

Digital Printing on Home Furnishing Products using Motifs Inspired from Saura Painting

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ABSTRACT

Saura tribal painting is a style of wall mural paintings associated with the Saura tribals of the state of Odisha in India. Today Saura painting has lost much of its importance within Odisha. Revival of this painting is necessary. Therefore, the present study is an attempt to introduce Saura painting (tribal art) to new textile experimentation; using CAD designing. The designs of Saura painting were collected. The motifs of "Saura painting" were modified by computer aided designing software and 15 designs, for home furnishing; including 5 for curtains, 5 for diwan set and 5 for cushions were developed. The developed designs were evaluated by a panel of 30 judges to select 'one' best design for the product development. The product was developed and its cost was calculated. The results showed that the design of cushion cover (Design no. CC5) got the highest marks in visual evaluation and it was developed into a product by digital printing. Further result showed that, the developed product was highly acceptable by the judges in all the parameters such as suitability of fabric used, neatness and clarity of the design and overall appearance except the parameter 'economic feasibility'. The sale price of the developed product (Design no. CC5) was Rs. 1950. Mass production of this product will reduce the cost of the product to the greater extent. It will also inspire designer to collect the motifs of Saura painting and adopt the design for home furnishing and other textile articles by using computer aided designing software.

Key Words : Saura painting, CAD software, Digital painting, Home furnishing, Tribe

INTRODUCTION

Saura tribal painting is a style of wall mural paintings associated with the Saura tribals of the state of Odisha in India. These paintings, also called *ikons* (or *ekons*) are visually similar to Warli paintings and hold religious significance for the Sauras. Sauras are the most ancient tribes in India and is mentioned in the Hindu epics of Ramayana and Mahabharata. Savari, Rama's devotee in the Ramayana and Jara, the hunter who mortally wounded Krishna with an arrow, are thought to have been members of this tribe. The Saura wall paintings are dedicated to Idital (also *edital*) the main deity of the Sauras. These paintings draw upon tribal folklore and have ritualistic importance. Ikons make extensive use of symbolically pregnant icons that mirror the quotidian

chores of the Sauras. People, horses, elephants, the sun and the moon and the tree of life are recurring motifs in these ikons. Ikons were originally painted on the walls of the Saura's adobe huts (Anonymous, 2018). Painting on walls by hand, is a laborious and time consuming process. But due to the advancement in the technology, these motifs and designs can be created with the help of Computer aided designing software. It shortens the time required for designing and adaptation of motifs. The saved motifs can be used many times without wastage of time (Bora and Sakshi, 2017). Today Saura painting has lost much of its importance within Odisha. Revival of this painting is necessary. Therefore, the present study is an attempt to introduce Saura painting (tribal art) to new textile experimentation, through the combination of CAD designing and digital printing.

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Digital textile printing technology is sparking a fundamental change in the textile and apparel industry. Traditionally, to create printable designs for fabric, color separations and screens or rollers had to be used for the transfer of designs to fabric. Digital textile printing is the process of creating printable designs for fabric on a computer, which can be sent directly from the computer to fabric printing machinery without the use of screens and color separations. This revolution in digital image processing has necessitated new ways of thinking about textile design and production (Jain, 2014). The development of designs through digital printing by taking inspiration from “Saura painting” will satisfy the demand of younger generation and it will give innovativeness in fashion. Therefore, the study was planned with the objective; to develop designs for home furnishing products using CAD and applying the selected design on home furnishing product through digital printing,

METHODOLOGY

The step by step procedure conducted for accomplishment of the experiment is mentioned under following headings:

Collection of designs of Saura painting and development of home furnishing using CAD:

The designs of Saura painting were collected and are shown in Fig. 1 (a-m) The motifs of “Saura painting” were modified and used for the development of designs for home furnishing. The designing was done through Computer Aided Designing software *i.e.* Corel draw and Adobe illustrator. Total 15 designs, for home furnishing, including 5 for curtains, 5 for diwan set and 5 for cushion covers were developed.

Visual evaluation of the developed designs:

The developed designs were evaluated by a panel of 30 judges including 15 staff members and 15 students of Department of Home Science, University of Allahabad, Prayagraj, Uttar Pradesh for the selection of one most preferred designs from each category, total three designs were selected, one from each category. The evaluation of the designs was done on the parameters; arrangement of motifs, appropriateness of design, color combinations, and overall appearance. A five point ranking proforma was used for this purpose. The products were scored as 5, 4, 3, 2, 1 corresponding to excellent, very good, good, fair and poor, respectively.

Visual evaluation of selected designs for product developed:

The selected design (one) from each category were evaluated again by the same procedures on the same parameters by the same panel of thirty judges to find the best design among the three selected designs for product development.

Assessment for acceptability of the prepared products:

The prepared product was further subjected to visual evaluation by the same panel of thirty judges to assess the acceptability of the developed product. The acceptability of the product was assessed on the parameters; suitability of fabric used, neatness and clarity of design, economic feasibility and overall appearance.

Statistical analysis:

The data was collected by the evaluation of the “designs” of the products. It was then coded, tabulated and analyzed using mean score. The acceptance of the design for the product was analyzed using Weighted



Fig. 1 : Motifs of Saura painting (a-m)

Mean Score (W.M.S). The weighted means score was calculated from the scores given by the judges with the given formula:

$$W.M.S = \frac{\text{No. of respondent (HA)} \times 3 + \text{No. of respondent (SA)} \times 2 + \text{No. of respondent (SWA)} \times 1}{\text{Total no. of respondent}}$$

Finally W.M.S was analyzed for the acceptance level in the following ranges (Gagoi *et al.* 2016).

- Highly acceptable (HA) : 2.34-3.00
- Acceptable (A) : 1.6-2.3
- Somewhat acceptable (SA) : 0.6-1.66

RESULTS AND DISCUSSION

Developed designs for home furnishing with CAD:

Total fifteen designs for home furnishing items were made using Computer aided designing software. Five designs were made for Curtains, five for Diwan set and five for Cushion covers. The designs are shown in Fig. 2 to 4.

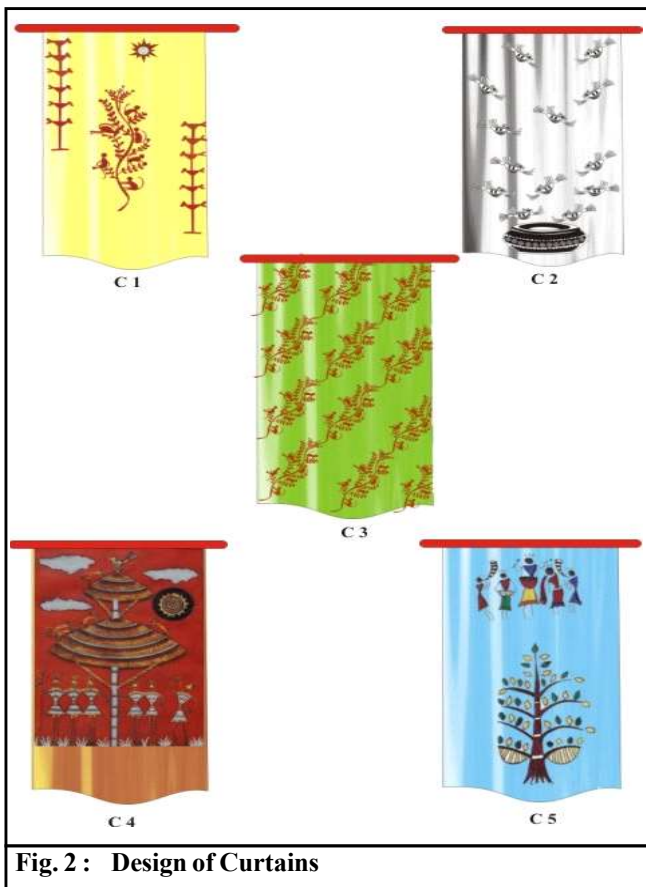


Fig. 2 : Design of Curtains

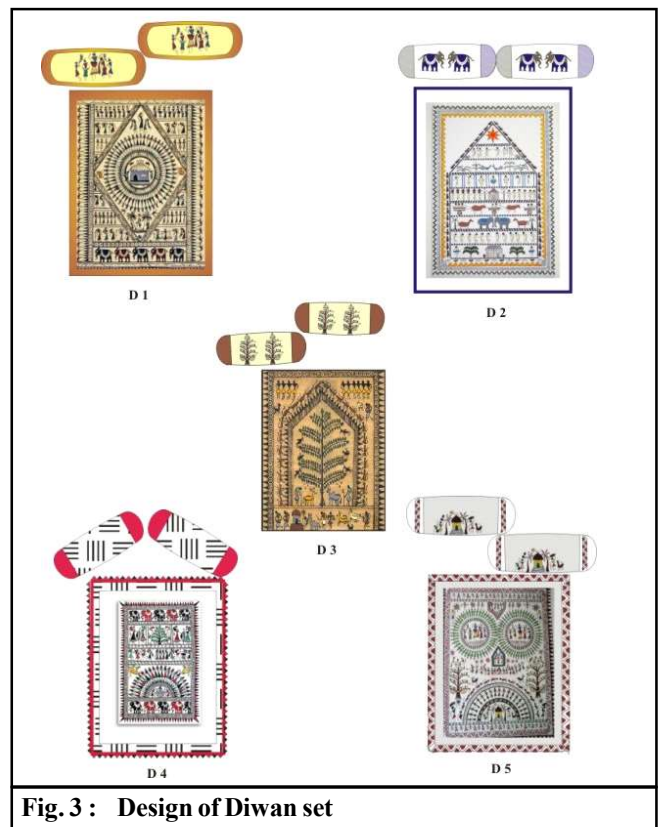


Fig. 3 : Design of Diwan set

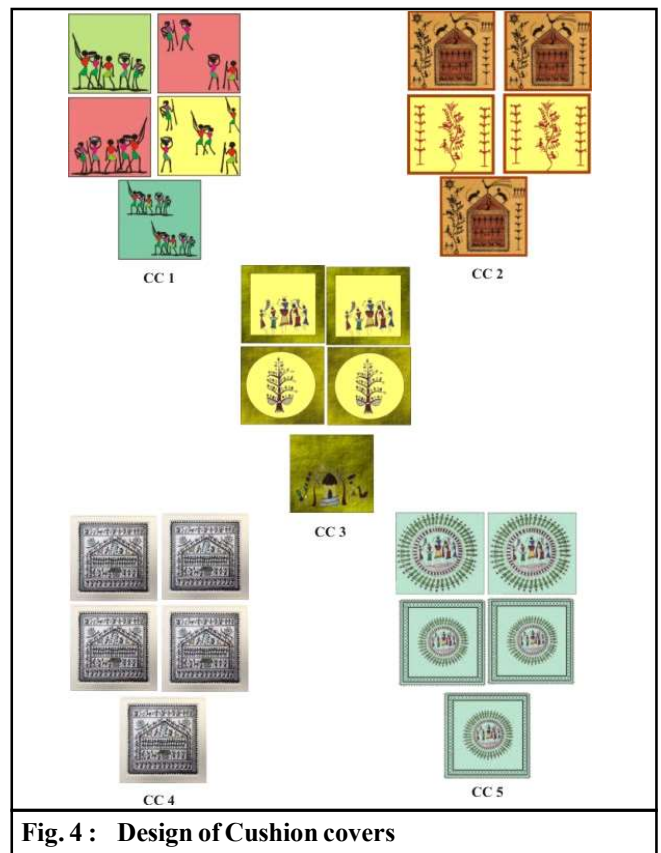


Fig. 4 : Design of Cushion covers

Visual evaluation of developed designs:

All the prepared designs for home furnishing items namely, curtains diwan sets and cushion covers were subjected to visual evaluation by the panel of thirty judges for selection of “one” best design from each category. The results of visual evaluation are shown in Table 1 to 3.

Visual evaluation of the designs of Curtain :

The prepared five designs of curtains were subjected to visual evaluation by the judges for selection of “one” best design of Curtains. The developed designs are shown in Fig. 2. The results of visual evaluation are shown in Tables 1 and it was found that among various designs developed for curtains, design number C 3 (Fig. 2) which has a tree motif got the highest score (16.6). The design number C 2 got the second highest score (15.2) followed by the scores of design C5, C 1 and C 4 which had the score 14.9, 13.4 and 12.6, respectively. Thus the highest scored design (C 3) was selected for

further evaluation.

Visual evaluation of the designs of Diwan set:

The prepared five designs of Diwan set were subjected to visual evaluation by the judges for the selection of “one best designs. The designs are shown in Fig. 3 and the results of visual evaluation are shown in Table 2. Result showed that, design number D 4 (Fig. 3) got the highest score (16.5). The design number D 2 got the second highest score (16.4) followed by the scores of design number D 1, D 5 and D 3 which had the mean score of 15.9,13.9 and 12.9, respectively. Thus the highest scored design (D 4) was selected for further evaluation.

Visual evaluation of the designs of Cushion cover:

The prepared five designs of cushion covers were subjected to visual evaluation by the judges for selection of “one” best design of Cushion cover .The developed designs are shown in Fig. 4. The results of visual evaluation are shown in Table 3. It was found that, among

Table 1 : Average scores of visual evaluation for Curtain

Design Number	Arrangement of motifs	Appropriateness of design for product	Color combination	Overall appearance	Total
C 1	3.2	3.4	3.3	3.5	13.4
C 2	3.5	3.7	3.6	3.4	15.2
C 3	4.0	4.1	4.3	4.2	16.6*
C 4	3.2	3.1	3.3	3.0	12.6
C 5	3.6	3.9	3.6	3.8	14.9

*Highest score

Table 2 : Average scores of visual evaluation for Diwan set

Design Number	Arrangement of motifs	Appropriateness of design for product	Color combination	Overall appearance	Total
D 1	4.0	4.2	3.9	3.8	15.9
D 2	4.1	4.0	4.3	4.0	16.4
D 3	3.4	3.0	3.3	3.2	12.9
D 4	4.0	4.0	4.3	4.2	16.5*
D 5	3.4	3.4	3.5	3.6	13.9

*Highest score

Table 3 : Average scores of visual evaluation for Cushion cover

Design Number	Arrangement of motifs	Appropriateness of design for product	Color combination	Overall appearance	Total
CC 1	4.23	4.2	4.16	4.2	16.79
CC 2	3.9	4.1	4.1	3.9	15.1
CC 3	3.2	4.0	3.10	3.2	13.5
CC 4	4.2	3.9	4.22	4.2	14.6
CC 5	4.6	4.3	4.63	4.56	18.09*

*Highest score

the five designs developed for cushion covers, the design number CC 5 (Fig. 4) got the highest mean score (18.09). Design number CC 1 got the second highest score (16.79) followed by the design number CC 2, CC 4 and CC 3 which got the mean score of 15.1, 14.6 and 13.5, respectively. Thus the highest scored design (CC 5) was selected for further evaluation.

Product development:

The three selected designs of home furnishing (C 3, D 4 and CC 5), one from each category (Curtain, Diwan set and Cushion cover) were evaluated again by the same panel of thirty judges, to find out “one best design” among the three designs for product development. The results of visual evaluation showed that, among three designs of home furnishing (Curtain, Diwan set and Cushion cover) the design of Cushion cover (Design no. CC 5, Fig. 4) got the highest score (18.09), the design of Curtain (Design no. C 3, Fig. 2) got the second highest score (16.6) and the design of Diwan set (D 4, Fig. 3) got the lowest score the (16.5). Thus, the highest scored design of home furnishing item *i.e.* Design number CC 5, which was a design of cushion cover was selected for the product development. One set of cushion cover of the Design number. CC 5 was developed which included five pieces of cushion covers. The selected design was printed with digital printing on the cushion covers and the picture of the developed product is shown in Fig. 5.



Fig. 5 : Cushion Cover, Design No. CC 5

Acceptability of the prepared product:

The prepared product was subjected to evaluation by the same panel of 30 judges (the judges who evaluated the developed designs) to assess the acceptability of the developed products. The acceptability of the prepared product was evaluated on various parameters. The result of acceptability of the prepared product is shown in the Table 5, it was found that, design number CC 5 was highly

acceptable with the mean score 2.51 on the parameter suitability of fabric used. The fabric used for the cushion cover was liked by the judges.

Neatness and clarity of the design of the developed product was also assessed. It was found highly acceptable with the mean score 2.53. The motifs in the developed product were printed very neatly and clearly. Economic feasibility was also assessed by the judges and data in Table 5 depicts that design number CC 5 was somewhat acceptable with mean score of 1.66. The cost calculated of cushion cover was Rs. 1560. After adding the profit margin of 25 per cent the sale price of the cushion cover was Rs. 1950. The cushion cover was little costlier than the cushion cover available in the market. This is due the reason that, single set of cushion cover was developed. If it is put into the mass production, the cost of product will be reduced to the great extent. Overall appearance of the cushion cover (design number CC 5) was judged by the judges and it was found highly acceptable with mean score of 2.62. Thus the overall appearance of the product was good and liked by the judges. Jain (2014) also reported in her study that, the developed designs for

Table 4 : Average scores of visual evaluation for selected designs						
Design No.	Home furnishing items	Arrangement of motifs	Appropriateness of design for particular product	Color combination	Overall appearance	Total
C3	Curtain	4.0	4.1	4.3	4.2	16.6
D 4	Diwan set	4.0	4.0	4.3	4.2	16.5
CC5	Cushion cover	4.6	4.3	4.63	4.56	18.09*

*Highest score

Table 5 : Acceptability of the prepared product				
Design No.	Suitability of fabric used	Neatness and clarity of the design	Economic feasibility	Overall appearance
CC 5	2.51	2.53	1.59	2.62

apparels inspired by tribal Gond paintings can be used for digital printing and the developed product was highly acceptable by the college going girls.

Result on the acceptability of prepared product reveals that the design number CC 5 was highly acceptable in the parameters such as suitability of the fabric used, neatness and clarity of the design, and overall appearance but the product was somewhat acceptable in parameter of economic feasibility. The sale price of this product was little high but mass production of this product will reduce its cost to the greater extent.

Conclusion:

The designs prepared for home furnishing products were successfully applied through digital printing and the prepared product was highly appreciated. The present study was an initial step in the direction of creating designs for home furnishing product using computer aided designing. The adaptation of these designs on the textile products using digital printing further facilitates the faster production with less time span. The introduction of digital printing by inspiration of "Saura painting" will satisfy the demand of younger generation to give innovativeness in

fashion. This can open the avenues for the designers to fulfill the ever changing demands of consumers especially for those who hunt for the ethnic design in their attire and other textile products. In this study traditional Saura painting of Odisha has been given new shape using technological tools and techniques which will help the product to be acceptable among the consumers in the present market and will provide employment to the artisans as well.

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