

Chapter 4

RESULT AND DISCUSSION

This study was carried out on “Innovation in Designing of *Mashru* Textiles for Product Diversification”. The result and discussion for the same has been discussed under following points:

4.1 Tracing the historicity of *Mashru* fabrics.

4.2 Documentation of the production process of *Mashru* & exploring its existing status.

4.3 Documentation of the designs and motifs of *Mashru* with its significance.

4.4 Design and development of new *Mashru* fabrics.

4.5 Promotion of *Mashru* through product diversification of developed fabric.

4.6 Analysis of the market acceptability of developed fabrics in terms of yarn, colour, design and aesthetics.

4.1 Tracing the historicity of *Mashru* fabrics

The tracing of the historicity of *Mashru* fabrics were majorly done under five components i.e., origin, evolution, identification of fabrics similar to *Mashru*, its centers of production and history of silk, cotton, rayon and polyester *Mashru* textiles. Origin of *Mashru* mainly dealt with the reason behind its beginning; evolution dealt with its history and progression in India, how it grew, propagated and flourished in different parts of the country with major focus on Gujarat; identification of mixed textiles similar to *Mashru* dealt with those fabrics which were either technically or visually similar to *Mashru* in Indian Subcontinent or globally; Centers of *Mashru* production dealt with the different centers within India where is flourished and history of silk, cotton, rayon and polyester *Mashru* textiles dealt with the evolution of *Mashru* in context of raw material. The study was carried out through secondary sources (books, paper published in journals, blogs) and primary sources. Primary data were collected through interview and observation method. To achieve these subobjectives, it was very indispensable to understand the importance of product and surrounding where it originated and sustained. India had been very popular for its variety of craft and handicraft since long, where textiles holds a major share. Within Indian states also, Gujarat is a major hub for its rich textile heritage like *Patola*, *Saudagiri* prints, *Gharchola*, *Bandhani*, *Sujani*, *Ashawali*, *Patola*, *Mashru* etc. So, not only within state or within Western India; Gujarati textiles had been crucial in globally acknowledging India as colorful and vibrant subcontinent.

Textiles have been used as markers of high status in India since the earliest times. Their use as prestigious gifts or as lavish furnishing to display wealth and impress visitors is clear both from surviving examples and written accounts. In a culture traditionally without solid furniture, fabrics can be suspended from the ceiling, spread on the floor and hung on walls to decorate rooms and can serve as seats and tables as well as all-enveloping covers for piles of bedding, that in other cultures might be stored in cupboards. This textural and multicolored immersion in cloth has always impressed visitors to India, especially those from the West, and has helped to form an impression of the subcontinent as a uniquely colorful place. (Crill, 2015, p.3).

4.1.1 Origin of *Mashru* fabric

Mashru literally means “Permitted,” in reference to Muslim ceremonial law to the prohibition of pure silk by men with the exception in ‘war’ or ‘in the form of narrow borders of dresses’. To comply with this proscription, a verdict of the learned was attained that as pure silk (*harir*) is forbidden, hence fabrics containing silk with any additional material will be allowable for men. Thus, in this way *Mashru* fabric were devised for men believing in Islam. As this was not forbidden for women of Islam, therefore they use to wear opulent pure silk fabrics in severe compliance of their law (Ali, 1900). Desai (1988) also stated that for certain unknown reasons, it was worn by orthodox Muslim men who were prohibited to wear pure silk by their prophet. Today also, many orthodox Muslims stand by this tradition of not wearing pure silk. Basically, it represents mixed fabric that is not of pure silk but mixed with any other material preferably cotton due to its abundance in India. Lari (2010), also stated that the literal meaning of *Mashru* is ‘approved’, it was originated due to proscription of silk for Muslim men. So, this fabric was produced to meet people’s fondness for silk cloths while obeying the religious proscription.

Mashru is mixed fabric of silk and cotton, primarily associated with Muslim community. As per Islamic tradition, wearing of silk touching the skin were not acceptable in devout Muslim. Therefore, *Mashru* came into existence as admixture of silk and cotton in satin weave enabling not to touch wearer’s skin while wearing and also with far lesser consumption of silk (Dhamija & Jain, 1989).

According to Mukharji (as cited in Kacker, 1994), *Mashru* comes from ‘Persian’ word meaning ‘cleverly woven’, this epitomizes the dexterity with which cotton warp is absolutely

covered with silk weft. It is also supposed to derive from Sanskrit word '**misru**' meaning mixed (**Buhler, Fischer & Nabholz, 1981**).

Lari (2010) revealed two pertinent facts regarding origin of *Mashru* that the earliest samples of *Mashru* fabric came from Western India and the larger samples of mixed cloths relating to 19th century seemed to be coming from Banaras and Murshidabad.

Naqvi (1983), in her article 'Some Varieties of Indian Silk Stuffs in Persian Sources C. 1200-1700' presented a very remarkable perspective about silken fabrics (specifically silken-Persian variety) that in due course of journey, Persian textile culture has picked up more primarily Indian characteristics by quantity as well as variety by producing larger variation of cotton admixtures (cotton-silk mixed) which were principally silken. In this context by giving the example of *Mashru*, she stated that it was a double layered stuff with a substantial cotton base, concealed with almost a mono filament silken warp and cotton weft which were presumably an Indian innovation. This description gives insight of *Mashru* being a fabric of Indian origin.

Mashru fabric is about multiple bright colour, satin weave, brocade and *Ikat*. According to **Brett & Irwin (1970)**, in context of colour; the Greek physician Ktesas (5th century B.C.) accounts in the *De Animalium Natura* IV that among *Persians* bright coloured Indian textiles were very popular. He further extended that it is believed that the art of dyeing with the usage of mordants was developed in India and was taken from here to Egypt. **Bana (as cited in Lari, 2010)** discusses about *Stavarak* textiles which was actually *Kimkhab*. According to **Agrawal (as cited in Lari, 2010)**, *Stavarak* was a type of *Kimkhab* manufactured in Iran. In context of brocade textiles, **Lari (2010)** stated that what relation *Banarasi* brocade enjoys with *Iranian* brocade is not clear as the reputation of brocade was already established in India. These imported crafts might had come to India along with arrival of Muslims in India. Possibly Indian artisans might have efficaciously tried to learn such overseas crafts. **Dhamija (1989)**, has shared her view about negligence of scholars to classify fine Indian textiles as Islamic, near Eastern or Persian like examples of early silk brocade, shawls and carpets from Mughal period. Most of the older examples of Indian textiles collections are in abroad and often classified as Islamic and others. There has been a predisposition to label all fine quality silk textiles as Persian. This approach had been effectively questioned in recent research of weaving technique by experts. From Akbar to Aurangzeb's reign, remarkable mastery of technique, design, colours had been reflected in brocaded silks, sashes, shawls, hangings and carpets. *Mashru* too

were an important fabric during their reign. These references suggest the possibility of *Mashru* being originated in India.

During an interview with son of a master weaver cum trader of Patan named Jagdishbhai Khatri who belonged to one of the most significant hereditary weaver families of Patan, brought a new perspective behind nomenclature of *Mashru*. He told *Mashru* means a fabric made of mercerized cotton. Cotton is an indigenous fiber crop of Gujarat which is known as *rooi* in Hindi and is considered as *rooh* (soul) of Gujarat; a staple fiber of Gujarat and mas refers mercerized. Therefore, its name is *Mashru*. Earlier both warp and weft were of cotton, in course of its journey cotton warp were replaced by silk.



Plate 4.1: Master weaver/trader of Patan describing meaning of *Mashru*

Mashru resembles to *Kutnu* fabric of Turkey, previously it was part of Ottoman empire. The word “Kut’n” refers to cotton (<https://texinlife.com/kutnu-fabrics/>). Its production in Gaziantep dates back to 16th century. This also gives a point to rethink about origin of *Mashru*.

Sanghvi (2020) had explained that *Mashruh*, *Himruh* and *Amruh* are three types of textiles that came from Deccan and Gujarat, the places where Islam was propagated either by force or willingly. It was encouraged by royals either for self or for trade with the view that silk should not touch the skin. All these three varieties had ‘*ruh*’ of something like cotton or wool and silk being the common outer face of fabric. Cotton was the *ruh* of *Mashruh* and *Amruh* for summer and wool was the *ruh* of *Himruh* for winter season. She further adds in ancient textiles, satin and sateen weaves were used in those textiles where silk was needed in surface because no other weave could have given this result. This weave construction also enables air circulation for skin. The practical application of fabric was very well kept behind its origin.

Patan had been among the major centers for *Mashru* production in India. During researcher's visit to Patan, it was found that certain *Buttis* and stripe motifs seemed to be inspired from the famous monument of *Rani Ki Vav*, also known as queen's step wells. It was constructed by Udayamati, queen of Bhimadeva which took some fifteen to twenty years to build and it was structurally completed by 1090 A.D. This monument dates back to period prior to arrival of Muslim invaders. The wall of the well is most profusely ornamented with sculptures and deities as wall relief (**Sharma & Gupta, n.d.**). Due to fragile material nature of textiles, lack of preservation & documentation, many of old *Mashru* designs have not survived. Among the surviving and archive fragments, few of the *Buttis* and stripe motifs which found resemblance to this monument carving were *Barashahi*, *Saatdhani*, *Kakini*, *Kataria*, chevron. Few triangle-based motifs too seem to be inspired from it whose names are not known. In most of the documents it had been found that *Mashru* originated during 12th or 13th century onwards with advent of Muslim rulers (Delhi Sultanate) in India. So, this belief related to origin of *Mashru* becomes contradictory in researcher's opinion.



Plate 4.2: Carved wall of monument - *Rani Ki Vav*, highlighting inspiration for *Mashru* motifs

Above is the carved wall (plate 4.2) of *Rani Ki Vav* monument of Patan which was found to be inspiration for many *Mashru* motifs. The 2nd squared pattern from right (plate 4.2) is inspiration for *Barashahi* (plate 4.3 C/A), the first and sixth squared pattern from right (plate 4.2) seems to be inspiration for *Saatdhani* (plate 4.3 B) motif, and the 1st squared pattern from right (plate 4.2) seems to be inspiration for *Barashahi* (plate 4.3 C) stripe. Similarly, many carving patterns of this monument seem to have impact on conventional decorative stripe patterns of *Mashru*.



A. *Barashahi*

B. *Saatdhani Butti*

C. *Stripe motif*

Plate 4.3: *Mashru* motifs inspired from monument - *Rani Ki Vav*

Gujarat came under rule of Muslim ruler under reign of Delhi sultanate during late 13th century. Zafar Khan established the independent sultanate of Gujarat in early 15th century in Anhilvada (modern Patan) (Edwards, 2011). This is the same city of *Mashru* production. So, Islamic belief might had been carrier to promote the craft which already existed in India at that time and to match their belief system they might had brought some material change during their rule. Hence, looking into *Mashru*'s motif's similarity to *Rani Ki Vav* and Patan being the capital of independent Gujarat sultanate, it suggests an angle of possibility of *Mashru* being made prior to Muslim rule in Gujarat.

According to written account of Megasthenes, Chandragupta Maurya's Greek ambassador, Indian prince's cloths were made of pure gold. The proficiency of making brocade using gold & silver thread of Ahmedabad and Benaras travelled to Babylonia and subsequently to Rome from our country. The heavy woven brocade textile of *Kinkhab* using gold & silver yarn, and silk made *Amru* were produced both for local utilization as well as for exports (Calico Museum of Textiles, India, 1996). Thick brocaded textile is often satin based silk fabric, it means the skill, technique and set up needed for satin, brocade and silk weaving already existed in India around 3rd or 4th century, that also in Ahmedabad; city not very far from Patan, the city which was made capital by Ahmed Shah after shifting it from Patan (formerly Anhilvada). Hence, this definitely suggest the possibility of *Mashru* being produced before the arrival of Muslim weaving tradition. The terminology used for *Mashru* might had been different but has existed since long back in contradiction to those references which states that *Mashru* has originated in India during 13th century. Agrawal (2006) had also stated that before *Mashru*; *Alacha* or *Alaja* were the names commonly used for this fabric. *Kimkhwab* or *Kinkhab* is a traditional brocade fabric woven in silk and gold or silver. In Persian, it means 'a little dream', and it also means 'woven flower' an explanation applicable to brocade fabrics in reference of floral pattern being

very common to it. It had existed in India from ancient time, in Vedic literature it was termed as *hiranya*, or cloth of gold, in Gupta period it was known as *puspapata*, cloth with golden flowers (**Britannica Encyclopedia**). If the newer name can become more popular for *Kimkhwab*, then it can be for *Mashru too*.

Gillow & Barnard (1991) mentioned in his book – ‘Traditional Indian Textiles’ that in *Jataka’s* illustrative stories of Ajanta cave paintings, we can see depiction of fine quality of Indian textiles with excellence of weave, texture, techniques and motifs. In those cave frescoes, in representation of dancers, nobles, servants and musicians; patterns of resist techniques of printing, tie and dye, *ikat* as well as brocade weaving can be witnessed. This also gave a view that resist and brocade technique had existed during first and second century. So, this also leads the possibility of *Mashru* being originated in India long back in contrast to maximum secondary documents calming its arrival after 13th century or onwards this.

Mashru can be designated as the symphony of double-niche associated with patola and Ashawali because of its resemblance to them. It resembles to Ashawali for its motifs, its spatial arrangement and technique and it resembles to Patola for *ikat*; although actual element varies considerably. Overall, the basic idea behind these comparison and analysis from material, technique and weave aspects were that the precursors needed for *Mashru* production were already there in India before Sultanate period (13th century) and that also in Gujarat-in Ahmedabad and Patan itself. In *Butti* or brocade *Mashru*, beautiful and intricate explorations of brocade can be seen in archive samples, especially from the collection of Victoria and Albert Museum. Definitely it had its own visual sensibility but aforesaid proclamations cannot nullify its possibility of origin prior to 13th century.

According to Agrawal (2006), *Mashru* might had derived its name from Sanskrit word ‘*alasa*’ meaning ‘swan-footprint patterned creeper’ that can be related to *Khanjari* pattern. Before *Mashru*; *Alacha* or *Alaja* were the names commonly used for this fabric. She further adds reference of lower garment of queen Sivali of Ajanta painting, one of fifth centuries cave which were found with warp resist pattern (arrowhead, swan’s foot or *Alsa* pattern). Possibly this fabric must had existed at that time. These arrowhead patterns were similar to the *Alacha* fabrics of Gujarat. Gujarati *Alachas* had arrowhead, swan’s foot or *Alsa* pattern as a standard pattern that could be easily produced with single *ikat* technique. Prior to the period of western domination in Indian textile trade, Gujarat was the major port of trade for Indian and Arab merchants. The original Sanskrit names given to these ancient Indian trade textiles were often

mispronounced by Arab or other foreign traders. Accordingly, the latter 'sa' of *Alasa* turned into 'cha' and therefore in the trade jargon this fabric was referred to as *Alacha*. Later the group of mixed fabrics was referred to as *Mashru* with the spread of Islam. As in reference to Muslim religious law, *shar'ia*, men should not wear pure silk but are permitted to wear silk mixed with cotton. Therefore, it became significantly a desirable cloth among Muslims. It was traded to Persia, Egypt, Turkey and other Middle Eastern, Mediterranean and African countries in considerable quantity from the Gujarat ports (**Kamal, 2017**). In addition to it, as per researcher's observation, Aurangabad had been center for *Mashru* production. Possibly, it can be assumed as continuation of tradition that had existed for millennium, whose traces had existed in form of Ajanta painting. Therefore, *Mashru* seems to have originated in India.

4.1.2 Evolution of *Mashru* fabric

Indian craftsmen's ability to engross and integrate external influence with their existing skill and knowledge has created enormous variety and plethora of textiles. Though, the fragile characteristic of textiles did not enable to survive many fragments, still the existing legacy of technique, motifs that have survived till date talks about its sacred and majestic history. Especially, Gujarat holds a unique recognition for its history and surviving crafts. The textiles and dress of Gujarat are amazingly varied. They are component of an open material culture, creation of local inventiveness, pious pluralism and comprehensive history of cross-cultural influences, upshot of global trade, conquest, migration and diaspora. Gujarati artisans had shaped textiles in harmony of exceptional external stipulate as well as innovative design stimuli within India like raising influence of Islamic decorative ideas and supplemented persuade of overseas craft men, artists and clientele (**Edwards, 2011**). *Mashru* is pertinent outcome of abovementioned assertion. Especially from the view of Islamic weaving techniques and aesthetics. *Mashru* had its lineages with the weaving tradition of the 'Tiraz factories of Caliphates' (**Dhamija and Jain, 1989; Hatanka 1996**), 'Ottoman Aleppo' (**Dhamija, n.d**). This fabric had been nurtured within Indian weaving tradition; it had been assimilated as a part of our tradition as a unique fabric called *Mashru* of Indian subcontinent– as unification of *Islamic* and *Hindu* tradition which has been harmoniously acknowledged among both the communities. During the Mughal period *Mashru* was woven throughout India and was widely used by wealthy Muslims. By the nineteenth and twentieth century, it was adopted by many Hindu communities of Gujarat (**Edwards, 2011**). According to **Dhamija & Jain (1989)**, it was sold in huge extent to tribal women of Saurashtra and Kutch who used it for *Kanjari* (backless blouse), skirts and *chola* of the young unmarried girls. These uses were recent phenomena as a

replacement of richly embroidered garments for ladies and children. According to **John Irwin (as cited in Desai, 1988)**, quantities of mixed striped fabric under name of '*Tapaseils*' were exported to West Africa during 17th century and those fabrics were probably *Ikat Mashru*.

During late 20th century, it was woven in Patan, Mandavi, and Surat in Gujarat and Azamgarh in Uttar Pradesh (**Desai, 1988**). At present it is mainly woven in Patan and few villages & towns of Kutch like Mandavi, Godhra, Don and Bhujodi. *Mashru* is satin based fabric in silk warp and cotton weft which results in silk decidedly in face and cotton at back. These fabrics were characteristically woven in vertical stripes having small motifs, *Ikat* pattern, matching Islamic aesthetics as well as Quaranic religious belief to accord the wearing of silk without compromising the religious beliefs (**Watt, as cited in Edwards 2011**). Due to Islamic influence, geometry is prominently evident in motifs, patterns and at the same time completely escaping employment of human figures. This enabled *Mashru* fabric to echo the ritual of Muslim conviction. It was supposed to be originated in India during the beginning of 13th century when for first time Muslims conquered North India (**Desai, 1988; Hatanka, 1996**) and established their kingdom called Delhi Sultanate (**Hatanka, 1996, p. 365**). According to **Calico Museum of Textiles (1996)**, between 13th & 16th century, North western part of India came under Turko-Afgan regime. So, in 13th century the migration of artisans from Persia into India and succeeding Mongol subjugation of Central Asia directed to profound Persian distinctiveness in Delhi Sultanate period. Furthermore, introduction of Mughals in India led to strong and powerful successions that induced in attaining greater height to existing crafts. This dominantly influenced growth of *Mashru* too. **Balgopal (as cited in Kacker, 1994)** states that Abul Fazal had listed this fabric under silken stuff in Jaipur records, during reign of Sultan Ahmed Shah – founder of Ahmedabad (1411-1443); these fabrics were probably woven in India. It seems like that these thicker & luxuriant textiles were brought to India from the Ottoman Empire through commercial & cultural contacts from sixteenth century onwards & formed the basis of Indian *Mashru* production (**Murphy & Crill, 1991**). Also, mixed textiles containing silk and cotton gained better trade opportunities in the empire specifically after sixteenth century due to diminished inflow of silk yarn owing to the prohibition imposed on its export by the Persian Government. Thus, several fabric varieties like *alijah*, *cheera* for *dastars* (turbans) or *mindil* which were formerly of pure silk material had afterward implicated cotton attribute (**Naqvi, 1983**).

Moti Chandra (Kacker as cited in, 1994) stated that *Mashru* fabrics (mixed textiles) with red silk warp and cotton weft have been mentioned in Varnaka texts from Gujarat. In one of the

miniature paintings of Mughal period, painted in 1635, Shah Jahan is seated in peacock throne robed in Muslim *jama* (long robe) and *pyjama* (trousers) with tricolor stripes of green, purple, and yellow, that tricoloured *pyjama* gave visual indication of striped *Mashru*. Possibly that striped *pyjama* is one of the earliest examples of *Mashru* textiles (**Hatanka, 1996**). **Postans, (1839)** outlines a scenic description about the attire of local residents of Mandavi that it consisted of a satin petticoat with broad horizontal stripes of red, blue and yellow over a bodice tightly covering the bust, and embroidered with various coloured silk. This description shows the common prevalence of *Mashru* textiles during early nineteenth century. **Watt (1904)** stated *Mashru* as constituting one of the most significant of Indian textiles. Till beginning of 20th century, *Mashru* were woven and used in many regions of our country (**Buhler, Fischer & Nabholz 1980; Ali 1900**). **Irwin (1996)** had described about *Alacha, Alleja, Allegais, Elatches: Turkialcha, alacha*, 'stripes' as mixed cloth of cotton-and-silk usually striped red-white or blue-white, sometimes flowered or embellished with gold and silver thread. He further stated that a handloom cloth responding to the identical name (*alaicho, elaicho*) is still accessible at Ahmedabad today and these Gujarati *alachas* usually combined a higher proportion of cotton. The *Mashroo* or *Mashru* fabric has been woven in Kutch and Patan for many centuries (**Murphy & Crill, 1991**). Silk *Allejahas*, usual breadth was $\frac{3}{4}$ yard (twenty-seven inches) broad and seven yards (two hundred fifty-two inches) long (**Irwin, 1996**). Earlier *Mashru* fabrics were made in smaller width. For *Mashru*, **Mr. Wazir**, who is a guide and collector of antique textiles from Bhuj of Gujarat, during an interview, said that the lower the width, the older the *Mashru* fabric is. He considered width of the fabric a measure to check the historicity of the fabric. According to **Ali (1900)**, *Mashru* were manufactured and worn at the beginning of the 20th century in many regions of India, and they are still produced in several centers (**Buhler, 1980**).

It had been known under different names as *Mashru, Misru, alacha, cuttanee, or tapseil, mashroo* (**Murphy, Crill, 1991, Hatanka, 1996, Kacker, 1994, Ali, 1900**). The fact that not all Muslim men wore *Mashru*, and that many non-Muslims did, has backed the different etymologies for the word in India'. *Misru* is Sanskrit word meaning mixed (**Crill, 1998**). In Hindus silk is accepted to be pure and sacred for worship whereas in Muslims it is considered to be luxurious, an object of vanity for submission to god. Some sultans of Delhi banned its usage, later rulers and learned men conceded. It was banned inside mosques but acceptable outside it (**Hatanka 1996**). Therefore, the context of allowing Muslims to wear silk without violating the religious law, expansion of Islam, migration of weavers, and its patronage under

different kingdoms were the major motivation behind its progression and expansion in several parts of the country.

4.1.3 Identification of mixed textiles similar to *Mashru* within India and globally

4.1.3. a Mixed textile similar to *Mashru* within India

Mashru is an outcome of prohibition of silk. Else, it can also be said that aspiration to wear silk had been the major drive behind origin of *Mashru*. However, this philosophy seems to have given rise to wide variety of mixed fabrics. Few of them as per available documents are *Sangi*, *Gulbadan*, *Ghulta*, *Atlas*, *Charkhana*, *Doriya*, *Daryai* and *Ilayecha* (Ali, 1900). Many of these varieties were made in pure silk as well as in combination of other material. In today's context what we perceive as *Mashru* seems to represent aforesaid gamut of textiles to some extent. Brief descriptions of these fabrics are as follows:

Table 4.1: Mixed fabrics of India and its details

Fabric/Design Name	Raw Material	Pattern	Colour	Uses
<i>Sangi</i>	Pure silk, mixed cotton or Tasar (usually cotton warp & silk weft)	<i>Khanjari</i> , <i>butis</i> , occasionally dotted lines and checks	usually in green or yellow warp with red weft	<i>Lhengas</i> , <i>paijamas</i> , carriage decoration
<i>Garabhasuti</i> , <i>ShujaKhani</i> or <i>Sufi</i>	Mixed cotton – cotton in warp & silk in weft			
<i>Gulbadan</i>	Pure silk, or mixed with Tasar or cotton	<i>Khanjari</i> , flower or foliage, straight patterns, sometimes checks, woven in plain or satin	Red or green ground with white chevron	<i>lhengas</i> , <i>Paijamas</i> ,
<i>Mashru</i> , <i>Qatni</i>	Silk or rayon or cotton warp & cotton weft.	<i>Khanjari</i> , stripes, <i>butis</i> , dotted stripes in coarse and fine variety	Red, purple red, green, yellow with usually red weft	<i>Lhengas</i> , blouses, <i>paijamas</i> , lining, curtains, hangings, floor spreads, canopies, horse covers and accessories

<i>Ghalta</i>	Pure silk or mixed with cotton	Plain, Checks bounded with 1-3 lines and the portion between lines in one direction may be filled in with silk of different color from the rest of fabric to create combination of checks and stripes	Yellow, red, pink, pale yellow, golden yellow, black, white, blue, green, violet	Coats, <i>angarkhas</i> , <i>sherwaniachkans without kali</i> , <i>fatuhis</i> (sleeveless jackets) and other garments for men and women
<i>Satin or Atlas</i>	Pure silk, mixed with <i>Tasar</i> , mixed with cotton, cotton used in warp & silk in weft	Plain or floral with rare <i>zari</i> ornamentation or painted work on plain coloured silk or tie dyed on pure silk	Deep red, yellow, scarlet, pink, green, violet	Women's <i>pajamas</i> , <i>kurtas</i> , <i>lhengas</i> and men's <i>angarkbas</i>
<i>Charkhana</i>	Pure silk or mixed with cotton, bands of cotton and silk in both warp and weft	Small checks (8-10 checks in an inch)	Found in both dark (red, green, violet)&light (white, yellow) colored ground with usually contrast color check	<i>Lhengas</i> , Men's <i>sangas</i> , <i>kurtas</i> & coat, saris, turbans, sheets
<i>Doriya, Doro</i>	Pure cotton, pure silk or silk and cotton, <i>tasar</i> or other combinations, occasional use of gold and silver	Stripes lengthwise, reversible silken stuff probably	white, cream	<i>Angarkhas</i> , <i>kurtas</i> , <i>dupattas</i> , sari, turban, coat, sheet

<i>Daryai, Dara'i</i>	Silk	Plain	Yellow, green, red, pistachio green, white, yellow, blue	<i>Patka</i> (waist band) for bridegroom, shroud in funerals, hems & borders for women's garments
<i>Ilayecha, Alchah, Alijah</i>	Pure silk or cotton mixed	Stripe, shot effect	Red or bluish red with white stripes, green or black with yellow & red stripes	Blouses, <i>burkas</i> (by Bhora Muslims)
<i>Khara</i>	Possibly silk mixed with cotton	Smooth front & coarse wrong side, craped wavy texture		
<i>Khara i ata'i</i>	Possibly silk mixed with cotton	Striped		
<i>Taja e haft rang</i>	Possibly silk mixed with cotton	Seven coloured	Possibly similar to present <i>satrangi Mashru</i>	Shoulder cloth, <i>chania/lhengas</i>
<i>Barad i kaminar, Ambari,</i>	silk mixed with cotton	Coarse, Cheap variety		
<i>Cheerah/Chirah or Narima</i>	Pure cotton, mixture of silk and cotton, golden threads			Turbans, dress item
<i>Cornad sarees</i>	Combination of silk & cotton	Texture and colour variation		Saree

Source: (Dhamija & Jain, 1989; Hatanka 1996, Fatema 2018, Ali 1974, Kacker 1994, Kaliya and Saran 2016 & primary data collected during field visit to Patan & Kutch-Bhuj)

Many of the fabrics/designs explained in above table were identified under generic name of *Mashru*. *Ilayecha, Qatni* are few of patterns seen at present in Gujarat. In fact, *Qatni* design are known as *Kamkhi, Ilayecha* only. On the basis of pattern, colour, weave or place of

manufacture, *Mashru* had been named differently. In Uttar Pradesh and Patiala, varieties like *Sangi*, *Galta*, *Gulbadan* and *Gusi* were produced (Gaatha, n. d.). According to Lari (2010), *Ilaicha* refers to large diagonal chequered pattern in fabric. It also referred to cloth – probably mixed textile of silk and cotton woven till 18th or 19th century in Banaras region. In Gujarat, *Atlas* is known as plain *Mashru*. *Taja e haft rang* also seems similar to design woven under name of *Saat Pata or Saatrangi (band of seven colours)* in Gujarat. *Gulbadan* can be seen in Banaras.



Plate 4.4: *Mashru* motifs

According to Irwin (1995 & 1996) *Alacha*, *Alleja*, *Allegais*, *Elatches*, *Turki alcha*, *alacha*, ‘stripes’ (after Watt) belonged to one of the significant mixed handloom textiles of Gujarat. These fabrics were mainly designed in stripe of red-and-white or blue-and-white, at times ornamented with motifs in gold and silver thread. A similar fabric was also woven in Bengal but Gujarati *Alachas* contained cotton in higher proportion compared to Bengal. Due to higher cotton proportion in fabric, they were also considered as calicos. Kanakalatha (1992) has also stated that during seventeenth and eighteenth century several varieties of cotton fabrics of dyed yarn in stripes and checks were made and *Alachas* were among them. These descriptions had been furnished on the basis of similarity of names and description of designs in accordance to designs of *Mashru*. Thus, it suggests the possibility of many of the mixed textiles presented in above table might have been from *Mashru* family.

Most of the literature documented 1900 onwards has highlighted Muslim religious belief behind *Mashru*. Of course, they had been important because wearing of pure silk was considered pretentious for Islamic men, mixed with cotton made it acceptable for them but this can’t nullify the possibility of role of other religions, culture or nation behind its origin. Given this, it creates the possibility of *Mashru* being made in different material. In few of the literature, evidence of possibility of *Mashru* being made in cotton warp had been traced. At present *Mashru* being made in cotton and rayon warp had been considered recent change.

However, it's partially correct. Rayon is a recent innovation but cotton *Mashru* is probably not a recent innovation. Cotton had been an indigenous material to Gujarat. Its historicity can be linked to Indus valley civilization. It is often believed that most of the crafts originated with indigenous material and technique, and then this gives possibility of *Mashru*, made in cotton warp previously.

4.1.3. b. Mixed textiles similar to *Mashru* globally

Similar to *Mashru*; *Kutnu* is a woven textile with glossy surface and colourful vertical stripes, made with silk warps and cotton weft in satin weave. The art of *Kutnu* weaving is practiced in Gaziantep of Turkey, formerly Gaziantep was known as Aiantab where it was transferred from Aleppo (**jirousek, 2000**). Indian *Mashru* which is also known as *Gazi* in Gujarat region seems to have nomenclature connection with Gaziantep. It can be established from Esirgenler account (**as cited in Evliya Celebi**) that *Kutnu* fabric is oldest weaving in Gaziantep as tawny cloth and 'tells thousands of camel load fabrics sent to Arabia, Persia and India' (**Esirgenler, 2016**). Weaving tradition of *Kutnu* & *Alaca* is also found in 'Muslim regions of North India and Pakistan. There it is known as *Mashru*' (**jirousek, 2000**). In addition to it, 'a loom with a warp tensioning system virtually unique to Anatolia appears to be in use in some *Mashru* weaving centers, further suggesting an Anatolian or Ottoman origin'. Look and name of many of its designs resembles to Indian *Mashru* variant like *Alaca* in Turkish and *Alasa/Alacha* in India. **Crill (1998)** stated that 'the satin *Ikats* of Turkey & Syria evolved as a variant of Indian/Yemini tradition, replacing the all - cotton fabric with a silk warp and cotton weft'. She further specifically adds about similarity of *Tangadu* – a satin *ikat* fabric in red, yellow and black woven in Gujarat with Turkish & Syrian satin weave (*Atlas*).

'The wearing of silk, particularly next to the skin, was widely held to be an impious luxury for good Muslims. A colorful satin cloth which had a cotton weft and silk warp, and therefore a cotton inner surface and a silk outer face, allowed the wearer to conform to this religious admonition while enjoying the luxurious outer appearance of a silk garment. This textile had been widely used in the Islamic world, known as kutnu in the Near East, and Mashru in Northern India and Pakistan' (Charlotte, 2004).

Hence, from aforesaid discussion, the overall connection and comparison between Indian *Mashru* and Turkish *Kutnu* can be established.

Table 4.2: Comparison between *Mashru* and *Kutnu*

Features	Indian <i>Mashru</i>	Turkish <i>Kutnu</i>
Warp and weft	Traditionally, silk warp and cotton weft, now cotton and rayon warp as well with cotton weft	Traditionally, silk warp and cotton weft, now artificial silk warp and cotton weft as well
Weave	Satin	Satin
Color's Feature and Name	Bright and eye-catching; Yellow, red, green and purple are major colors and others are orange, magenta, black and blue	Bright and eye-catching; Yellow, red, green, purple are major colors and others are blue, black, Bordeaux, pink
Denting Order	3, 4	4, 5, 6
Fabric width	Traditionally 20-24 inches, at present till 36 inches	20-24 inches
Basic Designs	Stripes, <i>butti</i> (floral/geometrical), ikat	Plain, flowered and tied



Plate 4.5: Turkish *Kutnu* fabric
Source: Silkroad Development Agency



Plate 4.6: Indian *Mashru* fabric

4.1.4 Centers of *Mashru* production

The places where *Mashru* were produced in India were Agra, Azamgarh, Benaras/Varanashi of Uttar Pradesh – place dominated by Muslim weavers, Ahmedabad, Surat, Patan, Kutch of Gujarat where Ahmadabad was a commanding city of Provincial Mughal, Hyderabad – a Muslim dominating city, Mysore – a Hindu city influenced with Muslim culture, Chamba– inclined towards Muslim textile culture, Aurangabad of Maharashtra – a major center of Muslim culture. Somehow, a strong Muslim influence can be observed towards the growth of *Mashru* in India.

Apart from *Mashru*, in several parts of India mixed fabrics were produced in past. Although there are not many evidences but many of these fabrics seems to be part of today's *Mashru* in terms of visual organization, yarn content, resemblance of description based on certain documents as well as narratives behind them. For instance, **Naqvi (1983)** stated that certain fabrics like '*alijah, cheerah* or *narima* can be cotton or silken, could have been silken at one point of time or place, or cotton or mixed at another point of time or place'. Similarly, there are certain fabrics/designs that can be identified under generic name of *Mashru* at present. *Ilayecha, Taja e haft rang, Qatni, Barad i kaminar, Gulbadan*, are few of them which are woven in Gujarat at present or Varanashi in past as well as present (it has been explained in more detail under 4.1.3). This had been considered on the basis of similarity of names and description of designs in accordance to existing designs of *Mashru*. According to **Naqvi (as cited in Barni's account)** *Barad i kaminar* was a variety of *Mashru* that was quite inexpensive. Similarly, silken *ambari* was for gratification of low-income group. This also suggests the

possibility of *ambari* to be a mixed silken variety. Since there are no photographic or physical evidence to verify but possibly on the basis of description like being silky, inexpensive, for low income suggest its possibility to belong to *Mashru*, where cotton might had been mixed in higher proportion to reduce its cost. **Naqvi**, also stated ‘Bihar and Thatta to be producing silk-cotton mixed fabrics on large scale. **Kacker, (1994)** has described about another silk-cotton mixed fabric called ‘*garbhasuti*’ from Bengal and ‘*shujakhani*’ or ‘*sufi*’ from Punjab where cotton lied in warp and silk in weft in both fabrics. **Weiss (2018)** states *Mashru* being produced in many centers of India gives diverse possibilities of patterning and naming of this fabric. **Weiss (as cited in Birdwood, 1878)** further stated that “These mixed stuffs are also found plain and checked and figured, and are largely made in Punjab and Scinde, at Agra, and Hyderabad in the Deccan, and at Tanjore and Trichinopoly”. These evidences give scope to rethink and broaden the vocabulary for *Mashru* as well as its centers of production.

4.1.5 Exploring historicity of *Mashru* textiles in diverse material

Mashru is very practical and functional fabric suitably made as per climatic condition, religious beliefs and physical surroundings. It has specific context, culture and construction which had made it exist so long. *Mashru* were traditionally woven in silk warp and cotton weft as per most of written accounts, but it had been woven in pure silk, pure cotton as well. Later in 20th century it had also been woven in rayon or polyester warp with cotton weft also. However, very few evidences were found stating *Mashru* being woven in pure silk or pure cotton also. Cotton *Mashru* is usually considered as later invention but had existed since past.

According to **Watt (1903) and Naqvi (1983)** cotton *Mashru* too was a traditional variety of *Mashru*. **Watt (1903)** in ‘Indian Art at Delhi 1903 – Being the official Catalogue of the Delhi Exhibition 1092-1903’ had stated that *Mashru* from almost every province were brought to Delhi Exhibition. These *Mashru* varied from pure silk to pure cotton to mixed silk and cotton variety, though mixed variety were in abundance. He further described about tie-dyed cotton *Mashru* that were brought from Chamba state that consisted of alternate band of cotton and gold thread where cotton was tie-dyed to make wavy patterns in dark red within cotton stripes.

Lari (2010), also stated that three varieties of *Mashru* had existed i.e., pure cotton, silk and mixed cloths. **Naqvi (1983)**, stated that mixed textiles encompassing silk and cotton gained more profit chiefly after the sixteenth century when the influx of silken yarn had lessened due to proscription enforced on its export by the Persian Government. This led numerous textiles to implicate cotton character which were formerly of silk yarn. She also presented case of

Mashru in this concern. This comprehends that *Mashru* were made in silk primarily before sixteenth century. **Hatanka (1996)** in chapter three of the book titled 'Textile Arts of India' has furnished fabric fragments of cotton *Mashru* (Plate no. III-56), belonging to first half of 20th century. It means around hundred years back also tradition of pure cotton *Mashru* had existed. As far as Kutch- Bhuj region of Gujarat is concerned, they are only producing pure cotton *Mashru*. **Edwards (2011)** specified that recently *Mashru* weavers have developed pure cotton *Mashru* with both warp and weft in cotton. However, as per Watt and Naqvi's account it seems contradictory. Here researcher infer that due to *Mashru* being profoundly made, promoted and documented in mixed variety; resurgence of *Mashru* in pure cotton had been considered as later development of Kutchi weavers. Similarly, Recently in Patan, weavers have switched to rayon warp completely.

During field visit to Patan it was observed by researcher that just one weaver is left in Patan who occasionally weaves admixture of silk & cotton. **Hatanka (1996)** in chapter three of the book titled 'Textile Arts of India' has also presented cloth pieces of artificial silk (rayon) *Mashru* dating back to first half of 20th century. The latest shift in the history of *Mashru* is use of polyester warp. Actually, power loom imitations of *Mashru* had been made in polyester warp as well. According to **Edwards (2011)** among the rural communities of Kutch, polyester *Mashru* had developed as staple fabric in certain caste dresses and for specific rituals.

4.2 Documentation of the production process of *Mashru*

4.2.1 Overview of *Mashru* Production Process

Textile production is a significant part of cottage industry in India where fabrics are mainly made within the family. Traditional textiles reveal about specific technique, patterns, stripes, forms, color, texture, composition, local perceptions, production process and chronological transformation specifically related to it. Technically, production of *Mashru* involves various stages used in weaving of *Mashru* fabric. From weaver's view point, it is not just a routine process but a legacy being woven, anticipation for their livelihood being woven and a cause for customer's happiness being woven.

Like any handloom weaver; *Mashru* weaver also uses loom to weave their dream, to facilitate their expression come true, to make their manifestation tangible and concrete. Their manifestation was full of brightness, vibrancy, dynamism that adds charm and optimism all around. With time, loom and its form evolved. However, *Mashru* is still mainly woven with traditional and the simplest form of loom which remained untouched with sophistication. In Gujarat, both in Patan and Bhuj, pit loom and table loom are used for weaving *Mashru* fabric. However, weavers of both centers majorly relied upon fly shuttle pit loom. This legacy marks *Mashru* weaving process to be absolutely traditional signifying inheritance enfolded in countenance of creativity.

Mashru fabrics were traditionally woven by Hindu Khatri and Muslim Shaikh communities in Patan and by Hindu-*Maheshwari* community in Kutch-Bhuj. People from other communities like *harijans* had also acquired *Mashru* weaving in contemporary past. The process of weaving is mainly considered as men's task and women had been involved in associated processes. In *Mashru* weaving, this picture is different. *Mashru* fabric is exclusively made by hand, where women are expected to learn pre- and post-weaving processes except in Patan where they carry out weaving also as the remaining processes are not executed at home there. That is why; unmarking the trend of past, it is also woven by women. In Patan it is clearly apparent whereas in Kutch-Bhuj still it is men dominating act.

Apart from weaving being a core activity, pre- and post-loom technique becomes a virtuous means of socialization too, especially for Kutch-Bhuj weavers. This gives an amusing environment for music, dance, gossip, food etc. Cottage setup gives a very conducive learning environment within the family and vicinity for weaver's children which makes them to learn

various weaving related processes at early age through observation and hands-on work. Usually by the age of 14-15, children starts helping in family weaving work.

Mashru weaving technique is very specialized. Its entire process, right from setting of looms to finishing of fabric is very arduous and complex. Usually in pit loom, two to four shafts are used whereas in *Mashru* due to its specific structural prerequisite minimum seven shafts are used. Although it is possible in five shafts but in Gujarat seven or eight shaft had been preferred, these numbers of shafts are suitable for plain striped pattern, its number increases depending upon patterns and structural requirement till twenty-four also. This makes the complete process intricate and complex. Looms for *Mashru* are fabricated locally with the help of carpenter and is set with the help of weaver. Fabricated looms are usually modular in nature which are assembled and dismantled as per need of the weaver. Smaller parts like reed, harness, and shuttle are procured from local market or nearby town. Each loom had different setting depending upon type of loom (pit loom or table loom), number of reed, number of shaft, and width of fabric to be woven. Any required change in the setting of loom is manually done by weaver depending upon design, yarn to be used and required width of fabric to be woven. The whole weaving process is managed manually except the winding of weft yarn on pirn.

In most of the households either outer shades of the houses or the outer room were generally used for this purpose. In certain cases, dedicated weaving workshops were also found inside their premises. In Kutch-Bhuj, the whole intricate and lengthy processes were managed by the entire weaver 's family whereas in Patan each stage were performed by various communities like *Rangrez* (dyer), *rach*-maker (shaft maker) etc. Selection of appropriate raw material, Pre-processing, warping, accurate sizing and warp installation on the loom are major precursors before weaving to get a good quality *Mashru* fabric. Usually, seven or eight harnesses are used to get desired lustrous *Mashru* fabric.

With due patience weaver sits near the loom with his legs lying in the pit to operate pedals to weave the fabric. Therefore, *Mashru* fabrics are an outcome of weaver's endurance, perseverance and intra or inter family participation. This humble process starts from procurement of raw material i.e., warp and weft which ends with the folding of finished yardage ready for sell in market.

Before understanding the production process of *Mashru* it is imperative to understand the role of weaver and master weaver in *Mashru* production. Master weaver involvement is more into leading team of weavers under them, he is aware of technical details of fabric, loom setting.

He personally supervises & coordinate entire production process. He obtains the yarn, gets the warping, dyeing, sizing, weaving and finishing completed from specialized households and then does their selling. However, in Kutch-Bhuj apart from obtaining raw material and sale of finished products, they also get the entire preparatory process and weaving done at their own workshop. Overall, he manages day to day entrepreneurial roles and responsibilities. In addition to it, involvement of master weaver directly into weaving depends upon the scale of business which they have. In both Patan and Kutch-Bhuj scale of business of master weavers were not large except two-three master weaver, moreover they can also be considered as traders cum master weaver, therefore most of the master weavers were also involved in direct weaving along with team supervision.

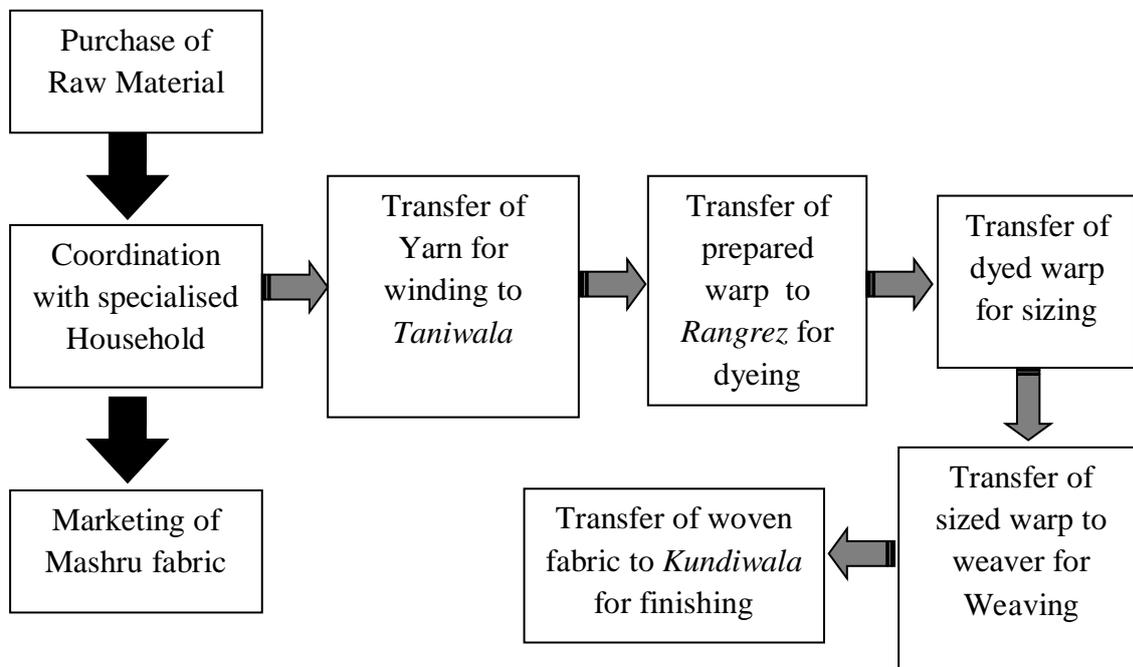


Fig 4.1: Role of Master Weaver in production & marketing of *Mashru* fabric

Mashru fabrics are developed in two broad categories that are yarn dyed and piece dyed. Hence, its production needed to be understood from these fabric categories points of view. It can be understood through process flow of below table.

Table 4.3: Comparative sequences of stages of *Mashru* production of piece & yarn dyed

Stages of <i>Mashru</i> production	
Piece Dyed <i>Mashru</i>	Yarn Dyed <i>Mashru</i>
<i>Taani</i> (warp) preparation	<i>Taani</i> (warp) preparation
<i>Paavat</i> (starching of warp)	<i>Rangai</i> (dyeing)
<i>Raas/rach</i> preparation	<i>Samvarwana</i> (Mending of damaged yarns)
Saandhani (joining of new yarns with tail end of previous one)	<i>Pavaat</i> (starching of warp)
<i>Bunnai</i> (weaving)	<i>Raas/rach</i> preparation
<i>Rangai</i> (dyeing)	<i>Saandhani</i> (joining of new yarns with tail end of previous one)
<i>Kundi</i> (calendaring)	<i>Bunnai</i> (weaving)
	<i>Kundi</i> (calendaring)

4.2.2 Procurement of Raw Material for *Mashru* fabric

Procurement of raw material is one of the most important phases to plan production process, which determine the variety & quality of fabric to be produced. For *Mashru* weaving yarns are sourced either in form of cones or skeins to prepare warp. In Patan for warp mainly rayon or occasionally silk and for weft spun cotton are used. In Patan, artificial silk (rayon) is procured locally from Surat, or is provided by master weaver, Mulberry silk is procured from Bangalore and cotton from Ahmedabad or locally from master weaver or shops. In Kutch-Bhuj-*Mashru* for both warp and weft cotton is used which is procured from Bhuj market mainly or occasionally from Ahmedabad. Cotton is procured as greige yarn, rayon is procured as ready to dye and mulberry silk is procured in dyed state only. Silk along with dyed state, also procured in ready to warp state. The detail of various warp and weft yarn used for *Mashru* fabric in under following table:

Table 4.4: Raw material details of conventional *Mashru* fabric

Warp & Weft	Type of Yarn	Thread Count	Place of Procurement	Price/Kg
Warp	Mulberry Silk	60D/3	Bengluru	4800Rs/Kg
	Rayon	120 Denier	Surat, Patan	300-400Rs/Kg
	Mercerized Staple Cotton	2/60 Count	Ahmedabad, Bhuj	400-500Rs/Kg
Weft	Spun cotton	30s/40s	Ahmedabad, Bhuj, Patan	400-500Rs/Kg

4.2.3 Importance of raw material & role of artisan in its selection for *Mashru* weaving

Artisan’s role is imperative in selection of raw material as he is the one who has to weave; to what extent a weaver is skilled to manage material is very singular, specifically in *Mashru* where it is woven in more than one set of material. A craftsperson, “is someone who chooses the design for the product; selects the materials needed and generally personally makes” (Campbell 2005). Hence, from this point of view weaver’s role become very important as at one end he is picker and consumer of yarn for the fabric to be woven and at other end he is producer of fabric to be consumed by other. In addition to it, every yarn has explicit design characteristics which are later imparted to fabric to be woven to define fabric characteristics (Kumari & Karolia 2019). Raw materials (yarn) are so important in textiles that it can profoundly influence end product in terms of hand feel, aesthetics, structure & longevity. Raw materials colour, its hand feel can act as a source of inspiration; motivate a weaver to use in making process. To certain extent, skill of the artisan in handling raw material becomes equally important as in *Mashru* majorly three yarn sets had been used i.e. silk, rayon and cotton. Hence each of these materials offers unique properties in fabric. Silk and rayon being filament yarn makes the *Mashru* fabric very lustrous whereas cotton being staple yarn offers comfort property to fabric.

4.2.4 Warp Preparation

In Patan, locally this process is known as *Tani* preparation, which is carried out by *Taniwala* (warper). Initially *Tani* (warp) is procured in form of cone which is given to *Taniwala* to convert into hank. These yarns are usually procured in un-dyed state; however, many times dyed yarns are also procured.

One rayon *tani* comprises of 1200 yarns. The total yarn required for 36 inches width of rayon fabric is 4800 and for 27 inches width of fabric is 3600. Therefore, for 36 inches width rayon fabric, 4 *Tanis* (warps) and for 27 inches width fabric, 3 *Tanis* (warps) are utilized. The conventional length of warping is around 58 meters, out of which approximately 52 meters of fabric are made. One silk *tani* comprises of 3200 yarns. The total yarn required for 36 inches width of fabric is 9600. Therefore, for 36 inches width silk fabric, 3 *tanis* are used. Weight of each silk *tani* is found around 800 grams. For silk *Mashru*, readymade *tanis* are procured from *Bengaluru*.

A *Taniawala* prepares around 10 *Tanis* (rayon warp) every day. This calculation and number of *tanis* produced in one day is for rayon. In Patan, warp is calculated in *Band*, 36 inches width fabric comprises of 15 *Band* (divisions) and each *Band* has 80 *Shari* (dent) and from each dent 4 threads are passed; therefore, total number of yarns in 36-inch width of rayon fabric is 4800. Similarly, 27 inches width of fabric comprises of 12 *Band*. Thus, total number of yarns in 27 inches width of rayon fabric is 3840. For silk *Mashru* calculation of *band* remains same. Only instead of four yarns per dent, 8 yarns per dent are taken. This calculation is as per regular quality of rayon fabric made over there.

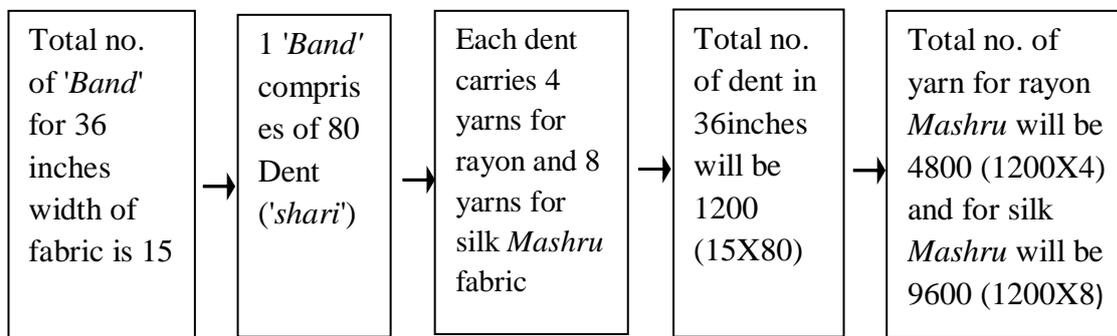


Fig 4.2: Warp calculation for 36-inch width of rayon & silk *Mashru* fabric in Patan

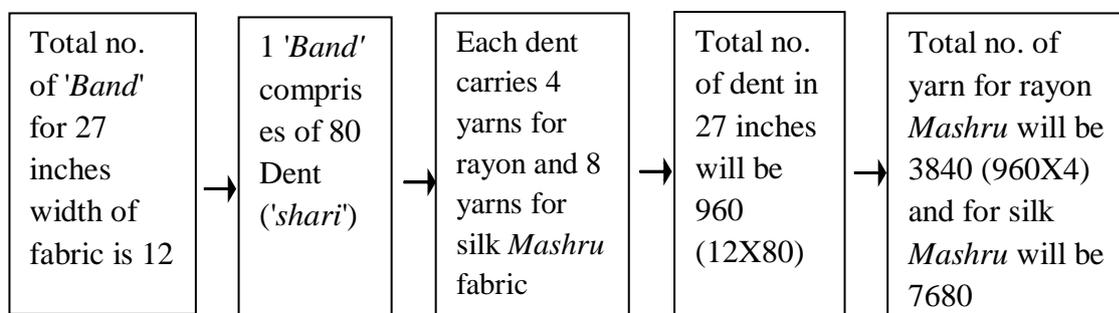


Fig 4.3: Warp calculation for 27-inch width of rayon & silk *Mashru* fabric in Patan

In Patan, the rayon yarns are prepared into warp by wooden warping frame, warping frame comprises of four sides. At times, cylindrical warping wheel are also used. The prepared warp is called *Tani*. For warp preparation 80 yarns are drawn together from 80 cones & passed through heddle. These all 80 yarns are together winded around the warping frame. One complete binding of yarn around the frame is locally called ‘*Ata*’. Warping is done to the length of 58 meters. Then the yarns are taken out from warping frame and tied into hank.



1

2

Plate 4.7: Warping setup at Patan

In Don (a village in Kutch-Bhuj), for warp preparation vertical crill is used. Cotton yarns running from several spools from a wooden frame (crill) is passed through the fixed heddle in vertical frame in cross (alternate) order, then to another finer reed and finally winded around a huge warping drum, over two meters in diameter. Here section warping is done till the expected width is reached.



Plate 4.8: Complete warping setup at Don Village



1

2

Plate 4.9: Traditional Wooden vertical crill – to hold yarn spools



Plate 4.10: Yarns passed through the fixed heddle in vertical frame in alternate



Plate 4.11: Yarns passing through alternate heddle & then through reed



1. Empty wooden warping drum



1. Filled wooden warping drum

Plate 4.12: Traditional wooden warping drum

In Bhujodi village, wooden warping frame is used for warp preparation. The form of this frame is like legless and armless chair. The plane of the warping frame consists of wooden pegs. It consists 18 pegs on either opposite side in L shape. In warp preparation process each yarn is pulled individually one by one from cones and passed around the pegs from top to bottom and vice versa in to and fro format across consecutive opposite set of pegs. Yarn is passed according

to predefined warp yarn pattern. To pass the yarn around the pegs, a stick is tied to hollow rod in T shape. The hollow pipe holds the yarn inside it and allows the warper in freely moving yarn across pegs as well as in maintaining adequate tension during warping process.



Plate 4.13: Warp preparation at weaver's home in Bhujodi village



Plate 4.14: Warping stick



Plate 4.15: Detailed view of wooden warping frame and pegs

4.2.5 Dyeing

The next step is dyeing of *Tanis*. Once the warp is ready, it is sent to weaver for piece dyed fabric whereas for yarn dyed fabric, it is sent to dyer. Dyeing is executed by a specific

community, locally known as *Rangrez*. They are traditional dyers through generations. In Patan, there are two households specialized in this process. For dyeing vat, naphthol and direct dyes are used. Cost of dyeing varied according to dyestuff. The major colours used in dyeing were red, yellow, and green. Of course, other colours are also used depending upon weaver's requirement.

At present single colour dyeing is done as per the desired colour as well as number of colors required in the design. Earlier, resist dyeing was also done from lighter to darker depth of colour due to use of warp *Ikat* in *Mashru*. Resist dyeing for *Ikat* were done by partially tying and then dyeing warp again and again as per the number of colors to be achieved. However, it is no more carried out at Patan.



1: Dyeing at Bhujodi



2: Dyeing at Patan

Plate 4.16: Dyeing at weaver’s workshop in Bhujodi & Patan

Dyeing is very common process to impart colour to different yarn content. However, its process varies considerably depending upon yarn content, dyestuff variety & technique. For resist dyeing basic process remained same, however it is repeated again and again from lighter to darker shade depending upon number of colours needed in same warp. For resist dyeing, bunch of 10-20 threads are tied together depending upon fineness of the chevron pattern at certain intervals varying upon space between consecutive patterns. Higher the number of ripples in specific length of warp, superior the quality of *Mashru* is considered. Prior to weaving, these warps are manipulated on loom in order to get desired chevron pattern.

At Patan, for *Mashru* fabrics two types of dyeing is done; one is *Kaccha* and other is *Paccka*. For *Kaccha* dyeing; direct, cold brand and hot brand reactive dyes are used and for *paccka* dyeing; *naphthol* and vat dyes are used.

Resist dyeing is neither done at Patan nor or Bhuj. Therefore, for this study it was carried out at Nuapatana *Ikat* cluster of Orissa and Surendra Nagar of Gujarat. The basic process of dyeing remained same, however prior to dyeing, warp yarns were dyed at equal distance with the help of thread and plastic to resist penetration of dyes in unwanted areas as per predefined design plan.



A.Yarn knotting B.Yarn dipped in water C.Dyed resisted yarn D.Dyed yarn knotted again

Plate 4.17: Resist dyeing done for *Mashru* fabric

4.2.6 Sizing of yarns

After dyeing of yarn, it is sent to sizer. It is the process of starch application on warp yarn which is known as *Pawat* locally. The basic objective of this process is to prevent yarn breakage and entanglement during upcoming weaving process. For this, dyed *Tani* is stretched in open between two wooden poles firmly fixed in ground. Later, starch is applied over the stretched warp with the help of a thick brush. Starch is prepared prior a day in advance before its application. It is prepared by mixing readymade gum- *saras* and cooking oil in a ratio of 1: 10. Also, according to **Kacker (1994)**, 'this was made by soaking overnight about 500 grams of a gum called '*saras*' a hard, opaque material made of animal origin. About fifty grams of cooking oil was then added the next day and the mixture was boiled to make a thick paste, stirring all the time'. After cooling of this mixture, it is applied on stretched warp enabling it to penetrate thoroughly. Then it is allowed to dry, damaged yarns are mended and finally enfolded.



Plate 4.18: Application of starch on *Tani* & its stretch in open between poles

4.2.7 *Rach Bharna* (Shaft Preparation)

Shaft (*Rach*) preparation deals with the threading of warp yarns into the heddles and reed as per design to be woven. It is done through *Rajbhara*, an expert who knows which warp has to

be passed through which heddle amongst all on basis of colour pattern and weave. A yarn density. In Patan, mostly for rayon fabric four yarns are passed through each dent and for silk, it is eight. For each new pattern and design new *Rach* is prepared. The cost of *Rach* preparation depends upon number of harness, yarn type and intricacy of design. *Rach* preparation is one of the most technical & difficult steps prior to weaving. The cost of *Rach* making in Patan varies from 1200 to 5000 Rupees whereas in Bhuj, it goes up to 12000 Rupees. At present, there is only one *rach* maker in Patan. In Kutch-Bhuj it is mostly done at trader's shed or in weaver's workshop.



Plate 4.19: *Rach* making frame at Don

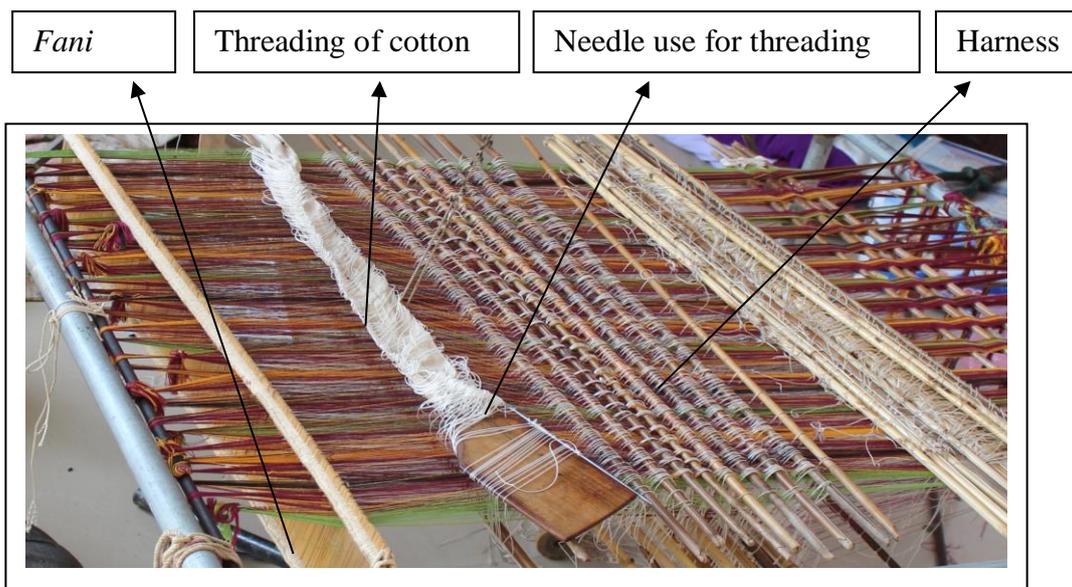


Plate 4.20: Detailed view of *Rach* making

For above process, first of all harness has to be made where waxed cotton thread with loop (heald) are threaded between two parallel wooden rods. It is facilitated with the set of *Kalpha* (a rectangular piece of wood) and *sua* (needle). Number of harness depended upon total number of unique order of interlacements. Distribution of healds in each harness depended upon number of yarns having same order of interlacing.



Plate 4.21: *Rach* making at Bhujodi **Plate 4.22: *Kalpha* & *sua* (needle) for harness making**

Similarly, *Fani* (reed) making is also a specific task which is traditionally made with wood with fine equidistant bamboo sticks placed in between like structure of comb. The more the number of bamboo sticks in *Fani*, the finer it will be and it's making cost also vary accordingly. Now a day readymade metallic and nylon cord reed had also been introduced, however, bamboo *Fani* gives better result. The entire setup of harness and reed are mounted on metallic frame (in form of cot) to proceed with *rach bharna*.



Plate 4.23: *Fani* with warp yarn as per fabric pattern

4.2.8 Weft preparation

In *Mashru* weaving, spun cotton yarns are usually used for weft. In Kutch-Bhuj white weft is used more whereas in Patan dyed weft is used. Among dyed weft, red is commonly used. This step is carried out at weaver's workshop by family members. For this, weft yarns are winded

around pirn with the help of ‘*Charkha*’ and ‘*Phirki*’. For dyed yarn it is spooled onto pirn after dyeing. Apart from hand driven *Charkha*, power driven winding machines were also found with weavers because of its higher speed. Prior to weaving, spools are merged in water container for some duration to moist them. This step increases its strength. Then spool is fixed in shuttle to get ready for weft insertion. According to **Kacker (1994)**, four and half KG weft was needed for 53 meters of *Mashru* fabric.



1

2

Plate 4.24: Charkha-for winding of weft yarn, Bhujodi



Plate 4.25: Phirki



Plate 4.26: Electronic bobbin winding machine for weft yarn, in weaver’s workshop at Don



Plate 4.27: Spool and bobbin used for weft winding



Plate 4.28: Bobbin filled with weft yarn Plate 4.29: Filled spool dipped in water container



Plate 4.30: Shuttle filled with weft yarn

4.2.9 Sandhini

After receiving threaded harness & dented reed from *Rach* maker, it is installed on loom by the weaver. This process includes the joining of warp yarns with tail ends of *Rach* as per the weave pattern and color combination throughout the width of fabric to be made. So, it needs correct

joining of yarns as one wrong joint can make the entire pattern wrong. So, this stage also turns to be very important to achieve flawless predetermined warp weave pattern and color repeat.



Plate 4.31: Joining of warp ends to *Rach* ends (*Sandhani*)

4.2.10 Weaving of *Mashru* fabric

After *Sandhini* (joining) warp is knotted over cloth beam, now it is ready for weaving. Warp yarns are lifted by operating pedals attached to harness of the loom. After shade preparation of warp, weft is allowed to pass through it. For shading harness needs to be lifted in certain order. Heald-shafts that needs to be lifted at same time are attached with a common cord and is connected to pedal attached to the lower part of the loom. The inserted weft is beaten against the woven fabric to be its part. This continuous process leads to the weaving of fabric. At Gramshree *Mashru* weaving workshop in Patan, wooden dobbie attachment was seen installed in few looms which were used to faster weaving process and to expand design possibility. Elsewhere, it was not observed at any weaver's workshop.



Plate 4.32: Weaver's workshop at Don



Plate 4.33: Weaver's workshop at Bhujodi



Plate 4.34: Gramshree *Mashru* workshop, Patan



Plate 4.35: Multiple harnesses used in *Mashru* loom



Plate 4.36: Multiple pedals used in *Mashru* loom



Plate 4.37: *Mashru* weaver using frame loom at Don



Plate 4.38: *Mashru* weaver using pit loom at Bhujodi



1 Male *Mashru* weaver at Patan



2 Female *Mashru* weaver at Patan

Plate 4.39: *Mashru* weavers using pit loom, at Patan

4.2.11 *Kundi* (calendaring) of greige *Mashru* fabric

After the completion of weaving, the fabric is washed, cleaned and folded. While the fabric is still moist, its upper surface is glazed by *Kundiwala*. For this back face of the fabric is beaten with wooden hammers which allows the warp threads to appear uniformly on the right side of the fabric. Then is calendared with Wheat flour paste and again beaten and further pressed to ready it for sale.



Plate 4.40: *Kundiwala* beating glazed *Mashru* fabric & folding finished fabric

4.2.3 Remuneration of different stages of weaving

Weaving of *Mashru* fabric goes through several pre- and post-loom stages. Hence, it goes through series of costing which varies from stage to stage, level of intricacy and material. Like, in rayon *Mashru* of 36 inches, 4800 warp yarns are used whereas in silk *Mashru* 9600 warp yarns are used. Below is the list of charges of different processes at Patan. Silk *Mashru* weaving takes almost 50 percentage of extra days compared to rayon *Mashru* weaving.

Taani preparation: Rs 550 /*Tani* (Rs 50 making charge & Rs 500 material charge)

Rangai: Rs 500 /*Tani* (including material and dyeing charge)

Samvarwana: Rs 100 /*Tnai* for rayon & Rs 300 /*Tani* for silk

Pavaat: Rs 120 /*Tani*

Raas/rach preparation: Rs 1200 to Rs 2500 per *Rach* depending upon complexity of design

Saandhani: Rs 500 for 36-inch width of rayon *Mashru*, Rs 700 for 36-inch width of silk *Mashru* and Rs 300 for 27-inch width rayon *Mashru*

Bunnai: Rs 15000 /52 meter of rayon *Mashru* & Rs 20000 /52 meter of silk *Mashru*

Kundi (calendaring): Rs 300 /10 *Taka* (1 *Taka* comprises of 5 meters, it is same for both rayon & silk)

4.3 Documentation of the designs and motifs of *Mashru* with its significance

4.3.1: Classification of *Mashru* on the basis of motifs & patterns

Traditionally *Mashru* were woven in wide variety. Overall, on the basis of observed characteristic patterns/motifs and their placement *Mashru* design can be categorized under three categories – stripe, Ikat and *Butti*.

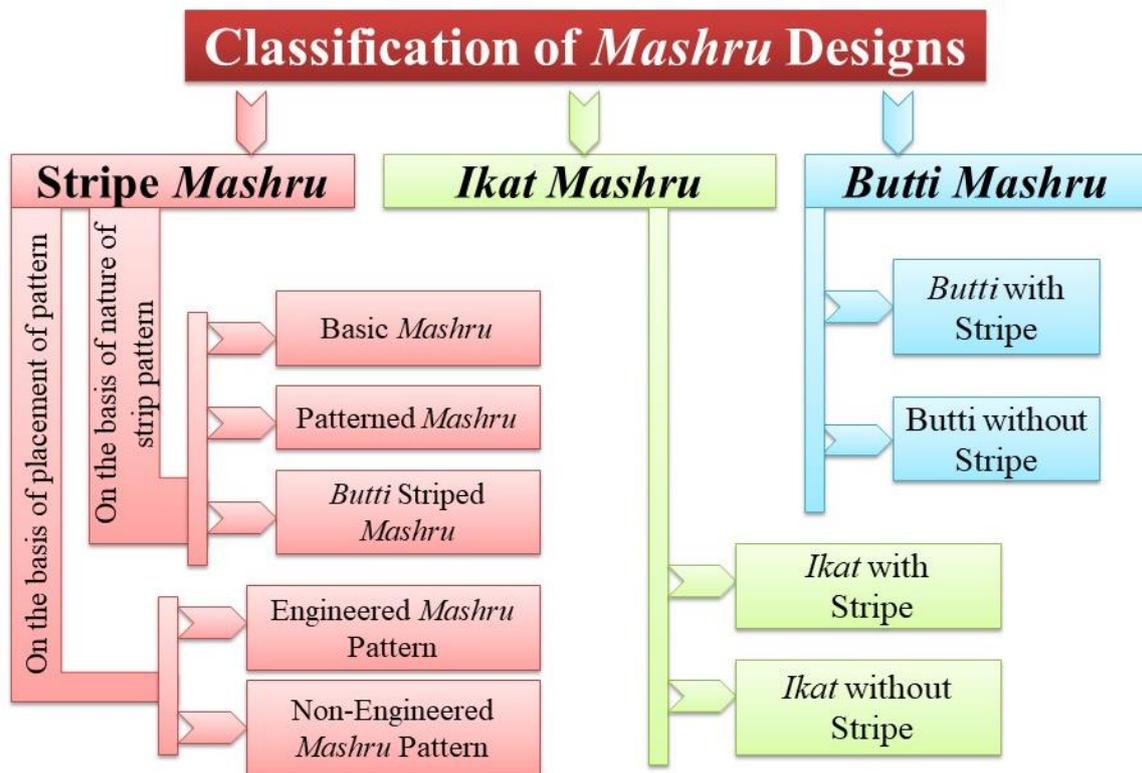


Fig 4.4: Classification of *Mashru* designs

4.3.1. a: *Stripe Mashru*

It is the most conventional and commonly found category of *Mashru* practiced maximum till today, simplest in its making process that can be made with least number of shafts among all varieties of *Mashru*. The complexity of the designs depends upon the incorporation of varied stripe patterns.

4.3.1. a. I: Features of *Stripe Mashru*

Stripes had been customarily found either in multicolor band placed next to each other or as single colored base separated by thin and thick stripes. Stripes width ranges from fine, thin, thick to bold sizes in varied fashion cherishing extensive array of charm. Overall, visually the representation of designs has been found from simple to complex patterns, uniform all over

stripe to engineered patterns. Many a times, intensely patterned design with thin and thick color band makes the observer to feel conflicting retinal images. Strong linear treatment of colors in broad band intensifies depth of the color. The simultaneous visual contrast is thus immediate and unchecked. The linear arrangement of colors has been brilliantly calibrated to give pleasant-exuberant-warmth feel. *Mashru* stripes are also found as supplementary or ground warp threads of patterned woven design like chevron, decorative rib in colours. These patterned stripes are mostly geometric in nature. Few of these characteristic stripe patterns are *Khajuri*, *Kataria* (chevron), *Mamul* and *Kakini*. These patterns have originated their names on the basis of their resemblance to certain natural and manmade objects. Like *Khajuri* is the stylized form of date fruit, it has been described as ‘a type of chevron pattern, with series of conical lines throughout the length of fabric’ (Gaatha, n.d.). *Kataria* originated from *Katar* (dagger- a type of weapon of god). *Kakini* is equidistant broken rectilinear geometric line. Many old *Mashru* designs have specific names whereas new designs didn’t have. Designs have also been named on the basis of various attributes such as major number of color bands present in it like *Panchrangi* – presence of five colored bands; *Paanchpata* – presence of five coloured bold & thicker bands, resemblance of texture and color like *Kelaphali* –similar to banana, on the basis of placement and number of stripe motif like *Jorkatari* – *Kataria* in pair, *Tran Kakini* – three *kakini* together, on the basis of usage for specific purpose like *Kanjari*– backless blouses used by women of Rawari community of Kutch-Bhuj region, on the basis of name of color present in design like *Kaloilaicho* and *Liloilaicho* – *Ilaicho* design in black and green colours respectively.

Although stripe is simplest form of design pattern for textiles, yet it is evergreen in choice. The simplicity of pattern & its lustrous elegance makes it different from other linear designs. Luster & linear pattern together creates visually rich surface that talks about beauty in simplicity. *Mashru* textile can be seen as textile connecting antiquity & primitiveness with modernity. Primitive art and craft started with linear pattern and at the same time modern art and craft are also innovative exploration of primitive linear patterns. *Mashru* in stripes is creating a sense of identity of continuity - over and over centuries. Linear patterns of *Mashru* itself have created a language of identity for itself. Combination of various stripe patterns together makes the linear nature towards abstract nature. Thus, the vibrantly coloured linear patterns using silky shine is enough to create multiple beautiful compositions ranging from simple to abstract nature. The meeting point of two contrasting colours act as melting point where both care each other being very informal. This generates the surface design as well as the pliable woven structure

communicating simplicity, abstract behavior as well as a means of ornamentation. Overall, the linear element of the *Mashru* fabric becomes one of the most dominant elements of design. Looking into the various designs of *Mashru*, it was found that the setting of linear patterns in various layout has created series of varying range of colour contrast from very steep to very light. Here the thickness of stripe, the depth of colour, repetition, nature of material, the nature of weave played vital role in determining this varying contrast character of stripe *Mashru* fabric. It can be summarized through bellow statement that

“Mashru fabric is perennial exotic pleasure in form of linear bright colour.”

4.3.1. a. I. a: Classification of stripe *Mashru* on basis of nature of stripe pattern

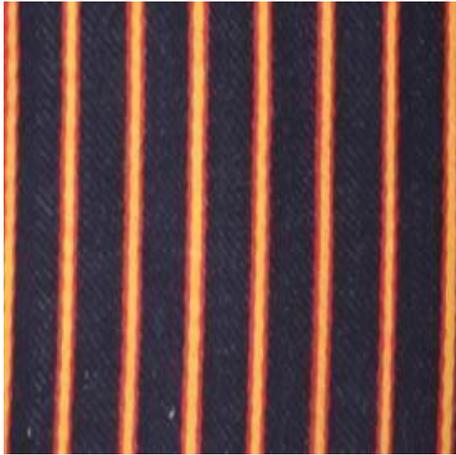
On the basis of nature of stripe pattern in design; Stripe *Mashru* can be divided in three types.

- a. Basic Stripe *Mashru*:** Basic stripe *Mashru* (**Plate 4.41**) are those *Mashru* designs where only regular, single-colored bands are used to create the design in woven fabric.
- b. Patterned Stripe *Mashru*:** Patterned stripe *Mashru* (**Plate 4.42**) are those *Mashru* designs where decorative stripe patterns like *Kakini*, *Khajuri* and others patterned stripes are used to create design in woven fabric.
- c. Dana Stripe *Mashru*:** *Dana* stripes *Mashru* (**Plate 4.43**) are those *Mashru* designs where *Dana* - small dotted motifs are used within stripes to create design in woven fabric.

4.3.1. a. I. b: Classification of stripe *Mashru* on basis of placement of pattern

On the basis of placement of stripes; *Mashru* designs can be categorized in two types:

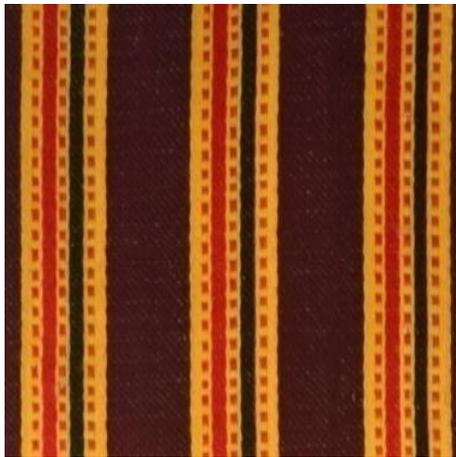
- a. Engineered *Mashru* design:** Engineered *Mashru* designs (**Plate 4.44**) are those designs where single uniform repetition of pattern is not found throughout the width of fabric. It may be found with border on either side or in one side of the fabric or in varying stripe pattern. Very few designs fall under this category.
- b. Non-Engineered *Mashru* design:** Non-engineered *Mashru* designs (**Plate 4.45**) are those designs where single unit repeat is repeated uniformly throughout the width of fabric. Most of the *Mashru* designs usually fall under this category.



A. Kalo Ilaicho

B. Khamki

Plate 4.41: Basic Stripe Mashru Designs



A. Jorkatari

B. Khajuri

Plate 4.42: Ornamented Stripe Mashru Designs



A

B

Plate 4.43: Dana Stripe Mashru Designs



A

B

Plate 4.44: Engineered *Mashru* Designs



A

B

Plate 4.45: Non-Engineered *Mashru* Design

4.3.1. b: *Ikat Mashru*

Ikat Mashru is the rarest category of *Mashru*, practiced no more today. *Ikat* was supposed to be precursor of *Mashru* (Gaatha, n. d.). the During late 20th century *Ikat Mashru* were rare in comparison to plain *Mashru* fabrics (Desai, 1988). It is quite complex in its making process although lesser number of shafts is needed like striped variety of *Mashru* but *Ikat* patterning makes it complex and exhaustive. Its extent of complexity depends upon nature of *ikat* pattern and number of colours used in it. *Ikat-Mashru* fabrics are called *Chhada* by their manufacturers in Gujarat (Buhler & Nabholz, 1980). According to Janak Bhai, a practicing master weaver of Patan, '*Ikat Mashru* is also called *Atto* in that region' (*Atto* is referred to woven diagonal patterns as well as *Ikat* diagonal patterns). This is also known as pulled *Ikat* due to adjustment of resist tie dyed yarn on loom prior to weaving to create arrow head kind of pattern.

4.3.1. b. I: Features of *Ikat Mashru*

It is characterized by unique warp *Ikat* stripes with or without multicolored vertical bands. The edges of the tie-dyed designs are never harsh or severe but rather the colors flow one into the other producing an effect of great softness and harmony (Jayakar, 1996). Given this, *Ikat Mashru* reflects this feature wherever used and making it supple. The precision of the design lies in the efficient tie-dye of warp and its skillful installation and setting on loom for getting the desired result after weaving.

Mashru fabric is not only augmented by lust of satin, warp *Ikat* stripes also plays vivacious role in defining unique aesthetic appeal of this fabric. In Indian *Mashru* fabrics, the *Ikat* designs are mostly simple (Buhler & Nabholz, 1980). In this category *Ikat* is either found against single colored base or in between multi-colored stripes or *Buttis*. Usually, *Ikat* stripes are accompanied or bounded by plain satin stripe. Although *Ikat* has been widely used in *Mashru* but in Gujarat it has been found less compared to other *Mashru* production centers. In *Ikat Mashru*; *Khanjari* (chevron) pattern is quite popular.

Bajpai (2015) stated that *Mashru* work is costly and is most gorgeous among all varieties of *Khanjari*. Use of *Ikat* in satin weave gives it an extraordinary lust and lucidity. The no. of thread in one repeat pattern of resist tie and dyed yarns vary from region to region. Ali (1900) states that for *Mashru* fabrics, the warp threads are tied up in bundles of 10 to 14 together at intervals which vary with the fineness of the wavy pattern ultimately required. The quality and price of this textile were determined by the number of wave lines per square unit of fabric. It is said that an ordinary *Mashru* has 30 waves per span of the material, but an especially fine *Mashru* can have up to 45. *Ikat* patterns in *Mashru* had been usually found in one or two color.

4.3.1. b. II: Classification of *Ikat Mashru*

a. *Ikat Mashru* with stripe: In this variety of *Mashru* designs, *Ikat* pattern is found accompanied by basic or patterned stripes or both.

b. *Ikat Mashru* without stripe: In this variety of *Mashru* designs, *Ikat* pattern is found without any stripes.

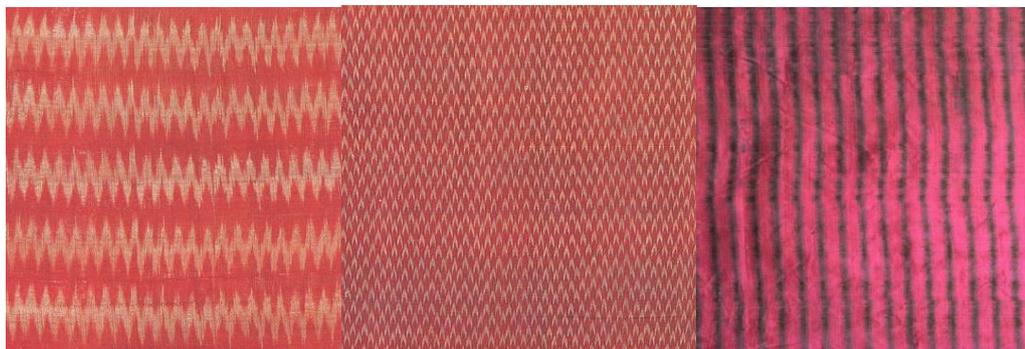


A

B

C

Plate 4.46: *Ikat Mashru* Designs with Strip



A

B

C

Plate 4.47: *Ikat Mashru* Designs without stripe

Image Source (Plate 4.47 A & B): Textile Art of India, Hatanka, 1996

Image Source (Plate 4.47 C): Victoria & Albert Museum

4.3.1. c: *Butti Mashru*

Butti Mashru is among the rare variety of *Mashru* which is hardly made at present except few designs like *Danedar* and *Saatdhani*. This variety encompasses *Buttis* engrained in satin woven ground with or without stripes or in combination with stripe and *Ikat* together. *Butti* is defined as small motif (Elese, 1988). Its designs are comparatively complex in terms of weave which utilizes maximum number of shafts among all varieties of *Mashru*. It uses supplementary warp and continuous or discontinuous supplementary weft or ground yarn weave float to create desired motif. On the basis of brocade technique used for making *Butti* it can be termed as Brocade *Mashru* also.

4.3.1. c. I: Features of *Butti Mashru*

Motifs placed against the vibrant, lustrous, bold & luxurious background of red, yellow, orange & purple creates a sparkling & starry effect at night disposing harmony, rhythm, and balance

with poetic sensation. When *Butti* yardage spreads around in day time, it embodies continuity, flow as if water droplets scattered all around over shiny surface signifying festive and fertile idiom.

Mashru found with supplementary weft motifs give it a royal touch, occasionally it is also intensified with golden & silver yarns. It is characterized by unique placement of small to medium size of *Butti* throughout the fabric surface or with combination of multicolor vertical bands with or without *Ikat* patterning. The motifs are often found in geometric symmetrical flair (**Kumari & Karolia, 2019**) or in naturalistic and stylistic colourful & lively form varying from small to medium size. These designs were usually found with red field, varying from bright, rich red to dark purple or black colour. Smaller motifs were often made with lighter colours like yellow, cream or in metal-wrapped golden & silver thread.

The stylized floral & tendril, and geometrical *Butties* were usually arranged in staggered manner within fine stripes or against plain ground leaving a mark of uniformity in entire space. Very often the continuity of motifs in stripes were found broken by horizontal lines in serrated style (**Plate 4.48**). Occasional evidence of floral motifs continuous rhythmic style (*Bel*) (**Plate 4.50**) was also witnessed. Older motifs of 19th century were observed brocaded in twill structure (**Plate 4.51**) probably to reduce the length of float & impart strength. However, in recent motifs twilling of motifs were not found. In several motifs outlining (*Meenakari*) (**Plate 4.49 B**) around contours was also observed, this gave very intricate & delicate touch to them.

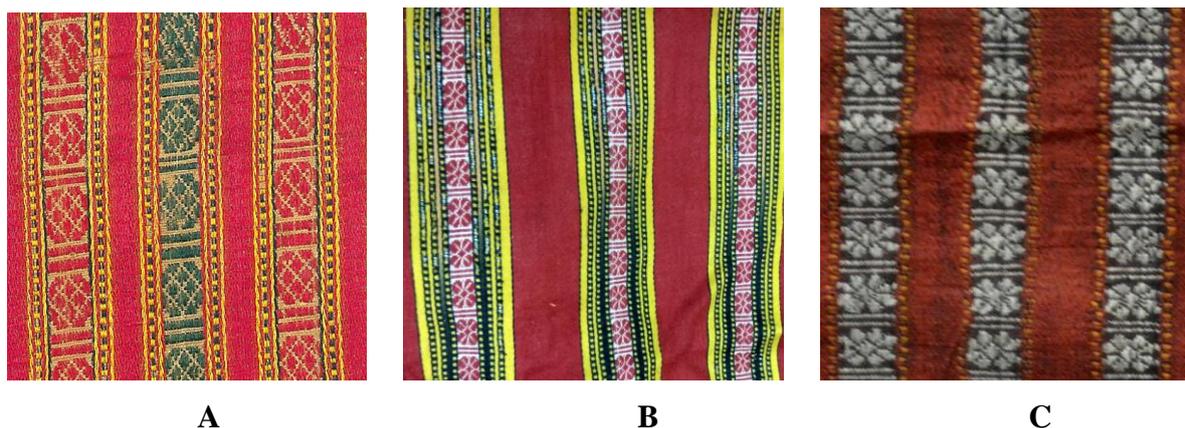


Plate 4.48 *Mashru* motifs within stripes in serrated style

Image Source (Plate 4.48 A): Textile Art of India

Image Source (Plate 4.48 C): Victoria & Albert Museum



A



B



C

Plate 4.49 *Mashru* motifs placed in staggered manner

Image Source (Plate 4.49 A & Plate 4.49 B): Victoria & Albert Museum

Image Source (Plate 4.49 C): Textile Art of India



Plate 4.50 Floral motifs in continuous rhythmic style (*Bel*)

Image Source (Plate 4.50): Victoria & Albert Museum

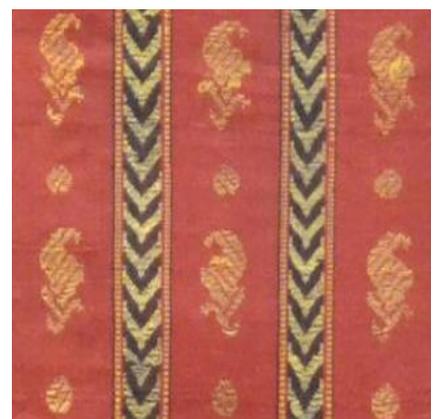


Plate 4.51 Brocade motifs in twill structure

Image Source (Plate 4.51): Victoria & Albert Museum

The use of variety of color bands with calibrated spread of *Buttis* on the fabric leads the eye to form distinct visual layers. These Motifs were constructed using supplementary warp or weft or with ground warp- weft float. Supplementary yarns used to create motifs were usually coarser in count compared to base yarn.

Baker (1995) stated that ‘Ottoman composition generally has a less pronounced illusion of depth and omits any figural representation. Indeed, there is such a noticeable absence of human, animal, bird and insect motifs in Ottoman fabrics that when such elements are incorporated one questions the textile’s provenance. However, there are figural motifs on Ottoman ceramics and on textiles of contemporary Mogul India’. Certainly, due to these mainly geometrical and stylized floral motifs are found in *Mashru*. Along with this Certain Ottoman textiles had ‘magic pattern’ squares containing auspicious numbers (**Baker,1995**). This might have relevance over Indian *Mashru* that is why motifs with squares like *Saat-dhani* (**Plate 4.54 A**), *Paanch-dhani* are found. Auspicious number might have certain connection to *Barashahi* motif also where twelve small units has been put together to make one motif, commonly under name of *Barashahi* (**Plate 4.52**). The floral variation of *Barashahi* were also made without stylized leaf and stem, though total subunits in motif were nine here. In archive samples of Victoria and Albert Museum these motifs were also found but name was not specified. These *Barashahi* motifs certainly have connection with *Rani Ni Vav* where many of these motifs had been seen as relief work of the monument.

Danedar (**Plate 4.55 A**) is also a popular motif extensively woven till today. The *Danedar* name itself suggests the name of motif, *dana* meaning small dot. It is small motif comprising of four dots. It is found as all over pattern as well in stripes. However, with stripes, usually stripes are more prominent compared to *Dana Buttis*.

Other similar name-based motifs are *Dhaniya*, *Methi*, although visual evidence of these motifs has not been found. Motifs were often symmetrical in nature possibly for creating larger sized motif in lesser number of shafts. Hence, *Mashru* motifs had certain symbolism and narratives behind it which have been guided by artisan’s philosophy of creativity, historical transformation, cultural belief, surroundings and capacity of loom.



A (with 12 sub-units)

B (with 12 sub-units)

C (with eight sub-units)

Plate 4.52 *Barashahi* motif variations

Image Source (Plate 4.52 B): Textile Art of India

4.3.1. c. II: Similarity in motif terminology of *Mashru* and *Banarasi* brocade and their description

In terms of certain technique and material, *Mashru* resembles to *Banarasi* brocade; however actual elements vary considerably. Similarly, it was found very interesting that they also carry certain similarities in the vocabulary and description of their motifs. Some of them are mentioned in below table with their meaning.

Table 4.5: Similarity in vocabulary and motif description of *Mashru* and *Banarasi* brocade

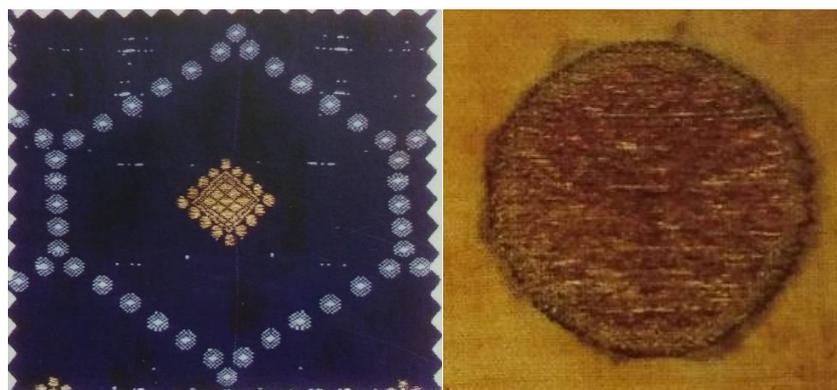
Motif name & its Meaning in <i>Banarasi</i> Brocade	Motif name & its Meaning in <i>Mashru</i>
<i>Satdana</i> : Formed from seven dots, hence named <i>Satdana</i> .	<i>Saatdhani</i> : Formed of cluster of seven dots with four dots in each cluster, therefore named as <i>Saatdhani</i> (Plate 4.54 A).
<i>Chaudana</i> : Formed from four square marks <i>Makhi Booti</i> (fly sized design): Formed of four small dots (Plate 4.53 A).	<i>Danedar</i> : Made up of four small squares (Plate 4.55 A)
<i>Naudana</i> : Arrangement of nine dots, three dots in three rows each (Plate 4.53 C).	
<i>Khanjaridar</i> : A wavy or zigzag pattern	<i>Khanjari</i> : wavy or Chevron or zigzag pattern, usually made with <i>Ikat</i> technique (Plate 4.47 A & Plate 4.47 B).

<p><i>Asharfi</i>: Coin shaped design with stripes in background usually or woven with other designs. Also called Dollar <i>Bootil/Butti</i> (Plate 4.53 D).</p>	<p><i>Asharfi</i>: Coin shaped</p>
<p><i>Phulia</i>: Depending on number of petals flower motif were named as <i>Tinphulia</i>, <i>Panchphulia</i>, <i>Satphulia</i></p>	<p>Although this name was not found, however on the basis motif description similar motifs were found in <i>Mashru</i> (Plate 4.48 B, Plate 4.48 C).</p>
<p><i>Ilaicha</i> mesh: Diagonal chequered pattern in fabric. Many times, dots were marked within the lines.</p>	<p><i>Ilaicha</i>: It refers to striped <i>Mashru</i> pattern usually in red or green colour in base. On the basis of description given in left column similar designs were found in <i>Mashru</i> too.</p>



A Chaudana Butti

B Jaldana Butti



C Naudana Butti

D Asharfi Butti

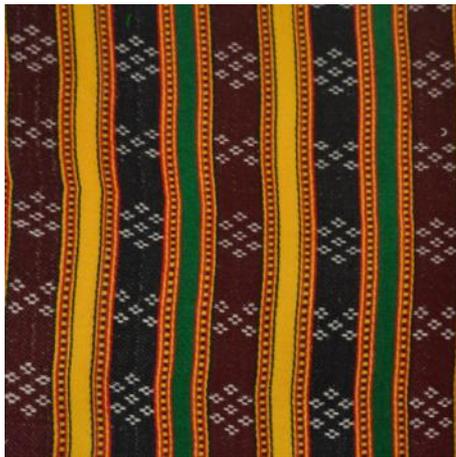
Plate 4.53: Banarasi brocade motifs for reference

Image Source (Plate 4.53): Textiles of Banaras, Lari, 2010

4.3.1. c. III: Classification of *Butti Mashru*

a. *Butti Mashru* designs with stripe: In this type of *Butti Mashru* designs (**Plate 4.54**); *Buttis* are found along with basic or patterned or both types of stripes to make the design.

b. *Butti Mashru* designs without stripe: In this type of *Butti Mashru* designs (**Plate 4.55**); *Buttis* are found without basic or patterned or both types of stripes to make the design.



A *Saatdhani*



B *Barashahi*

Plate 4.54: *Butti Mashru* designs with stripe



A *Danedar*



B Design name unknown

Plate 4.55: *Butti Mashru* designs without stripe

Image Source (Plate 4.55 B): Victoria and Albert Museum

4.3.1. d: Comparison within classified variety of *Mashru*

From above classified varieties of *Mashru* it was observed that stripe, *Ikat* and *Butti* variety of *Mashru* exhibited huge differences among each other on basis of certain parameters like use, harness requirement and complexity of design. These differences had been summarized in below table.

Table 4.6: Comparison within *Mashru* variety

Parameters	Stripe <i>Mashru</i>	<i>Ikat Mashru</i>	<i>Butti Mashru</i>
Use	Commonly used	Not in use	Rarely used except <i>Butti & Danedar</i>
Harness requirement	Usually less depending upon pattern used in stripe Plain stripe < Patterned < <i>Butti</i> striped Without border<with border	Usually less Without patterned stripe<With patterned stripes<With patterned <i>Butti & stripe</i>	Depending upon variety, size and nature of <i>Butti</i>
Complexity	Depends upon <i>Butti</i> used & pattern in stripes	Depends upon <i>Ikat</i> pattern & number of colours	Depends upon size & nature of <i>Butti</i>
Cost	Depends upon complexity & yarn content, usually lesser	Depends upon complexity & yarn content, usually higher	Depends upon complexity & yarn content, usually higher

4.3.2: Meaning and Significance of *Mashru* fabric and its motifs

4.3.2. a: Meaning of *Mashru* fabric

To understand the significance of *Mashru*, it's essential to first understand about mixed textiles. **Ali (1900)** described mixed fabrics, as those fabrics where silk combines with other yarn content like cotton, bark (traditional name of *Tasar* silk in Uttar Pradesh), hair or wool in higher proportion to be judiciously considered as mixed. Although any range of percent were not

defined, however in most of the cases either warp comprised silk and weft cotton or it's vice versa setting. *Mashru* literally means permitted. Not only *Mashru*, India had possessed many other varieties of mixed textiles like *Himroo*, *Sangi*, *Gulbadan*, *Ghalta*, *Atlas* etc. too. Abiding the belief of prohibition of silk has enabled these wide varieties. In certain conditions it was not restricted like war. The reason being that in such condition a soldier do not have connection with luxury, in fact silk were supposed to offer physical resistance to edge of sword. In many of above-mentioned mixed textiles certain features were common whereas certain were unique to the specific textile type. Among all, *Mashru* evolved as most popular representative of mixed textiles. Hence, from researcher's perspective *Mashru* can be understood as a tangible opportunity that allowed Muslims to be luxurious and sacred together in form of a fabric that brings practicality and builds balance between materialistic desire and sanctity.

4.3.2. b: Significance of *Mashru* fabric

Significance of *Mashru* can be understood from multiple perspectives like social, emotional, cultural, global, economical etc. *Mashru* were globally treasured for its artistic sophistication, diversity, aesthetic values and religious connect. It had played a major role in fulfilling luxurious desire of life without affecting religious sentiments. By virtue of its diverse material and technique it had offered wide variety of fabric which is absolutely unmatched. In its various forms, at times it had served a means of belief system, at times a means of devotion, at times a means of ritual, at times a means of self-sustenance, at times a means of status, at times a means of income and many more. In its all forms and functions it had been significant.

Mashru had given very connecting and intellectual way of observation, thinking, reaction and representation of social issues, religious sentiments in its due course of journey. It had enriched life with the understanding of interdependence and social fabrication where connection and community welfare has been valued more than individualism. It can be understood from interdependency of various components in *Mashru's* eco-system that had existed, their strong connectivity and bonding right from the sourcing of material to the finishing of product and its selling. With reference to *Mashru* it was specially observed that in most of its centers each stage of production was carried out by separate families or communities; aiming towards a common objective- an edifice of cultural, economic and social importance. All communities whether it was *rangrez* (dyer), or *kundiwala* or weaver or *rach maker*; all were equally important.

The due importance of *Mashru's* significance also lied in its cultural globalization that happened centuries back enabling *Mashru* to acquire cross cultural features during its voyage; i.e. why it borrowed certain elements from its place of origin as well the place of settlement; from other existing crafts and culture of that region in form of its color, pattern and material. In every region of India, it had grown with the unique identity of that region (**Kumari & Karolia 2019**). Thus, *Mashru* signified the need of integration, inclusion, acceptance and individuality for entity's sustenance.

The next significance is linked to its emblematic colours. It is such a significant feature of *Mashru* which envelops manifold facets varying from spiritual, psychological, emotional, physical to devotional needs of users and of communities on broader level. In India colour symbolism had been laid by tradition. Certain colors had been usually associated with social group, traditions which is still in picture though in diluted form. 'In the West we have a colour belt of bright desert shades stretching from Rajasthan to Kutch, where, as if to compensate for the Stark stretches of the sand and the crimped bushes and twisted cactus forms, a riot of bright hues bursts forth (**Chattopadhyay, 1975**). *Mashru* is a spectacular paradigm of aforementioned observation. Specific coloured *Mashru* signified variegated emotion, place, communities, region, occasion, position and season. Like, Red *Mashru* were sign of Valor for kings, i.e. why widely used among native royal families of the Bhuj, till today red *Mashru* is significant for brides and groom representing passion, fertility, sexual energy and good premonition. Another example is black *Mashru* that represented mourning, ill prophecy for Rabaris of Kutch.

Another significance of *Mashru* can be understood from its geometrical aura. Geometry had been fundamental element of *Mashru*, although few evidences of floral motifs have also been found but its essence had enthused around geometrical spirit. Jaitly (2014) states that, 'The most important profound philosophers, scientists and artists study symmetry and mathematics in the patterns of nature. Look at water, leaves, branches or sand - there are immutable laws that govern their designs'. Both from the viewpoint of Islamic and Hindu philosophy it had reflected significant meanings and had divine repercussion in its follower's life. The most prominent characteristics of *Mashru* are stripes, floral & geometric motifs. According to **Chattopadhyay (1975)** Strip is part of the whole that has been taken away or has to be turned back to the source. Again, the wider use of triangle in *Mashru* can be related to philosophy of Hinduism as well as to the demesne of human experience. This form in different arrangement can be widely observed in Indian temples as well. Symbolically triangle represents growth, higher spiritual

realm, elevation of human soul (**Jackson**) and ambition. Triangle-based motifs for reference can be seen in **Plate 4.52 B**.

Significance of *Mashru* can be realized from its mark of thoughtfulness. **Chattopadhyay (1975)** appropriately stated that ‘The growth of handicrafts in society was the sign of the cultivation of sensitivity and the stirring and mellowing of Humanism. It stood for man’s endeavor to bring elegance and grace into an otherwise harsh and drab human life’. Given this *Mashru* too had been functional for this. However, its significance is extended in terms of its acceptance among both Hindus and Muslims where it became part of everyday life ranging from social to religious rituals. Somewhere it tried to bring people on same platform. It thrived to make our life more elegant and meaningful by eliminating inter differences of communal thought. Hence, this characteristic function of *Mashru* makes it beautiful innately too beyond bodily appearance.

In textiles representation of religious and sacred values has been realized in two ways, one is through sacred usage/action and other through representation of sacred motifs upon it. In *Mashru* it has been seen in both ways, like design named *Kataria* (dagger like structure) is commonly used in *Mashru*. In Indian mythological stories god are shown with this weapon. Traditionally this *Kataria* fabric were used during Navratri to make goddess Durga’s *Chandarva* (fabric shed over goddess idol). Another usage of this design was found as shroud in funeral. Earlier in few of the communities of Gujarat it was essential to wear red *Mashru* blouse by bride during marriage. *Sonaria* design of (red and yellow base with black and green stripe) *Mashru* was used in Veravar region of Saurashtra in marriage. Today also, in Kutch-Bhuj region of Gujarat, in few of the communities *Mashru* is used by groom and their relatives during marriage. **Dhamija (2014)** stated that ‘trade cloths produced in India were considered ritually powerful and imbued with magical qualities’. *Mashru* is often regarded as trade of India.

Mashru had been significant in giving visual identities to communities. In past we can observe nice distribution of various designs for different communities. Somewhere it had helped in sustaining craft so far. Like *Rabaris* community ladies are associated with black *Mashru*.

4.3.2. c: Significance of *Mashru* motifs & pattern

To understand the significance of *Mashru* motifs it is important to understand its association with *Rani Ni Vav* and its symbolism. Since long as a student, it was read as well as experienced in many cases that craft is influenced by its surroundings. Especially in context of inspiration and in

framing visual identity, its role has been very substantial. Researcher wondered that *Mashru* being so old, globally acknowledged might also be having. Its evidence was not recognized in any secondary sources. This query lead to the journey of its search; exploration of *Mashru*'s connection with local flora, fauna, monuments, rituals and festival. Researcher started observing and examines carving and geometry of the heritage monument- *Rani ni vav* located at Patan. Gazing upon the monument again and again it was found that both organic and geometric elements were exquisitely used to create and adorn this beautiful monument. Under geometric forms, triangle, squares, vertical and horizontal lines were recursively used in this monument. Many of the carved motifs were composed of self-similar motifs as if well-proportioned units had amicably united to create whole. This symbolizes of wholeness as well as its fractal feature. According to **Marriot, 1990** fractal has been seen as self-similarities in nature among Hindus, and recursive geometry has been discerned as a mode to express profound philosophical sense of oneness. Fusion of geometry and specific number skillfully combined with architecture had led to beautiful carving of this monument which had been further extended to aesthetics of textiles where material and function has changed, keeping belief constant. Numbers twelve, nine and seven in this reference holds important position. Smaller units in these specific numbers had combined to create wholeness in carved motifs. *Mashru* motifs like *Barashahi*, *Saatdaani* can be related to the monument in this context. Although name of all referred *Mashru* motifs are not known but many of them were found to follows the philosophy of oneness.

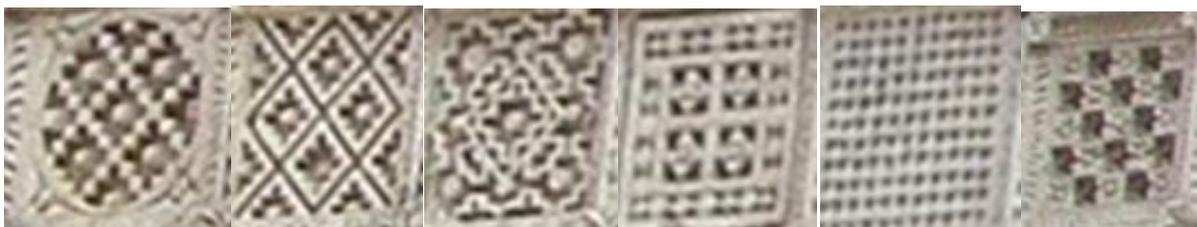


Plate 4.56: Detailed of carving from monument for inspiration of *Mashru*

Therefore, motifs that have been presented above seem to have direct link with *Rani ni vav*. These motifs have been observed in samples and images collected during primary and secondary study of *Mashru*. So, researcher's observation about *Mashru* is contradictory to existing documents which suggest Muslim belief as the basis of *Mashru*. Looking into the deeper symbolism associated with *Mashru* motifs, its extension from architecture to textiles;

its origin seems to have been rooted to Hindu philosophy which had not been explored and documented so far.

This travel from architecture to fabric has given *Mashru* a kind of deeper sensibility which can be observed in its linked rituals, practice that carries additional sense; when one comprehends its covert and overt symbols and vocabulary. A lot is found encrypted in its organization, in its philosophy of unity and of oneness, in dissemination of its fractal in form of shapes, motifs and patterns; in understanding of order, space; in transmission of its belief in making wearable form from rigidity of stone to fluidity of fabric, and in its crucial admission of the thought that - valuing smaller portion embark consideration for whole.

To completely understand the significance of *Mashru* motifs from geometric perspective it is also important to understand its association with Islam. According to **Edwards (2011)**, 'The woven patterning conformed to Islamic aesthetics and were typically lengthwise stripes that often included small chevrons and ikat'. **Baker (1995)** stated that Ottoman composition generally has a less pronounced illusion of depth and omits any figural representation. Indeed, there is such a noticeable absence of human, animal, bird and insect motifs in Ottoman fabrics that when such elements are incorporated one questions the textile's provenance. However, there are figural motifs on Ottoman ceramics and on textiles of contemporary Mogul India. Certainly, due to these mainly geometrical and stylized floral motifs are found in *Mashru*. Along with this **Baker (1995)** further stated that Certain Ottoman textiles had 'magic pattern' squares containing auspicious numbers. This certainly has relevance over Indian *Mashru* that is why motifs with squares like *Saatdhani*, *Paanch-dhani* are found.

Floral motifs too have been used in *Mashru* and had a long history. During field visit few specimens of *Barashahi* motif were collected. One *Barashahi* specimen comprised twelve divisions, here flower was represented in symmetrical fashion with leaves (**Plate 4.52 A**) whereas in other sample (**Plate 4.52 C**) leaves were not there but overall flower remained same.

Kacker (1994) had talked about designs under name of *Dhaniya and Methi* which must had been floral, although visual reference of these motifs was not given. In the archive samples studied from **Victoria and Albert Museum, London**, several visual references of floral motifs were found. Those motifs reflected Mughal sensibility. Union of *Butis & Butas* in silk *Mashru*, with distinct outline illustrates resemblance to *Pacchikari* (inlay) work done on marble and precious stone & metals. These motifs (**Plate 4.55 B, Plate 4.49 B**) encompass distinguished craftsmanship, persistence, an eye for detail & refinement.

4.3.3: Exploration of structural elements of *Mashru*

Fundamental elements and visual organization of *Mashru* can be studied from its weave, yarn content, colour and their relation.

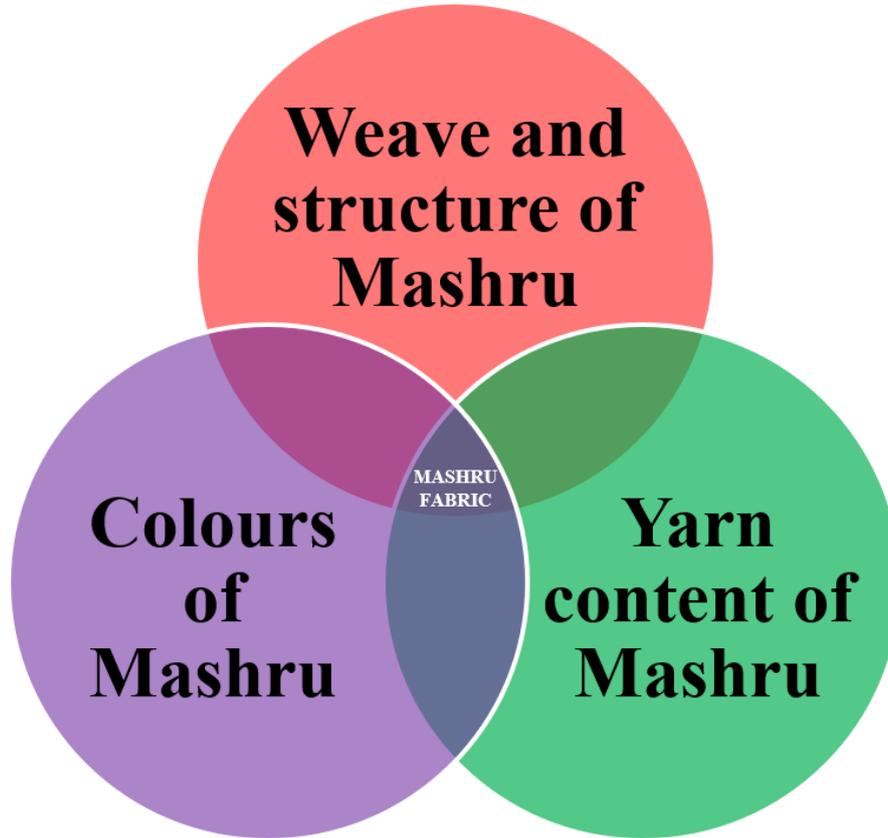


Fig 4.5: Structural elements of *Mashru*

4.3.3. a: Weave and structure of *Mashru*

Mashru fabric is about union of silk and cotton in satin weave where silk lies in warp and cotton in weft. The exquisiteness and ingenuity of the fabric lies in its material play in relation to weave in such a way that silk almost faces the outside world transacting glossy appeal, covering almost weft cotton. Cotton is found below silk layer touching the bearer, enabling inner surface breathable. In terms of weave satin had been the prime structural element where brocade was additionally & prudently used for ornamentation purpose. Supplementary warp-weft and ground warp-weft float were used to create decorative motif. Undoubtedly, on this basis it can also be categorized as brocade fabric. However, till 19th century in comparison to 20th century nature of brocade motifs and patterns were comparatively complex. Overall, the nature of brocade designs used in *Mashru* can be experienced in two ways- depending upon type of

motifs used. The natural and stylistic floral motifs were found to be soft, delicate, subtle and symmetrical (**Plate 4.55 B, Plate 4.49 A & Plate 4.49 B**) whereas certain floral and geometric motifs were found to be firm, bold, linear, simple and symmetrical in nature (**Plate 4.52 A, Plate 4.52 B, Plate 4.52 C, Plate 4.54 A, Plate 4.51 A**).

According to **Crill (1998)**, in Deccani *Mashru* centers – Thanjavur and Tiruchirappalli, beautiful non-*ikat Mashru* had been made ‘some with gold thread, as well as all - silk striped material with woven arrow-head designs, which were presumably intended as a lighter alternative to the densely woven *Mashru* fabric’.



Plate 4.57: Sample of stripe patterned *Mashru*, Tiruchirappalli, Tamil Nadu, c. 1855

Image Source: Forbes Watson, 1st series, no. 496 (as cited in Source: Indian Ikat Textiles)

Above plate narrates about impressive craftsmanship of weavers who developed detailed and intricate brocade motifs similar to Ikat pattern of *Mashru* (**Priyanka & Karolia 2020**). **Crill (1998)** also adds the comment of **Havell** that ‘the weavers seem to be of northern origin, both from type of features and language, the latter a dialect strongly mixed with Gujarati’ indicating the migration of weavers from Gujarat. As the weavers have migrated from Gujarat, possibly brocade *Mashru* must had widely existed long back in Gujarat. Some similar noteworthy plates where beautiful woven chevron or similar patterns were created were observed in Victoria and Albert Museum, London’s collection. Some of those plates for reference are **Plate 4.153, Plate 4.148 & Plate 4.157**.

In context of woven *Khanjari* pattern in *Mashru*; **Lari (2010)** also stated that for *Khanjari* designs warp yarn was resist dyed before weaving. Sometimes, it was achieved through coloured weft yarns also where it was not obtained through *bandhanu* technique. Coloured

cotton and silk yarns were used to obtain this design in cloth. This certainly indicates high weaving skills to create this specific pattern in fabric which were conventionally achieved through warp *Ikat*.

Other weaves comprise of twill- its variations like broken twill, reverse twill and warp rib which is used to create textured stripe motif and to sharply divide colored stripes. According to **Murphy & Crill (1991)**, among the two defining features of *Mashru* use of satin weave was one of them. According to **Buhler & Nabholz (1980)** in *Mashru* textiles, the pattern is produced not so much by the satin weave, this serves mainly to cover the cotton weft yarn-but rather by the multi-colored patterning of the warp yarn, carried out before weaving. It's true that in *Mashru* its stripes are the most dominant feature however this won't be possible without satin. On the basis of visual and technical analysis of secondary source images and collected swatches, satin was found to be the staple weave of this fabric which is used to construct the basic pliable structure. Use of satin weave with silk warp makes fabric very lustrous from front whereas with cotton weft absorbent from back. Though satin has been used in many other brocade varieties, the use of pure, vibrant and undiluted colored stripes in satin gives them characteristic feature and enable it to stand out as a unique handloom craft. According to **Kumari & Karolia (2020)**, 'from primary and secondary study it was established that every region had varying end repeat of satin in *Mashru*. Customarily in Deccani *Mashru* satin weave structure had warp thread floats covering six weft, in Varanasi *Mashru* satin weave structure warp cover three or four wefts, in Gujarati *Mashru* in Patan warp thread float covers seven weft and in Kutch six weft thread'. This varying weave repeat of satin has also affected their Compactness. Varanashi *Mashru* fabric was most compact among all. Deccani and Gujarati *Mashru* had almost similar compactness. Another interesting feature about satin used in *Mashru* is that it is used in twill fashion. This creates a fine diagonal line on the fabric surface. The below graph had been used to explain it. As per researcher's understanding this helps weaver in easy management of pedals with leg. Usually in most of the handloom weaving centers where a greater number of harnesses is used, they use either Dobby or Jacquard. However, in *Mashru* in such installation has been found. Therefore, this change might had been devised to meet the easy movement of pedals.

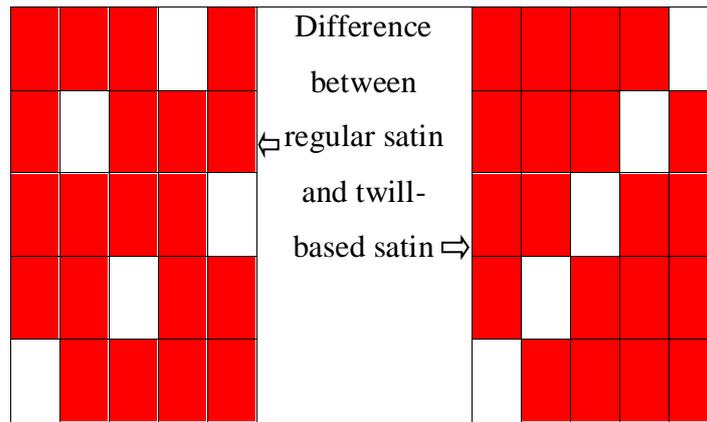


Fig 4.6: Regular satin of 7 ends & twill-based satin of 7 ends

Overall, its special weave enable cotton to cleverly hide from the front and unwaveringly felt by its user. Also, in creating a disguise feel of being royal, commanding from outside and humble, submissive from inside. That's where the magical role of weave lies making it a different fabric altogether that entices us to touch and experience it.

4.3.3. b: Yarn content of *Mashru*

Mashru is an admixture of silk and cotton. Traditionally *Mashru* had been made in silk warp and cotton weft. Use of silk in satin weave has given it lustrous appeal. This is one of the most prominent features of *Mashru*. Although at present it is found in rayon as well as cotton warp. However, in these varieties also specific lustrous appeal can be experienced. Definitely the extent of luster has varied from material to material.

Hatanka (1996) also stated *Mashru* to be a unified fabric with silky appeal, glossy and smooth texture. She further extends that its literal meaning is permitted that allowed to wear silk without infringing religious tradition. This shows how a fundamental element of fabric can be functional from religious facet. Another observation of researcher is that use of rayon as substitute of silk has made it over lustrous. The shine of silk *Mashru* were more pleasant compared to rayon one.

Postans (1839) beautifully described its feel that 'it gracefully flutters on the breeze, affords a charming effect of grace and softness to the outlines of their elastic figures'. The inherent features of silk like excellent drape, luxurious hand, luster, resistance to pill has definitely played a major role in bringing this charm in *Mashru*. In addition to it cotton beneath it offers good strength, soft hand, and fair drape, cooling effect and thus making comfortable wear for

hot weather. Overall, in this mixture fabric, fusion of yarn (silk and cotton) has helped in getting specific structure, colour and textural effect, physical and mechanical properties to suit diverse usage functionally and aesthetically. To some people this material manipulation has given an option of finest clothing and rich look without being expensive as pure silk.

In context of material the quote of **Irwin (1996)** can be added that ‘the silk exported from western India were mostly fabrics of mixed cotton-and-silk’. **Edwards (2011)** stated that the invention of synthetic fibers like art silk and polyester enabled it to be used as a vibrant ensemble in Contemporary dress for the common Gujarati. Its reflection can be seen in *Mashru*.

Aspiration to wear silk had been the major drive behind origin of *Mashru*. As per the maximum literature documented 1900 onwards, it has highlighted Muslim religious belief behind *Mashru*. Of course, they had been important because wearing of pure silk was considered pretentious for Islamic men, mixed with cotton made it acceptable for them but this can’t nullify the possibility of the role of other religions, culture or geography behind its origin, especially in Gujarat which had been hub of cotton. Given this, it creates the possibility of *Mashru* being made in different material. In few of the literature evidence of the possibility of *Mashru* being made in cotton warp had been traced. At present *Mashru* being made in cotton and rayon warp had been considered a recent change. However, it’s partially correct. Rayon is a recent innovation but cotton has been an indigenous material to Gujarat. Its historicity can be linked to Indus valley civilization. It is often believed that most of the crafts originated with indigenous material and technique, and then this gives the possibility of *Mashru* made in cotton warp previously. With all this it is clear that material had played a major role in framing the identity of *Mashru*.

Table 4.7: List of yarn content of *Mashru*

Warp yarn Count	Weft count
120 D (Rayon)	30s (Cotton)
60/2 (Cotton)	30s, 40s (Cotton)
60 D-3-ply (Silk)	30s, 40s (Cotton)

4.3.3. c: Colours of *Mashru*

Mashru is a joyful disposition of mood in the form of colour. It had expressed the sensitivity of both the rich and poor since ages through its colour. In a country like India colours had been ‘surcharged with nuances of mood and poetic association’ (Bhatnagar, 2005). This can be profoundly experienced in *Mashru*.

The distinctive and influencing colours of *Mashru* were social agents for interweaving religious and mystical motives and key to understanding the life, culture and interest of the rural masses and specific communities of the country.

It comprises primarily red colour as accent. The colours of *Mashru* are bright, intense, eye catching, energetic, aggressive yet cheerful. The use of saturated hues in fabrics gives a pure and vivid look, making it more dynamic and live. Colours used in balance and contrasting fashion allowed its colour to coexist with each other harmoniously. This creates strong interest in viewers eyes by creating a sense of depth and stability.

The higher presence of red, orange and yellow generate warmer appeal. When these warmer colours are used in combination with other colours, they tend to appear in the foreground of the fabric and enable others to recede in the background. Its colours communicate emotion, it was associated with specific meaning due to this many of the specific coloured *Mashru* found place in different rituals and customs, occasions, tribes and communities.

From the researcher's perspective red has been used to narrate a variety of emotions such as strength, energy aggression, love, passion and courage. Black has been used for mystery and pain. Green expressed growth and prosperity. Orange represented boldness, confidence, enthusiasm, optimism and adventurous spirit. It came into existence to elicit a barren land with zest of life. *Mashru* is a narrative of multiple colour. Choosing the correct colour can be a Paramount in satisfying the user without disturbing its essence. The role of colour in *Mashru* can be understood from following composition:

**“Freshness of thought
that means a lot
in the world of misery and pain
pleasure in brightness
treasure in droughtness
in the land of desert
Hope in despair
Where love and care are fair**

warm in the winter
Calm in the summer
commanding from outside
compassionate from inside
Shining with glitter
with ability to flutter.”

(Self-composed)

Mashru is mostly seen in its dynastic bright and warm red, yellow and cool green colors. **Kacker (1994)** also stated that the traditional colours were red, yellow and green. According to description furnished by **Naqvi (1979)** the major colour described about *Mashru* were found red. Recently few of the new developments have been seen in elusive-pastel hues. In traditional designs bright-dark colors form the ground whereas light colored motifs or stripes complement over the dark base to enrich the dimensional effect.

It's colours talks about the approaching and energizing red, invigorating and stimulating pink, refreshing and prosperous green, luxuriant and lush purple, ripened and matured yellow, blooming and blushing golden, murky and dusky black, affectionate and devoted orange. *Mashru* ensemble colors in such a way that in bare and barren land one won't feel its absence. These colors have certain narratives wrapped with a lush of tradition, devotion, ritual and passionate urge to come out of the plane in a balanced and composed attitude. Gujarat as a land of diverse culture is echoed through absolute colors of *Mashru*.

Textile symbolism in India had been rooted in tradition. Certain colors are traditionally associated with caste traditions still in practice though in diluted form. Red is associated with the *Kshatriyas* or kings, a sign of valor. It also represents fertility and sexual energy and is worn by brides, *Vaishyas* or traders associated with green, black were considered inauspicious, reflecting sorrow and ill omen (**Hatanka, 1996**). Therefore, red *Mashru* has been widely used among native royal families of the Bhuj, for the costumes of bride & their relatives.

Gujarat being land of traders since past till present, therefore green (*lilo*) *Mashru* had been widely found. Green represents growth and prosperity. Green *Mashru* is specialty of Gujarat. Black *Mashru* had been widely used in the *Rabari* community; there is an interesting narrative about their black wearing. Many years ago, Jaiselmer of Rajasthan was the main center for *Rabaris*. Once, a Muslim King fell in love with a young *Rabari* girl. However, his proposal was refused by the community. The king got angry and threatened to kill all of them. The *Rabaris* out of fear broke their camp in the middle of the night with the help of a Muslim

man. But the Muslim man while assisting the *Rabaris* for their escape was killed by the king. So, it is told that *Rabari* women wore black from then to mourn his death (**Frater 2003**).

Along with imparting significance and visual identity to designs, colors had also been used to give specific names to designs like *Lilo* (green) *Ilaicho*, *Karo* (black) *Ilaicho*, *Gulabi* (pink) *Kataria*, *Panchrangi* (five colored) and *Lilo* (green) *Kakini*, *Lal* (red) *Kakini*. Overall, colours have huge significance in framing identity of *Mashru*.

Another major perspective in context of colour were that over time the nature of colour of *Mashru* had varied a lot and consequently its perceived impact had also transformed. On the basis of visual interaction and analysis of *Mashru* samples its change and impact had been summarized in below table.

Table 4.8: Nature of colour of *Mashru* over period

Period	Nature of Color	Color Intensity	Overall Impact
19th century	Bright, calm	Less saturated	Subtle and serene
20th century	Bright, Calm & Moderately Advancing	More saturated	Medium robust and bustling
20th century	Bright, bold & highly Advancing	Most saturated	Robust and highly bustling

4.3.3. d: Colour and weave effect in *Mashru*

Colour and weave effect had been very significant in fabricating its distinguishing colour depth, colour contrast and patterns, especially geometric stripes - woven chevron (*Kataria*), rectilinear patterns (*mamul*), and decorative satin. Its intensified, bold colours had been enabled due to satin weave, it has prevented the mixing of warp and weft colour because of its specific weave structure. Interaction of bright colours placed together yields higher contrast value and thus forms the bright identity of *Mashru*.

4.3.4: Exploration of elements and principle of *Mashru* and their visual organization

Vibrant colours, linear bands, geometric motifs and *Ikat* patterns are interwoven with hardship and craftsmanship to create the fabric called “*Mashru*”. It exhibits a unique art and science of colour palette. The harmony and rhythm that has been seen among multiple colours is thrilling. In its all form it arouses the special feeling of beauty to the viewer and connects with them emotionally and sensually. From researcher’s view *Mashru* enhances beyond usual experience of fabric, with in depth meaning and elevated degree of involvement of senses in its varied pattern and colour.

This is an inquiry to understand various elements and principle of *Mashru* in framing its visual and emotional sensibility, how these elements and principles had been treated to get the desired effect. Its inquiry is beyond technique, an in-depth inquest to unravel its attributes like Simplicity, order, contrast, value and harmony which form the core component of this fabric. Plato has also described that harmony, proportion and symmetry constitute to the beauty of an object (**Plato, Phaedrus, p. 65**). This is utterly experienced in *Mashru*. According to Ruskin’s metaphysical theory “beauty in objects is found in certain qualities, such, unity, repose, symmetry, purity and moderation, which typify divine attributes” (**Puffer, Ethel D., Psychology of Beauty**). If we talk about *Mashru* in terms of placement of its stripe, use of colour or nature of motifs; everywhere these qualities can be experienced in optimum intensity. The aesthetics of *Mashru* fabrics has been enhanced by the placement of contrast colour band. As day seems extra beautiful when it is compared with night, a white colour seems extra beautiful when it is after black, similarly *Mashru*’s beauty is augmented when a green band is placed next to red, red is placed next to white, when a light coloured *Butti* is ingrained against dark bright base.



Plate 4.58: Glimpse of colour contrast in *Mashru*

In context of simplicity and order, researcher realized to relate and quote the words of **MC Escher** ‘the urge toward simplification and order keeps us going and inspires us in the midst of chaos: chaos is the beginning; simplicity is the end. Order is repetition of units; chaos is multiplicity without rhythm’ (**Escher 1989**). Its simplicity can be easily experienced in stripe patterns where only through lines engaging patterns have been created. Similarly, in *Ikat* and *Butti Mashru* judicious repetition of patterns and motifs in composed fashion with adequate breathing space has been created. In *Mashru*, the principle of contrast and value complement each other as well as unveil discrete roles. Juxtaposition of contrasting colours enhances the value and intensity of colours. It is captivating to observe the dexterity of artisans that usually without any complex motif; just with linear coloured bands beautiful design composition had been created. What we observe as beautiful composition in *Mashru* is the relationship of contrast and value of colours which is perceived as distinct visual layers in the pliable structure. That is why multi-chrome appearance combined with lustre framed the identity of this fabric and makes us yearn for it.

Colour has constantly played a mystical role in *Mashru* textiles. Envisaging from sensorial perspective it evokes the mood of the wearer with grace, delightfulness and gleam. Colours of *Mashru* communicate vividness and vibration where the intense multi-chromatic glow creates boundless richness to linger for a moment. Importance of vibrancy in selection of colours has been well understood by *Mashru* weavers. The choice of colours had been purposefully selected varying from region to region keeping into consideration occasion and environment. In barren deserts it fills wearer with colour of happiness, in sandy storm it gives them identity, in marriages it imparts emphasis to bride, groom and fills them with fertility and sexual energy, in children it divulges playfulness, in adults it offers impudence and in folk communities it gives a mark of visual differentiation and social identity.

4.3.5: Comparative regional characteristics of *Mashru*

The city of Patan, Surat, Mandvi, Varanasi, Azamgarh, Agra, Aurangabad, Chamba, Hyderabad and Mysore have been known for *Mashru* production in magnitude and quality. These centers were either under Muslim rule or influenced by Muslim culture or had trade connection with Muslim empires. At present it was mainly restricted to few centers of Gujarat – Patan, Mandvi, Godhra, Bhujodi and Don. Recently it has been revived in Banaras by Sanjay Garg. In Hyderabad it is somewhat in continuity with the effort of Suraiya Hasan Bose. However, overall aesthetics of fabrics of these two centers are apparently different from Kutch-Bhuj and Patan. Unlike other textile craft “*Mashru* have comparatively few distinctive regional

characteristics & included several designs as common to more than one center” (Crill, 1998). Though the number of regional characteristics is less but is noticeable for differentiation among each other. Even if we look at the characteristics of *Mashru* of Patan and Kutch-Bhuj of Gujarat, both the centers exhibit unique identities. The resemblance of *Mashru* to other centers are mainly due the philosophy under which it had originated, expansion of Muslim kingdom, assimilation of *Mashru* within Indian characteristics, its acceptance within other Hindu community, migration of ethnic communities and their skills to different parts of the country.

The basic elements of comparison in *Mashru* within various centers are Ikat patterning, brocade technique, satin weave and colour. It is also important to understand that most of the centers have focused more on specific techniques or combination of few specific techniques. Like, “In Gujarat wider range of *Mashru* are non Ikat, having woven patterns of white dots, either arranged in groups between colored stripes or all over a plain ground” (Crill, 1998), Hyderabad’s *Mashru* had focused upon Ikats; either alone or in combination of stripes, in Varanasi *Mashru* it had been Ikat as well as brocade technique. However, among all these peculiarities the “Fundamental patterns of *Mashru* are stripes expressed by warps, which are developed into a range of variation by combining them with supplementary warps or arrowhead patterns” (Hatanka, 1996). The overall comparison among *Mashru* from Prominent centers of India is in below table.

Table 4.9: Inter-center comparative study of *Mashru* features

Feature	Deccan <i>Mashru</i>	Varanasi <i>Mashru</i>	Gujarat <i>Mashru</i>	
			Patan	Bhuj
Satin Weave	7/8 ends satin weave repeat	4/5 ends satin weave repeat	8 ends satin weave repeat	7 ends satin weave repeat
Nature of satin weave	Satin is not true in nature as consecutive interlacing points are	Satin is not true in nature as consecutive interlacing points are touched diagonally	Satin is not true in nature as consecutive interlacing points are touched diagonally	Satin is not true in nature as consecutive interlacing points are touched diagonally

	touched diagonally			
Compactness Of weave	Looser weave compared to Varanasi and similar to Gujarat	Most compact compared to all centers	Looser weave compared to Varanasi and similar to Deccan	Looser weave compared to Varanasi and similar to Deccan
Geometrical rectilinear pattern	Commonly visible	Less visible	Commonly visible	Commonly visible
<i>Ikat Khanjari</i> (Chevron)	Commonly visible earlier and in use at present also	Commonly visible earlier and not visible at present	sparsely visible earlier and not visible at present	sparsely visible earlier and not visible at present
Woven chevron (supplementary warp/with ground yarn)	Commonly visible	Sparsely visible	Most commonly visible	Most commonly visible
Brocade Designs	Commonly visible in past	Commonly visible in past as well as at present	visible in past, sparsely visible at present	visible in past, sparsely visible at present
Dotted motif	Not visible	Not visible in past, sparsely visible at present	Commonly visible	Commonly visible
Major Colours	Red, yellow, purple	Red, yellow, purple, pink	Red, yellow, green	Red, yellow, green, black

Raw-materials	Mulberry silk & cotton	Pure silk or silk & cotton mixture or sometimes a mixture of mulberry and Tasar silk.	Mulberry silk & cotton in past, rayon & cotton at present	Mulberry silk & cotton in past, cotton & cotton at present
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Source of data: crill, 1998; Ali, 2000; Hatanaka, 1993; Lari, 2010; Primary data, Visual and fabric analysis of swatches, pictures obtained from primary and secondary sources.

4.3.6: Analysis of *Mashru* designs and their uses

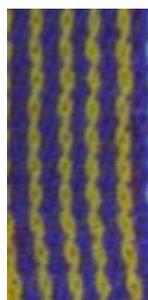
Mashru had several designs known under different names; they tender specific set of features. Categorization of design and specific features of each category had already been discussed previously. Here, major focus will be description of individual designs and their uses. Few of the samples collected during survey with their details had been explained below. To move ahead with its description, few of its characteristic pattern had been shown below.



A Kataria (decorative rib weave)



B Chevron (Decorative twill)



C Decorative satin



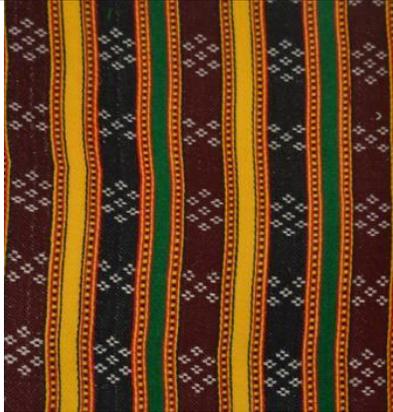
D Dana (dot motif)



E Khajoori

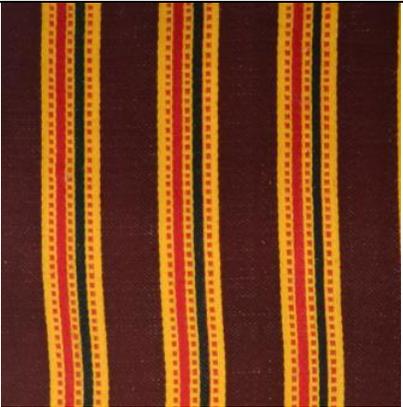
Plate 4.59: characteristic pattern of *Mashru*

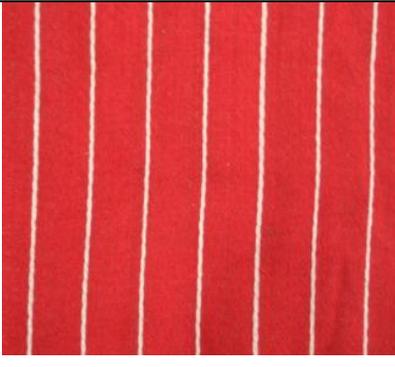
Table 4.10: Description of *Mashru* samples collected during field visit

<i>Mashru</i> swatch image	Description
 <p data-bbox="277 758 561 793">1. <i>Saatdhani Mashru</i></p>	<p data-bbox="651 310 1268 346">Design name: <i>Saatdhani</i> (cluster of seven dots)</p> <p data-bbox="651 365 1406 510">Physical description: <i>Mashru</i> Fragment, cotton warp, cotton weft, satin weave for ground & rib weave in narrow stripe for ornamentation.</p> <p data-bbox="651 529 1406 783">Stripe-<i>Butti Mashru</i> fragment in black and maroon thick alternate stripes with green- and yellow-coloured thin alternate stripes. Thick and thin stripes separated by decorative rib in yellow and black colour, alternate placement of seven and five dots.</p> <p data-bbox="651 802 1159 837">Place of origin: Mandavi (Kutch-Bhuj)</p> <p data-bbox="651 856 951 892">Date: Late 20th century</p> <p data-bbox="651 911 1308 1003">Artisan/Maker: Unknown, sourced from Mamtora Weaving Company, Mandvi, Kutch-Bhuj</p> <p data-bbox="651 1022 1390 1058">Materials and techniques: woven, cotton warp and weft.</p> <p data-bbox="651 1077 1008 1113">Fabric width: 21.75 inches</p> <p data-bbox="651 1131 1114 1167">Intended use: Garment, top of girls</p>
 <p data-bbox="277 1640 561 1675">2. <i>Saatdhani Mashru</i></p>	<p data-bbox="651 1192 1268 1228">Design name: <i>Saatdhani</i> (cluster of seven dots)</p> <p data-bbox="651 1247 1406 1392">Physical description: <i>Mashru</i> Fragment, cotton warp, cotton weft, satin weave for ground & rib weave in narrow stripe for ornamentation.</p> <p data-bbox="651 1411 1406 1665">Stripe-<i>Butti Mashru</i> fragment in red base with consecutive placement of yellow, green, yellow, black narrow stripes. Thick and thin stripes separated by decorative twill weave in yellow and black colour, alternate placement of seven and five dots.</p> <p data-bbox="651 1684 1243 1719">Place of origin: Bhujodi village (Kutch-Bhuj)</p> <p data-bbox="651 1738 963 1774">Date: Early 21st century</p> <p data-bbox="651 1793 1406 1829">Artisan/Maker: Babu Bhai Manodia, Bhujodi village,</p>

	<p>Kutch-Bhuj</p> <p>Materials and techniques: woven, cotton warp and weft.</p> <p>Fabric width: 21.75 inches</p> <p>Intended use: Garment, top of girls</p>
 <p>3. Danedar Mashru</p>	<p>Design Name: <i>Danedar</i></p> <p>Physical description: <i>Butti Mashru</i> Fragment, cotton warp, cotton weft, satin weave & warp float at specific interval to create small motif (<i>Butti</i>) as all over, <i>Butti Mashru</i> fragment in red base with white dotted (<i>Dana</i>) motifs, white weft.</p> <p>Place of origin: Mandavi (Kutch-Bhuj)</p> <p>Date: Late 20th century</p> <p>Artisan/Maker: Unknown, sourced from Mamtora Weaving Company, Mandvi, Kutch-Bhuj</p> <p>Materials and techniques: woven, cotton warp and weft.</p> <p>Fabric width: 21.75 inches</p> <p>Intended use: Garment</p>
 <p>4. Danedar Mashru Design in various colours</p>	<p><i>Danedar Mashru</i> designs are found in several colours, in varying width ranging from 22 inches to 36 inches. In Patan these designs are made in rayon warp and cotton weft whereas in Bhuj they are made in pure cotton. In Patan these designs are also called <i>Chundari</i>. These colour variations are found in traditional as well as contemporary colours. Among all, red, yellow and dark pink are common colours in this design. Apart from yarn dyed, these designs are also developed as piece dyed fabric. Admixture of rayon and cotton are used for piece dyeing.</p>

	<p>Fabric width: 36 inches Intended use: Dress material</p>
 <p>7. Paanchpata Mashru</p>	<p>Design Name: <i>Paanchpata</i> Physical description: <i>Mashru</i> Fragment, cotton warp, cotton weft, satin weave. Stripe <i>Mashru</i> fragment in multi-coloured broad band of alternate red with black, yellow, white, green and then black adjacent to yellow on either side. Black and yellow separated by decorative twill in black and yellow on either side Place of origin: Bhujodi (Kutch-Bhuj) Date: Early 21st century Artisan/Maker: Babu Bhai Manodia Materials and techniques: woven, cotton warp and weft. Fabric width: 36 Inches Intended use: Garment, border of veil cloth (<i>dupatta</i>), <i>Pachedi/Dhotio, Kedio</i></p>
 <p>8. Colour variant of Paanchpata Mashru</p>	<p>Traditionally <i>Paanchpata Mashru</i> designs were found in above colours, later keeping pattern constant, variation in colour combination had been done. However, attempt had been made to keep the value of colour similar except black in certain instances. One of the most unique features of this design is its colour pattern. Throughout width of fabric single colour pattern exist in mirror repeat.</p>

	<p>Design name: Name unknown</p> <p>Physical description: <i>Mashru</i> Fragment, cotton warp, cotton weft, satin weave</p> <p>Stripe <i>Mashru</i> fragment in dark pink, yellow and green broader stripes separated by bunch of narrow decorative stripe of white, red, yellow, violet and green.</p> <p>Place of origin: Mandavi (Kutch-Bhuj)</p> <p>Date: Early 21st century</p> <p>Artisan/Maker: Unknown, sourced from Mamtora Weaving Company, Mandvi, Kutch-Bhuj</p> <p>Materials and techniques: woven, cotton warp and weft.</p> <p>Fabric width: 22 Inches</p> <p>Intended use: Garment, <i>Pachedi</i></p>
<p>9. Stripe <i>Mashru</i> design variation</p>	<p>Design Name: <i>Jorkatari</i></p> <p>Physical description: <i>Mashru</i> Fragment, cotton warp, cotton weft, satin weave and rib weave as decorative stripe</p> <p>Stripe <i>Mashru</i> fragment in brown base with consequent yellow, red and black narrow stripe. These narrow stripes separated through decorative yellow and red rib stripe</p> <p>Place of origin: Bhujodi (Kutch-Bhuj)</p> <p>Date: Late 20th century</p> <p>Artisan/Maker: Unknown, sourced from Mamtora Weaving Company, Mandvi, Kutch-Bhuj</p> <p>Materials and techniques: woven, cotton warp and weft.</p> <p>Fabric width: 22 Inches</p> <p>Intended use: Garment</p>
	<p>10. <i>Jorkatari Mashru</i></p>

	<p>Design Name: <i>Liloillaicho</i></p> <p>Physical description: <i>Mashru</i> Fragment, cotton warp, cotton weft, satin weave, Stripe <i>Mashru</i> fragment in green base with narrow yellow stripe outlined in red.</p> <p>Place of origin: Mandavi (Kutch-Bhuj)</p> <p>Date: Late 20th century</p> <p>Artisan/Maker: Unknown, sourced from Mamtora Weaving Company, Mandvi, Kutch-Bhuj</p> <p>Materials and techniques: woven, cotton warp and weft.</p> <p>Fabric width: 22 Inches Intended use: Garment</p>
<p>11. <i>Liloillaicho Mashru</i></p>	<p>Design Name: <i>Kaloillaicho</i></p> <p>Physical description: <i>Mashru</i> Fragment, cotton warp, cotton weft, satin weave, Stripe <i>Mashru</i> fragment in black base with narrow yellow stripe outlined in red.</p> <p>Place of origin: Mandavi (Kutch-Bhuj)</p> <p>Date: Late 20th century</p> <p>Artisan/Maker: Unknown, sourced from Mamtora Weaving Company, Mandvi, Kutch-Bhuj</p> <p>Materials and techniques: woven, cotton warp and weft.</p> <p>Fabric width: 22 Inches</p> <p>Intended use: Garment, blouse</p>
	<p>12: <i>Kaloillaicho Mashru</i></p>
	<p>Design Name: <i>Kamkhi/Illaicho</i></p> <p>Physical description: <i>Mashru</i> Fragment, cotton warp, cotton weft, satin weave, Stripe <i>Mashru</i> fragment in red colour with fine white stripe</p> <p>Place of origin: Mandavi (Kutch-Bhuj)</p> <p>Date: Late 20th century</p> <p>Artisan/Maker: Unknown, sourced from Mamtora Weaving Company, Mandvi, Kutch-Bhuj</p> <p>Materials and techniques: woven, cotton warp and weft.</p>
<p>13. <i>Kamkhi/Kanjari Mashru</i></p>	

	<p>Fabric width: 22 Inches</p> <p>Intended use: Backless blouse, <i>Kanjari</i></p> <p>* As per Irwin (1995 & 1996), it is known as <i>Alacha</i>, during survey also it was found under the names of <i>Ilaicho</i> as well as <i>Kamkhi</i> or <i>Kanjari</i>. The name <i>Kanjari</i> possibly has been named on basis of its use in backless blouses worn by local community of Kutch-Bhuj. The name <i>Alacha</i> is also similar to <i>Ilaicho</i>. In turkey these fabrics are known as <i>Meydaniye</i> and <i>Kutnu</i> (Esirgenler, 2016).</p>
 <p>14. Kelaphali Mashru</p>	<p>Design Name: <i>Kelaphali</i></p> <p>Physical description: <i>Mashru</i> Fragment, cotton warp, cotton weft, satin weave, Stripe <i>Mashru</i> fragment in brown colour with fine yellow stripe and alternate decorative twill and rib stripe.</p> <p>Place of origin: Mandavi (Kutch-Bhuj)</p> <p>Date: Late 20th century</p> <p>Artisan/Maker: Unknown, sourced from Mamtora Weaving Company, Mandvi, Kutch-Bhuj</p> <p>Materials and techniques: woven, cotton warp and weft.</p> <p>Fabric width: 22 Inches</p> <p>Intended use: Garment</p>
 <p>15. Dhali Mashru</p>	<p>Design Name: <i>Dhali</i></p> <p>Physical description: Stripe <i>Mashru</i> Fragment, cotton warp, cotton weft, satin weave with decorative twill weave, Stripe <i>Mashru</i> fragment in alternate red and green stripe, stripe separated by decorative twill weave outlined with yellow colour in either side.</p> <p>Place of origin: Mandavi (Kutch-Bhuj)</p> <p>Date: Late 20th century</p> <p>Artisan/Maker: Unknown, sourced from Mamtora</p>

	<p>Weaving Company, Mandvi, Kutch-Bhuj</p> <p>Materials and techniques: woven, cotton warp and weft.</p> <p>Fabric width: 21.75 Inches</p> <p>Intended use: Garment, <i>Pachedi</i></p>
 <p>16. Panchrangi Mashru</p>	<p>Design Name: <i>Panchrangi</i></p> <p>Physical description: <i>Mashru</i> Fragment, cotton warp, cotton weft, satin weave, Stripe <i>Mashru</i> fragment in multicolour (five colour) stripe of red, violet, yellow and green, each colour separated by decorative twill stripe of yellow-black and white-red surrounded by fine black, yellow and red colour.</p> <p>Place of origin: Mandavi (Kutch-Bhuj)</p> <p>Date: Late 20th century</p> <p>Artisan/Maker: Unknown, sourced from Mamtora Weaving Company, Mandvi, Kutch-Bhuj</p> <p>Materials and techniques: woven, cotton warp and weft.</p> <p>Fabric width: 21.75 Inches</p> <p>Intended use: Garment, <i>Pachedi</i></p>
 <p>17. Stripe Mashru Design variation</p>	<p>Physical description: <i>Mashru</i> Fragment, cotton warp, cotton weft, satin weave, Stripe <i>Mashru</i> fragment in multicolour band of red, maroon, yellow, crimson, violet, green and black of equal width</p> <p>Place of origin: Godhra (Kutch-Bhuj)</p> <p>Date: Early 21st century</p> <p>Artisan/Maker: Unknown, sourced from Mamtora Weaving Company, Mandvi, Kutch-Bhuj</p> <p>Materials and techniques: woven, cotton warp and weft.</p> <p>Fabric width: 22 Inches</p> <p>Intended use:</p> <p>Intended use: Garment</p>

	<p>* Above design seems to be minimalistic manifestation of harmonious & malleable colour. However, its patterning is quite tricky. At a glance it appear mere repetition of multiple warm colour with an stroke of cool - green colour but if observed intricately it offers a broad repeat that holds the viewer for a while to understand. This shows the dexterity of artisan in creating such a piece of fabric which is visually simple yet complex in understanding.</p>
 <p>Plate 18: Stripe <i>Mashru</i> Design variation</p>	<p>Physical description: <i>Mashru</i> Fragment, cotton warp, cotton weft, satin weave, multicoloured Stripe <i>Mashru</i> fragment in subsequent white, yellow, black, red and green band</p> <p>Place of origin: Don village (Kutch-Bhuj)</p> <p>Date: Early 21st century</p> <p>Artisan/Maker: Bhojraj Bhai, Don village, Kutch-Bhuj</p> <p>Materials and techniques: woven, cotton warp and weft.</p> <p>Fabric width: 22 Inches</p> <p>Intended use: Garment</p>
 <p>19: <i>Khumri</i> stripe <i>Mashru</i></p>	<p>Design Name: <i>Khumri</i></p> <p>Physical description: Stripe <i>Mashru</i> Fragment, cotton warp, cotton weft, satin weave in base with rib as decorative stripe, <i>Mashru</i> fragment in maroon base with yellow, black and white mirror patterned stripe, narrow stripes separated by decorative rib in yellow and black</p> <p>Place of origin: Mandavi (Kutch-Bhuj)</p> <p>Date: Late 20th century</p> <p>Artisan/Maker: Unknown, sourced from Mamtora Weaving Company, Mandvi, Kutch-Bhuj</p> <p>Materials and techniques: woven, cotton warp and weft.</p>

	<p>Fabric width: 22 Inches Intended use: Garment, blouse</p>
 <p>20. Khajoori stripe Mashru</p>	<p>Design Name: <i>Khajoori</i> design variation Physical description: Stripe <i>Mashru</i> Fragment, rayon warp, cotton weft, satin weave in base with decorative twill, Multicoloured <i>Mashru</i> fragment in ochre, variation of blue and red. Each coloured band separated with decorative twill outlined in sharp ochre/red and black stripe on either side. Place of origin: Patan Date: Early 21st century Artisan/Maker: Janak Bhai Khatri, Patan Materials and techniques: woven, rayon warp and cotton weft. Fabric width: 36 inches Intended use: Dress material</p>
 <p>21: Stripe Mashru fabric</p>	<p>Design name: Unknown (stripe <i>Mashru</i> fabric) Physical description: <i>Mashru</i> Fragment, rayon warp, cotton weft, satin weave for ground & rib weave in fine line for ornamentation. Stripe <i>Mashru</i> fragment in bright maroon base separated by fine yellow & black decorative rib, border on either side in dark green colour with cluster of alternate maroon & yellow fine stripe on either side followed by fine rib line. Place of origin: Patan Date: Late 20th century Artisan/Maker: Janak Bhai Khatri, Patan Materials and techniques: woven, rayon warp and cotton</p>

	<p>weft.</p> <p>Fabric width: 36 inches</p> <p>Intended use: Used during marriages to knot of bride & groom</p>
 <p>22. Gulabi Katatia stripe</p>	<p>Design name: <i>Gulabi Katatia</i></p> <p>Physical description: <i>Mashru</i> Fragment, rayon warp, cotton weft, satin weave for ground & rib weave in narrow stripe for ornamentation.</p> <p>Stripe <i>Mashru</i> fragment in pink base with cluster of narrow yellow, red, green and yellow stripes. Narrow stripes separated by decorative rib of yellow and red.</p> <p>Place of origin: Patan</p> <p>Date: Late 20th century</p> <p>Artisan/Maker: Janak Bhai Khatri, Patan</p> <p>Materials and techniques: woven, rayon warp and cotton weft.</p> <p>Fabric width: 36 inches</p> <p>Intended use: Garment</p>
 <p>23. Khajoori design variation</p>	<p>Design name: <i>Khajoori</i> design variation</p> <p>Physical description: <i>Mashru</i> Fragment, rayon warp, cotton weft, satin weave for ground & decorative twill (<i>Khajoori</i>) in narrow stripe.</p> <p>Stripe <i>Mashru</i> fragment in red, ochre, blue & green coloured bands, these bands divided from centre with mirror patterned white and red/blue. Coloured bands separated from each other with <i>Khajoori</i> outlined with fine satin stripe.</p> <p>Place of origin: Patan</p> <p>Date: Early 21st century</p> <p>Artisan/Maker: Janak Bhai Khatri, Patan</p>

	<p>Materials and techniques: woven, rayon warp and cotton weft.</p> <p>Fabric width: 36 inches</p> <p>Intended use: Dress material</p>
 <p>24. Stripe <i>Mashru</i> design variation</p>	<p>Design name: Stripe <i>Mashru</i> design</p> <p>Physical description: <i>Mashru</i> Fragment, silk warp, cotton weft, satin weave for ground as well for ornamentation. Stripe <i>Mashru</i> fragment in light blue base with fine consequent stripe of bright yellow, blue, red, black and maroon</p> <p>Place of origin: Patan</p> <p>Date: Early 21st century</p> <p>Artisan/Maker: Janak Bhai Khatri, Patan</p> <p>Materials and techniques: woven, silk warp and cotton weft.</p> <p>Fabric width: 36 inches</p> <p>Intended use: Dress material</p>
 <p>25. Stripe <i>Mashru</i> design</p>	<p>Design name: Stripe <i>Mashru</i> design</p> <p>Physical description: <i>Mashru</i> Fragment, rayon warp, cotton weft, satin weave for ground & as well as for ornamentation. Stripe <i>Mashru</i> fragment in ochre and black coloured bands. Ochre band divided by finer, lighter ochre stripe of ochre & white. Similarly black band divided by pink and white. The major two colours separated by mirror patterned black & ochre stripe.</p> <p>Place of origin: Patan</p> <p>Date: Late 20th century</p>

	<p>Artisan/Maker: Janak Bhai Khatri, Patan</p> <p>Materials and techniques: woven, rayon warp and cotton weft.</p> <p>Fabric width: 36 inches</p> <p>Intended use: Garment</p>
 <p>26. Stripe <i>Mashru</i> design</p>	<p>Design name: Stripe <i>Mashru</i> design</p> <p>Physical description: <i>Mashru</i> Fragment, rayon warp, cotton weft, satin weave for ground as well as for ornamentation.</p> <p>Stripe <i>Mashru</i> fragment in multicolour – ochre, white, green, yellow, maroon, blue and red, of varying width in mirror pattern</p> <p>Place of origin: Patan</p> <p>Date: Late 20th century</p> <p>Artisan/Maker: Janak Bhai Khatri, Patan</p> <p>Materials and techniques: woven, rayon warp and cotton weft.</p> <p>Fabric width: 36 inches</p> <p>Intended use: Dress material</p>
 <p>27. Stripe <i>Mashru</i> design</p>	<p>Design name: Stripe <i>Mashru</i> design</p> <p>Physical description: <i>Mashru</i> Fragment, rayon warp, cotton weft, satin weave for ground & rib weave in narrow stripe for ornamentation.</p> <p>Stripe <i>Mashru</i> fragment in multicolour – dark blue, yellow, black, green, blue and orange, these bands divided at centre with decorative rib in alternate colours, each coloured band outlined with fine – white satin stripe.</p> <p>Place of origin: Patan</p> <p>Date: Late 20th century</p> <p>Artisan/Maker: Janak Bhai Khatri, Patan</p>

	<p>Materials and techniques: woven, rayon warp and cotton weft.</p> <p>Fabric width: 36 inches</p> <p>Intended use: Dress material</p>
 <p>28. Tangadu Ikat Mashru</p>	<p>Design name: <i>Tangadu</i> (Ikat Mashru design)</p> <p>Physical description: <i>Ikat Mashru</i> Fragment, silk warp, cotton weft, satin weave for ground, rib weave in narrow stripe for ornamentation & also for separating <i>ikat</i> with solid dyed base.</p> <p>Stripe <i>Mashru</i> fragment in red base with fine yellow, red & yellow mirror patterned stripe, fine stripes accompanied by decorative rib & <i>Ikat</i> in black & white.</p> <p>Place of origin: Possibly from Mandavi (Kutch-Bhuj)</p> <p>Date: Late 20th century</p> <p>Artisan/Maker: Unknown, sourced from Mr. Wzir, an artefact collector from Bhuj</p> <p>Materials and techniques: woven, silk warp and cotton weft, <i>Ikat</i></p> <p>Fabric width: 22 inches</p> <p>Intended use: Garment, blouse, drawstring trouser</p>
 <p>29. Ikat Mashru</p>	<p>Design name: <i>Ikat Mashru</i></p> <p>Physical description: <i>Mashru</i> Fragment, rayon warp, cotton weft, satin weave for ground, rib weave in narrow stripe for ornamentation & for separating <i>ikat</i> with solid dyed base.</p> <p>Stripe <i>Mashru</i> fragment in light turquoise blue base with <i>Ikat</i> stripe in white and beige, <i>Ikat</i> stripe accompanied by decorative rib from either side in yellow and black.</p> <p>Place of origin: Possibly from Patan</p> <p>Date: Late 20th century</p> <p>Artisan/Maker: Unknown, sourced from Mr. Wzir, an</p>

	<p>artefact collector from Bhuj</p> <p>Materials and techniques: woven, rayon warp and cotton weft, <i>Ikat</i></p> <p>Fabric width: Possibly 22 inches</p> <p>Intended use: Chania (long traditional skirt)</p>
 <p>30. <i>Ikat Mashru</i></p>	<p>Design name: <i>Ikat Mashru</i></p> <p>Physical description: <i>Mashru</i> Fragment, silk warp, cotton weft, satin weave for ground, rib weave in narrow stripe for ornamentation & separating <i>ikat</i> with solid dyed base. Stripe <i>Mashru</i> fragment in purple base with cluster of finer stripes in light yellow, decorative rib of light yellow & black, <i>ikat</i> in light yellow – blue and light yellow-purple in mirror pattern.</p> <p>Place of origin: Possibly from Mandavi (Kutch-Bhuj)</p> <p>Date: Late 20th century</p> <p>Artisan/Maker: Unknown, sourced from Mr. Wzir, an artefact collector from Bhuj</p> <p>Materials and techniques: woven, <i>Ikat</i>, silk warp and cotton weft.</p> <p>Fabric width: 22 inches Intended use: Garment</p>
 <p>31. <i>Ikat Mashru</i> design</p>	<p>Design name: <i>Ikat Mashru</i></p> <p>Physical description: <i>Mashru</i> Fragment, silk warp, cotton weft, satin weave for ground, rib weave in narrow stripe for ornamentation & separating <i>ikat</i> with solid dyed base. Stripe <i>Mashru</i> fragment in magenta base with equidistant orange and off white <i>Ikat</i> stripes, <i>Ikat</i> & magenta stripe separated by decorative rib of yellow and orange & outlined in yellow from either side.</p> <p>Place of origin: Possibly Kutch-Bhuj</p> <p>Date: Late 20th century</p>

	<p>Artisan/Maker: Unknown, sourced from Mr. Wzir, an artefact collector from Bhuj</p> <p>Materials and techniques: woven, rayon warp and cotton weft.</p> <p>Fabric width: 36 inches Intended use: Garment</p>
 <p data-bbox="310 867 526 898">32. <i>Ikat Mashru</i></p>	<p>Design name: <i>Ikat Mashru</i></p> <p>Physical description: <i>Mashru</i> Fragment, silk warp, cotton weft, satin weave for ground, rib weave in narrow stripe for ornamentation & separating <i>ikat</i> with solid dyed base. Stripe <i>Mashru</i> fragment in orange base with equidistant green and off white <i>Ikat</i> stripes, <i>Ikat</i> & orange stripe separated by decorative rib of yellow and black & outlined in yellow from either side.</p> <p>Place of origin: Possibly Kutch-Bhuj</p> <p>Date: Late 20th century</p> <p>Artisan/Maker: Unknown, sourced from Mr. Wazir, an artefact collector from Bhuj</p> <p>Materials and techniques: woven, rayon warp and cotton weft.</p> <p>Fabric width: 36 inches Intended use: Garment</p>
 <p data-bbox="240 1696 597 1766">33. <i>Barashai Butti Mashru variation</i></p>	<p>Design name: <i>Barashai Butti Mashru</i> variation</p> <p>Physical description: <i>Mashru</i> Fragment, silk warp, cotton weft, satin weave for ground, rib weave and <i>Ikat</i> in narrow stripe for ornamentation & separating <i>Butti</i> with base. Stripe <i>Mashru</i> fragment in magenta base with mirror patterned stripes containing fine black line in satin, narrow yellow line in satin, decorative rib in black & yellow outlined with fine black, <i>ikat</i> in yellow & black and <i>Barashahi Butti</i>.</p> <p>Place of origin: Possibly Kutch-Bhuj</p>

	<p>Date: Late 20th century</p> <p>Artisan/Maker: Unknown, sourced from Mr. Wzir, an artefact collector from Bhuj</p> <p>Materials and techniques: woven, silk warp and cotton weft.</p> <p>Fabric width: 22 inches</p> <p>Intended use: Garment</p>
 <p>34. Barashai Butti Mashru variation</p>	<p>Design name: <i>Barashai Butti Mashru</i> variation</p> <p>Physical description: <i>Mashru</i> Fragment, silk warp, cotton weft, satin weave for ground, rib weave in narrow stripe for ornamentation & separating <i>ikat</i> with solid dyed base. Stripe <i>Mashru</i> fragment in magenta base with mirror patterned stripes containing fine stripes of magenta, narrow stripes of light yellow in gradation, decorative rib in magenta & light yellow, <i>Ikat</i> in blue & light yellow and <i>Barashahi</i> motif.</p> <p>Place of origin: Possibly from Kutch-Bhuj</p> <p>Date: Late 20th century</p> <p>Artisan/Maker: Unknown, sourced from Mr. Wazir, an artefact collector from Bhuj</p> <p>Materials and techniques: woven, rayon warp and cotton weft.</p> <p>Fabric width: 22 inches</p> <p>Intended use: Garment</p>

Source: *Mashru* swatch/image collected during field visit

In the description of *Mashru* designs collected during field visit in above table, it can be seen that, its distinguishing patterns like *Kataria*, *Khajoori*, decorative satin were repeatedly used in different varieties of *Mashru*. However, *Khanjari* and other *Ikat* patterns were very less visible. These all samples were mainly collected from Patan and Kutch-Bhuj. In above samples, we can see that stripe category were more dominating, *Ikat* and *Butti* varieties were very less visible. Sourced *Ikat* variety of samples were quite older and from no such samples were collected from recent period. This showed that, *Ikat* variety is no more made at present.

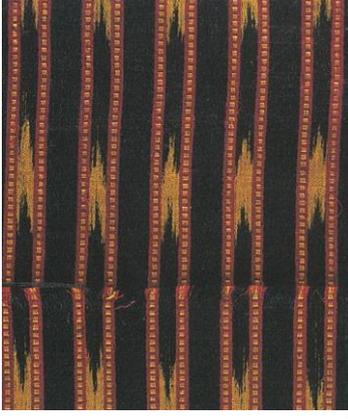
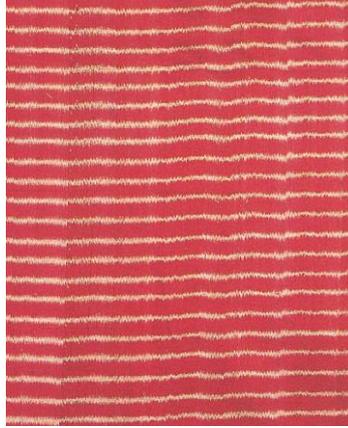
Among the recent sample of *Butti* variety, mainly *Danedar* and *Saatdhani* were seen. Other sourced *Butti* samples were quite old, again no more into practice. In terms of colour, use of traditional colour were mainly seen except *Danedar* design variety where several new colours like light purple, light blue, light colour were observed.

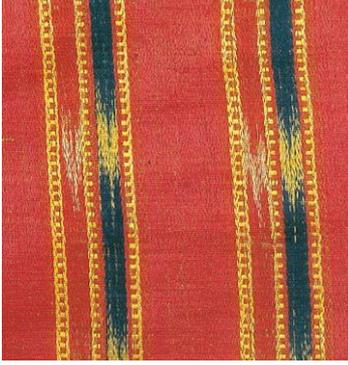
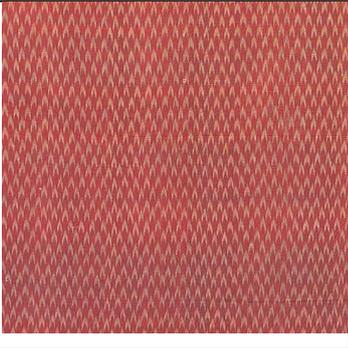
4.3.7: Study of old *Mashru* designs & their comparison with new *Mashru* designs

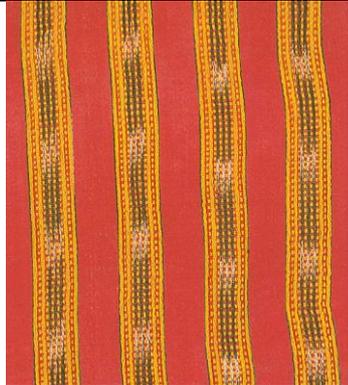
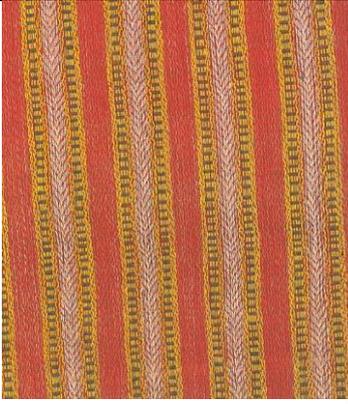
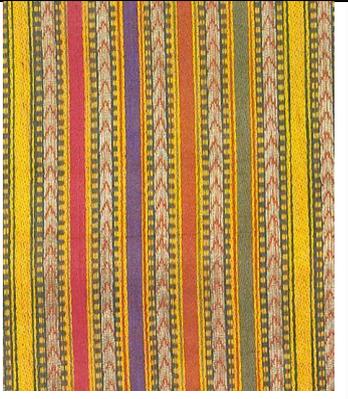
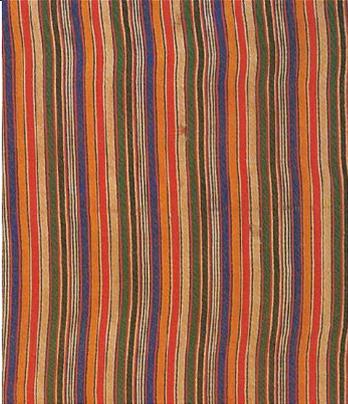
4.3.7: a: Study of old *Mashru* designs

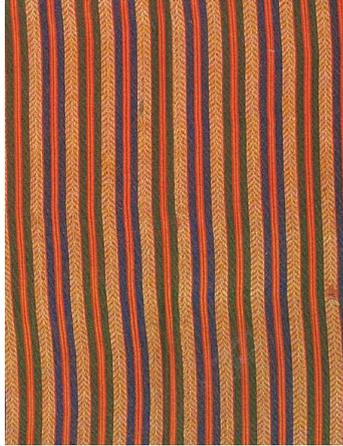
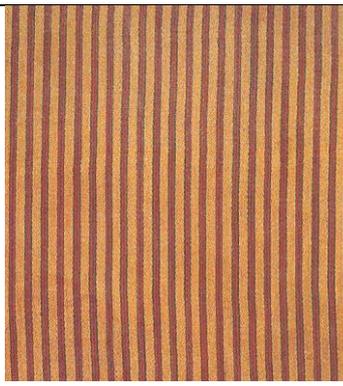
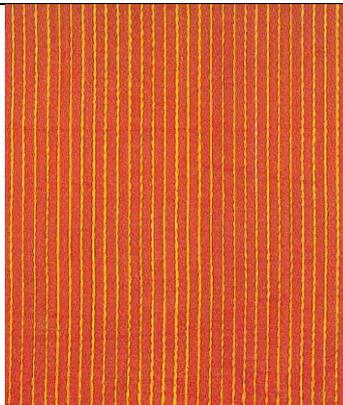
In addition to above description of the *Mashru* Samples (under previous head) procured during field visit, several samples were also studied from secondary sources like books, articles and digital museums. Among all secondary sources, information shared by **Buhler (1980)**, **Ali (1900)**, **Murphy & Crill (1991)**, **Hatanka (1996)**, **Kacker (1994)**, **Frater (2003)** & **Victoria & Albert Museum** were found very useful. These secondary references were presented here with the view to understand comparative changes that had taken in visual characteristic of *Mashru* in its due course.

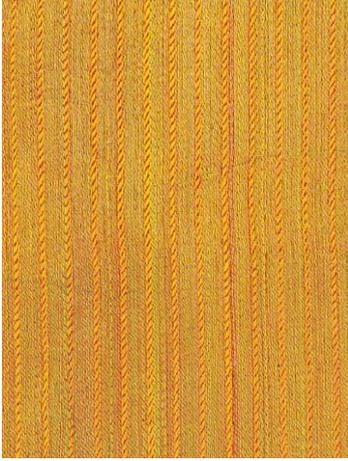
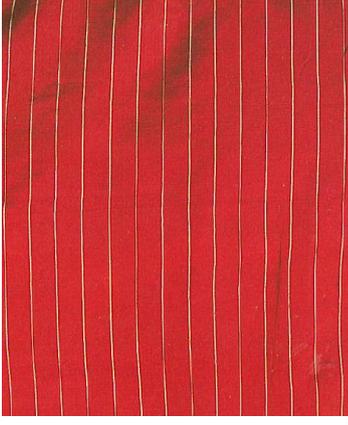
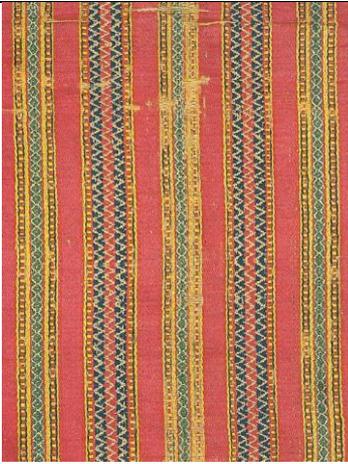
Table 4.11: Study of *Mashru* features from the plates of Textile Arts of India, Hatanka, 1996

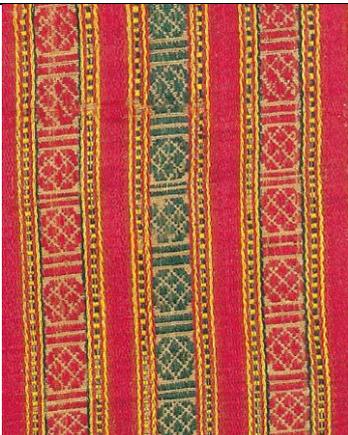
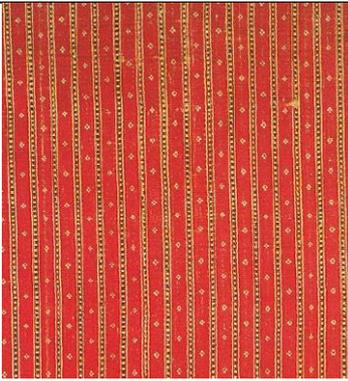
Specimen. No.	Specimen variety	<i>Mashru</i> specimen	Place of origin & date	Material, Techniques & description
1	<i>Ikat (Khanjari) Mashru</i>		Jaipur (Rajasthan) 19 th century	Silk, resist dyed, Warp <i>Ikat</i> , satin weave, <i>Ikat Mashru (Khanjari)</i> design with continuous zigzag (<i>Chevron</i>) pattern running through entire width.
2	<i>Ikat Mashru</i>		South India Late 19 th century	Silk warp & cotton weft, resist dyed, warp <i>Ikat</i> & supplementary warp in satin weave. Black base alternating with beige chevron outlined within decorative fine stripe of red and beige.
3	<i>Ikat Mashru</i>		South India 1 st half of 20 th century	Silk warp & cotton weft, resist dyed, warp <i>Ikat</i> in satin weave, bright red base with white <i>Ikat</i> running in continuity throughout fabric width.

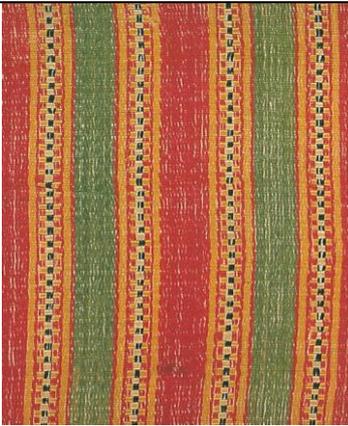
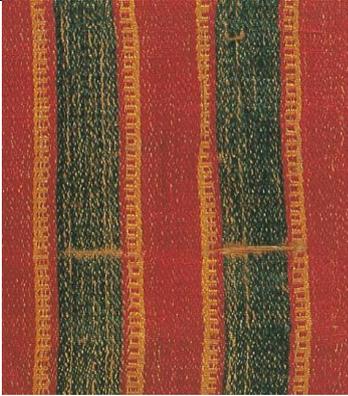
4	<i>Ikat Mashru</i>		Gujarat, Rajasthan Late 19 th century	Silk warp & cotton weft, resist dyed, warp <i>Ikat</i> & supplementary warp in satin weave. Red base alternating with adjacent <i>Ikat</i> stripe of red & white, blue and yellow outlined within fine red and yellow supplementary warp strip.
5	<i>Ikat Mashru (Khanjari)</i>		Jaipur, Rajasthan 19 th century	Silk, resist dyed warp <i>Ikat (Khanjari)</i> , red base with white <i>Khanjari Ikat</i> placed in block pattern throughout fabric.
6	<i>Ikat Mashru (Khanjari)</i>		Jaipur, Rajasthan Late 19 th century	Silk, Warp <i>Ikat</i> , resist dyed, <i>Khanjari</i> , red base with white <i>Ikat</i> running in continuity throughout fabric width.
7	<i>Ikat Mashru</i>		Hyderabad, Andhra Pradesh Late 19 th century	Silk warp & cotton weft, resist dyed, warp <i>Ikat</i> , supplementary warp in satin weave. Red base with supplementary warp chevron pattern border outlined with fine strips on either side, in field red base alternating with mirror patterned black-white and white-red stripes outlined with decorative strip of black and white from either side.

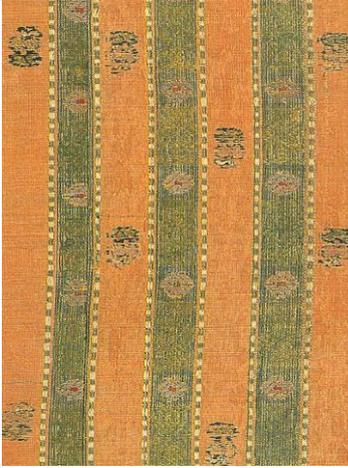
<p>8</p>	<p><i>Ikat Mashru</i></p>		<p>Patan, Gujarat First half of 20th century</p>	<p>Artificial silk warp & cotton weft, resist dyed, warp <i>Ikat</i>, Supplementary warp in satin weave. Red base alternating with cluster of mirror patterned fine black, yellow, red-yellow supplementary strip with alternating black-yellow & red-yellow strip.</p>
<p>9</p>	<p><i>Stripe Mashru (chevron)</i></p>		<p>Gujarat First half of 20th century</p>	<p>silk warp & cotton weft, supplementary warp in satin weave. Red base alternating with white brocade Chevron outlined with fine yellow, black-yellow & yellow stripes from either side.</p>
<p>10</p>	<p><i>Stripe Mashru (chevron)</i></p>		<p>Gujarat First half of 20th century</p>	<p>cotton, Supplementary warp in satin weave. Equal width stripes of bright yellow, red, purple, orange and green alternating with brocade Chevron outlined within black-yellow supplementary warp stripes.</p>
<p>11</p>	<p><i>Stripe Mashru</i></p>		<p>Gujarat First half of 20th century</p>	<p>Artificial silk warp & cotton weft, satin weave. Multicolored stripes of varying width of orange, red, yellow, black, green & purple in repetitive pattern.</p>

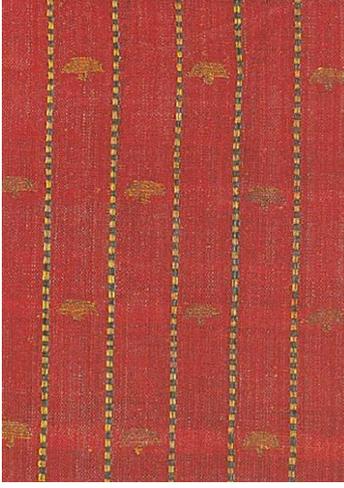
12	Stripe		<p>Gujarat First half of 20th century</p>	<p>Artificial silk warp & cotton weft, supplementary warp in satin weave. Patterned red and purple stripes alternating with golden brocade Chevron.</p>
13	Stripe Mashru		<p>Gujarat First half of 20th century</p>	<p>Artificial silk warp & cotton weft, striped fabric design in alternating colours</p>
14	Stripe Mashru		<p>Patan (Gujarat) First half of 20th century</p>	<p>Artificial silk warp & cotton weft, supplementary warp in satin weave. Green base alternating with decorative red-yellow stripes outlined in fine red.</p>
15	Stripe Mashru		<p>Gujarat Early 20th century</p>	<p>silk warp & cotton weft, satin weave, fine yellow stripe alternating in red base.</p>

16	Stripe <i>Mashru</i>		Gujarat First half of 20 th century	silk warp & cotton weft, supplementary warp alternating with satin stripe.
17	Stripe <i>Mashru</i>		Gujarat 19 th century	silk warp & cotton weft, satin weave, bright red base alternating with fine white stripe.
18	Stripe <i>Mashru</i>		Gujarat Early 19 th century	silk warp & cotton weft, supplementary warp, satin weave. Red base alternating with cluster of chevron pattern in black, red, black outlined in fine red, red-yellow, black & yellow stripe from either side, and cluster of diamond yellow stripe in green base outlined with fine red, yellow, black, red-yellow, black & yellow stripes from either side.

<p>19</p>	<p><i>Stripe Mashru</i></p>		<p>Gujarat (probably) Early 19th century</p>	<p>silk warp & cotton weft, supplementary warp in satin weave, green stripe divided by fine red, white, red stripes in mirror pattern, alternating with diagonal chequered stripe filled with small diamond or circle probably and outlined with fine yellow, black-yellow & red stripes from either side.</p>
<p>20</p>	<p><i>Barashahi Mashru</i></p>		<p>Gujarat Early 19th century</p>	<p>silk warp & cotton weft, supplementary warp in satin weave. Red <i>Mashru</i> alternating with bands of serrated black and red Octagonal diamond motif (<i>Barashahi</i> probably) outlined with fine yellow, red, black-yellow geometric stripes from either side.</p>
<p>21</p>	<p><i>Dana Stripe Mashru</i></p>		<p>Gujarat Early 19th century</p>	<p>silk warp & cotton weft, supplementary warp & continuous supplementary weft in satin weave. Red <i>Mashru</i> with fine mirror patterned vertical stripes in golden, red & black-golden and staggered <i>Dana</i> motifs in golden colour.</p>

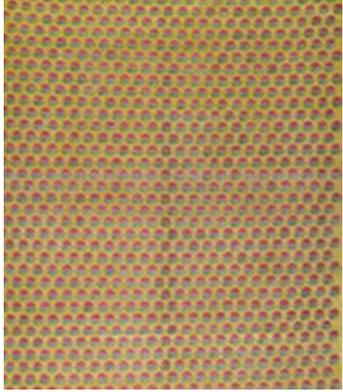
22	Stripe <i>Mashru</i>		Gujarat (probably) First half of 19 th century	silk warp & cotton weft, striped satin weave. <i>Mashru</i> design with alternating green and white stripes running throughout width.
23	Stripe <i>Mashru</i>		Gujarat (probably) First half of 19 th century	silk warp & cotton weft, satin weave. <i>Mashru</i> design with alternating red and white (probably natural silk colour) stripes running throughout width.
24	Stripe <i>Mashru</i>		Gujarat Early 19 th century	silk warp & cotton weft, supplementary warp in satin weave. Alternating red and green stripes divided by mirror patterned stripes of fine red, narrow yellow, fine red and geometric stripe (warp rib) of red-yellow & red-black.
25	Stripe <i>Mashru</i>		Gujarat Early 19 th century	silk warp & cotton weft, supplementary warp in satin weave. Red base with alternate stripe of dark green (probably) outlined with fine geometric stripe of red and golden from either side.

<p>26</p>	<p><i>Stripe Mashru</i></p>		<p>Gujarat 18th century</p>	<p>silk warp & cotton weft, striped satin weave. <i>Mashru</i> design in broad multicoloured striped placed adjacent to each other with narrow two stripes outlined with fine off white or yellow probably.</p>
<p>27</p>	<p><i>Mashru (probably)</i></p>		<p>Northwest India Early 19th century</p>	<p>silk warp & cotton weft, supplementary warp & weft. Striped <i>Mashru</i> in alternate red & blue-coloured stripes outlined with narrow twilled yellow line and flower motif in block repeat within red stripe.</p>
<p>28</p>	<p><i>Mashru (probably)</i></p>		<p>Northwest India 18th century</p>	<p>silk warp & cotton weft, silver thread, discontinuous supplementary weft, supplementary warp. Yellow Base with alternate green stripe outlined with fine yellow and geometric golden and green stripe from either side, floral and octagonal motifs placed within these stripes in block repeat.</p>

29	<i>Stripe Mashru (probably)</i>		Gujarat or Maharashtra 18 th century	silk warp & cotton weft, silk/silver thread, tapestry weave, supplementary warp. Red base with fine geometrical golden & black (probably) line, staggered floral motifs in golden colour within stripes.
30	<i>Butti, Mashru</i>		South India Late 19 th century or early 20 th century	Silk warp & cotton weft, Continuous supplementary weft in satin weave. Staggered linear-diagonal motifs in golden colour in black base.

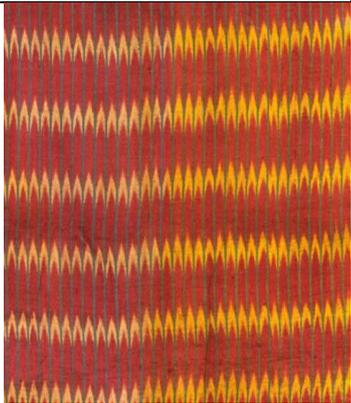
Source: Textile Arts of India (Hatanka, 1996)

Table 4.12: Study of *Mashru* features from the collection of Victoria & Albert Museum

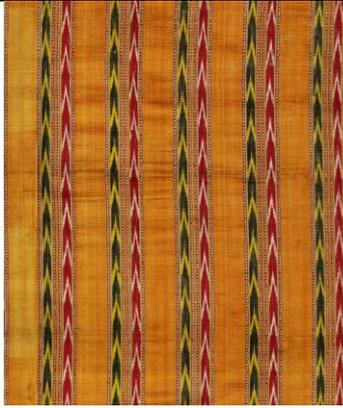
Specimen. No.	Specimen variety	Mashru specimen	Place of origin & date	Material, Techniques & description
1	Brocade <i>Mashru</i>		Hyderabad 1855	Silk warp and cotton weft, satin weave & discontinuous supplementary weft in silk (brocading) in design of small, single green stems with blossoms in red and white on a bright yellow ground.
2	<i>Ikat Mashru</i>		Surat 1855	Silk warp and cotton weft, satin weave, warp <i>Ikat</i> , red stripes alternating with green and blue <i>Ikat</i> stripes with gold-coloured silk, additional gold and black fine stripes
3	Brocade <i>Mashru</i>		Aurangabad 1851	Silk warp and cotton weft, satin weave, discontinuous supplementary weft in silk (brocading) in design of motif, purple base with regular rows of a flower design in pink, white, green and yellow silks.

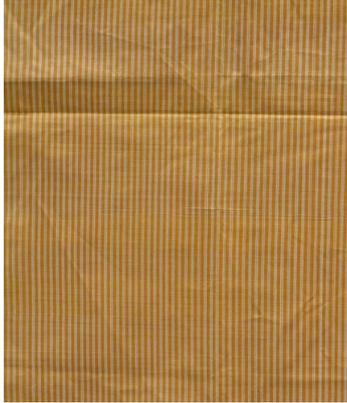
4	Brocade Mashru		Hyderabad 1858	Silk warp and cotton weft, satin weave, brocade, red and green blossoms on white background.
5	Stripe Mashru		Hyderabad 1880	Silk warp and cotton weft, satin weave, white base with equidistant fine green stripes.
6	Ikat Mashru		Tiruchchirapalli 1855	Silk warp and cotton weft, satin weave, warp <i>ikat</i> in continuity throughout width, bright pink warp with white cotton weft.
7	Ikat Mashru		Hyderabad 1880-1882	Silk warp & cotton weft, satin weave, warp <i>Ikat</i> , purple and yellow stripe in silk warp forming a chevron pattern with red cotton wefts.

<p>8</p>	<p><i>Ikat Mashru</i></p>		<p>Aurangabad 1855</p>	<p>Silk warp & cotton weft, satin weave, resist dyed, warp <i>Ikat</i>, equidistant <i>Ikat</i> in vertical bands throughout the fabric width.</p>
<p>9</p>	<p><i>Ikat Mashru</i></p>		<p>Varanasi 1855</p>	<p>Silk warp & cotton weft, satin weave, resist dyed, warp <i>Ikat Mashru</i> fragment with zigzag design running widthwise.</p>
<p>10</p>	<p><i>Ikat Mashru</i></p>		<p>Varanasi 1855</p>	<p>Silk warp & cotton weft, satin weave, resist dyed, warp <i>Ikat</i>, purple base with alternate cluster of <i>Ikat</i> outlined with decorative rib.</p>
<p>11</p>	<p><i>Stripe Mashru</i></p>		<p>Thanjavur 1855</p>	<p>Silk warp & cotton weft, satin weave, orange base with red, white and red mirror patterned fine stripes.</p>

12	<i>Ikat Mashru</i>		Tiruchchirapalli 1855	Silk warp & cotton weft, satin weave, resist-dyed, warp <i>ikat</i> , dark purple ground with white warp- <i>ikat</i> continued chevrons throughout width and narrow vertical stripes of red and yellow.
13	<i>Ikat Mashru</i>		Hyderabad 1880	Silk warp and cotton weft, satin weave, Orange-red and green silk warps and white cotton wefts. Warp <i>ikat</i> chevron design in yellow against orange-red and green vertical stripes.
14	<i>Stripe Mashru</i>		Mandvi (Gujarat) 1867	Silk warp & cotton weft, satin weave, <i>Mashru</i> design with broad red and white stripes, alternating with narrower red, black and yellow stripes
15	<i>Stripe Mashru</i>		South India 1855-1879	Silk warp & cotton weft, satin weave, equal-width stripe in dark pink, purple, green with yellow stripes & the yellow stripes containing a geometric design

<p>16</p>	<p><i>Ikat Mashru</i></p>		<p>Madras 1855</p>	<p>Silk warp & cotton weft, satin weave, resist dyed, warp <i>Ikat</i>, woven with diagonal serrated stripes of pink and white (in <i>Ikat</i>) and with narrow vertical stripes of dark blue and yellow.</p>
<p>17</p>	<p><i>Brocade Mashru</i></p>		<p>Madras (Probably) 18th century- early 19th century</p>	<p>Silk warp & cotton weft, satin weave, vertical stripes decorated with rows of daisy-like flowers created by bands of supplementary patterned weft.</p>
<p>18</p>	<p><i>Ikat Mashru</i></p>		<p>Hyderabad 1880</p>	<p>Silk warp & cotton weft, satin weave, warp <i>ikat</i>, green ground with white warp-<i>ikat</i>, continued chevrons throughout width.</p>
<p>19</p>	<p><i>Ikat Mashru</i></p>		<p>Tiruchchirap palli 1855</p>	<p>Silk warp & cotton weft, satin weave, resist dyed, warp <i>Ikat</i>, <i>Mashru</i> design with pink, white, green and blue stripe, these stripes alternated with warp <i>Ikat</i> of two colours against golden yellow ground.</p>

20	<i>Ikat Mashru</i>		<p>Unknown (India) 1855-1879</p>	<p>Silk warp & cotton weft, satin weave, resist dyed, warp <i>Ikat</i>, orange stripes alternating with green and yellow, and red and white <i>ikat</i> stripes with narrow red borders.</p>
21	<i>Brocade Mashru</i>		<p>South India (probably) 1850-1879</p>	<p>Silk warp, cotton weft, metal-wrapped thread, satin weave and brocade technique, <i>Mashru</i> design with floral brocade motifs in metal-wrapped thread within vertical stripes of red and yellow silk & purple silk base and black cotton wefts.</p>
22	<i>Stripe Mashru</i>		<p>Unknown (possibly South India) 1855 - 1879</p>	<p>Silk warp & cotton weft, satin weave, red with green stripes with chevrons. The specialty of this chevron is that they are woven, not <i>Ikat</i> made.</p>
23	<i>Ikat Mashru</i>		<p>Tanjore Mid19th century (made)</p>	<p>Silk warp & cotton weft, satin weave, resist dye, warp <i>Ikat</i>, yellow stripe with band of red and white arrow-head <i>Ikat</i>.</p>

24	Stripe <i>Mashru</i>		Gujarat 1855-1879	Silk warp & cotton weft, satin weave, <i>Mashru</i> design with yellow and white stripes throughout width.
25	Brocade <i>Mashru</i>		Tiruchchirapalli 1855	Silk warp & cotton weft, satin weave, gold-wrapped thread, woven, <i>Mashru</i> with red, green and yellow stripes, alternating with motifs woven in yellow and gold-wrapped thread.
26	Stripe <i>Mashru</i>		India 1855 - 1879	Silk warp & cotton weft, <i>Mashru</i> design with narrow patterned stripes in red, gold and blue in all over.
27	Brocade <i>Mashru</i>		Ahmadabad 1854	Silk warp & cotton weft, satin weave, <i>Mashru</i> in red and yellow stripes alternating with bands of pink and blue flowers

28	<i>Brocade Mashru</i>		South India 1855-1879	Silk warp & cotton weft, gold-wrapped thread, satin weave, red <i>Mashru</i> , with chevron stripes of black and gold-wrapped thread, alternating with rows of gold <i>Buta</i> and circular <i>Butti</i> .
29	<i>Brocade Mashru</i>		Thanjavur 1855	Silk warp, cotton weft, gold-wrapped thread, brocade, satin weave, purple <i>Mashru</i> with white vertical stripes and staggered circular motifs in gold-wrapped thread within stripes.
30	<i>Brocade Mashru</i>		Thanjavur 1855-1879	Silk warp & cotton weft, satin weave, brocade, <i>Mashru</i> design in black with alternating stripes of red and orange silk and white flowers.
31	<i>Brocade Mashru</i>		Hyderabad 1855	Silk warp, cotton weft, gold-wrapped thread, brocade, satin weave with flowers staggered in purple, blue, green and gold-coloured silk thread throughout fabric.

32	<i>Ikat Mashru</i>		South India 1867	Silk warp & cotton weft, stripe <i>Mashru</i> design with vertical and horizontal <i>Ikat</i> stripes. The vertical stripes have a small <i>Ikat</i> design in red with yellow and pink borders, the horizontal serrated stripes are alternately red and white, black and yellow and purple and white.
33	<i>Brocade stripe Mashru</i>		Madras 1855	Silk warp & cotton weft, satin weave, brocade, <i>Mashru</i> design with red, green, orange and white stripes, with woven leaf pattern in the white stripes.
34	<i>Brocade stripe Mashru</i>		Aurangabad 1855-1879	Silk warp & cotton weft, satin weave, green <i>Mashru</i> brocaded with horizontal zigzag bands in silver-wrapped thread.

Source: Victoria & Albert Museum

Motif, technique, Pattern and designs of handloom products are their silent features which gives them a mark of differentiation. In *Mashru* these features were found recurring yet stimulating, individualistic and at the same time general to more than one center. However, these set of characteristics had given them a mark of association to its appreciator and user to connect with these specific textiles. As any change is inevitable owing to existing situation and system, *Mashru* too undergone many changes like material & process, lapse of specific techniques and

even impetus behind weaving which has brought change in its motif, pattern, layout, texture, perceived colour, user perception and overall visual sensibility. Certainly, it has lost specific techniques and few visual elements of identification; still, it is appreciable to view its constant effort to keep its essence, style and iconography alive. This had enabled *Mashru* to persist regardless of inevitable problems, transformations from time to time.

4.3.7: b: Comparative study of *Mashru* with reference to older *Mashru* plates

The study of old procured samples and archive plates divulge more complex and precise use of technique, patterns and decorative motifs compared to what artisans are crafting today. One of the artifact collectors from Bhuj stated that the lesser the width, the older the swatch is. Many a times two fabrics were joined together to get the required width. During researcher's visit to the several *Mashru* weaving pockets, it was found that the technically rich artifacts found in the archives were almost obsolete. It showed how earlier generation must have had better skill, composition sense and understanding of technique. The older designs were found aesthetically very appealing, they were either found highly intricate, complex and decorative or vice versa reflecting minimalistic approach. colours too seemed comparatively subdued, subtle and less pronounced. During nineteenth century when chemical dyes were introduced it were rapidly accepted in market in lieu of cost, fastness, chromatic variation and ease of use. *Mashru* didn't remain impervious to it. This gave very pronounced and loud appeal to *Mashru*. Although hues used didn't changed much but their temperament changed a lot.

The advent of manufactured yarn propelled silk warp replacement by rayon, allowing cheaper price of production and faint of its primal appeal. Thus, strengthening the overstated appeal of *Mashru*, what we observe today, yet maintaining its delicate side.

Another shift in warp content was towards cotton. This is a matter of inquiry whether it had been invigorated or had been a change. Whatever, it might have been but the important concern is the change in user perception, lower perceived value of craft has impelled this change. It also had a positive side that cotton had been a native material for Gujarat, well honored among Gujarati populace. This had added an assenting dimension to the craft, something local as well as suitable as per climatic condition. So, not going away from the function of craft it has sustained its value among local users and gradually also percolated to certain extent among urban users who were influenced by ethnic chic - fashion.

Gradually, the elaborative-intricate designs were observed to be replaced by fast doing patterns, with time it turned simple – compromising with its core essence; innovating labor saving and speedier method of fabric production. This has “lapsed the skill” and “ability to make elaborative-exhaustive designs” which their forefathers were making; resulting in making “simple designs” only. Its outcome majorly focused on striped patterns mainly, creating a huge gap of craftsmanship. Therefore, from researcher’s observation not all but many newer *Mashru* patterns seem to be brash and reflection of soiled authenticity rather than local identity and regional decorative topologies.

The move towards simple designs, headed towards loss of brocade technique also. The subtle and delicate beauty of brocade *Mashru* (**Table 4.10: 33, 34; Table 4.11: 20, 27, 28, 29, 30; Table 4.12: 1, 3, 4, 17, 21, 25, 28, 29**) does not exist anymore. Today’s *Mashru* motifs are limited to firm aesthetics of geometric motifs like *Danedar* or *Saadhani* (**Table 4.10: 1, 2, 3, 33**) in bold style only. In certain designs (**Table 4.12: 3, 17, 31**) we can experience the immaculate craftsmanship of artisan where through *Meenakari*, strength had been tactfully incorporated in motifs by binding outline in motifs, without compromising its aesthetics. This discreet skill also lapsed, not seen any more.

Although in due course of voyage of *Mashru* a lot has changed, but at the same time, a lot remained unchanged which can be seen into practice at present also. In this concern few of the designs like *Illaicho*, *Panchrangi* can be related. In *Illaicho Mashru*, also known as *Kamkhi* or *Kanjari*, overall colour combination, pattern & depth remained same. However, material has changed. At present it is mainly found in cotton warp (**Table 4.10: 13**) instead of silk warp (**Table 4.11: 17**). Similarly, in older and newer *Panchrangi Mashru* images, we can see the evolutionary change of this design. Almost, colour and pattern remained same, golden warp colour had been replaced by white cotton, and pointed Chevron was changed to diagonal lines. However, present design (**Table 4.10: 16**) also rotates around aesthetics of older *Mashru* plate (**Table 4.11: 10**).

The woven chevron pattern (decorative twill) and dual coloured stripe (decorative rib) has remained prominent in *Mashru* today also. Another major feature of stripes that had remained same is the use of stripes outlined by fine line of other contrast colour. This style of pronouncing the brightness of colour through outline has remained same.

One of the major changes in terms of progression had been increase of fabric width. No doubt today also smaller widths (22 inches) of fabrics are made in certain varieties like *Danedar* and

Butti. However, in most of the varieties it is being woven in thirty-six inches, facilitating its scope in diverse products which requires larger width of fabric.

The disposition of colours seen today in comparison to past had changed a lot. Like, red is no more the same red, yellow is no more the same yellow. Previously colours were bright yet soft, quiet, fuller and effective. Today also colours are bright but strident, amplified and deficient. The number of colours used in *Mashru* at present has increased considerably. However, in few of its specific designs like *Paanchpata*, *Panchrangi* etc. numerous colours had been used previously also in a unique manner highlighting each colour's individuality. Today, specifically in Kutchi *Mashru*, a burst of enormous pattern & colours are into usage, not much upholding the design principle of traditional *Mashru*. Overall, in archive samples, the selected colours & created contrast were steep not harsh, daring not unsettling with juxtaposition of warm & gentle colour whereas these characters were found missing to certain extent in recent development. In addition to this several new colours or variation of traditional colours had also been seen like light purple, chocolate brown, peach etc. in present designs. In certain designs attempt to match the urban taste had been made which had also shifted a bit the traditional sensibility of *Mashru* fabrics.

In terms of techniques Ikat seems to be disappeared in recent *Mashru* samples. However, in older specimen its relentless striking utilization can be seen from few lines to extensive usage, completely defining fabric spirit through this technique only.

Similarly, in older designs greater emphasis on brocade techniques can be seen. In recent samples it had been limited to few repetitive decorative stripes or rarely used *Buttis* only. Previously it had been the major defining feature of many of the samples. This distinctive technique of framing *Mashru*'s surface had headed towards decline.

Nature of stripes pattern seems to be overstated and flashy in many of recent designs, at times they give feeling of mere multiplication of lines of varied width. However, in archaic samples they seemed to be modest and thoughtful, showing higher level of harmony and rhythm within design elements.

The overall feel of older samples tends to be warmer side due to its tawny character. However, in recent samples it is unclear. It seems to create several appeals based on their colour application like tawny, greenish etc.

Previously use of natural off white or cream colour of warp yarns especially of silk along with others colours created softer contrast and archaic appeal whereas in recent fabrics mainly pure white had been used with other warp colours which have created stiffer contrast, nasty & hasty appeal.

4.3.8: Association of *Mashru* with the monument - *Rani ni Vav*

Previously, the relation between *Mashru* and *Rani ni Vav* were observed from the view of source of inspiration for *Mashru* motifs. However, apart from this, several broader and deeper connections were experienced between them. Symmetry, continuity, rhythm are important touches of this monument which is echoed from its form, structure, carving and relief work. These features too seem to be translated into motifs of *Mashru*, its pattern and its overall characteristics. In *Rani ni vav*– monument repetitive vertical pillars are very prominent feature which seems to be extended in *Mashru* also in form of stripes. These pillars/ stripes create rhythm and harmony, giving a nuance of visual music. Another nuance perceived due to repetition of pillars is dynamism; it can be experienced while being in that monument. Its solicitation can be experienced in *Mashru* as well during weaving where repetitive to and fro movement of hand brings whole body of weaver in motion, action with complete involvement; eyes foreseeing, mind consistently committed, legs moving forward and backward creating musical note, ears enjoying music; keeping awake, alert, on and onto weaver. Thus, this repetition of cyclic process enables tacit expression in form of fabric.

4.3.8: Overall representation of features of *Mashru*

Mashru is fabric encompassing multiple techniques, extending its aesthetics from basic structural weave to decorative surface, from single colour to multiple colours, from solid dyed to resist dyed, from simple stripe to beautifully engrained motif and their vast amalgamations. Due to this adeptness, a variety of visual aspects become the attraction for *Mashru*, one can relish its rhythm, luster, simplicity of design; enabling it to be perfect edifice for physical and psychological interaction. Its unique proposition offers wealth of engagement and nuances depending upon religion, tribe, community etc. Like Muslim philosophy gives different nuance, Hindu philosophy gives a different. The luster of the fabric can be seen as reflection of weaver's hardship and aspiration eliminating negativity from all around. From researcher's perspective union of similar forms to create a motif can be perceived as totality of weaver's community, each unit having similar spirit, belief, expression and common purpose. Therefore, *Mashru* fabrics give an aesthetically crafted layer of experiences symbolically as well as

aesthetically as an amalgamation of many secret /sacred messages, their association, reiteration, expansion and consolidation making its meaning newer and newer. Its overall, features had been summarized below:

Table 4.13: Summary of *Mashru* features

Features of <i>Mashru</i>
<ul style="list-style-type: none"> • Use of bold, bright, highly saturated color palette with major emphasis on use of red, its various tones, yellow, green & purple to create visual symphony. • Colours giving festive and warm sensations. • Colours used are usually of contrasting nature. • Every colour's identity is highlighted. • Positive and negative space equally important & highlighted. • Patterns creating rhythm and musical sensation. • Use of satin weave. • Satin usually composed in twill fashion. • High lustrous appearance. • Different front and back colour (mostly). • Different yarn content in front and back, usually silk in front & cotton in back. • Strong optical movement of colors and pattern. • Use of firm geometric and soft floral motifs • Derivation of geometrical motifs as repetition of self-similar forms (usually). • Self-similar units of motifs often found in some auspicious numbers like seven, twelve. • Use of motifs in symmetrical fashion. • Motifs usually arranged with adequate breathing space, making it soothing and composed. • Motifs usually placed in vertical strand or in block repeat. • Many times, ornamented with dual color chevron Ikat. • Ikat bands are usually found in red, orange, yellow and green color. • Use of woven chevron stripes. • Use of geometric stripes in two colours. • Use of brocade for motifs. • Brocade motifs usually in twill weave.

- Stripes pattern found in wide variation like single repeat throughout width, smaller repeat etc.
- Vertical stripes usually outlined with finer lines from either side.
- Warp *Ikat* patterning usually used in stripes.
- *Ikat* stripes usually outlined with finer lines.
- It's trans-seasonal in nature, suitable for both summer and winter.
- Usually varies from medium to heavy weight fabric.
- Easier to maintain compared to pure silk fabrics.

4.4 Design and development of new *Mashru* fabrics

Handloom weaving of Gujarat holds a great value in domestic and overseas market due to its exclusive design, colour and diversity. Its products had moderately sustained so far coping industrialization, mechanization and liberalization because of its diverse craftsmanship as well as unique sense of aesthetics. Gujarat is such a place where art and craft had been deeply rooted in its daily life and societal setting. It's a matter of distress and exasperates that belonging to such a productive place for crafts, why *Mashru* had been left behind? Why with time, competency & versatility of *Mashru* artisans haven't been polished & innovated according to demand and environment? Pattern of consuming clothes have changed, so technique and materials need to be harmonized accordingly. Why the unique aspects of *Mashru* had not been utilized efficiently to meet present demand? Why the sense of pride in consuming *Mashru* had been diluted at local level? Why the most colourful and vibrant textile of Gujarat has turned dull and spiritless. These all questions gave rise to study the existing state of this crisis (carried out in previous objectives) of *Mashru* & then leading towards design and development of new *Mashru* fabrics for its sustainability. For this understanding of background of Gujarat, user as well as trend was very essential. Hence, starting with understanding of Gujarat, researcher headed towards design development.

We are living in such an epoch where we are blessed with good designs, to a certain extent it is also an outcome of collaboration between artisan and designer. Today's consumers are conscious of materials with what the product is made up of, their physical and sensual appeal, their source, importance, and impact upon maker, user & environment, who made them & how they were made. For extending the craft expressions and aiming contemporary markets collaborative innovation between designer and craftsperson is a major means. For tapping sustainability driven consumers, it can be enabled in composite sense assimilating cultural, social, economic and ecological dimensions of product. Especially for developing countries like India indigenous innovations are incredibly decisive to attain economic and social development. From this perspective, the design and development of *Mashru* fabrics can be found very instrumental in escalating change.

4.4.1 Background of Gujarat and its influence on *Mashru*

The collective landscape of Gujarat can be majorly looked into four cultural regions that are North Gujarat, Kutch-Bhuj, Saurashtra & South Gujarat. Each region shows their unique identities in terms of people, their life and topography. It's a place of coexistence of several religions, communities and tradition but connected with each other through their lifestyle, clothing, language & food. The presence of diverse crafts of Gujarat had been supported by its

dominant business culture & availability of multiple ports; enabling their presence in far distant places. These business linkages influenced locally existing crafts too. From many centuries, *Mashru* textiles had been woven in Kutch-Bhuj & Patan. These two regions fall under two distinct regions of Gujarat. Kutch-Bhuj lies in the extreme frontier of state whereas Patan lies in the center of South Gujarat. Both the centers are weaving *Mashru* following the philosophy of Prohibition of pure silk; however, they carry certain differences and certain similarities in material and visual sensibility of *Mashru* (discussed under **Table 4.9**).

Mashru was previously called as trade textiles. This recognition itself talks out its productivity and scale of business that it must had offered previously. It had represented sophisticated fabric structure, mesmerizing pattern, ornamentation & ergonomic functionality in hot weather as well as under religious constraints. This required huge skill & dexterity that took years of experience. *Mashru* designs were profoundly associated with communities and thus reveal community identity in its colour & pattern. These identities reflect artistic appearance, visual distinctiveness, association with specific culture and religion. However, this identity is found in diluted state at present.

4.4.2 Philosophy behind design innovation in *Mashru*

Any change is inevitable which further influences existing situation and system. Given this, handloom too had been influenced by this inevitable change. So, in due course of change, for any textile it is very crucial to keep its essence, style and iconography alive. It has also been experienced in several instances that in name of handloom product touch of Indianness or stroke of specific craft is given but process is not indigenous which creates trust deficit for sustainability of genuine product. Somewhere intervention seems to be perplexing within originality and commercialization.

Handloom in a true meaning should be about its value, which comes only when we pay for it. ‘What doesn’t cost anything doesn’t worth anything’. Our association with handloom should not be only restricted to commercial & aesthetics aspect only but also to originality considering social, cultural & geographic factors. Similarly, for handloom-design-innovation, innovation should not mean following traditional production technique only, but should go with development of such product which follows traditional technique and at the same time which fit to the traditional product gamut and its visual vocabulary. This will propel user to connect with the specific handloom tradition. Certain set of design elements needs to be common somewhere in its treatment its form, color, layout or any visual element with their guiding

principles. The mantra of repetition can be an effective way to retain, iterate & reflect indigenous style.

Realizing these critical aspects and coming out of superficial and shallow understanding of craft and its dynamic characteristics. Researcher intended for holistic approach where design innovation can be seen as a thread to unite indigenous communities with consumer, a catalyst to boost up cultural fabrication of society, an approach to give pleasure and deeper association of product to its creator as well as user that represent magnificent, majestically rich product and experience. Overall, interlacing social, cultural and economic value altogether. Development of Such *Mashru* fabric that is representative of fine artistry, rich design, aesthetic, wonderful finish, detail, traditional color, enticing texture, generousness, brilliance, elegance, purity, sensuality, spirituality and intellect, at the same time, entailing fusion of tradition and modernity, quest of true community expression, stylization of nature around, representation of life and civilization as whole. This is definitely an ideal situation; however, researcher intended to make sincere effort within available resources.

4.4.3 Approach & basis for design innovation in *Mashru*

Knowledge has significant potential, whether it is artisan's empirical knowledge gained under informal system or designer's knowledge gained under formal system. Each of these knowledges have their own importance, when these two forms of knowledge come together; it heads towards product appropriation, product innovation or a better ecosystem for innovation. It can also be said that collaboration of empirical knowledge and design knowledge brings a balance between craftsmanship and mass production.

Craft has multiple dimensions like aesthetics, skill, creativity, sociology, traditional technology, economy and many more. At the same time just philosophizing things cannot bring substantial benefits to it. Designs & craft together can work together to optimize substantial benefits. In recent studies also lot of impetus had been seen towards collaborative approach of product development where artisan's knowledge had been used in form of action and designer's knowledge had been used in form of ideas, sketches & prototypes. The basic features used for innovation in designing of *Mashru* fabric were through material, production techniques and product variation in terms of width, weight and texture, so that they can be commercialized further. Colours of the fabrics were kept constant to traditional palette to endure the visual sensibility of pure *Mashru* for deeper connect and to treasure and rejoice it in its original form. With this view researcher agree with the view of designer 'Belaa Sanghvi' that consumer awareness is a chief barrier. Understanding of traditional textiles in classical form were

understood by older generation; however, the visual language of present generation is unlike. To praise traditional textiles with contemporary sensitivity is tough. “Once they wear it, they love it. But until that point, they use western sensibilities for Indian textiles. And that is so wrong... French, Hindi and Tamil are different languages, right? It's the same with textiles” (Belaa Sanghvi, 2020). In-between extreme views researcher selected colours from traditional palette only but were judiciously-proportionately used to match the sensibility of current generation. Similarly, existing infrastructure were also kept constant, possibilities were explored within that to match the visual & regional sensibility of pure *Mashru*. Infrastructure had played crucial role in creating specific craft sensibility of *Mashru* over centuries. “I believe it takes centuries to develop a sensibility and make it a tradition. And one cannot just slap designs in traditional sensibilities, even to contemporize the design” (Belaa Sanghvi, 2020). Overall, from below list the core features targeted for innovation can be understood.

Table 4.14: Basic features used for design innovation in *Mashru*

Basic features for innovation	Conventional approach	Extended approach for innovation
Material	Cotton, Rayon, Mulberry silk (rare case) warp.	Cotton, Rayon, Mulberry silk, <i>Tasar</i> silk, Korea silk warp, Combination of <i>Tasar</i> & Mulberry silk.
Production technique	Satin weave	Satin weave alone or with Brocade or <i>Ikat</i>
Product variation	Fabric width in 24/36 Inches Medium fabric weight Cotton offering soft & cool texture, rayon offering smooth, soft & silky texture, silk offering smooth & sleek texture.	Fabric width in 24/36/48 Inches Light to medium fabric weight Cotton offering soft & cool texture, rayon offering smooth, soft & silky texture, silk offering smooth & sleek texture, <i>Tasar</i> silk offering rich texture & gold gleam, Korea silk offering translucent texture and shine

4.4.4 Influence of raw material (yarn content) & technique in design innovation & its feasibility for *Mashru* fabric

Designer's responsibility is extremely crucial in bestowing significant traditional handloom product where produce go through some definite modification to make sure its continued existence ensuring it's cultural, visual stylistic and technical connect with the craft intact. In this concern sustaining handloom *Mashru* fabric with innovation in material was spotted as key to success. Therefore, researcher for this study has selected yarn as one of the basic elements for innovation. To create a fabric yarn is the most crucial raw material. Every yarn has certain design characteristics which is further passed down to define the characteristics of developed fabric (**Kumari & Karolia, 2019**). As the *Mashru* fabric was to be prepared & woven by artisan therefore the role of artisan became very crucial in defining possibility of expected feature to be developed in fabric. At one hand he is selector and consumer of the raw material for the fabric to be developed whereas in other hand he is producer of the product for another consumer. Raw materials heavily influence fabric making, even at times they act as source of inspiration to maker. Factors like colour, hand feel of the yarn may influence artisan behind its selection. For *Mashru* factors like its identity, social, cultural and religious relevance, the process and materials to be involved, the competency of the artisan to handle that, its awareness and acceptance among users; all became very important to incorporate the innovation to get the expected outcome.

So, screening the competency of craftsmen, identity of the craft as well as the shift of market trend towards sustainable textiles in connects with consumers need, researcher selected specific materials for innovation in *Mashru*. For this researcher also referred **Donald Norman's (2004)** Levels of Emotional Design Theory and **Casey Stannard and Kathy Mullet's** research article "**Yarn Design Characteristics Which Influence Craftsmen to Consume Either Artisan Brand Yarn or commercial yarn**" as the basis of selection of yarn content for the fabric development. It has been applied to understand preference of yarn by the artisan looking into the levels of design characteristics of the yarn. Later its analysis was applied in creative application of yarn for *Mashru* textile considering the visual understanding of the craft and willingness of the artisan to undertake it. So, overall idea was to understand the design attributes of diverse materials and its creative application for *Mashru* textile.

Before moving ahead with this process, researcher first looked into the limitation here in terms of selection of artisan, selection of yarn content due to a smaller number of artisans practicing *Mashru* as well as their willingness to weave the fabric for the study. Therefore, after

interacting with several artisans, five artisans were included in the sample who had worked with silk, two in Patan & three in Kutch-Bhuj. Also, among the three artisans selected from Kutch-Bhuj, two were non-*Mashru* weavers. Due to majority of *Mashru* weaving being done in Cotton and Rayon warp since few decades; it has restricted the willingness of artisan as well their proficiency in execution of either finer or newer material. The selected artisans were convinced to incorporate various silk varieties like Mulberry, Tasar, Korea silk or their combination in warp for *Mashru*. Other major constraint was that *Mashru* is warp based satin fabric; therefore, most of the artisans felt themselves incompetent in execution of new material in warp. To bring change in weft yarn is quite easy but change in warp need high level of skill and willingness especially working with finer variety of yarn (**Kumari & Karolia, 2019**).

At present *Mashru* is mainly known for its multicolored striped patterns occasionally enhanced by *Butti* and *Ikats*. It is also due to lack of expertise of weavers in using supplementary warp/weft technique as well as *Ikat*. In addition to it, one of the major thrusts of the study was introduction of new material to *Mashru* along with the existing one to cater wider audience; therefore, design development was centered around permutation of different possibilities (discussed under **Table 4.14**) and competency of artisans.

Like the weavers from Patan were competent in handling, rayon, mulberry silk & cotton but they only agreed for making stripe variety, they were not competent in supplementary warp & weft technique, in terms of product also only yardage or stoles were possible as fabric width up to 36 inches were possible. The fortunate thing was that they were convinced to work in tasar and Korea silk as well. The *Mashru* weaver from Bhujodi was also competent in using cotton and silk and in using extra warp & weft. Another two weavers selected from Kutch-Bhuj were not *Mashru* weavers but they were competent in working with silk as well as expert in supplementary weft.

Then to understand the design attributes of diverse materials and its creative application for *Mashru* textile, **Donald Norman's (2004)** Levels of Emotional Design were studied and related in the context of yarn. According to Don Norman, why we love or hate everyday things is decided between three levels of emotional system that are 'visceral, behavioral and reflective levels. Each of these levels is deeply linked and interwoven in its own specific way (**Norman's 2004**). Then, these factors were further related to commercial and niche variety of yarns.

Visceral Level: It captures appearance or the visible qualities of a product and its perception by observer/user. 'Act of distinguishing one product from other not by the tangible benefits it

offers the user but by tapping into user’s attitudes, beliefs, feelings and how they want to feel, so as to elicit such emotional responses’ (Norman’s 2004). Therefore, color and surface texture were considered for the visceral level.

Behavioral Level: ‘Behavioral design is all about use. Appearance doesn't really matter. Rationale doesn't matter. Performance does. What matters here are four components of good behavioral design: function, understandability, usability, and physical feel. Sometimes the feel can be the major rationale behind the product’ (Norman 2004). Therefore, suitable yarn count or ply, and hand feel were considered for this level.

Reflective Level: ‘Reflective design covers a lot of territory. It is all about message, about culture, and about the meaning of a product or its use’ (Norman 2004). Therefore, Handspun, natural fiber content, revival of traditional hand dyeing technique (Ikat) and traditional motifs & pattern were considered for this level.

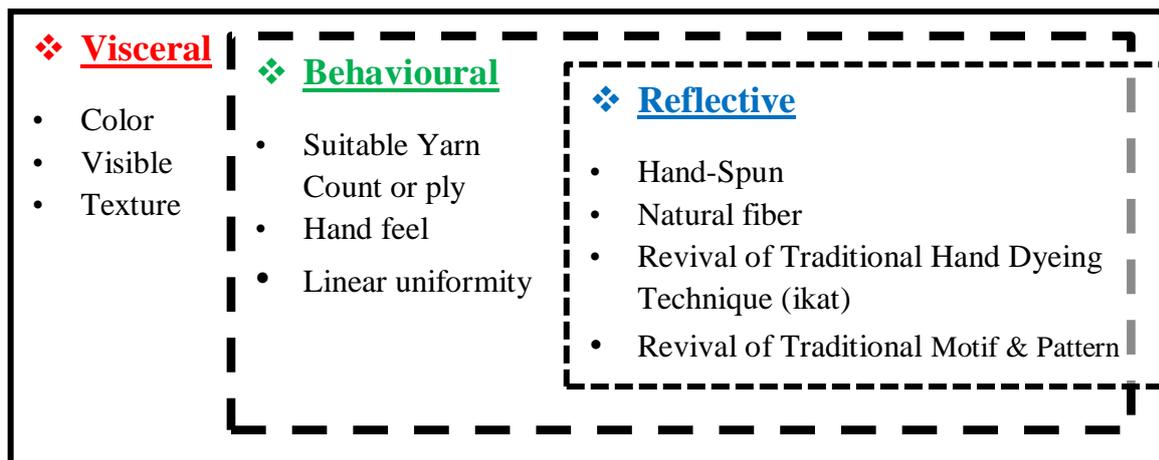


Fig 4.7: Relating Donald Norman’s Three Levels of Design to the factors included in yarn selection for new design development in *Mashru* fabric

Responses were gathered from all five artisans. While interviewing artisans, it were revealed that several characteristics of yarn like luster, beauty, luxurious look, attractive appearance, elegance, softness, hand-feel, color, texture, linear uniformity, uniformity of dye, quantity available, price, demand of market, special requirement of client, selling price, profit margin, capability to manage yarn during weaving and other preparatory process, acceptance by dyer etc. are inducing factors in selection of raw materials for the product development.

In order to understand the design characteristics of yarn in the selection process, weavers were asked to recall about commonly used yarn by them, any favorite weaving assignment which they anticipated again. They started revealing about their past assignment and also shown few fabric swatches which they kept with them as a matter of pride. In Patan, yardage was the main product made by them whereas in Kutch-Bhuj piece goods were main products for non *Mashru* weaver and for *Mashru* weaver both yardage and piece goods were into common practice.

They further stated that the consumption and expenditure of yarn completely depended upon nature of material and product in demand with respect to time. Throughout their weaving carrier so far, Patan weavers have woven few silk *Mashru* compared to rayon *Mashru*. In Kutch-Bhuj cotton was the main yarn content used with little order in silk fabric. They said they were interested for silk weaving but were not getting order frequently in that. Then, they were asked to show their favorite *Mashru* sample in silk, rayon & cotton, hoping that it will help in collating their hands-on experiential view and other factors behind selection of yarn.

Table 4.15: Selection of artisans, their perception about yarn design characteristics

Total no. of artisans	5
No. of <i>Mashru</i> weavers from Patan	2 (both were <i>Mashru</i> weavers)
No. of <i>Mashru</i> weavers from Kutch – Bhuj	3 (one was <i>Mashru</i> weaver & 2 were non <i>Mashru</i> weaver)
Method to collect artisan’s perception	Interview, Observation and rating scale
Yarn characteristics revealed by artisans	Luster, beauty, luxurious look, attractive appearance, elegance, softness, hand-feel, color, texture, linear uniformity, uniformity of dye, quantity available, price, demand of market, special requirement of client,

	selling price, profit margin, capability to manage yarn during weaving and other preparatory process like acceptance by warper, dyer, shaft maker.
Yarn design characteristics considered for study	Colour, visible texture, yarn count, yarn ply, hand feel, linear uniformity, hand spun, natural fiber, manmade fiber, commercial category of yarn, niche category of yarn

During discussion it was found that in both commercial and niche category of yarn, color, textural (visceral) properties of yarn were very important. Commercial category of yarns was the lesser expensive yarn content and niche category of yarns were expensive varieties of yarn. *Mashru* is about bright color and luster, so these properties were must to give woven fabric the identity of *Mashru*.

Along with that from customer's perspective also, bright colors were fast moving especially in commercial category. Suitable yarn count or ply, feel and linear uniformity of the yarn were also very important as the behavioral property of yarn in both commercial and niche category of yarn.

These properties also gave an idea to the weavers that whether they will be able to handle the yarn during different processes of production or not as well it also determined the quality and texture of fabric to be woven. Especially, while working with silk it was found more crucial as silk is delicate and difficult to manage compared to rayon.

The third level i.e., reflective property of yarn included desire of making greener difference (hand-spun), natural fiber, revival of traditional hand dyeing technique (Ikat), motif & pattern. Artisans revealed that in commercial category it does not have much significance whereas in niche category it has huge significance. In niche segment customers are ready to pay for these factors, although their demand was found quite less compared to commercial one.

Table 4.16: Preference of yarn design characteristics in selection process of yarn for *Mashru* fabric

	Levels of design	Yarn Design Characteristics	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
Niche Category (warp) 1: Mulberry silk 2: Tasar silk 3: Korea silk 4: Cotton	Visceral level of design	Color(bright)	3	2			
		Visible Texture(luster)	5				
	Behavioral level of Design	Suitable Yarn Count & ply	5				
		Hand Feel	5				
		Linear uniformity	4	1			
	Reflective level of design	Hand-Spun	5				
		Natural fiber	5				
		Revival of Traditional Hand Dyeing Technique(ikat)	3	2			
		Revival of Traditional Motif & pattern	5				
	Commercial Category (warp) 1: Rayon 2: Cotton	Visceral level of design	Color(bright)	5			
Visible Texture(luster)			4	1			
Behavioral level of Design		Suitable Yarn Count & Reed	5				
		Hand Feel	4	1			
		Hand-Spun					5

	Reflective level of design	Natural fiber		3		2
		Manmade fiber	1	3	1	
		Revival of Traditional Hand Dyeing Technique(ikat)	1	1	2	1
		Revival of Traditional Motif	1	2	2	

Note: Numbers in table represent number of artisans preferring each factor

After looking into the preference of consumer towards reflective level of design, specifically hand spun, natural fiber and revival of specific hand dyed yarn technique, it was planned to introduce for *Tasar* silk, cotton and combination of *Tasar* and Mulberry silk warp. Convincing artisans for newer silk yarns were very difficult whereas they easily agreed for cotton, Mulberry silk and rayon warp. They agreed for need of revival of traditional motifs in both commercial and niche category but due to availability of lesser number of harnesses, unwillingness to bring any change in existing loom setting and competency in using supplementary yarn; Patan weavers didn't agreed whereas Kutch-Bhuj artisans agreed to make *Butti* in *Mashru* using extra weft. Hence, *Mashru* fabric were planned in five warp types taking into consideration of artisan's perspective of yarn design characteristics, their willingness to weave in diverse material as well as for targeting wider categorical segment of consumers. For new design and development of *Mashru* fabric, raw materials were deduced from above discussion and design elements were deduced from analysis of third objective. Thus, designs to be developed can categorized under two categories on the basis of raw material i.e., Niche category and Commercial category. The Niche category included four materials cotton, Mulberry silk, *Tasar* silk & Korea silk whereas commercial category included only cotton & rayon. Cotton was included in both the categories on the basis of techniques to be used as well as on the basis of artisan's view & past experience.

Table 4.17: Selection of warp in commercial and niche category of *Mashru* fabric in reference to considered yarn design characteristics

Niche Category	Warp Variety	Visceral Yarn Design Characteristics	Behavioral Yarn Design Characteristics	Reflective Yarn Design Characteristics
	Mulberry silk, Tasar Silk, Korea silk, combination of more than one silk & Cotton	Color (bright), Texture (Luster)	Suitable yarn Count & ply, hand-feel, linear uniformity	Revival of dyeing technique (Ikat), motif & pattern, Hand-Spun, natural fiber,
Commercial Category	Rayon & Cotton	Color (bright), Texture (high Luster)	Suitable yarn Count and ply, hand-feel	Natural fiber, Manmade fiber

With the current trend in sustainable fashion niche category samples can be effectively positioned for high end market. Diversification of material and revival of silk along with other factors (weaver’s competency & infrastructure) can be judiciously used for product variation.

4.4.5 Categories for designing *Mashru* fabric

Selection of category for designing depended upon *Mashru* fabric basic design variation found during analysis of its fabric design i.e., Stripe, Ikat and *Butti*. Commonly *Mashru* is known for stripes, however in archive samples huge emphasis on Ikat and *Butti* were observed in defining its aesthetic sensibility. Without any development of Ikat and *Butti* the entire effort would had been incomplete. Of course, reestablishing the lost technique was a major challenge. The entire value chain didn’t exist anymore in either center of production. Hence looking into the limitation of resources, although three categories for designing were taken but their number of design development depended upon availability of resources, willingness of artisans and their competency. In this context **Mehta (2010)** has also stated that before undertaking any design intervention, it is essential to get a holistic perceptive of situation, its strength, weakness, and opportunities in terms of resources and nature & level of skills, available experience, social, cultural issues and market demand. Given this it led towards more possibility of execution in stripes compared to Ikat and *Butti*. Several digital explorations were done in all these three categories. For weaving of stripe samples implementation of design and material handling was

not challenging in cotton, rayon and to certain extent in mulberry silk warp but material handling was a major concern for *Tasar*, Korea silk or in combination of different yarn content in warp. For *Ikat*, resist dyeing was a severe challenge as it was not being done in either center. In addition to it, manipulation of resist dyed warp on loom prior to weaving to get *Ikat* effect was also a challenge. As it was not into practice for years, so it was also a major challenge that was going to come forth. Likewise, in *Butti*, use of supplementary warp and weft was a matter of concern. Weaver’s willingness was limited to conventional *Danedar & Saatdhani* designs. Working beyond this was practically difficult to persuade them. Overall, this broad design categorization was targeted for creating diverse appeal for users. It had potential to cover most possible variation that can be done in handloom textiles.

Table 4.18: Challenges & possibilities within each design category of *Mashru* at Patan

Challenges within each design category at Patan					
Strip		<i>Ikat</i>		<i>Butti</i>	
Challenges	Possibilities	Challenges	Possibilities	Challenges	Possibilities
Lack of warp preparation & dyeing competency for Mulberry, <i>Tasar</i> and Korea silk.	Dyeing was possible for rayon and cotton; weaving was possible for all cotton, rayon & silk.	Lack of warp preparation & dyeing competency for Mulberry and <i>Tasar</i> silk. Lack of resist dyeing facility at patan	Regular single colour dyeing in cotton & rayon possible for ground yarn, weaving of <i>Ikat</i> warp manipulation on loom & its	Lack of competency in making <i>Rach Butti</i> , Lack of competency in making <i>Butti</i> using extra warp and weft technique	Characteristic supplementary designs like <i>Khajoori</i> , <i>Kakini</i> , <i>Kataria</i> was possible

			weaving was possible.		
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Table 4.19: Challenges within each design category of *Mashru* at Kutch-Bhuj

Challenges within each design category at Kutch-bhuj					
Strip		<i>Ikat</i>		<i>Butti</i>	
Challenges	Possibilities	Challenges	Possibilities	Challenges	Possibilities
Only one <i>Mashru</i> weaver had competency to work with Mulberry silk, others were comfortable with cotton only	Dyeing was possible for rayon and cotton; weaving was possible for all cotton & Tasar silk.	Lack of resist dyeing facility at Kutch-Bhuj Incompetency to set resist dyed yarn on loom prior to weaving	Regular single colour dyeing in cotton, Mulberry and Tasar silk possible for ground yarn	Lack of competency in making appropriate <i>Butti Mashru</i> for <i>Butti Mashru</i> using extra warp Lack of competency in making appropriate <i>Butti Mashru</i> using extra warp	Very competent in making <i>Butti Mashru</i> through supplementary weft

Table 4.20: Details of design categories with final selected raw material for new development in *Mashru* fabric

Detail of Design category 1- stripe with raw material
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Design 1: Stripe in Rayon warp with cotton weft	Design 2: Stripe <i>Mashru</i> in Mulberry Silk warp with cotton weft	Design 3: Stripe in cotton warp with cotton weft	Design 4: Stripe in Korea silk warp with cotton weft	Design 5: Stripe in <i>Tasar</i> Silk warp with cotton weft
Detail of Design category 2 - Ikat with raw material				
Design 6: <i>Ikat Mashru</i> in Mulberry and <i>Tasar</i> Silk warp combination where <i>Tasar</i> incorporated in <i>Ikat</i> and Mulberry in solid-colored stripes with cotton weft		Design 7: <i>Ikat Mashru</i> in cotton warp and cotton weft		
Detail of Design category 3 - Butti with raw material				
Design 8: <i>Butti Mashru</i> in complete cotton warp with cotton weft				

4.4.6 Identification of scope of innovation through material, technique & quality

As we are aware that historically *Mashru* was a royal textile known for variegated charm as well as variety. Today the general understanding of *Mashru* had been mainly limited to warp & weft yarn content i.e. silk/rayon/cotton & cotton. However, previously within *Mashru* different varieties were made. This was probably differentiated by percent composition of silk & cotton. Coarser variety might have higher proportion of cotton whereas finer variety might have lower proportion of cotton. According to **Naqvi (as cited in Barni's account)** *Barad i kaminar* was a variety of *Mashru* that was quite inexpensive. Similarly, silken *ambari* was for gratification of low-income group. These evidences suggest that previously also product positioning must had been taken care of. That is why the same craft were found in different variety. This character actually adds to the success of craft by expanding its clientele. Similarly, researcher also thought of creating different variety within *Mashru* that can be positioned for customer's with varied income group.

4.4.7 Identification of Unique Selling Proposition for *Mashru*

Mashru is such a craft which divulges the beauty of Ikat as well as brocade together in satin weave. The layered culture of Gujarat can be magnificently reflected through *Mashru*. *Mashru*

can be communicated as the symphony of double-niche associated with *patola* and *Ashawali* because of its resemblance to them. It resembles to *Ashawali* because of Brocade technique, warp (silk), weft (cotton) setting, and it resembles to *Patola* because of ikat technique; although actual elements vary considerably. This can be highlighted as very unique feature for *Mashru*. *Mashru* fabric is neither as heavy as brocade nor as *Patola*. It incorporates both techniques judiciously, efficiently with minimalistic approach in cost effective manner. In addition to above contemplation, usually Ikat fabrics are woven in plain weave, however in *Mashru* Ikat is woven in satin weave which creates a luxurious and extraordinary stimulating appeal which is unmatched to other textiles. At the same time Ikat is used in warp only and that also reasonably. So, for those consumers who aspire for rich traditional textiles in moderate budget, *Mashru* can be a suitable option.

Another important proposition of *Mashru* is its stripes character. Although stripe is the simplest form of design in textiles, but it eternal, evergreen pattern which never goes out of fashion. It suits people with all shapes and sizes. So, whether it is home furnishing or apparel it is always there. The simplicity of pattern in lustrous elegance makes it unique from other linear designs. Hence, being a traditional craft, its nature of pattern enables it to fit in modern taste of consumers. Technically also, in a smaller number of harnesses, with lesser effort this design vocabulary becomes a unique proposition of craft. **Dhamija and Jain (1989)** while describing *Mashru* designs said that though it is traditional, it is contemporary in design.

As per selected range of materials a broad option of *Mashru* variety can be created in varying texture, weight and cost. This will enable in maintaining existing clientele as well in adding more potential clients. A huge share of existing clientele comprises of rural consumers who are price sensitive. Therefore, this factor was also considered while designing for existing clientele. Gujarat is very rich in handloom textiles and is incredibly accepted also. Although looking into the present scenario of Gujarat, it can be observed that majority of woven textiles of Gujarat are cotton based and few are silk based. In this geographical location woven mixed (silk & cotton combination) textiles are not very prominent in terms of scale. This gap gives immense scope for *Mashru* to be promoted as major silk-based mixed textiles of Gujarat which gives the appeal of pure silk from front. So, this factor enhances the possibility of success to *Mashru*. If the entire value chain is created in local area then *Mashru* fabrics can be woven in a cost-effective manner. The existing branding of Gujarat in field of handloom will support its growth. It has the huge potential to make identity as geographically rich silk fabric of Gujarat. No, doubt quality definitely needs to be taken care of to avail this reputation. This turn out to be an important proposition for *Mashru* from cost and promotion point of view.

4.4.8 Understanding trend for *Mashru* and requirement of user

After understanding basis, possibility and scope for innovation in *Mashru*, researcher started understanding trend as well as user for later innovation process. For this, contemporary development and use of *Mashru* fabrics were studied to understand how it has been done, what factors were considered and how it can be linked with present *Mashru* study. In Gujarat region not much development was seen in recent period. Mostly in terms of silhouette, development references were observed. In Varanasi *Mashru*, lot of development, in fabric especially in form of saree was observed. In Varanasi, weavers are very competent in using Supplementary warp /weft technique, infrastructure in terms of loom width, dobby jacquard widely supports it. The gathered information was critically analyzed in terms of colour, pattern, usage & product gap which were found very useful for the designing phase. Few of the reviewed contemporary *Mashru* products were as follows:

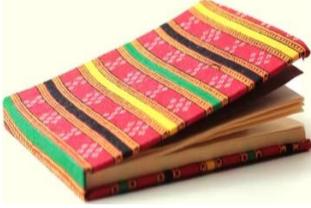
Table 4.21: Details of Gujarati *Mashru* products referred for trend and user study

Sr. No	Source	Image	Description
1.	http://jigarvanzaMashru.blogspot.in/2015/03/Mashru-used-in-amit-khans-film-hobi.html		Actress Monica Dogra wearing <i>Mashru</i> top at Radio <i>Mirchi</i> Music Award.
2.	www.imgrumweb.com		<i>Mashru</i> jacket from Pero

Sr. No	Source	Image	Description
3.	www.imgrumweb.com/post/B1xU4ACl8ax		<p><i>Mashru</i> top, fabric sourced from Khamir, Kutch.</p>
4.	https://in.pinterest.com/dlfemporio/project-renaissance/		<p>Costume designed by Bibhu Mohapatra for Vogue's project 'Renaissance' The grand revival</p>
5.	https://www.instagram.com/p/Bbw4tHjU8I/?utm_source=ig_embed		<p><i>Mashru</i> blouse</p>
6.	https://www.facebook.com/Craftroots/		<p><i>Mashru</i> saree with <i>Mashru</i> blouse</p>

Sr. No	Source	Image	Description
7.	https://www.facebook.com/Craftroots/		<i>Mashru saree</i> (probably)
8.	https://www.facebook.com/Craftroots/		<i>Mashru blouse</i>
9.	https://www.facebook.com/Craftroots/		<i>Mashru saree & blouse</i>
10.	https://www.facebook.com/Craftroots/		<i>Mashru kurta, bottom & duppata</i>
11.	https://chidiyaa.com/products/mustard		Handprinted <i>Mashru</i> silk dress

Sr. No	Source	Image	Description
12.	https://www.yeshasant.com/products/mashru-dots-top		<i>Mashru</i> dot top and pant
13.	https://www.ensembleindia.com/deep-blue-mashrublouse/p/3665?eq=mobile&ci=US&cc=&		Deep blue <i>Mashru</i> blouse
14.	Craft Root exhibition organized at Surya Palace, Vadodara		<i>Mashru</i> jacket
15.	http://craftmark.blogspot.com/2009/07/mashru-woven-cushions.html		<i>Mashru</i> cushion
16.	Craft Root exhibition organized at Surya Palace, Vadodara		Patan <i>Mashru</i> in bed furnishing from Craft Root

Sr. No	Source	Image	Description
17.	Craft Root exhibition organized at Surya Palace, Vadodara		Mashru bag made from <i>Danedar</i> and striped cotton <i>Mashru</i> variety using
18.	Craft Root exhibition organized at Surya Palace, Vadodara		Mashru bag made from striped cotton <i>Mashru</i> variety
19.	https://shop.gaatha.com/mashru-stripped-ruled-yellow-pages.html		A4 sized notebook cover in <i>Mashru</i> fabric
20.	https://okhai.org/collections/meera/products/urmul-neera-hand-embroidered-cherry-red-mashru-silk-kurta-pant-dupatta-set		Mashru silk kurta set
21.	https://okhai.org/collections/meera/products/urmul-neera-hand-embroidered-cherry-red-mashru-silk-kurta-pant-dupatta-set-online?variant=36859123531942		Mashru silk kurta set

Sr. No	Source	Image	Description
22.	https://okhai.org/collections/meera/products/urmul-neera-hand-embroidered-cherry-red-mashru-silk-kurta-pant-dupatta-set		<p><i>Mashru</i> silk kurta set</p>
23.	https://okhai.org/collections/meera/products/urmul-neera-hand-embroidered-cherry-red-mashru-silk-kurta-pant-dupatta-set		<p><i>Mashru</i> silk kurta set</p>
24.	https://vasstram.com/products/kaftan-mashru-red?variant=31865501188174		<p><i>Mashru</i> Kaftan</p>
25.	https://www.ensembleindia.com/wine-mashru-kurta/p/5157		<p><i>Mashru</i>-Kurta</p>

Sr. No	Source	Image	Description
26.	https://vasstram.com/products/butterfly-mashru-dress?variant=31865485000782		Butterfly <i>Mashru</i> dress
27.	https://chidiyaa.com/collections/dresses		Orange block print <i>Mashru</i> crop top
28.	https://qohindia.com/products/mashru-cotton-silk-blouse-turquoise-blue		<i>Mashru</i> top
29.	https://chidiyaa.com/collections/dresses		Sea green block print <i>Mashru</i>

Mashru had been in used in diverse products ranging from apparel to stoles to accessories to home furnishing to stationary products. Above photographs (**Table 4.21: Sr. No. 1-19**) were absolutely representing essence of *Mashru* of Gujarat. Mostly designers have picked up

existing design and had tried to contemporize them in terms of use and silhouettes. In sarees (Table 4.21: Sr. No. 6-7) and dress materials (Table 4.21: Sr. No. 10), recently new developments were seen. Here also, traditional style was adhered in terms of patterns but somewhere variations in colours in contrast to traditional palette were observed. The extent of new development done for woven designs seems to be inadequate. Overall, these pictures suggest enormous possibility of *Mashru* in its traditional form with contemporary silhouette. Therefore, researcher adhered to traditional style & colours of Gujarati *Mashru*.

Another major observation while referring products were that plain *Mashru* (*Atlas, Gazzi*) were widely used with embroidery (Table 4.21: Sr. No. 20-23) and print (specifically block print like Table 4.21: Sr. No. 27 & 29) for different products. In plain, printed and embroidered *Mashru* huge variation in colours were observed in contrast to traditional palette. Specifically, at present *Mashru* had been widely used for blouses. One common view among designers and users were that it is a bit thicker variety of fabric, so quite suitable for blouse & crop top.

Table 4.22: Details of other region *Mashru* products, referred for trend and user study

Sr. No	Source	Image	Description
1	https://www.imgurweb.com		Journalist & Author Sagarika Ghose in 'Arshiya' striped black and white <i>Mashru</i> silk sari at book launch, from Raw mango-Sanjay Garg collection
2	https://www.imgurweb.com		Actress Kajol in <i>Mashru</i> blouse with Chanderi sari, from Raw mango, Sanjay Garg collection

Sr. No	Source	Image	Description
3	https://www.facebook.com/rawmangosanjaygarg/photos/a.248298468606426/1923944451041811/?type=3&theater		<p>Filmmaker shonali Bose in <i>Mashru</i> silk sari and ‘Pali’ silk blouse at Toronto Film Festival from Raw Mango, Sanjay Garg</p>
4	https://www.southindiafashion.com/2019/12/20-best-celebrity-silk-saree-looks-of-2019.html		<p>Actress kajol in yellow green <i>Mashru</i> silk from <i>Raw Mango</i>, Sanjay Garg for Durga Puja.</p>
5	https://www.southindiafashion.com/2019/12/20-best-celebrity-silk-saree-looks-of-2019.html		<p>Actress Shilpa Shetty in <i>Mashru</i> silk saree by <i>Raw Mango</i>, Sanjay Garg.</p>

Sr. No	Source	Image	Description
6	https://www.facebook.com/rawmangosanjaygarg/photos/a.248298468606426/993367230766209/?type=3&theater		<p>Actress <u>Karisma Kapoor</u> in black sari with <i>Mashru</i> border from Raw Mango</p>
7	https://www.facebook.com/rawmangosanjaygarg/photos/a.248298468606426/1305132062923056/?type=3&theater		<p>Actress Vidya Balan in <i>Mashru</i> sari from Raw Mango, Sanjay Garg.</p>
8	<p>Source: https://www.vogue.in/vogue-closet/product/sari-raw-mango/</p>		<p><i>Mashru</i> sari from Raw Mango, Sanjay Garg</p>

Sr. No	Source	Image	Description
9	Artist Tanya Goel in striped <i>Mashru</i> silk kurta from Raw mango		Artist Tanya Goel in striped <i>Mashru</i> silk kurta from Raw mango
10	https://luxury.tatacliq.com/little-things-studio-gold-mashru-jacket/p-mp00000007545979?cid=ps:gmcfed:google:sokrati:20201013&gclid=aw.ds&cid=ps:tatacliqluxury:Google:PLA:Sok_Globa		<i>Mashru</i> jacket from Little Things Studio
11	https://www.littlethingstudio.com/collections/lakme-fashion-week-x-winter-festive19/products/gold-mashru-puff-sleeve-dress?variant=32323432120399		Gold <i>Mashru</i> Puff Sleeve Dress

Sr. No	Source	Image	Description
12	https://aavaranudaipur.com/products/indigo-dyed-kediya-with-peplum-skirt		<p><i>Mashru</i> indigo dyed Kediya with Peplum</p>
13	https://aavaranudaipur.com/products/sw		<p><i>Mashru</i> tea dip Layered Kurta with Narrow trouser</p>
14	https://aavaranudaipur.com/products/mm-10		<p>Indigo dyed saree with <i>Mashru</i> Jacket</p>

Sr. No	Source	Image	Description
15	https://styleonmymind.com/2018/07/07/modern-yet-ethnic/		Actress Neha Dhupia in <i>Mashru</i> silk saree
16	https://aavaranudaipur.com/products/tea-dip-mashru-saree-with-jacket-1		Tea dip <i>Mashru</i> Saree with Jacket
17	https://www.facebook.com/straavi/photos/a.279828342149324/1748271815304962/?type=3&theater		<i>Mashru</i> Silk Saree

Sr. No	Source	Image	Description
18	https://www.jaypore.com/neon-green-violet-sultanah-cotton-silk-saree-by-raw-mango-p44217?view=all		Sultanah Neon Green cotton-silk Mashru saree
19	https://www.jaypore.com/red-multicolor-nahar-silk-tissue-saree-by-raw-mango-p44226?view=all		Mashru silk tissue saree by Raw Mango
20	https://www.jaypore.com/peach-mint-green-jeenat-cotton-silk-saree-by-raw-mango-p44214?view=all		Jeenat Peach Cotton-Silk Mashru Saree

Above photographs were representing *Mashru* designs in contemporized form. Of course, they were representing *Mashru* but not specifically ‘*Mashru* of Gujarat’ except few. Many of the above products were made in Banaras. The designer seemed to focus on technique and varied colour palette. Both traditional (**Table 4.22: Sr. No. 6 - 9**), nontraditional (**Table 4.22: Sr. No. 10, 11, 12, 14 & 16**) *Mashru* colours were used. Pastel colours (**Table 4.22: Sr. No. 20**), monochromatic colours (**Table 4.22: Sr. No. 5**), florescent colours along with traditional

colours (Table 4.22: Sr. No. 6 & 18), indigo (Table 4.22: Sr. No. 12 & 14), beige (Table 4.22: Sr. No. 13 & 16), abundant of golden or ochre (Table 4.22: Sr. No. 10 & 11) were found in common. In certain designs (Table 4.22: Sr. No. 4, 5 & 7) both traditional and contemporary colours were judiciously combined together to retain the character of traditional *Mashru* in contemporized form. Traditional Stripe pattern were efficiently used in products (like Table 4.22: Sr. No. 1, 2, 9 & 10) to highlight *Mashru* characteristics. Similarly, the *Dana* motifs too were beautifully used to define product (like Table 4.22: Sr. No. 7, 18 & 20) characteristics. Definitely sari as product in *Mashru* was very innovative in terms of product type and in offering huge consumption. It was shimmering modern charm yet ethnic and classical in nature. Stripe in all forms were bringing bold & beautiful appeal in garments. This approach of contemporizing was found very effective and accepted in market.

4.4.9 Major gaps identified during trend study & user requirement

One of the major gaps observed during primary and secondary study were in terms of product development (garment & furnishing) that so far it had been underutilized craft. It has huge potential in terms of various product line.

Mashru were mainly known for bit thicker fabric variety. In Patan as well as Kutch-Bhuj *Mashru*, usually specific reed-pick were found to be followed at present. This had limited its opportunities to be used for diverse products. The same variety of fabric were found to be used in many products, not in closer harmony with product functional requirement, somewhere responsible for creating trust deficit for it. This creates need of *Mashru* to be made in various qualities to meet varied product functional requirement.

Being labeled as thicker known fabric variety had also limited its acceptance as delicate and supple fabric which could had been put up for finer clothing for men's and women. In terms of visual appeal, it is very lustrous, bright, bold & flamboyant. So, from this perspective also its product positioning was critically needed to be done to exploit its aforesaid features.

Satin weave in silk or *Gajji* or plain *Mashru* had been as an important material for garments as well as for furnishing. Traditionally also its consumption was seen in sarees (satin silk), long shirts, *Paijama* for men, skirts and top for women as well as children then why it had shrined today. Probably, previously it was made in different variety which had enabled these opportunities. So, this was critically needed to be addressed to meet this gap.

Today, *Mashru* is commonly observed as multi-colored fabric, a fabric with multiple colour bands which is partially right. Of course, it is such a fabric which had contained several colours but not necessarily always in one design. In its older (archive) specimen it was observed that

colours were used in various ways, in limited (one, two, three) colours as well as multiple colours (three or more than three). Aesthetically and visually all those colours represented Indian traditional sensibility and various moods in form of fabric. This character of *Mashru* had also offered it to be used for various purpose. So, within traditional palette judicious use of colours strategically depending upon users was needed to be encapsulated in fabrics to target specific set of consumers. This gave huge potential to extends its aesthetics for urban population.

Mashru traditionally known or promoted so far just as fabric for men of Islam, or fabric with magical features with silk face and cotton back or a fabric for tribal population of Gujarat or adjoining states, or fabric as a substitute of rich embroidered garments or semi-precious fabric. Its brocade dimension had never been utilized optimally. Technically, it is a precious fabric that reflects the aesthetics of brocade, Ikat, luxury of gold & silver and rich satin weave all together. Its beautiful interpretation can be experienced in its archive specimens. These features need to be highlighted in its products to create multidimensional interest about this fabric within consumers.

Another major observation was that being an admixture of silk and cotton, it reduces the cost, maintenance as well as product making time. Optimum costing and hassle less care can be an added advantage to promote the craft.

In terms of fabric width, huge limitation was experienced, for *Butti (Danedar) Mashru* it was limited to 24 to 36 inches mainly, stripe *Mashru* were possible in higher width. In Kutch-Bhuj brocade was possible but skill to manage silk yarn were missing. In Patan silk yarn management (by two weavers) was possible then brocade was not possible. So huge gap was there in terms of skill and its execution. Skill management, skill upgradation of artisans as well as flexibility in thought of artisans were a major hindrance for product development. This gap also needed to be addressed critically.

In contemporary time, lot of exploration and experimentation had been done by artisans as well as designers in handloom fabric. One of the prominent examples are Kutchi shawl weaving itself where lot of different yarn content had been used. It had been successful and well accepted among consumers of niche segment. Today no such approach had been employed for *Mashru*. Therefore, huge scope in novel product development incorporating various silk yarns were needed to create different visual fabric appeal while adhering to the principle of *Mashru* origin.

However, analyzing into varied approaches of innovation, trend & user requirement researcher had decided to develop *Mashru* in most possible traditional form following its staple colour palette that can suit traditional as well as contemporary users.

4.4.10 Exploration of designs

Designs were mainly explored under three categories i.e., stripe, Ikat and *Butti*. To bring variation in stripe design; concepts like half and half (both half -half width of fabric having different pattern and its repeat), thin stripes (like pin stripes, pencil stripes, chalk stripes; basically, stripes width ranging from .25/16 to 4/16 inch), thick stripes (above 4/16 to 8/16 inch), combination of thin and thick stripes, broader repeat patterns (larger repeat pattern), fewer colours (2-3 colours) to multiple colours (more than three colours) were explored. For simple *Ikat* to complex *Ikat* patterns having one colour or two colour, lesser *Ikat* stripes to more *Ikat* stripes within patterns, narrow stripe to broad stripes, one or two or more *Ikat* stripes together, *Ikat* with plain stripes in varying thickness with or without geometric stripes were explored were explored. Later depending upon the selection as well as weaving possibility selected designs were woven. The basic flow of process behind design development was as follows:

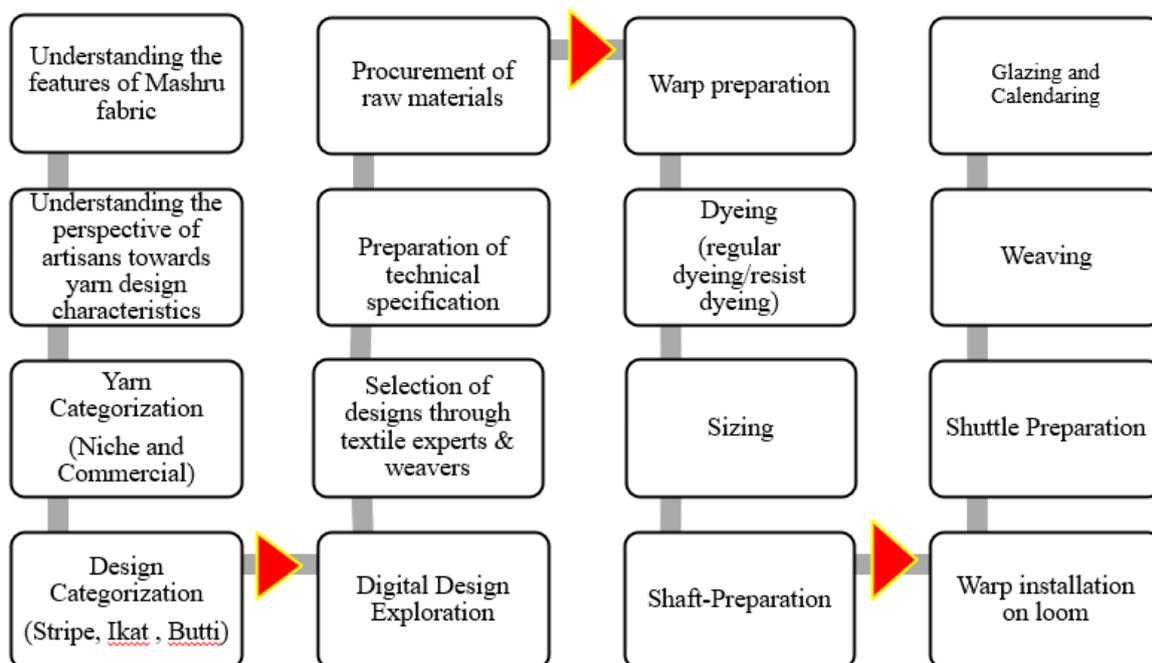


Fig 4.8: Workflow of new design development in *Mashru* fabric

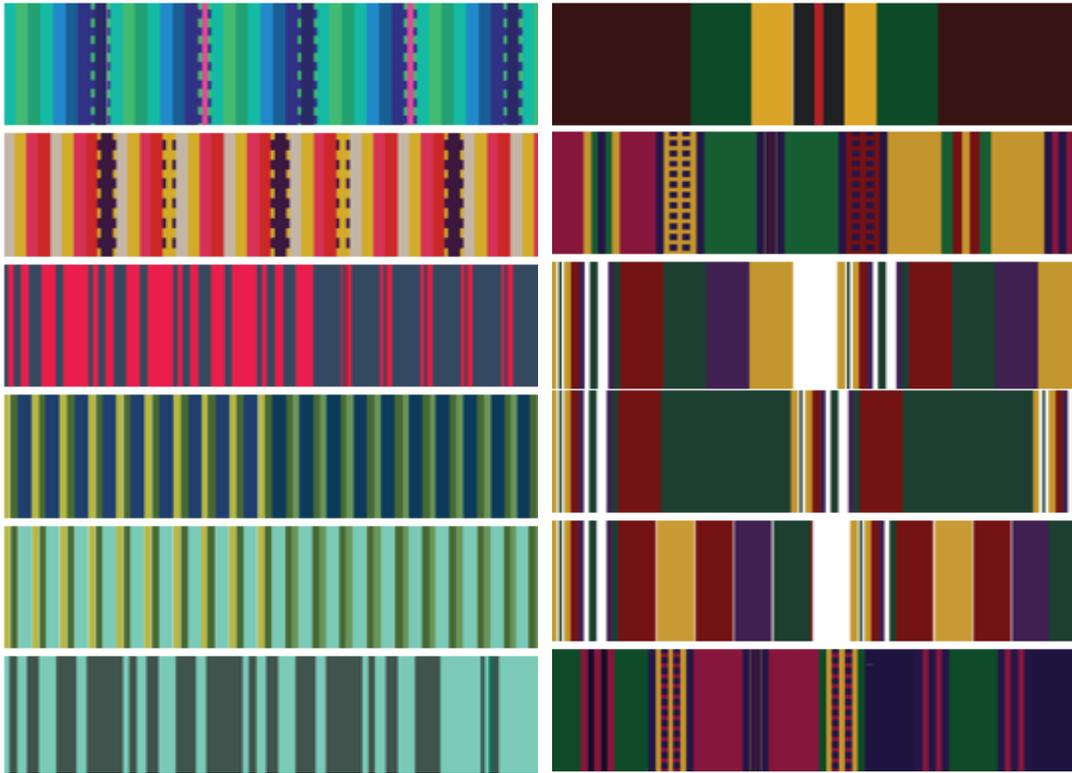


Fig 4.9: Exploration of Stripe *Mashru* in half and half pattern in non-traditional colours

Fig 4.10: Broad allover stripe *Mashru* exploration

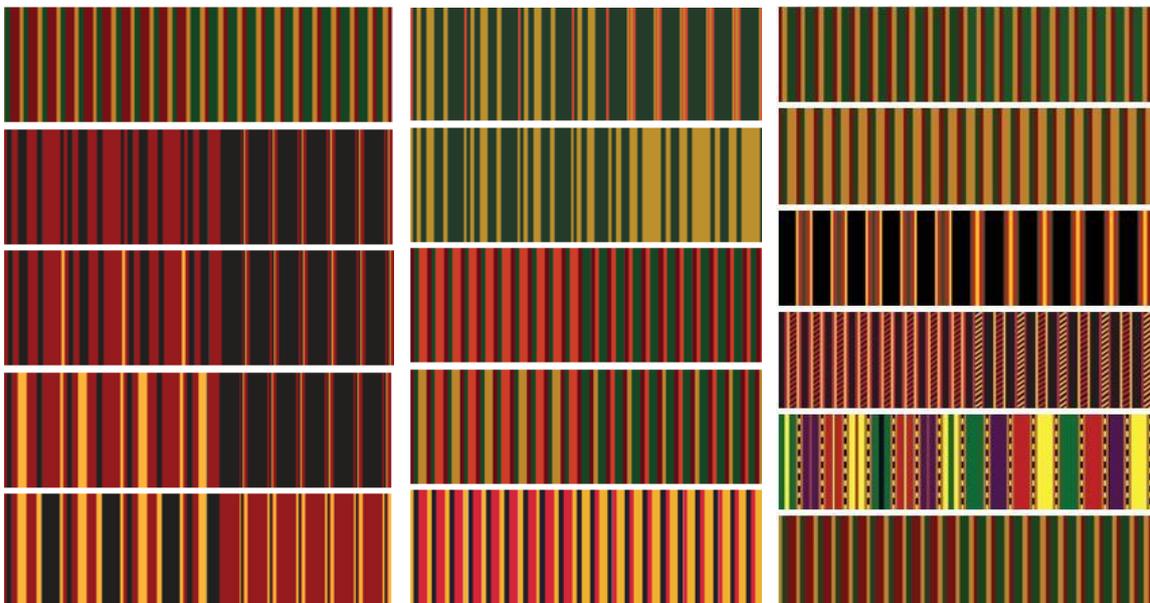


Fig 4.11: Exploration of Stripe *Mashru* in Half and half pattern in traditional colour

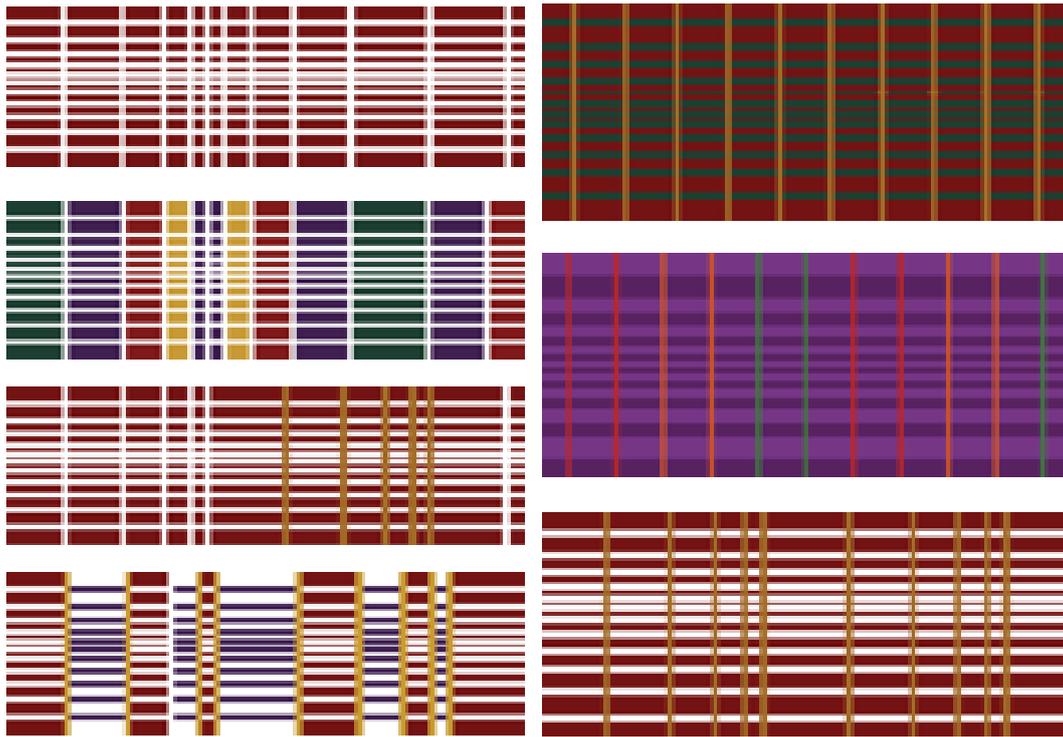


Fig 4.12: Exploration of Stripe *Mashru* pattern with optical illusion

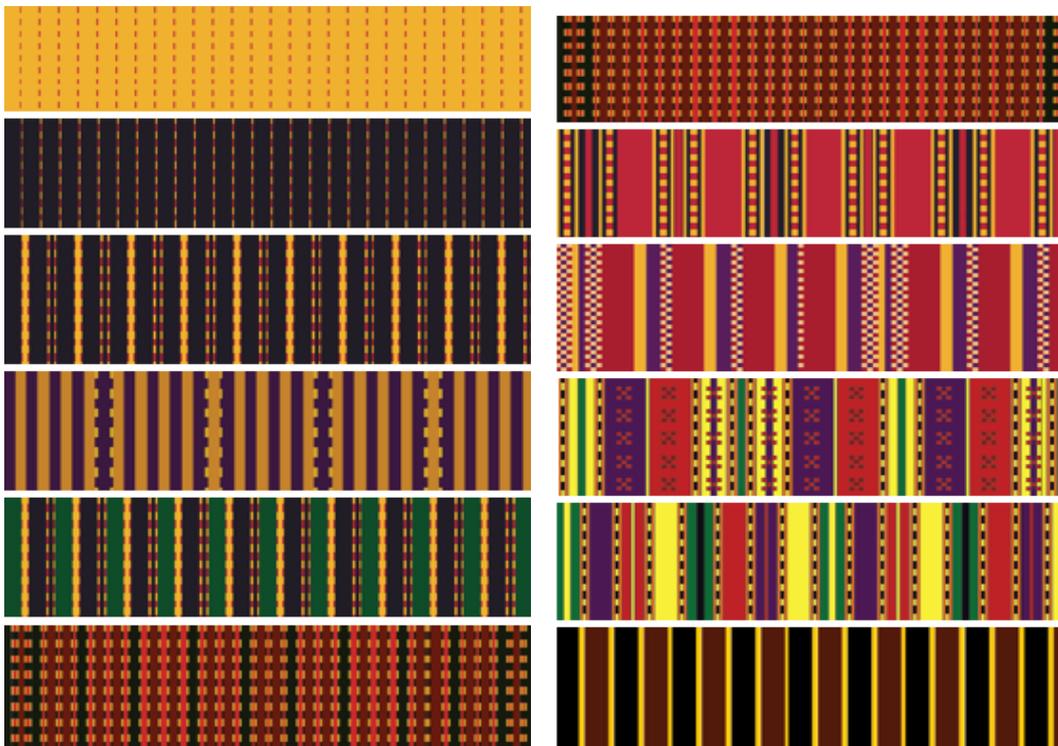


Fig 4.13: Exploration of *Mashru* designs in stripe patterns

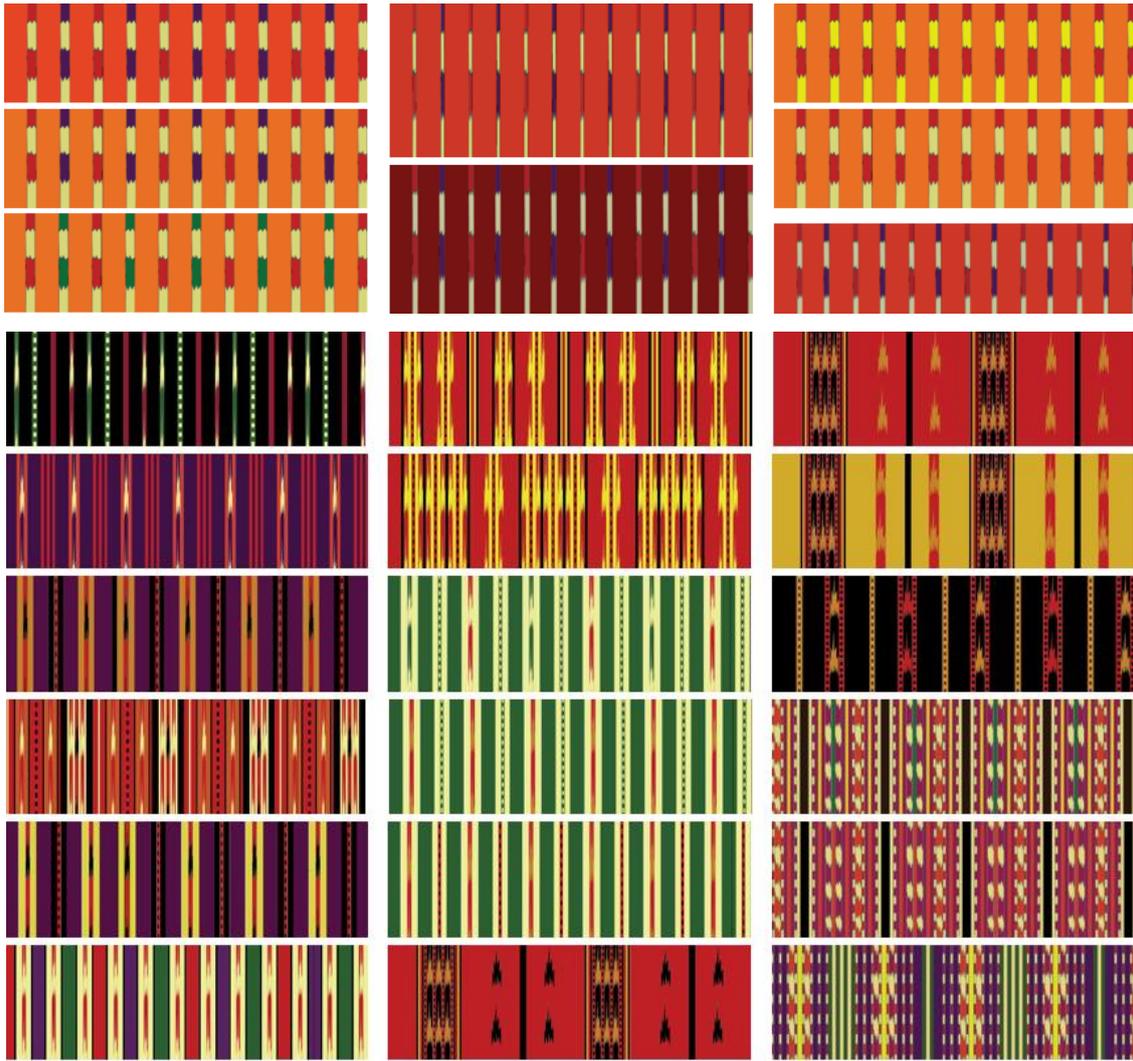


Fig 4.14: Exploration of *Ikat Mashru*

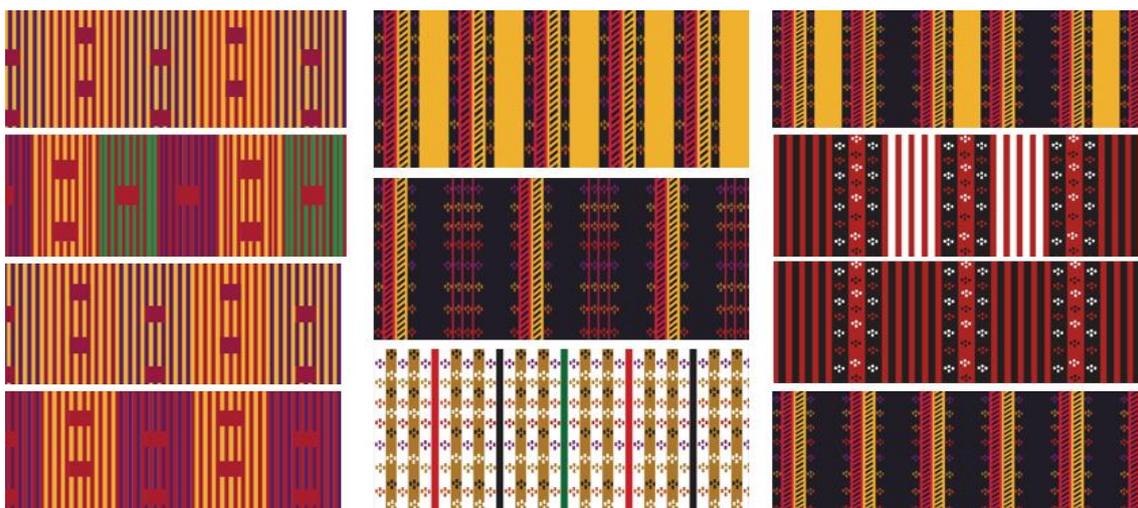


Fig 4.15: Exploration of *Butti Mashru* with stripes

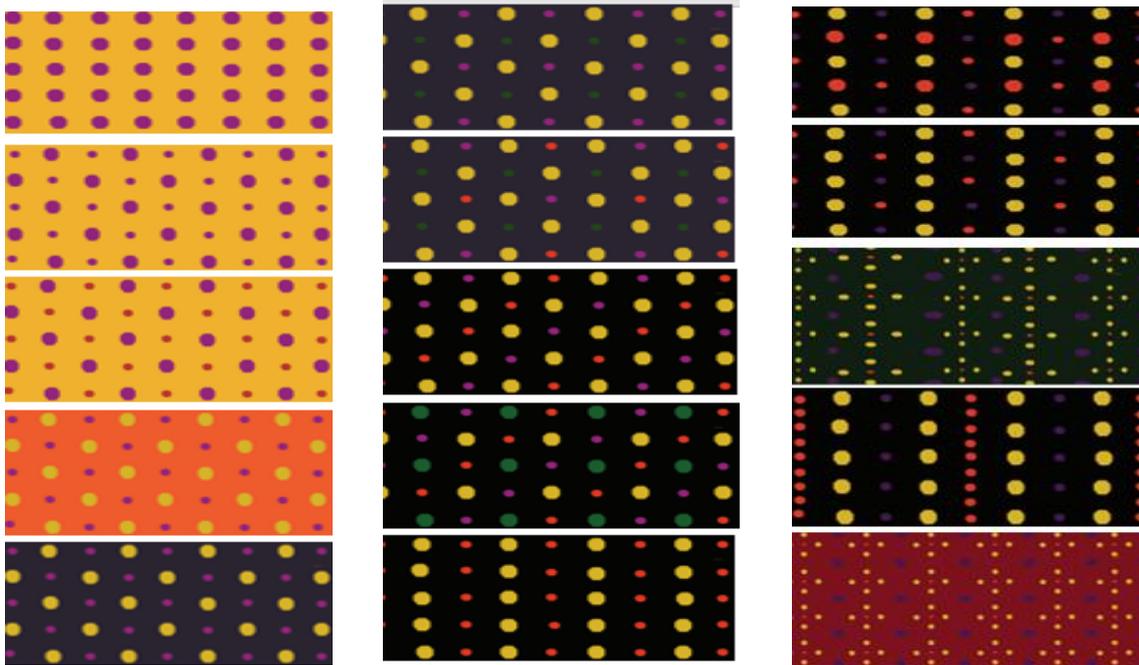


Fig 4.16: Exploration of *Butti Mashru* without stripes

Initially designs were begun free hand, later it was explored digitally. Later selection of designs was done with the help of textile experts and people from related field. Prior to weaving of selected designs handloom sampling was done in cotton to get a prior view, feel of fabric and to avoid any technical issue/error. *Mashru* artisans were not ready for sampling, they agreed for weaving regular yardage size. Therefore, handloom sampling was carried out in Mumbai. After the assurance of sampling quality, raw materials were procured for final selected designs. One by one weaving of selected designs started as per ease and convenience of weavers and gradually complex designs (in terms of newer material and obsolete techniques) were woven by them.

For understanding of *Butti* jointly designer and weaver set up the loom with nearby materials and showed artisan related to drawing of threads, their lifting order to get the desired motif in fabric with coarser yarn. It was an experiential collaboration between artisan and researcher. The output enabled him to understand, however due to his personal issue, he didn't put up that forward. After this, *Butti* design were explored with the help of another weaver of Kutch-Bhuj in mulberry silk warp and cotton weft. However, this also didn't work due to lack of skill to manage extra warp technique as well change needed in loom setting. Due to higher number of treadles and lifting order and uncommon work, artisan left the work in-between. It yielded fabric with warp float defects (**Plate 4.66**). Then researcher went with extra weft technique of *Butti* making for the third category (*Butti*) of *Mashru* design. In Kutch-Bhuj regions, *Kutchi*

weaving is done in supplementary weft. Along with it, in review and analysis of previous (archive samples) samples, it was found that traditionally also extra weft techniques were used for *Butti* (brocade) *Mashru* variety. Hence, it was started with this in mulberry silk warp (**Plate 4.65**). However, due to unprofessional attitude of artisan it was left in-between and continued with cotton warp. After the successful completion of *Butti* in cotton warp, it was initiated in tasar warp (**Plate 4.64**). However, due to pandemic it wasn't completed. For tasar stripe also, initial sample (**Plate 4.67**) didn't come out well, but result achieved in next attempt. This entire attempt, made it clear that *Mashru* can be effectively made in varied silk & cotton warp.



Plate 4.60: Stages of loom setting from nearby materials for *Butti* making demonstration



Plate 4.61: Fabricated loom for *Butti* making



Plate 4.62: Developed *Butti* on fabric



Plate 4.63: Handloom *Mashru* sampling



Fig 4.17: Weave explorations for stripes & motifs



Plate 4.64: *Tasar* silk *Butti* exploration using supplementary weft



Plate 4.65: Mulberry silk *Butti* exploration using supplementary weft



Plate 4.66: Mulberry silk *Butti* exploration using warp yarn



Plate 4.67: Stripe *Mashru* exploration in tasar silk warp & cotton weft

Table 4.23: Technical specification of developed designs

Design Category	Design No.	Loom type	Yarn Content	Warp Count	Weft Count	Weave	Reed Number	Denting Order	Colour	Width
Category 1: Stripe	1	Pit loom	Rayon + Cotton	120 D	30 Ne	Satin	66	4	Black, maroon, yellow	36 Inches
	2	Pit loom	Mulberry + Cotton	60-66 D	30 Ne	Satin	66	8	Green, orange, maroon	36 Inches
	3	Pit loom	Cotton + Cotton	80/2	40 Ne	Satin	60	3/4	Maroon, dark green, beige	48 Inches

Design Category	Design No.	Loom type	Yarn Content	Warp Count	Weft Count	Weave	Reed Number	Denting Order	Colour	Width
	4	Pit loom	Korea + Cotton	33-37 D	30 Ne	Satin	66	4	Black, red, green, yellow	36 Inches
	5	Pit loom	Tasar + Cotton	50-60 D	30 Ne	Satin & Twill	66	4	Red, Yellow, black	36 Inches
Category 2: Ikat	6	Pit loom	Mulberry & Tasar + Cotton	60-66 D & 50-60 D	30 Ne	Satin	66	4	Orange, red, purple	36 Inches
	7	Pit loom	Cotton + Cotton	80/2	30 Ne	Satin	66	4	Black, red, green, yellow	
Category 3: Butti	8	Frame loom	Cotton + Cotton	80/2	40 Ne	Satin & extra weft	60	4	Yellow, Purple	24 Inches

CATEGORY 1: Stripe *Mashru*: Design 1

4.4.10. I. Stripe *Mashru*-Design 1: Under design 1 of stripe design category (Design category 1) of *Mashru*; rayon warp and cotton weft were taken. For this half and half stripe pattern were taken, where half width of the fabric had one pattern repeat & other half had different pattern repeat.



Fig 4.18: Selected layout for Design 1 of category 1 - Stripe *Mashru*



Plate 4.68: First half of the Design 1



Plate 4.69: 2nd half of the design 1

Table 4.24: Weaving specification of Design 1 under category 1 Stripe

Category 1, Design 1: Stripe		
1.	Weave	Satin
2.	Placement of stripe	Half and half

3.	Reed	66	
4.	Ends/Inch	132	
5.	Raw material	Rayon warp & spun cotton weft	
6.	Count of yarn	Warp - 120 D, 30 Ne	
7.	Width of fabric	36 Inches	
8.	Colour	Warp	Weft
		Black, Maroon and Yellow	Red
9.	Time taken	20 days (including all process, while weaving 2 people assisted weaver)	
10.	Place of weaving	Patan	
11.	Prototype Manufacture cost	Rs 451 /Meter	
a.	Cost of warp yarn + warp preparation	Rs 2000	
B	Cost of weft yarn	Rs 1800	
c.	Dyeing	Rs 500	
d.	<i>Pawat</i>	Rs 500	
e.	Mending of damaged yarn (<i>sambharna</i>)	Rs 400	
f.	Rach preparation	Rs 2200	
g.	<i>Sandhani</i>	Rs 500	
h.	Weaving	Rs 15000 (for 52 meters)	
i.	<i>Kundikam</i>	Rs 300 (for 10 <i>taka</i> & each <i>taka</i> has 5 meters average)	
j.	Miscellaneous (like courier)	Rs 300	
	Total	Rs 21580	

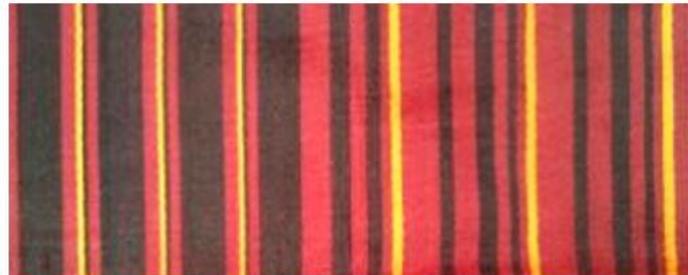


Plate 4.70: Category 1: Stripe *Mashru*: Design 1: Rayon warp with cotton weft

CATEGORY 1: Stripe *Mashru*: Design 2

4.4.10. II. Stripe *Mashru*-Design 2: Under design 2 of stripe design category (Design category 1) of *Mashru*; mulberry silk warp and cotton weft were taken. For this half and half stripe pattern were taken, where half width of the fabric had one pattern repeat & other half had different pattern repeat.



Fig 4.19: Selected layout for Design 2 of category 1 - Stripe *Mashru*

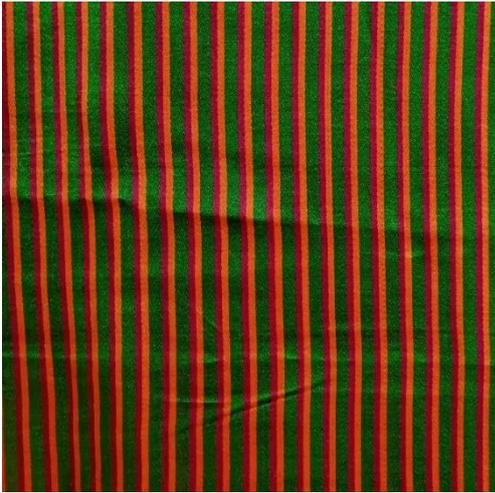


Plate 4.71: First half of the Design 2

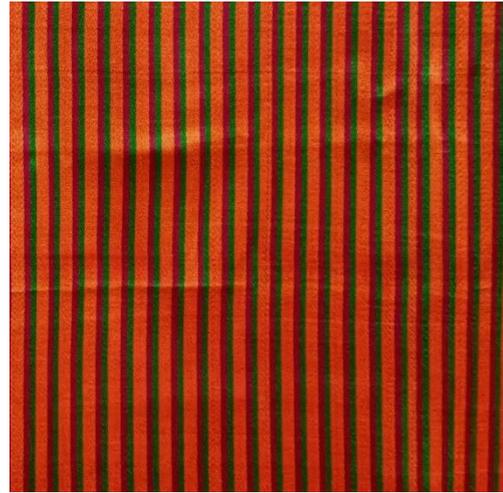


Plate 4.72: First half of the Design 2

Table 4.25: Weaving specification of Design 2 under category 1 Stripe

Category 1, Design 2: Stripe			
1.	Weave	Satin	
2.	Placement of stripe	Half & half	
3.	Reed	60	
4.	Ends/Inch	105	
5.	Raw material	Mulberry silk warp & spun cotton weft	
6.	Count of yarn	Warp - 60-66 D & weft 40 Ne	
7.	Width of fabric	36 inches	
8.	Colour	Warp	Weft
		Green,	Red

		orange, maroon	
9.	Time taken	25 days (including all process, while weaving 2 people assisted weaver)	
10.	Place of weaving	Patan	
11.	Prototype Manufacture cost	Rs 817 /Meter	
a.	Cost of warp yarn (including, dyeing, mending, sizing & warp preparation)	Rs 15600	
b.	Cost of weft yarn	Rs 2100	
c.	<i>Pawat</i> & mending of damaged yarn	Rs 1300	
e.	<i>Rach</i> preparation	Rs 2200	
f.	<i>Sandhani</i>	Rs 700	
g.	Weaving	Rs 20000	
h.	<i>Kundikam</i>	Rs 300	
i.	Miscellaneous	Rs 300	
	Total	Rs 42, 500	

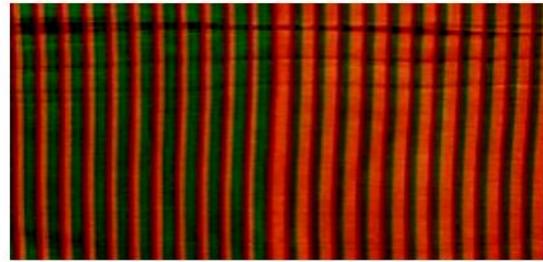


Plate 4.73: Category 2: Stripe *Mashru*: Design 2: Mulberry Warp and Cotton Weft

CATEGORY 1: Stripe *Mashru*: Design 3

4.4.10. III. Stripe *Mashru*-Design 3: Under design 3 of stripe design category (Design category 1) of *Mashru*; cotton warp and cotton weft were taken. For this half and half stripe pattern were taken, where half width of the fabric had one pattern repeat & other half had different pattern repeat.

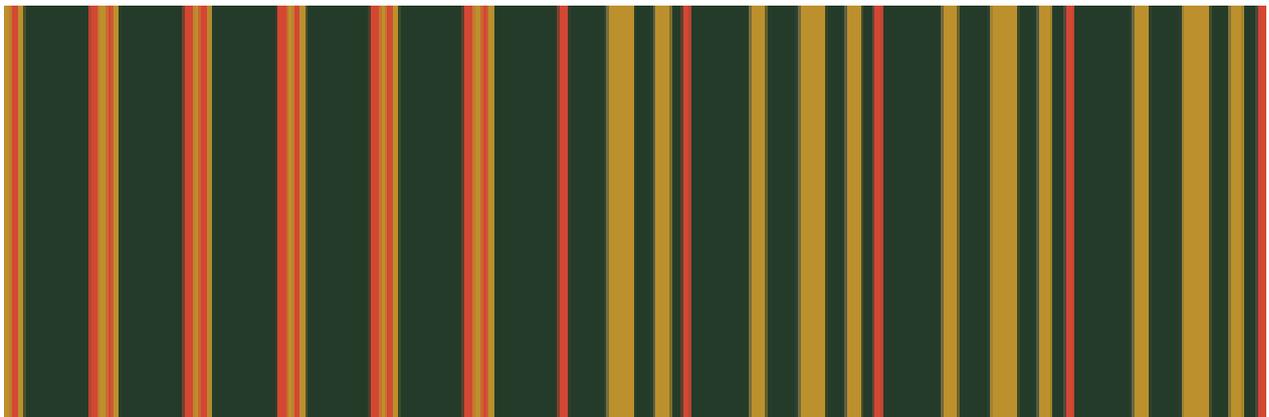


Fig 4.20: Selected layout for Design 3 of category 1 - Stripe *Mashru*



Plate 4.74: First half of the Design 3



Plate 4.75: First half of the Design 3

Table 4.26: Weaving specification of Design 3 under category 1 Stripe

Category 1, Design 3: Stripe			
1.	Weave	Satin	
2.	Placement of stripe	Half and half	
3.	Reed	60	
4.	Ends/Inch	105	
5.	Raw material	Cotton warp & spun cotton weft	
6.	Count of yarn	Warp – 80/2, 30 Ne	
7.	Width of fabric	48 Inches	
8.	Colour	Warp	Weft
		Maroon, dark green, beige	White
9.	Time taken	15 days (including all process for 15 meters)	
10.	Place of weaving	Bhujodi	
11.	Prototype Manufacture cost	Rs 1020 /Meter	

a.	Weaving including preparatory process & raw material cost	Rs 15000
j.	Miscellaneous (like courier)	Rs 300
	Total	Rs 15300



Plate 4.76: Category 1: Stripe *Mashru*: Design 3: Cotton Warp and Cotton Weft

CATEGORY 1: Stripe *Mashru*: Design 4

4.4.10. IV. Stripe *Mashru*-Design 4: Under design 4 of stripe design category (Design category 1) of *Mashru*; Korea silk warp and cotton weft were taken. For this half and half stripe pattern were taken, where half width of the fabric had one pattern repeat & other half had different pattern repeat.



Fig 4.21: Selected layout for Design 4 of category 1 - Stripe *Mashru*



Plate 4.77: First half of the Design 4



Plate 4.78: Second half of the Design

Table 4.27: Weaving specification of Design 4 under category 1 Stripe

Category 1, Design 4: Stripe			
1.	Weave	Satin	
2.	Placement of stripe	Half & half stripe	
3.	Reed	66	
4.	Ends/Inch	132	
5.	Raw material	Korea silk warp & spun cotton weft	
6.	Count of yarn	Warp -33-37 D, Weft - 30 Ne	
7.	Width of fabric	36 Inches	
8.	Colour	Warp	Weft
		Black, yellow, green & red	Red
9.	Time taken	30 days (including all process)	
10.	Place of weaving	Patan	
11.	Prototype Manufacture cost	Rs 1311 /Meter	
a.	Cost of warp yarn	Rs 7500	
b.	Cost of weft yarn	Rs 1000	
c.	Warp preparation	Rs 1872	

d.	<i>Pawat</i>	Rs 500
e.	Dyeing	Rs 500
f.	Mending of damaged yarn	Rs 100
g.	<i>Rach</i> preparation	Rs 1200
h.	<i>Sandhani</i>	Rs 500
i.	Weaving	Rs 5500 (for 15 meters)
j.	<i>Kundikam</i>	Rs 500
k.	Miscellaneous	Rs 500
	Total	Rs. 19672



Plate 4.79: Category 1: Stripe *Mashru*: Design 4: Korea Silk Warp and Cotton Weft

CATEGORY 1: Stripe *Mashru*: Design 5

4.4.10. V. Stripe *Mashru*-Design 5: Under 5th stripe design category of *Mashru*; Tasar silk warp and cotton weft were taken. For this half and half stripe pattern were taken, where half width of the fabric had one pattern repeat & other half had different pattern repeat.

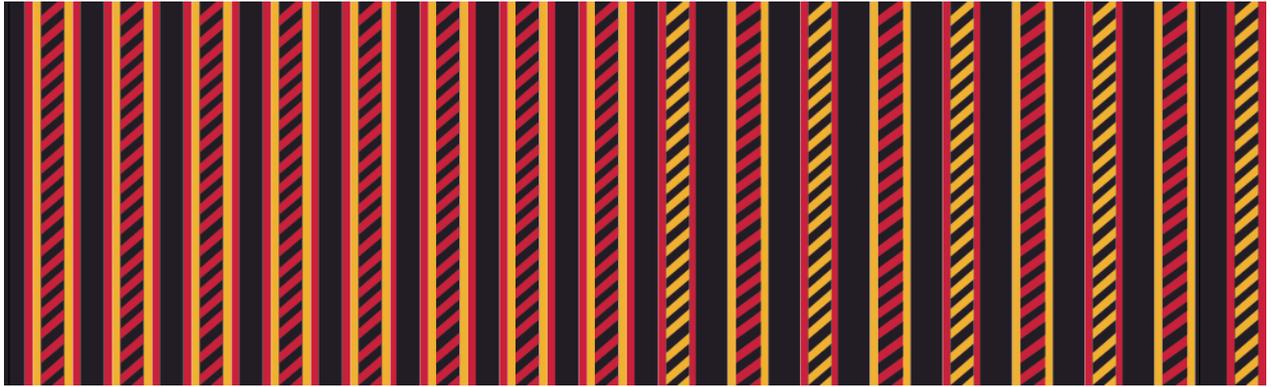


Fig 4.22: Selected layout for Design 5 of category 1 - Stripe *Mashru*



Plate 4.80: First half of the Design 5



Plate 4.81: Second half of the Design

Table 4.28: Weaving specification of Design 5 under category 1 Stripe

Category 1, Design 5: Stripe		
1.	Weave	Satin
2.	Placement of stripe	Half & half stripes
3.	Reed	66
4.	Ends/Inch	132

5.	Raw material	Tasar warp (handspun) & cotton weft	
6.	Count of yarn	Warp – 50-60 D, Weft – 30 Ne	
7.	Width of fabric	36 Inches	
8.	Colour	Warp	Weft
		Red, Yellow & black	Red
9.	Time taken	35 days (including all process)	
10.	Place of weaving	Patan	
11.	Prototype Manufacture cost	Rs 1683	
a.	Cost of warp yarn including dyeing	Rs 7500	
b.	Cost of weft yarn	Rs 1000	
c.	Warp preparation	Rs 3500	
e.	Mending of damaged yarns	Rs 800	
f.	<i>Rach</i> preparation	Rs 2200	
g.	<i>Sandhani</i>	Rs 1000	
h.	Weaving	Rs 7500	
i.	Kundikam	Rs 750	
j.	Miscellaneous	Rs 1000	
	Total	Rs 25250	



Plate 4.82: Category 1: Stripe *Mashru*: Design 5: Tasar Silk Warp and Cotton Weft

CATEGORY 2: *Ikat Mashru*: Design 6

4.4.10. VI. *Ikat Mashru*-Design 6: Under design 6 of stripe design category (Design category 2) of *Mashru*; Mulberry and tasar silk in warp and cotton in weft were taken. For this *Ikat* design mulberry silk were taken in base and tasar were taken in *Ikat*. Resist dyeing (*Ikat*) were done in purple with natural gold colour of tasar and in red with natural gold colour of tasar.

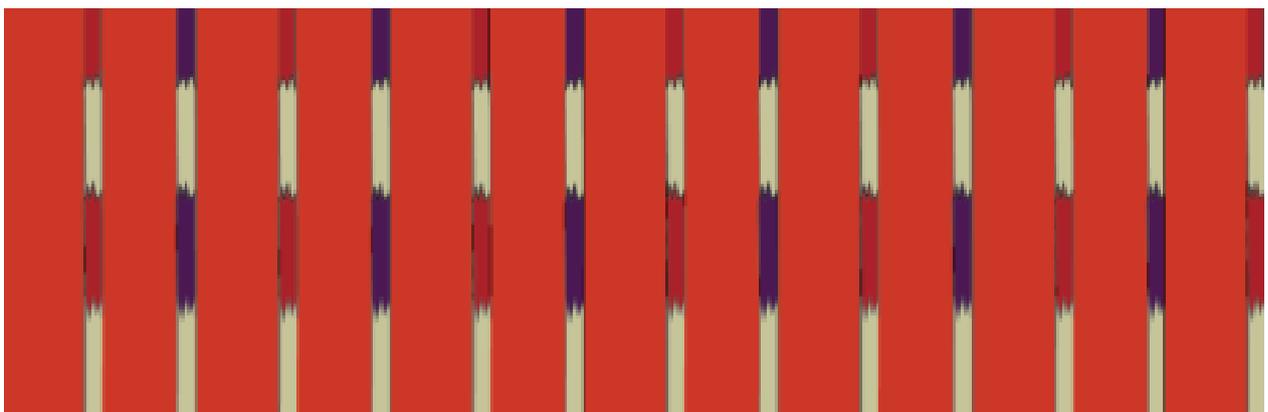


Fig 4.23: Selected layout for Design 6 of category 2 - *Ikat Mashru*

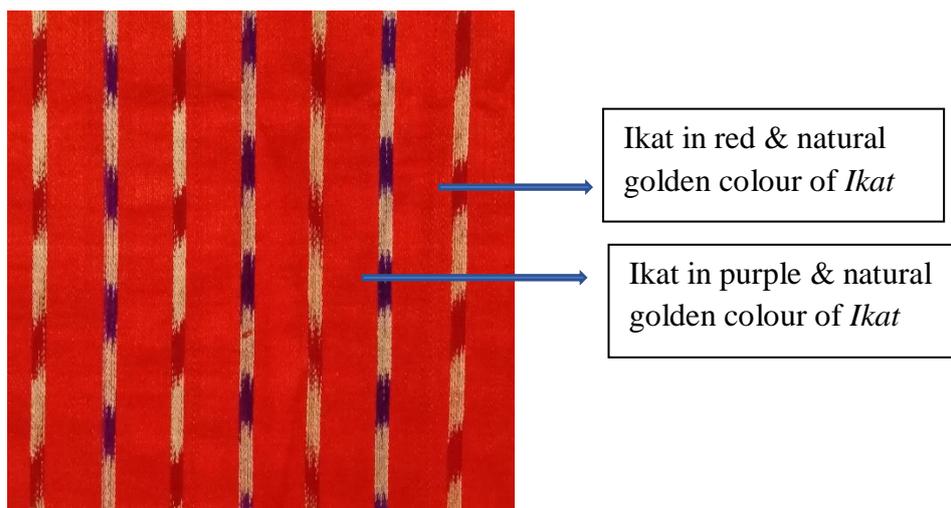


Plate 4.83: Ikat colour detail of the Design 6

Table 4.29: Weaving specification of Design 6 under category 2 Ikat

Category 1, Design 1: Stripe			
1.	Weave	Satin	
2.	Placement of Ikat	Alternate red and purple Ikat band in orange base	
3.	Reed	66	
4.	Ends/Inch	132	
5.	Raw material	Mulberry & tasar warp & cotton weft	
6.	Count of yarn	Warp-60-66 D (mulberry silk) & 50-60 D (tasar silk), weft - 30 Ne	
7.	Width of fabric	36 Inches	
8.	Colour	Warp	Weft
		Orange, resist dyed red, resist dyed purple	Red
9.	Time taken	35 days	
10.	Place of weaving	Patan	
11.	Prototype Manufacture cost	Rs 1527 /Meter	

a.	Cost of warp yarn (mulberry & tasar silk) including dyeing of orange base & warp preparation	Rs 5000
b.	Cost of weft yarn	Rs 1000
c.	Ikat (resist) dyeing of tasar silk	Rs 5000
d.	<i>Rach</i> preparation	Rs 2200
e.	<i>Sandhani</i>	Rs 700
f.	Weaving	Rs 7500
g.	Kundikam	Rs 500
h.	Miscellaneous (courier charge)	Rs 1000
	Total	Rs 22900



Plate 4.84: Category 2: Ikat *Mashru*: Design 6: Mulberry & Tasar Silk Warp and Cotton Weft

CATEGORY 2: *Ikat Mashru*: Design 7

4.4.10. VII. *Ikat Mashru*-Design 7: Under design 7 of *Ikat* design category (Design category 2) of *Mashru*; cotton was taken in both warp and weft. For this *Ikat* design, resist dyeing (*Ikat*) was done in dual colour; red with yellow & green with yellow.

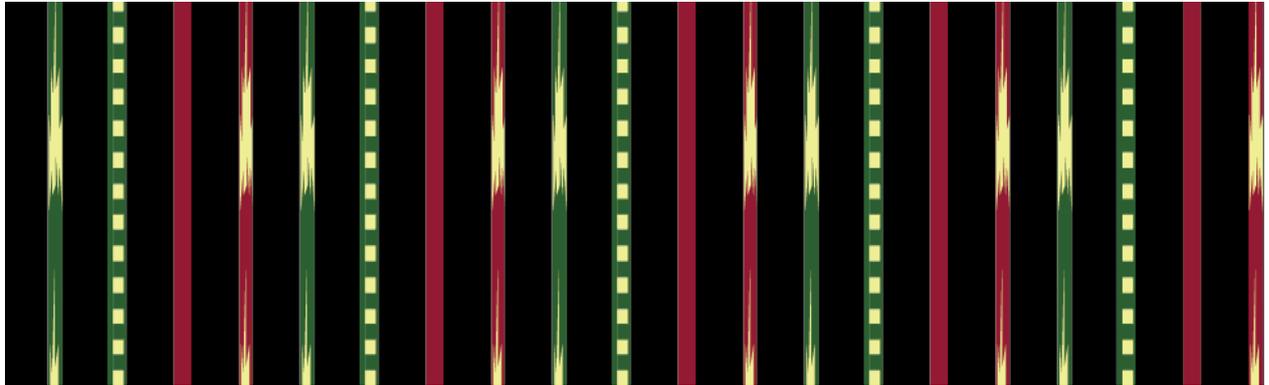


Fig 4.24: Selected layout for Design 7 of category 2 - *Ikat Mashru*

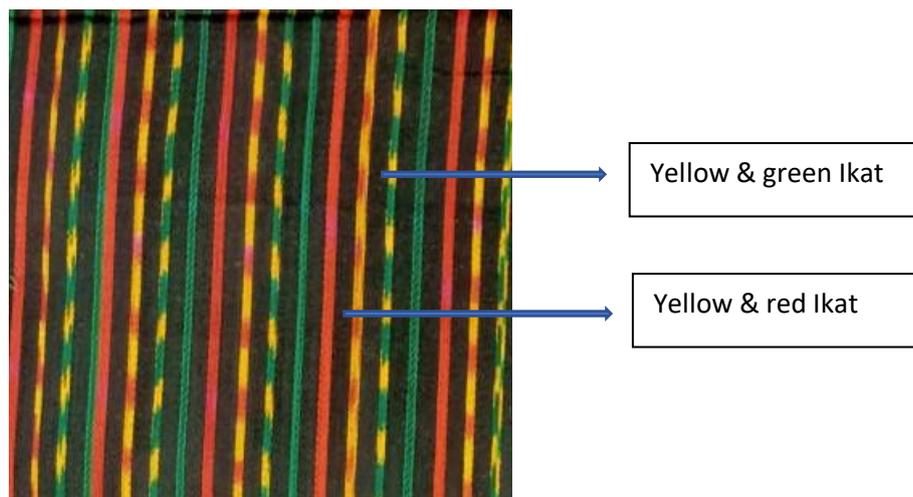


Plate 4.85: *Ikat* colour detail of the Design 7

Table 4.30: Weaving specification of Design 7 under category 2 *Ikat*

Category 1, Design 1: Stripe		
1.	Weave	Satin
2.	Placement of stripe	Regular stripes
3.	Reed	66

4.	Ends/Inch	132	
5.	Raw material	Cotton warp & cotton weft	
6.	Count of yarn	Warp – 80/2, Weft – 30 Ne	
7.	Width of fabric	36 Inches	
8.	Colour	Warp	Weft
		Black. red, resist dyed green- yellow, Resist dyed red-yellow	Black
9.	Time taken	20 days	
10.	Place of weaving	Patan	
11.	Prototype Manufacture cost	Rs 1020 /Meter	
a.	Cost of warp yarn including dyeing & warp preparation	Rs 5000 (for 15 meters)	
b.	Cost of weft yarn	Rs 1000	
c.	<i>Rach</i> preparation	Rs 2200	
d.	<i>Sandhani</i>	Rs 500	
e.	Weaving	Rs 5500	
f.	Kundikam	Rs 500	
g.	Miscellaneous (courier charge)	Rs 600	
	Total	Rs. 15300	



Plate 4.86: Category 2: Ikat *Mashru*: Design 7: Cotton warp & cotton Weft

CATEGORY 3: *Butti Mashru*: Design 8

4.4.10. VIII. a. *Butti Mashru*-Design 8: Under third *Butti* design category of *Mashru*; cotton warp and cotton weft were taken. For this *asharfi* motif in block repeat were taken. It was a traditional *Mashru* motif either used alone or in combination of other motifs in varied sizes. Here this motif in magenta colour were used against yellow base to make it distinct.

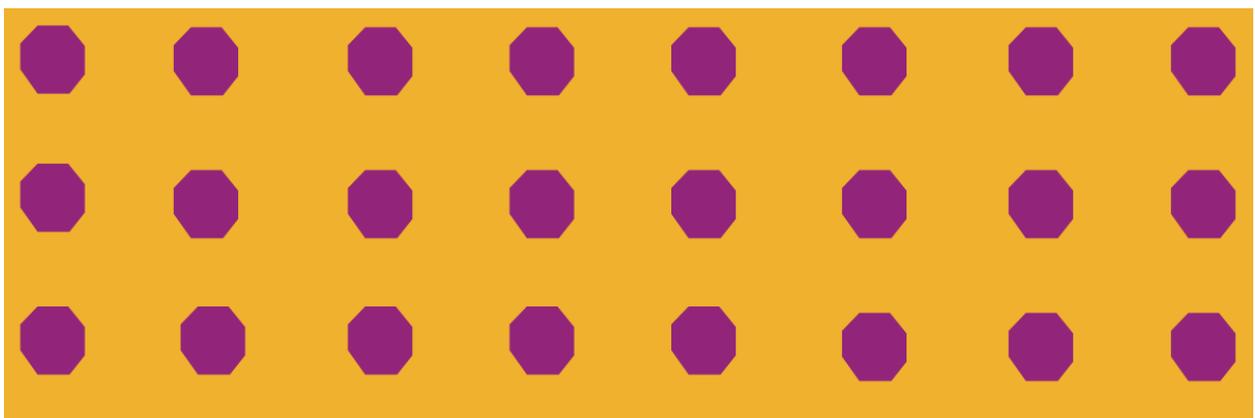


Fig 4.25: Selected layout for Design 2 of category 1 - Stripe *Mashru*

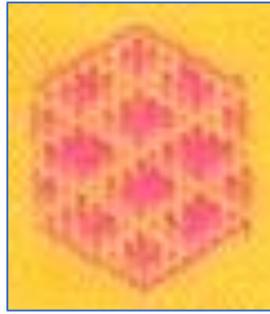


Plate 4.87: Detailed *Asharfi* motif

Table 4.31: Weaving specification of Design 8 under category 3 *Butti*

Category 3, Design 8: Butti			
1.	Weave	Twill (3/1)	
2.	Type of motif repeat	Block repeat	
3.	Reed	60	
4.	Ends/Inch	60	
5.	Raw material	Cotton warp & spun cotton weft	
6.	Count of yarn	Warp – 80/2, 40 Ne	
7.	Width of fabric	24 Inches	
8.	Colour	Warp	Weft
		Yellow	Yellow, magenta (extra weft)
9.	Time taken	15 days (including all process)	
10.	Place of weaving	Bhujodi	
11.	Prototype Manufacture cost	Rs 1355 /Meter	
a.	Weaving including preparatory process & raw material cost	Rs 7150 (for 5.5 meters)	

b.	Miscellaneous (like courier)	Rs 300
	Total	Rs 7450



Plate 4.88: Category 3: *Butti Mashru*: Design 8: Cotton warp and Cotton Weft

4.4.10. VIII. b. Other designs explored under *Butti Mashru*-Design

Under 3rd design category other motifs and layouts were explored in the same yellow warp where motifs related to triangle and diamond were explored. These motifs were taken in with the view of geometric motifs & patterns that had been prominent characteristics of *Mashru* especially triangles & diamonds. Under these explorations colours & motifs were traditional in character, however newness in motifs were explored. The three products explored under this were stole.

Product description: All the three designs of stole were woven in common bright yellow coloured warp with variation of motif, its colour and layout. *Mashru* is known for luster and bright colours. Hence, Yellow colour was selected as satin base with contrast undiluted bright colored motifs. Yellow also comes among the traditional colours (red, yellow, green) of *Mashru*. Colour contrast of motifs helped in visually separating them with its plane. Motifs used were mainly variation of triangle & diamond as traditionally geometrical motifs were widely used in *Mashru* with major

emphasis on triangular form & their variations. Designed layouts for products were quite creative in nature and difficult for power loom imitation.

In first (**Plate 4.89**) and second (**Plate 4.90**) designs; motifs were repeated in asymmetrical pattern yet maintaining order and rhythm whereas in third (**Plate 4.91**) design it was repeated in contrast of first two- in systematic order defining simplicity in the bright plane. In layout of designs, researcher had taken care to incorporate judicious number of motifs in the layout that will be visible during draping as every motif was going to add cost to the product. The change in reed-pick, count of yarn played vital role in creating light weighted stole which was easy to carry, and care. The product has broken the myth of *Mashru* to be medium to heavy weighted fabric suitable only for, blouses, jackets and furnishing items. The overall concept was to represent the flair of youth in product who are vibrant, energetic and believes in self-expression through their lifestyle with aesthetic sensibility rooted in tradition.



**Plate 4.89: Product: Stole 1,
cotton warp and cotton Weft**



Plate 4.90: Product: Stole 2, cotton warp and cotton Weft



Plate 4.91: Product: Stole 2, Cotton warp and Cotton Weft

4.5 Promotion of *Mashru* through product diversification of developed fabric

With the rise in awareness and demand of traditional textiles in view of responsible consumption, there is rise in market for traditional textiles. Especially when ninety percent of total global export of handloom textiles is met by India then it would make huge sense if *Mashru* textiles too moves in that direction through product diversification to avail this opportunity and boost up its consumption in domestic as well as export market.

In the recent period several attempts had been made by designers, NGOs, export and design houses for product diversification with traditional textiles to explore the possibilities of maintaining and promoting abundantly available rich traditional textiles of India and had been found successful also. These products have immense potential worldwide to produce foreign exchange, to boost employability at grassroot level, to offer less harmful/harmless fabrics to user and to sustain the ecological balance. Keeping the aforesaid points in mind the objective of promotion of *Mashru* through product diversification of developed fabric was formulated.

4.5.1. Understanding product and possibilities of *Mashru*

Mashru deals with the narratives of many affordances since its inception. From the perspective of its quality and function it has been explored in multiple ways such as costumes, furnishing, accessories and decorative items.

Traditionally it had been used to make robe and covers for bolster and cushion. In cloths; *Mashru* skirts, blouses, and tunics for both men and women had been widely popular. In Madhya Pradesh, Rajasthan, and Gujarat; it was quite popular till advent of 21st century. Women of tribal communities of Gujarat especially from the areas of Kutch-Bhuj and Saurashtra used it to make their traditional blouses (*Kanchali*) where previously embroidery were used. In contemporary past it had been widely used in marriage ceremonies by bride, groom and their relatives, for ritualistic textiles also it had been used to make *chandarva* (shed) of goddess Durga.

According to **Edwards (2011)**, *Mashru* was popular for furnishings, hangings, quilts and robes, and was often used as a lining fabric. Its cotton material not only allowed the faithful to circumvent disobedience of religious law but also offered adequate strength to endure wear. It was popular among different age group, genders as well as people from various economic groups, social strata, caste and communities. Until the 1900's the royal craft of *Mashru* were produced in large quantities for export markets and local elite but at present it is in despair.

Amidst a varied range of ecological and social concerns, there is increase in demand of traditional products. Design based innovation in traditional sector can fetch constructive change in connecting with users. Outcome of such innovations can multiply; when strategically linked to diverse products parameters prior to its conception and development.

To promote *Mashru* for diverse products with the changed and growing environment, it was crucial to rethink the way in which *Mashru* were made earlier as well as to explore new ways to address ecological and social issues. It can be possible through building new competencies, reviving skillsets and motivating artisans as agent of change in shaping the future of textile and fashion industry. Designers can be involved with artisans through participatory approach to bring informative strategic intervention apart from just targeting elements of textile design.

In comparison to other popular crafts *Mashru* products are hardly visible in public and private exhibitions. Designers can help to promote *Mashru* through their uniqueness, by creating innovative product narratives and casting it to suite the need of hour. It can be firm, sophisticated, stylish, colorful and elusive option for modern women. Similarly, with the acceptance of bright colors in male, it can be a bold, flamboyant, ceremonial and audacious option for modern men too. Its garments can be perfect solution for all seasons with good longevity and innate sense of sustainability. These areas were optimally utilized by researcher to visualize *Mashru* relevant in present fashion context. In the era of trans-disciplinary research, the elegance of *Mashru* can be extended beyond the confines of textiles and fashion.

This fabric can be developed ranging from low, medium to heavy weight qualities to suffice other functional usage like festive packaging, interior, furniture and accessory based products. This perspective can be reconsidered for *Mashru* too to be used as decorative or functional products for Interior, furniture and other application. Its supremacy can bloom place's appearance from a wearisome to stimulating blaze. Hence, *Mashru* has huge potential to be used in different products.

4.5.2. Selection of product as per fabric properties (product diversification)

Understandings of properties of fabric are very significant to understand function and performance of a fabric as per its subjected end use. It helps in defining visual characteristics, utility characteristics, durability characteristics, and production working characteristics of product to be developed & its maintenance requirement. Researcher analyzed the properties of developed fabric in terms of fabric hand feel, texture, drape, fabric thickness, pattern, width

and colour. Taking these points into consideration researcher selected few end uses which were suitable as per the fabric characteristics as well as the novelty in the product application. The various products selected for diversification were shirt, blazer, *kurti*, suits, tunics, gowns, ethnic wear and home furnishing like curtain, upholstery, bedsheet, cushion cover etc.

4.5.3. Technique selected for fabric visualization on specific product

For product diversification digital rendering on specific products were done in order to visualize the fabric on a greater number of products, in different styles. Leveraging technology for this objective were helpful in fabric draping, visualizing garments on models and furnishing in varied setting with essential prop without actually getting them stitched and fabricated. It's was a hassle-free approach that can be used to convince clients without much expense in shorter span.

At, present when lot of impetus is given on digitalization and cost optimization then this can be seen as key tool in aligning our traditional textiles in that perspective. One of the important benefits of this approach is that a textile designer or artisan who don't have technical knowledge of garment construction can easily integrate the value chain of textile and garment together for three-dimensional ideation and effective product presentation. With these views' researcher used TRI3D software for fabric draping and rendering.

4.5.4. Digital exploration of products

1. Product diversification of developed *Mashru* fabric - Category 1: - Stripe *Mashru*: Design 1: Rayon warp with Cotton weft

Mashru in rayon warp, cotton weft, satin weave in half and half colour pattern with red, black and fine yellow stripes of varying width in either sides. Developed fabric were digitally rendered for men's shirt & blazer and women's top and shirt.

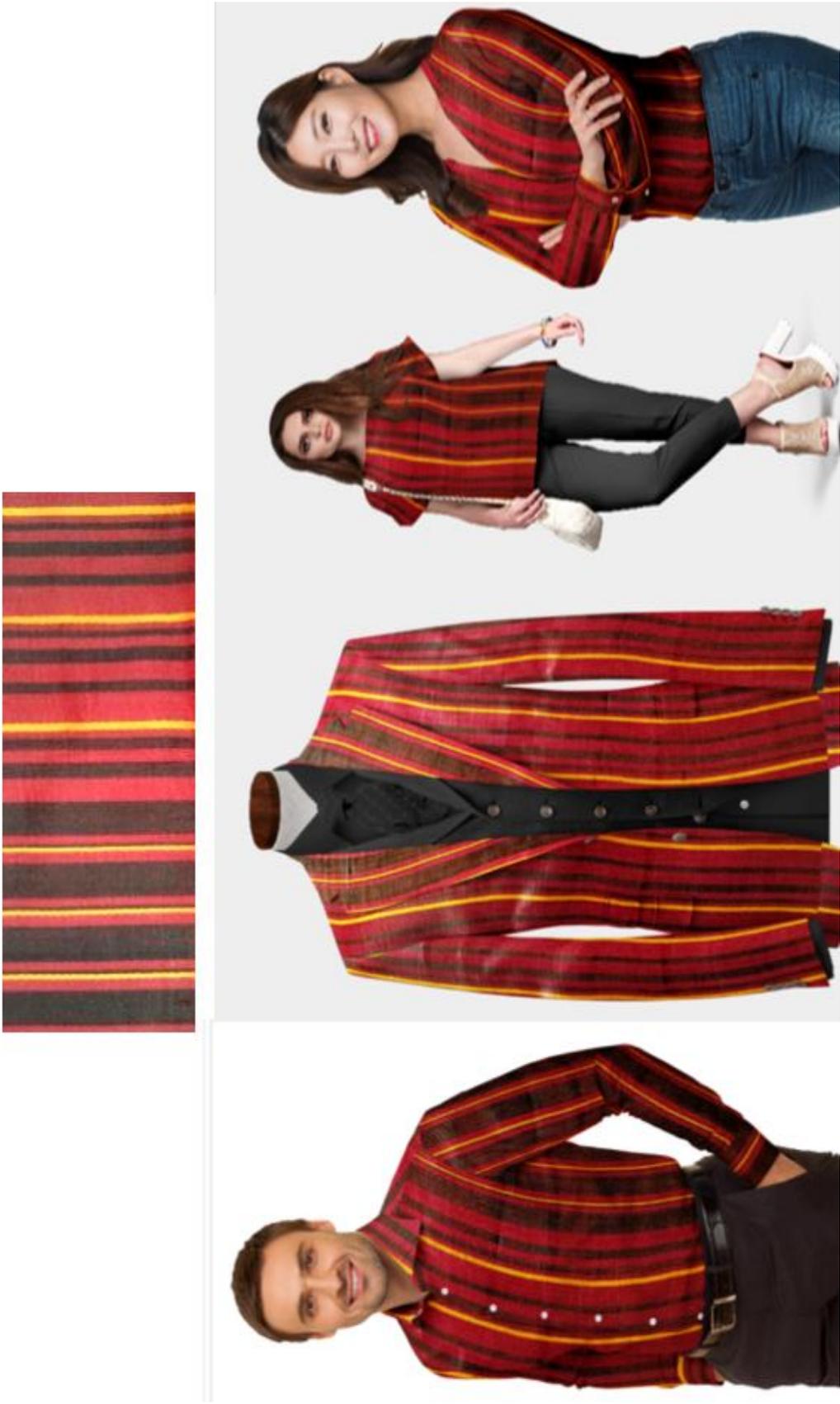


Plate 4.92: Products rendered from Design – 1

2. Product diversification of developed *Mashru* fabric - Category 1: - Stripe *Mashru*:

Design 2: Mulberry silk warp with Cotton weft

Mashru in half and half pattern with mulberry silk warp and cotton weft. Either half unlike yet tied together with colour harmonization. Developed fabric were digitally rendered for furnishing products like bedcover & cushion and apparel products like men's half coat and lady's top.



Plate 4.93: Products rendered from Design – 2

3. Product diversification of developed *Mashru* fabric - Category 1: - Stripe *Mashru*:

Design 3: Cotton warp with Cotton weft

Mashru in cotton warp & cotton weft, half and half stripe pattern. Either half showing contrast colour proportion resulting in lighter and darker value.

Developed fabric were digitally rendered for furnishing products like curtain, upholstery, bedsheet & cushion cover and wrapping cloth for infant.

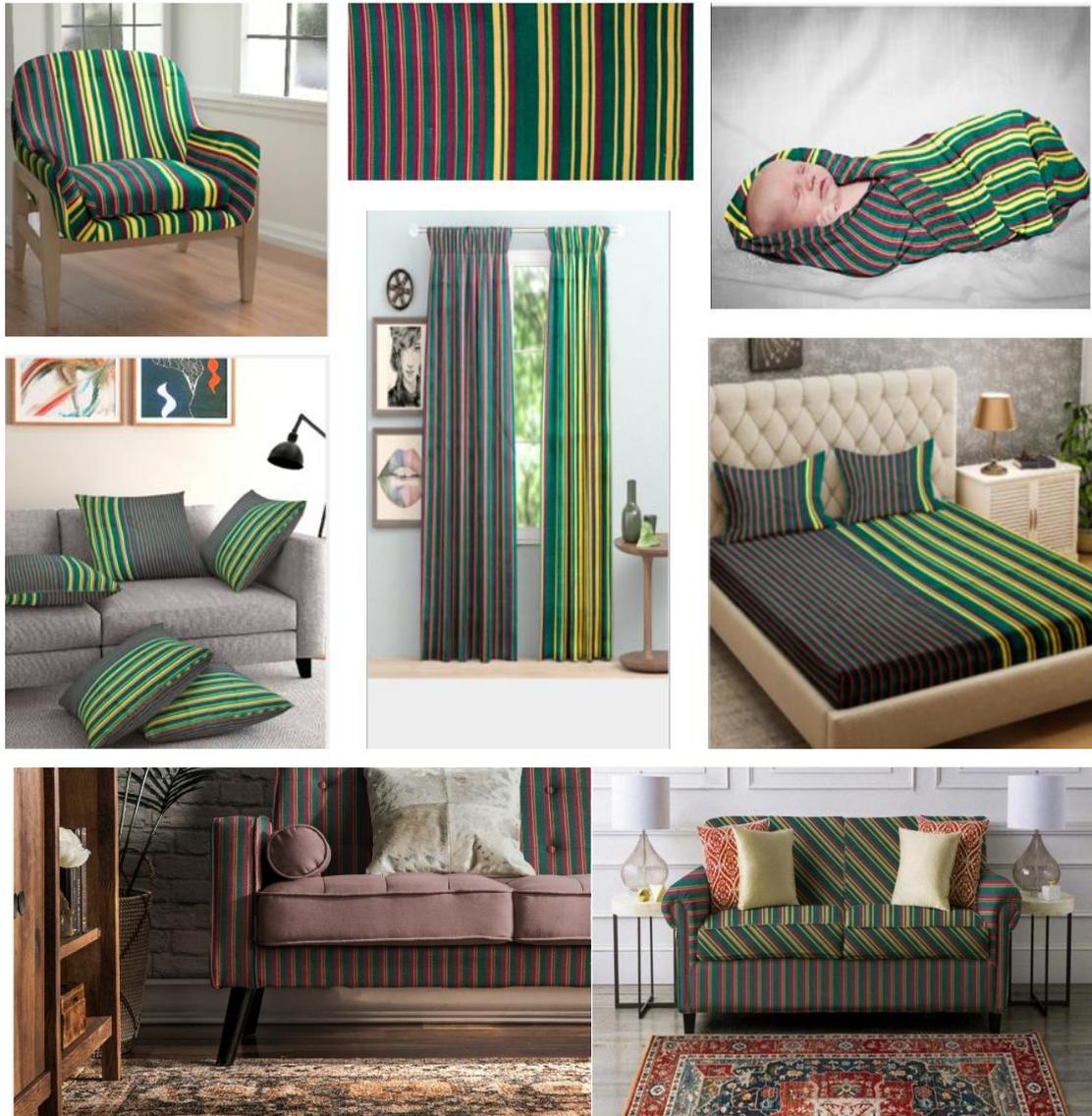


Plate 4.94: Products rendered from Design – 3

4. Product diversification of developed *Mashru* fabric - Category 1: - Stripe *Mashru*:

Design 4: Mulberry & tasar silk warp with Cotton weft

Mashru in tasar silk warp & cotton weft, satin weave in half and half similar pattern. Cluster of yellow, red, green and green, red, yellow symmetrical patterns repeating in either sides in black base. Red weft is merging with back warp and its luster to give a glazed effect, an unusual texture within the usual attitude of *Mashru*. Developed fabric were digitally rendered for apparel only due to its very fine quality. The rendered products were men's shirt, half jacket and lady's formal and casual dress.



Plate 4.95: Products rendered from Design – 4

5. Product diversification of developed *Mashru* fabric - Category 1: - Stripe *Mashru*:

Design 5: Tasar silk warp with Cotton weft

Mashru design with handspun tasar silk warp and cotton weft, satin weave, resist dyed, warp *Ikat* in half and half pattern. Use of tasar is reflecting luster in pleasant and calm style. Developed fabric were digitally rendered for apparel only due to its very fine quality and beautiful matt surface. The rendered products were men's shirt, half jacket; lady's formal and casual garments like shirt, top, dress and for kid's kurta.

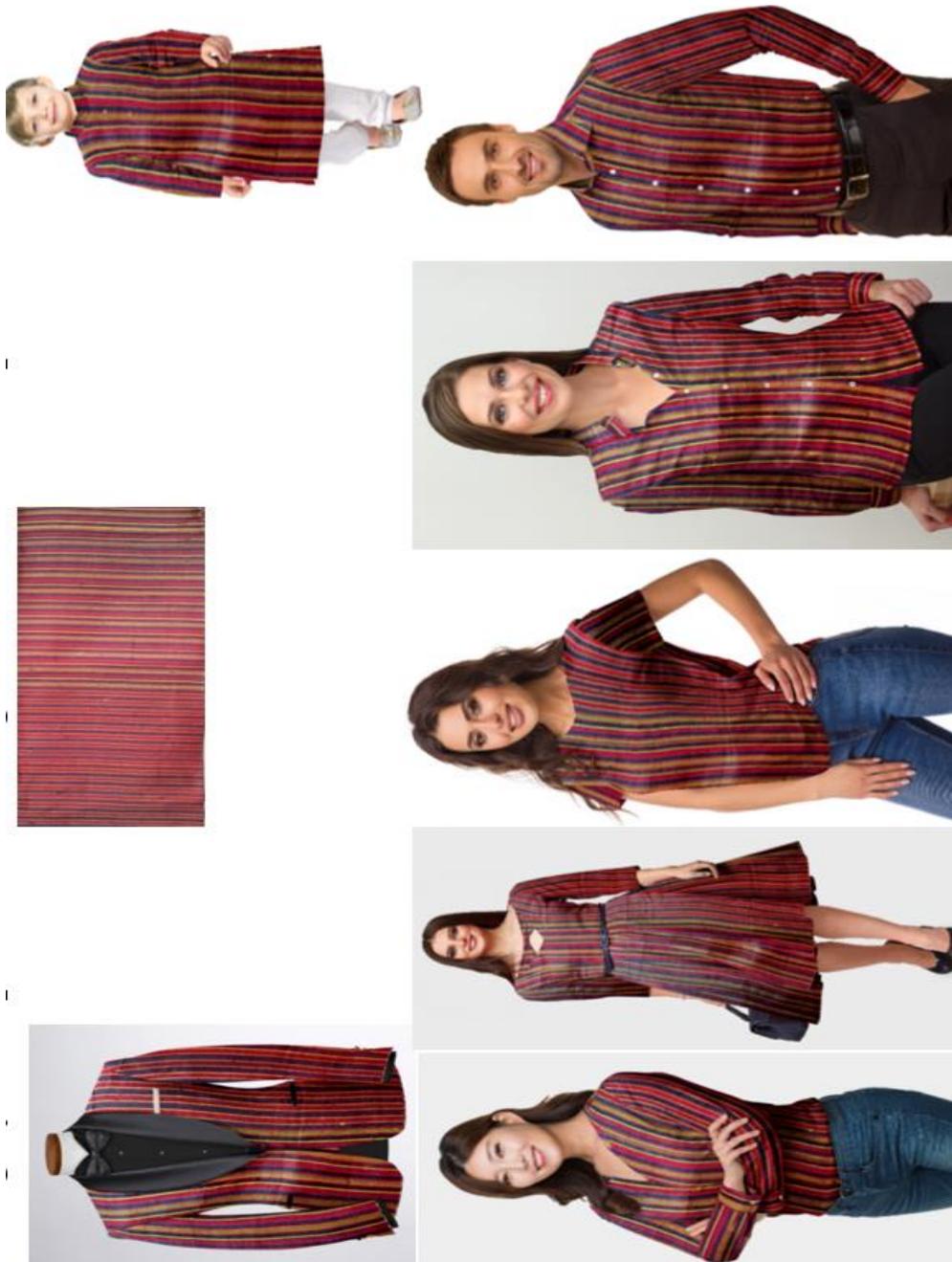


Plate 4.96: Products rendered from Design – 5

6. Product diversification of developed *Mashru* fabric - Category 2: - *Ikat Mashru*: Design

6: Tasar silk warp with Cotton weft

Mashru design in mulberry and tasar silk warp and cotton weft, satin weave and warp *Ikat*. orange stripes alternating with red-golden and purple-golden *Ikat* stripes are creating exotic sensation wrapped in tradition. Developed fabric were digitally rendered for apparel only due to its very fine quality and very glossy texture. The rendered products were men's coat; lady's formal and casual wear like shirt, *kurti*, top, dress and kid's frock and shirt.



Plate 4.97: Products rendered from Design – 6

7. Product diversification of developed *Mashru* fabric - Category 2: - *Ikat Mashru*: Design

7: Cotton warp with Cotton weft

Mashru design with pattern of rhythm and musical sensation in cotton warp & cotton weft, satin weave and resist dyed-warp *Ikat*. Resist dyed red-yellow, green -yellow, solid dyed green and red stripes alternating in black base. Developed fabric were digitally rendered for both apparel and furnishing products like men's kurta, half jacket; kid's kurta; lady's formal and casual *kurtis* and furnishing products like table runner, bedsheet and two siter sheets.



1



2

Plate 4.98: Products rendered from Design – 7

8. Product diversification of developed *Mashru* fabric - Category 3: - *Butti Mashru*:

Design 8: Cotton warp with Cotton weft

Mashru design in cotton warp, cotton weft, satin weave and brocade technique, the extra weft traditional *asharfi* motifs in purple thread scattered in block repeat against yellow base. Its inspiration of colours and motifs were drawn from the traditional *Mashru*. Self-similar pattern of *asharfi* motif is mark of unity and sense of completion in togetherness. Developed fabric were digitally rendered for apparel and curtain only due to its fine quality, texture and pattern. In apparel it was rendered for men's shirt, half jacket; women's dress and kid's frock, night wear and shirt.



1



2

Plate 4.99: Products rendered from Design – 6

4.5.5. Costing of developed fabric and products

Researcher calculated the sampling charge of all developed fabric wherein raw material cost, freight charges, processing charges, wages at every stage of production, finishing charges and concept charge were included. Overall, the costs of various samples were influenced by material, technique, making and level of intricacy. The cost of the product varied from Rs-500/meter to 1480 Rs-500/meter.

Category-1, Stripe *Mashru*, Design-1: Rayon warp & cotton weft, price: Rs. - 550/- per meter

Category-1, Stripe *Mashru*, Design-2: Mulberry silk warp & cotton weft, price: Rs. - 850/- per meter

Category-1, Stripe *Mashru*, Design-3: Cotton warp & cotton weft, price: Rs. - 650/- per meter

Category-1, Stripe *Mashru*, Design-4: Korea silk warp & cotton weft, price: Rs. - 1480/- per meter

Category-1, Stripe *Mashru*, Design-5: Tasar silk warp & cotton weft, Price: Rs. - 1220/- per meter

Category-2, *Ikat Mashru*, Design-6: Mulberry-Tasar warp & cotton weft, Price: Rs. - 1200/- per meter

Category-3, *Butti Mashru*, Design-7: Cotton warp & cotton weft, Price: Rs. - 900/- per meter

4.6 Analysis of the market acceptability of developed fabrics in terms of yarn, colour, design and aesthetics

The objective of the study was “to analyze the market acceptability of developed fabrics in terms of yarn, colour, design and aesthetics”. With this objective, preference schedule was designed to analyze developed *Mashru* fabrics. The schedule was framed under three segments where the first segment dealt with demographic details like age, gender, qualification, income locality; second section dealt with craft awareness among respondents like awareness about handloom fabric, its possession, their preferences related its use and third segment dealt with opinion of the respondents related to concept behind designing of *Mashru* fabrics like colour, pattern, techniques, material, aesthetics, uses etc. The schedule was prepared using google form. Digital invitation was prepared to invite respondents to fill the form and give their opinion about the developed fabrics. Also, brief note of *Mashru* were given to the respondents. Place was not a limitation as responses were to be collected digitally. Researcher also shared her contact number and email with respondents to contact in case of any query. Responses were received from eighteen states. This approach gave the opportunity to make people aware about *Mashru* on broader basis as well to capture their responses from several parts of the country. A total of 236 responses were received from which 230 responses were selected for evaluation, remaining six were discarded due to incomplete nature of response. Responses were segregated on the basis of male, female & Gujarat, other state.

Table 4.29: Selected respondents from Gujarat and other state

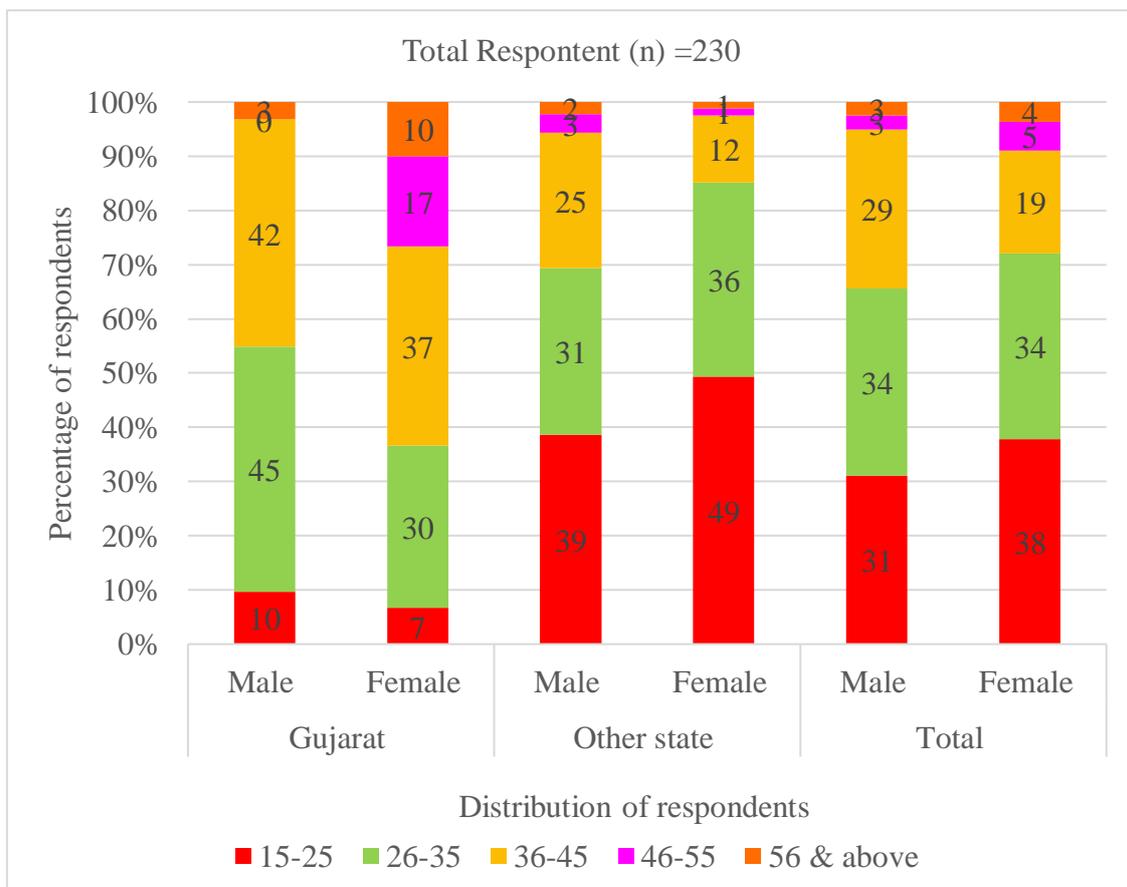
Sr. no.	State	Gender		No. of respondents
		Male	Female	Total
1.	Gujarat	31	30	61
2.	Other state	88	81	169
Total		119	111	230

Responses were collected from both the genders because *Mashru* fabric is extensively used by both the gender in different forms. Apart from self-usage of *Mashru* among both the genders, they also influence each other’s decision and behavior of consumption. Therefore, this was crucial to collect opinion of both the genders. Another important feature about respondents’ sample was that number of male and female respondents of Gujarat and outside Gujarat were similar. This helped in giving much clear picture of acceptance among both the genders based on different parameters. Respondents primarily comprised of faculties, design students, home maker, design professionals, textile engineers, fashion, textile and costume designers.

4.6.1 Demographic data of respondents

4.6.1. a Age of the respondents

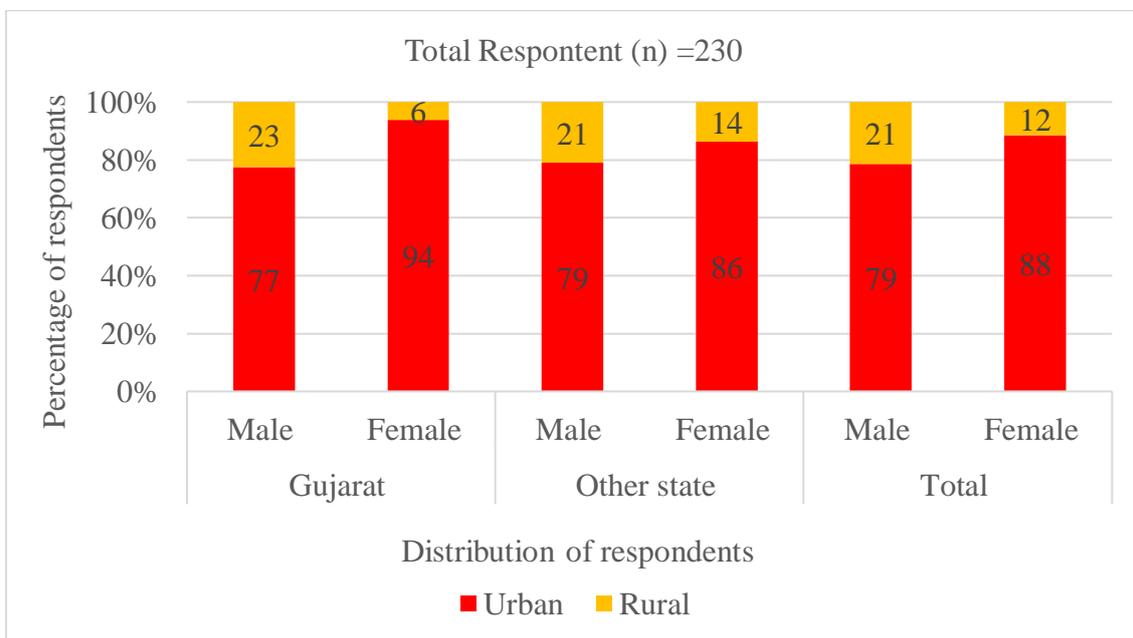
As every age group has their own preferences, therefore responses were collected from different age groups pertaining to newly developed designs of *Mashru* fabrics. Both the genders and different age group were selected because *Mashru* products were used by both male and female of different age groups. After receiving data related to age of respondents, it was segregated under age groups with range of 10 years except the group of 56 and above. Data relating to age group of respondents indicated in **Graph 4.1** reflected that total 230 respondents were considered to assess the acceptance of products where maximum percent of male and female respondents from Gujarat state were between age group of 26-35 & 36-45 respectively and from other state were between 15-25 for both the genders. The most imperative observation was that distribution of maximum percentage of male in total response were between age group of 26-35 and of female were between the age group of 15- 25. Also, the percentage of male and female respondents in the age group of 26-35 were same.



Graph 4.1: Age of respondents

4.6.1. b Locality of the respondents

Mashru is such a textile which is used in both urban & rural locality. Therefore, respondents were selected from both localities. Data relating to the locality of respondents indicated in **Graph 4.2** reflected that among total 230 respondents; in Gujarat as well as in other states maximum percentage of both male and female belonged to urban locality. Therefore, overall, total number of urban respondents in both male and female were higher compared to rural respondents. Among rural respondents also percentage of male respondents were higher compared to female respondents. In Gujarat it was very less whereas in other state it was more than fifty percentage.

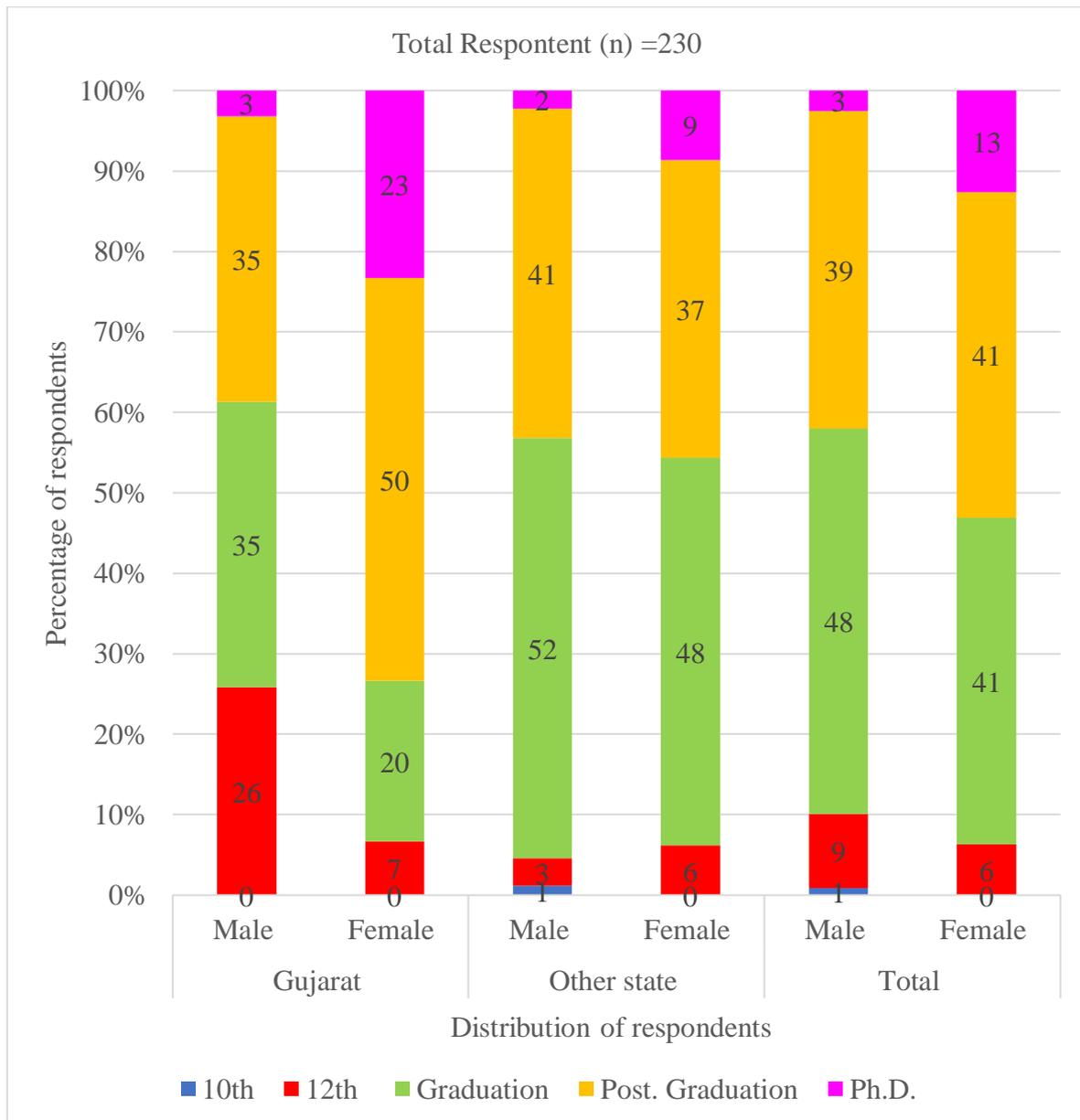


Graph 4.2: Locality of respondents

4.6.1. c Educational qualification of the respondents

Data associated to educational qualification of the respondents were collected as education extensively influences a person’s behaviour, attitude, value, interest and preferences to a huge extent. **Graph 4.3** reflects that in Gujarat; percentage of male respondents having graduation and post-graduation were same and they also formed the percentage having maximum response. At the same time female having post-graduation constituted maximum response with 50 percentage. In other states; both males and females constituting maximum percentage of total responses had graduation. Overall, maximum male had qualification of graduation and female had equal percentage of graduation and post-graduation qualification. Another

observation in Gujarat as well as in other states were that maximum percentage of respondents with higher qualification (PhD) were females and that also in Gujarat it were quite high compared to other states.

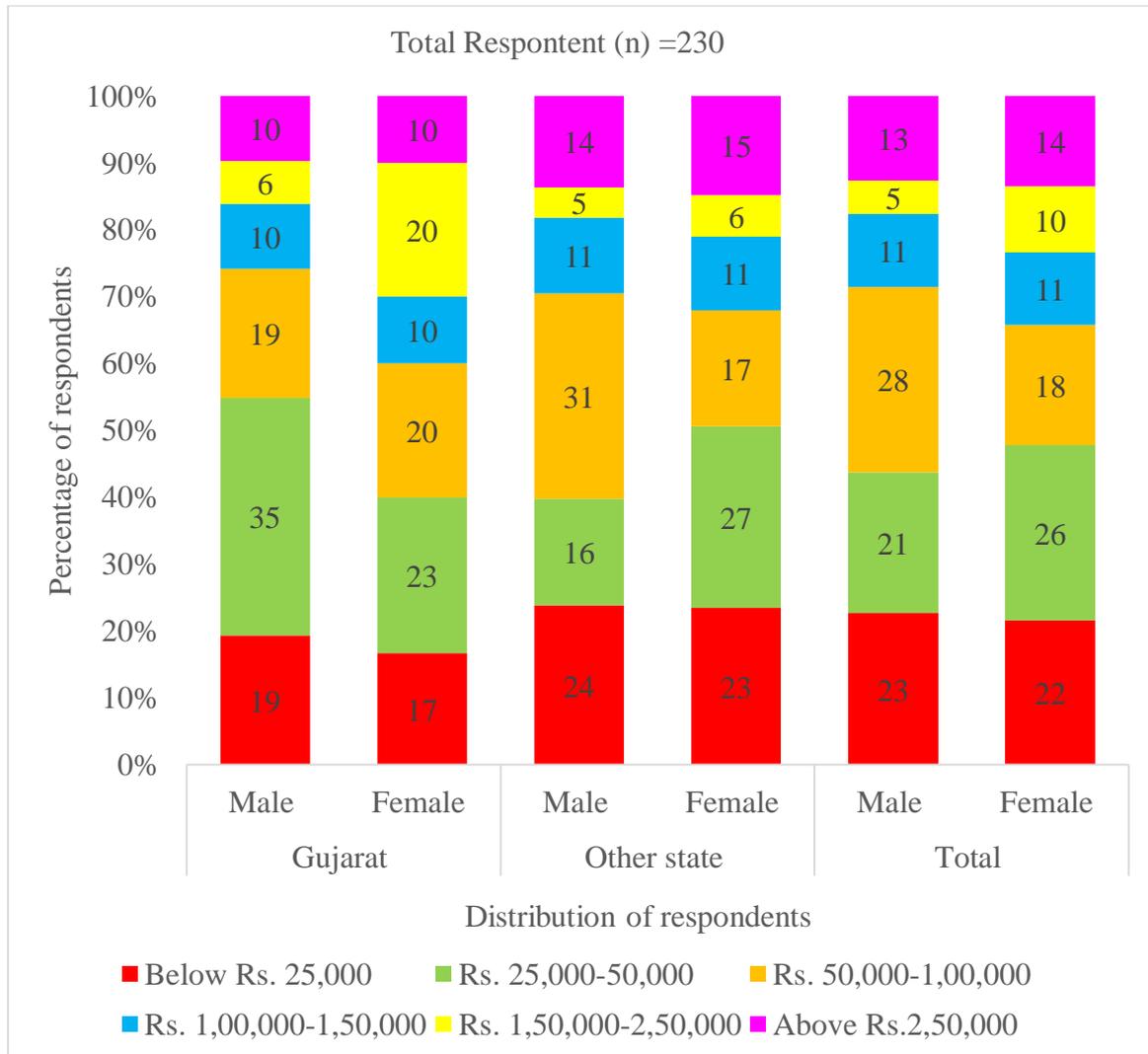


Graph 4.3: Qualification of respondents

4.6.1 d Income of the respondents

Traditionally *Mashru* had been a fabric of various income groups in form of different products. With this view the fabrics were developed in varied qualities with diverse pricing. Hence, accordingly respondents were collected from diverse income groups to have composite view about developed fabrics. Information pertaining to family income in **Graph 4.4** reflected that

in Gujarat, maximum percentage of male and female respondent had family income between Rs 25,000-50, 000. In other states; maximum percentage of male respondent’s family income lied between Rs 50,000-1000,000 and female lied between Rs 25,000-50,000. Overall, family income of maximum male respondents lied between Rs 50, 000-1, 00000 and of female respondents lied between Rs 25,000-50,000. Another major observation was that in Gujarat and in other states; percentage of respondents having family income between Rs 1,00,000-1.50,000 were almost similar.

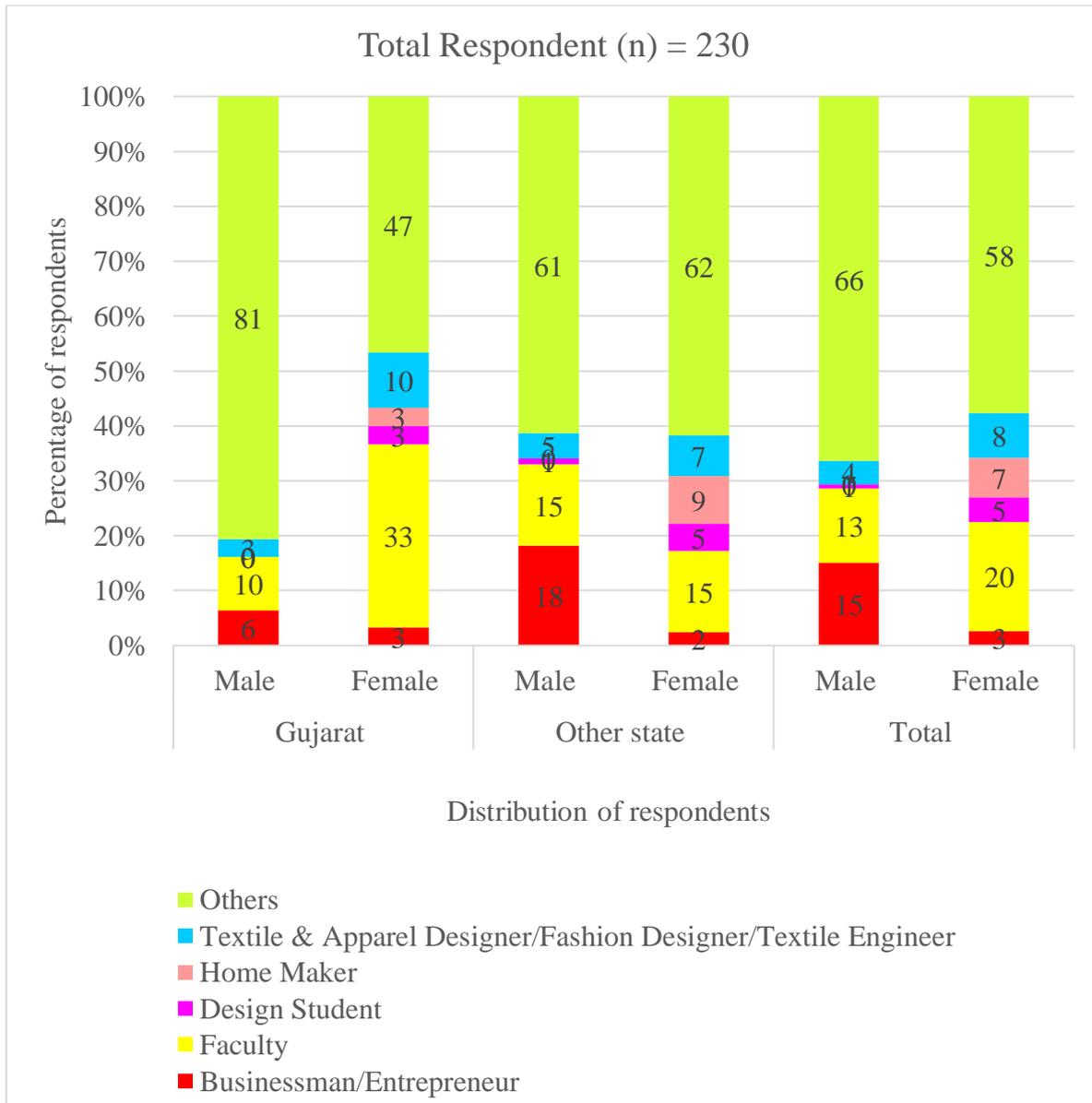


Graph 4.4: Family income of respondents

4.6.1. e Occupation of the respondents

During interpretation of data regarding occupation of respondents as mentioned in **Graph 4.5**, it was found that maximum percentage of both male & female respondents from Gujarat & other states belonged to other category. In Gujarat 6 percentage of male respondents and 3

percentage of female respondents belonged to business, 10 percentage of male and 33 percentage of female respondents belonged to faculty and 3 and 10 percentage of male & female respondents belonged to textile and related profession. In other state 18 & 2 percentage of male & female, 15 percentage of both genders, 5 & 7 percentage of male and female respondents belonged to business, faculty and textiles & allied professions respectively. In Gujarat the percentage of female faculty were seen quite substantial in total collected responses.

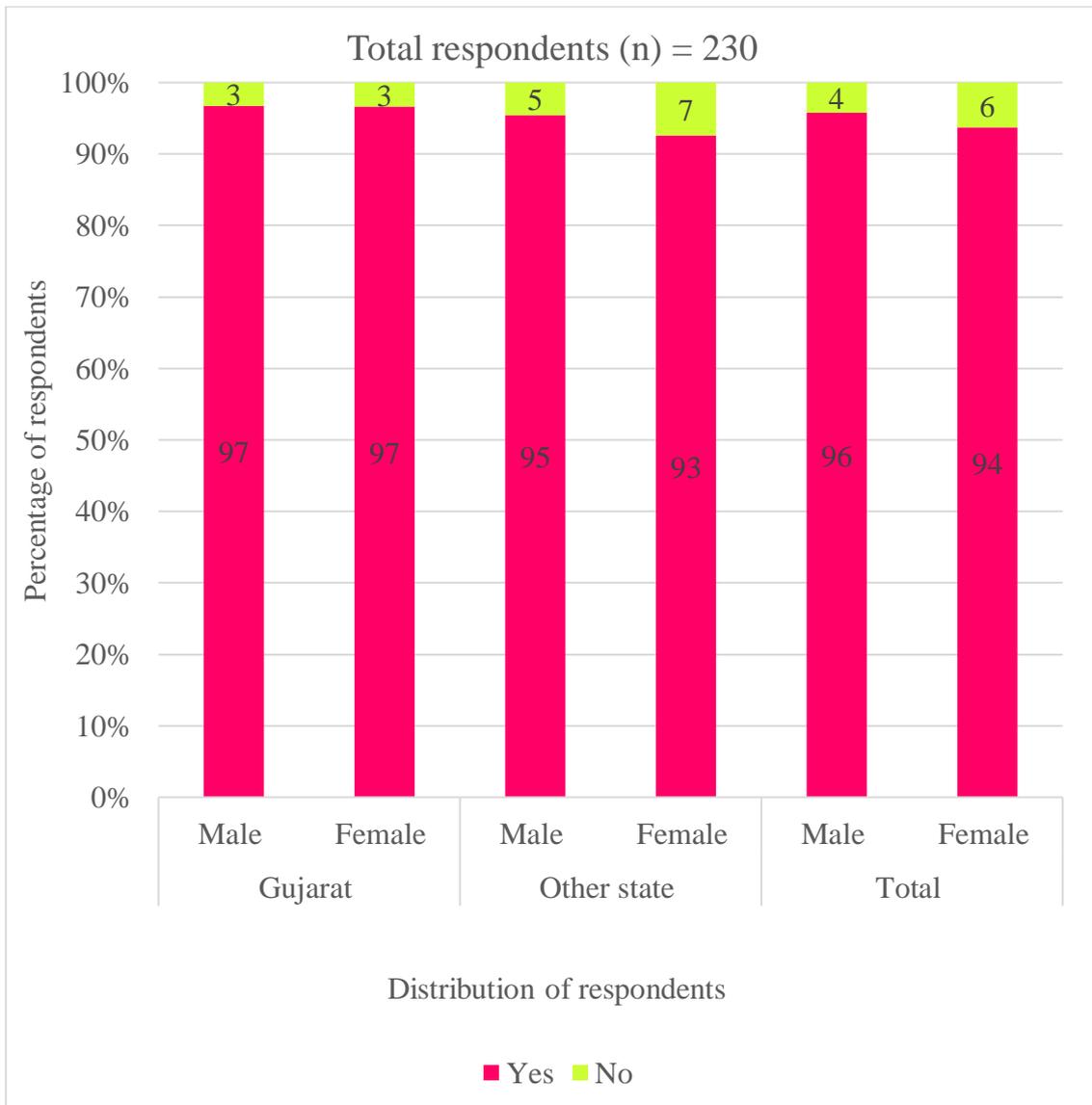


Graph 4.5: Occupation of respondents

4.6.2 Craft awareness among respondents

4.6.2. a Awareness about handloom fabric among respondents

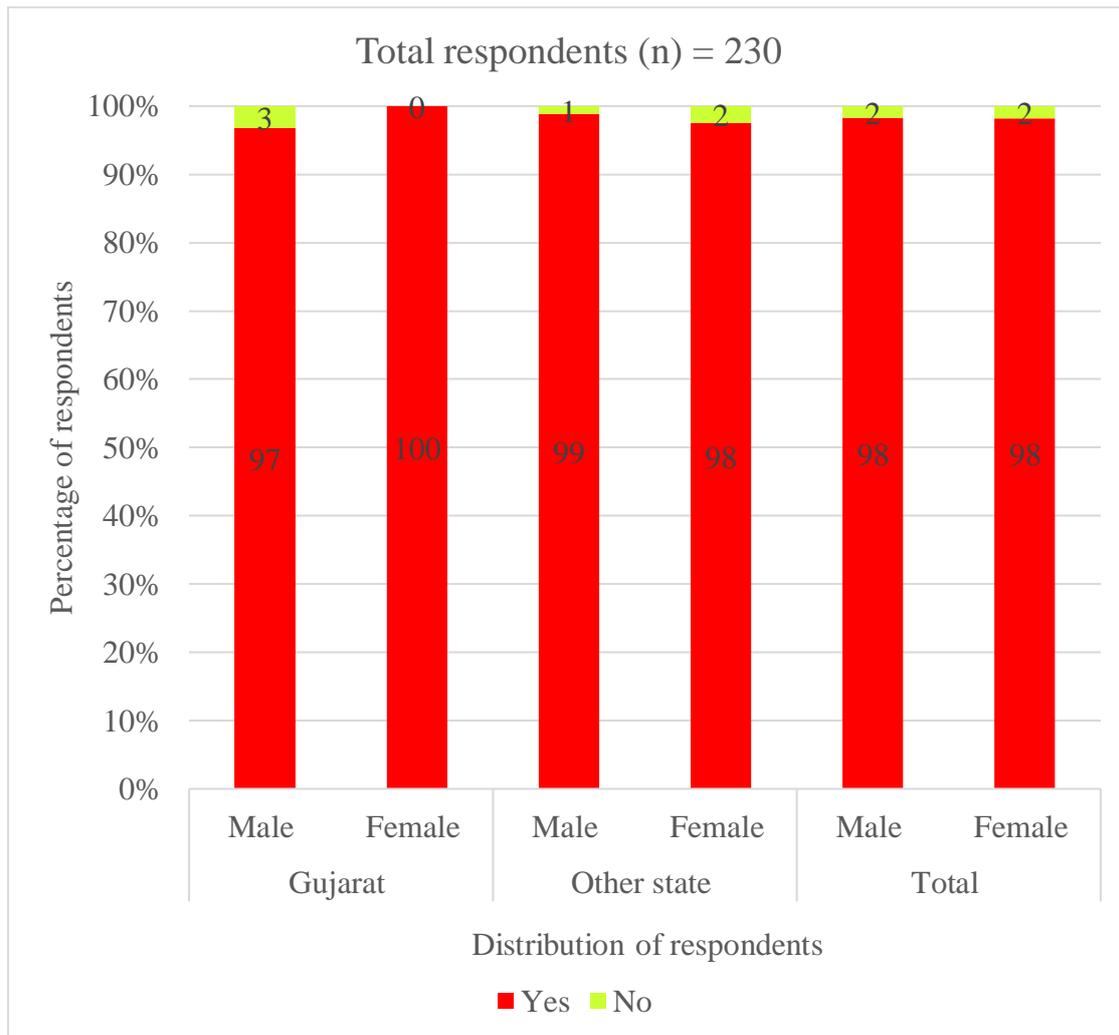
Data regarding the awareness of handloom fabric among the respondents as shown in **Graph 4.6** reflected that maximum percentage of both male and female respondents in Gujarat as well as in other state were aware about handloom fabrics. This portrayed a affirmative picture about the relevance of handloom fabrics in present times also.



Graph 4.6: Handloom fabric awareness among respondents

4.6.2. b Likeness to use handloom product among respondents

Upon observing the data related to likeness to use handloom product among respondents as indicated in **Graph 4.7**, it was found that in Gujarat; 97 percentage of male and 100 percentage of females likes to use handloom product and in other states 99 percentage of male & 98 percentage of females liked to use handloom products. It meant that overall, maximum percentage of respondents liked to use handloom products.

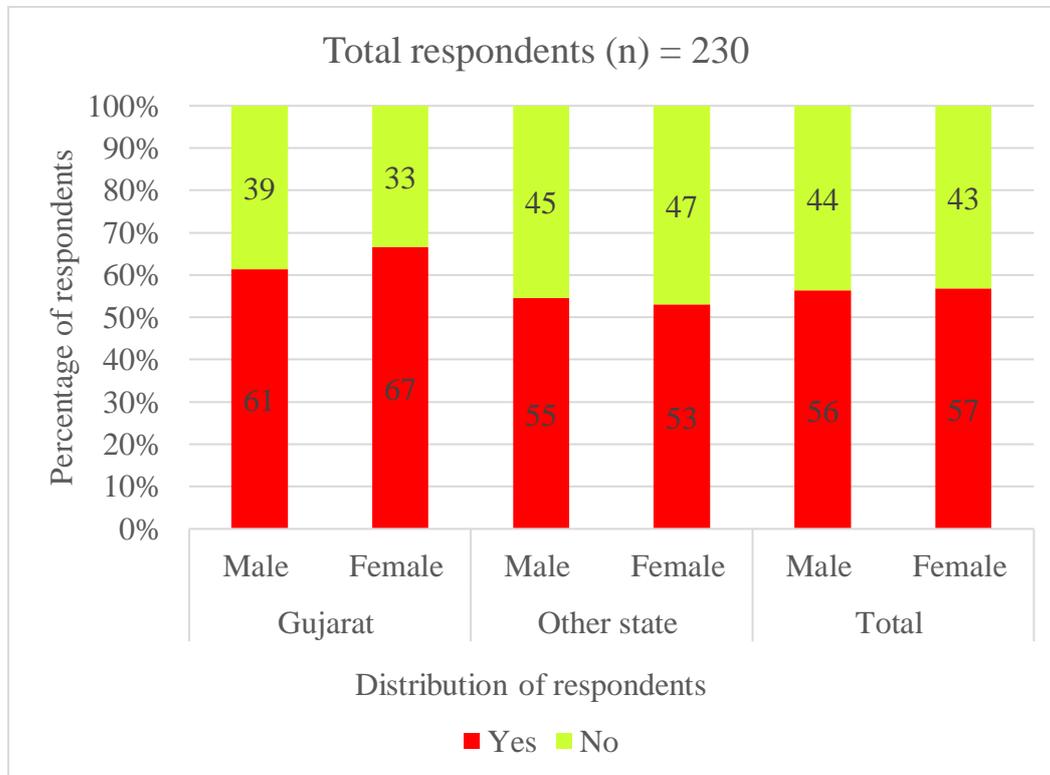


Graph 4.7: Likeness to use handloom products among respondents

4.6.2. c Mashru fabric in respondent's collection

While viewing the data of respondents pertaining to availability of *Mashru* fabric in their collection as presented in **Graph 4.8**, it was found that in Gujarat; 61 percentage of male respondents and 67 percentage of female respondents had *Mashru* fabric in their collection. In other states 55 percentage of male & 53 percentage of females had *Mashru* fabric in their

collection. However, researcher presumed that respondents of other states approved presence of *Mashru* in their collection possibly on the basis of visual appearance of fabrics presented in the opinionnaire.



Graph 4.8: *Mashru* fabric in respondent’s collection

4.6.3 Opinion of the respondents related to concept in designing

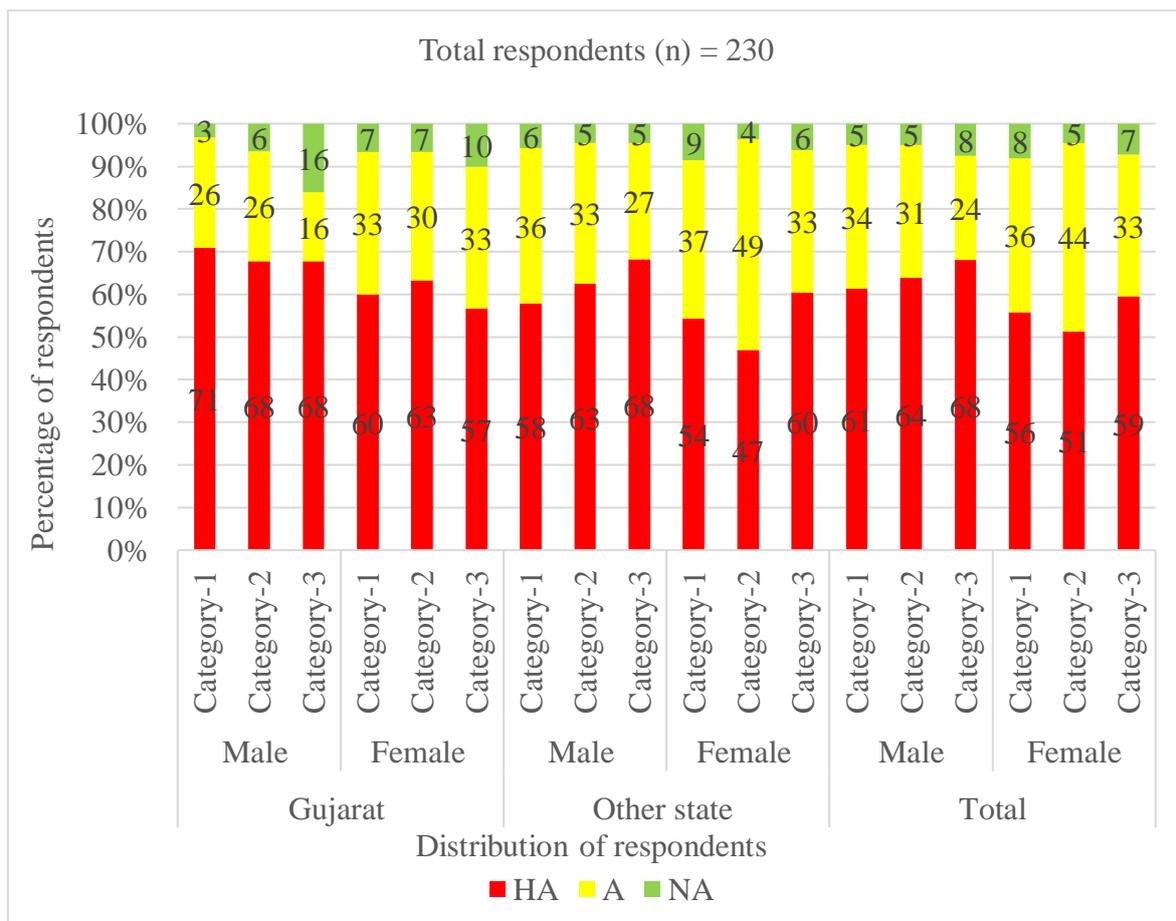
4.6.3. a Overall aesthetic appeal of developed *Mashru* fabric under each category - 1, 2 & 3

On understanding the data related to the overall aesthetic appeal of developed *Mashru* fabric under each category as shown in **Graph 4.9**; it was observed that in Gujarat; maximum 71 percentage of male marked highly appealing to category -1, Stripe design whereas female marked category – 2, *Ikat* design with 63 percentage as maximum. In other states; category -3, *Butti* design was marked as highly appealing with 68 and 60 percentage as maximum by both male and female. This also gave a picture that the preferences of male and females within Gujarat and other states differed considerably from each other. In Gujarat two different categories that Category -1, stripe design was liked maximum by males as highly appealing and category -2, *Ikat* design was marked maximum by females as highly appealing; however,

in other states, the same category that is category- 3, *Butti* design was marked maximum as highly appealing by both males & females.

Another major observation was that, overall category – 3, *Butti* design was maximum marked as highly appealing by males and females including Gujarat and other states with 68 percentage and 59 percentage respectively. Also, regarding the view of not appealing for all the three categories, it was observed that 10 or below than 10 percentage of respondents in most of the categories marked as not appealing.

Looking into the design category with maximum percentage of highly appealing including both male and females of Gujarat as well as other states, category 3, *Butti* designs was marked with maximum percentage. Also, looking into the overall view regarding highly appealing in all the three categories; it was observed that in most of the cases the percentage of highly appealing were above 50 percentage.



Graph 4.9: Overall aesthetics appeal of each category of developed *Mashru* fabrics

* HA – Highly Appealing, * A – Appealing, *NA – Not Appealing

4.6.3. b Opinion of respondents for the below-listed statements related to colour, pattern, motif, *Ikat* & their combination

On analysis of the data related to the various statements pertaining to colour, pattern, motif, *Ikat* & their combination for newly developed fabrics under different categories as shown in **Graph 4.10**, it was observed that in Gujarat; 74 percentage of male & 67 percentage of female marked that the selection of colours was appropriate, it meant that for larger percentage of males of Gujarat it were appropriate compared to females of Gujarat; in other states; 78 percentage of male & 52 percentage of female marked it excellent, it meant that in other states also it was appropriate for males in higher percentage compared to females; in total 77 percentage of male & 56 percentage of females including respondents of Gujarat & other states marked it excellent, here also it was found appropriate for larger percentage of males compared to females. Overall, it can be conferred that larger percentage of males found it appropriate compared to females. In addition to it, 70.5 percentage of all respondents including respondents of both the genders and of Gujarat & outside Gujarat state marked it excellent.

On the basis of appropriateness of placement of stripe & pattern, it was observed that 77 percentage of male and 67 percentage of female in Gujarat marked it excellent, it meant that higher percentage of males of Gujarat found it appropriate compared to females of Gujarat; 65 percentage of male and 48 percentage of female outside Gujarat marked it excellent, it meant that larger percentage of male found it appropriate compared to females; in total 68 percentage of male & 53 percentage of females including respondents of Gujarat & other states marked it excellent, here also comparatively larger percentage of male found it appropriate compared to female. Overall, among all categories of respondents, larger percentage of males found it appropriate compared to females. Furthermore, 60.5 percentage of all respondents including respondents of both the genders and of Gujarat & outside Gujarat state marked it excellent.

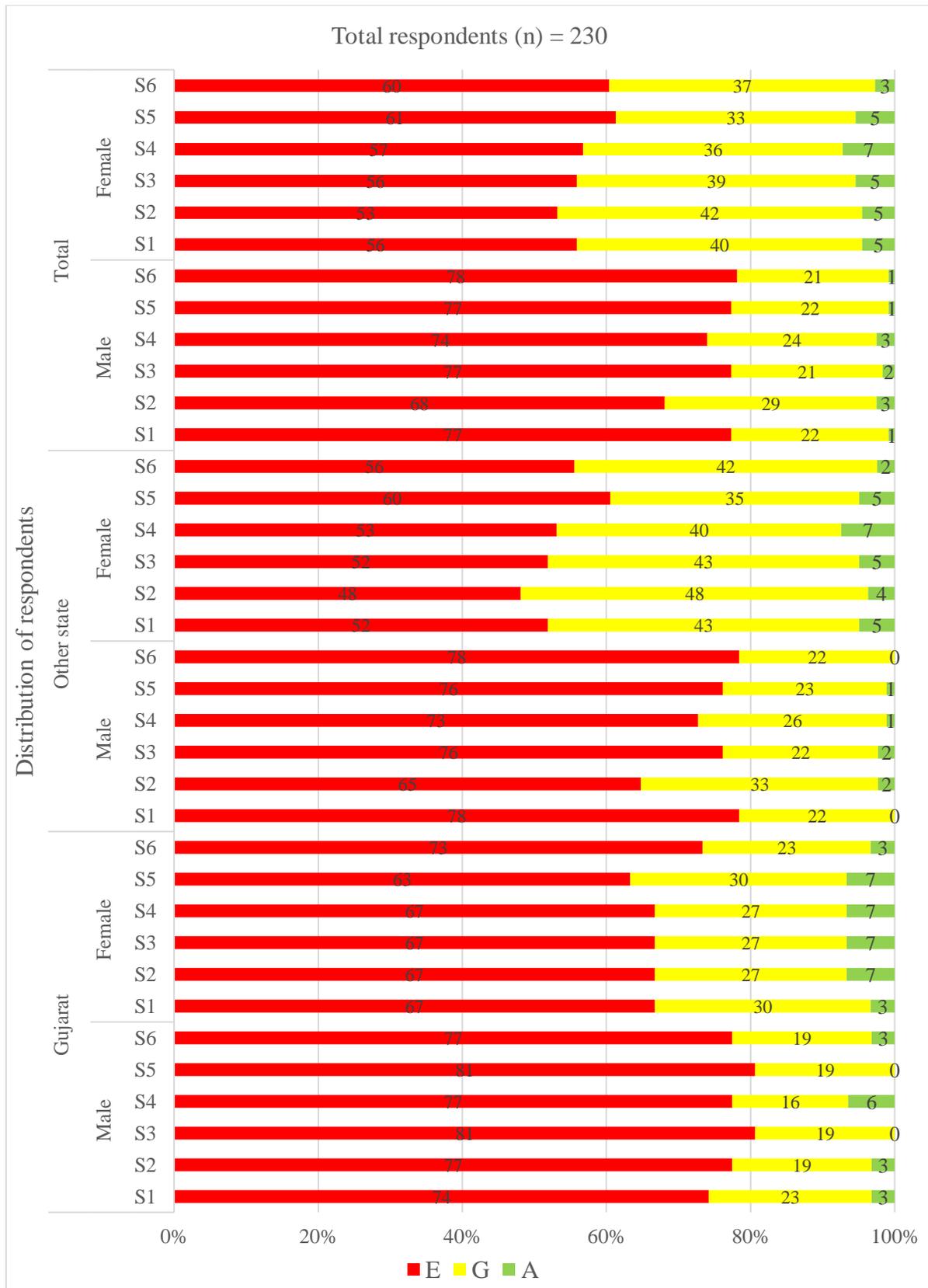
On the basis of appropriateness of placement of motifs, it was observed that 81 percentage of male and 67 percentage of female in Gujarat marked it excellent, it meant that larger percentage of male found it appropriate compared to female; 76 percentage of male and 52 percentage of female outside Gujarat marked it excellent, it meant that larger percentage of male found it appropriate compared to female; in total 77 percentage of male & 56 percentage of females including respondents of Gujarat & other states marked it excellent, again here also for larger percentage of male it was found appropriate compared to females. Overall, for male it was found appropriate for larger percentage compared to females. Moreover, 66.5 percentage of all

respondents including respondents of both the genders and of Gujarat & outside Gujarat state marked it excellent.

On the basis of appropriateness & adequacy of placement of Ikat patterns, it was observed that 77 percentage of male and 67 percentage of female in Gujarat marked it excellent, it meant that it was found more appropriate for males compared to females; 73 percentage of male and 53 percentage of female outside Gujarat marked it excellent, it meant that larger percentage of male found it appropriate compared to females; in total 74 percentage of male & 57 percentage of females including respondents of Gujarat & other states marked it excellent, overall, here also it was found appropriate for larger percentage of male compared to females. Additionally, 66.5 percentage of all respondents including respondents of both the genders and of Gujarat & outside Gujarat state marked it excellent.

On the basis of appropriateness of placement of stripe and *Ikat* combination, it was observed that 81 percentage of male and 63 percentage of female in Gujarat marked it excellent, for larger percentage of male it was found appropriate compared to female; 76 percentage of male and 60 percentage of female outside Gujarat marked it excellent, it was found more appropriate for male compared to female; in total 77 percentage of male & 61 percentage of females including respondents of Gujarat & other states marked it excellent. So, here also it was found appropriate for larger percentage of male compared to female. Additionally, 69 percentage of all respondents including respondents of both the genders and of Gujarat & outside Gujarat state marked it excellent.

On the basis of appropriateness of overall placement of yarn/color/stripe/motifs/*Ikat* and their combination, it was observed that 77 percentage of male and 73 percentage of female in Gujarat marked it excellent, it meant that it were found appropriate for slightly larger percentage of male compared to female but substantially appropriate for both genders; 78 percentage of male and 56 percentage of female outside Gujarat marked it excellent, here also it were found appropriate for larger percentage of male compared to female; in total 78 percentage of male & 60 percentage of female including respondents of Gujarat & other state marked it excellent. Overall, it was found appropriate for larger percentage of male compared to female. Additionally, 69 percentage of all respondents including respondents of both the genders and of Gujarat & outside Gujarat state marked it excellent.



Graph 4.10: Opinion for the listed statements related to colour, pattern, motif, *Ikat* & their combination of newly developed *Mashru* fabrics

*** S1 - The selection of colors are appropriate, *S2 - The placement of stripe patterns are appropriate, *S3 - The placement of motifs are appropriate, * S4 - The placement of Ikat patterns are appropriate and adequate, *S5 - The placement of stripe and Ikat combination are appropriate & *S6 - The overall placement of yarn/color/stripe/motifs/Ikat and their combination are appropriate**

***E – Excellent, *G – Good & *A – Average**

4.6.3. c Opinion of respondents about the developed *Mashru* fabric on the basis of placement of stripe/motif/ikat under each category

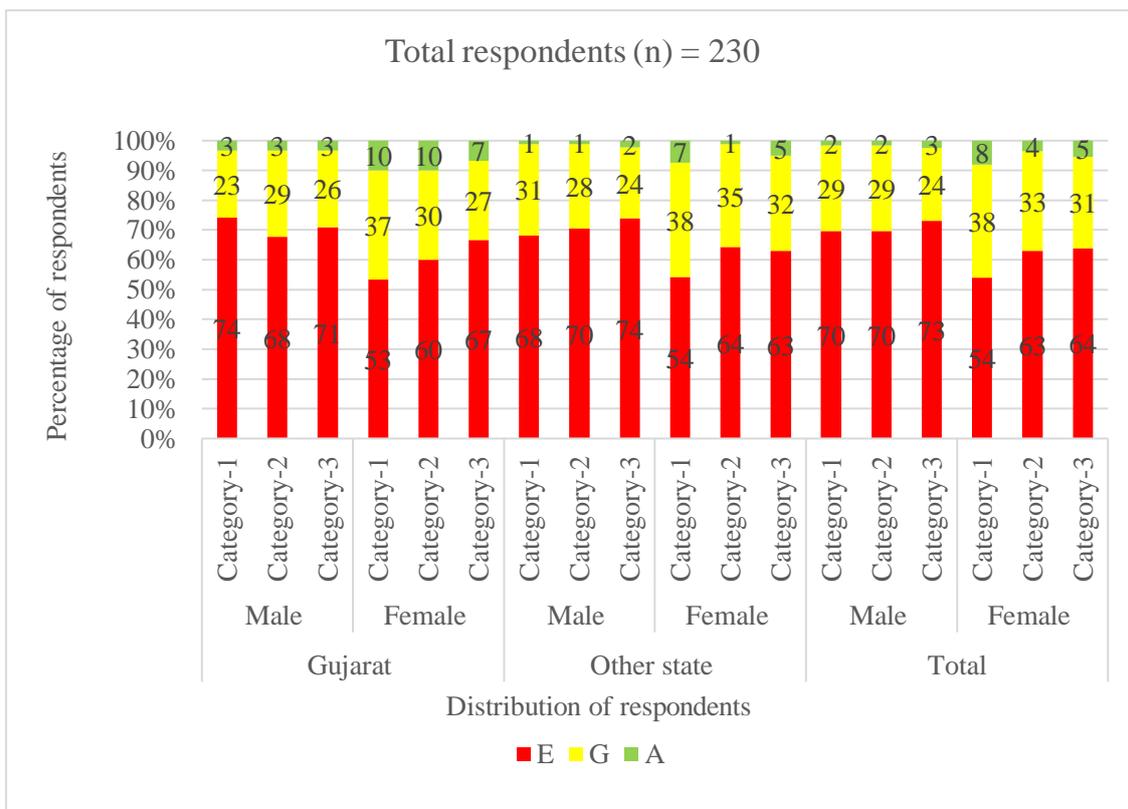
Stripe, motif & *Ikat* were the characterizing features of the different categories of *Mashru*, therefore it was specifically included in the opinionnaire to understand the view of respondents pertaining to newly developed *Mashru* fabric. Another major perspective behind highlighting these features were that traditionally *Mashru* were woven extensively using these or their combination. However, at present uses of motif and *ikat* onto *Mashru* were not into usage due to lack of skill as well as lapse of market. Therefore, researcher tried to conserve them by creating awareness regarding them as well as using them as major design element in newly developed *Mashru* fabric. Stripe were used in category – 1, *Ikat* in category -2 and *Butti* in category – 3. As per the data shown in **Graph 4.11**, it was revealed that in Gujarat; maximum 74 percentage male and 53 percentage females marked category – 1, stripe excellent on the basis of placement of stripe. In other state; maximum 68 percentage male and 54 percentage females marked it excellent on the basis of placement of stripe. In total 70 percentage of male & 54 percentage of females including respondents of Gujarat & other states marked it excellent. It was observed that in all the categories of respondents, larger percentage of male marked it appropriate compared to female. Additionally, 62 percentage of all respondents including respondents of both the genders and of Gujarat & outside Gujarat state marked it excellent.

In Gujarat, maximum 68 percentage male and 60 percentage females marked category – 2, *Ikat* excellent on the basis of placement of *Ikat*. In other state; maximum 70 percentage male and 64 percentage females marked it excellent on the basis of placement of *Ikat*. In total 70 percentage of male & 63 percentage of females including respondents of Gujarat & other states marked it excellent. It was observed that in all the categories larger percentage of male marked it excellent compared to female but were substantially considered excellent among both genders. Additionally, 66.5 percentage of all respondents including respondents of both the

genders and of Gujarat & outside Gujarat state marked it excellent on the basis of placement of *ikat*.

In Gujarat, maximum 71 percentage male and 67 percentage females marked category – 3, *Butti*, excellent on the basis of placement of *Butti*. In other state; maximum 74 percentage male and 63 percentage females marked it excellent on the basis of placement of *Butti*. In total 73 percentage of male & 64 percentage of females including respondents of Gujarat & other states marked it excellent. It was observed that in all the categories larger percentage of male marked it excellent compared to female but were substantially considered excellent among both genders. Additionally, 68.5 percentage of all respondents including respondents of both the genders and of Gujarat & outside Gujarat state marked it excellent on the basis of placement of *Butti*.

Percentage of respondents marking average in all the categories were either 10 or below it. Also, overall, 65.66 percentage of respondents including all categories marked it excellent on the basis of stripe, *ikat* & *Butti* of the newly developed *Mashru* fabrics under three categories.

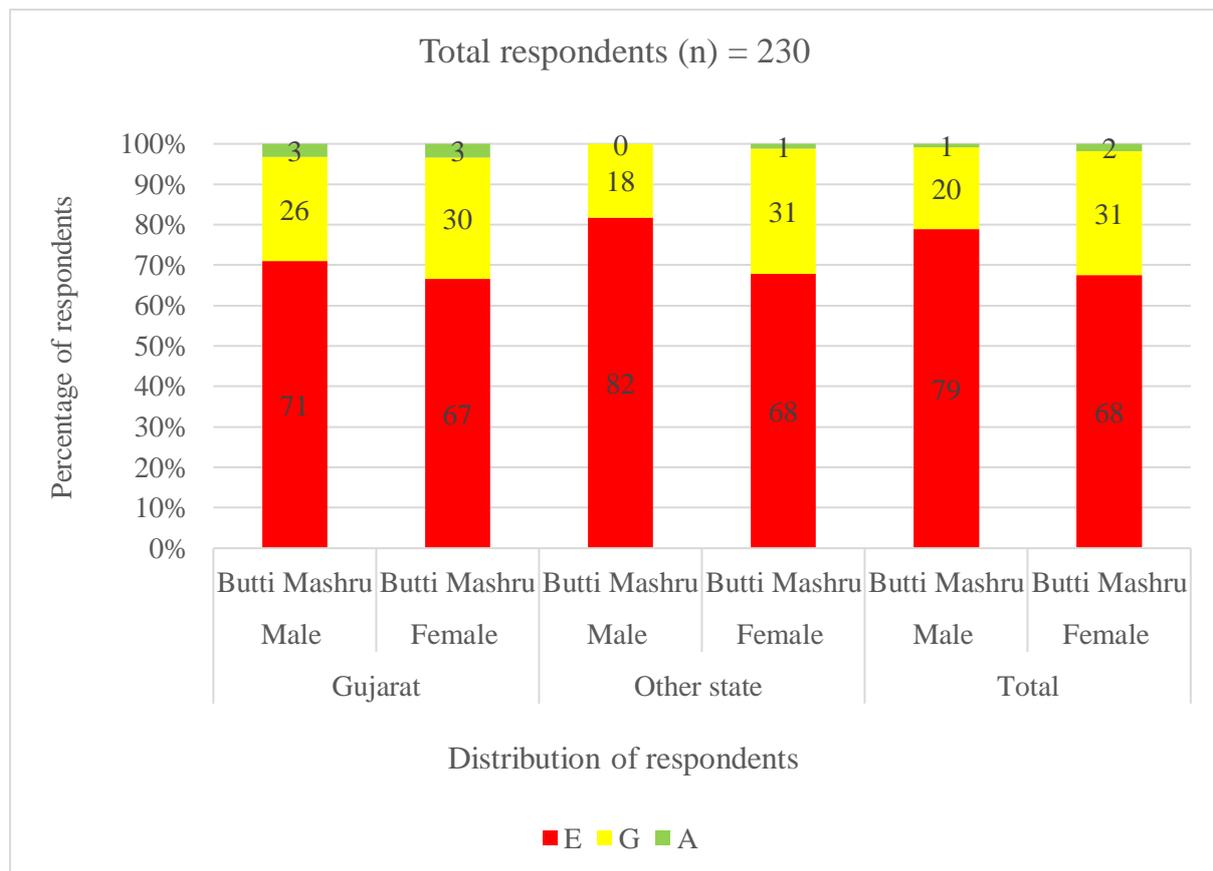


Graph 4.11: Opinion of respondents on the basis of placement of stripe/motif/ikat under each category

***E – Excellent, *G – Good & *A - Average**

4.6.3. d Opinion of respondents towards overall rating of motif under category-3, *Butti Mashru fabric*

Certain motifs were traditionally very popular in *Mashru* and *asharfi* was one of them. At present very rarely motifs were made in *Mashru*. Therefore, researcher Motif Data pertaining to the rating of motif under category-3, *Butti* as shown in **Graph 4.12** reflected that in Gujarat, 71 percentage of male and 67 percentage of female marked it excellent. In other states, 82 percentage of male and 68 percentage of female marked it excellent and in total 79 percentage of male & 68 percentage of females including respondents of Gujarat & other states marked it excellent. It was observed that in all the categories of respondents, larger percentage of male marked it excellent compared to female. Additionally, 73.5 percentage of all respondents including respondents of both the genders and of Gujarat & outside Gujarat state marked it excellent.



Graph 4.12: Rating of *Mashru* motifs developed under category – 3, *Butti Mashru*

***E – Excellent, *G – Good & *A - Average**

4.6.3. e Opinion of respondents towards overall rating of strip patterns developed under category-1, stripe *Mashru* fabrics

Stripes were traditionally very popular in *Mashru* and till today they are perceived as its most popular characteristic feature. Data pertaining to the rating of stripe patterns under category-1, stripe as shown in **Graph 4.13** it was revealed that in Gujarat; maximum 71 percentage male and 43 percentage female rated design – 1, stripe pattern excellent. In other state; maximum 73 percentage male and 48 percentage females rated it excellent. In total 72 percentage of male & 47 percentage of females including respondents of Gujarat & other states rated it excellent. It was observed that in all the categories of respondents, substantial percentage of male marked it excellent in contrast to female. overall, as per perceived data in all categories of females, its rating on the basis of stripe pattern was found quite less in design – 1.

In Gujarat; maximum 74 percentage male and 77 percentage female rated design – 2, stripe pattern excellent. In other state; maximum 69 percentage male and 54 percentage females rated it excellent. In total 71 percentage of male & 60 percentage of females including respondents of Gujarat & other states rated it excellent. It was observed that in all the categories of respondents, larger percentage of male respondents rated it excellent in comparison to female but overall, substantial percentage of male and female rated stripe pattern of design – 2 excellent.

In Gujarat; maximum 81 percentage male and 63 percentage female rated design – 3, stripe pattern excellent. In other state; maximum 74 percentage male and 53 percentage females rated it excellent. In total 76 percentage of male & 56 percentage of females including respondents of Gujarat & other states rated it excellent. It was observed that in all the categories of respondents, larger percentage of male respondents rated stripe pattern of design – 3 excellent in comparison to female respondents.

In Gujarat; maximum 74 percentage male and 67 percentage female rated design – 4, stripe pattern excellent. In other state; maximum 72 percentage male and 64 percentage females rated it excellent. In total 72 percentage of male & 65 percentage of females including respondents of Gujarat & other states rated it excellent. It was observed that in all the categories of respondents, larger percentage of male respondents rated it excellent in comparison to female but overall, substantial percentage of male and female rated stripe pattern of design – 4 excellent.

In Gujarat; maximum 77 percentage male and 63 percentage female rated design – 5, stripe pattern excellent. In other state; maximum 74 percentage male and 64 percentage females rated it excellent. In total 75 percentage of male & 64 percentage of females including respondents of Gujarat & other states rated it excellent. It was observed that in all the categories of respondents, larger percentage of male respondents rated it excellent in comparison to female but overall, substantial percentage of male and female rated stripe pattern of design – 4 excellent.

Looking into the overall rating pattern of stripe designs, it was observed that all designs were rated excellent by substantial percentage of male and female respondents of each category except design-1 which were found below 50 percentage that is 43 & 48 percentage by the respondents of Gujarat & other state.



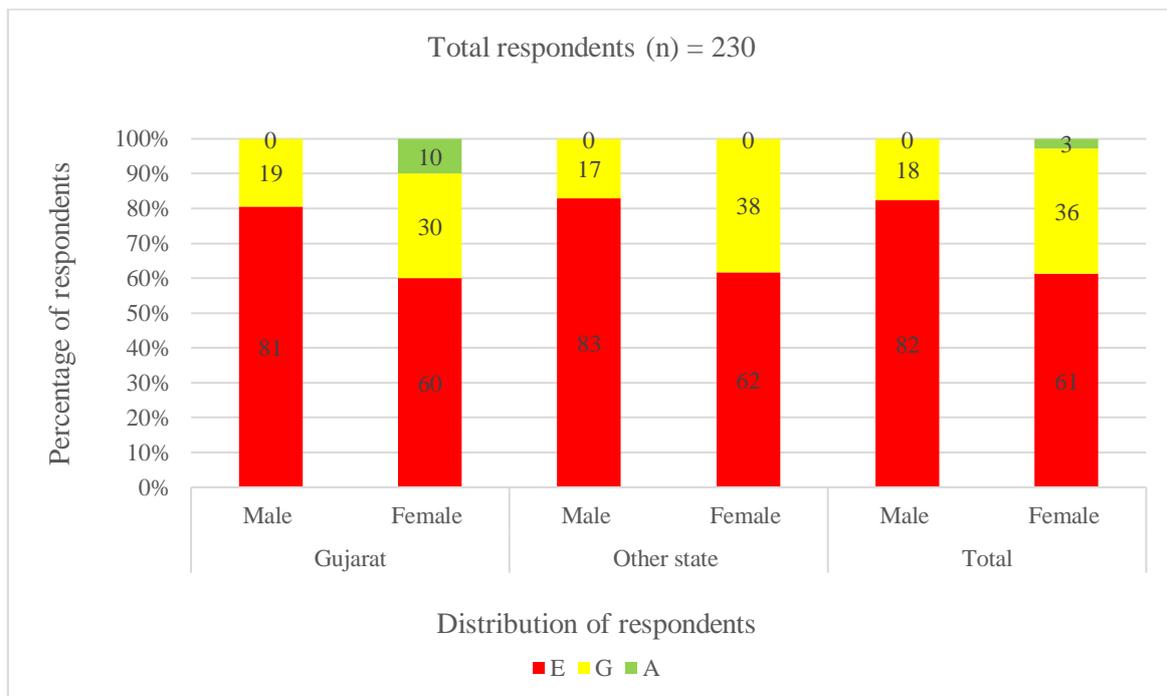
Graph 4.13: Rating of stripe pattern developed under category – 1, stripe *Mashru*

*** Design-1: Rayon warp & Cotton weft, * Design-2: Mulberry silk warp & Cotton weft, *Design-3: Cotton warp & Cotton weft, * Design-4: Korea Silk warp & Cotton weft, * Design-5: Tasar Silk warp & Cotton weft, *E – Excellent, *G – Good & *A - Average**

4.6.3. f Opinion of respondents towards overall rating of *Ikat* pattern developed under category-2, stripe *Mashru* fabrics

Data pertaining to the rating of *Ikat* under category-2, *Ikat* as shown in **Graph 4.14** reflected that in Gujarat, 81 percentage of male and 60 percentage of female marked it excellent. In other states, 83 percentage of male and 62 percentage of female marked it excellent and in total 82 percentage of male & 61 percentage of females including respondents of Gujarat & other states marked it excellent. Additionally, 71.5 percentage of all respondents including respondents of both the genders and of Gujarat & outside Gujarat state marked it excellent.

It was observed that in all the categories of respondents, larger percentage of male marked it excellent compared to female. However, it was marked excellent by substantial percentage of male and female respondents of all categories. Furthermore, percentage of excellent marked by male respondents of Gujarat and outside Gujarat were almost similar. Similarly, percentage of excellent marked by female respondents of Gujarat and outside Gujarat were almost similar.



Graph 4.14: Rating of *Ikat* pattern developed under category – 2, *Ikat Mashru*

***E – Excellent, *G – Good & *A - Average**

4.6.3. g Opinion of respondents towards overall rating of warp yarn suitability for developed *Mashru* fabrics

Yarn is the most fundamental component of fabric. Apart from functional aspects it becomes more crucial in *Mashru* due to religious connotation attached to it. With this view, variation of silk, rayon & cotton were taken in warp. On viewing the data related to opinion of respondents towards overall rating of warp yarn suitability for developed *Mashru* fabrics as shown in **Graph 4.15**, it was observed that in Gujarat; maximum 84 percentage of male & 73 percentage of female rated the selection of warp1 – mulberry silk yarn excellent, it meant that for larger percentage of males of Gujarat, it were excellent compared to females of Gujarat; in other states; 75 percentage of male & 69 percentage of female marked it excellent, it meant that in other states also it was appropriate for males in higher percentage compared to females; in total 77 percentage of male & 70 percentage of females including respondents of Gujarat & other states marked it excellent, here also it was found excellent for larger percentage of males compared to females. Overall, it can be conferred that larger percentage of males found it appropriate compared to females. In addition to it, 73.5 percentage of all respondents including respondents of both the genders and of Gujarat & outside Gujarat state marked it excellent.

In Gujarat; maximum 77 percentage of male & 63 percentage of female rated the selection of warp2 – tasar silk yarn excellent, it meant that for larger percentage of males of Gujarat, it were excellent compared to females of Gujarat; in other states, 76 percentage of male & 59 percentage of female marked it excellent, it meant that in other states also it was excellent for males in higher percentage compared to females; in total 76 percentage of male & 60 percentage of females including respondents of Gujarat & other states marked it excellent, here also it was found appropriate for larger percentage of males compared to females. Overall, it can be conversed that larger percentage of males found it appropriate compared to females. In addition to it, 68 percentage of all respondents including respondents of both the genders and of Gujarat & outside Gujarat state marked it excellent.

In Gujarat; maximum 84 percentage of male & 70 percentage of female rated the selection of warp3 – tasar + mulberry silk yarn excellent, it meant that for larger percentage of males of Gujarat, it were excellent compared to females of Gujarat; in other states, 77 percentage of male & 65 percentage of female marked it excellent, it meant that in other states also it was appropriate for males in higher percentage compared to females; in total 79 percentage of male & 6 percentage of females including respondents of Gujarat & other states marked it excellent,

here also it was found appropriate for larger percentage of males compared to females. Overall, it can be conversed that larger percentage of males found it appropriate compared to females. In addition to it, 73 percentage of all respondents including respondents of both the genders and of Gujarat & outside Gujarat state marked it excellent.

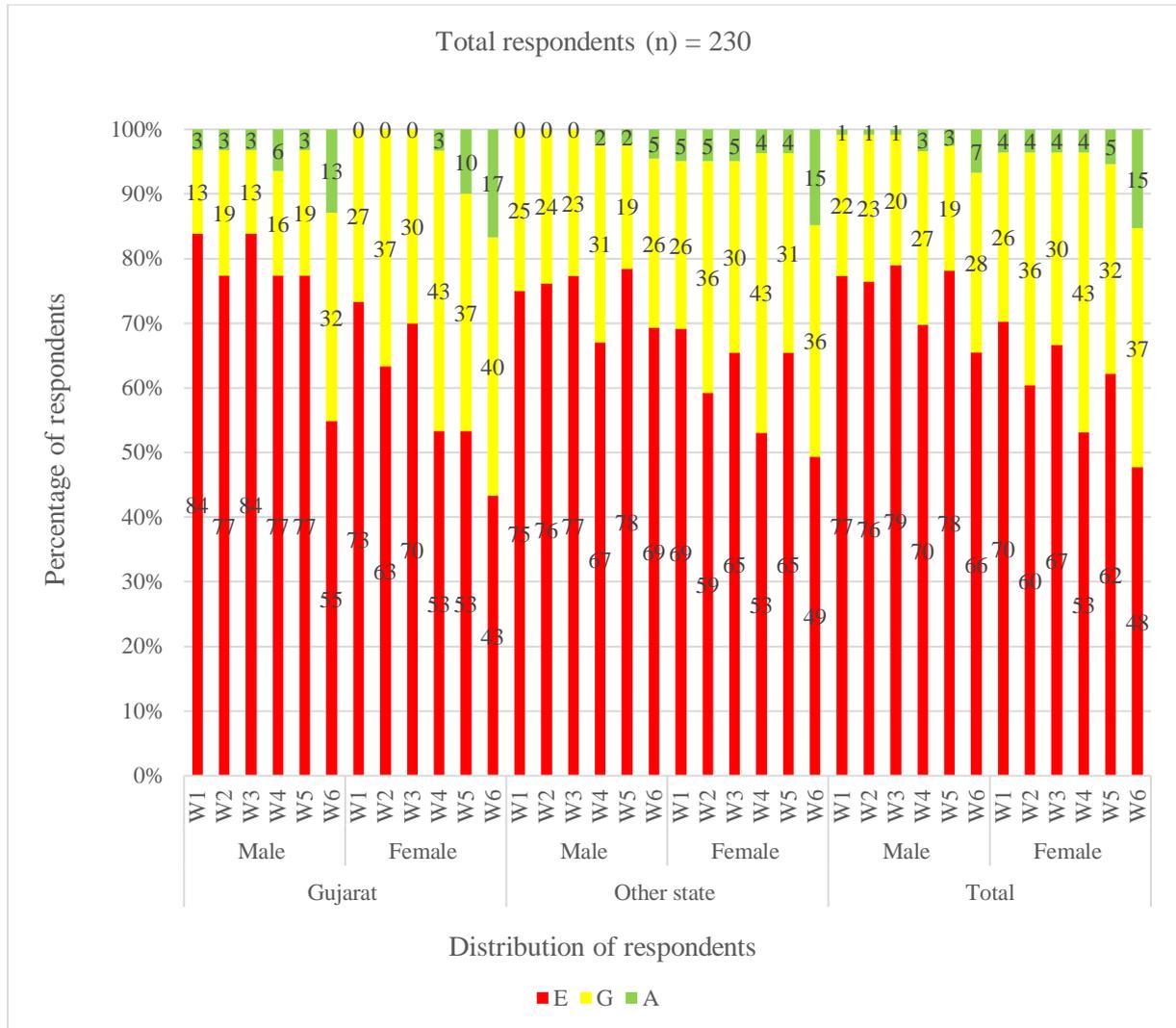
In Gujarat; maximum 77 percentage of male & 53 percentage of female rated the selection of warp4 – Korea silk yarn excellent, it meant that for larger percentage of males of Gujarat, it were excellent compared to females of Gujarat; in other states, 67 percentage of male & 53 percentage of female marked it excellent, it meant that in other states also it was excellent for males in higher percentage compared to females; in total 70 percentage of male & 53 percentage of females including respondents of Gujarat & other states marked it excellent, here also it was found appropriate for larger percentage of males compared to females. Overall, it can be conversed that larger percentage of males found it appropriate compared to females. In addition to it, 61.5 percentage of all respondents including respondents of both the genders and of Gujarat & outside Gujarat state marked it excellent.

In Gujarat; maximum 77 percentage of male & 53 percentage of female rated the selection of warp5 – cotton yarn excellent, it meant that for larger percentage of males of Gujarat, it were excellent compared to females of Gujarat; in other states, 78 percentage of male & 65 percentage of female marked it excellent, it meant that in other states also it was excellent for males in higher percentage compared to females; in total 78 percentage of male & 62 percentage of females including respondents of Gujarat & other states marked it excellent, here also it was found appropriate for larger percentage of males compared to females. Overall, it can be conversed that larger percentage of males found it appropriate compared to females. In addition to it, 70 percentage of all respondents including respondents of both the genders and of Gujarat & outside Gujarat state marked it excellent.

In Gujarat; maximum 55 percentage of male & 43 percentage of female rated the selection of warp6 – rayon yarn excellent, it meant that for larger percentage of males of Gujarat, it were excellent compared to females of Gujarat; in other states, 69 percentage of male & 49 percentage of female marked it excellent, it meant that in other states also it was excellent for males in higher percentage compared to females; in total 66 percentage of male & 48 percentage of females including respondents of Gujarat & other states marked it excellent, here also it was found appropriate for larger percentage of males compared to females. Overall, it can be conversed that larger percentage of males found it appropriate compared to females. In

addition to it, 70 percentage of all respondents including respondents of both the genders and of Gujarat & outside Gujarat state marked it excellent.

Percentage of respondents rating average in all varieties of warp for all categories of respondents were between 0 to 17 percentage.



Graph 4.15: overall rating of warp yarn suitability for developed Mashru fabrics

*W1 - Mulberry Silk, *W2 - Tasar Silk, *W3 – Tasar + Mulberry Silk, *W4 - Korea Silk, *W5 – Cotton, *W6 – rayon, *E – Excellent, *G – Good & *A - Average

4.6.3. h Opinion of respondents towards ranking of each developed Mashru fabric on basis of colour combination

Colour is the most fundamental visual component of fabric. Apart from this, it also carries certain significance contextually. In *Mashru*, it carries several social, emotional and psychological relevance. Linear solid colours are its characterizing features. Hence, traditional colours were taken in it. On observing the data related to opinion of respondents towards ranking of each developed *Mashru* fabric on basis of colour combination as shown in **Graph 4.16**, it was observed that in Gujarat; maximum 71 percentage of male & 53 percentage of female ranked the selection of colour of design 1 excellent, it meant that for larger percentage of males of Gujarat, it were excellent compared to females of Gujarat; in other states; 81 percentage of male & 58 percentage of female marked it excellent, it meant that in other states also it was appropriate for males in higher percentage compared to females; in total 78 percentage of male & 57 percentage of females including respondents of Gujarat & other states marked it excellent, here also it was found excellent for larger percentage of males compared to females. Overall, it can be conferred that larger percentage of males found it appropriate compared to females. In addition to it, 67.5 percentage of all respondents including respondents of both the genders and of Gujarat & outside Gujarat state marked it excellent.

In Gujarat; maximum 71 percentage of male & 70 percentage of female ranked the selection of colour of design 2 excellent, it meant that for similar percentage of males and females of Gujarat, it were excellent, in other states; 75 percentage of male & 59 percentage of female marked it excellent, it meant that in other states, it was appropriate for males in higher percentage compared to females; in total 74 percentage of male & 62 percentage of females including respondents of Gujarat & other states marked it excellent, here also it was found excellent for larger percentage of males compared to females. Overall, it can be conferred that larger percentage of males found it appropriate compared to females except Gujarat. In addition to it, 68 percentage of all respondents including respondents of both the genders and of Gujarat & outside Gujarat state marked it excellent.

in Gujarat; maximum 81 percentage of male & 50 percentage of female ranked the selection of colour of design 3 excellent, it meant that for much larger percentage of males of Gujarat, it were excellent compared to females of Gujarat; in other states; 70 percentage of male & 60 percentage of female marked it excellent, it meant that in other states also it was appropriate for males in higher percentage compared to females; in total 73 percentage of male & 58 percentage of females including respondents of Gujarat & other states marked it excellent, here

also, it was found excellent for much larger percentage of males compared to females. Overall, it can be conferred that larger percentage of males found it appropriate compared to females. In addition to it, 65.5 percentage of all respondents including respondents of both the genders and of Gujarat & outside Gujarat state marked it excellent.

In Gujarat; maximum 65 percentage of male & 60 percentage of female ranked the selection of colour of design 4 excellent, it meant that for similar larger percentage of males and females of Gujarat, it were excellent; in other states; 77 percentage of male & 60 percentage of female marked it excellent, it meant that in other states, it was appropriate for males in higher percentage compared to females; in total 74 percentage of male & 60 percentage of females including respondents of Gujarat & other states marked it excellent, here also it was found excellent for larger percentage of males compared to females. Overall, it can be conferred that larger percentage of males found it appropriate compared to females. In addition to it, 67 percentage of all respondents including respondents of both the genders and of Gujarat & outside Gujarat state marked it excellent.

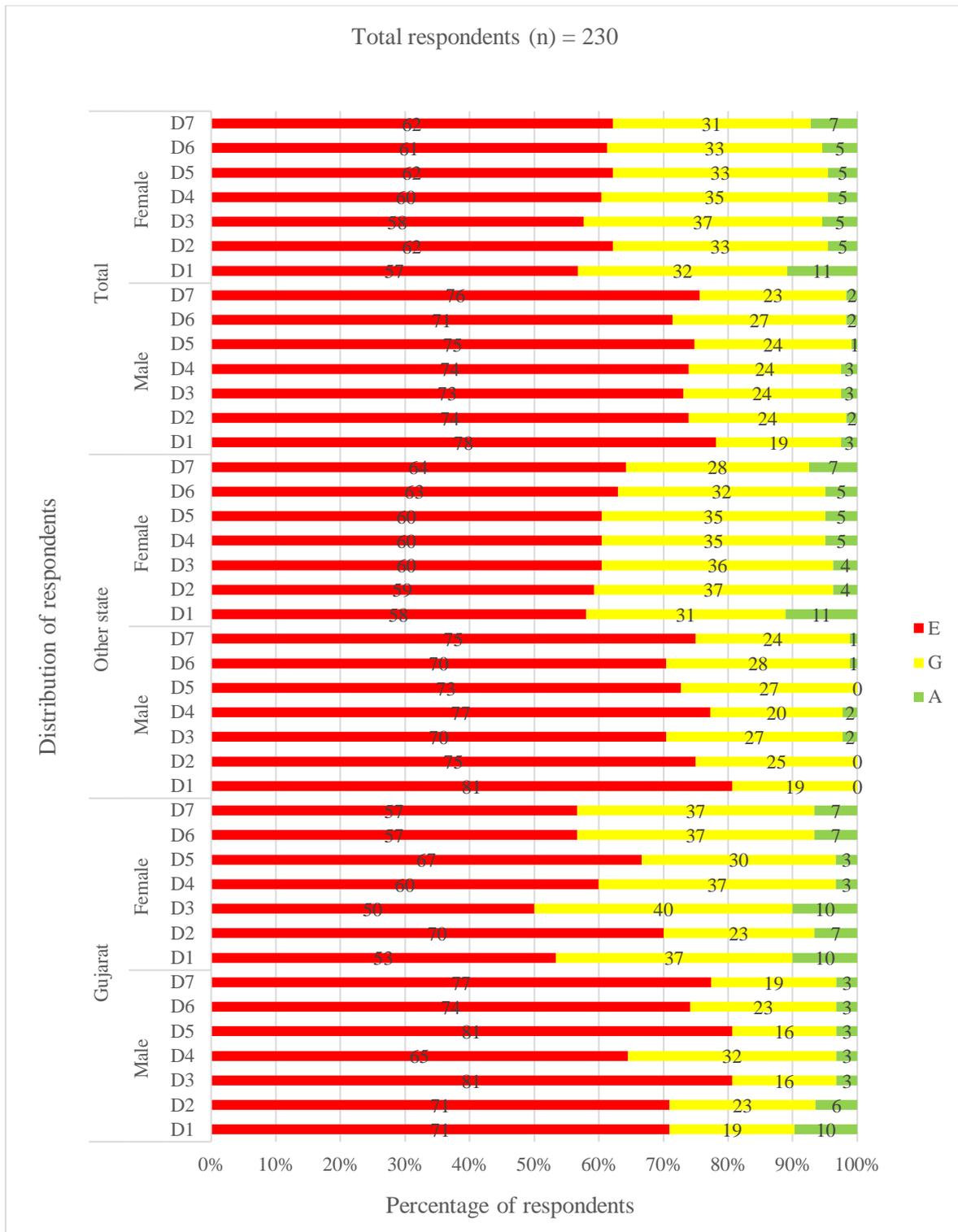
In Gujarat; maximum 81 percentage of male & 67 percentage of female ranked the selection of colour of design 5 excellent, it meant that larger percentage of male ranked excellent compared to female of Gujarat; in other states; 73 percentage of male & 60 percentage of female marked it excellent, it meant that in other states also, it was appropriate for higher percentage of male in comparison to females; in total 75 percentage of male & 62 percentage of females including respondents of Gujarat & other states marked it excellent, here also it was found excellent for larger percentage of males compared to females. Overall, it can be conferred that larger percentage of males found it appropriate compared to females. In addition to it, 68.5 percentage of all respondents including respondents of both the genders and of Gujarat & outside Gujarat state marked it excellent.

In Gujarat; maximum 74 percentage of male & 57 percentage of female ranked the selection of colour of design 6 excellent, it meant that larger percentage of male ranked excellent compared to female of Gujarat; in other states; 70 percentage of male & 63 percentage of female marked it excellent, it meant that in other states also, it was appropriate for higher percentage of male in comparison to females; in total 71 percentage of male & 61 percentage of females including respondents of Gujarat & other states marked it excellent, here also it was found excellent for larger percentage of males compared to females. Overall, it can be conferred that larger percentage of males found it appropriate compared to females. In addition to it, 64

percentage of all respondents including respondents of both the genders and of Gujarat & outside Gujarat state marked it excellent.

In Gujarat; maximum 77 percentage of male & 57 percentage of female ranked the selection of colour of design 7 excellent, it meant that larger percentage of male ranked excellent compared to female of Gujarat; in other states; 75 percentage of male & 64 percentage of female marked it excellent, it meant that in other states also, it was appropriate for higher percentage of male in comparison to females; in total 76 percentage of male & 62 percentage of females including respondents of Gujarat & other states marked it excellent, here also it was found excellent for larger percentage of males compared to females. Overall, it can be conferred that larger percentage of males found it appropriate compared to females. In addition to it, 69 percentage of all respondents including respondents of both the genders and of Gujarat & outside Gujarat state marked it excellent.

The percentage of average response for all designs in all categories of respondents were quite less, it varied from 0-10 percentage. The percentage of average response in all designs for male respondents of Gujarat were above 65 percentage. The percentage of average response in all designs for male respondents of other state were above 70 percentage. The percentage of average response in all designs for female respondents of Gujarat were above 60 percentage. The percentage of average response in all designs for female respondents of other state were around 60 percentage. This showed similarity of opinion of males of Gujarat to males of other state & female of Gujarat to female of other state in terms colour of developed *Mashru* fabric.



Graph 4.16: Ranking of developed Mashru fabric on basis of colour combination

*** D1 - Design-1: Rayon warp & Cotton weft, D2 - Design-2: Mulberry silk warp & Cotton weft, D3 - Design-3: Cotton warp & Cotton weft, D4 - Design-4: Korea Silk warp & Cotton weft, D5 - Design-5: Tasar Silk warp & Cotton weft, D6 - Design-6: Mulberry-**

Tasar warp & Cotton weft, D7 - Design-7: Cotton warp & Cotton weft, *E – Excellent, *G – Good & *A – Average

4.6.3. i Opinion of respondents towards overall aesthetic appeal of *Mashru* fabrics developed in different categories

On observing the data related to overall aesthetic appeal of *Mashru* fabrics developed in different categories as shown in **Graph 4.17**, it was observed that in Gujarat; maximum 68 & 23 percentage of male; 37 & 40 percentage of female marked Design-1 excellent and very good on the basis of overall aesthetics appeal. It meant that for larger percentage of male of Gujarat, it was preferred compared to females of Gujarat. In other states, 67 & 26 percentage of male, 42 & 37 percentage of female marked it excellent & very good. It meant that in other states also, it was preferred by higher percentage of male compared to female.

In Gujarat; maximum 71 & 16 percentage of male; 57 & 27 percentage of female marked Design-2 excellent and very good on the basis of overall aesthetics appeal. It meant that for larger percentage of male of Gujarat, it was preferred compared to females of Gujarat. In other states, 69 & 23 percentage of male, 43 & 44 percentage of female marked it excellent & very good. It meant that in other states also, it was preferred by higher percentage of male compared to female.

In Gujarat; maximum 74 & 19 percentage of male; 37 & 37 percentage of female marked Design-3 excellent and very good on the basis of overall aesthetics appeal. It meant that for larger percentage of male of Gujarat, it was preferred compared to females of Gujarat. In other states, 73 & 22 percentage of male, 46 & 37 percentage of female marked it excellent & very good. It meant that in other states also, it was preferred by higher percentage of male compared to female.

In Gujarat; maximum 75 & 29 percentage of male; 57 & 30 percentage of female marked Design-4 excellent and very good on the basis of overall aesthetics appeal. It meant that for larger percentage of male of Gujarat, it was preferred compared to females of Gujarat. In other states, 70 & 24 percentage of male, 52 & 32 percentage of female marked it excellent & very good. It meant that in other states also, it was preferred by higher percentage of male compared to female.

In Gujarat; maximum 77 & 19 percentage of male; 73 & 7 percentage of female marked Design-5 excellent and very good on the basis of overall aesthetics appeal. It meant that for

larger percentage of male of Gujarat, it was preferred compared to females of Gujarat. In other states, 68 & 25 percentage of male, 58 & 27 percentage of female marked it excellent & very good. It meant that in other states also, it was preferred by higher percentage of male compared to female.

In Gujarat; maximum 74 & 19 percentage of male; 63 & 17 percentage of female marked Design-6 excellent and very good on the basis of overall aesthetics appeal. It meant that for larger percentage of male of Gujarat, it was preferred compared to females of Gujarat. In other states, 70 & 20 percentage of male, 71 & 20 percentage of female marked it excellent & very good. It meant that it was preferred by similar percentage of male & female.

In Gujarat; maximum 77 & 16 percentage of male; 50 & 27 percentage of female marked Design-7 excellent and very good on the basis of overall aesthetics appeal. It meant that for larger percentage of male of Gujarat, it was preferred compared to females of Gujarat. In other states, 66 & 25 percentage of male, 56 & 32 percentage of female marked it excellent & very good. It meant that in other states also, it was preferred by higher percentage of male compared to female.

In Gujarat; maximum 77 & 16 percentage of male; 50 & 27 percentage of female marked Design-7 excellent and very good on the basis of overall aesthetics appeal. It meant that for larger percentage of male of Gujarat, it was preferred compared to females of Gujarat. In other states, 66 & 25 percentage of male, 56 & 32 percentage of female marked it excellent & very good. It meant that in other states also, it was preferred by higher percentage of male compared to female.

In total, on the basis of overall aesthetic appeal of *Mashru* fabrics developed in different categories, maximum male respondents including respondents of Gujarat & other state marked Design – 3 as excellent. Similarly, total female respondents including respondents of Gujarat & other state marked Design – 5 as excellent.

On the basis of overall aesthetic appeal of *Mashru* fabrics developed in different categories, maximum male respondents of Gujarat marked Design – 7 & 5 and female respondents marked Design – 5 as excellent. In other state, maximum male respondents marked excellent to Design – 3 and female respondents to Design- 6.



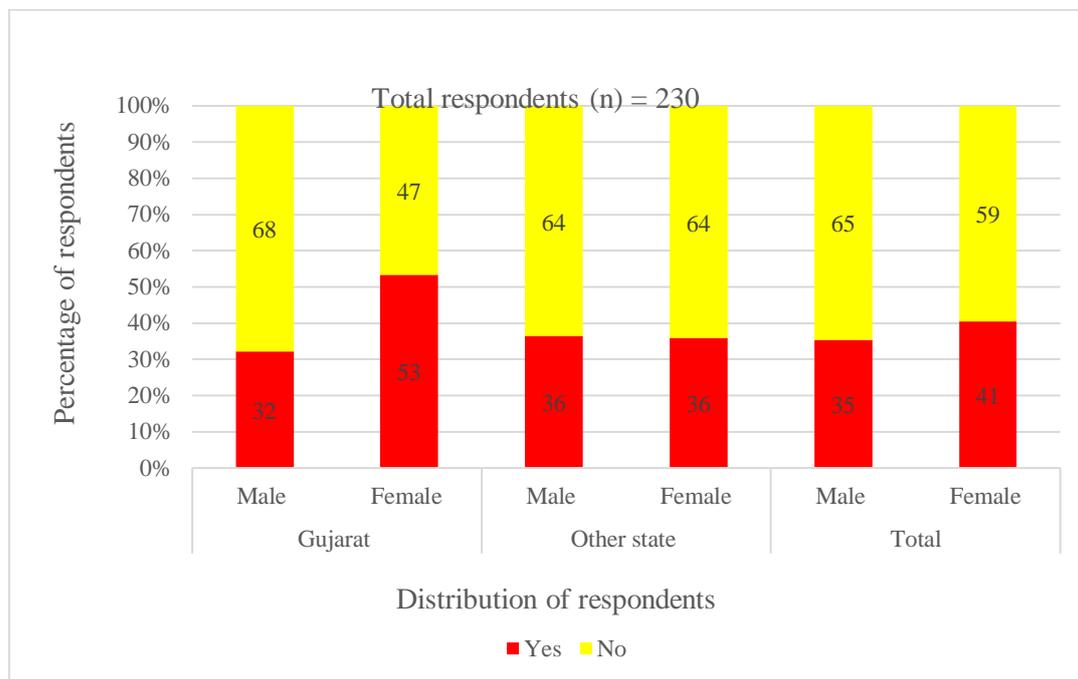
Graph 4.17: Overall aesthetic appeal of *Mashru* fabrics developed in different categories

***D1 - Design-1: Rayon warp & Cotton weft, *D2 - Design-2: Mulberry silk warp & Cotton weft, * D3 - Design-3: Cotton warp & Cotton weft, * D4 - Design-4: Korea Silk warp & Cotton weft, * D5, - Design-5: Tasar Silk warp & Cotton weft, D6 - Design-6: Mulberry-Tasar warp & Cotton weft, * D7 - Design-7: Cotton warp & Cotton weft, *E – Excellent, * VG - Very good, * G – Good, * A – Average, *P - Poor**

4.6.3. j Opinion of respondents towards similarity of newly developed *Mashru* fabric designs to earlier *Mashru* fabric designs

Data pertaining to similarity of newly developed *Mashru* fabric designs to earlier *Mashru* fabric designs as shown in **Graph 4.18** reflected that in Gujarat, 32 percentage of male and 53 percentage of female stated yes. In other states, equal percentage of male and female respondents that is 36 percentage stated yes & in total 35 percentage of male & 41 percentage of female including respondents of Gujarat & other states marked it excellent. Additionally, 38 percentage of all respondents including respondents of both the genders and of Gujarat & outside Gujarat state marked it excellent.

As per researcher’s information gathered from primary and secondary sources, it was found that *Mashru* was primarily sold in Gujarat and adjacent states. In other states it is sold in very less quantity with the help of NGO and design houses. Possibly responses given by respondents of other state might had been on the basis of design similarity to any other fabric, not necessarily *Mashru*. Another major observation was that in Gujarat, female respondents are more aware about similarity of designs in comparison to male respondents.



Graph 4.18: similarity of newly developed *Mashru* fabric designs to earlier *Mashru* fabric designs

4.6.3. k Explanation of similarity of newly developed *Mashru* fabric designs to earlier *Mashru* fabric designs which respondents came across

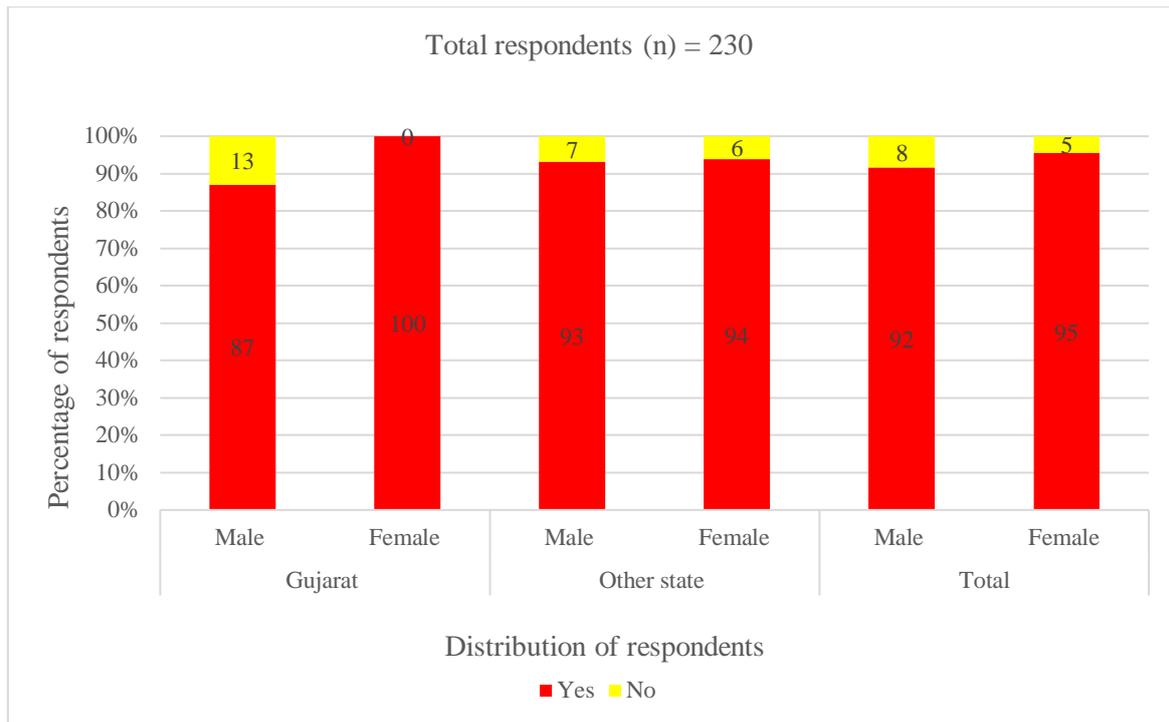
Design development in traditional textiles is a very crucial task where we need to follow the visual sensibility, tools & techniques in such a way that new development becomes its part in genuine sense. On observing the comment of respondents regarding similarity of newly developed *Mashru* fabric in relation to *Mashru* fabric they came across, it was found that stripes were a common element shared by several respondents. In addition to this several other similarities were also shared which were colour combination, Variable stripe width, line, similarity in visual appearance, *Ikat* and its placement, placement of stripes and ikat pattern together, motif & stripes, shine & texture, royal look of fabric and stripes colour arrangement. One of the respondents stated that Gamthiwala – a retail textile store in Ahmedabad has similar stripes, also old artifacts in Kutch museum, Calico museum and Shreyas museum Ahmedabad shares visual similarity.

One of the respondents also stated that *Mashru* fabric in her grandmother's collection as salwar and sometimes as covering of her mother's trousseau, all in pure silk and cotton combination had similarity of colour, stripe and *Ikat*. Furthermore, few of the respondents stated that the developed fabrics are little different but also similar in look. Overall, it is reflected that developed *Mashru* fabric had essence of traditional *Mashru* and at the same time different also.

4.6.3.1 Opinion of respondents towards likeness of *Mashru* fabric for dress material

In terms of usage, *Mashru* had been a versatile fabric. While observing data pertaining to opinion of respondents towards likeness of *Mashru* fabric for dress material as shown in Graph 4.19, it was found that in Gujarat, 87 percentage of male and 100 percentage of female stated yes for dress material. In other states, similar percentage that is 93 & 94 percentage of male and female responded yes & in total 92 percentage of male & 95 percentage of female including respondents of Gujarat & other states marked it excellent. Additionally, 93.5 percentage of all respondents including respondents of both the genders and of Gujarat & outside Gujarat state marked yes for dress material.

Another major observation was that in all categories of respondents, percentage of respondents stating yes for dress material were quite high.

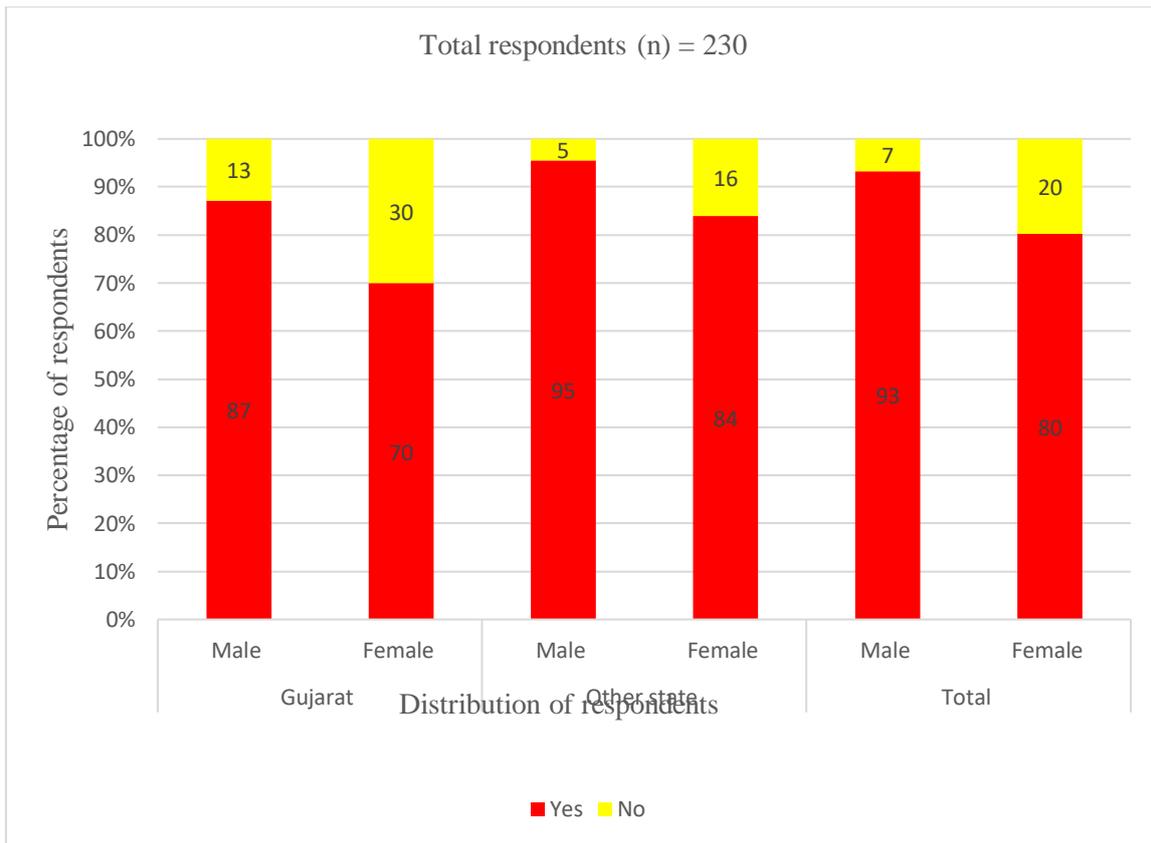


Graph 4.19: Likeness of *Mashru* fabric for dress material

4.6.3. m Opinion of respondents towards likeness of *Mashru* fabric for home furnishing

While observing data pertaining to opinion of respondents towards likeness of *Mashru* fabric for home furnishing as shown in **Graph 4.20**, it was found that in Gujarat, 87 percentage of male and 70 percentage of female stated yes for home furnishing. In other states, 95 percentage of male and 84 percentage of female responded yes & in total 93 percentage of male & 80 percentage of female including respondents of Gujarat & other states marked yes for home furnishing. Additionally, 86.5 percentage of all respondents including respondents of both the genders and of Gujarat & outside Gujarat state marked yes for home furnishing.

Another major observation was that in all categories of respondents, percentage of respondents stating yes for home furnishing were substantially good.

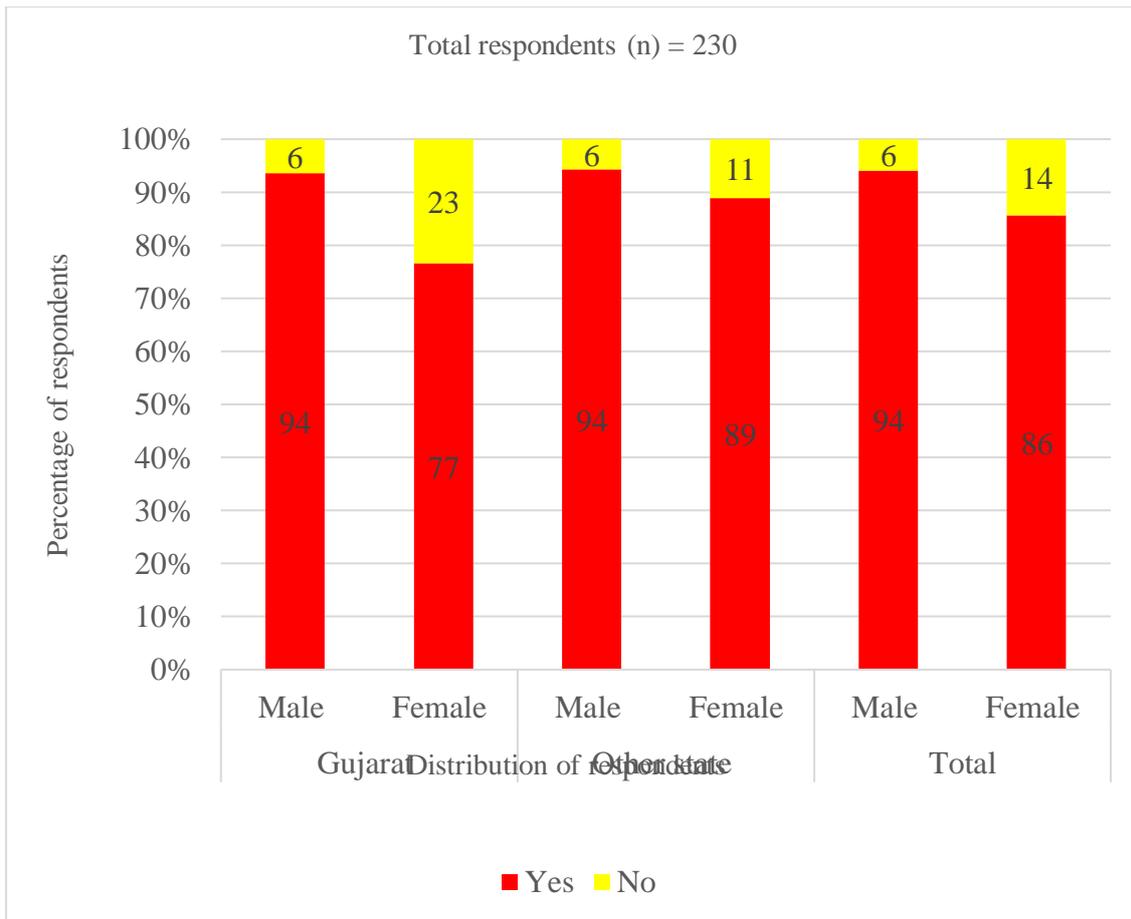


Graph 4.20: Likeness of *Mashru* fabric for home furnishing

4.6.3. n Opinion of respondents towards likeness of *Mashru* fabric for lifestyle-Accessories

While observing data pertaining to opinion of respondents towards likeness of *Mashru* fabric for lifestyle-Accessories as shown in **Graph 4.21**, it was found that in Gujarat, 94 percentage of male and 77 percentage of female stated yes for lifestyle-Accessories. In other states, 94 percentage of male and 89 percentage of female responded yes & in total 93 percentage of male & 86 percentage of female including respondents of Gujarat & other states marked yes for lifestyle-Accessories. Additionally, 86.5 percentage of all respondents including respondents of both the genders and of Gujarat & outside Gujarat state marked yes for lifestyle-Accessories.

Another major observation was that in all categories of respondents, percentage of respondents stating yes for lifestyle-accessories were substantially good.



Graph 4.21: Likeness of *Mashru* fabric for lifestyle-Accessories

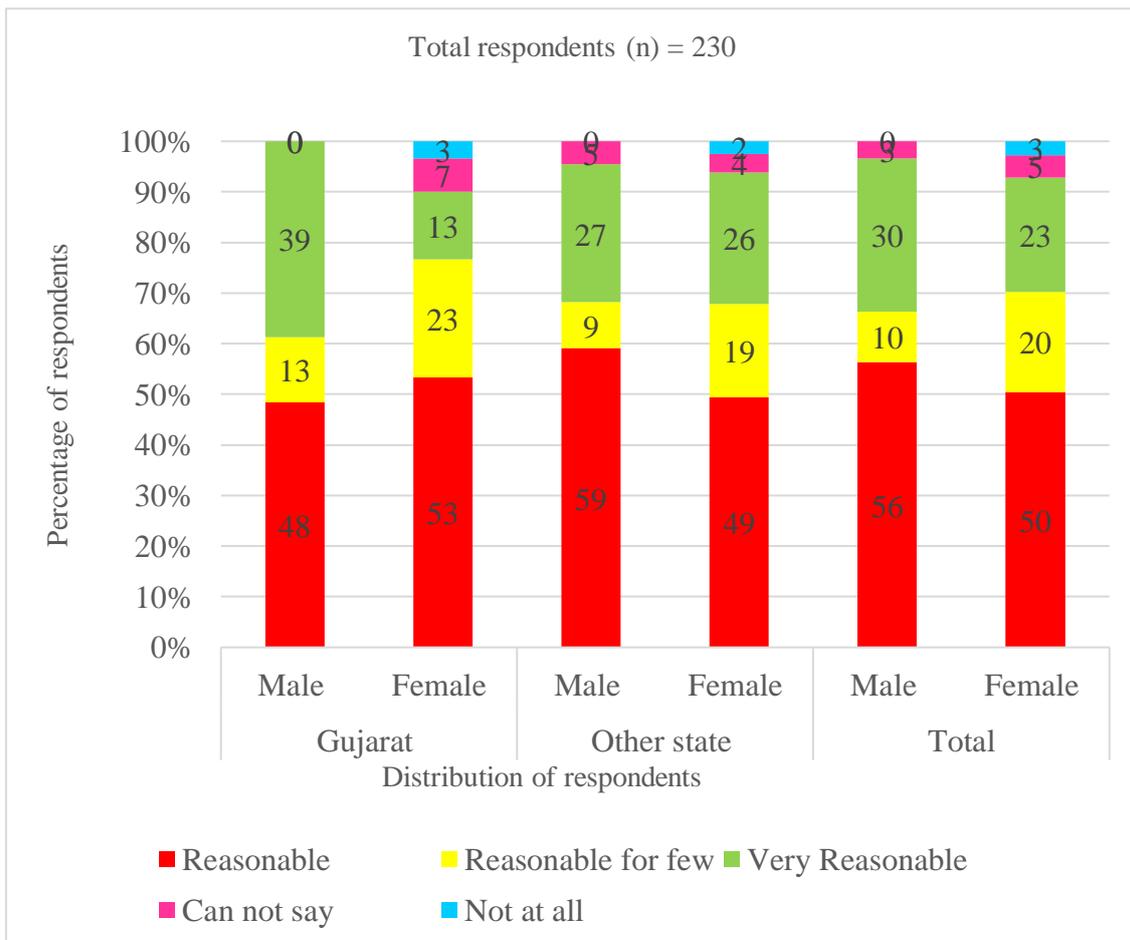
4.6.3. o Opinion of respondents towards reasonable pricing of the developed *Mashru* fabric as per the value of traditional craft

While observing data pertaining to opinion of respondents towards reasonable pricing of the developed *Mashru* fabric as per the value of traditional craft as shown in **Graph 4.22**, it was found that in Gujarat, maximum 48 percentage of male and 53 percentage of female marked reasonable. In other states, 59 percentage of male and 49 percentage of female responded reasonable & in total 56 percentage of male & 50 percentage of female including respondents of Gujarat & other states marked reasonable. Additionally, 53 percentage of all respondents including respondents of both the genders and of Gujarat & outside Gujarat state marked reasonable.

In Gujarat after maximum 48 percentage of reasonable response among male respondents of Gujarat, the second was very reasonable with 39 percentage and then reasonable for few with 13 percentage. In Gujarat after maximum 53 percentage of reasonable response among female respondents of Gujarat, the second was reasonable for few with 23 percentage and then very reasonable with 13 percentage.

In other state after maximum 59 percentage of reasonable response among male respondents, the second was very reasonable with 27 percentage and then reasonable for few with 9 percentage. In other state after maximum 49 percentage of reasonable response among female respondents, the second was very reasonable with 26 percentage and then reasonable for few with 19 percentage.

Another major observation was that in Gujarat higher percentage of female marked it reasonable compared to male whereas in other state higher percentage of male marked it reasonable compared to female. Percentage of responses towards cannot say and not at all was extremely less or negligible. Among all the five options – reasonable, reasonable for few, very reasonable, cannot say and not at all; maximum percentage of responses went to reasonable and very reasonable. Hence, looking into the overall percentage of responses towards reasonable and very reasonable, it was found that substantial percentage of respondents agreed with pricing of developed *Mashru* fabrics.

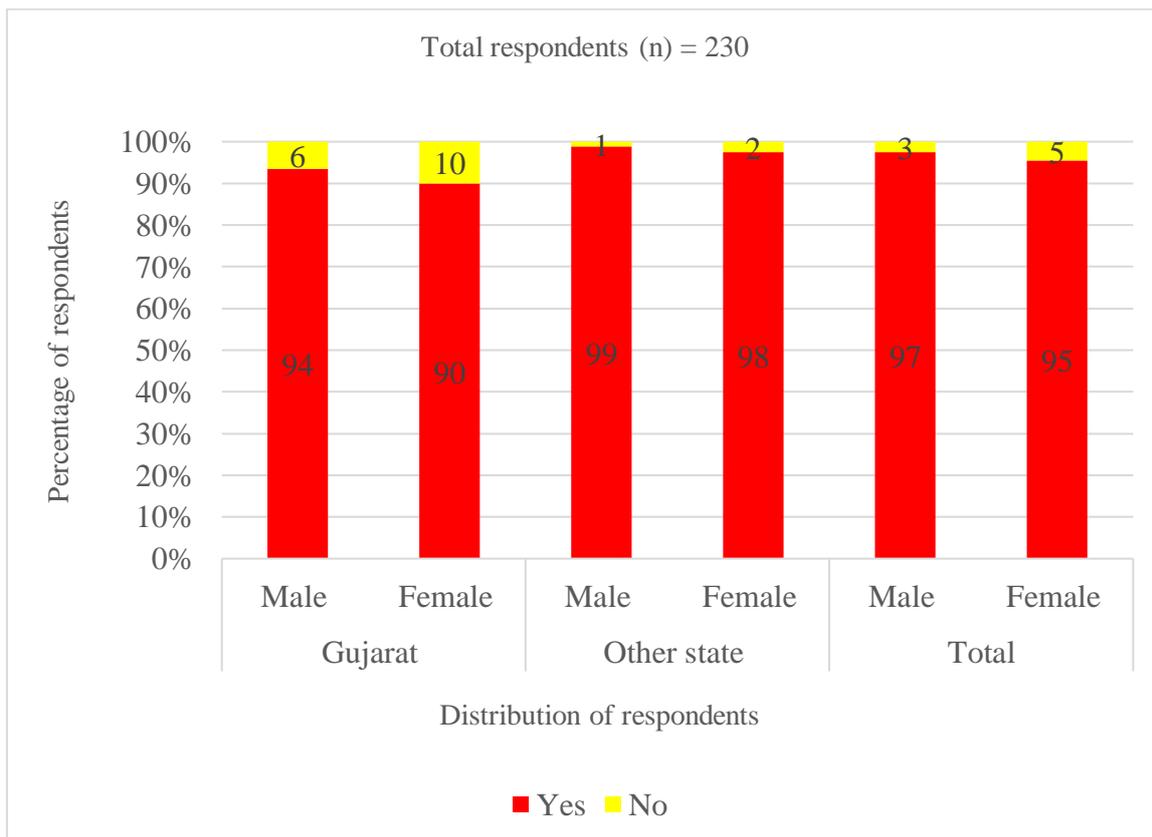


Graph 4.22: Responses towards reasonable pricing of the developed *Mashru* fabric

4.6.3. p Opinion of respondents towards readiness to pay price quoted for developed *Mashru* fabrics for innovative use of material, technique & pattern

While observing data pertaining to opinion of respondents towards readiness to pay price quoted for developed *Mashru* fabrics for innovative use of material, technique & pattern as shown in **Graph 4.23**, it was found that in Gujarat, 94 percentage of male and 90 percentage of female stated yes to pay quoted price. In other states, 99 percentage of male and 98 percentage of female responded yes & in total 97 percentage of male & 95 percentage of female including respondents of Gujarat & other states marked yes to pay quoted price of developed *Mashru* fabric for innovative use of material, technique and pattern. Additionally, 96 percentage of all respondents including respondents of both the genders and of Gujarat & outside Gujarat state marked yes for lifestyle-Accessories.

Another major observation was that in all categories of respondents, percentage of respondents stating yes to pay quoted price were substantially very good.

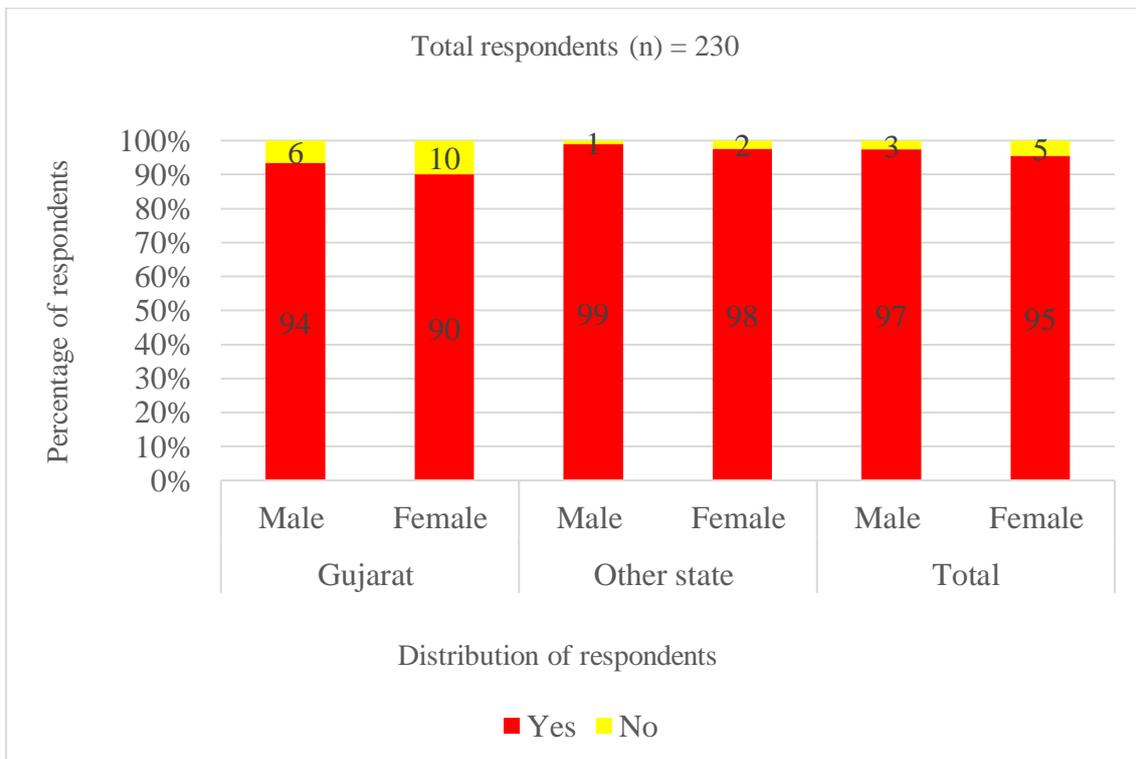


Graph 4.23: Responses towards readiness to pay price quoted for developed *Mashru* fabrics for innovative use of material, technique & pattern

4.6.3. q Opinion of respondents towards acceptance of developed *Mashru* fabrics by customers

On observing data pertaining to opinion of respondents towards acceptance of developed *Mashru* fabrics by customers as shown in **Graph 4.24**, it was found that in Gujarat, 94 percentage of male and 90 percentage of female marked yes towards acceptance of developed *Mashru* fabrics by customers. In other states, 99 percentage of male and 98 percentage of female marked yes & in total 97 percentage of male & 95 percentage of female including respondents of Gujarat & other states marked yes towards acceptance of developed *Mashru* fabrics by customers. Additionally, 96 percentage of all respondents including respondents of both the genders and of Gujarat & outside Gujarat state marked yes.

Another major observation was that in all categories of respondents, percentage of respondents stating yes towards acceptance of developed *Mashru* fabrics by customers was very good whereas stating no was very less ranging from 1-10 percentage.

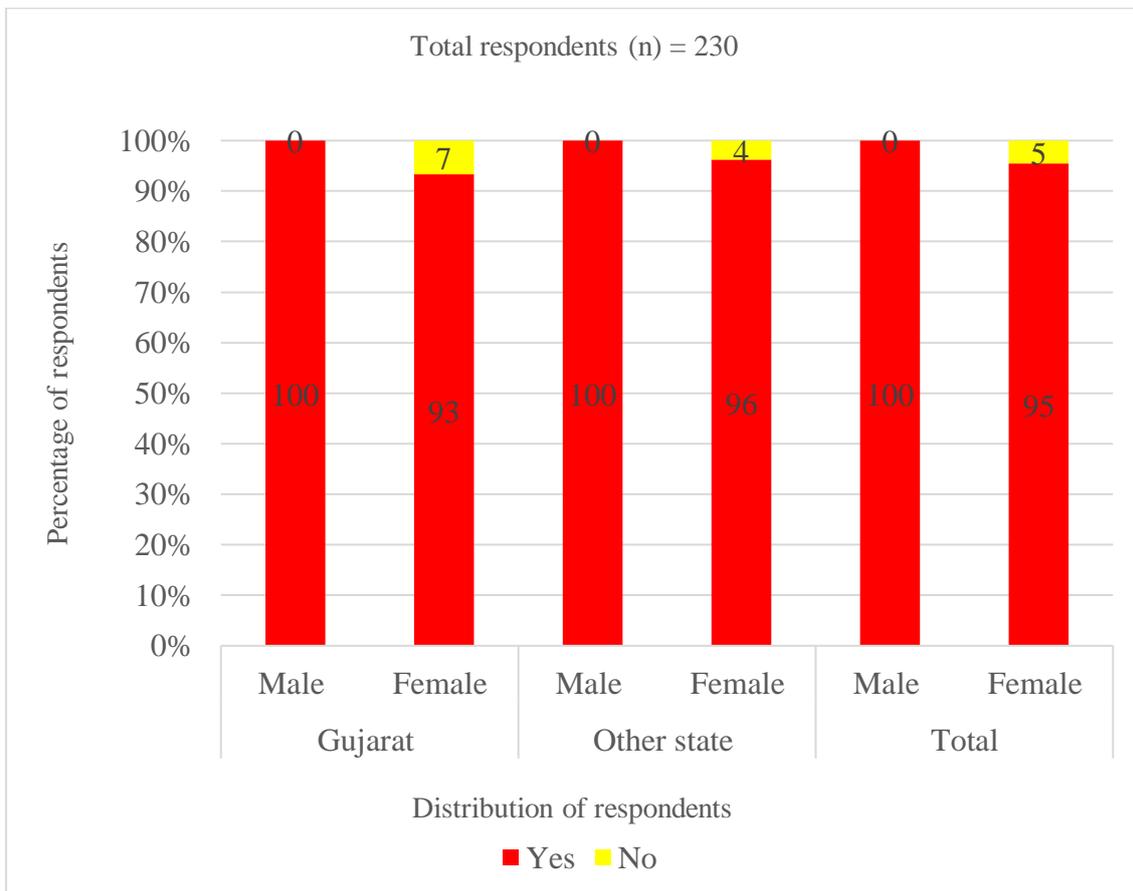


Graph 4.24: Opinion towards acceptance of developed *Mashru* fabrics by customers

4.6.3. r Opinion of respondents towards endeavor of design and development of new fabric in *Mashru* to preserve this craft

On observing data pertaining to opinion of respondents towards endeavor of design and development of new fabric in *Mashru* to preserve this craft as shown in **Graph 4.25**, it was found that in Gujarat, 100 percentage of male and 93 percentage of female marked yes that endeavor of design and development of new fabric in *Mashru* will preserve this craft. In other states, 100 percentage of male and 96 percentage of female marked yes & in total 100 percentage of male & 98 percentage of female including respondents of Gujarat & other states marked yes that endeavor of design and development of new fabric in *Mashru* will preserve this craft. Additionally, 96 percentage of all respondents including respondents of both the genders and of Gujarat & outside Gujarat state marked yes.

Another major observation was that in all categories of respondents, percentage of respondents stating yes was very good whereas stating no was very less or negligible ranging from 0-7 percentage.

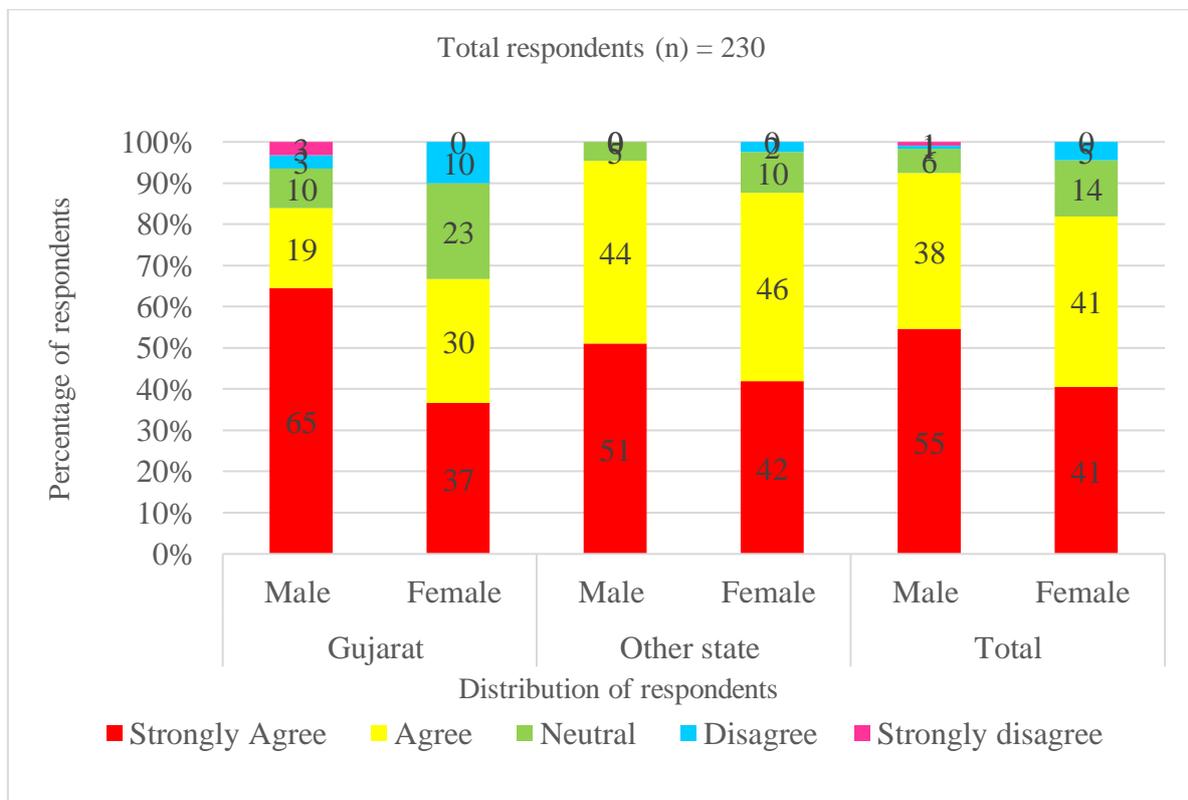


Graph 4.25: Opinion towards design and development of new fabric to preserve *Mashru*

4.6.3. s Opinion of respondents towards the concept to uphold the traditional colour palette constant in developed *Mashru* fabric to keep the identity of the craft intact

On observing data pertaining to opinion of respondents towards the concept to uphold the traditional color palette constant in developed *Mashru* fabric to keep the identity of the craft intact as shown in **Graph 4.26**, it was found that in Gujarat, 65 & 19 percentage of male and 37 & 30 percentage of female marked strongly agree & agree towards the concept to uphold the traditional color palette constant in developed *Mashru* fabric to keep the identity of the craft intact. In other states, 51 & 44 percentage of male and 42 & 46 percentage of female marked strongly agree & agree. In total, 55 & 38 percentage of male; 41 & 41 percentage of female including respondents of Gujarat & other states marked strongly agree and agree.

Another major observation was that in all categories of respondents, sum of percentage of respondents marking strongly agree & agree towards the concept to uphold the traditional colour palette constant in developed *Mashru* fabric to keep the identity of the craft intact was quite substantial. Percentage of respondents marking disagree and strongly disagree were quite less. Overall, it can be concluded that maximum respondents agreed with the aforesaid mentioned concept.

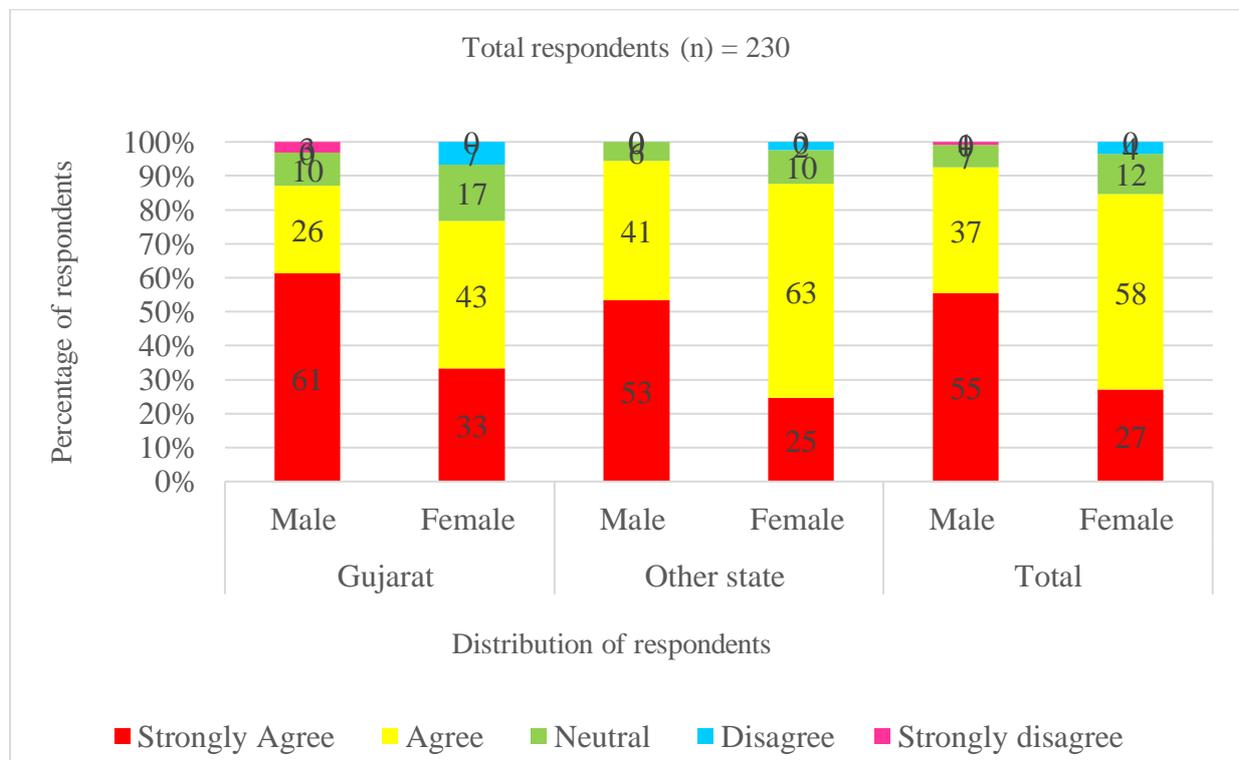


Graph 4.26: Concept to uphold the traditional color palette constant in developed *Mashru* fabric to keep the identity of the craft intact

4.6.3. t Opinion of respondents towards the *Mashru* fabric developed under category-1 that it will be helpful in making garments with various patterns from a single fabric

On observing data pertaining to opinion of respondents towards the *Mashru* fabric developed under category-1 that it will be helpful in making garments with various patterns from a single fabric as shown in **Graph 4.27**, it was found that in Gujarat, 61 & 26 percentage of male and 33 & 43 percentage of female marked strongly agree & agree; in other states, 53 & 41 percentage of male and 25 & 63 percentage of female marked strongly agree & agree. In total, 55 & 37 percentage of male; 27 & 58 percentage of female including respondents of Gujarat & other states marked strongly agree and agree that the *Mashru* fabric developed under category-1 will be helpful in making garments with various patterns from a single fabric.

Another major observation was that in all categories of respondents, sum of percentage of respondents marking strongly agree & agree was quite substantial. Percentage of respondents marking disagree and strongly disagree were quite less varying from 0 to 7 percentage. Overall, it can be understood that maximum respondents agreed to the view that the *Mashru* fabric developed under category-1 will be helpful in making garments with various patterns from a single fabric

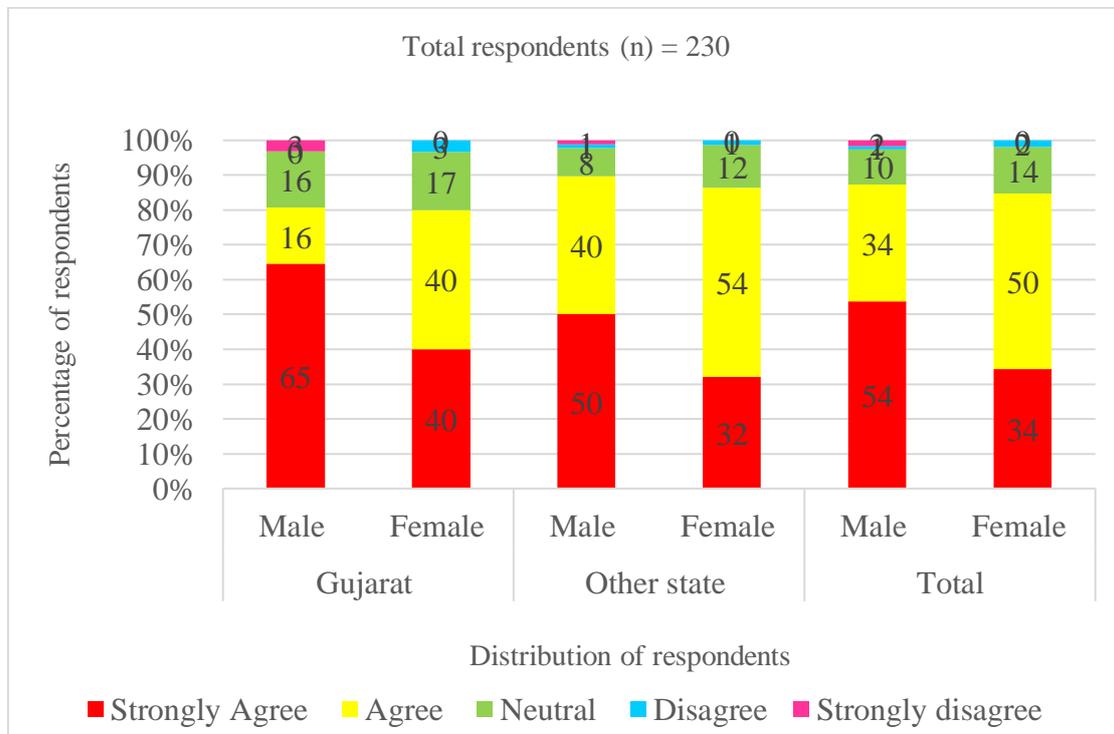


Graph 4.27: Responses towards *Mashru* fabric developed under category-1 that it will be helpful in making garments with various patterns from a single fabric

4.6.3. u Opinion of respondents towards the incorporation of Tasar silk & Korea silk in developed *Mashru* is innovative

Mashru were traditionally made in silk warp and cotton weft due to religious obligation attached to it. Usually, mulberry silk was used in it, researcher made an attempt to use different variety of silk to create material variation while keeping the religious sanctity constant. On observing data pertaining to opinion of respondents towards the incorporation of Tasar silk & Korea silk in developed *Mashru* is innovative as shown in **Graph 4.28**, it was found that in Gujarat, 65 & 16 percentage of male and 40 & 40 percentage of female marked strongly agree & agree; in other states, 50 & 40 percentage of male and 32 & 54 percentage of female marked strongly agree & agree. In total, 54 & 34 percentage of male; 34 & 50 percentage of female including respondents of Gujarat & other states marked strongly agree and agree that the incorporation of Tasar silk & Korea silk in developed *Mashru* is innovative

Another major observation was that in all categories of respondents, sum of percentage of respondents marking strongly agree & agree was quite substantial. Percentage of respondents marking disagree and strongly disagree were quite less varying from 0 to 3 percentage. Overall, it can be understood that maximum respondents agreed that the incorporation of tasar silk & Korea silk in developed *Mashru* was innovative.

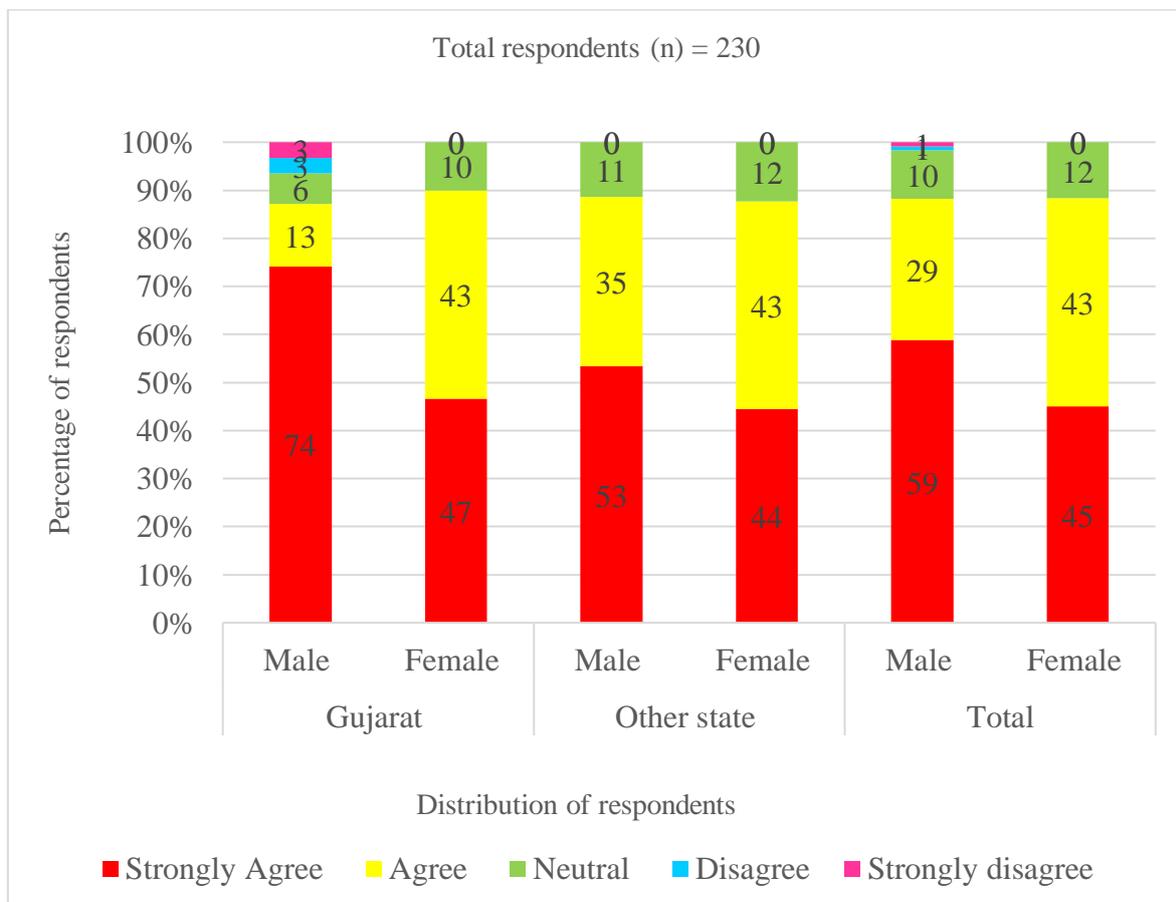


Graph 4.28: Responses towards the incorporation of tasar silk & Korea silk in developed *Mashru* as innovative

4.6.3. v Opinion of respondents towards the re-introduction of *Ikat* in developed *Mashru* fabric as addition of value

On observing data pertaining to opinion of respondents towards the re-introduction of *Ikat* in developed *Mashru* fabric as addition of value as indicated in **Graph 4.29**, it was found that in Gujarat, 74 & 13 percentage of male and 47 & 43 percentage of female marked strongly agree & agree; in other states, 53 & 35 percentage of male and 44 & 43 percentage of female marked strongly agree & agree. In total, 59 & 29 percentage of male; 45 & 43 percentage of female including respondents of Gujarat & other states marked strongly agree and agree that the re-introduction of *Ikat* in developed *Mashru* fabric is adding value to it.

Another major observation was that in all categories of respondents, sum of percentage of respondents marking strongly agree & agree was quite substantial. Percentage of respondents marking disagree and strongly disagree were quite less varying from 0 to 3 percentage. Overall, it can be understood that maximum respondents agreed that the re-introduction of *Ikat* in developed *Mashru* fabric is adding value to it.

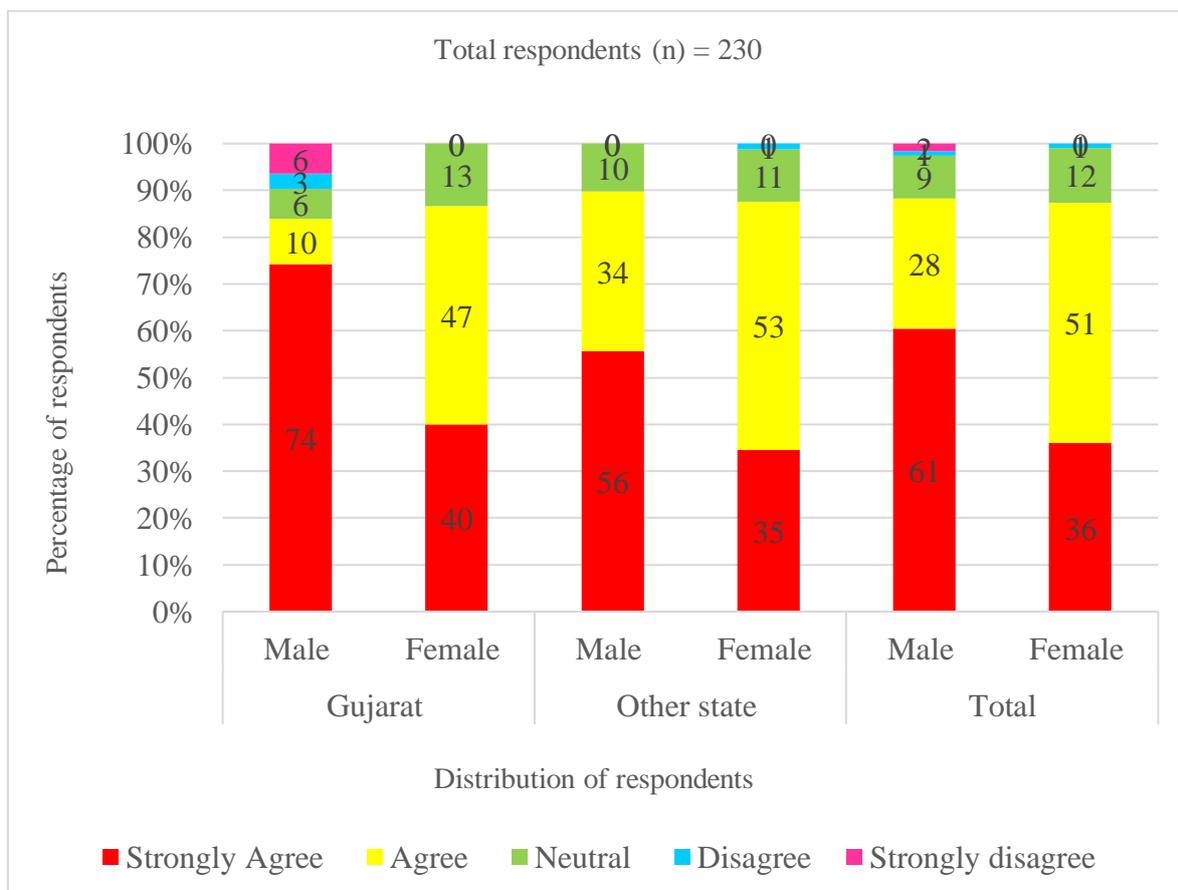


Graph 4.29: Responses towards the re-introduction of *Ikat* in developed *Mashru* fabric as addition of value

4.6.3. w Opinion of respondents towards the re-introduction of traditional motif as addition of value to the developed *Mashru* fabric

On observing data pertaining to opinion of respondents towards the re-introduction of traditional motif as addition of value to the developed *Mashru* fabric as indicated in **Graph 4.30**, it was found that in Gujarat, 74 & 10 percentage of male and 40 & 47 percentage of female marked strongly agree & agree; in other states, 56 & 34 percentage of male and 35 & 53 percentage of female marked strongly agree & agree. In total, 61 & 28 percentage of male; 36 & 51 percentage of female including respondents of Gujarat & other states marked strongly agree and agree that the re-introduction of traditional motif in developed *Mashru* fabric is adding value to it.

Another major observation was that in all categories of respondents, sum of percentage of respondents marking strongly agree & agree was quite substantial. Percentage of respondents marking disagree and strongly disagree were quite less varying from 0 to 6 percentage. Overall, it can be understood that maximum respondents agreed that the re-introduction of traditional motif in developed *Mashru* fabric is adding value to it.

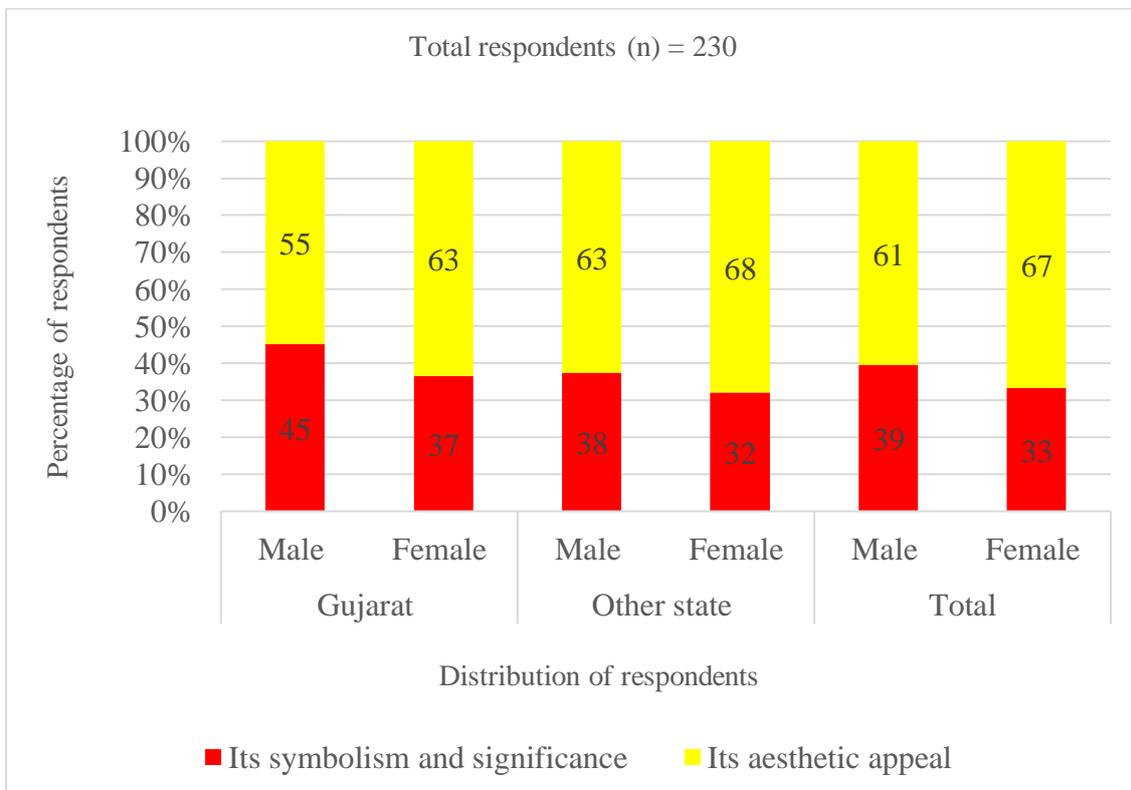


Graph 4.30: Responses towards the re-introduction of traditional motif in developed *Mashru* fabric as addition of value

4.6.3. x Opinion of respondents towards the preference of developed *Mashru* fabric on the basis of its symbolism & significance or its aesthetic appeal

On observing data pertaining to opinion of respondents towards the preference of developed *Mashru* fabric on the basis of its symbolism & significance or its aesthetic appeal as indicated in **Graph 4.31**, it was found that in Gujarat, 45 percentage of male and 37 percentage of female preferred it on the basis of its symbolism and significance and 55 percentage of male and 63 percentage of female preferred it on the basis of its aesthetic appeal. In other state, 38 percentage of male and 32 percentage of female preferred it on the basis of its symbolism and significance and 63 percentage of male and 68 percentage of female preferred it on the basis of its aesthetic appeal.

In total also, 39 percentage of male and 33 percentage of female preferred it on the basis of its symbolism and significance and 61 percentage of male and 67 percentage of female preferred it on the basis of its aesthetic appeal. Overall, in all categories of respondents it was understood that maximum percentage of respondents preferred the developed fabric on the basis of its aesthetic appeal.

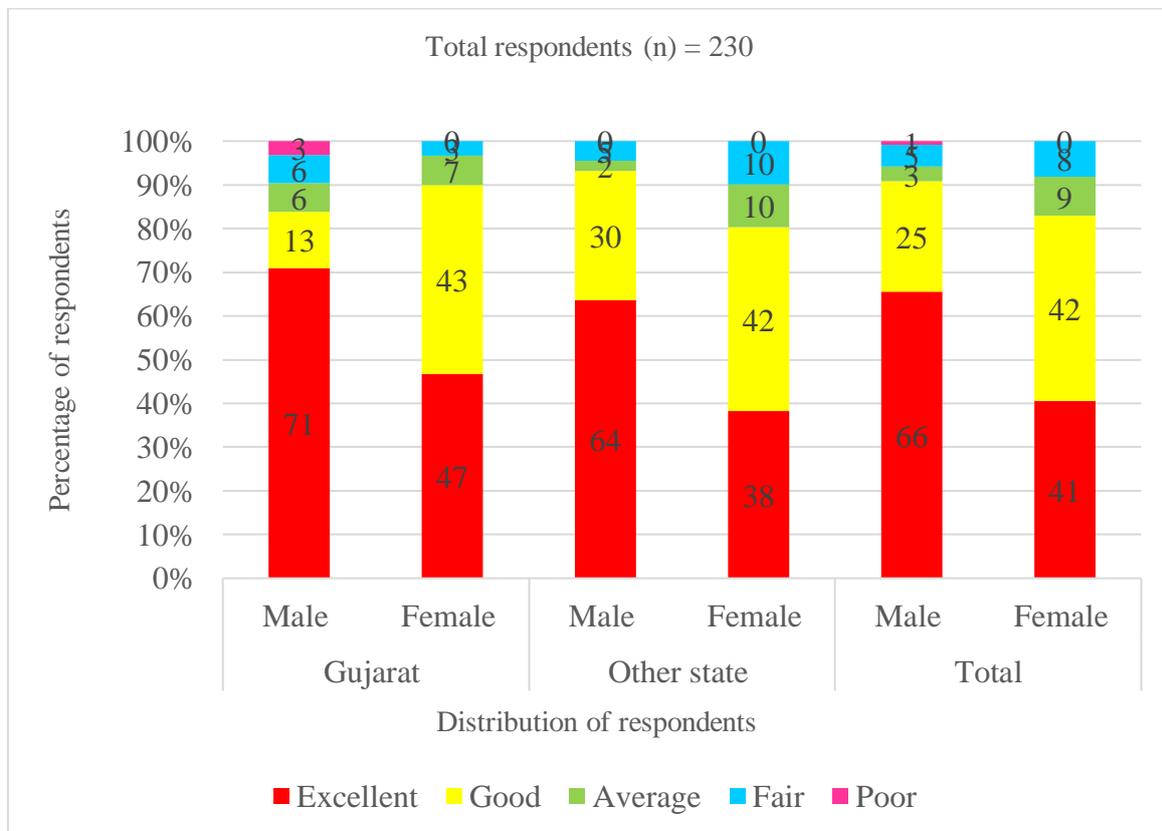


Graph 4.31: Responses towards the preference of developed *Mashru* fabric on the basis of its symbolism & significance or its aesthetic appeal

4.6.3. y Overall opinion of respondents towards the newly designed *Mashru* fabric

On observing data pertaining to overall opinion of respondents towards the newly designed *Mashru* fabric as indicated in **Graph 4.32**, it was found that in Gujarat, 71 & 13 percentage of male and 47 & 43 percentage of female marked excellent & good; in other states, 64 & 30 percentage of male and 38 & 42 percentage of female marked excellent and good. In total, 66 & 25 percentage of male; 41 & 42 percentage of female including respondents of Gujarat & other states marked excellent and good towards overall opinion towards the newly designed *Mashru* fabric.

Another major observation was that in all categories of respondents, sum of percentage of respondents marking excellent and good was quite substantial. Percentage of respondents marking average, fair and poor were quite less varying from 0 to 10 percentage. Overall, it can be understood that maximum respondents found newly developed *Mashru* fabric as excellent and good.



Graph 4.32: Overall opinion of respondents towards the newly designed *Mashru* fabric

Overall, the finding of the study revealed that maximum respondents were aware about handloom fabrics and were inclined to use it. However, in reference to *Mashru* fabrics, a considerable number of respondents were found aware of it. It was appreciated with varying degree of opinion among both male and female respondents of Gujarat and other state. A common trend observed in the assessment of developed *Mashru* fabrics in concern of most of the parameters was that higher percentage of male respondents of Gujarat and male respondents of other state preferred the fabrics in comparison to female respondents of Gujarat and female respondents of other state. Overall, being a bright and colourful fabric, it was preferred more among male respondents compared to female respondents.