructured interviews.

Zhang, L., Bont, C.D. et.al. (2023) conducted a study on An Exploration of the Relevance between Sustainable Craft and Service Design Based on a literature Review Study. The data on sustainable crafts of 21st century was collected from published articles from most productive journals and scopus database of research articles.

The research aimed to analyse how sustainable crafts have evolved and the current state of sustainable craft knowledge and trends in future investigations. After that, service design theory will be expounded in a greater depth. The interrelationship between sustainability craft and service design was explored. For the analysis following question was framed:

Q1. How have theories about sustainable crafts evolved?

Q2. Which publications are most pertinent to the subject matter of sustainable crafts and the primary subject areas

Q3. What are the influential periodicals and research institutes for sustainable crafts?

Q4. What is the relationship between sustainable crafts and service design based on theoretical analysis?

Results revealed that the first period endured before the break of the 2008 global financial crisis and was characterized by a virtual cessation of scientific production. The second stage started in the wake of the financial crisis. Finally, the third stage has a surge from 2015. It could be because, according to the United Nations, the 2030 Agenda and the Sustainable Development Goals (17 SDGs) promoted researchers to be more receptive to adopting the international community's guidelines and applying them to the crafts field.

According to Bamford this aspect is integrated into the industry through “design for sustainability” as a remedy for the detrimental effects of excessively efficient production and pervasive “throw-away” consumerism. According to Vaananen and Pöllänen et al. sustainable craft is a multifaceted notion that presently comprises two essential elements: craft, which pertains to design and sustainability. They conclude that craft can bring about the transition to a more sustainable society.

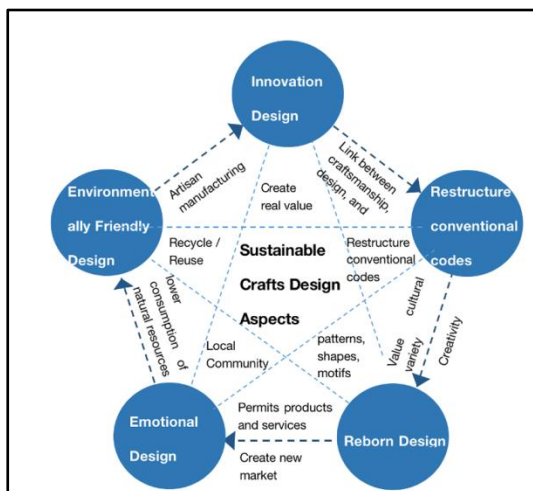


Figure.2.1 Sustainability Crafts Design Aspects

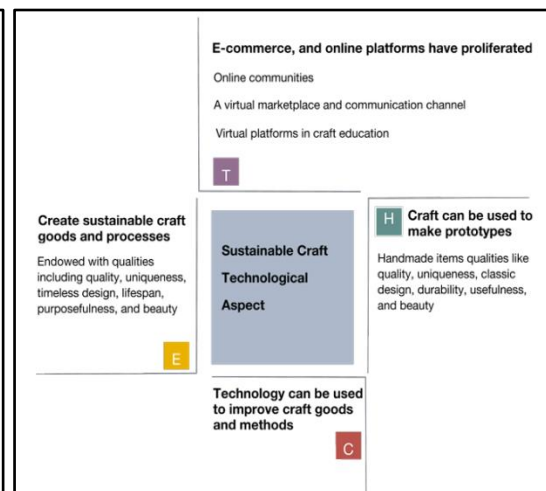


Figure.2.2 Sustainability Crafts Technology Aspects

The selected literature on sustainability crafts was further analysed and divided into different research objectives which includes - craft environment (C1), culture (C2), education (C5) and economic aspects (C9). Environmental aspects include theoretical framework to improve energy efficiency and minimize the craft department's reliance on fossil fuels. Cultural importance and meaning encompass diverse, interconnected

elements, including tradition, locality, community, personal identity, spiritual welfare, aesthetics, environmental considerations, materials, technology, skills, and the trade of goods and services. This design aspects facilitates heightened utilization of products and services while concurrently fostering stakeholder awareness. Technological aspects includes e-commerce, online platforms, virtual marketplace and communication channel. The sustainable product made with the technology context was endowed with quality, uniqueness, timeless design, lifespan, purposefulness, and beauty. The relationship between education, professional craftsmanship and sustainable craft is important for two reasons: (i). craft as a trade generates goods that impact the environment and the economy (ii). education enhances lives and imparts skills. Emotional aspects includes that consumers seek products because they are developed with skill and care by an individual who employs craft knowledge in their production, implying that the product and craft connect with ideals of quality and authenticity. Age, sustainable behavior, comprehension of sustainable craft, and opinions on the product's usefulness influence consumer purchasing decisions. Developing a well-rounded production system necessitates the development of three fundamental dimensions: economic, environmental, and social sustainability.

Extrinsic and intrinsic values are associated with sustainable craft. Extrinsic values include economic and environmental factors, whereas spiritual, cultural, and societal aspects are reflected in intrinsic values

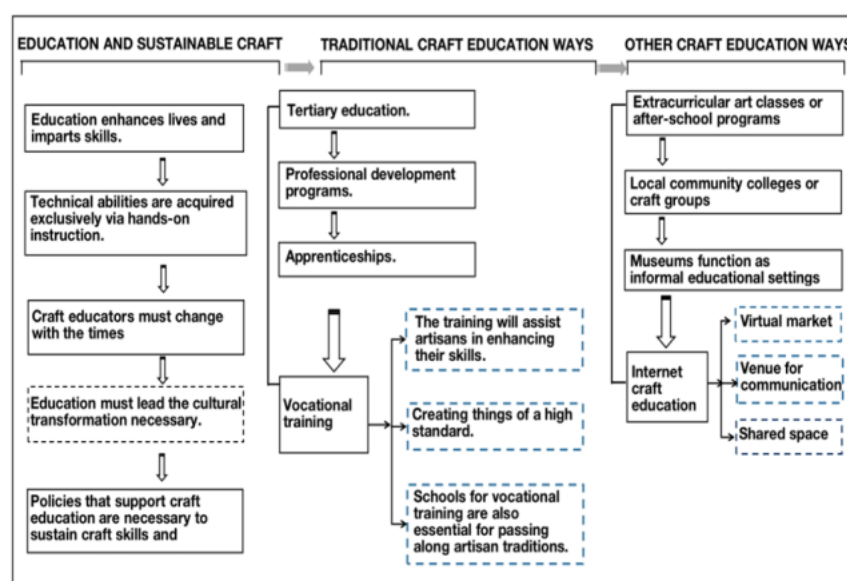


Figure.2.3 Educational Aspect

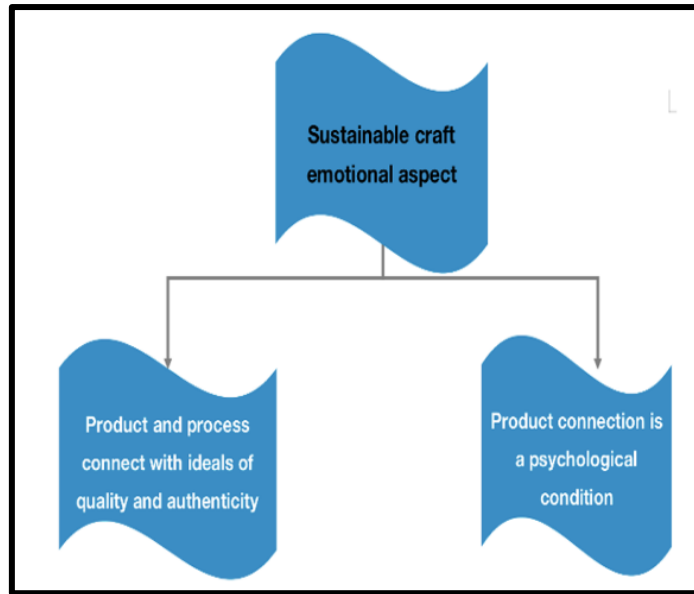


Figure.2.4 Emotional Aspect

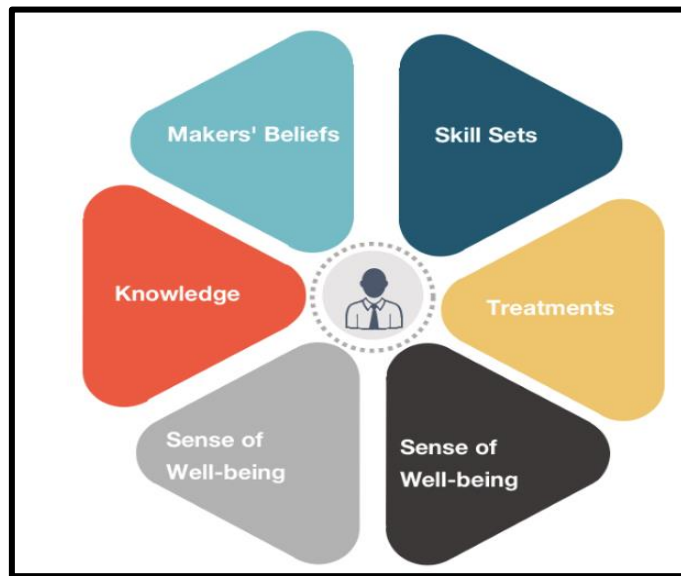


Figure.2.5 Personal Aspect