



The Art of Hand Knitting in Darjeeling

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Abstract

The purpose of this paper is to shed light on the traditional hand knitting of Darjeeling, which is influenced by the Himalayan culture and familiarising the local artisans with a new range of products (besides caps, socks, leg warmers, sweaters and baby suits, mufflers, and cushion covers) while remaining true to the regional design aesthetic. The main motive of the design ideation is to add a new range to the existing products, making them more explorative and appealing by redefining the local aesthetics in silhouettes and structures. A collection using 100 percent original sheep and yak natural dyed wool yarn was designed and developed after primary and secondary research. This adds distinctiveness to the pieces. The silhouettes and structures of the collection are based on ethnographic research and trends. The design intervention for the garments started after primary market surveys and forecast reports from WGSN.

An autumn/winter collection has been designed keeping research, culture, and trends in mind. A collection was conceptualised and developed using the locally available materials and skills of local artisans.

Key words: Hand Knitting, Natural Dyeing and Natural Yarns.

Introduction

Darjeeling is a small town situated in the northernmost district of West Bengal, in the foothills of the Himalayas. The district is renowned for its tourism, tea, rich culture, traditions, and India's highest railway station in the Himalaya.

The craft of hand-knitting in Darjeeling dates far back to the British era. Knitted products such as socks, mufflers, monkey caps, sweaters, etc. are made by the locals mainly for the cold climatic conditions of the winters in Darjeeling.

Hand knitting in Darjeeling became a popular source of income for the housewives. The regular knitters have an order-from-supply basis with garment shops or the locals in their village. However, all of these enterprises are micro-household units. The patterns and designs they develop are at their own capacity or are derived from the already existing market. Simple products may have received much appreciation in earlier times, but now, with the modernization of the market, they are facing problems. The artisans are finding It is hard to preserve the tribal craft as the sweaters, cardigans, and baby suits that are sold at bazaars are mostly from Ludhiana. It hampers the local market due to its latest designs, superior finishing, and lower price.

Keeping in view the above points, an attempt was made to study the traditional hand knitting of the Darjeeling, and a design intervention was done to meet the contemporary requirements of both traditional local craft and the urban consumer.

Objectives

- 1- To study the raw materials, techniques, and designs of the hand knitting craft of Darjeeling
- 2- Design intervention and product development using natural dyed woollen yarn and hand knitting techniques.

Materials and Methods

Raw materials:

Hand-spun coarse 100 percent sheep and yak's wool are used.

Himalayan sheep wool is known for its insulating properties. This natural fibre uniquely traps warm air close to the body, making it an excellent choice for clothing in chilly weather. Wool is breathable, wicking away moisture from the body.

Yak wool is one of the softest and warmest natural fibres out there. This precious wool comes from the yak, a cattle-like creature that lives in the lofty heights of the Himalayas and the Tibetan Plateau. As these animals deal with cold winters and plummeting temperatures, they have developed a dreamy warm coat that is considered as soft as cashmere, warmer than sheep wool, and has the added benefits of being moisture-wicking, beautifully breathable, and hypoallergenic to boot.

Hand spinning process: the following steps are used:



Image1- Sorting of raw wool

1.Sorting

Raw sheep wool is ordered from Ladakh in huge quantities. Once the wool is delivered, it is kept in a well-lit room where five to six workers sit and carefully sort it manually. The wool is sorted based on its colour.

2. Washing

After sorting, the raw wool is then washed. Simply washing wool can remove many impurities, but the grease can sometimes require soap. Hence, the wool is washed in a bucket with soap. Two or three workers hand washes the wool in buckets.



Image 2- washing of wool

3. Drying

The washed wool is then dried on rooftops. During summers, when the temperature ranges from 11.2°C to 19.1°C, washed wool takes 3–4 days to dry. On sunny days, it takes even less. However, drying wool can be problematic during the winter and monsoon, which is why the workers refrain from washing wool during these seasons.

4. Carding

Once the wool is dried, it is carded with hand carders. The wool is put in thin layers on the combs of the carders and brushed lightly. When that is done, the combed wool is rolled and kept aside for spinning. About 2–3 workers do the job of carding wool.



Image 3- Carding by Hand

5. Spinning

The carded wool fibres are then spun by hand. The cluster also interestingly makes these wooden spinners with a wheel that assists the worker while spinning the fibres into yarns. The hand-spun yarns vary in thickness.



Image 4- Hand spinning

6. Knitting

The main two basic stitches used in knitting are called knit and purl. To begin stitching, usually start by making a slip knot on one needle and casting on the number of stitches needed for the product. The basic stitches are created using both needles, wrapping the yarn over one needle and drawing the wrapped yarn through loops on the other needle. At the end, it finishes by binding off the stitches.

Natural Dyes

Natural dyes are the colorant which are extracted from naturally resources like plants and minerals. Following are the dyes found in the Himalayan region. These dyes are used to dye the yarns used for weaving and knitting.

Barberry Plant

It is particularly the Japanese and European varieties, is an invasive shrub which can be easily found and accessible. This plant leaves a strong yellow or greenish-yellow dye. It is also good for making an excellent turquoise colour when over-dyed with indigo. It is mainly found in woodlands.

Indigo Plant

Indigo, a famously tropical plant, grows well in ample sun and rain. The best time to sow the seeds is just before the monsoons, in the month of June. In about three months, just as they start flowering, the indigo plants are harvested.

Myrobalan Nut

The nuts produced by the Terminalia chebula tree helps as a dyeing agent. It gives a light variant of yellow when applied. This nut is a good base for over-dyeing and makes an ideal colour when over-dyed with single indigo drop for teal. This plant is mainly found in mixed deciduous forests, dry evergreen forests and scattered in teak forests.

Rhubarb Root

It is a perennial plant and the roots produce shades of yellow and orange and they are an important source of dye in Tibet and Nepal.

Madder Root

Madder dye plants has been in use for thousands of years as a dying agent. The chemical compound which produces the red colour is Alizarin.

Rumex Leaf

The plants have leathery coated leaves with long taproots. They form mordant free mustard –fresh green dyes.

Tea Leaf

Tea is a drink that is popular all over the world. All varieties of teas are produced only from Camellia Sinensis plant. They contain other herbs and spices, used as a natural dyeing agent and have various medicinal values.

Traditional Motifs

The local knits of Darjeeling are known for their colorful stripes and **Jacquard** motifs more than their structures. The most popular Jacquard motif that can be traced is a triangle. The shape is inspired by the homely scenery of the Himalayan mountain; Kanchenjunga.

Few of the motifs that were found existing in the market are:

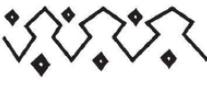
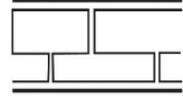
			
This geometric structure resembles the roofs of monasteries and is often found on Bhutia rugs	Simple cross motif that is mostly used on sweaters.	Triangular motifs can be seen in abundance with variations in placements	Endless Knot- This motif is symbolic to eternity in Buddhism.
			
Geometric heart motif has been on popular demand out in the local market.	The shape of the motif is taken from the ups and downs of the hills	This motif is a variation of a triangle motif.	This motif resembles sets of teeth on a line.

Image 5: Different traditional motifs

Existing hand-knitted products of Darjeeling:

As per the history of Darjeeling, hand knitting has been practicing for making knitted goods from generation to generation. The women artisan uses the traditional patterns, process and colours, etc. in the design of hand knitting products. Traditional products are sweaters, ponchos, caps, socks, mufflers, and leg and ear warmers.





Image 6: Existing Hand knitting products

Knitting clusters in Darjeling

Hayden Hall: Hayden Hall is a private, non-profit organisation founded by Fr. Edgar Peter Burns in 1969. It works towards the development of underprivileged women in the area and helps them become self-reliant. The following range of products are made by women artisans.

Range of products

- Bhutia Carpets: The handwoven carpets are the main product sold, as they are the most expensive. The pieces are exported to international clients and are bought by local clients as a gift during weddings, mainly. Cost: Rs. 10,800 to 50,000.
- Bags: There are about 15 different types of bags sold, ranging from paper bags to woven bags and jute/hemp bags. Cost: Rs. 25 to Rs. 1,800.
- Sweaters and Ponchos: Handknitted and crocheted sweaters and ponchos are made from synthetic or natural yak yarns. Cost: Rs. 850 to 2,000.
- Accessories: socks, caps, mufflers, and gloves are the most easily sold products. Cost: Rs. 150 to Rs. 650.

Design Intervention

Keeping in view their tradition, current trends, and the market, the collection was conceptualised and developed using natural woollen yarns dyed with natural dyeing.

Most forecast reports on WGSN lead to slow and sustainable fashion with artisanal appreciation that creates a deeper connection with the wearer. Fashion has become a conscious choice that can give one a peep at the wearer's point of view. Clothing with cultural stories is going to be the next big thing, as most want to be associated with roots that are personal through design. Demand for hand knits is to be seen rising, for they look alive and unique, giving the person a feeling of earthiness.

Patra (chiso)

Concept: Patra means layers, and Chiso means cold in the Nepali language. During the cold months in Darjeeling, layers of clothing are required to keep the body warm. Similarly, the collection is an attempt to include the

different layers of cultures that are required to keep Darjeeling warm at heart. The attempts can be found in terms of silhouettes, yarns, and structures used.

Yarn used—100 percent sheep wool, dyed with tea—was used to explore the different hand knitting swatches.

Development of swatches: A total of 20 swatches were developed keeping the concept, research, and aesthetic in mind, as well as freshness and uniqueness. The developed hand-knitted swatches were evaluated visually by the panel (a panel consisting of 4 faculty and 2 designers).



Table 1:

Visual Display of Evaluation Report of Swatches Designs

Swatches number	Visual Appeal	Colour Combination	Appropriateness of Motif	Overall Appearance	Avg. Score
Swatch 1	3.5	3.2	3.7	3.1	2.8
Swatch 2	2.6	2.4	2.2	3	3.1
Swatch 3	3.4	3.2	3.3	3.1	2
Swatch 4	2.9	3.4	3.1	3.4	2.8
Swatch 5	2	2.5	3.2	2.6	2.1
Swatch 6	2.7	2.1	2.6	2.8	2.2
Swatch 7	4.4	3.6	4.1	3.4	3.7
Swatch 8	3.8	2.7	2.9	3.5	3.4
Swatch 9	3.4	2.2	3.5	3.3	2.6
Swatch 10	4.1	4	4.8	3.8	4.5
Swatch 11	3.8	3.7	3.5	2.8	3.1
Swatch 12	4.1	3.8	4.2	4.7	4.2
Swatch 13	3.9	4.6	3.5	3.7	4.6
Swatch 14	4.2	3.2	3.7	4.4	4.2
Swatch 15	3.7	3.6	4.6	3.4	3.7
Swatch 16	3.5	3.2	3.7	3.1	2.8
Swatch 17	2.9	3.4	3.1	3.4	2.8
Swatch 18	3.8	2.7	2.9	3.5	3.4
Swatch 19	3.5	3.2	3.7	3.1	2.8
Swatch 20	3.4	2.2	3.5	3.3	2.6

Evaluation of swatches

20 swatches were developed, out of which 9 swatches were selected by the jury panel. Various parameters were used to select the best design, as shown in Table 1. The following are the final swatches (Image 7), which were used further in designing the hand knitting collection.



Image 7: Selected swatches for the Collection

Development of silhouettes

Twenty silhouettes were designed on CAD using the selected swatches. Those silhouettes were shown to the jury panel. After evaluating the silhouettes using various parameters, five silhouette designs were selected for the range development.

Range development

The final silhouette designs were executed by the local artisans, as shown in image 8. The developed collection was well appreciated, as it has the essence of the culture and a touch of contemporary trends.

Evaluation Report of Silhouette Designs



Image 8: The Final Range



Image 9: Photo-shoot of the ensembles

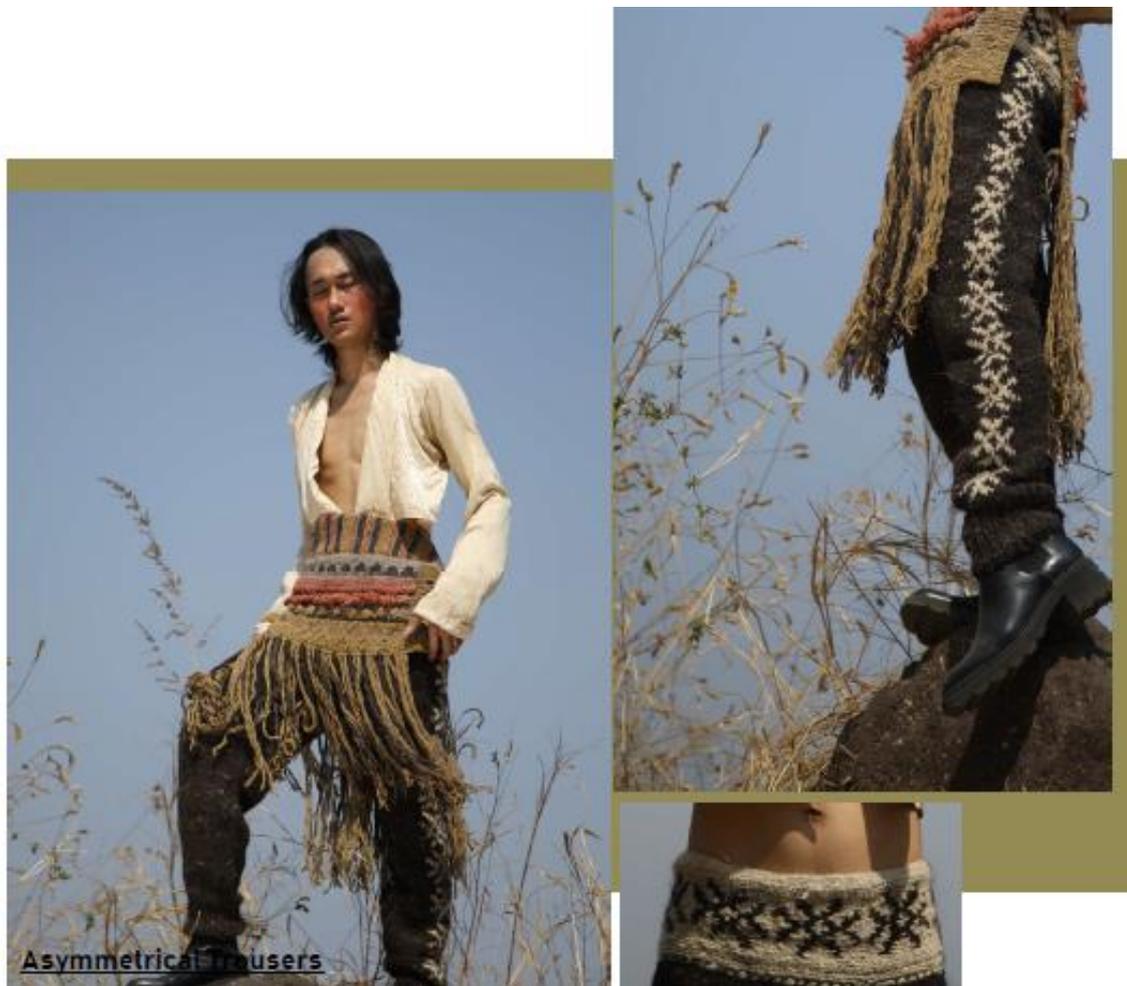


Image 10: Photo-shoot of the ensembles

Conclusion: The entire process for making hand knitted products from locally available yarn and natural dyes is eco-friendly and sustainable. It is suggested that new intervention models and strategies in designing and marketing are required to develop a new product ranges and connect them to mainstream fashion.

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