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Product innovation in felt and their consumer acceptability

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ABSTRACT

In the present study an attempt has been made for value addition of felt by product diversification and surface enrichment. Thirty products were prepared. New surface enrichment techniques were used individually or in combination. Products were evaluated by a panel of judges on the basis of five criteria.

Key Words : Felt, Product diversification, Surface enrichment

INTRODUCTION

No wool fabric has so wide a range both in quality and end use as felt. Two factors mainly contribute in the variety of the fabrics. First, the process is cheap. Second, the simplicity of production process which lends itself to easy variation. Variation in raw material also makes different types of felt.

Felting is a simple technique requiring very little equipment. Main advantage of felting over other textile manufacturing techniques is that it produces a finished product in much less time.

Felt is made in many countries all over the world and each country, the process of making it is the same. Rajasthan is a maximum wool processing states in India and rich in wool based industry. Felt manufacturing units are scattered in different pockets of the Rajasthan state mainly in Tonk, Jaipur and Bikaner. Today approximately 150 different handmade felt units are working in Rajasthan and other parts of country (Shakyawar *et al*., 2004). Handmade felt is commonly found in Malpura, Deoli, Uniara, Todaraisingh and Newai (Batra *et al.*, 1998).

Felt has multiple properties which are advantageous in product designing. Felt has no warp, filling or selvedge which simplifies its use in construction of articles. There is no consideration of grain while placing pattern properly (Corbman, 1983). Felt has high thermal insulation property due to content of wool and presence of substantial air pockets in its construction. (Wani and Pokharna, 2004)

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Another advantage contributed by wool content is the brightness of colour. Wool takes up dyes well and the felt looks attractive. Felt is a fabric in which both sides can be used as the face side. This makes it suitable for making reversible articles (Gill and Pusphanjali, 2005).

Felt is versatile material which is an integral part of our daily life. The industry generally produces items like toys, carpets. hats, jackets, wall hanging, foot mats, slippers, caps, bags, dusters, pillows, pillow covers, magazine holders, Aassan, tea cosies, ghuggies, shoe bags, blankets, table mats, sofa spreads, sofa backs, television covers, cushions and other decorative and utility articles.

Market survey revealed that designing techniques of felt articles is limited to patchwork, appliqué and embroidery. Floral and geometrical designs are generally used in these techniques. Patchwork felt designs are made by cutting out shapes in different coloured felt and stitching the pieces together to form the desired pattern. In embroidery only two or three types of stitches are used and done with woollen thread (Singh, 2004).

Designing is a careful and knowledgeable manipulation of art according to present day need, which will increase marketability of product. As consumer demand variety so new designing techniques will help in improving aesthetic appeal and give variety to consumers. Everyone is looking for novelty and innovative ideas to create new designing patterns to produce attractive items which are essential in fashion world.

As mentioned before, India has rich resources and cheap labour. It is helpful for the rural women empowerment but due to lack of product diversification felt industry is struggling to achieve national and international fame. In the increasing competitive world today, it becomes essential to develop varied products of felt using different techniques. Puspanjali (2009) opined that an industry cannot survive solely upon a monotonous range of products, especially in textile sector which is very much demand motivated. New looks and structures are constantly in demand. Manufactures must always be inventive to satisfy this demand. The product may be upgraded by developing superior color, new design, new designing techniques and new yarns incorporation.

Thus development of new products, new designs and designing technique is need of the hour for sustainability of the craft. An attempt was made for value addition of felt by surface enrichment and product diversification.

METHODOLOGY

Making list of possible techniques to be used :

A list of different surface enrichment techniques possible to be used to enhance the aesthetic appeal of felt products was prepared. The list is given here-

Embroidery:

Embroidery with different stitches with the help of different types of threads

Printing:

Batik, Block Printing, Stencil Printing, Discharge Printing, Screen Printing, Tie and Dye, Hand painting, Spray printing

Beads and sequins:

Beads and sequins of different materials, styles, shapes and size

Trimmings:

Laces, piping, gota, ghungaroos, bells

Others:

Mirrors and readymade appliqué pieces (iron on/ sew on)

Sample preparation :

Initially, after necessary experimentation, 28 samples of decorated felt were prepared each using a different enrichment technique included in the list. Those samples were evaluated by 30 judges (Faculty members of Department of Home Science and Department of Textile Designing, Banasthali University) for selection of suitable techniques. Samples were evaluated for two design parameters *i.e. Aesthetic* Appeal and Suitability of technique for felt using self-structured five point rating scale. Weighted mean score was calculated for each criterion. Ranks were given to each technique on the basis of total weighted mean score. Result is given in Table 1.

Rating	Weightage
Highly appealing/suitable	5
Fairly appealing/suitable	4
Appealing/suitable	3
Somewhat appealing/suitable	2
Not appealing/suitable	1

Product development :

Considering the samples appreciated by judges, 50 products were planned. While planning the products following considerations was kept in mind:

- Product should not need frequent washing.
- Felt may be combined with other fabrics.
- Products should not become very expensive.
- Design variation is possible in traditional products.
- Completely new products are also possible.
- Developing products with varied uses purpose.
- Possibility of manufacture of new products needs to be discussed with the artisans.

Product design sketches :

A list of 50 possible products was prepared. The 30 ideas were short listed after discussion of design concepts with the experts and the artisans. The new products were then sketched in black and white and design number was designated for ease in evaluation by the experts. Three alternative designs for each product was sketched; hence 90 sketches were there.

A design catalogue was prepared.

Product design review :

The product sketches were evaluated by judges on the basis of suitability for making in felt, uniqueness and aesthetic appeal. Suggestions for modification in the designs were invited. The judges were selected from Faculty in the office of Ministry of Textile, Jaipur, Faculty of Home Science, Banasthali University and Dept. of Textile Designing, Banasthali University for making felt. For evaluating aesthetic appeal and uniqueness of product a five point scale was used.

Product manufacture :

The products sketches getting high scores were manufactured by the researcher with the help of the artisans. Handmade felt and machine made felt was used to prepare product.

Costing and pricing :

Total cost of each product was calculated by summing up all the materials costs, labour costs and profit margin of ten per cent was added to ascertain the price.

Final product appraisal :

The final products were evaluated for neatness of construction, colour combination, uniqueness, utility, product acceptability, and price acceptability. For the purpose of evaluation the products were displayed in the form of an exhibition with name, use and price labels attached to each article. The assessment index was used for data collection for the response of judges.

RESULTS AND DISCUSSION

Finding suitable surface enrichment techniques :

One of the objectives of the study was to explore new surface as well as structural designing techniques for felt material. Twenty eight felt samples were made using various designing. The data related to assessment of novel techniques used in designing of felt are presented in Table 1.

The Table depicts that for aesthetic appeal 20 design samples of felt have been rated as excellent (WMS 4.14 to 4.96) while machine embroidery, applique work, Stone beads work, dori work, kodi work, fabric work, glitter work and wooden beads work very good with WMS ranging from 4.06 to 3.68.

It is clear from the Table 1 that bullion knot was found most suitable for designing of felt and gets the 1st rank followed by screen printing and mirror work which get 2nd and 3rd rank. Suitability of the designing techniques of button work, couching, crochet work, cross stitch work, dabu printing, eyelet work, fabric work, gota work, piping work, sequins work, screen printing, spray painting, ribbon work, stone work, thread work, tie and die work and tissue fabric work have been found to be excellent with WMS ranging from 4.06 to 4.98. On the other hand, suitability of applique work, glitter work, fabric work, dori work, kodi work, machine embroidery work, stone beads and wooden beads work achieved WMS ranging from 3.66 to 4.02. It is clear from the table that bullion knot technique gets higher score on the two parameter of evaluation and fabric work gest the lowest score. The techniques

Table 1 : Assessment of design samples of felt (N = 100)

Sr. No.	Initial sample	Aesthetic appeal (WMS)	Suitability of technique (WMS)	Total (WMS)	Rank
1.	Appliqué work	3.96	3.71	7.67	26
2.	Bullion knot	4.96	4.9	9.86	1
3.	Button work	4.16	4.38	8.54	14
4.	Couching	4.42	4.69	9.11	8
5.	Crochet work	4.4	4.54	8.94	11
6.	Cross stitch work	4.44	4.52	8.96	10
7.	Dabu printing	4.68	4.88	9.56	5
8.	Dori work	3.96	3.8	7.66	27
9.	Eyelet work	4.28	4.56	8.84	12
10.	Fabric work	3.68	3.66	7.34	28
11.	Glitter work	4.14	3.68	7.82	24
12.	Gota work	4.24	4.06	8.3	17
13.	Kodi work	3.96	3.72	7.68	25
14.	Kundan work	3.88	4.58	8.46	15
15.	Machine embroidery	4.06	4.02	8.08	21
16.	Mirror work	4.72	4.98	9.7	3
17.	Piping work	4.8	4.74	9.54	6
18.	Ribbon work	4.84	4.82	9.66	4
19.	Screen printing	4.92	4.86	9.78	2
20.	Sequins work	4.22	4.18	8.4	16
21.	Spray painting	3.82	4.28	8.1	20
22.	Stencil printing	4.5	4.6	9.1	9
23.	Stone work	4.22	4.42	8.64	13
24.	Stone beads work	3.92	3.91	7.83	23
25.	Thread work	4.06	4.1	8.16	19
26.	Tie and dye	4.68	4.8	9.48	7
27.	Tissue fabric work	4.22	4.06	8.28	18
28.	Wooden Bead work	4.14	3.7	7.84	22

which got 1 to 10 ranks have been selected for further work. These include bullion knot, screen printing, mirror work, ribbon work, dabu printing, piping, tie and dye, couching, stencil printing and cross stitch.

Evaluation outcome of the finished products :

The final products have been evaluated for neatness of construction, colour combination, uniqueness, utility and price acceptability. For the purpose of evaluation, the products were displayed in the form of an exhibition with name, use and price labels attached to each article. The assessment index has been used for data collection for the response of judges.

The weight mean score and rank for utility, neatness of construction, uniqueness and colour combination of finished felt product have been presented in Table 2. It is clear that among the folder and holders the bottle cover is liked the most for its uniqueness as well as

aesthetic appeal while among the apparel and accessories, necklace and earring obtain the top scores. In the class of bags and covers the hand bag gets highest rank, followed by the tablet cover. In the category of miscellaneous article photo frame is ranked first for utility, neatness of construction, uniqueness and colour combination.

Price acceptability of the products :

The price, price acceptance frequency and percentage and the orders received for each of the constructed felt product are presented in Table 2. It is clear from the table that all the products have been accepted by the judges at the given price except a few articles like baby blanket and key ring.

The data related to orders reveal that among felt products the necklace and earing have been ordered by maximum number of consumers, followed by tea coaster, paper holder, handbag, wall hanging, centre elephant and laundry bag. The table mat, tea coaster and cushion cover are, however, ordered by four to three consumers but the orders are larger because the items have been purchased in sets of six and five pieces each. It is felt that the order is influenced by the prices and utility factors for the consumers.

Hand Bag
Clutch
Towel Hanger
Key Stand
Bandhan Wall
Wall Painting
Wind Chain
Wall Hanging
Hanging Piece
Waist Coat
Skirt
Baby Blanket
Jewellery
Footwear
Basket
Photo Frame
Pen Stand
Muddhi
Flower Pot
Key Ring

Table 2 : Assessment of constructed felt products (N=100)

Product No.	Product description	Utility	Neatness of construction	Unique-ness	Colour combination	Product accept-ability	Rank	Price acceptability			
		WMS	WMS	WMS	WMS	Total WMS		Price (Rs.)	Acceptance (F)	Acceptance (%)	Order
Folder and holder											
1.	Paper folder	4.55	4.42	3.03	4.67	16.67	II	75*	100	100	13
2.	Pin cushion	4.53	4.23	3.40	4.45	16.61	III	100	100	100	2
3.	Bottle holder	4.33	4.57	4.48	4.40	17.78	I	70	100	100	1
Mats											
4.	Table runner	4.27	4.40	4.73	4.13	17.53	IV	200	100	100	6
5.	Table mat	4.69	4.66	4.80	3.73	17.88	II	150*	100	100	3(18)
6.	Tea coaster	4.36	4.65	4.47	4.97	18.45	I	150*	100	100	4(24)
Bags and covers											
7.	Tablet cover	4.11	4.49	4.43	4.35	17.38	II	55	100	100	1
8.	Cushion cover	4.31	4.73	3.53	4.33	16.90	IV	90	100	100	3(15)
9.	Chapati cover	4.07	4.52	3.40	4.11	16.09	VI	70	100	100	1
10.	Laundry bag	4.33	4.47	4.14	4.09	17.03	III	150*	100	100	9
11.	Hand bag	4.44	4.80	4.60	4.40	18.34	I	350*	100	100	12
12.	Clutch	4.15	4.66	3.80	3.57	16.18	V	75	100	100	1
Hangings											
13.	Towel hanger	4.34	4.19	3.67	3.60	15.80	V	50	100	100	1
14.	Key stand	4.37	4.53	4.60	4.47	17.97	II	150	100	100	3
15.	Bandhan wall	4.62	4.70	4.33	4.50	18.15	I	150	100	100	8
16.	Wall painting	4.27	4.36	3.63	3.57	15.83	IV	300	100	100	1
17.	Wind chain	4.41	4.75	4.73	4.00	17.89	III	150	100	100	10
18.	Wall hanging	4.37	4.50	4.30	4.40	17.57	III	55*	100	100	11
19.	Hanging piece	4.48	4.14	3.63	3.70	15.95	VI	45	100	100	10
Apparel and accessories											
20.	Waist coat	4.49	4.30	4.33	4.47	17.59	III	150	100	100	5
21.	Skirt	4.23	4.60	4.77	4.30	17.95	II	200	100	100	2
22.	Baby blanket	4.03	4.17	3.57	3.39	15.16	V	120	100	98	1
23.	Jewellery	4.60	4.83	4.36	4.67	18.46	I	75*	100	100	25
24.	Footwear	4.60	4.09	3.17	3.70	15.56	IV	150	100	100	1
Miscellaneous articles											
25.	Basket	3.98	4.20	4.60	4.53	17.31	II	100	100	100	1
26.	Photo frame	4.40	4.88	4.40	4.47	18.15	I	145*	100	100	6
27.	Pen stand	4.24	4.63	4.10	4.07	17.04	III	70	100	100	9
28.	Muddi	4.20	4.23	3.83	4.10	16.36	V	150	100	100	2
29.	Flower pot	4.30	4.36	4.13	4.03	16.82	IV	100	100	100	1
30.	Key ring	3.82	4.12	3.43	3.23	14.6	VIII	10	98	100	5

*Few judges suggested increase in the profit margin
Figures in parenthesis indicates no. of pieces

Conclusion :

The present study brought about encouraging results. People always want novelty and the study has provided novel ides of designing felt products. New designing technique and products developed in the study can be used to increase marketability of the felt products. Adoption of the array of new products will certainly help in upliftment of handmade felt industry. A large base of artisans with low socio- economic and educational status will be benefited. The added products will rejuvenate the industry and consequently help in preserving the textile heritage of India.

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