

# **RESTRUCTURING CONVENTIONAL MOTIFS FOR HOME TEXTILES**

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# **RESTRUCTURING CONVENTIONAL MOTIFS FOR HOME TEXTILES**

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in

**TEXTILE AND APPAREL DESIGNING**

By

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**CERTIFICATE**

This is to certify that the thesis entitled "RESTRUCTURING CONVENTIONAL MOTIFS FOR HOME TEXTILES" submitted by Miss GAYATRI RAJBANSHI for the degree of MASTER OF HOME SCIENCE in TEXTILE AND APPAREL DESIGNING, to the University of Agricultural Sciences, Dharwad, is a record of bonafide research work, carried out by her during the period of her study in this University, under my guidance and supervision, and the thesis has not previously formed the basis of the award of any degree, diploma, association, fellowship or other similar titles.

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# 1. INTRODUCTION

The history of textile is as early as that of human civilization and as time moves on the history of textile has further enriched itself. Through the entire expanse of time covered by prehistory and history, clothing has been recognized as a primary need of mankind along with food and shelter. With the passage of time, the basic need for clothing led to the development of textile as early as the Neolithic or new stone age. In the course of time since the Neolithic period, weaving became a part and parcel of man's culture as a household craft or cottage industry. The production of textile spread throughout the world at first as a household industry and then as a commercial enterprise in the more developed civilizations (Baruah, 1987).

India has a diverse and rich textile tradition. The origin of Indian textiles is hidden in the mists of prehistory, exactly how ancient; the textile tradition is a matter for speculation. What is sure, however, is that by the time of the Indus valley civilization- about the third millennium BC, the first literary information about textiles of India was found in Rig-Veda, which refers to weaving. The Indian epics- Ramayana and Mahabharata did speak about variety of fabrics of those times. The Ramayana refers to rich styles worn by the aristocracy on one hand and the simple cloth worn by the commoners and ascetics. Ample evidence on the ancient textiles of India was obtained from sculptures of Mauryan and Gupta's reign as well as Buddhist scripts and murals of Ajanta caves. The past traditions of the textiles and handlooms can still be seen amongst the motifs, patterns, designs and the old techniques of weaving, still used by Indian weavers. (<http://www.culturalindia.net>)

The artisans living in the Indian countryside were influenced in their textile production by the elements of physical environment as well as by their myths, legends, rituals, ceremonies, festivals, social organizations and cultural norms. All these elements reflected upon their respective textile traditions in one way or another. As a result, each culturally definable region of India has developed distinctive characteristics of its own in the craft of weaving and production of textiles of diverse types and designs (Baruah, 1987).

The north-eastern region of India (consisting of the seven states of Assam, Meghalaya, Arunachal Pradesh, Mizoram, Nagaland, Manipur and Tripura) enjoys a place of pride in the whole country for its rich heritage of artistic handloom products. There is an immensely rich assembly of tribal cultures in this region. In fact, except for the Brahmaputra and Barak Plains of Assam and the Imphal Plains of Manipur, the indigenous inhabitants of most of this largely hill region are tribals. The beautiful hand woven products of the tribals and non-tribals of this region not only reflect the skills of individual weavers and artisans, but the creative capacity and deep perception of beauty in colour and design of the people as a whole. The very socio-cultural life of the communities is revealed significantly in their textiles.

According to the 3<sup>rd</sup> census report, 62 per cent of India's weavers are from the north-east. Created with highly evolved sense of design and colours, hand-woven exquisitely by skillful weavers, textile crafts from the region with ethnic, tribal motif, textures, are gaining popularity in the international markets due to their distinct style and uniqueness. Story of north east region is therefore

essentially of craftsmen giving shape to natural materials and resources to create beautiful and useful products, which are eco-friendly, sustainable and unique, besides fitting into contemporary lifestyles of the consumers. The land of north east India is a treasure house of hand-spun, hand-woven textiles in silk, cotton and their blends with an array of patterns and motifs (<http://www.homefashionindia.net>).

Assam is the largest and most accessible of the north east India states. Assam comprises of both tribal and non-tribal populations. The Assamese people are a group of a broad racial intermixture of Mongolian, Indo-Burmese, Indo-Iranian and Aryan origin. Hand woven fabrics from Assam are in cotton, muga and pat (mulberry silk) and eri (endi). Muga has a natural golden sheen; eri is a mildly warm silk, particularly suitable for winter. Muga silk was once used together with zari to weave fabrics for royalty, but today zari has been replaced by multicoloured cotton threads. Cotton decorative textiles include bed spreads, furnishing materials, mekhela, chaddar, shawls and sarees. Assamese weavers produce beautiful designs on the borders of their mekhelas, chaddars, rihās (traditional garments used by the women), and gamosas (towel). Designs are mostly stylized symbols of animals, human figures, flowers, birds, diamonds, cross borders, and the galaxy. The status of traditional handloom products can be judged from the remark made by Mahatma Gandhi after his visit to Assam in 1929: "Assamese women are born weavers; they can weave fairy tales in their cloths" (<http://textiles.indianetzone.com>).

The traditional handloom fabrics of Assam unfold the creative genius of the local weavers: the plains Assamese as well as the tribals. The traditional textiles, woven out of these silks were known for the fine quality, brightness of colour and durability. On the other hand, cotton textiles were known for their bright colours, specific textures and bold loom-embroidered designs. The numerically dominant Assamese-speaking peasantry of the Brahmaputra Plains and the indigenous tribal populations of the region share many cultural elements and many common definitions of the situation. There have been considerable inter-mingling of ethnic stocks since early historical times resulting in a synthesis of cultures. In the field of handloom weaving also, the influence and contributions of these various ethnic groups are easily marked, especially in the numerous designs and varieties of colour schemes of the textiles of Assam. The unique characteristics of the textiles as well as the techniques of weaving of different ethnic groups have not been retained in all their pristine forms. Changes in many aspects have been incorporated and adopted from time to time.

Nature has played an important role in inspiring the folk and tribal artisans to reproduce its many beauties in their crafts. It is said that throughout the world nature seems to have set the pattern for almost every creative urge and artistic endeavour. The handloom fabrics of Assam are noted for their various indigenous artistic designs. The ornamentation is done on the loom itself. Embroidery as a mode of ornamentation is absent in the case of handloom fabrics of Assam. However, it is evident from historical records that embroidery with the needle was introduced in the Assamese textiles with the advent of Muhammadans. This particular type of needle embroidery, once famous and practiced till recent past, is called *Karchip* work. It is done with flat silver thread and generally on fine silver cloth (Baruah, 1987).

The designs and motifs of Assamese fabrics are inspired from nature, and from familiar objects that surround them. Though the traditional motifs from the past are strictly geometrical, over time some lyrical and flowing designs have also developed. Diamonds in different characters form an interesting part of Assamese design. The influence of architecture is also evident. The figurative and nonfigurative stone carvings from the Madan Kamdev temple are incorporated in the woven patterns. Animals, birds, plants and flowers form important textile motifs. *Juhi* is a prominent floral motif depicted with six or seven small petals. An interesting tree motif is widely used as a side motif. Animal and bird motifs include figures of peacock, parrot, pigeon, lion, horse and elephant. Assamese ornaments such as the *thoria*, *karanasingu*, or *jonbiri* inspire some unique motifs. External influences on woven patterns brought about a remarkable change in the weaving industry of Assam. For example, the use of zari as an extra weft was introduced during the reign of Rudra Singh. Most designs on muga are derived from common flowers. Plants and creepers such as the fern and banana are stylized into geometrical or lyrical patterns. Some other typical motifs include a horseman with a fan, dragon, a diya stand, and a fan. The flying lion is considered an auspicious symbol, while the *Kingkhap* is a traditional motif woven in zari on muga. The *Kingkhap* motif has a great historical and cultural importance. The contemporary motifs among ancient motifs, a strong tribal influence is evident. With the advent of Muslim influence, the purely geometrical style acquired movement. Today, designers and artists pick up motifs from traditional designs and incorporate them in their weaves and colour ways based on market demand. However, there is no doubt that stylized versions of ancient designs are enjoying a new impetus. (<http://textiles.indianetzone.com>)

The inspirations and socio-cultural conditions which influence the skillful weavers of the old do not any longer exist with the same force or intensity. As a result, the rich textile tradition of Assam is on the decline. The indigenous textiles have been facing stiff competition from mill-made products. With all the changes that have come about since the advent of British rule in Assam in 1826 A.D., handloom weaving is still an important cottage industry and a living craft of Assam.

In order to have a proper understanding of the present status of textiles, it is important to know the age-old traditions. This is so because the contemporary techniques of production as well as designs have their roots in the past. It is through a process of evolution that the new elements have come into existence. Both the state and union governments have placed great importance on the revival of indigenous textiles along with other local crafts. But such attempts will have more value, if a detailed study, encompassing diverse aspects of traditional textiles is made (Karolia and Prakash, 2014).

Traditionally these textiles were made by hand which was tedious, time consuming and laborious process. But in due course of time with technological advancement, these designs directly can be created with the help of various softwares like corel draw, Illustrator, photoshop *etc.* It is now possible with CAD to go straight from an initial idea to visual representation of fabric showing different types of designs and combination of colors. CAD has led to better quality and flexibility in design development, increasing the efficiency and shortening the time between the design concept and actual marketing (Sharma and Paul, 2015).

Designing is a creative/technical process that is dependent upon the ability of the designer to combine aesthetic sensibility with a strong knowledge of the technology. Computers have been utilized in designing for almost 25 years and have revolutionized the entire thought process from the initial artwork to final production. The use of computers has opened up remarkable opportunities for innovative designs, improved productivity as per the changing lead time in fashion industry. As CAD softwares not only help in producing a design but also provide easy tools to make changes as per the requirements (Gupta and Joseph, 2015).

Fashion designers need to present their collections, once designed, in a context that enables others to understand them. This usually means depicting the designs on a garment or an interior. This takes the designs to another level by putting them into a realistic environment and giving the collection a sense of place. Lately the industry has seen the arrival of a wealth of exciting new fashion illustration techniques, due partly to advances in digital technology. Today, digital technology is accepted as one of the tools available to textile designers, and in some converters and design studios they have become an integral part of the design, colour, and repeat process. While welcoming the labour -and time- saving advantages provided by computer software, they also consider the computer's limitations, and emphasize that designers must have an understanding of traditional textile design aesthetics and hand painting methods. Consequently, digital technology is changing the face of textile design, from methods of creating and presenting design to the ways in which they are realized (Esen and Tuba, 2012).

Digital fashion, historically, has always been integral for fashion, but over time it has become a more prominent and relevant part of the fashion language. Not surprisingly, it is technology that has enabled the gradual development and ubiquity of print applied to textiles. Furthermore digital fashion print is intended to help the designer who can think laterally, using a non-linear and modular structure (Esen and Tuba, 2012).

Home Textile is a branch of technical textile comprising application of textiles in household purposes. Home Textiles are nothing but an internal environment, which deals with internal spaces and their furnishings. Home Textiles are mainly used for their functional and aesthetic properties, which provides mood and also gives mental relaxation to the people. (<http://textileapex.blogspot.in/>)

The Home textile market is recognized as an important part of the technical textile that comprises household textiles, furnishings and upholstered furniture industry. Home Textiles transform a house into home by improving designs, patterns, size and styles. Today, people want modern and well-furnished homes in place of traditional and dull looking house. Therefore, they are ready to accept new and expensive Home Textile products that could fill colors of newness and excitement to their life. Every furnishing in our house is inspired with latest designs such as wallpapers, upholstery, curtains, shower curtains, bedspreads and aprons. There are so many prints, shades and fabrics available in the market that make easy to pick one, which decorates the floor of living hall, the tiles of the kitchen, the color of walls and the wooden shade of lobby (Chaudhary and Shahid, 2012)

India is globally well known for its wide variety and exquisite designs in Home Textiles and furnishing fabrics. Within the country, with a big boon in housing and affordability of Indian consumers, the demand for Home Textiles growing by a healthy 30-40 per cent per annum. Indian Home Textile products have become synonyms with luxury, comfort, design innovations and high quality in all sophisticated international markets. Indian Home Textiles is one of the fastest growing textile export segments from India and enjoys universal popularity even in the most demanding markets like USA, EU and Japan .The Home Textiles and furnishings can be functionally grouped as interior products, bedroom textiles and table linens, wallpapers, floor coverings *etc.*(<http://www.texprocil.org>).

India has emerged as a major producer of home furnishings in recent years as well has a rich heritage of cotton weaving, dyeing and printing. Equally important is the fact that India has all the diverse resource required for producing intricate design and patterns. India has inherent strength in producing high quality home and apparel textile and has accepted in the world market. India enjoys inherent advantages of easy access to raw materials and low waged skilled workers that serve as a balance for international buyers. Global competition in the textiles and apparel industry has become more intense due to the changes in the regulations of world trade. To compete in the future while reducing cycle time and cutting costs new product development method contribute or enhance the marketing of innovation products. In the present study apparel and home furnishing is a new concept providing variety in Indian market. Textile industry has re-invented itself recently in household fabrics market. Despite a general fall in worldwide textile exports, household textile products such as linen and furnishing offerings are holding up well and recording increased consumption patterns over its previous years (Kashyap *et al*, 2012).

The product market in Home Textiles in India has un-evenly developed. Of the furnishing segment, it is the bed and bath segment that dominates across the product range constituting about two thirds of the segment. So, automatically the competition in this segment is the maximum. The Indian industry is still greatly influenced by the traditional motifs, with the materials of satin mix, tapestry for drapes and even cotton mixes with synthetics for the traditional look. The secret of successful home decoration is to combine careful planning and a sensible budget with self-creative flair and energy. Modern lifestyles and changing needs do demand practical and ingenious approach to home furnishings and textiles where an emerging need for textile designs and interior designs will arise (Byadgi, 2009).

The traditional handloom fabrics of Assam are noted for their varied motifs and designs. Objects of nature constitute the main source of inspiration for motifs and designs used in the ornamentation of textiles of Assam. To embellish these objects in weaving, these are simplified, conventionalized and to some extent distorted. Thus, the textile motifs of Assam are more stylized than naturalistic. The weavers in many communities have good collections of indigenous motifs and designs, mostly in the form of old scraps of design or in old design catalogues. The danger of disappearance of these traditional motifs and designs is very real. Once the scraps of old designs and catalogues disintegrate and the experts are no longer there to properly identify and explain the designs, the old designs too will die a natural death. This points to the need for immediate salvage work in the sphere of motifs and designs of Assam.

An endeavor has been made by the scholar to revive the traditional motifs and designs of Assam by restructuring them to contemporary form by suitable selection of elements of art and applying principles of design. Also, efforts have been made to use the printing as well as visual graphic designing technique in contemporizing the designs among several home furnishing.

To the knowledge of the investigator no comparative, in depth, study of reviving the indigenous motifs of Assam has done so far. Therefore, in the present study the author has tried to explore these motifs by reviving to produce designer's Home Textiles.

Thus, the present study on "Restructuring conventional motifs for Home Textiles" is taken up with the following objectives -

- 1.To explore the possibilities of restructuring conventional Assamese textile motifs into contemporary motifs
- 2.To digitize the conventional and contemporary textile patterns
- 3.To find out the possibilities of developing the digitized motifs for Home Textiles
- 4.To assess the cost of production and consumer's acceptance for designer's Home Textiles

## 2. REVIEW OF LITERATURE

A review of past research helps in identifying the conceptual and methodological issues relevant to the study. This will enable the researcher to collect relevant data and subject them to sound reasoning and meaningful interpretation. The review of literature to the present study is arranged in this chapter under the following sub headings:

- 2.1 Conventional motifs
- 2.2 Revival of conventional motifs
- 2.3 Home textiles and market scenario
- 2.4 Product development and consumer acceptability
- 2.5 Computer aided designing

### 2.1 Conventional motifs

Historical motifs and designs have begun to be used regularly in various industries. Products created in today's world play an important role in preserving cultural and historical values. Combining contemporary styles with age old designs and motifs ensures the survival of these motifs for future. The magic of Indian folklore has evolved over the ages. With each state having its own distinctive and unique style, India is popularly known for intricate designs and vibrant colours in its traditional stitchery. The highlights of studies on conventional motifs of the country are described here under:

Gunter (2003) conducted a study on "Japanese design motifs and their symbolism as used on *ITAJIME*-dyed *JUBAN*" to identify the motifs and the associated symbolic meanings used as decoration on the *itajime*-dyed garments and garment fragments. *Itajime* is a little-known process of resist-dyeing that employs sets of wooden boards carved in mirror image of one another to clamp together a piece of folded fabric. *Itajime* was used extensively to decorate Japanese women's underkimono (*juban*). The findings of the study showed that the most frequently appearing motifs on the sixty-five *itajime*-dyed *juban* and garment fragments fell in the botanical motifs category. Of the designs in the botanical motif category, cherry blossoms, chrysanthemums, plum blossoms, and hemp leaves were the most often pictured motifs. The most frequently occurring motifs within the bird, animal, and insect category were butterflies and *chidori* (plover). Waves occurred the most often of the motifs within the water-related motifs category. Of the motifs within the everyday object motif category, fans and mouth bits (part of equine tack) were seen the most frequently although only three times and twice, respectively. Motifs in the abstract designs and geometric shapes category were also frequently represented, with waves occurring the most often, followed by stripes.

"Weaving computerized *negi* motifs in traditional Lakkundi saris" a study conducted by Vastrad (2003), where it was depicted that Kasuti the word derived by combining two vernacular words of Karnataka viz., "*kara*" meaning hand and "*suti*" is the cotton thread, which in totally explains the handwork of cotton thread. Kasuti has resemblance with tattooing and floor decoration that reflect the folk culture of that region. The designs for floor decoration and motifs used in embroidery were almost similar i.e. the geometrical patterns with dots, lines, squares, circles, swastika, lotus, fish, creepers, flowers, animals, birds and anthropomorphic figures. The kasuti embroidery consists of four types of stitches viz. *Gavanti*, *murgi*, *negi* and *menthi*.

Davari (2009) in his thesis “Iranian traditional motif: the *Boteh* design” studied the special and important motif of Iran (*Boteh*). There are a lot of different motifs in the Iranian culture; the designs are inspired from the shapes of plants. The names of motifs are considered from the way of craftsmen’s decoration or artists. These motifs are used in different kinds of crafts in Iran like printed cloth, enamel, emboss, and tile work. From the research, findings showed that most of the people do not know about the different kinds of *Boteh*/Paisley, even though this motif is recognized around the world. *Boteh* motif is an ancient motif inspired from a leaf. In this research, all the shapes of *Boteh* was introduced such as Tufted Paisley, Deer Horn Paisley, Termeh Paisley, Saraband Paisley, Kherghei Paisley, Isfahan Pen case Paisley, Kordestani Paisley, Eight bush Paisley, Broken Mir Paisley, Sanandaj Paisley, Afshari Paisley and Armlet Paisley. It showed also the function of *Boteh* in contemporary style and traditional function that is continuing until now on one of the most popular handicraft called printed cloth.

Gumuser (2012), conducted a study on “Contemporary usage of Turkish traditional motifs in product designs” with an aim to investigate in which industrial design, and with what kind of interpretation, the motifs used in Ottoman arts are being used today, and to create awareness in current designs. The designs were usually stylized flowers according to that period. Common motifs were classified: Animal motifs (tiger stripe, three spot, rumi, cloud), semi stylized flowers (tulip, carnation, hyacinth), fruit motifs (pomegranate), crescent and star motifs. Traditional Turkish motifs were found to be used in the design of everyday products, such as decoration art, tiles, ceramics, glass and lighting products. It was seen in the investigated examples, that Turkish motifs and designs provided several opportunities to make unique designs that are appropriate for both classical and modern designs. These motifs gain the quality of art, if they are applied to design products in terms of material, color, form and interpretations. In conclusion, the motifs used in the Ottoman empire were seen to be in many designs products. These products with Turkish motifs on them will certainly be a cultural bridge for the designs that are going to come in the future.

Kashyap *et al.* (2012) conducted a study on “Exploration and documentation of traditional Danke-Ka-Kaam of Udaipur” with a view to document the motifs of Danke-ka-kaam embroidery of Udaipur as well to explore the tools and techniques used in executing this embroidery. Metal embroidery of Rajasthan is largely of three kinds – Zardozi, Gota work and Danke-ka-kaam. Danke-ka-kaam is distinguished by the use of a small, metallic square around which Zardozi is worked. This decorative technique is usually worked on satin, chiffon or silk fabric and in bright coloured fabric. Natural motifs like paisley, moon, sun, peacock, flower, leaf are used in this embroidery. This embroidery is done on *poshak* of rajputs and *maharanas* of Mewar.

Kashyap and Ojha (2012) conducted a study on “Simulation of designs of *Gota* work of Rajasthan” to explore the Rajasthani motifs used in *Gota* work. Various types of *Gota* are *sikhiya gota*, *Chaumasa*, *panchmasa*, *athmasa*, *lappa*, *thappa*, *gokhru*, *lehrugotta*, *nakshi*, *bijbel*, *bijiya*, *chiru*, *kiran*, *chatai* and *chip gotta*. Previously *gota* was available in silver and gold color but now it is available in red, orange, pink, magenta, maroon and yellow colours. The popular design elements are

flowers, leaves, stylized mango motifs, heart shapes and checkerboard patterns. Animal figures, like the parrot, peacock and elephant are some of the folk motifs. The gota is embroidered on to the cloth with the help of a dori or thread.

Singh *et al.* (2013) conducted a study on “Design placement of traditional canvas embroidery articles” to know the design placement of traditional motifs on canvas embroidery articles produced by rural women of Hisar district of Haryana state. Canvas embroidery is locally known as *dasuti kadhai* in rural Haryana and mainly worked in jali casement and sometimes on khaddar casement. The designs used by rural women are always geometrical or stylized either animal or floral base. The frequently used geometrical motifs were lozenges, lattices, squares, triangles and zig-zag bands; floral motifs were comprised of *aath kalian* (eight buds), rose flowers and creepers and foliage. Pair of deers and rabbits were common animal motifs while pairs of peacock, parrot, duck and sparrow were the common bird motifs. A few human and ethnic figures along with miscellaneous motifs like building and vehicles were also observed. Majority of motifs and designs were in geometrical form while some floral, animal, human and ethnic motifs were portrayed in naturalistic and stylized forms also.

Gupta and Mehta (2014) in their article “Patterns of *Phulkari*: Then and now” explored the patterns of embroidered textile craft of Punjab. The traditional phulkari motifs were many times used differently from vendor to vendor. Usually shopkeepers coin their own names for several designs, *e.g.* if a *buti* (motif) looks like a star, named as *star buti*, if one comprehends a diamond motif as *burfi* design and other can name it by *dabbi* design *etc.* Motifs were usually geometrical in nature. A printer from a village in Patiala district mentioned that few motifs and designs of phulkari like *parantha buti*, *chaukadajal*, *kanchan buti*, *tikoni phulkari*, *gol phulkari* *etc.* He said most of these motifs were in use since 15 to 20 years ago but were embroidered on a coarse fabric, now they are embroidered on fine voile.

Kaur *et al.* (2014) conducted a study on “Traditional and modern expressions of *Phulkari*” to document the motifs, fabrics, stitches and colours used traditionally in *Phulkari* in the last five years (2009-2013). The documentation of motifs used in *Phulkari* in the olden times revealed that, since *Phulkari* was connected to the rural Punjab, the motifs were inspired from village life and nature. The use of different types of flower motifs were found in abundance, as the traditional craft derived its name from *phul* meaning flower. Traditionally, the motifs of birds, animals, vegetables, rivers, sun, moon, fields along with other motifs from everyday life were used. Thus, the patterns were classified accordingly; like *dhaniya* (coriander), *motia* (jasmine), *leheria bagh* (garden of waves), *surajmukhi* (sunflower), *mor* (peacock), *kukad* (cock) *etc.* Even motifs of ornaments such as *hansali*, *tika*, *kada*, *singhar-patti* and *guluband* were used. In most of the *Phulkaris*, geometric motifs were used involving the basic geometric shapes like triangles, squares, vertical and horizontal lines. These basic shapes employed either colour variation or by variation of the direction of the darn stitch. Some skillful women embroidered complicated patterns like lozenges, pentagons and wavy lines.

Sinduja and Dua (2014) in her thesis “A Study on Ajrakh prints and developing innovative Ajrakh patterns using different traditional techniques” explored that *Ajrakh* is one of the oldest types of block printing on textiles still practiced in parts of Gujarat and Rajasthan in India, and in Sindh in

Pakistan. *Ajrakh* is traditionally, a double-sided block printed cotton fabric in the dominant colors of rich crimson and a deep indigo. The textile is decorated in an all-over pattern with geometrical motifs in combination with some floral designs. The shapes and motifs of *Ajrakh* echo the architectural forms of Islamic architecture's intricate jali windows and trefoil arches. One of the most beautiful traits of traditional Islamic design is intricate geometrical shapes. These shapes are achieved in a complicated mapping process that involves linking a series of concentric circles with lines.

Negi *et al.* (2015) in the article "New horizon for *Aipan* (Folk art of Uttarakhand) motifs through applique" explained that *Aipan*, the art of Uttarakhand is known for its beautiful and intricate design that shows a complex yet balanced combination of geometric abstract and stylized designs. *Aipan* designs are good source of folk motifs to be used on textile products. *Aipan* designs show a blend of ethnic and natural, yet stylized designs. Each and every *Aipan* design had a particular meaning attached to it and was drawn with a specific purpose in mind. The designs were intricate though simple to create and adapt. The blend of *Aipan* design with applique provided an imaginative and fresh collection for people to develop traditional motifs with essence of modernization.

## 2.2 Revival of Conventional motifs

Textile designing has greater extent of creativity and scope with vast horizon, and is a demanding and emerging field. Throughout time, textile designers from all over the world have been inspired to decorate their fabrics by looking at many things either natural or manmade. In the similar manner, the rich motifs and designs of various arts and crafts can be readily adapted into contemporary forms. People; particularly youth always enjoy the diversity that brings change in the trends. Presented here are the insights of researches on reviving traditional motifs into contemporary form:

Naik and Vastrad (2008) reported in their study "Protection and revival of traditional hand embroidery, *Kasuti* by automation" that hand embroidery has importance and sanctity of its own. The traditional Karnataka *Kasuti* is elaborate, requires skill and hence works out to be more costly. Hence, this elaborate embroidery is more suitable for the traditional and expensive silk saris, which surely enhance and restore the tradition. On the other hand, *negi Kasuti* motifs would go unseen and may gradually become extinct, unless efforts are made to revive it. Hence, computerizing *negi* motifs and incorporation through jacquard on the handloom hastened the production process and thus made traditionally available for women consumers of all income groups.

Byadgi and Naik (2010) in the article "Automation of hand embroidery motifs into self-woven designs" depicted that among the variegated Indian embroideries, Gujarat has anchored a greater wealth and variety of stitcheries than any other state and boasts some of the most colourful and exquisite embroideries such as mirror work of Kutch and bead work of Saurashtra. As these traditional textiles of Gujarat are widely used and adopted in latest fashion fabrics, the designers have begun to explore deeply the technology to develop the conventional motifs on to modern textiles. Since, the conventional embroidery motifs provide a source of inspiration to many young designers in developing interesting patterns. Hence efforts were made by the researcher to produce the Gujarat embroidery motifs into automated designs by using Computer Aided Textile Designing software - GC Kala-2004 and Paint Shop Pro (PSP).

Latif *et al.* (2012) conducted a study on “Textile designs based on Kashmiri wood work motifs identified and collected from the traditional buildings” to conserve the fantastic wood work motifs of which are really traditional and depict historic cultural heritage items rather than sacred relics, which could disappear with the passage of time and gradually with the change in the construction pattern of the houses according to climatic conditions and economic setup of the people. The Kashmiri craftsman, however, rejoices in carving intricate and varied designs based on lively natural forms. A variety of carved products bear recurrent motifs of rose, lotus and iris, bunches of grapes or pears and *Platanus orientalis* leaves, *Lhasa* dragon motifs *etc.* The author made an attempt to preserve these wood work motifs by transferring them to the cloth surface in the form of bed sheets and curtains by using screen printing method.

Kishore *et al.* (2013) in his study “Adaptation of monumental motifs for textile application” depicted that India, the land of culture and crafts, has been known to the world for its magnificent textile arts since ages. There is a great need to revive the traditional records of textiles by giving captivating grandeur to the Indian textile pieces by introducing innovative designs like Indian monuments on woven materials. Therefore, the researchers had put forth this innovative idea into practice. It has revolutionized the world of designing by bringing in a change in existing style of designing for woven materials like saris, kurtis and skirts. Most of these beautiful buildings are having intricate structural designs that can be used to extract motifs for designing textiles for weaving as well as for printing which includes base, dome and minered, finial (terminal feature), spandrel (space between arches), marble carvings on wall, incised paintings, inlay work of Taj *etc.* These monumental designs were collected from either using the entire motif (monumental design) or by applying components and detailed carvings of the designs.

Kaur and Gupta (2014), conducted a study on “*Phulkari* and *Bagh* folk art of Punjab: a study of changing designs from traditional to contemporary time” to examine the traditional folk art of Punjabi *Phulkari* and its revival in the major metropolises of Punjab by some associations such as Punjab Small Industries and Export Corporation (PSIEC), Patiala Handicraft Workshop Cooperative Industrial Society Ltd. It was concluded that, although traditional *Phulkari* is losing its original form; many NGOs are working on to revival it. Today, the commercialization of the contemporary *Phulkari* has compromised its quality and durability as a traditional *Phulkari* of Punjab. It is now not done for personal use or as a gift. It is now done for profit that benefits the women of Punjab. Today, making *Phulkari* is not as time consuming and detailed as the traditional, rural *Phulkari*. However, the traditional *Phulkari* looks more attractive than the contemporary *Phulkari*. By organizing special training programs, fairs, exhibitions and competitions, the government has been working towards the promotion of the Punjabi *Phulkari*. The plus side of this revival is providing work to many poor people, especially women. Now *Phulkari* is not only known in Punjab, it is also famous in foreign countries.

“Designing of indowestern garments by using tantric motifs” a study conducted by Sharma and Garg (2014), to revive the age old tantric motifs of Rajasthan. Many people still consider tantra to be full of obscenities and unfit for people of good taste. It is also often accused of being a kind of black magic. However, in reality, tantra is one of the most important Indian traditions, representing the

practical aspect of the Vedic tradition. The study was undertaken to add new and interesting ideas, which can break monotony and give a touch of novelty in construction of garments by using the tantric motifs. It was concluded from the data that designing of black and white garments with tantric motifs with stencil printing were preferred by the consumers.

Sharmah *et al.* (2014) conducted a study on “Digitalization of *Madhubani* designs for transferring on apparels using screen printing technique” to develop designs inspired from *Madhubani* paintings of Bihar for ladies kurtis, bed spreads and saris. Out of twenty designs, ten each for ladies kurtis and saris were developed manually and these designs were subjected to visual evaluation by a panel of thirty judges for selection of two best designs from each category in order to apply on various articles. The articles were printed by screen printing method. The study proved to be beneficial for those women who want to start an enterprise as they can follow up these guidelines for designing, preparation of screens and printing procedure.

Bennur and Gavai (2015), conducted a study on “Regional traditional Indian embroidery ‘*Kasuti*’: Key success factors to reach the international markets” to revive and modify the ‘*kasuti*’ embroidery designs to cater the consumers in international markets. Findings from the study revealed that the *Kasuti* embroidery made its way to the international markets through trader’s laborious efforts to revive the regional *Kasuti* embroidery and make it available to other parts of India as well as abroad. Some of the traders revealed that in order to be successful in the international market they had tailored their products and embroidery styles to fulfill the needs of the global consumers. For example, ‘*Kasuti*’ style of embroidery was conventionally embroidered only on the pallav (end portion of the India drape: Sari) however the artisans have altered their conventionally style of embroidery to suit to the needs of global consumers. And today, *Kasuti* is embroidered on fashion apparel, stoles, baby clothing, quilts, home furnishings, greeting cards, invitations, folders, fashion accessories (bags, belts, shoes *etc.*).

“Tally Motifs as a contemporary fashion in designing upholstery fabrics” a study done by Elsayed and Ahmed (2015), which focuses on innovating contemporary designs suitable for printing upholstery fabrics inspired from motifs of Egyptian tally art using metallic printing on organza fabric to keep pace with modern fashion of upholstery fabrics printing. Cultural heritage in all its forms and manifestation is a record of human values and experiences. It encourages, sustains originality, and develops the feelings of identity and national belongingness. Investing this cultural heritages properly can actually lead to economic development as it becomes a new scarce of wealth. It was found that studying and analyzing motifs of Egyptian tally art in folk Egyptian fashions in Assuit and Suhag, including its aesthetic and plastic values is a resource for the creation of unique designs suitable for printing contemporary upholstery fabrics.

Gupta and Joseph (2015) in the article “Development of designs for table cloth through CAD software” depicted that textiles can be given a new aesthetic appeal by enrichment of it with the motifs used by ancient civilizations. One such civilization was of Greeks, who were considered to be the most artistic and innovative people. The ancient Greeks created what has become known as classical art. The ancient Greeks are known for three main items; their sculptures, their temples and their vase

paintings. For the present study, eighty Greek motifs under eight distinct categories *i.e.* animal, human, pottery, foliage, stylized, architectural, geometrical and stylized flora fauna, were collected. On the basis of preferences of motifs by respondents, five top ranked motifs in each category were selected for development of designs for home furnishing article such as tablecloth using Auto CAD software. The execution of this study revealed that the charm of Greek motifs has unfolded several possibilities, paving the way to the discovery of wide range of designs. These developed designs can also be used for home furnishing articles, as such or with slight modifications.

Sharma and Dutta (2015) described in the paper “Revival and protection of traditional jewellery motifs of Assam, over Eri silk by innovative techniques” that Assam (India), the gate way to the northeast India is mainly known for its exquisite silks, the art and craft. The state has a rich collection of traditional jewellery which is unique and exclusive to the state. In the present study the researcher selected traditional motifs of Assamese ornaments. Some of the popular traditional Assamese jewellery including earrings, necklaces and finger ring designs were chosen for the border, the main motif and all over butta followed by placement of developed patterns on products. The products developed were stoles, scarfs, purses, brooch pins, skirts, handkerchief, ties and jackets. It was observed that the embellished traditional jewellery motifs resulted in fresh and colourful pattern on Eri silk products. Moreover, the motifs which were on the verge of extinct among the community, exhibited a very good recognition towards art. The embroidered Eri silk fabric also created a huge change in a positive adoption among craftsman.

## 2.3 Home textiles and market scenario

Home furnishings at present are flourishing in domestic and foreign markets. India is globally known for its wide variety and exquisite designs in home textiles and furnishing fabrics. There is high demand for Indian textiles like soft furnishings, draperies and sheeting in the international market. Thus, it was felt necessary to review few articles to know the present trend in uprising market:

Mathur and Heera (2002) conducted a study on “Textiles in home furnishings” and revealed that many ready to use furnishing products such as upholstered furniture, beds and carpets were difficult, cumbersome, labour intensive and expensive to transport, while stuffed products such as duvets were found to be bulky and hence had a relatively high unit transport cost. As a result, in comparison to many other textile sectors, there was still relatively little global trade in Home textiles. It was concluded that as substitution for natural fibres continued, demand for synthetic products would accelerate due to the rapid expansion of Home textile markets in the developing countries.

Mital (2005) in the article “Home Textiles: Draped in success” expressed that one sector that was experiencing very good growth in textiles was home linens, and many companies were being attracted to this sector continuously over the last six months, some five new projects have been announced. Hanil Era, a cotton spinning company was moving into home textiles. K.G. Denim was going full swing into bed sheeting. S. Kumars was planning a foray into the segment. A Kolkata based company was setting up a green field project in home furnishings. Gujarat Fertilizers and Chemicals Ltd (GFCL) are also moving into this segment.

Chaudhary and Shahid (2012) expressed in the article “Growing importance of hometech textiles in India” that the Hometech industry is quite wide spread in India but the products with high production levels in India and with substantial exports of the commodities are not very R&D intensive. Potential of technical textile is essential not only for economic growth, employment generation and increasing exports like many other sectors, but also in the larger public interest, in terms of public safety, security, hygiene, protection of environment, quality infrastructure and an overall better world and a better life. There are certain regulatory areas where government intervention is required. Some require new legislations while some may be amended immediately through executive orders.

Nayak and Shaikh (2014) worked on “Home Textiles exports of India in world trade” and reported that export of home textiles in India during 2013 was US\$ 4.71 billion and its share was 11.72 per cent of its total textiles and clothing exports to the world. India’s major product group amongst the home textile product basket is furnishing articles, bedspreads followed by bed linen, table linen, toilet linen and kitchen linen which collectively contribute around 67.75 per cent of the home textiles exports to the world. China, being the world leader in the textiles and clothing exports to the world, is behind India with respect to some home textiles products. The sheer advantage of India is the customer loyalty and acceptability of these products in the world market.

Chaudhary and Akhtar (2015) described in the article “Competitive analysis of Indian home-tech industry” that out of twelve segments of technical textiles, the market for hometech is gaining prominence and is significantly expanding as the products are being put to an ever-increasing number of end uses. Hometech Textiles have attracted considerable attention *i.e.* other than fabrics, nonwovens and composite reinforcements; the focus is on the furniture, household textiles and furnishing. This sector has got its significance in today’s corporate world due to the life style of consumers, process complexities, requirement of specific products, demand for comfort, security situation and well - furnished and modern homes. The Indian companies are expected to perform well in future years in order to meet consumer’s demand. From the various literature reviews it is found that there is no conclusive work done about the competitive analysis of Hometech industry in India. The researcher in this paper tries to explore in to the industry and study its competitive strength using the Michael E Porter’s - ‘Five Forces’ Model.

## 2.4 Product development and consumer acceptability

Consumers are the ‘King’ of marketing. Any product development always depends on the choice and preference of the consumers, which differ widely. There are wide varieties of textiles available for the consumers in today’s era putting them in great dilemma while selecting the fabrics. Hence, it is necessary to study the consumer purchasing behaviour towards textiles by reviewing some of the articles listed below:

Mathur and Hira (2002) in their study on “Textiles in home furnishing” depicted that the household textile industry is regionalized; the tastes and preferences of consumers vary depending upon their culture, their interests & likings and geographical area. Hence, the end product varies considerably with respect to design, style, size and performance.

'Consumption pattern of textiles' was reported by Kagi (2005) where in the demand for textiles or as a product depends on various factors such as price, price of its substitutes, income of the consumer, consumer tastes and preferences, size and composition of population, advertisement and publicity, income distribution, climatic conditions, Government policies viz. tax policy, price policy, licensing policy, monetary policy and EXIM policy. Textile being the basic necessity will have continuous demand and with the rise in population, the future demand is likely to be more.

Chatterjee *et al* (2008) studied on "Designing handicrafts using Information Communication Technology" and quoted that product innovation and improvements in design as well as manufacturing technologies in the formal sector of occurs on a routine basis. In case of informal sector, the concept of product innovation remains subdued. With an introduction of modern technologies of design and product innovation, the change is necessary in informal sector so that the economy can be uplifted. In particular, the textile sector in India presents an appropriate case for introducing the tools of design and product development. It is felt that the textile handicraft sector will be benefited if such tools and products are available at an appropriate price. In order to overcome the cultural inertia of change, it is necessary to provide an appropriate environment of training and education. Since the economic size of this sector is large, any effort in the direction of technology improvement will yield significant dividends.

Srivastava and Rajvanshi (2008) carried out a study on "Simulation of textile designs from *Phad* paintings for fashion apparels in different color ways textile design software" in the Shahpura town of Bhilwara district and Udaipur city. For the research purpose a documentation of the *Phad* designs was done by interviewing the artists and other secondary sources. Thirty ethnic motifs inspired from various themes of *Phad* paintings were identified for developing 15 designs in different color ways. Through textile designing software six designs were selected, out of 15 color ways for developing screens. The selected designs in suitable color ways were applied on fashion apparels i.e. Dupatta, Wrap-round and Short kurta. The findings of the study revealed the designs were very innovative, creative and as per the current market need and were highly appreciated by the judges.

Byadgi (2009) reported in the study that conventional Gujarat embroidery motifs were modified and digitized and were incorporated in hand woven Dharwad saris using GC Kala – 2004 with interface Paint Shop Pro (PSP) software. Thirty each working women and housewives of Dharwad town were interviewed to assess the extent of acceptance for the swivel pattern saris. More than fifty per cent of the housewives mentioned that most of the digitized patterns of Gujarat embroidery resembled wholly with the respective hand embroidered motifs and thus preferred digitized patterns. The respondents in general opined that the swivel pattern saris were excellent since the designs were very attractive, pleasant, eye catching, unique, replica of hand embroidery motif and first of its kind. The cost of production of saris was relatively lesser than hand embroidered sari, where the weaver could earn 25 per cent of net profit per sari.

Babel and Kaur (2010) reported in her study that majority of the experts appreciated the efforts made by researcher in developing value added shawl with *danka* work. All the respondents highly appreciated workmanship of the shawls and according to their views developed *danka* work

shawls would have enough buyers in the market as women preferred to wear these types of shawls on *poshaks* and saris. Further the judges opined that the motifs developed were very innovative and creative. Thus, it was suggested from the present study that traditional design on *danka* work are useful as self-employment project by using them on making different shawls for sale through boutiques or retailers and also a good boost for creativity.

Babel and Kumawat (2011) conducted a study on “Value addition of low width khadi fabric into khadi bed linen and embellishment with CAD embroidery”. The researcher developed special layout of motifs developed design layout used on less width khadi fabric which could be used as bed linens. And these newly developed bed linen got good appreciation of acceptability (70-90 per cent). The products were found to be exclusive and unique by the respondents. The cost of developed bed linens was found to be very reasonable and had good market potentials. The author also referred that the bed linens could be embellished with computerized machine embroidery and it may go as a new venture of self-employment to produce variegated designs on khadi bed linen which could be promoted through retailers. It was concluded that CAD embroidery is a source of textile designing and creativity.

Sujata and Vastrad (2011) conducted a study on “Patchwork quilt value added products - Consumer acceptance” with a view to develop patchwork quilt value added products, thus throwing light on the opinion of consumers towards modernization of traditional quilt (*kaudi*) making technology. Traditional quilt value added products included quilt tops with random placement of swatches giving less importance to size, shape, colour, texture and fibre content. It was found that majority of the consumers from both rural and urban areas preferred the combination of mosaic patchwork with quilting technique followed by block and crazy patchworks. Among the patchwork quilt value added products, all the mosaic quilt value added products were highly accepted by both rural and urban consumers. Consumers also opined that if more number of items were developed through patchwork and quilting technique, that products may hold lots of market potentials and can be adapted to cottage level. Women can start a small enterprise for developing articles as per demand by forming self-help group.

Gill *et al.* (2012) conducted a study on “Market potential of traditional *Indhi* of Haryana” in Kurukshetra, Haryana. *Indhi* was found to have excellent market potential. To make commercial success such articles should be exposed at International level. Adequate financial incentive should be given by the government. These items should be displayed in state government offices and tourist complexes so that tourists and visitors have exposure to these items. The acceptability of *Indhi* was found to be excellent with respect to traditional value (WMS- 3.75), colour combination (WMS- 3.71), uniqueness (WMS- 3.50), aesthetic appeal (WMS- 3.48) and fabric (WMS- 3.40), while utility (WMS- 3.22) and workmanship (WMS- 3.05) of *Indhi* were assessed as very good.

Karolia and Prakash (2014) conducted a study on “Design and development of fashion accessories inspired from the hand woven shawls of Nagaland” with the major objective of documenting the history, origin, weaving techniques, motifs and significance of the hand woven textiles and ornaments of Nagaland. Inspired from these textiles fashion accessories, i.e. bags, belts

and neckwear were designed and constructed and its market acceptability was studied. The study revealed that the products were highly appealing in the market and there was lot of scope to develop such products. The respondents and shopkeepers also acknowledged that the attempt was very innovative and creative to make people aware of the textiles of Nagaland and the study helped uplift, preserve and popularize the hand woven textiles of the state by product diversification.

Sodhi *et al* (2016) in their article “Development of designs by adaptation of *Warli* painting motifs” depicted that this study was conducted to strengthen creativity by exploring the possibility of fusion of traditional motifs of *Warli* painting for *Aari* work. The concept behind the theme was to create new range of textile designs by maintaining the beauty and originality of traditional painting as well as *Aari* work. Thirty designs were developed from fifteen selected motifs using CAD. Three developed designs were selected on the basis of expert’s preferences for adaptation to *Aari* work. The prepared samples were got assessed by the experts and consumers in terms overall appeal, cost acceptability and suitability of designs to *Aari* work. It was found that the respondents had very high opinion about the developed designs. The cost of prepared samples of *Warli* painting was highly acceptable by the majority of the respondents. The work done in the form of prepared samples was appreciated and preferred for application on wide range of articles. Thus, the motifs explored from *Warli* painting were highly acceptable for product development as variety of designs can be created through the use of CAD technology.

## 2.5 Computer aided designing

Computer aided textile designing is the hope and anticipation of today’s era. Computers have helped to carry on the work easily and in a short duration, maximum number of assignments can be fulfilled leading towards profit of the company. It is now possible with CAD to go straight from an initial idea to visual representation of fabric showing different types of designs and combination of colours. CAD has led to better quality and flexibility in design development, increasing the efficiency and shortening the time between the design concept and actual marketing. Hence, it was felt necessary to collect information about CAD in Textiles from some of the reviews listed below:

Bains and Bhatti (2001) developed “Software for *Phulkari* design” under Microsoft Disk Operating System (MS-DOS). The basic statements used in MS-DOS were arithmetic operators, read, for-to, go-to, go sub routine, if-then-else, input, locate, loops, print, read, return and end statements. The software developed provided immediate visualization of the results of any design on the monitor and any detailed alterations could be done in minutes. The simulation involved also provided an additional advantage of checking out the suitability of designs on computer screens for commercial production.

The conventional method of designing was tedious, time consuming and laborious. The entire process of designing a fabric is revolutionized where previously designers used to labour over graph paper and stencils. Now, the artist has to play with a mouse or stylus pen to come out with innovative designs and the result is not only an increase in speed but greater accuracy than the manual process described by Bogart (2003) in his article “New development in CAD for the fashion designer”.

According to Yadav *et al.* (2006) in the article on “Apparel designing using computer technology” revealed that computer is one of the important tools for Apparel designing. Advanced computer systems of 2 or 3 dimensional concept designs were used widely in developed countries. A number of software used in apparel designing are CorelDraw, Adobe Illustrator, Karat cad, TUKA CAD concentrates on the practical use of Computers in pattern design and product development as stated by development of new designs.

Naik and Vastrad (2008) made an attempt to revive the *negi* motifs of Kasuti embroidery by way of automation mentioned in an article on “Protection and revival of traditional hand embroidery, *Kasuti* by automation”. The author cited that among the four types of stitches of Kasuti embroidery *viz*, *Gavanti*, *Murgi*, *Negi* and *Menthi*, *negi* was the stitch which is rarely used and is gradually becoming extinct since it involves skill, patience, expertise and intricacy. GC Kala 2000 with interface Paint Shop Pro (PSP) software was used for automation and handloom with jacquard attachment for incorporating the automated *negi* motifs on the sari. It was concluded that the technology of computerizing *negi* motifs and woven with the help of jacquard shedding mechanism on the handloom, that hastened production rate as well as retained the traditionality.

Namrata and Naik (2008) in her research work reported that nowadays, CAD in every field is hastening the work efficiency and assisting to introduce variety in colours, designs and textiles of fabrics. It is possible to produce a single design with several colour combinations either changing the background or colour of the pattern to attract the buyers and know the trend of colour combination. Colour way is nothing but showing a pattern on a background in different colour combinations. Thus, in the study, the researcher made an effort to produce the prototype diwan sets in different colour ways. Here the background colour was changed from creamish (gray sheeting material) to lighter hues of blue, red and yellow, keeping the colour and pattern of khana fabric same. The surface embellishments and special features used to contemporize diwan sets were also kept constant. The graphics of diwan sets were scaled using CorelDraw version 11 and the khana material was scanned on HP scanner, copied, pasted on the graphics of diwan sets. The designs were highly appreciated by the experts.

Jyoti and Grover (2009) in their article “Designing and printing of bed cover using CAD technology” viewed that Computer Aided Designing is gradually taking momentum in the era of textile designing. The conventional method of designing was tedious, time consuming and laborious. The entire process of designing the fabric is revolutionized with the introduction of CAD. The researcher developed fifteen designs for screen printing of bedcover using Corel Draw and Photoshop software by arranging scanned and prepared motifs which were highly appreciated by the respondents. The software eventually saved time, money and labour resulting into low cost of production.

Byadgi and Naik (2010) in their article “Automation of hand embroidery motifs into self-woven designs” described that In the present scenario of fast life style, creating designs with the assistance of CAD has not only expanded the horizon of designing but also can create any number of designs that could be saved in library to apply as and when required. CAD systems are more advantageous with respect to speed, pattern creation, editing, repeating, flexibility, variety, colour ways and cost-

effective. The adoption of CATD will be beneficial for a designer to replicate and reproduce the motifs appropriately and simple design can be visualized in different colour combinations on the monitor as well as develop new patterns by systematic arrangement of different motifs proportionately; in turn the entire design can be stored in the archive.

Gulati *et al.* (2012) conducted a study on “A CAD paradigm for generating woodworking motifs” to preserve the cultural heritage of Saharanpur Art, this work presented an in-house CAD tool for generating Saharanpur’s motifs. The local craftsmen were very resistant to accept new technology because of fear to lose the heritage style of woodworking. As a result, old design motifs were existing there for ages. Besides, commercial CAD packages are beyond the reach of craftsmen in terms of price as well as knowledge. Hence, this work presented a parametric CAD paradigm, which offered the possibility for assisting craftsmen in creating 2D designs. Using this tool, it was possible to make many more motifs and patterns in addition to contemporary design styles with lots of variation. Furthermore, this work provided a cost effective system for the handicraft workers to reproduce the identical woodwork in smaller time duration.

Saini and Saggi (2012) conducted a study on “Automation and CAD/CAM adoption in knitwear production” and concluded that in fabric and garment production, considerable decrease in lead time was reported by majority of the units with automation and CAD/CAM adoption. Majority of the units used CAD/CAM systems in garment assembly followed by pattern cutting, marker making, pattern layout and grading. With the adoption of automation and CAD/CAM systems in knitwear, rate of design production, quality of design, production capacity, quality of production and communication speed increased whereas manufacturing cost, overall labour cost, manpower and lead time decreased or reduced which are very important to meet the market requirements in the competitive world.

Kaur and Gandotra (2012) in their article “Design development of traditional embroidery motifs in knitwears through computer aided designing” depicted that technological advancements have brought automation and computer aided manufacturing (CAD/CAM) system in all the areas including textile and garment industry. CAD has specific design system using computer as a tool to design anything from aircraft to knitwears. Thus, computer aided designing system is a boon in modern era to the textile industry through which a variety of products can be designed. Hence the use of computer aided designing was helpful in the revival of traditional embroidery in more sophisticated and modern method of designing trendy and fashionable products.

Sharma *et al.* (2014) worked on “Fusion of Indian folk arts *Madhubani* and *Warli* for designing of apparels using CAD” and described that traditionally these motifs were hand painted which is tedious, time consuming and laborious. But in due course of time with technological advancement, these designs directly were created with the help of various software like Corel Draw, Illustrator, Photoshop and many more, constantly added in the digital market. It is now possible with CAD to go straight from an initial idea to visual representation of fabric showing different types of designs and combination of colours. CAD has lead to better quality and flexibility in design development, increasing the efficiency and shortening the time between the design concept and actual marketing.

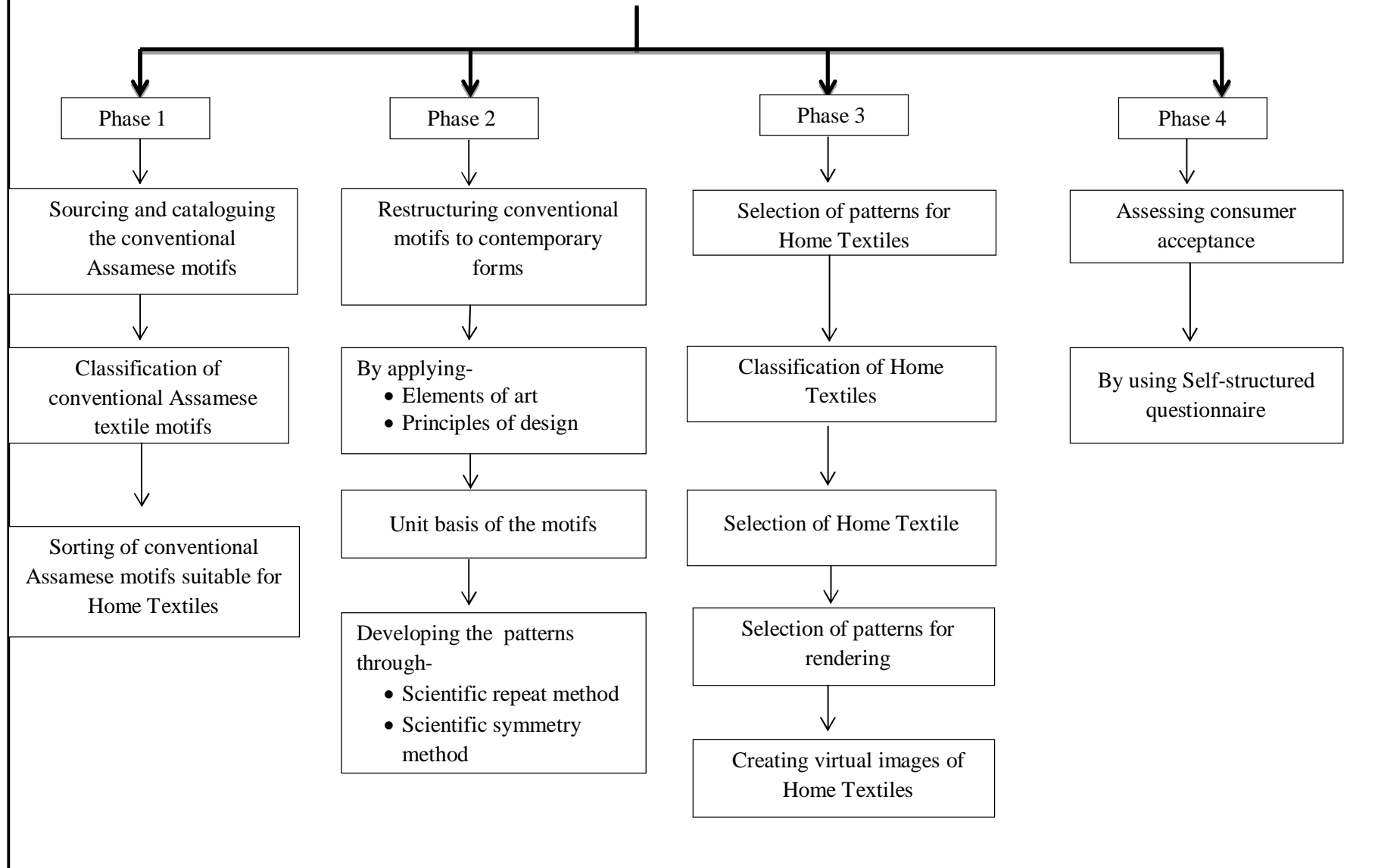
Sharma and Paul (2015), in their article “Adaptation of Indian folk paintings for designing and digital printing of apparels using computer aided designing” expressed that the fusion designs prepared by CAD were successfully applied on various apparels items using digital printing and all the prepared articles were highly appreciated. The study was an attempt made in the direction of creating fusion designs of two folk arts using CAD technology which can open the avenues for the designers to fulfill the ever changing demands of consumers especially for those who hunt for the ethnic motifs and designs in their attire and other textile products and to preserve these designs by developing a repository, which could be accessed as and when needed. The adaptation of the prepared designs on the apparels using digital printing techniques further facilitates the faster production with high accuracy within less time span. The use of advance digital printing technique produces vibrant and even coloration on textiles with no release of effluents; thereby reducing the load on environment and its degradation. It also facilitates faster product development, so commercialization and economic gain is better.

## **3. MATERIAL AND METHODS**

The present study on “Restructuring Conventional Motifs for Home Textiles” was conducted in the Department of Textile and Apparel Designing during the year 2015 - 2016. The methodology adopted to carry out the study is classified under the following sub headings:

- 3.1 Sourcing and cataloguing the conventional woven motifs of Assam
- 3.2 Classification of conventional Assamese textile motifs
- 3.3 Sorting of conventional Assamese motifs suitable for Home Textiles
  - 3.3.1 Tools used for selection of motifs
  - 3.3.2 Selection of Assamese motifs for Home Textiles
  - 3.3.3 Nomenclature of the selected motifs
- 3.4 Restructuring the conventional motifs into contemporary forms
- 3.5 Unit basis of the motif
- 3.6 Developing the patterns
  - 3.6.1 Exploring the possibilities of producing patterns
    - 3.6.1.1 Developing patterns by ‘scientific repeat’ procedure
    - 3.6.1.2 Developing patterns by ‘scientific symmetry’ procedure
- 3.7 Selection of patterns for Home Textiles
  - 3.7.1 Classification of Home textiles
  - 3.7.2 Selection of Home Textiles
  - 3.7.3 Selection of patterns for rendering
- 3.8 Creating virtual images of Home Textiles
  - 3.8.1 Rendering of Home Textiles
  - 3.8.2 Developing Home Textile products digitally
- 3.9 Consumers acceptance for virtual images of Home Textiles
- 3.10 Statistical analysis
- 3.11 Cost of production of virtual images of Home Textiles
- 3.12 Hypothesis set for the study

# RESEARCH DESIGN



### 3.1 Sourcing and cataloguing the conventional woven motifs of Assam

The fascinating traditional textile motifs used on the ethnic costumes of Assamese women, the *Mekhela Chadar*, the silk sari, the *gamosa*, the head gear- *Japi* were collected from various secondary sources. The motifs are always found to be stylized, figurative and geometrical; scarcely observed the naturalistic, abstract, picturesque, and landscape figures. The common motifs used in textiles are symbol of birds, animals, human figures, flowers and geometrical figures like circle, concentric structure, diamond, lozenges, criss-cross borders and galaxy of small images.

The researcher made efforts to collect the motifs that are commonly found on clothing materials and popularly applied for decorating the women attires. The motifs selected were exclusively used on ensemble of Assamese women. In total 35 motifs were collected from various secondary sources *viz.*, traditional woven textiles, research articles, magazines, dissertations and thesis, journals, websites. The mode of collection comprised of both hard and soft styles *i.e.* by sketching, photographs and downloading.

### 3.2 Classification of conventional Assamese textile motifs

The collected 35 motifs were classified into three categories *viz.*, naturalistic, geometrical, and stylized. Further, these 35 figures were grouped as unidirectional or non-directional in order to streamline the procedure of developing the conventional motifs into contemporary form.

Each motif collected was scanned, edited, resized and saved into archive categorically for further study. The hard copy of each motif is printed and saved as catalogue with necessary information.

### 3.3 Sorting the conventional Assamese motifs suitable for Home textiles

The sorting process involved arranging the Assamese textile motifs systematically in a sequence and grouping them according to the similarity and property.

Home Textiles, is the textile used for home furnishing. It consists of various range of functional as well as decorative products used mainly for decorating the houses. Home Textiles are nothing but an internal environment which deals with internal space and their furnishing. These are mainly used for functional and aesthetic appeal in the home or any four walls building that provide mood and mental relaxation to the inmates. Different type of Home Textiles are include bed spreads, blankets, pillows with covers, cushions with cover, carpet and rugs, wall hangings, wall decorations, towels, table cloth and mats, kitchen linens and accessories, bathroom accessories, tiles, curtains and draperies.

From a total of 35 motifs collected, almost fifty per cent of the motifs (17 no.) were sorted by the researcher keeping in view the suitability for Home Textiles (Plate 1 and 2).

### 3.3.1 Tools used for selection of motifs

A self-structured questionnaire was used to elicit the information about the Assamese motifs most suitable for Home Textiles. A display of 17 Assamese textile motifs was organized which were evaluated by a panel of 30 textile experts comprising of staff and students of Department of Textile and Apparel Designing of the college.

### 3.3.2 Selection of Assamese motifs for Home Textiles

The said panel of textile experts evaluated each motif in a scale of 5 to 1, where 5- Excellent, 4- Very good, 3- Good, 2- Fair, 1- Poor. Out of 17 motifs, the most suitable 1/3<sup>rd</sup> of the motifs (6 no.) ranked highest were chosen on the basis of weighted average ranking, for further development of patterns.

### 3.3.3 Nomenclature of the selected motifs

Nomenclature is the devising or choosing of names for things, especially in a particular area of science or any other discipline. Instead of coding the motifs, the researcher decided to define names for each motif which would help in depicting the results more effectively, precisely and directly.

## 3.4 Restructuring the conventional motifs into contemporary forms

The selected Assamese conventional motifs were restructured into contemporary form by applying elements of design *i.e.* the line, shape, size, space and colour.

A stepwise procedure followed in restructuring of the motifs is as detailed in Figure 1.

The selected contemporary designs are classified as Unidirectional, bilaterally symmetry and non-directional.

Initially each design is individually created on the tracing opaque paper, is the paper made to have low opacity, allowing light to pass through. This paper is originally developed for architects and design engineers to create drawings which could be copied precisely. The bilaterally symmetrical motif is vertically divided into  $\frac{1}{2}$  where as non-directional motif which is in a circular form, is first divided into  $\frac{1}{2}$  and then into  $\frac{1}{4}$  size for further restructuring; on the contrary the unidirectional motif is taken in its complete form. The motif or part of the motif is scanned and saved in individual folder/s. The software used for restructuring the motif is CorelDRAW-X8. The steps involved in restructuring the motif digitally are illustrated in Figure 2.

## 3.5 Unit basis of the motif

Any motif drawn from any source, all originate from geometrical base. For instance, straight lines of very minute distance build the circle. The motif designed is always embedded in any of these geometrical shapes *i.e.* square, rectangular, triangle, diamond, circle, semi-circle, pentagonal, and so on. Hence, it is always necessary to plan out a pattern and decide upon which unit lines it is based. It is absolutely necessary to plan a geometrical base for the design to be reproduced as a repeating pattern by mechanical means. The unit base for six motifs selected suitable for Home Textiles is outlined and taken for development of pattern by repeating the motif.



1. Babori (Chrysanthemum)



2. Phul buta (Flower butta)



3. Phuldaani (Flower vase)



4. Phuldaani (Flower pot)



5. Juti phul (Flower bunch)



6. Phul koli (Flower shoot)



7. Joba phul (Hibiscus flower)



8. Jamilyaman (Karbi design)



9. Dhekia lata (Fern and creeper)

Plate 1: Conventional Assamese textile motifs



10. Chaki and dhupdaani (Diya and lampstand)



11. Man riding horse



12. Dragon motif



13. Munit arjan (Human figure in geometric form)



14. Pokhila phul (Butterfly design)



15. Barfi (Diamond)



16. Barfi (Diamond)



17. Galpata (Necklace design)



18. Geometric butta

Plate 1: (Contd....) Conventional Assamese textile motifs (1 to 18)



19. Leaf



20. Four petal flower

b. Bird



21. Affronte peacock

**B. Geometric motifs**



22. Hand fan



23. Headgear

**Plate 2: Conventional Assamese textile motifs suitable for Home Textiles**



24. Gomcheng



25. Kingkhap



26. Flower and leaf



27. Flower and tree



28. Foliage



29. Tree



30. Kalka butta



31. Flower pot with leaves



32. Concentric flower



33. Kalka



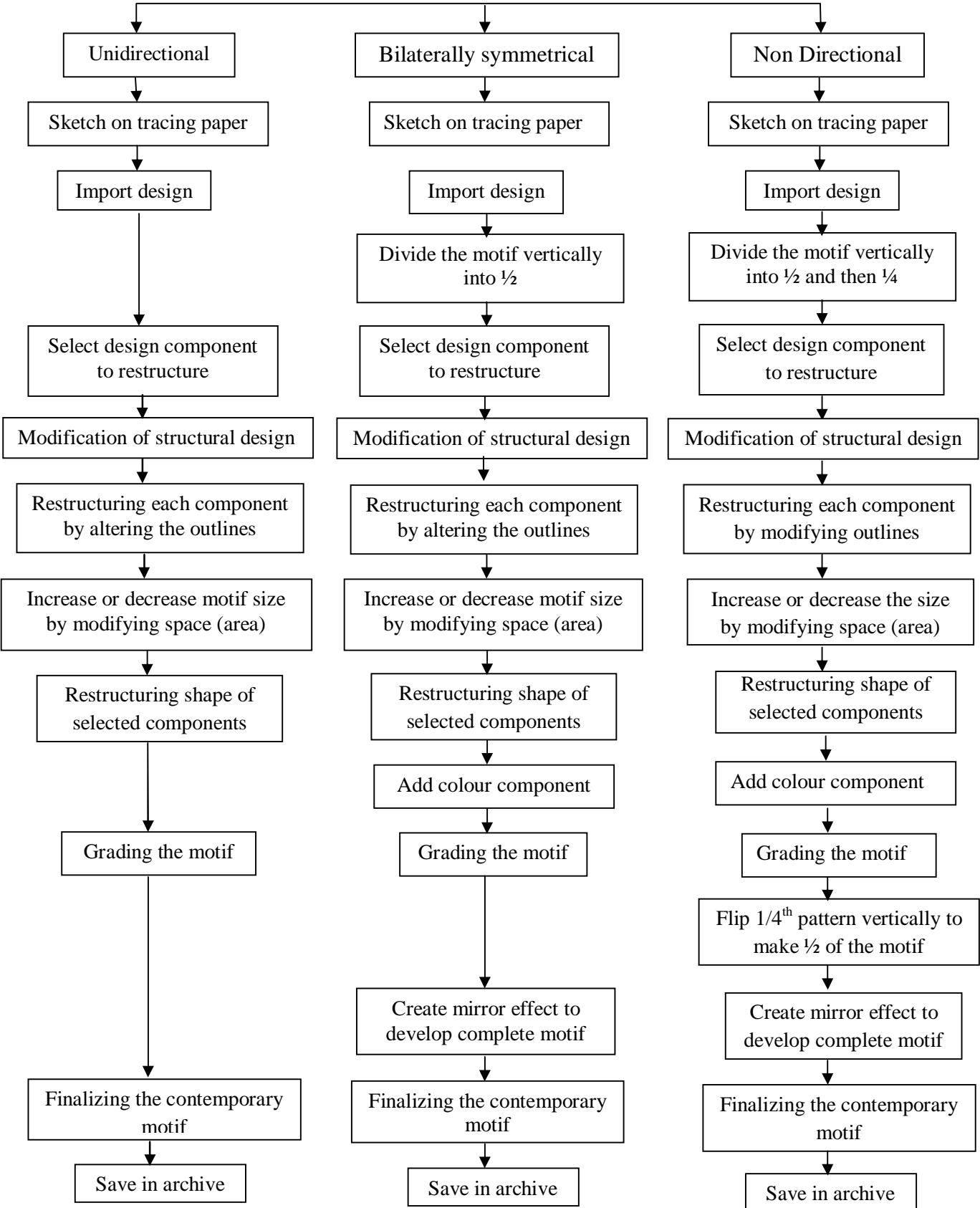
34. Stylized hand fan



35. Mirrored peacock

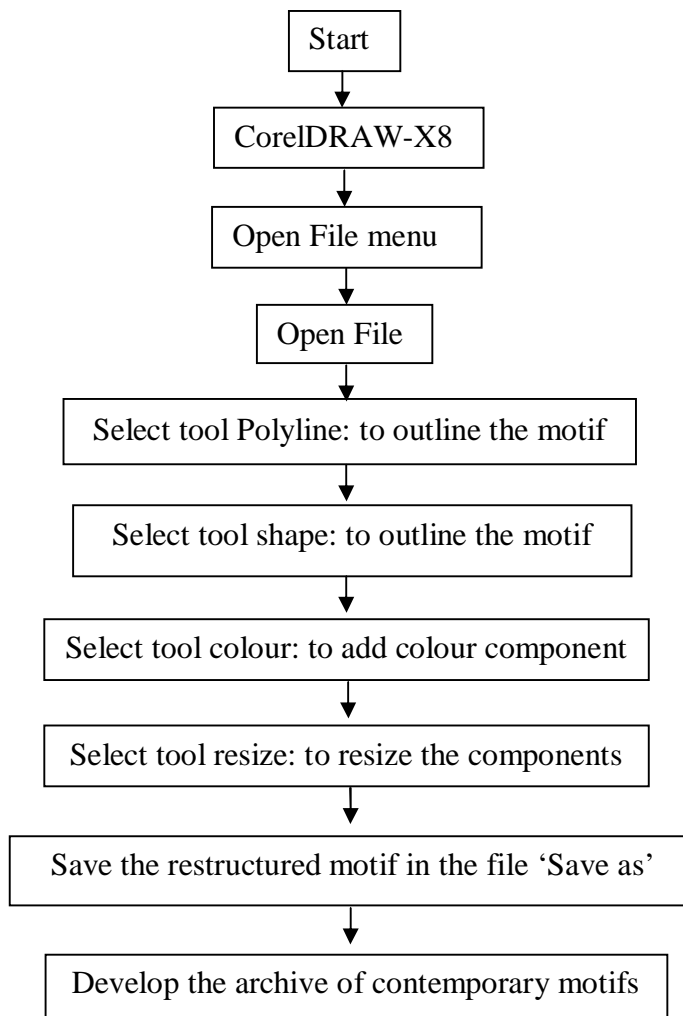
Plate 2: (Contd....) Conventional Assamese textile motifs suitable of Home Textiles (19 to 35)

**Classification of selected conventional motifs**



**Fig. 1. Process flow of restructuring the motifs categorywise**

**Restructuring the motif in CorelDRAW-X8**



**Fig. 2. Process flow of restructuring the motifs using CAD software – CorelDRAW-X8**

### 3.6 Developing the patterns

By using geometry, it is possible to produce enormous number of patterns. A pattern, apart from the term's use to mean template, which could be repeated either vertically or horizontally to cover entire substrate, like fabric. The motif needs to be repeated in a definite order but the basic ways involves a systematic approach. Most commonly a series of guidelines for repeat are either rectangular or square; in a form of simple grid can be repeated in many ways, with each square or rectangular facing the same way, mirrored, rotated, dropped (full or half), or misplaced to form a brick layout.

#### 3.6.1 Exploring the possibilities of producing patterns


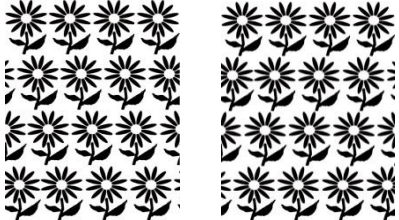
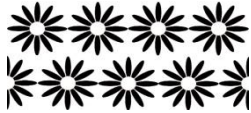
The patterns were produced by applying 'scientific repeat' viz., block, brick ( $\frac{1}{4}$ ,  $\frac{1}{2}$ , &  $\frac{3}{4}$ ) and drop ( $\frac{1}{4}$ ,  $\frac{1}{2}$ , &  $\frac{3}{4}$ ) as well 'scientific symmetry' viz., transformation, reflection, rotational and glide reflection method for producing variegated design patterns.

##### 3.6.1.1 Developing patterns by 'scientific repeat' procedure

The six most preferred motifs were arranged in different layouts using the methods of design repeat through Adobe Photoshop. The details of the developed patterns of the selected six motifs are shown in Figure 3 to Figure 8.

Further the other conventional woven motifs were also repeated in many ways for getting different design patterns.

The various design repeats which were implemented here are as follows-

Repeats	Definations	Figures
1. Block Repeat	In this repeat type the block contains a design and is positioned in such way that the design faces the same direction or way at each repeat. The block can be rotated or mirrored (flipped over), but its outlines must always be kept in line.	
2. Brick Repeat	It gives a design the horizontal and diagonal emphasis; if the outline of the brick is bold and visible it gives a sense of solidity and stability.	
	a) $\frac{1}{4}$ brick: the design shifts $\frac{1}{4}$ step horizontally to the right	$\frac{1}{4}$ brick
	b) $\frac{1}{2}$ brick: the design shifts half-step horizontally to the right while moving upwards like bricks.	$\frac{3}{4}$ brick
	c) $\frac{3}{4}$ brick: the design shifts $\frac{3}{4}$ step horizontally to the right	

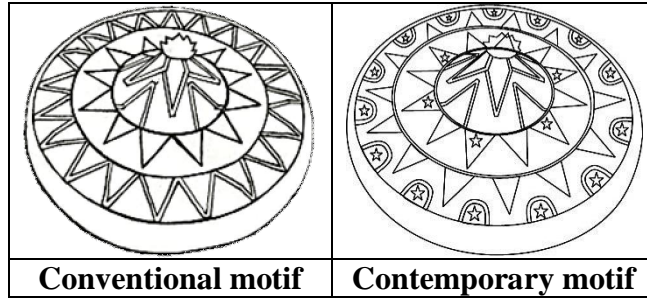
3. Drop Repeat	It is a closely related to the brick repeat: the drop forms a vertical emphasis and the brick repeat, horizontal. The 'drop' repeat is so called because each unit is dropped vertically halfway (or a quarter, or a third) down to another unit.	
	a) $\frac{1}{4}$ drop: the design drops at $\frac{1}{4}$ vertically down to another unit.	
	b) $\frac{1}{2}$ drop: This is like the basic repeat, except the design is repeated with a half-step vertically while moving to the right.	
	c) $\frac{3}{4}$ drop: the design drops at $\frac{1}{4}$ vertically down to another unit.	

### 3.6.1.2 Developing patterns by 'Scientific symmetry' procedure

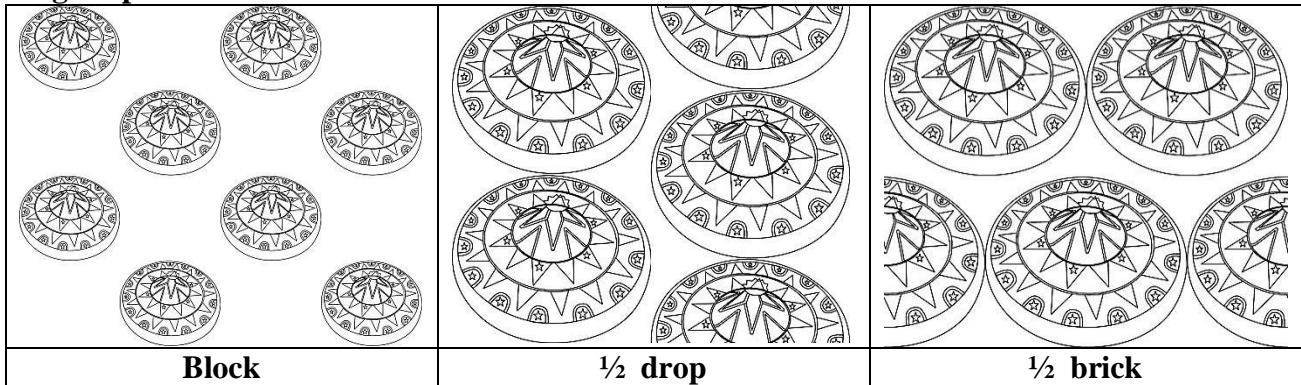
The patterns were also developed according to the symmetry of motifs. These are

Symmetry	Defination	Figures
1. Translation	It is where the motif repeats vertically, horizontally or diagonally at regular intervals, while retaining the same orientation.	
2. Reflection	It is a mirror image where the motif repeats across an imaginary straight line.	
3. Rotation	It is where the motif is repeated at a definite angle and revolves around a fixed point (also known as centre of rotation). The ultimate effect of this repeat is similar to an inverse mirror effect.	
4. Glide reflection	It is the image form when the motif repeats in one action with a combination of translation and reflection.	

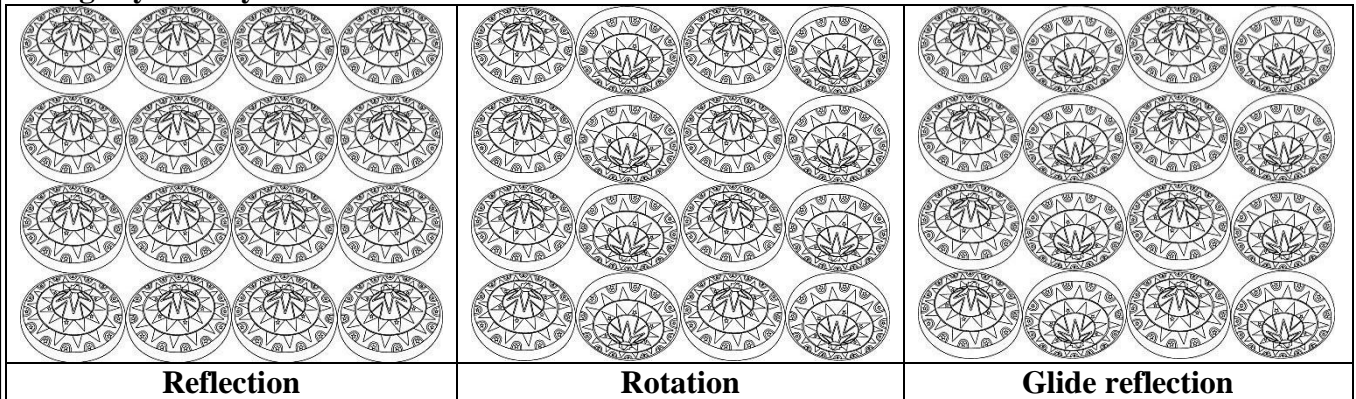
**Motif 1: Japi (headgear)**



**Design repeat:**


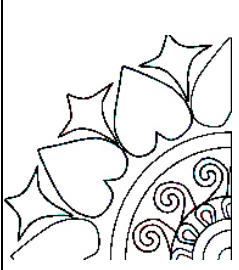
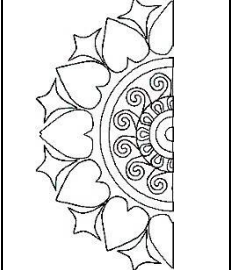



**Design symmetry:**

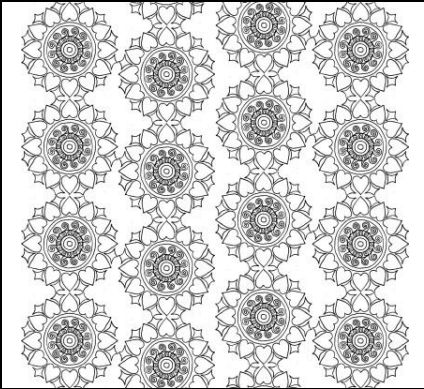
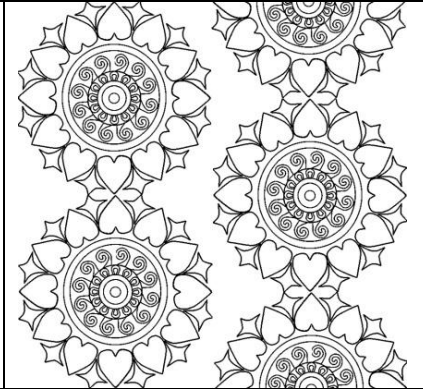
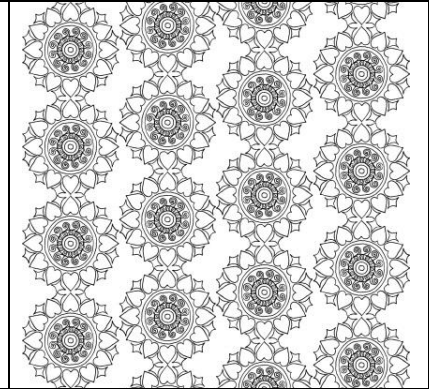
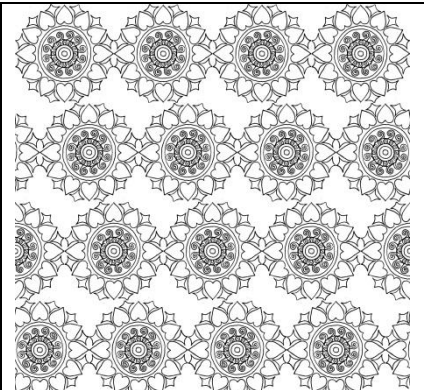
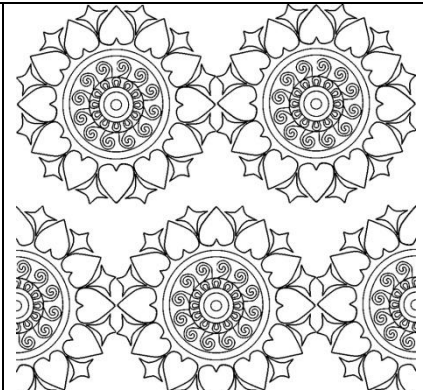
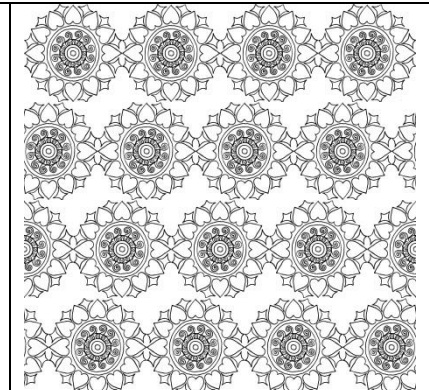


**Figure 3. Pattern development by scientific ‘Repeat and symmetry’ technique**

**Motif 2: Concentric petals**

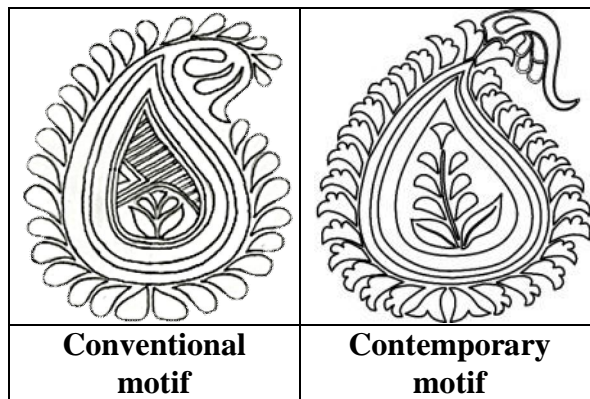
			
<b>1/4 of conventional motif</b>	<b>1/4 of contemporized motif</b>	<b>1/2 of contemporized motif</b>	<b>Contemporized motif</b>

**Design repeat:**

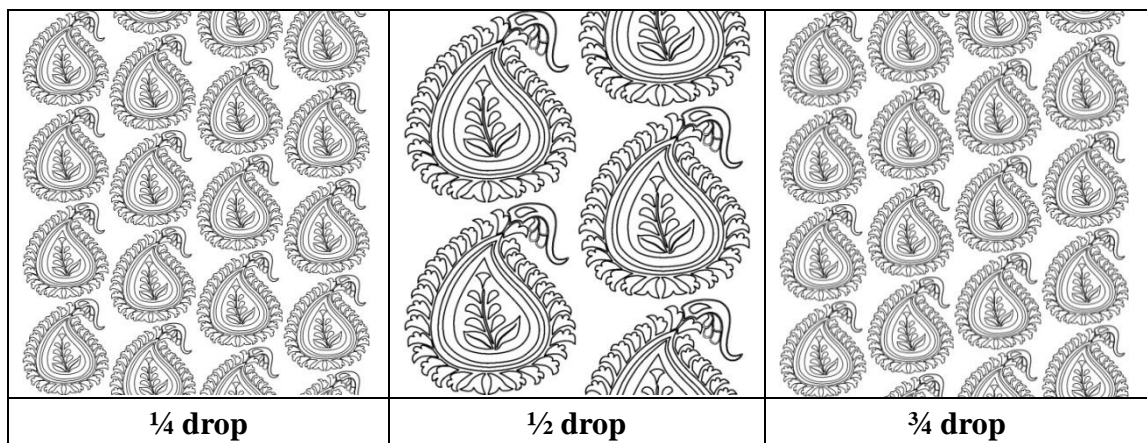
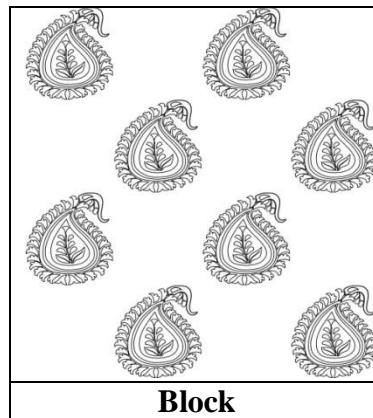
		
<b>1/4 drop</b>	<b>1/2 drop</b>	<b>3/4 drop</b>
		
<b>1/4 brick</b>	<b>1/2 brick</b>	<b>3/4 brick</b>

**Figure 4. Pattern development by scientific 'Repeat' technique**

**Motif 3: Kalka**

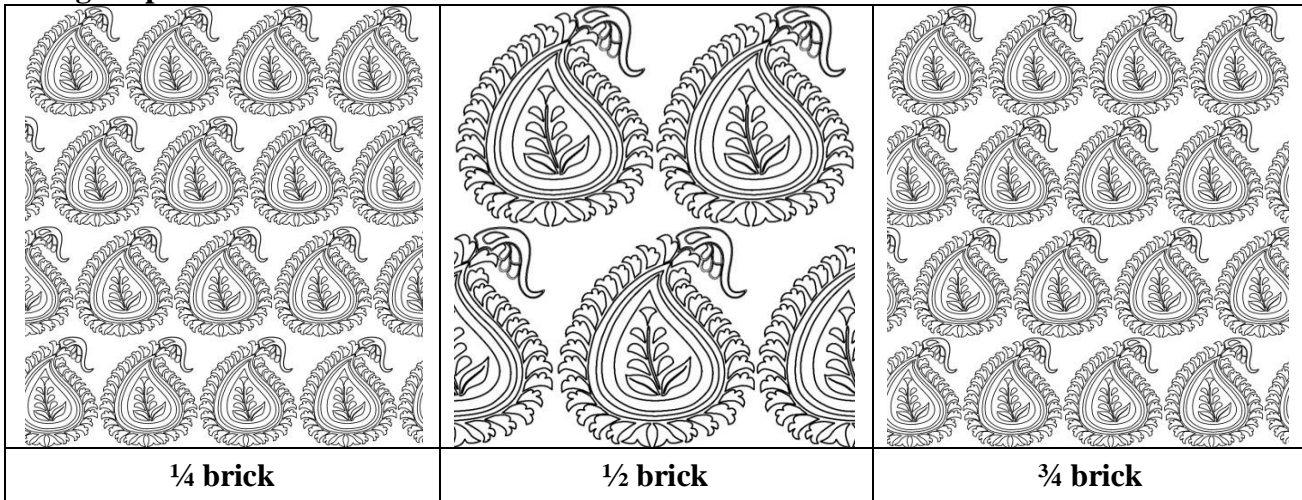


**Design repeat:**

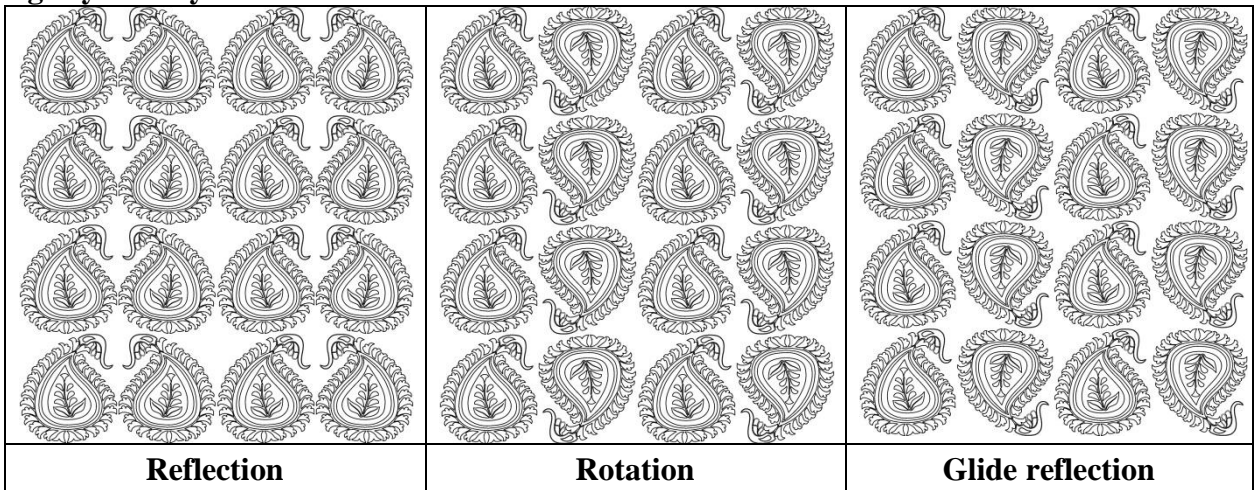


**Figure 5. Pattern development by scientific 'Repeat' technique**

**Design repeat:**



**Design symmetry:**



**Figure 5. (Contd...) Pattern development by scientific 'Repeat and symmetry' technique**

**Motif 4: Foliage**

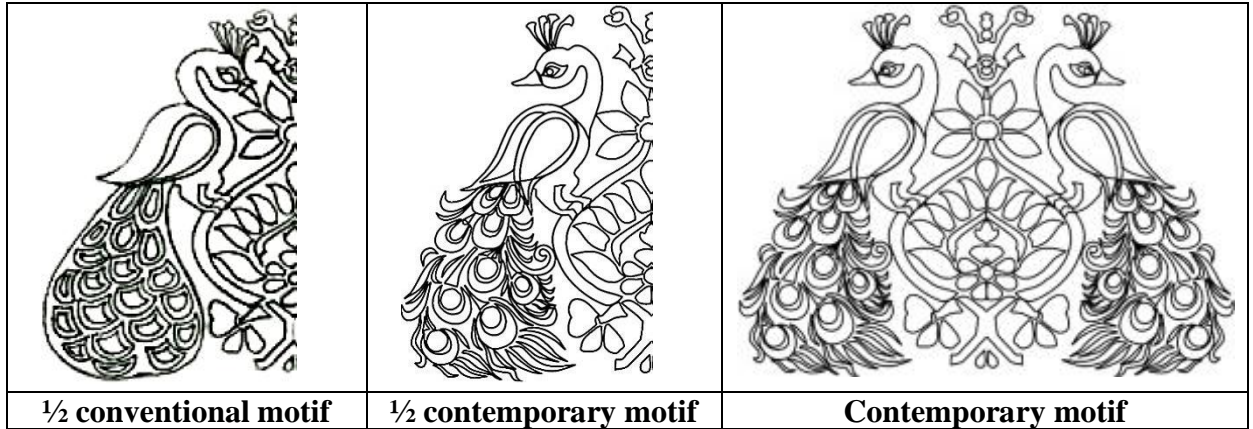
$\frac{1}{2}$ <b>conventional motif</b>	$\frac{1}{2}$ <b>contemporary motif</b>	<b>Contemporary motif</b>

**Design repeat:**

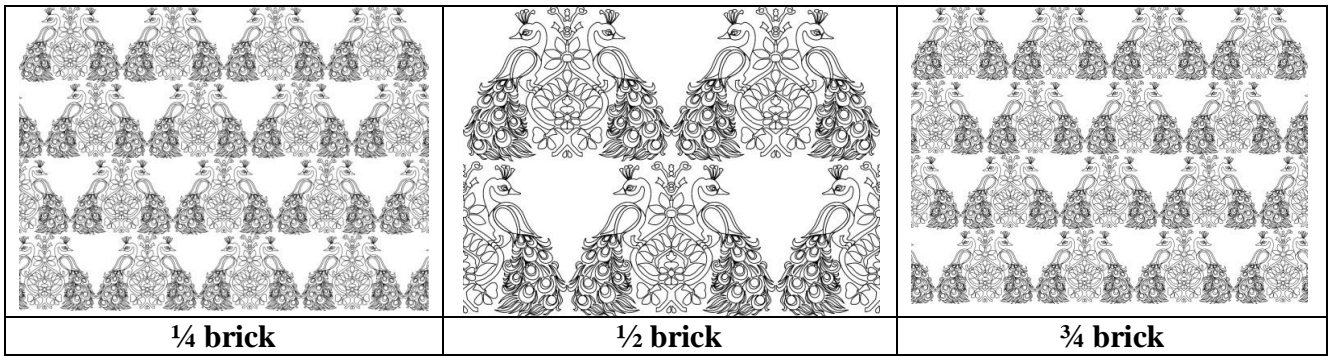
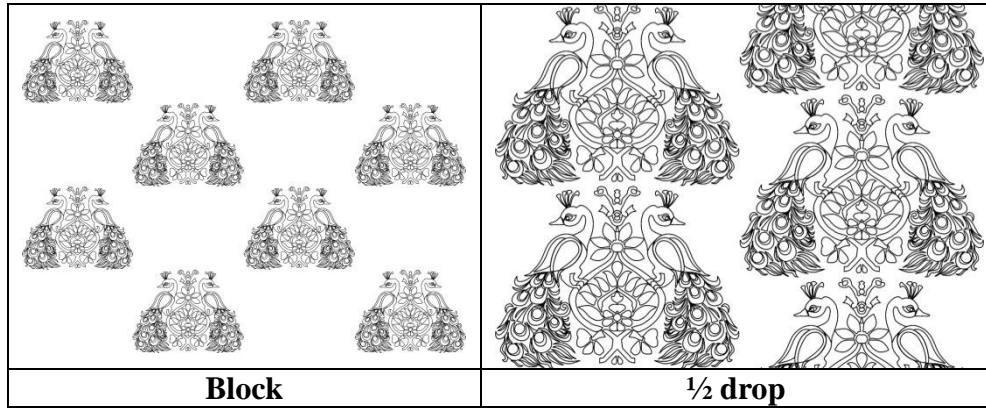
 <b>Block</b>			
	$\frac{1}{4}$ drop	$\frac{1}{2}$ drop	$\frac{3}{4}$ drop
	$\frac{1}{4}$ brick	$\frac{1}{2}$ brick	$\frac{3}{4}$ brick

**Figure 6. Pattern development by scientific ‘Repeat’ technique**

**Motif 5: Affronte peacock**

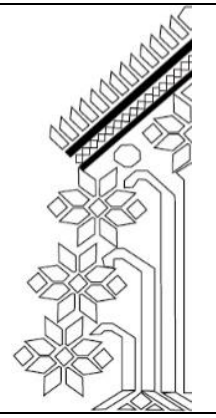
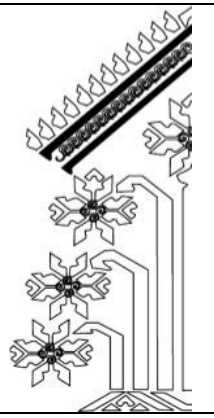
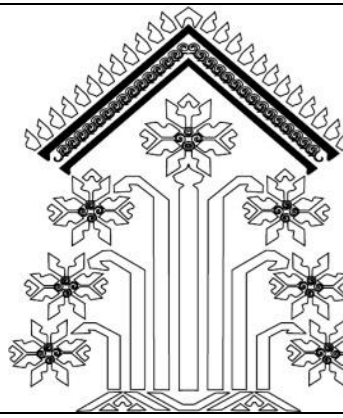


**Design repeat:**

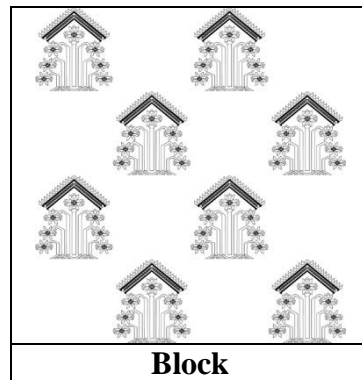


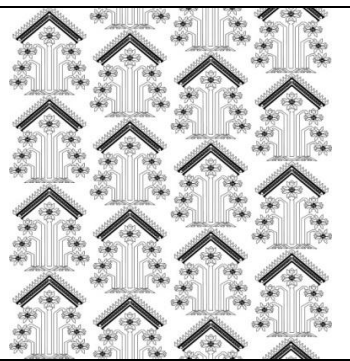
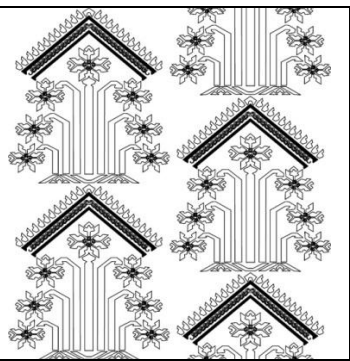
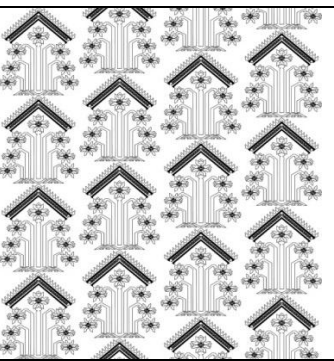
**Figure 7. Pattern development by scientific 'Repeat' technique**

**Motif 6: Tree**

		
$\frac{1}{2}$ <b>conventional motif</b>	$\frac{1}{2}$ <b>contemporary motif</b>	<b>Contemporary motif</b>

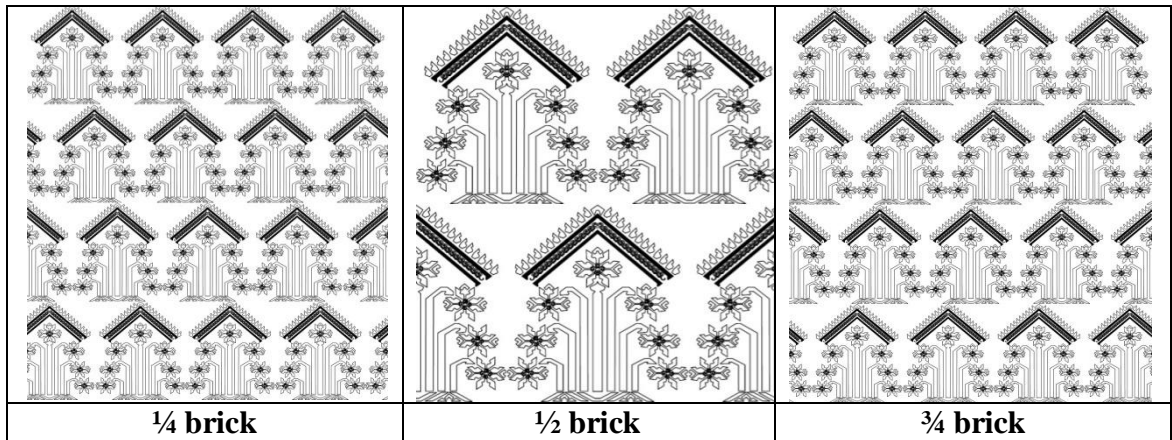
**Design repeat:**



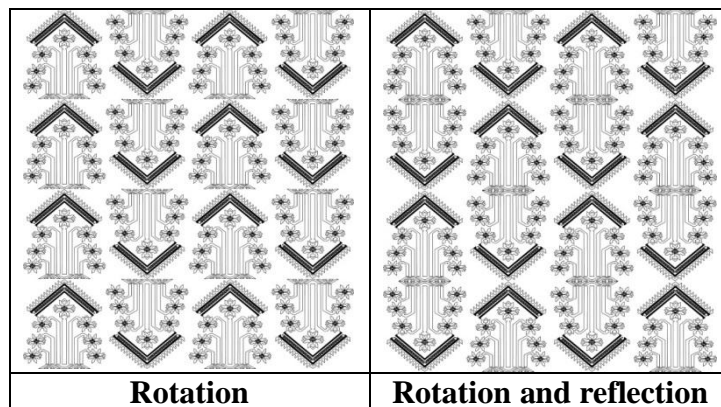
		
$\frac{1}{4}$ drop	$\frac{1}{2}$ drop	$\frac{3}{4}$ drop

**Figure 8. Pattern development by scientific 'Repeat' technique**

**Design repeat:**



**Design symmetry:**



**Figure 8. Pattern development by scientific 'Repeat and symmetry' technique**

## 3.7 Selection of patterns for Home Textiles

### 3.7.1 Classification of Home Textiles

Home Textiles play an important role and are an integral part of the home or any building or any hall or for a matter of fact any four walls. The sector of Home Textiles is very vast and thus in this study the Home Textiles were classified into four categories *viz.*; Soft furnishings, Window dressing, Wall coverings and Floor coverings. These are discussed in details as below-

**Soft furnishings:** Household textiles, frequently referred to as soft furnishings, are fabrics used in the home. It can be defined as those components that beautify the interiors and provide atmosphere in the house. So anything that is made up of soft material could constitute the term Soft Furnishing, this may include mattresses, curtains, pillows, covers, sofas, bed sheets, table linens and much more. All these together create an ambience that makes the living more comfortable and easy.

**Window dressing:** Windows along with walls, floor and ceilings form the shell of a room and may be treated to blend unobvious into the background. Windows are really a decorating opportunity for setting a room's mood and style. Window dressings can cover faults, create illusions, or become a focal point. The mood set by window can be quiet reserved or wild as a night club, luxuriously formal, contemporary, classically charming and nostalgic. There are a number of window dressings that can enhance the beauty of the windows and thus of the whole room. These include- Blinds, Shutters, Screens, Panels, Shades and Curtains.

**Wall coverings:** It is important to finish the interior as well as the exterior walls for functional considerations. Since walls are the largest area seen in the interior of any room, it is necessary to pay enough attention to their finishes. Today's markets provide a large number of options as wall coverings to create colour effects, illusionary space or to provide theme, mood or style of a room. The wall coverings are therefore, used not merely for functional purposes, but also for aesthetic and other reasons. Some of the very popular wall treatments are- wood panels, paints, cork, leather, masonry, fabrics, wall papers, tiles, murals and mirrors.

**Floor coverings:** The beauty of a room begins with its floor, since this is the foundation for comfort as well as for a decorative background. Floors, along with walls and ceilings, form the shell of the room. Next to walls, floors are the largest colour area in the home interior. Generally, the floor is expected to give a long service without extensive repair.

A soft floor covering makes a room comfortable and gives it a finished appearance. In winter, it is usually good to have a carpet or a large rug in all the rooms in the house except the kitchen and the bathroom. However, in the summertime, or at any other time of tropics, bare floor appear clean and cool but the soft floor covering gives an aesthetic appeal.

The soft floor covering mainly includes the carpet and rugs. Since they contribute to a greater area of the house, their design, colour and texture have considerable importance. The foremost thing that comes to our mind while selecting a floor covering is that whether we should have a rug or wall-to-wall carpet. The recent innovation in floor coverings has been the indoor-outdoor type of carpeting. This carpeting often has different textural qualities from the more conventional soft floor coverings. These are more practical, washable, and therefore, easy to maintain.

### 3.7.2 Selection of Home Textiles

From the four categories the researcher selected two-three types of home furnishing for developing virtual images by rendering and details are as below:

- ❖ Soft furnishings : Bed sheet, Sofa cover and Dining table runners
- ❖ Window dressings : Curtains and Panels
- ❖ Wall coverings : Tiles and Wall paper
- ❖ Floor coverings : Carpet and Flooring

### 3.7.3 Selection of patterns for rendering

The single motif is developed into several patterns as indicated in 3.6 by scientific repetition and symmetry of motifs.

Though 6 motifs out of 17 were chosen for development into conventional patterns, it was decided to input other 11 motifs too to create virtual images by rendering. Therefore, the researcher developed patterns for the remaining 11 motifs; and all the 17 motifs are taken for 'rendering' the pattern on selected Home Textiles.

## 3.8 Creating virtual images of Home Textile

'Rendering' is the software tool that creates 3D images from 2D. The 3D images on Home Textile provide the virtual appearance of the patterns when spread, draped, stitched or thrown. The images of patterns due to folding, hiding, moulding, tucking of Home Textile is virtually viewed. The illusion of the 3D images is the base in developing the Home Textiles for consumer acceptance.

As per the research design the 3D virtual images are developed and saved in respective archive.

### 3.8.1 Rendering of Home Textiles

Both contemporary as well as conventional Assamese textile motifs were rendered on different Home Textiles by using CAD software.

### 3.8.2 Digital development of Home Textile products

Virtual images of the Home Textile products were developed digitally on Adobe Photoshop viz.; window dressing, soft furnishing, wall covering and floor covering.

## 3.9 Consumers acceptance for virtual images of Home Textiles

The hard copy of 3D virtual images of Home Textiles were printed on the paper, displayed in the department categorywise and the subjects comprised of 30 each teachers and students of the college of Rural Home Science, evaluated for acceptance. A self-structured questionnaire was distributed to each subject for indicating the level of acceptance for various Home Textiles. The questionnaire consisted of general and specific information which includes- Meaning of Home

Textiles, Function of Home textiles, Preference for Home Textiles by the respondents, Meaning of Window Dressing, Preference for virtual images of Curtains, Preference for virtual images of Panels, Meaning of Soft Furnishings, Preference for virtual images of Bed sheets, Preference for virtual images of Sofa covers, Preference for virtual images of Dining Table Runners, Meaning of Wall Coverings, Preference for virtual images of Tiles, Preference for virtual images of Wallpapers, Meaning of Floor Coverings, Preference for virtual images of Carpets, Preference for virtual images of Floorings and Overall opinion of the respondents for rendering the contemporary Assamese designs on Home Textile and creating virtual images.

The evaluation was made on 5 point scale where 5=excellent, 4=very good, 3=good, 2=fair and 1=poor. The entities considered for assessment were suitability of motif, arrangement of motifs, colour combination and overall appearance.

### 3.10 Statistical analysis

The data generated by interview regarding suitability of Assamese motifs for Home Textiles and consumer acceptance for virtual images of Home Textiles were statistically analysed by Weighted Average Ranking (WAR) by applying the formula:

$$\text{WAR} = \frac{\sum R_i f_i}{\sum f_i}$$

Where,

R<sub>i</sub>- ranks given by the respondents

f<sub>i</sub>- the frequency

### 3.11 Cost of production of virtual images of Home Textiles

The virtual images of Home Textiles were developed on A-4 and A-3 papers as well digitally on cloth as signages. The cost of printing the signages included the labour cost incurred on conversion of 2D images into 3D by rendering on the various Home Textiles *i.e.*, soft furnishings, window dressing, wall covering and floor covering.

### 3.12 Hypothesis set for the study

The following hypotheses were set for the present study:

- The Assamese textile motifs used on clothing are not suitable for Home Textiles
- The selected motifs can be developed into patterns by using 'repeat and symmetry' technique
- The contemporary motifs developed vary in appearance to that of conventional Assamese motifs

## 4. EXPERIMENTAL RESULTS

The findings of the present study on “Restructuring conventional motifs for Home Textiles” are presented in this chapter under the following headings:

- 4.1 Selection of Assamese motifs for Home Textiles
- 4.2 Nomenclature of the selected motifs
- 4.3 Unit basis of the motif
- 4.4 Respondents outlook about Home Textiles
- 4.5 Functions of Home Textiles: Respondents opinion
- 4.6 Preference for Home Textiles by the respondents
- 4.7 Respondents outlook about Window Dressing
  - 4.7.1 Preference for virtual images of Curtains
  - 4.7.2 Preference for virtual images of Panels
- 4.8 Respondents outlook about Soft Furnishing
  - 4.8.1 Preference for virtual images of Bed Sheets
  - 4.8.2 Preference for virtual images of Sofa Covers
  - 4.8.3 Preference for virtual images of Dining Table Runners
- 4.9 Respondents outlook about Wall Covering
  - 4.9.1 Preference for virtual images of Tiles
  - 4.9.2 Preference for virtual images of Wallpapers
- 4.10 Respondents outlook about Floor Covering
  - 4.10.1 Preference for virtual images of Carpets
  - 4.10.2 Preference for virtual images of Floorings
- 4.11 Respondents outlook for rendered Assamese motifs on Home Textiles
- 4.12 Cost of production of virtual images of Home Textiles

### 4.1 Selection of Assamese motifs for Home Textiles

Table 1 gives an overview of Assamese conventional textile motifs, classified as Naturalistic, Geometrical and Stylized. Out of 17 motifs, three are Naturalistic (floral-2 & bird-1), two are Geometrical both being clothing accessories and 12 are in the categories of stylized. The result of acceptance by 30 subjects comprising of teachers and students of Department of Textile and Apparel Designing on 5 point scale are revealed here with:

The Weighted Average Ranking (WAR) clearly indicated that 63.33 per cent of the respondents gave I rank to headgear, the Japi (4.57) followed by II rank by 56.67 per cent to affronte peacock (4.36), III rank by 43.33 per cent to kalka, IV rank by 56.67 per cent to tree (4.27) and 36.67 per cent to concentric flower (4.27) and V rank by 30.00 per cent to foliage.

These six conventional Assamese motifs selected by the panel of judges are further modified by the researcher to develop them into contemporary motifs.

## 4.2 Nomenclature of the selected motifs

After modifying the selected conventional Assamese motifs into contemporary form, both conventional as well contemporary motifs were given name (title) instead of coding for the clarity and convenience of presenting the results and discussion. The detail of nomenclature given to each motif is presented in Table 2.

## 4.3 Unit basis of the motif

The motif sketched from any class or category, may be realistic, stylized or abstract, all originate from geometrical base. The unit base for six motifs selected suitable for Home Textiles is outlined and taken for development of pattern by repeating the motif. Table 3 shows the unit base of the selected six conventional motifs. It is found that 'Japi' (the headgear) has the unit basis as 'oval', 'affronted peacock' the 'trapezoid', 'kalka' the 'rectangle', 'concentric petals' the 'circle' and 'tree' & 'foliage' the 'regular pentagon' shape.

## 4.4 Respondents outlook about Home Textiles

The knowledge about Home Textiles by teachers and students is presented in Table 4. The majority of the teachers expressed that the meaning of Home Textiles encompasses not only one entity thus it is 'Fabrics used in home for decoration'(73.33 %), 'Soft textiles used for beautification of interiors' (53.33 %) and finally, 'Harsh textile materials both functional and decorative'(40.00 %), whereas the students opined that Home Textile means 'Textiles used for furnishings' (60.00 %), followed by 'Fabrics used in home for decoration'(50.00 %) and 'Soft textiles used for beautification of interiors' (46.67 %).

## 4.5 Functions of Home Textiles: Respondents opinion

Home Textiles play an important role and are an integral part of the home or any building or any hall or for a matter of fact any four walls. It was felt necessary to gather information about the functions of Home Textiles as expressed by the students and teachers which is depicted in Table 5.

Majority of the students expressed that Home Textiles 'add aesthetic appeal' (73.33 %), followed by it is 'decorative' (66.67 %) and 'provide internal environment' (63.33 %) whereas least preference is given for 'It provides mood'(40.00 %), always. On the contrary more than 73.00 per cent of the teachers are of the opinion that the Home Textiles always 'provide internal environment' (80.00 %), 'add aesthetic appeal' (76.67 %) and 'decorative' (73.33 %). Both students (60.00 %) and teachers (66.67 %) opined that sometimes Home Textiles do 'provide mood'. However, very meagre per cent of the students (06.67 %) and teachers (03.33 %) indicated that Home Textiles never provided internal environment and aesthetic appeal, respectively.

**Table 1: Selection of motifs for Home Textiles**

N=30

Category	Motif	Preference					WAR	Rank
		5	4	3	2	1		
<b>A. Naturalistic motifs</b>								
Floral	Leaf	01 (03.33)	09 (30.00)	15 (50.00)	05 (16.67)	-	3.20	XI
	Four petal flower	05 (16.67)	18 (60.00)	04 (13.33)	03 (10.00)	-	3.83	VII
Bird	Affronte peacock	17 (56.67)	08 (26.67)	04 (13.33)	01 (03.33)	-	4.36	II
<b>B. Geometric motifs</b>								
	Hand fan motif	05 (16.67)	05 (16.67)	16 (53.33)	04 (13.33)	-	3.37	X
	Headgear	19 (63.33)	09 (30.00)	02 (06.67)	-	-	4.57	I
<b>C. Stylized motifs</b>								
	Gomcheng	02 (06.67)	09 (30.00)	13 (43.33)	04 (13.33)	02 (06.67)	3.17	XII
	Kingkhap	03 (10.00)	07 (23.33)	12 (40.00)	08 (26.67)	-	3.16	XIII
	Flower & leaf	03 (10.00)	15 (50.00)	12 (40.00)	-	-	3.70	IX
	Flower & tree	10 (33.33)	11 (36.67)	09 (30.00)	-	-	4.00	VI
	Foliage	09 (30.00)	18 (60.00)	03 (10.00)	-	-	4.20	V
	Tree	17 (56.67)	05 (16.67)	07 (23.33)	01 (03.33)	-	4.27	IV
	Kalka butta	-	07 (23.33)	11 (36.67)	10 (33.33)	02 (06.67)	2.77	XV
	Flower pot with leaves	02 (06.67)	03 (10.00)	16 (53.33)	09 (30.00)	-	2.93	XIV
	Concentric flower	11 (36.67)	16 (53.33)	03 (10.00)	-	-	4.27	IV
	Kalka	13 (43.33)	13 (43.33)	04 (13.33)	-	-	4.30	III
	Stylized hand fan	06 (20.00)	13 (43.33)	09 (30.00)	02 (06.67)	-	3.77	VIII
	Mirrored peacock	04 (13.33)	09 (30.00)	07 (23.33)	08 (26.67)	02 (06.67)	3.17	XII

Figures in parentheses indicate percentages

**Table 2: Nomenclature of the selected motifs**

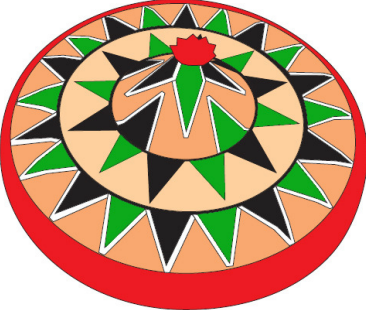











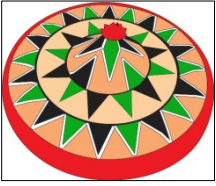
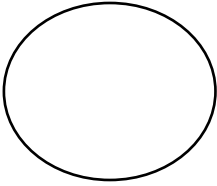

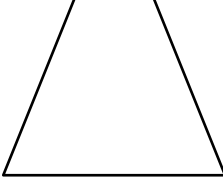



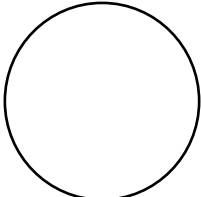

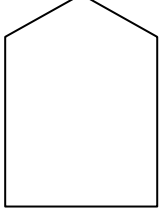

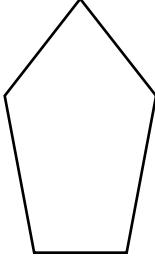
Conventional motifs	Contemporary motifs
	
Conventional japi	Contemporary japi
	
Conventional peacock	Contemporary peacock
	
Conventional kalka	Contemporary kalka

Table 2. Contd.....

Conventional motifs	Contemporary motifs
 <p>A stylized tree motif with a green canopy and red and green stems. The canopy is composed of multiple layers of green leaves, and the stems are decorated with red and green floral patterns.</p>	 <p>A contemporary tree motif with a green canopy and pink and orange stems. The canopy is composed of multiple layers of green leaves, and the stems are decorated with pink and orange floral patterns.</p>
<p>Conventional tree</p>	<p>Contemporary tree</p>
 <p>A circular motif with concentric layers of blue petals. The center features a yellow and orange cross-like shape surrounded by a green ring and a blue ring.</p>	 <p>A contemporary circular motif with concentric layers of pink and yellow petals. The center features a yellow and pink spiral pattern surrounded by a yellow ring and a pink ring.</p>
<p>Conventional concentric petals</p>	<p>Contemporary concentric petals</p>
 <p>A black silhouette of a stylized foliage motif, featuring a central stem with multiple layers of leaves and small white flowers.</p>	 <p>A contemporary foliage motif in purple and white, featuring a central stem with multiple layers of leaves and small yellow and orange flowers.</p>
<p>Conventional foliage</p>	<p>Contemporary foliage</p>

**Table 3: Unit basis of the motifs**

Sl. No.	Conventional motifs		Unit basis
1	Headgear		
2	Affronted peacock		
3	Kalka		
4	Concentric petals		
5	Tree		
6	Foliage		

## 4.6 Preference for Home Textiles by the respondents

Table 6 provides information about preference for Home Textiles by both students and teachers. The Table has 12 components of Home Textiles, and the students indicated that curtain and draperies (96.67 %), table linen (76.67 %) and bed spreads (73.33 %) are in the descending order of preference, always. More than 60.00 per cent of the students did mention that blankets and pillows with cover (each 63.33 %) and carpets and rugs are also preferred, always. Meanwhile, the students never preferred kitchen accessories (40.00 %), wallpaper (33.33 %) and bathroom accessories (26.67 %) as part of Home Textiles. In contrast, cent per cent of the teachers always preferred bed spreads and cushion with covers, followed by pillows with covers and curtains and draperies (each 93.33 %), finally carpet & rugs and table linen (86.67 % and 80.00 %, respectively). Further more than 1/3 of the teachers preferred bathroom accessories (60.00 %), kitchen accessories (40.00 %), wallpaper (33.33 %) and blankets, towels & kitchen linen (each 30.00 %) preferred as Home Textiles, sometimes. Comparatively very meagre per cent of the teacher never accepted kitchen accessories (20.00 %) and bathroom accessories (13.33 %) as a part of Home Textiles, hence did not show any preference.

## 4.7 Respondents outlook about Window Dressing

From Table 7 it is clear that the outlook *i.e.* meaning of Window Dressing is very wide and is framed with four options. The Table reveals that cent per cent of the students and 86.67 per cent of the teachers mentioned that Window Dressing is nothing but 'Dressing window with curtains and draperies', always. Both the categories of the respondents mentioned Window Dressing sometimes means 'Dressing with plantation and creepers' (83.00 % and 66.67 %), 'Dressing of the sliding windows' (70.00 % and 66.67 %), 'Dressing the grills' (66.67 % and 76.67 %), respectively. However, both students and teachers did mention that Window Dressing never means as 'Dressing with plantation and creepers' (16.67 % and 33.33 %), 'Dressing the grills' (13.33 % and 23.33 %) and 'Dressing of the sliding windows' (13.33 % and 20.00 %), respectively.

### 4.7.1 Preference for virtual images of Curtains

A total of 60 respondents comprising of each 30 teachers and students expressed their preference for virtual images of curtain and is presented in Table 7(a). The researcher designed, created and developed five curtains of visual rendered images of curtains and the respondents evaluated the motifs with respect to suitability, arrangement, colour combination and overall appearance and the results are expressed in terms of ranks (Plate 3).

As far as suitability was considered the teachers gave first preference to CR1 (4.67) and then CR5 and CR2 with 4.20 and 4.13 WAR respectively; whereas the students preferred CR2 (4.73) followed by CR1 (4.57) and CR5 (4.47).

The trend of preference by students for arrangement of motifs and patterns is almost on same order of suitability of motifs *i.e.* CR2 (4.57), CR1 (4.47) and CR5 (4.5); whereas the pattern arrangement was found to be better with CR2 (4.37) than CR5 (4.16), by the teachers.

Meanwhile the order of preference for colour combination of the motifs expressed by both teachers and students is same as that of pattern arrangement with WAR above 4.00.

**Table 4: Respondents outlook about Home Textiles**

N=60

Sl. No.	Details	Preference			
		Teachers (n <sub>1</sub> = 30)		Students (n <sub>2</sub> = 30)	
		Yes	No	Yes	No
1	Fabrics used in home for decoration	22 (73.33)	08 (26.67)	15 (50.00)	15 (50.00)
2	Textiles used for furnishings	17 (56.67)	13 (43.33)	18 (60.00)	12 (60.00)
3.	Soft textiles used for beautification of interiors	16 (53.33)	14 (46.67)	14 (46.67)	16 (53.33)
4.	Harsh textile materials both functional and decorative	12 (40.00)	18 (60.00)	03 (10.00)	27 (90.00)

Figures in parentheses indicate percentages

**Table 5: Function of Home Textiles: Respondents opinion**

N= 60

Sl. No.	Details	Preference					
		Teachers (n <sub>1</sub> =30)			Students (n <sub>2</sub> =30)		
		A	ST	N	A	ST	N
1	Decorative	22 (73.33)	08 (26.67)	-	20 (66.67)	10 (33.33)	-
2	Provide mood	10 (33.33)	20 (66.67)	-	12 (40.00)	18 (60.00)	-
3	Provide internal environment	24 (80.00)	06 (20.00)	-	19 (63.33)	09 (30.00)	02 (06.67)
4	Add aesthetic appeal	23 (76.67)	06 (20.00)	01 (03.33)	22 (73.33)	08 (26.67)	-

Figures in parentheses indicate percentages

Note: Always - A  
 Sometimes - ST  
 Never - N

**Table 6: Preference for Home Textiles by the Respondents**

N= 60

Sl. No.	Particulars	Preference					
		Teachers (n <sub>1</sub> =30)			Students (n <sub>2</sub> =30)		
		A	ST	N	A	ST	N
1	Bed spreads	30 (100.00)	-	-	22 (73.33)	08 (26.67)	-
2	Blankets	20 (66.67)	09 (30.00)	01 (03.33)	19 (63.33)	11 (36.67)	-
3	Pillows with cover	28 (93.33)	02 (06.67)	-	19 (63.33)	11 (36.67)	-
4	Cushion with cover	30 (100.00)	-	-	17 (56.67)	13 (43.33)	-
5	Carpets and rugs	26 (86.67)	04 (13.33)	-	18 (60.00)	11 (36.67)	01 (03.33)
6	Wallpaper	20 (66.67)	10 (33.33)	-	12 (40.00)	08 (26.67)	10 (33.33)
7	Towels	20 (66.67)	9 (30.00)	01 (03.33)	16 (53.33)	08 (26.67)	06 (20.00)
8	Table cloth, mats and runners	24 (80.00)	06 (20.00)	-	23 (76.67)	07 (23.33)	-
9	Kitchen linens	20 (66.67)	09 (30.00)	01 (03.33)	17 (56.67)	09 (30.00)	04 (13.33)
10	Bathroom accessories (tiles)	08 (26.67)	18 (60.00)	04 (13.33)	13 (43.33)	09 (30.00)	08 (26.67)
11	Curtains and Draperies	28 (93.33)	02 (06.67)	-	29 (96.67)	01 (03.33)	-
12	Kitchen accessories (tiles)	12 (40.00)	12 (40.00)	06 (20.00)	13 (43.33)	05 (16.67)	12 (40.00)

Figures in parentheses indicate percentages

Note: Always -A  
 Sometimes -ST  
 Never -N

Finally the order of preference for curtain by teachers is CR1 (I rank), CR2 (II rank) and CR5 (III rank) and that of students is CR2, CR1 and CR5 in order of I, II and III ranks.

#### 4.7.2 Preference for virtual images of Panels

Panels are considered as a part of Window Dressing basically and presently are extended to wall too. The researcher has created 5 virtual images of panels and are evaluated by the respondents, and expressed in terms of Weighted Average Ranking (WAR) as well as by ranks.

Table 7 (b) and Plate 4 reveal about the preference of teachers and students for panels created with both conventional and contemporary Assamese motifs.

It is found that the teachers have given first preference to P5 by giving highest value with respect to suitability of motif (4.30), pattern arrangement (4.27), colour combination (4.40) and overall appearance (4.30) and finally denoted as 'first rank'. Similarly, giving second highest score to P1 and third highest to P2 for all the entities, deciding II and III rank, respectively.

Meanwhile Panel P2 was ranked I, securing highest WAR (4.32) for three main entities by the students; followed by P4 (4.07) and P5 (4.03). Meanwhile least preference was given to P4 (3.50) and P3 (3.75) by teachers and students, respectively.

### 4.8 Respondents outlook about Soft Furnishings

Soft Furnishing is another broad segment of Home Textiles. Before getting preference by the respondents, it was imperative to learn about the respondents 'outlook' about Soft Furnishings and the results are presented in Table 8. It is evident from this Table that more than 50.00 per cent of the teachers agreed that 'Soft Furnishing' means, 'Fabric used at home' (66.67 %), 'Fabric used for furnishing' (53.33 %) and 'Fabric being soft and pliable' (50.00 %), always; whereas correspondingly remaining teachers listed the same entities as, 'sometimes'.

On the other hand majority of the students viewed 'Soft Furnishings' as 'Fabric being soft and pliable' (83.33 %), followed by 60.00 per cent each mentioned, 'Fabric used at home' and 'Fabric used for furnishing', always and sometimes (46.67 %).

On the contrary each 06.67 per cent of teachers opined that 'Soft and pliable fabric' and 'Fabric used for upholstery' are never considered as 'Soft Furnishings', so also 'Fabric used for furniture' as mentioned by students.

#### 4.8.1 Preference for virtual images of Bed sheets

The preference for virtual images of Bed Sheets by the teachers and students is presented in Table 8 (a). The researcher designed, developed the patterns and rendered 5 patterns of bed sheets to create 3D virtual images of Bed Sheets (Plate 5).

It is interesting to note that both teachers and students have given first rank to B2, the bed sheet rendered with leaf motif repeated on  $\frac{3}{4}$  drop leaf motif with WAR 4.30 and 4.45, respectively. However, the teachers preferred B5 by giving II rank because of its suitability (4.27), arrangement of pattern (4.04), colour combination (4.33) and overall appearance (4.28) whereas students liked B3 which is rendered with  $\frac{1}{4}$  drop repeat of contemporary tree.

**Table 7: Respondents outlook about Window Dressing**

N= 60

Sl. No.	Details	Preference					
		Teachers (n <sub>1</sub> =30)			Students (n <sub>2</sub> =30)		
		A	ST	N	A	ST	N
1	Dressing windows with curtains and draperies	26 (86.67)	04 (13.33)	-	30 (100.00)	-	-
2	Dressing with grills	-	23 (76.67)	07 (23.33)	06 (20.00)	20 (66.67)	04 (13.33)
3	Dressing of the sliding windows	04 (13.33)	20 (66.67)	06 (20.00)	05 (16.67)	21 (70.00)	04 (13.33)
4	Dressing with plantation and creepers	-	20 (66.67)	10 (33.33)	-	25 (83.33)	05 (16.67)

Figures in parentheses indicate percentages

Note: Always - A  
Sometimes - ST  
Never - N

**Table 7 (a): Preference for virtual images of Curtains (Window Dressing)**

N=60

Designs	Suitability of motif for the product		Arrangement of motifs and patterns		Colour combination		Overall appearance		Average scores		Rank	
	WAR		WAR		WAR		WAR					
	Teachers (n <sub>1</sub> =30)	Students (n <sub>2</sub> =30)	Teachers (n <sub>1</sub> =30)	Students (n <sub>2</sub> =30)	Teachers (n <sub>1</sub> =30)	Students (n <sub>2</sub> =30)	Teachers (n <sub>1</sub> =30)	Students (n <sub>2</sub> =30)	Teachers (n <sub>1</sub> =30)	Students (n <sub>2</sub> =30)	Teachers (n <sub>1</sub> =30)	Students (n <sub>2</sub> =30)
CR1	4.67	4.57	4.60	4.47	4.50	4.47	4.57	4.57	4.59	4.52	I	II
CR2	4.13	4.73	4.37	4.57	4.40	4.70	4.17	4.63	4.27	4.66	II	I
CR3	3.93	4.33	3.70	4.20	3.80	4.10	4.07	4.33	3.88	4.24	IV	V
CR4	3.53	4.27	3.77	4.27	3.50	4.23	3.70	4.27	3.63	4.26	V	IV
CR5	4.20	4.47	4.16	4.50	4.20	4.40	4.20	4.30	4.19	4.42	III	III

Note: CR1 -Curtain 1: Motif – Hibiscus flower, Symmetry- Reflection  
 CR2 -Curtain 2: Motif – *Gomcheng*, Repeat- ¾ Drop  
 CR3 -Curtain 3: Motif – Flower and Tree, Repeat- ¼ Drop  
 CR4 -Curtain 4: Motif – Flower and Leaf, Repeat- ¼ Brick  
 CR5 -Curtain 5: Motif – Geometrical butta, Symmetry- Rotational  
 WAR -Weighted Average Ranking



CR1 Motif : Hibiscus flower Symmetry: Reflection



Motif : Hibiscus flower



Symmetry: Reflection



CR2 Motif : Gomcheng Repeat:  $\frac{1}{4}$  drop



Motif : Gomcheng



Repeat:  $\frac{3}{4}$  drop

**Plate 3: Virtual images of curtains**



CR3 Motif : Flower and tree Repeat:  $\frac{1}{4}$  drop



Motif : Flower and tree



Repeat:  $\frac{1}{4}$  drop



CR4 Motif : Flower and leaf Repeat:  $\frac{1}{4}$  brick



Motif : Flower and leaf



Repeat:  $\frac{1}{4}$  brick

**Plate 3: (Contd....) Virtual images of curtains**

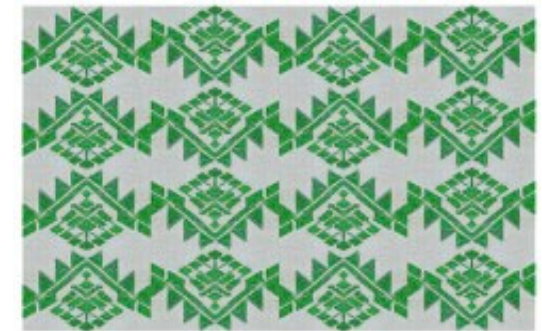


CR5 Motif name: Geometrical butta

Symmetry: Rotational



Motif name: Geometrical butta



Symmetry: Rotational

**Plate 3: (Contd....) Virtual images of Curtains**

**Table 7 (b): Preference for virtual images of Panels (Window Dressing)**

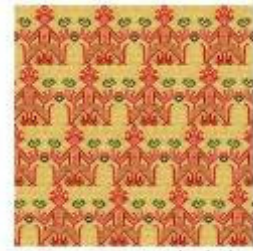
N =60

Designs	Suitability of motif for the product		Arrangement of motifs and patterns		Colour combination		Overall appearance		Average scores		Rank	
	WAR		WAR		WAR		WAR					
	Teachers (n <sub>1</sub> =30)	Students (n <sub>2</sub> =30)	Teachers (n <sub>1</sub> =30)	Students (n <sub>2</sub> =30)	Teachers (n <sub>1</sub> =30)	Students (n <sub>2</sub> =30)	Teachers (n <sub>1</sub> =30)	Students (n <sub>2</sub> =30)	Teachers (n <sub>1</sub> =30)	Students (n <sub>2</sub> =30)	Teachers (n <sub>1</sub> =30)	Students (n <sub>2</sub> =30)
P1	4.13	3.83	4.07	4.00	4.10	3.87	4.03	4.03	4.08	3.93	II	IV
P2	4.03	4.43	4.03	4.27	4.03	4.23	4.00	4.33	4.02	4.32	III	I
P3	3.90	3.60	3.83	3.8	4.03	3.83	3.90	3.87	3.92	3.76	IV	V
P4	3.47	4.13	3.40	4.07	3.60	4.06	3.53	4.00	3.50	4.07	V	II
P5	4.30	4.20	4.27	3.93	4.40	4.00	4.30	3.97	4.32	4.03	I	III

Note: P1 - Panel 1: Motif – Human figure, Repeat-  $\frac{3}{4}$  Brick  
P2 -Panel 2: Motif – Man riding horse, Symmetry- Reflection  
P3 -Panel 3: Motif – Karbi design, Repeat-  $\frac{3}{4}$  Drop  
P4 -Panel 4: Motif – Kalka, Symmetry- Reflection  
P5 -Panel 5: Motif – Diya and lampstand, Repeat- Block  
WAR -Weighted Average Ranking



Motif : Human figure



Repeat:  $\frac{3}{4}$  brick



P1 Motif : Human figure

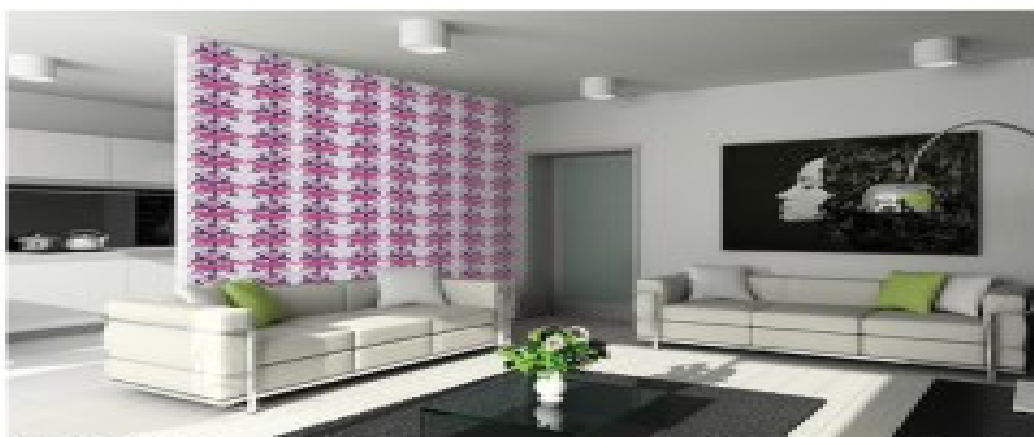
Repeat:  $\frac{3}{4}$  brick



Motif : Man riding horse



Symmetry: Reflection



P2 Motif : Man riding horse

Symmetry: Reflection

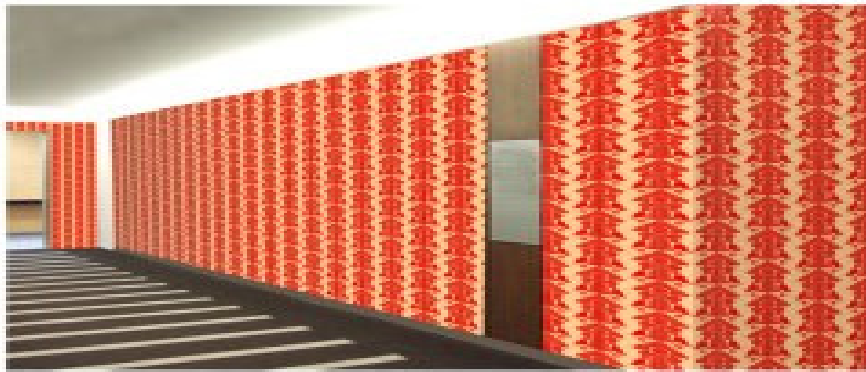
**Plate 4: Virtual images of panels**



Motif : Karbi design



Repeat:  $\frac{3}{4}$  drop



P3 Motif : Karbi design

Repeat:  $\frac{3}{4}$  drop



Motif : Kalka



Symmetry: Reflection



P4 Motif : Kalka

Symmetry: Reflection

**Plate 4: Contd....) Virtual images of panels**



Plate 4: (Contd...) Virtual Images of panels

**Table 8: Respondents outlook about Soft Furnishing**

N= 60

Sl. No.	Details	Preference					
		Teachers (n <sub>1</sub> =30)			Students (n <sub>2</sub> =30)		
		A	ST	N	A	ST	N
1	Fabric used at home	20 (66.67)	10 (33.33)	-	18 (60.00)	12 (40.00)	-
2	Fabric used for furniture	16 (53.33)	14 (46.67)	-	18 (60.00)	10 (33.33)	02 (06.67)
3	Fabric used are soft and pliable	15 (50.00)	13 (43.33)	02 (06.67)	25 (83.33)	05 (16.67)	-
4	Fabric used as upholstery	13 (43.33)	15 (50.00)	02 (06.67)	16 (53.33)	14 (46.67)	-

Figures in parentheses indicate percentages

Note: Always - A  
 Sometimes - ST  
 Never - N

Meanwhile, the respondents irrespective of both the category agreed that the bed sheet patterned with concentric petal with  $\frac{1}{4}$  brick repeat (B4) could be given III rank and the one having flower pot with leaves developed on  $\frac{3}{4}$  brick repeat as V rank.

#### 4.8.2 Preference for virtual images of Sofa Covers

The researcher made efforts to develop three Sofa Covers coded as S1, S2 and S3 by rendering both conventional and contemporary patterns with virtual images.

It is evident from Table 8 (b) and Plate 6 that both teachers and students opined that the sofa cover with fern and creeper, on block repeat (S1) was least preferred with WAR as (4.24) and (4.10) respectively.

On the other hand the teachers found 'flower vase, developed on  $\frac{1}{2}$  brick' (S3) to be the most suitable motif (4.53), as well its pattern arrangement (4.30), overall appearance (4.30), thus ranked as I. But the same motif, its arrangements and other entities were quite liked by students, thus gave II rank.

In contrast to these results, the students liked the contemporary foliage repeated on  $\frac{1}{2}$  brick, the most and thus rated as I rank (4.43) whereas the teachers gave II rank to S2 sofa cover with 4.26 WAR.

#### 4.8.3 Preference for virtual images of Dining Table Runners

Three varieties of Dining Table Runners were developed by single leaf motif developed into pattern by rotation symmetry. This is a unique style of creating virtual image by changing and modifying the back ground colour or edge finishing of the runner (Plate 7).

The respondents, irrespective of the categories gave I rank to Dining Table Runner (D1) with simple rotational patterns, II rank to D2 where the Dining Table Runner has lacy finishing and finally the runner finished with binding is ranked III.

### 4.9 Respondents outlook about Wall Coverings

The Wall Coverings of every room is an important entity in providing mood or internal environment. Under this category two types of Wall Coverings viz.; Wallpaper and Tiles are considered while developing virtual images by rendering.

However, before assessing the preference, it was imperative to learn the views of the respondents about 'Wall Coverings'. Table 9 gives the details on the meanings of 'Wall Covering' perceived by both teachers and students. It was found that more than 90.00 per cent of the teachers expressed 'Wall Covering' as a 'Decorative element'; followed by 'Any material used as wall finish' (63.33 %) and 'A sheet of paper pasted on the wall' (56.67 %), always; further expressed that sometimes Wall Covering may be the 'Screen that covers wall' (43.33 %), too. The expression of the students is in the same trend as that of teachers but with slight variation in percentage *i.e.* Wall Covering is a 'Wall decorative' (83.33 %), 'Any material used as wall finish' (40.00 %), 'Sheet of paper pasted on the wall' (36.67 %) and 'Screen that covers wall' (33.33 %), always. However, very meagre per cent expressed that 'Paper pasted on the wall' (10.00 %), 'Screen that covers wall' (10.00 %) and 'Material used as wall finish' (06.67 %) are never considered as 'Wall Covering'.

**Table 8 (a): Preference for virtual images of Bed sheets (Soft Furnishing)**

N=60

Designs	Suitability of motif for the product		Arrangement of motifs and patterns		Colour combination		Overall appearance		Average scores		Rank	
	WAR		WAR		WAR		WAR		Teachers (n <sub>1</sub> =30)	Students (n <sub>2</sub> =30)	Teachers (n <sub>1</sub> =30)	Students (n <sub>2</sub> =30)
	Teachers (n <sub>1</sub> =30)	Students (n <sub>2</sub> =30)	Teachers (n <sub>1</sub> =30)	Students (n <sub>2</sub> =30)	Teachers (n <sub>1</sub> =30)	Students (n <sub>2</sub> =30)	Teachers (n <sub>1</sub> =30)	Students (n <sub>2</sub> =30)				
B1	4.17	3.60	4.13	4.03	4.07	3.70	4.10	3.90	4.12	3.81	V	V
B2	4.40	4.40	4.27	4.47	4.23	4.50	4.30	4.43	4.30	4.45	I	I
B3	4.13	4.43	4.27	4.30	4.23	4.37	4.20	4.47	4.21	4.39	IV	II
B4	4.27	4.17	4.23	4.13	4.27	4.10	4.27	4.23	4.26	4.16	III	III
B5	4.27	3.93	4.30	4.03	4.33	3.97	4.20	4.03	4.28	3.99	II	IV

Note: B1 -Bed sheet 1: Motif –Flower pot with leaves, Repeat-  $\frac{3}{4}$  Brick  
 B2 -Bed sheet 2: Motif – Leaf, Repeat-  $\frac{3}{4}$  Drop  
 B3 -Bed sheet 3: Motif – Kalka, Repeat-  $\frac{3}{4}$  Drop  
 B4 -Bed sheet 4: Motif – Concentric petals, Repeat-  $\frac{1}{4}$  Brick  
 B5 -Bed sheet 5: Motif – Contemporary Tree, Repeat-  $\frac{1}{4}$  Drop  
 WAR -Weighted Average Ranking



Motif : Flower pot with leaves



Repeat:  $\frac{3}{4}$  brick



B1 Motif : Flower pot with leaves

Repeat:  $\frac{3}{4}$  brick



Motif : Leaf



Repeat:  $\frac{3}{4}$  drop



B2 Motif : Leaf

Repeat:  $\frac{3}{4}$  drop

Plate 5: Virtual images of bed sheets



Motif : Kalka



Repeat:  $\frac{3}{4}$  drop



B3 Motif : Kalka

Repeat:  $\frac{3}{4}$  drop



Motif : Contemporary tree



Repeat:  $\frac{1}{4}$  drop



B4 Motif : Contemporary tree

Repeat:  $\frac{1}{4}$  drop

**Plate 5: (Contd....) Virtual images of bed Sheets**

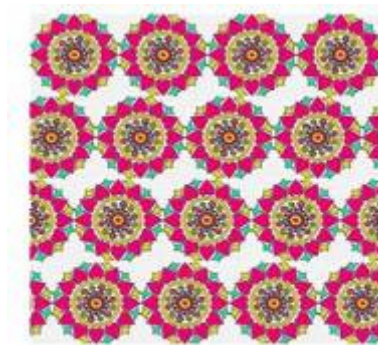


B5 Motif : Concentric petals

Repeat: ¼ brick



Motif : Concentric petals



Repeat: ¼ brick

**Plate 5: (Contd...) Virtual images of bed sheets**

**Table 8 (b): Preference for virtual images of Sofa cover (Window Dressing)**

N =60

Designs	Suitability of motif for the product		Arrangement of motifs and patterns		Colour combination		Overall appearance		Average scores		Rank	
	WAR		WAR		WAR		WAR		Teachers (n <sub>1</sub> =30)	Students (n <sub>2</sub> =30)	Teachers (n <sub>1</sub> =30)	Students (n <sub>2</sub> =30)
	Teachers (n <sub>1</sub> =30)	Students (n <sub>2</sub> =30)	Teachers (n <sub>1</sub> =30)	Students (n <sub>2</sub> =30)	Teachers (n <sub>1</sub> =30)	Students (n <sub>2</sub> =30)	Teachers (n <sub>1</sub> =30)	Students (n <sub>2</sub> =30)				
S1	4.37	4.10	4.33	4.33	4.20	3.97	4.07	4.00	4.24	4.10	III	III
S2	4.30	4.37	4.30	4.53	4.13	4.40	4.30	4.43	4.26	4.43	II	I
S3	4.53	4.13	4.47	4.30	4.63	3.93	4.43	4.10	4.52	4.12	I	II

Note: S1 - Sofa cover 1: Motif –Fern and creeper, Repeat- Block  
 S2 -Sofa cover 2: Motif – Contemporary foliage, Repeat- ½ Brick  
 S3 -Sofa cover 3: Motif –Flower vase Repeat- ½ Brick  
 WAR -Weighted Average Ranking



Motif : Fern and creeper



Repeat: Block



S1 Motif : Fern and creeper

Repeat: Block



Motif : Contemporary foliage



Repeat: 1/2 Brick



S2 Motif : Contemporary foliage

Repeat: 1/2 Brick

Plate 6: Virtual images of sofa cover

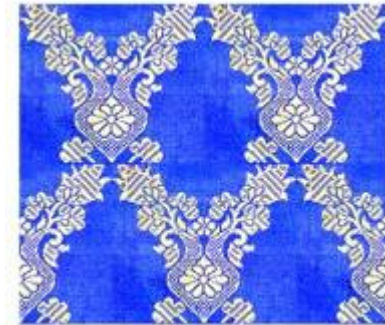


83 Motif : Flower vase

Repeat: 1/2 Brick



Motif : Flower vase



Repeat: 1/2 Brick

Plate 6: (Contd...) Virtual images of sofa cover

#### 4.9.1 Preference for virtual images of Tiles

The researcher developed eight virtual images of Tiles by selecting both conventional and contemporary motif and rendering on to Tiles (Plate 8). The preference for rendered Tiled images is presented in Table 9 (a).

As far as 'Suitability of motif' was considered the teachers gave first preference to Tile-T7 (4.47) and second to T3 (4.37), whereas students found the motif of T1- the Diamond to be most suitable for Tiles (4.50) followed by T6-Contemporary Peacock (4.17). Nevertheless irrespective motif, it's arrangement and colour combination the students preferred T1 by giving highest Weighted Average Ranking (4.45) followed by T3 (II rank, WAR- 4.15) and T6 & T7 (III rank, each WAR- 4.14).

However, the Weighted Average Ranking indicated that teachers preferred T7 and ranked first (WAR, 4.34) followed by T3, II rank (WAR- 4.29) and III rank bagged by T1 and T6 (each WAR- 4.20).

Whereas least preference given by teachers for Tile images is T8 (3.53) and that of students is T5 (3.85).

#### 4.9.2 Preference for virtual images of Wallpaper

Wallpaper is one of the most popular wall dressing elements, not only in India but also in the first world. The researcher created 5 varieties of designs and rendered on to Wallpapers (Plate 9). The preference for the motif and pattern by the respondents is presented in Table 9(b). Considering the suitability of motif, pattern arrangement, colour combination and overall appearance, the teachers gave I rank to Wallpaper W2 and W5 with WAR as 4.60, followed by W1 (II rank, WAR- 4.35) and W3 (III rank, WAR- 3.98). On the contrary the students preferred W4, the most and ranked first (WAR- 4.35) whereas II and III ranks were given to W2 (WAR- 4.33) and W5 (WAR- 4.29), respectively. The important observation made in this Table is that, among the virtual images of Wallpapers, the first preference given by the teachers is referred as II by the students and the last preference is given as I rank indicating a great difference in the preference of Wallpapers among teachers and students which is supported by Weighted Average Ranking (WAR).

### 4.10 Respondents outlook about Floor Covering

Floor covering was the concept very commonly seen in western countries. But it has become a part and parcel of Home Textiles today across the Globe. The meaning of 'Floor Covering' is understood and expressed in several ways by heterogeneous consumers and population. Hence, efforts were made to learn the concept and outlook about the 'Floor Coverings' by the respondents, who are the important subjects of the study.

It is clear from Table 10 that both teachers and students expressed that 'Floor Covering' means 'A type of spread for the floor' (93.33 % and 86.67 %, respectively), followed by 'A carpet' (56.67 % and 76.67 %, respectively) and 'A spread from wall to wall' (30.00 % and 26.67 %), always. On the other hand respondents of both the categories opined that 'Floor Coverings' are sometimes referred to 'Wall to wall spread', 'Cotton durries' and 'A carpet'. Meanwhile, it was surprising to know that about 10.00 per cent to 20.00 per cent of the respondents mentioned 'Floor Covering' is never a 'Wall to wall spread' and 'Cotton durries'.

**Table 8 (c): Preference for virtual images of Dining table runner (Window Dressing)**

N =60

Designs	Suitability of motif for the product		Arrangement of motifs and patterns		Colour combination		Overall appearance		Average scores		Rank	
	WAR		WAR		WAR		WAR					
	Teachers (n <sub>1</sub> =30)	Students (n <sub>2</sub> =30)	Teachers (n <sub>1</sub> =30)	Students (n <sub>2</sub> =30)	Teachers (n <sub>1</sub> =30)	Students (n <sub>2</sub> =30)	Teachers (n <sub>1</sub> =30)	Students (n <sub>2</sub> =30)	Teachers (n <sub>1</sub> =30)	Students (n <sub>2</sub> =30)	Teachers (n <sub>1</sub> =30)	Students (n <sub>2</sub> =30)
D1	4.50	4.43	4.47	4.53	4.50	4.23	4.50	4.53	4.49	4.43	I	I
D2	4.27	4.43	4.37	4.43	4.43	4.23	4.43	4.43	4.38	4.38	II	II
D3	4.07	3.93	4.13	3.97	3.97	3.77	4.23	3.93	4.10	3.90	III	III

Note: D1 - Dining table runner 1: Motif –Leaf, Symmetry- Rotational  
D2 -Dining table runner 2: Motif – Leaf with lacy finish, Symmetry- Rotational  
D3 -Dining table runner 3: Motif – Leaf with binding, Symmetry- Rotational  
WAR -Weighted Average Ranking



Motif : Leaf



Symmetry: Rotational



D1 Motif : Leaf

Symmetry: Rotational



Motif : Leaf with lacy finish



Symmetry: Rotational



D2 Motif : Leaf with lacy finish

Symmetry: Rotational

**Plate 7. Virtual images of dining table runners**



Motif : Leaf with binding



Symmetry: Rotational

D3 Motif : Leaf with binding

Symmetry: Rotational

**Plate 7. (Contd...) Virtual images of dining table runners**

**Table 9: Respondents outlook about Wall Covering**

N= 60

Sl. No.	Details	Preferences					
		Teachers (n <sub>1</sub> =30)			Students (n <sub>2</sub> =30)		
		A	ST	N	A	ST	N
1	It is a wall decorative	28 (93.33)	02 (06.67)	-	25 (83.33)	05 (16.67)	-
2	It is a sheet of paper pasted on the wall	17 (56.67)	13 (43.33)	-	11 (36.67)	16 (53.33)	03 (10.00)
3	It is any material used as wall finish	19 (63.33)	11 (36.67)	-	12 (40.00)	16 (53.33)	02 (06.67)
4	It is the screen that covers wall	09 (30.00)	13 (43.33)	08 (26.67)	10 (33.33)	17 (56.67)	03 (10.00)

Figures in parentheses indicate percentages

Note: Always - A  
 Sometimes - ST  
 Never - N

**Table 9 (a): Preference for virtual images of Tiles (Wall Covering)**

N =60

Designs	Suitability of motif for the product		Arrangement of motifs and patterns		Colour combination		Overall appearance		Average scores		Rank	
	WAR		WAR		WAR		WAR		Teachers (n <sub>1</sub> =30)	Students (n <sub>2</sub> =30)	Teachers (n <sub>1</sub> =30)	Students (n <sub>2</sub> =30)
	Teachers (n <sub>1</sub> =30)	Students (n <sub>2</sub> =30)	Teachers (n <sub>1</sub> =30)	Students (n <sub>2</sub> =30)	Teachers (n <sub>1</sub> =30)	Students (n <sub>2</sub> =30)	Teachers (n <sub>1</sub> =30)	Students (n <sub>2</sub> =30)				
T1	4.13	4.50	4.30	4.47	4.23	4.40	4.13	4.43	4.20	4.45	III	I
T2	4.07	3.90	4.27	4.17	4.10	4.07	4.20	4.10	4.16	4.06	IV	IV
T3	4.37	4.07	4.17	4.07	4.40	4.23	4.23	4.23	4.29	4.15	II	II
T4	3.70	3.93	3.80	4.10	3.70	3.93	3.83	4.03	3.76	3.99	VI	V
T5	3.97	3.80	3.87	3.87	4.00	3.83	4.07	3.90	3.98	3.85	V	VII
T6	4.10	4.17	4.07	4.23	4.00	4.03	4.00	4.13	4.04	4.14	III	III
T7	4.47	4.07	4.30	4.17	4.30	4.20	4.30	4.10	4.34	4.14	I	III
T8	3.50	4.00	3.53	3.83	3.53	3.93	3.57	4.00	3.53	3.94	VII	VI

Note: T1 - Tile 1: Motif – Diamond, Repeat- Block  
 T2 -Tile 2: Motif – Flower butta, Repeat- Block  
 T3 -Tile 3: Motif – Headgear, Repeat- Block  
 T4 -Tile 4: Motif – Dragon, Symmetry- Reflection  
 T5 -Tile 5: Motif – Dragon, Symmetry- Reflection  
 T6 - Tile 6: Motif – Contemporary peacock, Repeat- Block  
 T7 - Tile 7: Motif – Contemporary tree, Repeat- Block  
 T8 - Tile 8: Motif – Flower butta, Repeat- Block

WAR - Weighted Average Ranking



Motif : Diamond



Repeat: Block



T1 Motif : Diamond

Repeat: Block



Motif : Flower butta



Repeat: Block



T2 Motif : Flower butta

Repeat: Block

**Plate 8. Virtual images of tiles**



Motif : Japi (headgear)



Repeat: Block



T3 Motif : Japi (headgear)

Repeat: Block



Motif : Dragon



Symmetry: Reflection

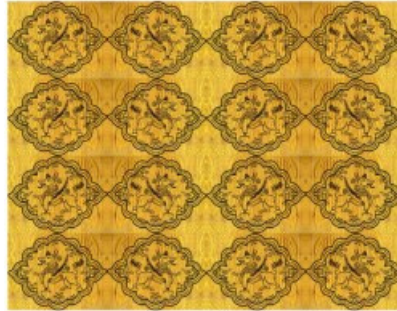


T4 Motif : Dragon

Symmetry: Reflection



Motif : Dragon



Symmetry: Reflection



T5 Motif : Dragon

Symmetry: Reflection



Motif : Contemporary peacock



Repeat: Block



T6 Motif : Contemporary peacock

Repeat: Block

**Plate 8. (Contd....) Virtual images of tiles**



Motif : Contemporary tree



Repeat: Block

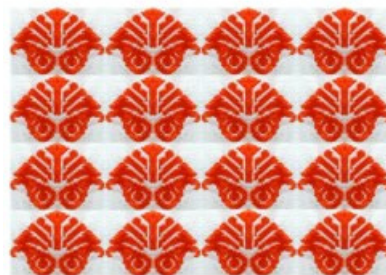


T7 Motif : Contemporary tree

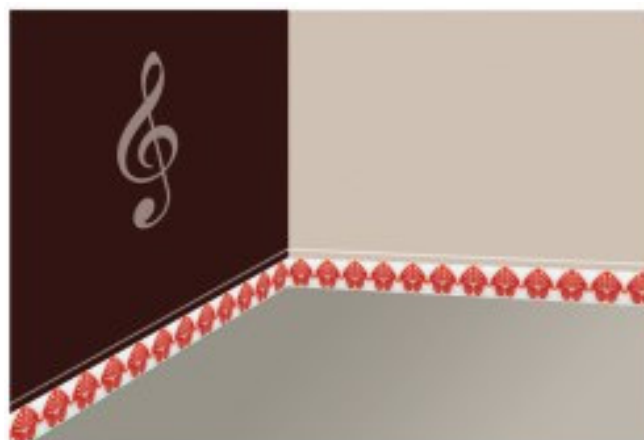
Repeat: Block



Motif : Flower butta



Repeat: Block



T8 Motif : Flower butta

Repeat: Block

Plate 8. (Contd....) Virtual images of tiles

**Table 9 (b): Preference for virtual images of Wallpaper (Wall Covering)**

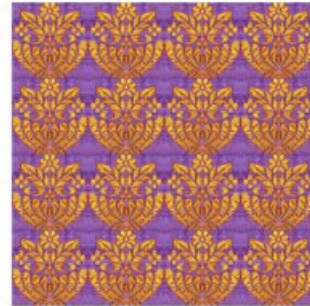
N =60

Designs	Suitability of motif for the product		Arrangement of motifs and patterns		Colour combination		Overall appearance		Average scores		Rank	
	WAR		WAR		WAR		WAR		Teachers (n <sub>1</sub> =30)	Students (n <sub>2</sub> =30)	Teachers (n <sub>1</sub> =30)	Students (n <sub>2</sub> =30)
	Teachers (n <sub>1</sub> =30)	Students (n <sub>2</sub> =30)	Teachers (n <sub>1</sub> =30)	Students (n <sub>2</sub> =30)	Teachers (n <sub>1</sub> =30)	Students (n <sub>2</sub> =30)	Teachers (n <sub>1</sub> =30)	Students (n <sub>2</sub> =30)				
W1	4.47	4.13	4.27	4.13	4.30	4.07	4.37	4.23	4.35	4.14	II	V
W2	4.60	4.37	4.57	4.37	4.67	4.33	4.57	4.23	4.60	4.33	I	II
W3	3.93	4.23	4.00	4.17	4.00	4.17	4.00	4.23	3.98	4.20	III	IV
W4	3.37	4.30	3.57	4.40	3.63	4.33	3.43	4.37	3.50	4.35	V	I
W5	4.60	4.23	4.60	4.37	4.60	4.27	4.60	4.30	4.60	4.29	I	III

Note: W1 - Wallpaper 1: Motif –Flower pot, Repeat- Block  
W2 -Wallpaper 2: Motif – *Kingkhap*, Repeat-  $\frac{3}{4}$  Brick  
W3 -Wallpaper 3: Motif – Flower pot, Repeat- Block  
W4 -Wallpaper 4: Motif – Concentric petals, Repeat-  $\frac{3}{4}$  Brick  
W5 -Wallpaper 5: Motif – *Gomcheng*, Repeat-  $\frac{3}{4}$  Drop  
WAR - Weighted Average Ranking



Motif : Flower pot



Repeat: Block



W1 Motif : Flower pot

Repeat: Block



Motif : Kingkhap



Repeat:  $\frac{3}{4}$  Brick



W2 Motif : Kingkhap

Repeat:  $\frac{1}{4}$  Brick

**Plate 9. Virtual images of wallpapers**



Motif : Flower pot



Repeat: Block

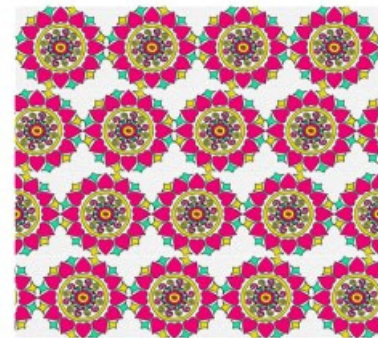


W3 Motif : Flower pot

Repeat: Block



Motif : Concentric petals



Repeat:  $\frac{3}{4}$  Brick



W4 Motif : Concentric petals

Repeat:  $\frac{3}{4}$  Brick



W3 Motif name: Gomcheng

Repeat: % drop



Motif name: Gomcheng



Repeat:  $\frac{3}{4}$  drop

Plate 9. (Contd...) Virtual images of wallpapers

#### 4.10.1 Preference for virtual images of Carpets

Carpet is an important element of 'Floor Covering'. The researcher developed 4 carpet patterns using conventional Assamese motifs (Plate 10). The preference for these Carpets by the respondents is presented in Table 10 (a), who evaluated on the entities *viz*; suitability of motif, arrangement of motif, colour combination and overall appearance.

Irrespective of the entities the teachers preferred CA1 (I rank, WAR- 4.54) followed by CA3 (II rank), CA4 (III rank) and least preferred being CA2 (IV rank); whereas the preference by students is almost opposite to that of teachers *i.e.* CA4 is with I rank, CA2- II rank, CA1- III rank and CA3- IV rank.

#### 4.10.2 Preference for virtual images of Floorings

The 'Flooring' in this study is the arrangement of tiles and or the sheet that spreads from wall to wall, which covers the entire floor and in fact acts as floor itself. The researcher developed 6 types of flooring and the respondents evaluated and expressed their preference considering the motif, its arrangement and colour combinations (Plate 11).

Table 10 (b) gives a detailed account on the preference for Flooring by the respondents. It is found that both teachers and students preferred floral motifs (F5, I rank and F3, II rank, respectively) which are developed on block repeat (F5, 4.27 and F3, 4.23). Anyhow, the most becoming colour combination for teachers is F2 (4.13) and that of students is F1 (4.23). However, the descending order of the preference made by teachers is F5 (I rank, WAR- 4.25), F2 (II rank) and F1 (III rank) and that of students is F5 (I rank), F3 (II rank) and F1 (III rank). The preference of teachers and students with respect to virtual images of flooring is almost same.

### 4.11 Respondents outlook for Assamese motifs rendered on Home Textiles

It is imperative to understand the overall opinion of the respondents about the concept of developing virtual images of Home Textiles using conventional Assamese motifs as the base. The researcher collected the information on important aspects of the study *viz*.; concept on revival of conventional Assamese motif, inspiration to revive other traditional motifs, idea & concept of developing patterns, on scientific repeats and symmetry, a means to save, protect & preserve the traditional motifs, motivation to incorporate woven patterns into printed forms and creating virtual images by rendering. The respondents expressed their views on 5 point scale, and the results are presented in Table 11. It is learnt from this Table that the teachers highly appreciated the efforts made by the researcher in reviving the traditional Assamese motifs (93.33 %) as well mentioned that it is a means to preserve the conventional motifs (90.00 %). More than 70.00 per cent of both teachers and students expressed that the virtual images are elegant and eye catching (76.67 % and 73.33 %), the study basic idea and concept for home decor (86.67 % and 83.33 %), and an inspiration for revival of other tribal and mythological motifs (76.67 % and 70.00 %), respectively. Very meagre per cent of the respondents (03.33 %) expressed that the advantages (entities) of the study on Assamese motifs rendered on Home Textiles is fair by giving score as 2 and 1, whereas more than 95.00 per cent of the respondents have given the score as 5 and 4.

**Table 10: Respondents outlook about Floor Covering**

N= 60

Sl. No.	Details	Preferences					
		Teachers (n <sub>1</sub> =30)			Students (n <sub>2</sub> =30)		
		A	ST	N	A	ST	N
1	It is a carpet	17 (56.67)	13 (43.33)	-	23 (76.67)	06 (20.00)	01 (03.33)
2	It is a spread from wall to wall	09 (30.00)	21 (70.00)	-	08 (26.67)	15 (50.00)	07 (23.33)
3	It is cotton durries	08 (26.67)	19 (63.33)	03 (10.00)	06 (20.00)	20 (66.67)	04 (13.33)
4	It is spread for the floor	28 (93.33)	02 (06.67)	-	26 (86.67)	04 (13.33)	-

Figures in parentheses indicate percentages

Note: Always - A  
 Sometimes - ST  
 Never - N

**Table 10 (a): Preference for virtual images of Carpet (Floor Covering)**

N = 60

Designs	Suitability of motif for the product		Arrangement of motifs and patterns		Colour combination		Overall appearance		Average scores		Rank	
	WAR		WAR		WAR		WAR		Teachers (n <sub>1</sub> =30)	Students (n <sub>2</sub> =30)	Teachers (n <sub>1</sub> =30)	Students (n <sub>2</sub> =30)
	Teachers (n <sub>1</sub> =30)	Students (n <sub>2</sub> =30)	Teachers (n <sub>1</sub> =30)	Students (n <sub>2</sub> =30)	Teachers (n <sub>1</sub> =30)	Students (n <sub>2</sub> =30)	Teachers (n <sub>1</sub> =30)	Students (n <sub>2</sub> =30)				
CA1	4.57	4.40	4.50	4.40	4.50	4.23	4.57	4.27	4.54	4.33	I	III
CA2	3.97	4.37	4.00	4.40	3.80	4.40	3.87	4.50	3.91	4.42	IV	II
CA3	4.43	4.27	4.57	4.40	4.57	4.23	4.50	4.30	4.52	4.30	II	IV
CA4	4.13	4.43	4.27	4.57	4.27	4.40	4.20	4.47	4.22	4.47	III	I

Note: CA1 - Carpet 1: Motif – Diamond, Repeat- Block  
 CA2 -Carpet 2: Motif – Hand fan, Repeat- ¾ Brick  
 CA3 -Carpet 3: Motif – Flower shoot, Repeat- Block  
 CA4 -Carpet 4: Motif – Flower shoot, Repeat- Block  
 WAR -Weighted Average Ranking



Motif : Diamond



Repeat: Block



CA1 Motif : Diamond

Repeat: Block



Motif : Hand fan



Repeat:  $\frac{3}{4}$  Brick



CA2 Motif : Hand fan

Repeat:  $\frac{3}{4}$  Brick

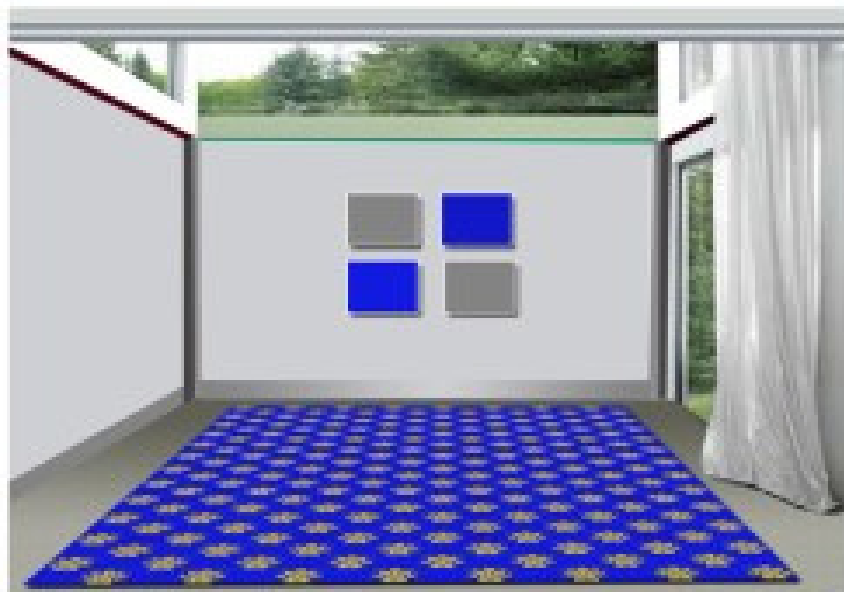
**Plate 10. Virtual images of carpets**



Motif : Flower shoot



Repeat: Block



CA3 Motif : Flower shoot

Repeat: Block



CA4 Motif : Flower shoot

Repeat: Block

**Plate 10. (Contd.....) Virtual images of carpets**

## 4.12 Cost of production of virtual images of Home Textiles

Table 12 reveals about the cost of production of the virtual images. The virtual images of Home Textiles were developed on A-4 and A-3 papers as well digitally on cloth as signages. Various factors like developing motifs through input of designs editing, resizing, creating the archive & rendering (on various Home Textiles); arranging the motifs as per classification, inserting titles and motif details digitally and digital printing of Home Textiles with rendered virtual patterns on cloth were taken into account while determining the cost of production. The total cost of designing, developing, rendering of 3D virtual images (hard copy) of 46 variegated Home Textiles amounted to ₹ 16,600/-.

**Table 10 (b): Preference for virtual images of Flooring (Floor Covering)**

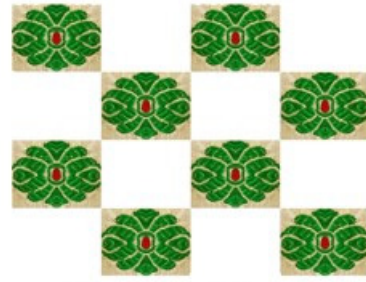
N =60

Designs	Suitability of motif for the product		Arrangement of motifs and patterns		Colour combination		Overall appearance		Average scores		Rank	
	WAR		WAR		WAR		WAR		Teachers (n <sub>1</sub> =30)	Students (n <sub>2</sub> =30)	Teachers (n <sub>1</sub> =30)	Students (n <sub>2</sub> =30)
	Teachers (n <sub>1</sub> =30)	Students (n <sub>2</sub> =30)	Teachers (n <sub>1</sub> =30)	Students (n <sub>2</sub> =30)	Teachers (n <sub>1</sub> =30)	Students (n <sub>2</sub> =30)	Teachers (n <sub>1</sub> =30)	Students (n <sub>2</sub> =30)				
F1	3.97	4.00	4.03	4.00	3.93	4.23	4.07	4.04	4.00	4.01	III	III
F2	4.13	3.90	4.13	3.97	4.13	3.92	4.13	3.88	4.13	3.89	II	V
F3	3.73	4.10	3.73	4.23	3.73	3.96	3.73	4.16	3.73	4.09	V	II
F4	3.73	3.73	3.87	3.80	3.43	3.60	3.57	3.72	3.65	3.68	VI	VI
F5	4.33	4.03	4.27	4.17	4.07	4.00	4.33	4.24	4.25	4.10	I	I
F6	3.93	4.03	3.80	3.96	3.83	4.04	4.03	4.00	3.90	4.00	IV	IV

Note: F1 - Flooring 1: Motif – Flower butta, Repeat- Block  
 F2 - Flooring 2: Motif – Necklace design, Repeat- ½ Brick  
 F3 - Flooring 3: Motif – Four petal flower, Repeat- Block  
 F4 - Flooring 4: Motif – Flower bunch, Symmetry- Rotational  
 F5 - Flooring 5: Motif – Flower butta, Repeat- Block  
 F6 - Flooring 5: Motif – Necklace design, Repeat- ½ Brick  
 WAR -Weighted Average Ranking



Motif : Flower butta



Repeat: Block



F1 Motif : Flower butta

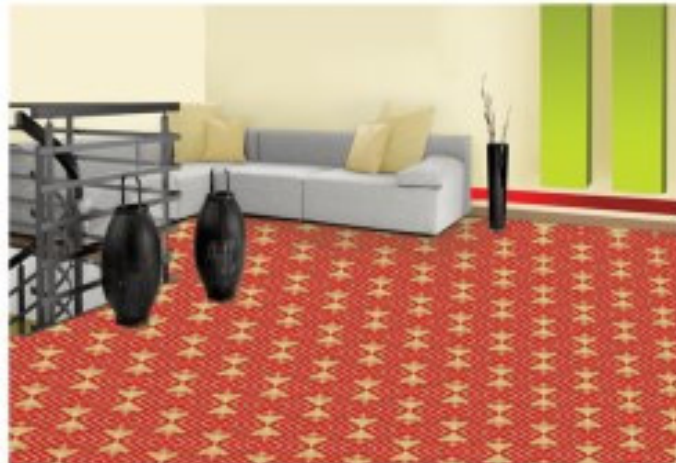
Repeat: Block



Motif : Necklace design



Repeat: 1/2 Brick



F2 Motif : Necklace design

Repeat: 1/2 Brick

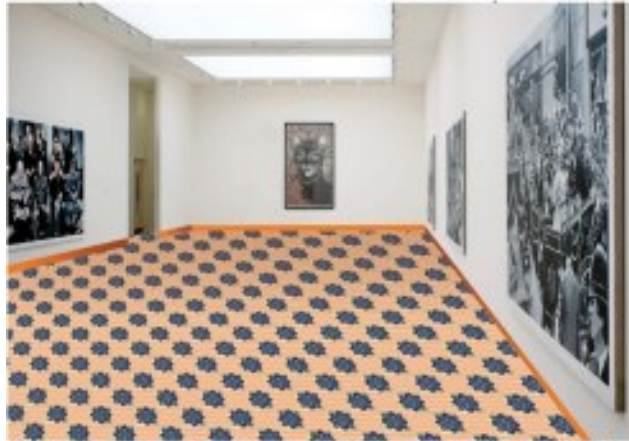
**Plate 11. Virtual images of floorings**



Motif : Four petal flower



Repeat: Block



F3 Motif : Four petal flower

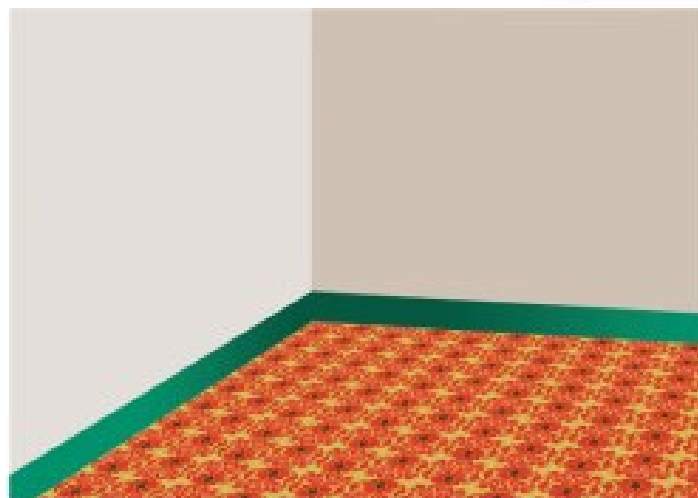
Repeat: Block



Motif : Flower bunch



Symmetry: Rotational



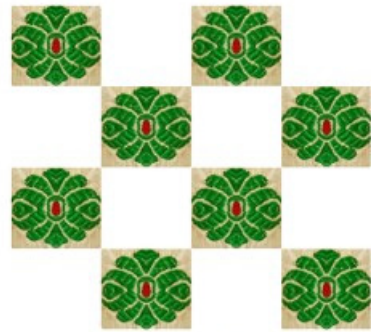
F4 Motif : Flower bunch

Symmetry: Rotational

Plate 11.(Contd...) Virtual images of floorings



Motif : Flower butta



Repeat: Block



F5 Motif : Flower butta

Repeat: Block



Motif : Necklace design



Repeat: 1/2 brick



F6 Motif : Necklace design

Repeat: 1/2 brick

**Plate 11.(Contd...) Virtual images of floorings**

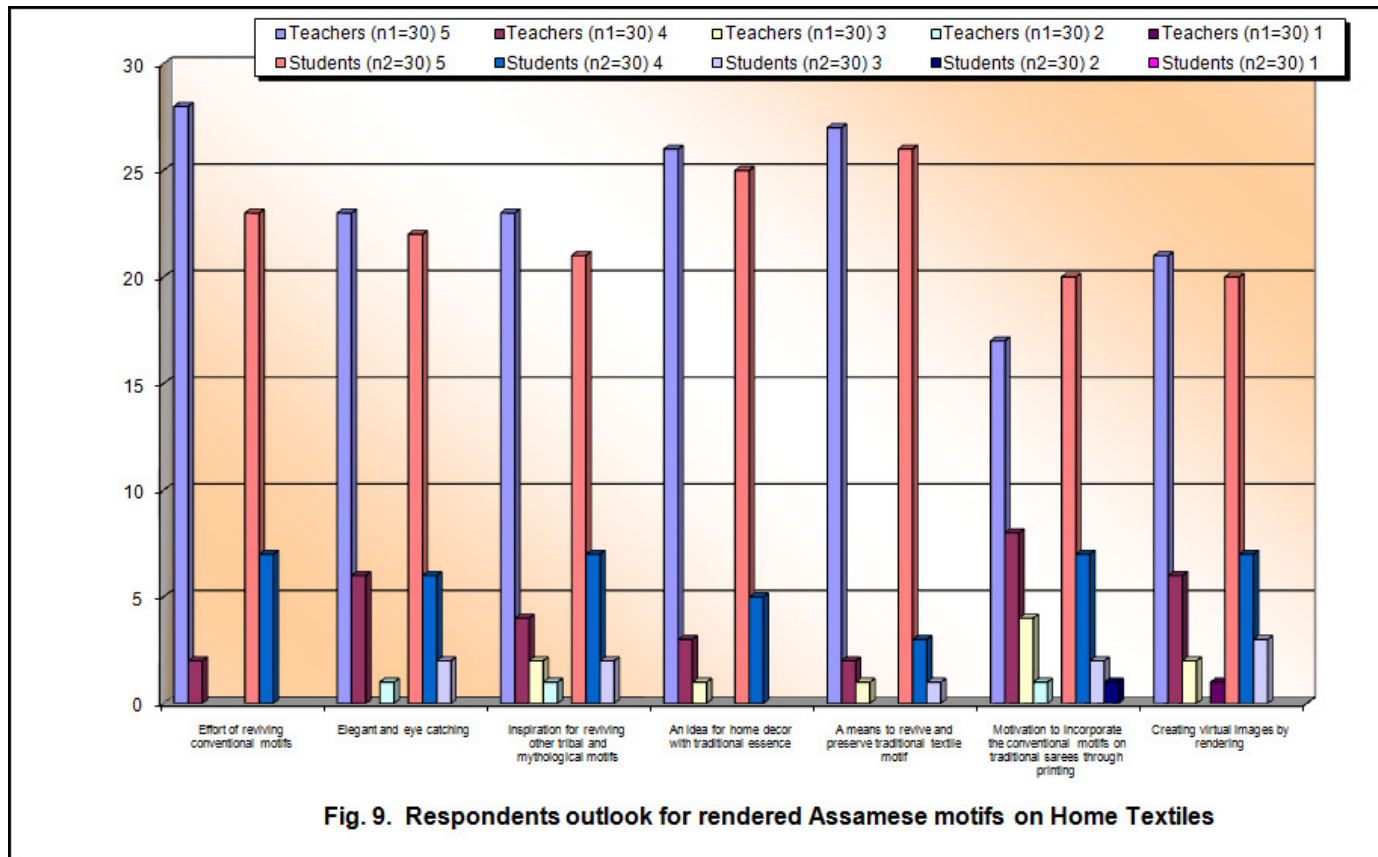
**Table 11. Respondents outlook for rendered Assamese motifs on Home Textiles**

N= 60

Sl. No.	Details	Preference									
		Teachers (n <sub>1</sub> =30)					Students (n <sub>2</sub> =30)				
		5	4	3	2	1	5	4	3	2	1
1	Effort of reviving conventional motifs	28 (93.33)	02 (06.67)	-	-	-	23 (76.67)	07 (23.33)	-	-	-
2	Elegant and eye catching	23 (76.67)	06 (20.00)	-	01 (03.33)	-	22 (73.33)	06 (20.00)	02 (06.67)	-	-
3	Inspiration for reviving other tribal and mythological motifs	23 (76.67)	04 (13.33)	02 (06.67)	01 (03.33)	-	21 (70.00)	07 (23.33)	02 (06.67)	-	-
4	An idea for home decor with traditional essence	26 (86.67)	03 (10.00)	01 (03.33)	-	-	25 (83.33)	05 (16.67)	-	-	-
5	A means to revive and preserve traditional textile motif	27 (90.00)	02 (06.67)	01 (03.33)	-	-	26 (86.67)	03 (10.00)	01 (03.33)	-	-
6	Motivation to incorporate the conventional motifs on traditional sarees through printing	17 (56.67)	08 (26.67)	04 (13.33)	01 (03.33)	-	20 (66.67)	07 (23.33)	02 (06.67)	01 (03.33)	-
7	Creating virtual images by rendering	21 (70.00)	06 (20.00)	02 (06.67)	-	01 (03.33)	20 (66.67)	07 (23.33)	03 (10.00)	-	-

Figures in parentheses indicate percentages

Note: Always - A  
 Sometimes - ST  
 Never - N



**Fig 9. Respondents outlook for rendered Assamese motifs on Home Textiles**

**Table 12: Cost of production of virtual images of Home Textiles**

Sl. No.	Particulars	Quantity (no.)	Rate (₹)	Amount (₹)
1	Developing motifs through input of designs editing, resizing, creating the archive& rendering ( on various Home textiles)	46	250	11,500/-
2	Motif arrangement (46) as per classification, inserting titles and motif details digitally	-	-	1500/-
3	Digital printing of Home textiles with rendered virtual patterns on cloth	8	450	3,600/-
			Total cost (₹)	16,600/-

## 5. DISCUSSION

The results of the present study on “Restructuring conventional motifs for Home Textiles” are discussed in this chapter under the following headings:

- 5.1 Selection of Assamese motifs for Home Textiles and the unit basis of the motifs
- 5.2 Respondents outlook about Home Textiles
- 5.3 Functions of Home Textiles: Respondents opinion
- 5.4 Preference for Home Textiles by the respondents
- 5.5 Respondents outlook about Window Dressing
  - 5.5.1 Preference for virtual images of Curtains
  - 5.5.2 Preference for virtual images of Panels
- 5.6 Respondents outlook about Soft Furnishing
  - 5.6.1 Preference for virtual images of Bed Sheets
  - 5.6.2 Preference for virtual images of Sofa Covers
  - 5.6.3 Preference for virtual images of Dining Table Runners
- 5.7 Respondents outlook about Wall Covering
  - 5.7.1 Preference for virtual images of Tiles
  - 5.7.2 Preference for virtual images of Wallpapers
- 5.8 Respondents outlook about Floor Covering
  - 5.8.1 Preference for virtual images of Carpets
  - 5.8.2 Preference for virtual images of Floorings
- 5.9 Respondents outlook for Assamese motifs rendered on Home Textiles

### 5.1 Selection of Assamese motifs for Home Textiles and the unit basis of the motifs

From the 17 conventional Assamese motifs, 6 motifs that were ranked highest from 1 to 5 with WAR varying from 4.57 to 4.20 were selected to modify them into contemporary motifs and develop pattern on scientific repeat and symmetry methods. It is interesting to know that  $\frac{1}{3}^{\text{rd}}$  of motifs from each category are accepted by the panel of judges which clearly indicates that the naturalistic, geometrical and stylized motifs used on Assamese clothing are also suitable for Home Textiles and could be well applied. It is evident that the motifs most suitable are bird, flower, foliage and tree indicated the liking of the panels for nature. The Kalka motif (paisley) is the basic motif in textile designing, is suitable on all types of textiles viz., women’s wear, men’s wear, furnishing, table linen, floor covering *etc.* Japi, the head gear of Assamese was ranked first may be because of its colourful composition of geometrical shapes and is a unique unit.

The unit base of the selected 6 motifs were oval, trapezoid, circle, rectangle and pentagon *i.e.* the motif did not fit into one or two unit bases but each had its own well defined unit base. The unit base plays an important role in developing pattern by scientific repeat and symmetry of motifs.

The non-directional motifs having circle as the unit base cannot be developed into pattern by reflection and any other form of symmetry *i.e.* rotation, glide reflection, since it appears same in any system of repeat (example: Japi and concentric petals). The unidirectional, vertically upright motifs cannot be produced into mirror pattern (example: Tree and foliage motif). The mirror or reflection patterns could be developed when the motif has either its tip or base bent towards right or left, (example: Peacock and kalka). In other words of the six motifs Japi, concentric petals, tree and foliage can be developed into pattern by block, drop ( $\frac{1}{4}$ ,  $\frac{1}{2}$  and  $\frac{3}{4}$ ) and brick ( $\frac{1}{4}$ ,  $\frac{1}{2}$  and  $\frac{3}{4}$ ) repeats; tree and foliage can also be developed by symmetry method *viz.* translation, rotation and glide reflection; whereas peacock and kalka could not be developed of all techniques of scientific repeats and symmetry.

Thus, it can be stated that the hypothesis set for the study that the selected motifs can be developed into patterns by using 'repeat and symmetry' technique was accepted. Also, as the developed contemporary motifs has fulfilled all the factors like size, direction, symmetry and unit base as the conventional motifs do, hence it can be specified that the hypothesis set for the study that the contemporary motifs developed vary in appearance to that of conventional Assamese motifs was rejected.

## 5.2 Respondents outlook about Home Textiles

From the results it is evident that teachers have better knowledge than students about Home Textiles and is definitely acceptable. In fact Home Textiles is one of the largest segments of Textiles today which comprises of all textile materials, may be soft, smooth, hard, harsh, dull, lustrous, textured, fine, coarse, durable, non-durable used either in the interiors or exteriors for both decoration and functional purpose. The galaxy of teachers comprised of specialists in the field of Resource Management, Textiles and Apparel Designing and artists, who are well read and have rich knowledge on the subject, hence the expression of the teachers is much wider and groovy than students who are still in the stage of learning.

## 5.3 Functions of Home Textiles: Respondents opinion

Home Textiles are not only functional but decorative too. Basically Home Textiles are decorative, which create a sort of aesthetic appeal in the room that in turn builds an internal environment that develops a positive mood among the inmates or dwellers. At times the mood may be negative too. One individual may show positive mood for the interiors but another may show negative mood of different levels; for the same. Therefore, the opinion of both teachers and students are well taken and accepted, since are of individual expressions. Respondents of both the categories expressed that Home Textiles are decorative, have aesthetic appeal and provide internal environment, with varied percentages. However, both gave last preference for 'mood'; probably

because when the interiors are decorative, beautiful and provide good environment, the mood of an individual will be good, cheerful and happy. In fact, mood of an individual depends on the surrounding environment which is a product of aesthetics, beauty and positive energy.

## 5.4 Preference for Home Textiles by the respondents

The Table 7 clearly indicated that components of Home Textiles used in different rooms for different purposes to perform variegated functions. However, given a chance for the respondents to express their preference for Home Textiles, some of the important and fundamental components were never preferred as Home Textiles. Nevertheless, the components where textile fabric being the foundation substrate is considered as Home textiles, by both the categories of respondents *viz.*, curtains and draperies, table linen, floor coverings, bed linen and furniture linen, always. This may be due to the reason that, most of the people decorate the hall, living room and bed rooms where the inmates spend much of the time. Moreover, the friends, relatives and visitors who visit the house, very rarely go to the kitchen and bath room, instead appreciate the interiors of other rooms. Therefore majority of the people spend quality time, energy and may be money to beautify these rooms to provide a comfortable environment and get appreciation about interiors than the restricted areas like bath room and kitchen. Meanwhile the knowledge for preference of Home Textiles by teachers is much wider and enriched than the students, which clearly indicate that the youngsters do not give importance for kitchen and bath room accessories as well as wall papers, though are the vital components of Home Textiles. This may be because being hostel dwellers; the students have limited work in the kitchen and restrictions in decorating the walls of their room, that has limited impact on the level of their knowledge on Home Textiles.

## 5.5 Respondents outlook about Window Dressing

The outlook for Window Dressing expressed by the respondents are many but related to textile substrate are limited. In fact respondents of both categories aptly responded towards Curtains and Draperies, always. Whereas, some per cent of students and teachers never agreed for the option like 'Dressing the grills', 'Dressing the sliding windows' and 'Dressing with plantation and creepers' which is very true. But, people do use the term 'Dressing' for any beautification, thus probably almost 60.00 to 70.00 per cent of the respondents expressed rest of the three options in the table could be taken as 'Window Dressing', sometimes. The opinion which is studied either as 'Always' or 'Never' indicate confirmed decision whereas 'Sometimes' is a blend of positive and negative opinion.

### 5.5.1 Preference for virtual images of Curtains

There are several factors that contribute to evaluate an overall appearance of curtains. And the factors considered would surely differ from individual to individual, since it depends on the taste, like-dislikes, interest, perseverance and angle of outlook. With due respect to the choice of both teachers and students it may be stated that, the best three virtual images were CR1, CR2 and CR5. It is interesting to note that the respondents gave III rank to CR5 where the image is created by geometrical butta developed into pattern by 'Rotational', symmetry. The entire cluster of respondents gave III rank may be because of window display with scallops and 2-3 levels of drapings (Plate 12).

**I Rank**



CR1 Hibiscus flower : Reflection

**II Rank**



CR2 Gomcheng: : ¼ drop

**III Rank**



CR5 Geometrical butta: Rotational

**Teachers**



CR2 Gomcheng: : ¼ drop



CR1 Hibiscus flower : Reflection

**Students**



CR5 Geometrical butta: Rotational

**Plate 12: Preference for virtual images of curtains by the respondents**

The Hibiscus flower produced by reflection symmetry was given I rank by teachers and II by students may be because of colour combination of red and pink with horizontal stripes, that added elegance to the curtain.

On the other hand, Gomcheng pattern developed with  $\frac{3}{4}$  drop pattern was ranked as I by students and II by teachers may be because of creating an emphasis of yellow motifs against cream background; with wide borders of warm yellow colour on either ends enhanced the beauty of the interiors by providing warmth to the inmates.

In general however, it may be stated that, the curtains with bright and warm colours are much impressive and accepted by the consumers on one hand; the floral motifs are most becoming as for window dressing than any others, on other hand.

### 5.5.2 Preference for virtual images of Panels

Interior decoration is the subject keeps changing with the taste of the consumers; the old antique is changed with ultramodern in a short span of time. The panel used to be a part of window but the concept of panel shifted to walls by treating a part of the wall with exclusive paints, or tile creating textural images or illusions as panels. Hence, panel is considered as a part of wall and created five virtual images by the researcher.

The panel P5 is most preferred by teachers may be because of the exclusive conventional 'Diya and lampstand' motif of Assamese, which is applied on a rectangular panel against sufficient background. This placement of panel created not only emphasis but did balance the entire wall. Meanwhile, the II rank was given to P1 which is a panel designed as a border for the upper part of the wall continued as side panel. This panel has human figure produced in warm yellow colour against red background; this bordered panel gave a look of continuity to the room.

In fact students gave I rank to panel P2 having the traditional motif of 'Man riding horse' created with mirror effect, rendered on a similar rectangular panel on one corner of the room that separated kitchen and living room. Similarly the students gave II rank to P4 which is a pattern of 'Kalka- reflection' and panel placed in one of the corners of the room that acted as a partition between two rooms.

In general it may be inferred that the conventional human, animal, butta, diya and lampstand are found to be highly acceptable; the colour combination, and position of panel create emphasis, balance, equal force of illusion are accepted more than, the bright coloured continuous panel all along the long wall (P3, Plate 13).

## 5.6 Respondents outlook about Soft Furnishing

The 'Soft Furnishing' is another broad category of Home Textiles that covers any type of furniture used for office work, study, sitting, resting, sleeping, dining may be any activity carried out manually or digitally. There are innumerable type of fabrics available in the market may be woven, knitted or non-woven, leather, fur *etc.* in several fibre contents, natural or synthetic or blended; with several finish- soft, pliable, hard, harsh, leathery, furry, shiny, dull, matt, smooth, slippery and in many colour ways. Though the outlook for the meaning of 'Soft Furnishing' is diverse, is definitely accepted

because, the opinions of the respondents are the outcome of their experience, exposure, knowledge and vision. In fact, all the 4 entities listed from 1 to 4 in Table 8 come under the category of 'Soft Furnishing'.

### 5.6.1 Preference for virtual images of Bed Sheets

As already learnt from Table 8 that Soft Furnishings are the textiles used at home, always soft and pliable and may be used for upholstery, furniture covers or table linen.

As far as bed linen was considered entire galaxy of respondents preferred B2 because of its elegant colour combination, the simple leaf motif repeated on  $\frac{3}{4}$  drop system and attractive arrangement of pattern by rendering in tint and shade of purple colour combination. The entire rendering has given a pleasant and soothing effect with frill as edge finishes.

The students gave II rank to the Bed sheet (throw) B3 which is beautifully designed in contemporary Kalka (paisley) motif, by developing pattern with  $\frac{1}{4}$  drop repeat in pastel green and yellow colour combination. The choice may be because of the cool green colour and ever popular 'Kalka' motif that added traditional essence to the bed linen. Meanwhile the teachers gave II rank to Bed sheet B5 where the entire sheet is designed with concentric petals in  $\frac{1}{4}$  brick repeat of simple, light and cool colour combination. The patterns provided a sort of cooling effect to eyes and mind, a healthy mood at bed time.

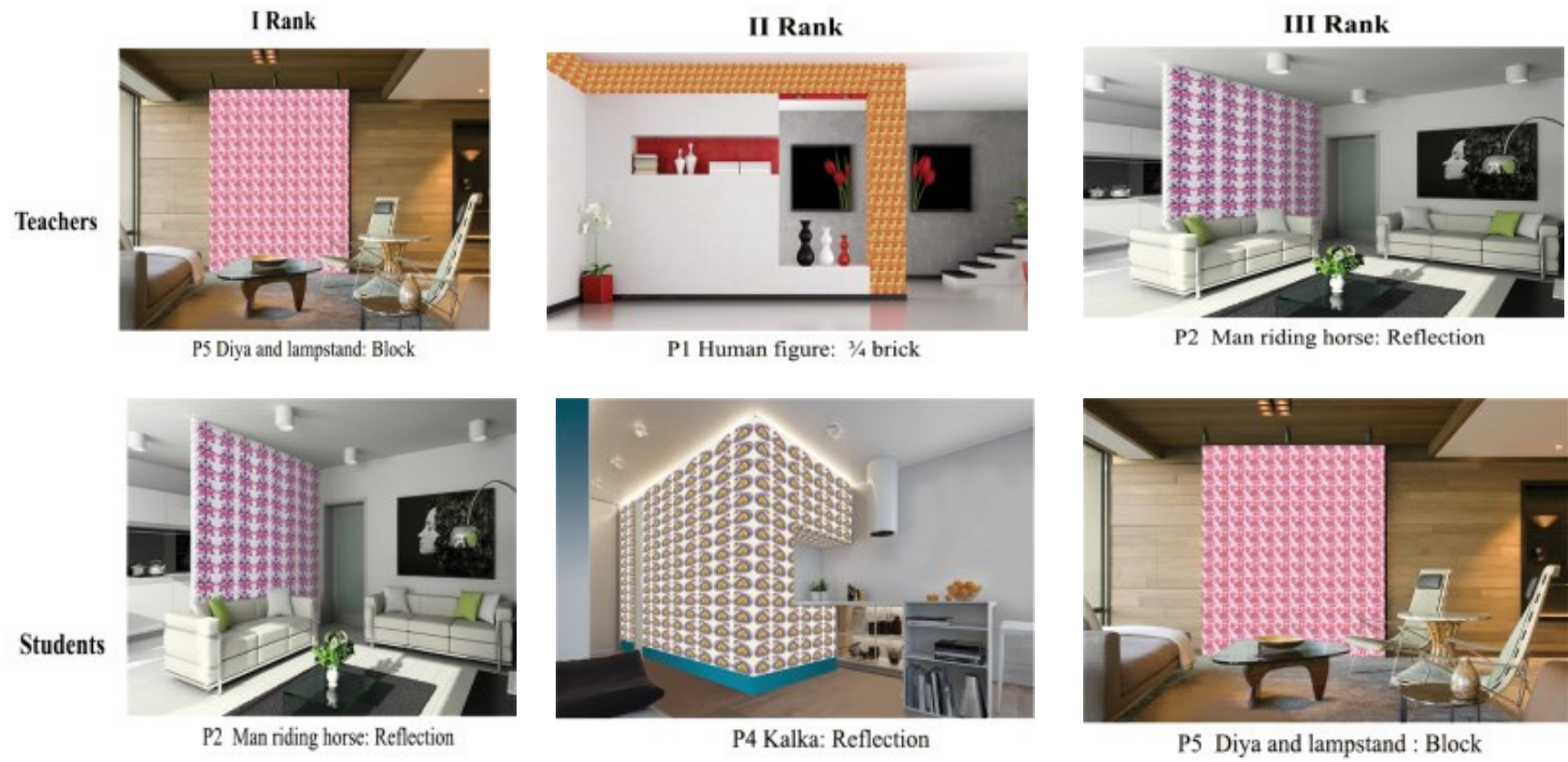
On the other hand both teachers and students gave III rank to Bed sheet B4 may be because of the contemporary motif, produced in  $\frac{1}{4}$  drop pattern and beautifully coloured in green and red against pastel background (Plate 14).

### 5.6.2 Preference for virtual images of Sofa Covers

The teachers gave I rank and students the II rank to Sofa Cover S3 developed in pastel pink and purple colours, the motif being flower vase is developed into  $\frac{1}{2}$  brick repeat. This may be probably the motif appeared like a 'Diamond' repeated on right hand elongated twill with twill line ranging towards  $90^\circ$ . The Sofa cover with diamond pattern placed against the wall painted with circles gave a very good combination of geometrical shapes. The two cushion covers in complementary green and blue shades added additional colour to the entire sofa set, placed on the wooden floor. Thus it is a combination of vertical stripes, diamond and circles.

Meanwhile the teachers gave II rank to Sofa cover S2 rendered with contemporary foliage repeated on  $\frac{1}{2}$  brick style. Being in single colour, it added elegance may be because of the Sofa which is arranged against a light yellow wall and similar background. This matching was complementary to the Sofa cover. The students in fact highly appreciated the Sofa cover S2 and gave first preference by rating as 'first'.

The Sofa cover S1 was rated as least preferred by both teachers and students may be because of the analogous colour combination which is relatively dull and simple. In fact there is no drastic difference between the II and III ranks *i.e.* S2 and S1 or S3 to S1 is only 0.02, which is negligible. Under such situation, it may be stated that both the Sofa covers ranked as III may be taken as II rank for all practical purpose; because the colour combination gives a cool effect rendered with the conventional fern and creeper motif repeated in block patterns (Plate 15).



**Plate 13: Preference for virtual images of panels by the respondents**



**Plate 14: Preference for virtual images of bed Sheets by the respondents**

**I Rank**



S3 Flower vase : ½ brick

**II Rank**



S2 Contemporary foliage : ½ brick

**III Rank**



S1 Fern and creeper : Block

**Teachers**



S2 Contemporary foliage : ½ brick



S3 Flower vase : ½ brick



S1 Fern and creeper : Block

**Students**

**Plate 15: Preference for virtual images of sofa cover by the respondents**

### 5.6.3 Preference for virtual images of Dining Table Runners

Table runner add elegance as well mood not only to the room but also the people around, hence under Home Textiles runners have occupied a vital position. Keeping the importance of Dining Table Runners the researcher designed and developed three rendered patterns, and uniqueness of this category was 'the motif' was rendered same.

The entire cluster of respondents ranked D1 as first because of eye catching cream and purple combination. The simple leaf motif developed into pattern by rotational symmetry created an illusion of self-designed Jacquard woven pattern, especially the table linen. It also gave an idea that the traditional Assamese motifs can be produced on Jacquard loom. The collective impression of motif, the symmetry of motif and colour combination have given an impression of elegance, at the same time contrast combination.

The second rank was given to D2 where the runner is simply spread on the table. The motif is in dark maroon colour rendered against white background and is finished with beautiful lace, all around. The lacy edge finish probably appeared much elegant and attractive than D3, which was given III rank by the respondents of both categories (Plate 16).

## 5.7 Respondents outlook about Wall Covering

Wall Coverings are important finishes for interior as well as exterior walls not only add aesthetic appeal but are functional too. The materials used for Wall Coverings may be soft and silky textiles, beautifully printed papers, hard and strong tiles, murals *etc.* Hence, the outlook of the respondents towards Wall Coverings is accepted positively. Greater per cent of the respondents accepted Wall Coverings as decorative because it is either the material used as wall finish or paper pasted on the wall; where one may be permanent like tiles but may be changed as and when needed like wall papers, transparent draperies, wall hangings, wall paintings *etc.* From the results it is learnt that 'screen that covers wall' does not fall under 'Wall Coverings', may be true because, usually no screen is placed against the wall to cover it up. In fact screen is an independent entity used for privacy and not as a part of wall.

### 5.7.1 Preference for virtual images of Tiles

Tiles form the basic wall coverings in kitchen, bathroom, toilets and utility areas. Presently the outdoor walls of the house especially the walls adjacent to main door, balcony, lobby *etc.* are partly covered with bold, bright, attractive and durable Tiles. Some have the entire walls of living room, bedroom, halls and God's room covered with Tiles may be as source of care and maintenance. A great number of choice was given by the researcher among the category of 'Tiles' to the subjects to evaluate them and from the 8 patterns, the teachers gave first rank to T7, the contemporary tree produced on block repeat, also appeared like 'Full Drop' with well defined 'Right Hand Twill' effect creating the wale at 90°. The motifs are well spread with clarity produced in green and pink colours against a tint of ash colour background. In fact the Tiles are so arranged that it is giving the concept of vertical panel in the front view and two rows of horizontal panels on the side wall; the combination of vertical and horizontal panels creating an informal balance in the room that has probably attracted the subjects. However, the students have given III rank to T7.

**I Rank**



D1 Leaf : Rotational

**III Rank**



D3 Leaf with binding : Rotational

**Plate 16: Preference for virtual images of dining table runner by the respondents**



**Plate 17: Preference for virtual images of tiles by the respondents**

Both the teachers and students gave II rank to T3, the kitchen tiles designed with 'Japi' the headgear of Assamese, very colourful, bright and warm, composed of geometrical shapes; most suitable for kitchen, a source of energy.

The III rank among the 'tile designs' was given anonymously by the entire sample to T6, the tiles with contemporary affronte peacock motif produced with block repeat giving a 'Left hand twill' effect on one side of the bathroom and 'Right hand twill' effect on the opposite wall. The size of the motif and the arrangements on two opposite walls into vertical panel and horizontal panel has created an informal balance, thus a new concept using bird motif for bathroom tiles probably created interest among the subjects.

On the other hand the students gave I rank to T1 developed by conventional diamond motif; and arranged in the kitchen as block pattern along with border. The blue coloured diamond against light coloured background looked elegant, attractive because of innovative concept; otherwise the kitchen tiles usually have the pictures of fruits, vegetables, kettle, coffee –tea, cups- mugs *etc.* In fact the teachers rated T1 with III rank.

However, the last preference was given to T8, may be because of the motif, arrangement of the pattern as single line border and fair combination of colours such as black wall with dull colour floor and red colour tiles. The entire arrangement in the room probably created a dull appearance hence, given last preference (Plate 17).

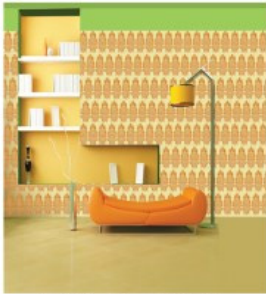
### 5.7.2 Preference for virtual images of Wallpapers

Wallpapers are the most attractive but expensive source of Wall Coverings. Basically it is cellulose in nature but presently the papers have been made moisture proof to show resistance for mildew attack. These papers are available in definite sizes, brilliant colours, designs, 2D & 3D effects and embossed designs providing large scope for the consumers to choose.

The results revealed that the teachers gave I rank to W2 and W5. The common feature among these two Wallpapers is the motifs *Kingkhap* (W2) and *Gomcheng* (W5), both being conventional Assamese motifs, repeated on  $\frac{3}{4}$  brick and block respectively, that created a faint line of twill, presented in warm yellow colour. The colour, motifs and complete arrangement in living room has created a comfortable warmth and a sort of soothing mood of peace. The arrangement of Wallpaper has given a virtual environment of relaxation, appeared classy and royal. In fact the students gave II rank to W2 and III to W5.

On the contrary, the students gave I rank to W4 may be because of pleasing colour combination of 'Concentric petals', providing a cool environment, elegant to eyes and most suitable for summer climate. However the teachers gave least preference to W4, probably their preference was for warm and bright colours (Plate 18).

Teachers



W2 Kingkhap : ¼ brick

I Rank



W5 Gomcheng : ¼ drop

II Rank



W1 Flower pot : Block

III Rank



W3 Flower pot : Block

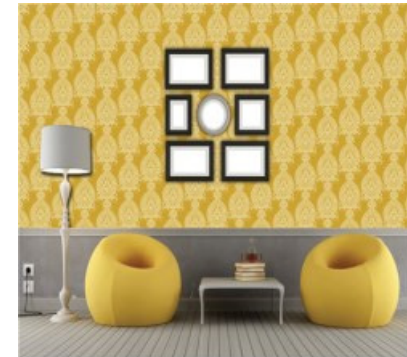
Students



W4 Concentric petals : ¼ brick



W2 Kingkhap : ¼ brick



W5 Gomcheng : ¼ drop

Plate 18: Preference for virtual images of wallpapers by the respondents

## 5.8 Respondents outlook about Floor Covering

The respondents expressed their views about the meaning of 'Floor Covering' and the results are presented in Table 10. In fact 'Floor Covering' is the cover or spread which is thrown on the floor; may be in the centre, corner or sides of the floor in a room; may also a spread between wall to wall; made up of cotton, wool, silk, synthetic or natural sources; in different size, weight, thickness, colours, prints and produced employing different constructional methods. Floor Covering is such a diversified textile product produced in variegated methods, because it performs innumerable functions, however basic being decorative, too.

The entire cluster of respondents agreed that 'Floor Covering' is a spread for the floor always, and not only a carpet or durries but also the spread between the walls. This indicated that the respondents are well read, aware and have good knowledge about 'Floor Coverings', probably a part of Home Science curriculum where the chapters on 'Floor Coverings' are dealt with.

### 5.8.1 Preference for virtual images of Carpets

A Carpet is a textile floor covering, usually has pile of varied heights. Carpet plays several important functions such as insulation, shock absorbent, a foundation to sit and relax, play floor for children, protection from cold *etc.* along with adding colour and decoration to the room.

From the four virtual images of carpets the teachers preferred carpet CA1 may be because of its rich red colour with little green; the diamond motif designed with block repeat gives continuity to the pattern. However, the students gave III preference for CA1, probably fair acceptance for bright red colour.

The teachers gave II rank to CA3 may be because of wonderful flower shoot in yellow colour against rich and gorgeous purple colour. It is relatively small in size hence, appears bold against the wooden floor. The motifs repeated on block style that created a well-defined vertical line effect, thus attracting equal force from yellow and purple colour. However, the students did not like CA3 much hence gave IV rank.

However, the students liked CA4 and ranked first, though the motif and colour combination is same as that of CA3, may be because of well-defined twill line effect; carpet being relatively small compared to room size appeared more like a throw on the floor bringing a unique get-up.

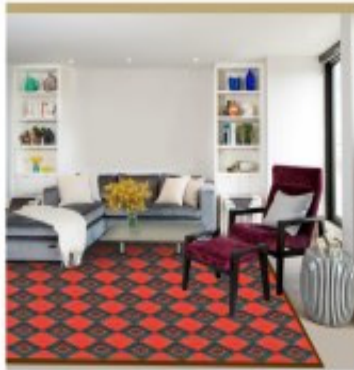
Similarly, the carpet CA2 which is ranked second by students is been rated as IV rank by teachers may be because of multi coloured effect; the pattern being developed on  $\frac{3}{4}$  brick probably did not show clarity in the design (Plate 19).

### 5.8.2 Preference for virtual images of Flooring

Flooring is the general term for permanent covering of a floor or work of installing such as covering. It is also described as any finished material applied over a floor structure to provide a walking surface. Flooring materials may include linoleum or vinyl flooring, apart from carpets and rugs. Materials commonly referred may also include wood, ceramic tiles, stone *etc.* Keeping these aspects in view the researcher designed 6 pattern of flooring, subjected for evaluation and acceptance.

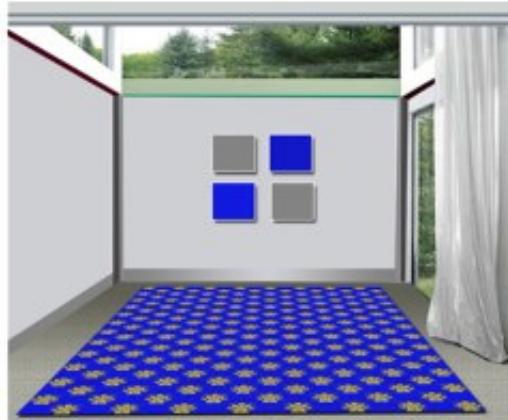
Teachers

I Rank



CA1 Diamond : Block

II Rank



CA3 Flower shoot : Block

III Rank



CA4 Flower shoot : Block

Students



CA4 Flower shoot : Block

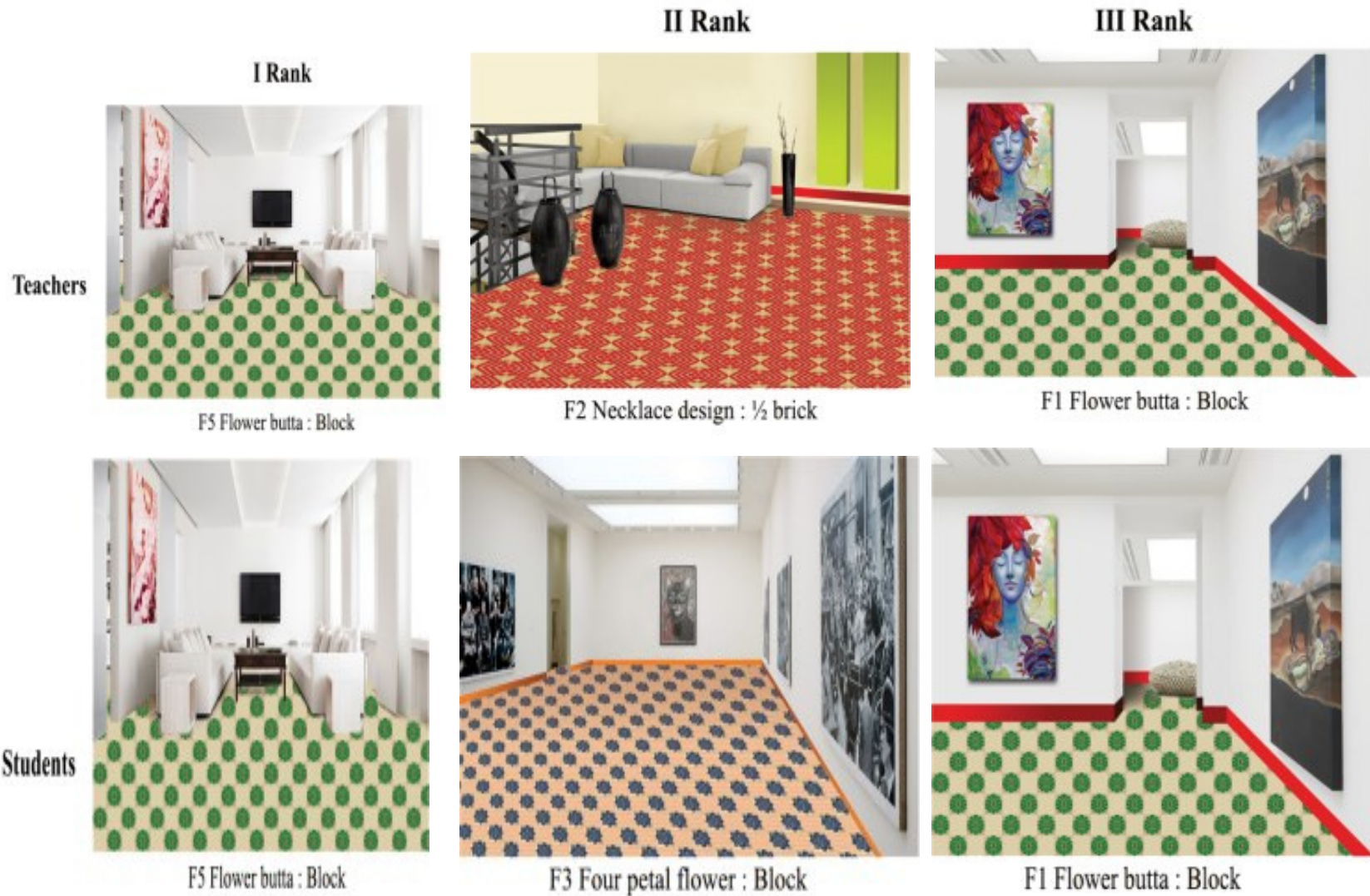


CA2 Hand fan : 3/4 brick



CA1 Diamond : Block

Plate 19: Preference for virtual images of carpet by the respondents



**Plate 20: Preference for virtual images of flooring by the respondents**

Both teachers and students gave first preference to Flooring F5 developed by floral butta repeating block wise, rendered with green flower against cream colour ground. It is the Flooring extending from wall to wall without any border, thus probably appeared elegant, well matched with neutral coloured interiors.

The second rank was given to Flooring F2 by teachers may be because of bright red coloured ground inter spaced with yellow hour glass motif (necklace) repeated on ½ brick style. The design is well matched with the colour combo of the interiors, thus providing warmth and cozy feeling. However, the students gave V rank probably they have limitation for hot and warm colours.

On the other hand the students preferred F3 a sober flooring developed on block repeat using a four petal flower, simple, clear and exclusive in appearance. The flooring is supported with border that probably influenced the student's choice. Nevertheless the teachers gave V rank to F3 probably found the colour combination bit dull.

It is interesting to note that both teachers and students did like F1 a combination of yellow ground with green floral butta finished with red border. In fact the pattern and colour combination is same as that of F5 except for the skirting with red. Both the categories of subjects preferred the flooring supported with skirting or border (Plate 20).

## 5.9 Respondents outlook for Assamese motifs rendered on Home Textiles

The researcher felt necessary to find out the opinion of the respondents about the study on developing virtual images of Home Textiles using Assamese conventional motifs used on clothing. Rendering is one of the digital options that create virtual images before getting on to production. The concept of 'Rendering' is implied on developing export quality textile goods and 'Home Textiles' is a very large segment of 'Textile Exports'. Meanwhile the present day consumer does make his or her selection or choice on 2D and 3D virtual images and the rendered images. This being the digital world, creating, designing and developing the archive is the basic feature of any businessman. Hence, efforts were made to develop an archive for 'Home Textiles' categorically and a feedback from the respondents on the concept of this study was evaluated.

It was very encouraging to learn that the efforts made in developing the contemporary motifs, reviving the traditional motifs, creating elegance and eye catching Home Textiles. The respondents expressed that the study throws light on revival of tribal and mythological symbols, an inspiration to textile designer, home decor, weaver, printer and such other allied industries who can venture in the area of rendering the images on variegated textiles, a foundation for the business.

Hence, it can be stated that the hypothesis set for the study that the Assamese textile motifs used on clothing are not suitable for Home Textiles was rejected.

## 6. SUMMARY AND CONCLUSIONS

The present study on “Restructuring conventional motifs for Home Textiles” was conducted in the Department of Textile and Apparel Designing, College of Rural Home Textiles during the year of 2015-16 with the objectives to explore the possibilities of restructuring conventional Assamese textile motifs into contemporary motifs, to digitize the conventional and contemporary textile patterns, to find out the possibilities of rendering the digitized motifs and acceptance for virtual images of Home Textiles, and to assess the cost of production .

A literature survey was conducted to collect the conventional motifs of Assam which are commonly found on clothing materials and popularly applied for decorating the women attires. In total 35 motifs were collected from various secondary sources viz., traditional woven textiles, research articles, magazines, dissertations & thesis, journals and websites. From the 35 motifs collected, almost fifty per cent of the motifs (17) were sorted by the researcher keeping in view the suitability for Home Textiles. Among the 17 motifs, a total of six motifs (1/3<sup>rd</sup>) were selected by a panel of 30 textile experts comprising of staff and students of Department of Textile and Apparel Designing considering the suitability of motifs for Home Textiles. The conventional motifs were restructured into contemporary form by using ‘CorelDraw- X8’ software and these six motifs were arranged in different layouts by repeating the motifs on ‘Adobe Photoshop’. Further the other conventional woven motifs were also repeated in many ways applying ‘scientific repeat’ viz., block, brick (1/4, 1/2, & 3/4) and drop (1/4, 1/2, & 3/4) as well ‘scientific symmetry’ viz., transformation, reflection, rotational and glide reflection methods for producing variegated design patterns. Both contemporary as well as conventional Assamese textile motifs were rendered on 4 classes of Home Textiles using CAD software i.e. window dressing, soft furnishing, wall covering and floor covering. In total 45 virtual images of Home Textiles were created by rendering technique i.e. Window Dressing- Curtains (5 no.) and Panels (5 no.); Soft Furnishing- Bed Sheets (5 no.), Sofa Covers (3 no.) and Dining Table Runners (3 no.); Wall Coverings- Tiles (8 no.) and Wallpapers (5 no.) and Floor Coverings- Carpets (4 no.) and Floorings (6 no.). Consumer acceptance for these 3D virtual images of Home Textiles was evaluated by administering a self-structured questionnaire, where the total sample size 60, comprised of 30 each teachers and students of the college of Rural Home Science. Finally, the cost of printing the signages on A-4, A-3 sheets as well digitally on cloth was calculated.

The results of the present study are hereby summarized as follows-

### Selection of Assamese motifs for Home Textiles

- The researcher collected 35 conventional Assamese motifs of which 17 were selected by panel of experts
- From the 17 conventional motifs 1/3 of motifs used on Assamese women’s clothing were found to be suitable for Home Textiles
- The motifs suitable for Home Textiles belonged to bird, floral, foliage, tree and kalka categories
- ‘Japi’, the Assamese headgear was the motif most suitable for Home Textiles

## Respondents outlook about Home Textiles

- Teachers have better concept, idea and wide outlook about Home Textiles than students
- Home Textiles comprises of textile materials used for both interiors and exteriors; it is decorative, yet functional may be durable or may not.

## Functions of Home Textiles: Respondents opinion

- Home Textiles basically are decorative, create aesthetic appeal, builds internal environment and positive mood among the inmates
- The respondents agreed that Home Textiles provided internal environment but the level varies with individuals. Therefore, when some have good mood, then others may have bad
- Hence, 'mood' is psychological status governed by surrounding environment, aesthetics, beauty and positive energy

## Preference for Home Textiles by the respondents

- The respondents opined that the foundation substrate in Home Textiles is the 'fabric'
- Special attention is given to decorate the living room, hall and bedroom with selective Home Textiles, by throwing low light on interiors of kitchen and bathroom, generally
- The teachers have rich knowledge about Home Textiles & its applications than the students
- Greater per cent of the students being hostelites had limited freedom to decorate their rooms, thus had limited level of knowledge

## Respondents outlook about Window Dressing

- Teachers (86.67 %) and Students (100.00 %) opined that 'Window Dressing' always means 'Dressing the windows with curtains and draperies'
- It was also opined that 'Window Dressing' encompasses the entity of 'Dressing the quilt' (76.67 % and 66.67 %), 'Dressing the sliding windows', and 'Dressing with plantation and creepers', sometimes
- One fourth of the teachers agreed that 'Dressing the grill', 'Dressing the sliding windows' and 'Dressing with plantation and creepers' is never meant to be 'Window Dressing', which is true. This is supported by about 10.00 to 15.00 per cent of students

## Preference for virtual images of Curtains

- The teachers and students gave I and II ranks to the curtains developed with floral motifs either by drop repeat or symmetry
- The teachers opined that warm colours add energy, warmth and space to the room; curtains with borders enhance the beauty of the curtains
- Exaggerated and elaborate curtains are found to be heavy and very suitable to star hotels *etc.*
- Curtains rendered with geometrical motif were not preferred by the respondents

## Preference for virtual images of Panels

- Panels though basically considered as an entity of 'Window Dressing' but can be a part of 'Wall Dressing' too
- Teachers preferred a centrally placed rectangular panel (P5, I rank) having sufficient wall area on either sides of the panel
- Traditional 'Diya and Lampstand with block repeat' of P5 is accepted also by students (III rank) since it gives a vertical line effect on the panel

- The students did prefer (I rank) a similar panel positioned on one side of the wall with conventional motif 'Man riding horse with reflection repeat'
- The 'symmetry reflection' created a vertical stripe effect, adding height to the panel P2 and is ranked III by the teachers
- The panel P4 created by mirror effect of 'Kalka' motif was ranked II by the students
- Teachers gave II rank to P1, the border style panel, produced on  $\frac{3}{4}$  brick repeat of human figure produced in yellow and orange colour
- The traditional Assamese motifs were found to be suitable for Panel produced on both reflection and block repeats created vertical stripe effect on rendering
- Brick repeat created a twill line effect adding a special effect to Panel P1

## Respondents outlook about Soft Furnishing

- More than 50.00 per cent of the teachers opined that 'Soft Furnishing' always means 'Fabric used at home' (66.67 %), 'Fabric used for furnishing' (53.33 %) and 'Fabric being soft and pliable' (50.00 %)
- The teachers remaining correspondingly listed the same entities as, 'Sometimes'
- Majority of the students viewed 'Soft Furnishings' as the 'Fabric being soft and pliable' (83.33 %), followed by 60.00 per cent each 'Fabric used at home' and 'Fabric used for furnishing', always and sometimes (46.67 %)
- Very meagre per cent of both teachers and students (each 06.67 %) opined that 'Soft and pliable fabric' and 'Fabric used for upholstery' are never considered as 'Soft Furnishings'

## Preference for virtual images of Bed sheets

- The respondents preferred the foliage motif as the most suitable for bed sheets
- The pattern developed on  $\frac{3}{4}$  drop repeat produced a well-defined twill line (LHT), is more attractive than block repeat
- The combination of tint and shade of cool finish is less becoming than frilled edges that add 'emphasis' to the bed linen
- Both conventional and contemporary Assamese motifs are suitable for bed linen
- Cool colours are found to be interesting than warm colours
- Drop repeats either  $\frac{1}{4}$ ,  $\frac{1}{2}$  or  $\frac{3}{4}$  are most interesting than block repeat

## Preference for virtual images of Sofa covers

- Geometrical motifs are becoming for sofa covers
- The motif on  $\frac{1}{2}$  brick repeat created a twill line at 90°
- The cushion covers in contrast to the colour of Sofa cover are more appealing
- The sofa covers and cushion covers in analogous combo are found to be dull and displeasing
- The patterns developed in block repeat are less pleasing

## Preference for virtual images of Dining table runner

- A single motif in single repeat can be presented in several styles to give variegated effects
- The white colour motif developed on white background D1 created an illusion of a self-designed woven pattern like Jacquard pattern

- A bright coloured table runner on white table linen produced 'contrast' effect than analogous combination
- Lacy trimming is most exciting for table runner than straight binding
- The respondents opined that the Table Runner should be simple, elegant and sober in colour and less decorative

## Respondents outlook about Wall Covering

- Most of the teachers (90.00 %) opined 'Wall Covering' as a 'decorative element'; followed by 'any material used as wall finish' (63.33 %) and 'a sheet of paper pasted on the wall' (56.67 %), always; also expressed that sometimes Wall Covering may be the 'screen that covers wall' (43.33 %)
- Students did agreed with teachers with slight variation in percentage *i.e.* Wall Covering is a 'wall decorative' (83.33 %), 'any material used as wall finish' (40.00 %), 'sheet of paper pasted on the wall' (36.67 %) and 'screen that covers wall' (33.33 %), always
- Very meagre per cent expressed that 'paper pasted on the wall' (10.00%), 'screen that covers wall' (10.00%) and 'Material used as wall finish' (06.67%) are never considered as 'Wall Covering'

## Preference for virtual images of Tiles

- The teachers preferred contemporary tree motif coloured in green and pink, developed in block repeat
- The tree motif which is clear, simple and giving a twill line effect is suitable as 'Tiles' for bathrooms
- The bright coloured geometrical motif, like 'Japi' repeating in full drop or block repeat is most suitable in kitchen
- Geometrical motifs like 'Japi' and 'Diamond' are most becoming as 'Kitchen Tiles'
- Both warm and cool colours generate energy in the kitchen
- Bird motifs like 'Affronte peacock' is accepted as tiles for 'bathroom'
- Arrangement of tiles as horizontal and vertical panels on opposite or adjacent walls create informal balance
- Light and sober colour tiles are becoming for bathroom
- Any beautiful tiles with conventional or contemporary motif used along with block wall or tiles is least preferred

## Preference for virtual images of Wallpaper

- Conventional Assamese motifs are most suitable for wallpapers
- The wallpapers may be in warm or cool colours depend on the area of wall where affixed
- The wallpapers should create cool internal environment, soothing to eyes, and suitable to summer
- The warm colour wallpapers may be stimulating during winters
- Motifs repeated on  $\frac{3}{4}$  drop created a faint twill line, more preferred than deep twill line of  $90^\circ$ , produced on  $\frac{1}{4}$  drop repeat

## Respondents outlook about Floor Covering

- Both teachers and students expressed that 'Floor Covering' always means a type of spread for the floor (93.33 % and 86.67 % respectively), followed by 'a carpet' (56.67 and 76.67 %, respectively) and 'a spread from wall to wall' (30.00 % and 26.67 %)
- On the other hand respondents of both the categories opined that 'Floor Coverings' are sometimes 'wall to wall spread', 'cotton durries' and 'a carpet'
- Surprisingly, 10.00 per cent to 20.00 per cent of the respondents never considered 'Floor Covering' as a 'wall to wall spread' and 'cotton durries'

## Preference for virtual images of Carpets

- Teachers preferred the rich coloured carpet CR1 (I rank) with 'Diamond' motif produced in block repeat
- But students did not accept bright red colour for carpet and hence gave CR1, III rank
- Teachers preferred the carpet CA3 (II rank) with wonderful flower shoot in yellow colour against rich and gorgeous purple colour in block pattern
- Students did prefer a relatively small in size carpet (CA4, I rank) with well-defined twill line effect; appeared more like a throw on the floor bringing a unique get-up
- The multicoloured carpet CA2 with 'Hand fan' motif on  $\frac{3}{4}$  brick was preferred (II rank) by the students but least preferred by teachers due to lack of clarity in the design
- Carpets that are not wall to wall and smaller in size appeared like a throw are more becoming

## Preference for virtual images of Flooring

- Both teachers and students gave first preference to Flooring F5 developed by repeating floral butta on block, rendered with green flower against cream colour ground
- Flooring extending from wall to wall without any border probably appeared elegant, well matched with neutral coloured interiors
- The second rank was given to Flooring F2 by teachers with bright red coloured ground interspaced with yellow hour glass motif (necklace) repeated on  $\frac{1}{2}$  brick style
- Both teachers and students did like F1 a combination yellow ground with green floral butta finished with red border
- The students preferred F3 a sober flooring developed on block repeat using a four petal flower, simple clear and exclusive in appearance
- Both the categories of subjects preferred the flooring supported with skirting or border

## Respondents outlook for rendered Assamese motifs on Home Textiles

- Rendering is one of the digital options that create virtual images before going on to production
- The teachers highly appreciated the efforts made by the researcher in reviving the traditional Assamese motifs (93.33 %) as well mentioned that it is a means to preserve the conventional motifs (90.00 %)
- More than 70.00 per cent of both teachers and students expressed that the virtual images are elegant and eye catching (76.67 % and 73.33 %), the basic idea and concept of home décor (86.67 % and 83.33 %), and an inspiration for revival of other tribal and mythological motifs (76.67 % and 70.00 %), respectively
- Very meagre per cent of the respondents (03.33 %) expressed that the study has created virtual images by rendering using CAD software

## Implications and recommendations

The conventional Assamese motifs and designs are the main emphasizing factor in the traditional handloom fabrics of Assam. But till now these motifs are exclusively used in clothing sector. Assamese weavers produce beautiful designs on the borders of the mekheles, chaddars, rihās (traditional garments used by the women), and gamosas (towel). The galaxy of designs is mostly stylized symbols of animals, human figures, flowers, birds, diamonds and cross borders. Therefore, the researcher felt the need motifs need to revive the conventional motifs and expand the horizon by implementing them on other textile materials. Hence, the present study concentrates on restructuring the conventional Assamese motifs for Home Textiles. The findings of the present study give a clear picture of the preference for conventional Assamese motifs for different Home Textiles including curtains, panels, bed sheets, sofa covers, dining table runners, tiles, wallpapers, carpets and floorings. The implications and recommendations of the present study are as follows:

- Modern lifestyles and changing needs of consumers do demand a practical and ingenious approach to home furnishings and textiles. Thereby, Interior designers can decorate the house by using these Home Textile; rendered with conventional as well contemporary Assamese motifs
- These virtual images of rendered Home Textile products can definitely have great demand in star hotels and such institutions which would enrich the interior
- It is a unique concept of reviving Assamese conventional motifs and rendered patterns create a new horizon for exporters
- The archive of virtual images are documented for future reference as secondary sources

## Suggestions for further study

Further studies can be conducted in the following areas:

- Development of Home Textile products from virtual rendered images using conventional motifs
- Incorporating the conventional motifs on traditional Indian saris through printing, embroidery and weaving
- Revival of tribal and mythological motifs, documentation and application on variegated textiles
- Market potential of virtual rendered images of Home Textiles with conventional motif in Indian fashion world
- Documentation of historically famous textile motifs statewide
- Developing fashion fabrics for Indian fashion world

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## APPENDIX I

### Title of Research: “Restructuring Conventional Motifs for Home Textiles” Questionnaire

Kindly rate the preference of the following Assamese conventional motifs keeping in view of its suitability for furnishing products

General information :

Name of the respondent :

Age :

Education :

Specific information

Sl. No.	Name of the motifs	Ratings				
		5	4	3	2	1
A.	Naturalistic motifs					
a.	Floral					
1	Leaf					
2	Four petal flower					
b.	Bird					
1	Affronte peacock					
B.	Geometric motifs					
1	Hand fan motif					
2	Headgear					
C.	Stylized motifs					
1	Gomcheng					
2	Kingkhap					
3	Flower and leaf					
4	Flower and tree					
5	Foliage					
6	Tree					
7	Kalka butta					
8	Flower pot with leaves					
9	Concentric flower					
10	Kalka					
11	Stylized hand fan					
12	Mirrored peacock					

Note: 5- Excellent, 4- Very good, 3- Good, 2- Fair, 1- Poor

## APPENDIX II

### Title of Research: “Restructuring Conventional Motifs for Home Textiles” QUESTIONNAIRE

ON

Acceptance of Home Textile products rendered with Assamese Textile motifs

- I. A) General information :
- Name of the respondent :
- Age :
- Education :
- II. 1. Meaning of Home textiles- ( put  $\checkmark$  mark)
- a. Fabrics used in home for decoration
  - b. Textiles used for furnishings
  - c. Soft textiles used for beautification of interiors
  - d. Harsh textile materials both functional and decorative

2. What is the function of Home textiles –

Sl. No.	Details	Always	Sometimes	Never
i.	Decorative			
ii.	Provide mood			
iii.	Provide internal environment			
iv.	Add aesthetic appeal			

3. Home textiles comprises of -

Items	A	ST	N	Items	A	ST	N
a. Bed spreads				g. Towels			
b. Blankets				h. Table cloth, mats and runners			
c. Pillows with cover				i. Kitchen linens			
d. Cushion with cover				j. Bathroom accessories ( tiles)			
e. Carpets and rugs				k. Curtains and Draperies			
f. Wallpaper				l. Kitchen accessories ( tiles)			

- B) A- Always, ST- Sometimes, N- Never
- I images of Home textiles rendered with Assamese textile motifs -

**1.** What do you mean by window dressing?

Sl. No.	Details	Always	Sometimes	Never
i.	Dressing windows with curtains and draperies			
ii.	Dressing of the grills			
iii.	Dressing of the sliding windows			
iv.	Dressing with plantation and creepers			

Category A: Window dressings

Products	Designs	Suitability of motif for the product					Arrangement of motifs and patterns					Colour combination					Overall appearance				
		5	4	3	2	1	5	4	3	2	1	5	4	3	2	1	5	4	3	2	1
Curtains	CR1																				

	CR2																			
	CR3																			
	CR4																			
	CR5																			
Panels	P1																			
	P2																			
	P3																			
	P4																			
	P5																			

Note : 5- Excellent , 4- Very Good , 3- Good , 2- Fair , 1- Poor.

Overall impression: (put  $\surd$  mark)

i) Excellent, ii) Very good, iii) Good, iv) Fair, v) Poor

**2.** What do you mean by soft furnishing?

Sl. No.	Details	Always	Sometimes	Never
i.	Fabric used at home			
ii.	Fabric used for furniture			
iii.	Fabric used are soft and pliable			
iv.	Fabric used as upholstery			

Category B: Soft furnishings

Products	Designs	Suitability of motif for the product					Arrangement of motifs and patterns					Colour combination					Overall appearance				
		5	4	3	2	1	5	4	3	2	1	5	4	3	2	1	5	4	3	2	1
Bed sheet	B1																				
	B2																				
	B3																				
	B4																				
	B5																				
Sofa cover	S1																				
	S2																				
	S3																				
Dining table runner	D1																				
	D2																				
	D3																				

Note : Excellent – 5, Very Good – 4, Good – 3, Fair – 2, Poor- 1.

Overall impression: (put  $\surd$  mark)

i) Excellent, ii) Very good, iii) Good, iv) Fair, v) Poor

**3.** What do you mean by wall coverings?

Sl. No.	Details	Always	Sometimes	Never
i.	It is a wall decorative			
ii.	It is a sheet of paper pasted on the wall			
iii.	It is any material used as wall finish			
iv.	It is the screen that covers wall			

Category C: Wall coverings

Products	Designs	Suitability of motif for the product					Arrangement of motifs and patterns					Colour combination					Overall appearance				
		5	4	3	2	1	5	4	3	2	1	5	4	3	2	1	5	4	3	2	1
Tiles	T1																				
	T2																				
	T3																				
	T4																				
	T5																				
	T6																				
	T7																				
	T8																				
Wallpaper	W1																				
	W2																				
	W3																				
	W4																				
	W5																				

Note : Excellent – 5, Very Good – 4, Good – 3, Fair – 2, Poor- 1.

Overall impression: (put √ mark)

i) Excellent, ii) Very good, iii) Good, iv) Fair, v) Poor

**4.** What do you mean by floor covering?

Sl. No.	Details	Always	Sometimes	Never
i.	It is a carpet			
ii.	It is a spread from wall to wall			
iii.	It is cotton durries			
iv.	It is spread for the floor			

Category D: Floor coverings

Products	Designs	Suitability of motif for the product					Arrangement of motifs and patterns					Colour combination					Overall appearance				
		5	4	3	2	1	5	4	3	2	1	5	4	3	2	1	5	4	3	2	1
Carpet	CA1																				
	CA2																				
	CA3																				
	CA4																				
Flooring	F1																				
	F2																				
	F3																				
	F4																				
	F5																				
	F6																				

Note : Excellent – 5, Very Good – 4, Good – 3, Fair – 2, Poor- 1.

Overall impression: (put √ mark)

i) Excellent, ii) Very good, iii) Good, iv) Fair, v) Poor

III. Overall opinion of the respondents for rendering the contemporary Assamese designs on Home Textile and creating virtual images.

Opinions	Ratings				
	5	4	3	2	1
a. Effort of reviving conventional motifs					
b. Elegant and eye catching					
c. Inspiration for reviving other tribal and mythological motifs					
d. An idea for home decor with traditional essence					
e. A means to revive and preserve traditional textile motif					
f. Motivation to incorporate the conventional motifs on traditional sarees through printing					
g. Creating virtual images by rendering					

Date :  
Place : Dharwad

Signature :  
Name of the faculty :

# **RESTRUCTURING CONVENTIONAL MOTIFS FOR HOME TEXTILES**

**GAYATRI RAJBANSHI**

**2016**

**Dr. SHAILAJA D. NAIK  
MAJOR ADVISOR**

## **ABSTRACT**

The present investigation on “Restructuring conventional motifs for Home Textiles” was conducted during 2014-16 with the objectives of restructuring and digitizing conventional Assamese textile motifs and rendering the digitized motifs on different Home Textiles by using CAD software. From the total 35 collected motifs, almost fifty per cent of the motifs (17) were sorted by the researcher keeping in view the suitability for Home Textiles. Among the 17 motifs, the six motifs identified by textile experts were restructured into contemporary form by using ‘CorelDraw- X8’. These six motifs along with other conventional motifs were arranged in different layouts by repeating the motifs on ‘Adobe Photoshop’ for producing variegated design patterns. Both contemporary as well as conventional Assamese textile motifs were rendered using CAD software on 4 classes of Home Textiles viz., window dressing, soft furnishing, wall covering and floor covering, a total 45 virtual images of Home Textiles were developed by rendering technique.

Thirty each teachers and students of the college of Rural Home Science, Dharwad evaluated the 45 virtual images of Home Textiles. It was found that the naturalistic, geometrical and stylized motifs used on Assamese clothing are suitable for Home Textiles hence could be well applied. Majority of the respondents preferred naturalistic motifs i.e., floral and bird are mostly suitable for window dressing as well soft furnishing whereas geometrical and stylized motifs for wall and floor coverings. The respondents expressed that the study throws light on revival of tribal and mythological symbols, an inspiration to textile designer, home decor, weaver, printer and such other allied industries who could venture in the area of rendering the images on variegated textiles, a foundation for the business.