

Development of Designs from Sculptures of Amaravathi for Application on Kameez Material

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Abstract: *Kalamkari is an ancient Indian art that originated about 3000 years ago. Kalamkari art of Andhra Pradesh has its very distinctive style in its shape and expression of its characters. It chiefly consists of scenes from Hindu mythology and figures of Hindu deities. In this article, we developed designs from sculptures of Amaravathi for application on kameez material using Kalamkari technique. Whereas, out of many pictures identified, a forty sculptural designs such as animal, birds, floral and creepers. Twenty were selected from an out of 40 motifs. Further twenty developed motifs were placed for the selection of five best for dress materials. A panel of thirty judges critically evaluated and selected the best five motifs out of 20. Then, judges evaluation was analyzed by using frequency and percentages. These selected motifs were drawn by using Corel DRAW 11 which is suitable for dress material either using a part of the motif or whole of the motif.*

1. Introduction

Amaravathi is the place where Buddhas remains are present. The sculptural wealth of Amaravati is displayed on the Mahachaitya, which include the typical motifs of the Amaravati art and sculptures. This includes the lotus and the 'Purnakumbha' motifs. These symbols stand for abundance and auspiciousness. Lord Buddha is depicted in the form of 'Swastika' mark. This has been carved out on the cushioned seat over a throne that is situated under the Bodhi tree. The same symbol is found on the Flaming pillar. There are animal sculptures, the Triratna, the coins of that age and other minor antiquities.

The figures of Amaravati have limb like features and are represented in difficult poses and curves. However the scenes are over-crowded, the general effect is not pleasing. Lion sculpture was placed at the gateways to the Amaravathi Stupa which represents power and strength and were meant to ward off evil spirits and protect the stupa. Sarkar and Nainar (2003). The whole stupa is intricately decorated with various sculptures by the kings of different eras.

Textile designing is the most demanding and emerging field as it has full scope of creativity. Adaptation of design on to textiles can be done either through structural or decorative design. For adaptation of any design, designers take inspiration from various sources like nature and man-made objects, which are part of the near environment and that of past traditions. An inspiration can come from any stimulus that starts the creative process. Sources of inspiration are literally everywhere. Arts and crafts have gained as an important source of inspiration for the textile designers. To keep the Madhubani art of the Bihar state alive, a study was conducted by Gupta and Gangwar (2016) to make an effort of adding another dimension in the application of Madhubani designs on textiles using hand painting. Sharma and Paul (2015) developed fusion designs using CAD from folk paintings of Warli art of Maharashtra and Madhubani art of Mithila for adaptation on apparel using digital printing techniques.

Kalamkari or Qalamkari is a type of hand-painted or block-printed cotton textile, produced in parts of India. The word is derived from the Persian words kalam (pen) and kari (craftmanship), meaning drawing with a pen. The craft made at Machilipatnam in Andhra Pradesh, evolved with patronage of The Mughals and the Golconda sultanat there are two distinctive styles of kalamkari art in India one, the 'Srikalahasti' style and the other, the Machilipatnam style of art. The Srikalahasti style of Kalamkari, wherein the "kalam" or pen is used for free hand drawing of the subject, and filling in the colours is entirely hand worked. This style flowered around temples and their patronage, and so had an almost religious identity scrolls, temple hangings, chariot banners and the like depicted deities and scenes taken from great epics - Ramayana, Mahabharata, Puranas and mythological classics. Only natural dyes are used in Kalamkari, and involve seventeen painstaking steps Ekta Sharma (2015).

An increasing number of people all across the globe are now discouraging the use of synthetic dyes and pigments that are associated with harmful chemicals. In such a scenario, Kalamkari emerges as the perfect craft as it is completely done in organic colours bringing a host of beautiful colours which are safe to both the environment and are skin friendly. Uniqueness in design which is rendered entirely by hand in earthly colours is an additional attraction. Consumers seeking exclusiveness in design have an eye to this beautiful craft flourishing in the state of Andhra Pradesh.

2. Material and Methods

The study was undertaken to develop new motif/designs to the existing traditional Kalamkari Painting during the year 2018.

Selection of Location

Amaravathi is the place which occupies a prominent position in the history of Indian art. It is situated about 35 Km to the north of the town of Guntur. The excavated stupa site and the

Archaeological Museum are the main locations that gave information about sculpture.

Selection of material for dress material

The material selected was a 100 percent plain weave cotton fabric in 60sX 40s count for dress materials to render Kalamkari painting with sculptural motifs and designs. Material was sourced from Vijayawada city.

Collection of motifs from sculptures

A total of 40 sculptural designs such as animal, birds, floral, creepers and other motifs were selected for adaptation in Kalamkari painting designs on dress material were selected, for adapting them suitable for dress material. The selected motifs for dress materials were modified using Corel DRAW 11 software.

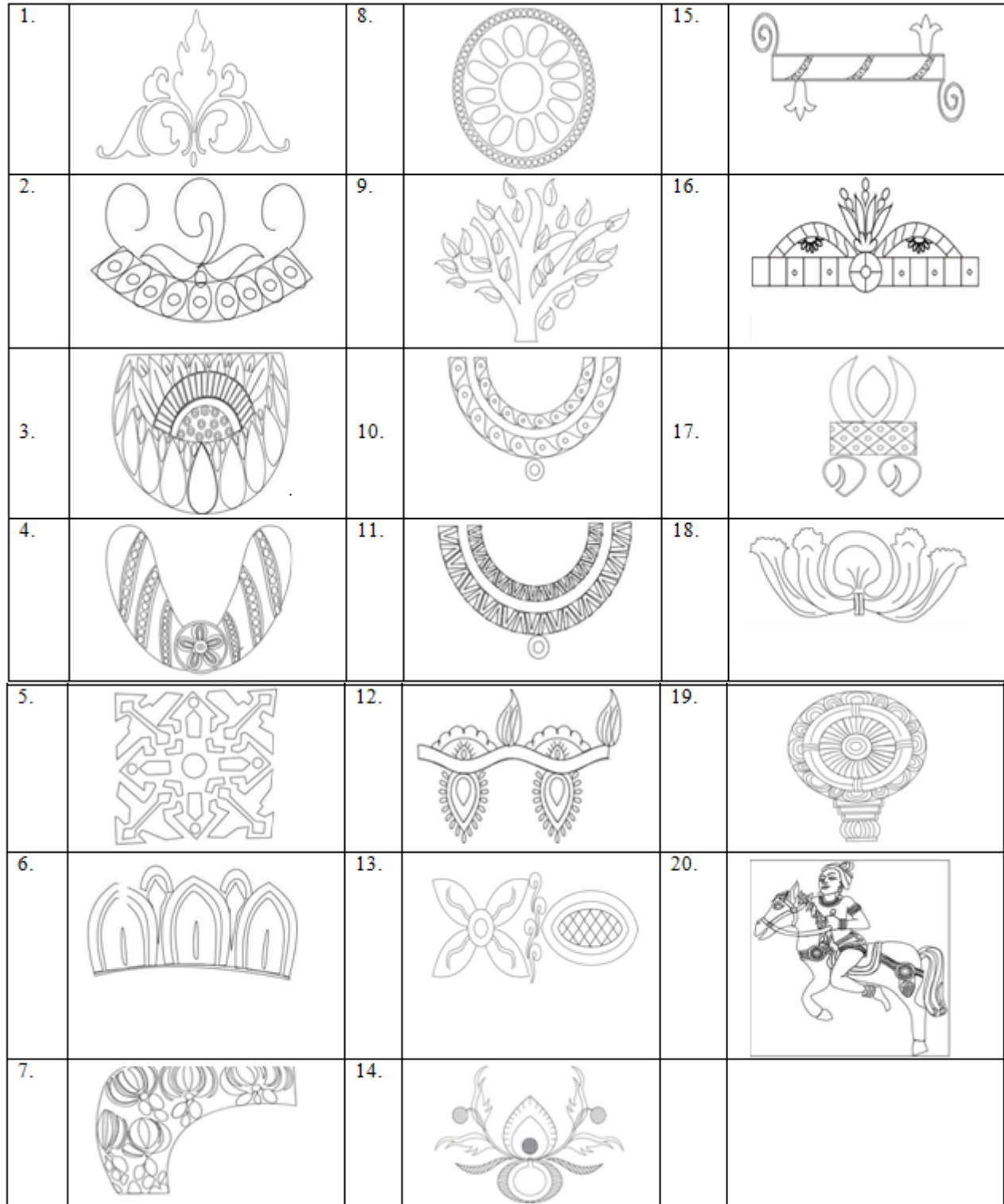


Figure 1: Selected motifs from Sculptures of Amaravathi

Design adoption techniques

Either the whole motif or parts of motif was considered in

adaptation onto textiles. In case of dress material, as kameez is the most accepted garment by adolescents, so designs were

developed to suit the kameez material. Motifs that were developed were used along with additional designs suitable for neckline and sleeve borders or garment edges in order to enhance the look of the garment.

Selection of colour ways and placement of designs:

The developed colour ways were shown to the experts and their preferences were sought using preferential choice index to select suitable colour ways of fabric Kalamkari painting. On the basis of preferences obtained through average were calculated and ranks were assigned to the developed colour ways. As per assigned ranks, one most preferred colour way of each preferred design placement on saris and Kameez was selected for Kalamkari painting. Similarly with the selected colour way, design placement was done in three different areas over the garment. Placement of design was again evaluated by the same panel of judges for final rendering of design on the garment.

Final evaluation of Samples

The evaluation of finished garments was done by a panel of 30 consumers, using the final evaluation schedule, which was pretested in (Appendix – III). The panel consisted of staff, post graduate students, under graduate students of College of Home Science, Acharya N.G. Ranga Agricultural University, Guntur, who are well versed in the designing aspect. The kameez materials were draped on the dress form to show the overall effect of the product and for convenience of consumers to evaluate the characteristics of each article. The consumers were requested to look into the characteristics of suitability of the design for the type of garment, suitability of the base fabric for the selected design, suitability of the motifs/border designs to the end use, suitability of the kalamkari painting technique for motifs/design, colour combination in motifs/border designs, quality of workmanship and overall appearance and cost factor. To find out the consumer acceptance, statistical analysis was done. Frequency scores and percentages were calculated for each designed item and required inferences were drawn.

3. Results and Discussion

Motifs used from sculptures of Amaravathi were developed to suit dress materials following the present trend. As youngsters prefer using kameez in their daily wear, designing for dress material was done suitable for kameez. A panel of judges related most appropriate motifs using a questionnaire for both the end uses. Animal, floral, border design were appreciated by all the judges.

Table 1: Averages and ranks of motifs selected for dress material.n=30

Motif No.	Average	Rank
1.	18.1	V
2.	18.4	IV
3.	15.6	XV
4.	17.1	VIII
5.	18.5	III
6.	16.5	X
7.	17.1	VIII

8.	15.6	XV
9.	17.5	VII
10.	16.8	IX
11.	16.2	XIII
12.	16.3	XII
13.	17.6	VI
14.	17.1	VIII
15.	16.2	XIII
16.	17.5	VII
17.	16.1	XIV
18.	16.4	XI
19.	19.0	I
20.	18.7	II

The collected motifs were evaluated and averages were calculated and in turn ranks were assigned accordingly. It is evident from the Table 1 that the motif no. 19 got highest average value 19.0 and it was assigned rank I followed by motif no. 20, 5, 2 and 1 with average 18.7, 18.5, 18.4 and 18.1 and were given ranks II, III, IV and V. The lowest average value was recorded for two motifs (3 and 8) and they were assigned with Rank XV. Motifs 9 and 16 got the same ranking of 7 while 4, 7 and 14 numbered motifs were ranked rank 8.

Consumer evaluation

Kameez –I

It is evident from Table 4 that consumers have opted for “Strongly Agree” for most of the attributes used in evaluating the final product. Parameters, like “use of Kalamkari technique in rendering the design is apt” placement of the design is we taken care “and motif/design used is in scale with the garment” were agreed by more than 50 per cent of the consumers.

As indicated by the results, the strongly agreed parameter by maximum number of consumers was “overall appearance of the product is appealing or unique”, whereas the least majority of the consumers strongly agreed with the parameter, “Motif/design used is in scale with the garment”. About 70 per cent of consumers have strongly agreed that the product developed has a very good appearance and unique. As seen from Table 4, more than 73 per cent of consumers agreed that, the cost of designed Kameez material is “appropriate” both in terms of designing as well as cost of finished materials. The image of the final product is given in Fig.2.

Colour combination used in the design was rated to be agreed strongly by more than 50 per cent of the consumers. With regards to marketability of the product, it was found that more than 95 per cent of consumers agreed that the designed products will have good market. Cent per cent of consumers accepted the fabric used in designing to be appropriate. More than 75 per cent consumers felt the cost of material to be appropriate.

Table 4: Consumer evaluation of designed kameez material I, n=30

S. No	Parameter/ Criteria	Strongly agree		Agree		Disagree	
		N	%	N	%	N	%
1.	Use of sculptural design on garment is appropriate	13	43.3	13	43.3	3	10
2.	Use of Kalamkari technique in rendering the design is apt	13	43.3	16	53.3	1	3.3
3.	Fabric selected is suitable for the end use	16	53.3	14	46.6	0	0
4.	Placement of design is well taken care	12	40.0	13	43.3	5	16.6
5.	Colour combination used is appropriate	16	53.3	10	33.3	4	13.3
6.	Motif/design used is in scale with the garment	9	30.0	18	60.0	3	10.0
7.	Quality of workmanship is good	16	53.3	11	36.6	3	10.0
8.	Developed product caters to the present trend	14	46.6	12	40.0	4	13.3
9.	There will be good marketability for the products designed	15	50.0	14	46.6	1	3.3
10.	The design is unique and different from ordinary Kalamkari	13	43.3	12	40.0	5	16.6
11.	Overall appearance of the product is appealing or unique	20	66.6	7	23.3	3	10.0
		High		Appropriate		Low	
	Cost factor	N	%	N	%	N	%
1.	Cost of designed dress material	6	20.0	22	73.3	2	6.6



Figure 2: Finished design on Kameez material- I

Kameez –II

It is noticeable from the Table 5 that, all the parameters were rated “Strongly Agree” followed by “Agree”. As shown in

Fig. 3, it is evident that the design adaptation from sculptural motif was accepted for the kameez dress material.

Table 5: Consumer evaluation of designed kameez material II, n=30

S.No	Parameter/ Criteria	Strongly agree		Agree		Disagree	
		N	%	N	%	N	%
1.	Use of sculptural design on garment is appropriate	16	53.3	14	46.6	0	0
2.	Use of Kalamkari technique in rendering the design is apt	14	46.6	15	50.0	1	3.3
3.	Fabric selected is suitable for the end use	16	53.3	14	46.6	0	0
4.	Placement of the design is well taken care	18	60.0	8	26.6	4	13.3
5.	Colour combination used is appropriate	14	46.6	15	50.0	1	3.3
6.	Motif/design used is in scale with the garment	18	60.0	11	36.6	1	3.3
7.	Quality of workmanship is good	18	60.0	12	40.0	0	0
8.	Developed product caters to the present trend	21	70.0	5	16.6	4	13.3
9.	There will be good marketability for the products designed	21	70.0	7	23.3	2	6.6

10.	The design is unique and different from ordinary Kalamkari	16	53.3	14	46.6	0	0
11.	Overall appearance of the product is appealing or unique	18	60.0	9	30.0	3	10.0
		High		Appropriate		Low	
	Cost factor	N	%	N	%	N	%
1.	Cost of designed kameez material	10	33.3	20	66.6	0	0



Selected motif



Rendered design

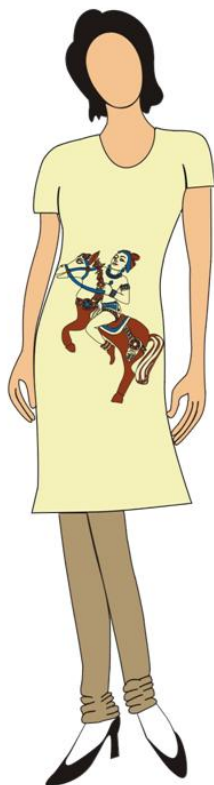


Figure 3: Finished design on Kameez material- II

It is obvious from the findings that, the maximum number of consumers strongly agreed with the parameter, “developed product caters to the present trend” and “there will be good marketability for the products designed”. The Parameters “Use of Kalamkari technique in rendering the design is apt” and “colour combination used is appropriate” were shown as least “strongly agreed” parameters. As seen from the above table, more than 66 per cent of consumers agreed that, the cost of designed kameez material is “appropriate” both in terms of designing as well as cost of finished materials. The image of the final product is given in Fig. 3, Overall rating for kameez material II is higher than kameez material I.

Kameez -III

It is evident from Table 6 that most of the parameters rated “Strongly Agree”. Adoption of sculptural design on dress material was found to be strongly supported by the consumers. This rating was higher than the first two kameez materials. All the consumers have agreed(per cent) that the product has good marketability. Design rendered in terms of colour combination, workmanship, uniqueness and overall appearance were rated 50 (per cent) and above by the consumers. Consumers opined that placement of design is not much taken care though it was their choice to be one of the best placement before embellishing the garment with Kalamkari.

As it is shown, more than 63 % of consumers agreed that, the cost of designed Kameez material is “appropriate” both in terms of designing as well as cost of finished materials. The image of the final product is given in Fig. 4.

Table 6: Consumer evaluation of designed kameez material –III, n=30

S.No	Parameter/ Criteria	Strongly agree		Agree		Disagree	
		N	%	N	%	N	%
1.	Use of sculptural design on garment is appropriate	17	56.6	11	36.6	2	6.6
2.	Use of Kalamkari technique in rendering the design is apt	10	33.3	17	56.6	3	10
3.	Fabric selected is suitable for the end use	14	46.6	13	43.3	3	10
4.	Placement of the design is well taken care	9	30.0	15	50.0	6	20
5.	Colour combination used is appropriate	16	53.3	12	40.0	2	6.6
6.	Motif/design used is in scale with the garment	16	53.3	10	33.3	4	13.3
7.	Quality of workmanship is good	15	50.0	13	43.3	2	6.6
8.	Developed product caters to the present trend	11	36.6	14	46.6	5	16.6
9.	There will be good marketability for the products designed	15	50.0	15	50.0	0	0
10.	The design is unique and different from ordinary Kalamkari	15	50.0	12	40.0	3	10.0
11.	Overall appearance of the product is appealing or unique	15	50.0	13	43.3	2	6.6
		High		Appropriate		Low	
	Cost factor	N	%	N	%	N	%
1.	Cost of designed kameez material	6	20.0	19	63.3	5	16.6

Kameez-IV

It is apparent from the results given in Table 7 that, out of ten, six parameters were rated as “Agree” followed by “strongly Agree”, The strongly agreed parameters were used

for sculptural design on garment, placement of the design, quality of workmanship and good marketability for the products designed. As shown in the results, the strongly agreed parameters by maximum number of consumers was

“Use of sculptural design on garment is appropriate”, whereas, the least majority of the consumers strongly agreed

with the parameter, “Use of Kalamkari technique in rendering the design is apt”.



Figure 4: Finished design on Kameez material -III.

Table 7: Consumer evaluation of designed kameez material IV, n= 30

S. No	Parameter/ Criteria	Strongly agree		Agree		Disagree	
		N	%	N	%	N	%
1.	Use of sculptural design on garment is appropriate	17	56.6	11	36.6	2	6.6
2.	Use of Kalamkari technique in rendering the design is apt	8	26.6	21	70	1	3.3
3.	Fabric selected is suitable for the end use	13	43.3	15	50	2	6.6
4.	Placement of the design is well taken care	15	50	8	26.6	7	23.3
5.	Colour combination used is appropriate	13	43.3	15	50	2	6.6
6.	Motif/design used is in scale with the garment	11	36.6	15	50	4	13.3
7.	Quality of workmanship is good	16	53.3	12	40	2	6.6
8.	Developed product caters to the present trend	14	46.6	16	53.3	0	0
9.	There will be good marketability for the products designed	16	53.3	13	43.3	1	3.3
10.	The design is unique and different from ordinary Kalamkari	13	43.3	17	56.6	0	0
11.	Overall appearance of the product is appealing or unique	14	46.6	15	50	1	3.3
		High		Appropriate		low	
	Cost factor	N	%	N	%	N	%
1.	Cost of designed kameez material	8	26.6	22	73.3	0	0
	(Values in parenthesis indicates percentage)	(n = Number of Respondents)					

All the consumers considered the design to be in line with the trend of the day and has uniqueness and is different from ordinary Kalamkari fabrics available in the market. Overall appearance of this kameez material is rated lower than

kameez materials I to III. This kameez material received a similar rating to kameez material- I in terms of cost factor Fig, 5.



Figure 5: Finished design on Kameez material - IV

Kameez -V

Table 8: Consumer evaluation of designed Kameez material V, n=30

S. No	Parameter/ Criteria	Strongly agree		Agree		Disagree	
		N	%	N	%	N	%
1.	Use of sculptural design on garment is appropriate	22	73.3	6	20	2	6.6
2.	Use of Kalamkari technique in rendering the design is apt	18	60	12	40	0	0
3.	Fabric selected is suitable for the end use	17	56.6	10	33.3	3	10
4.	Placement of the design is well taken care	13	43.3	15	50	2	6.6
5.	Colour combination used is appropriate	20	66.6	8	26.6	2	6.6
6.	Motif/design used is in scale with the garment	18	60	10	33.3	2	6.6
7.	Quality of workmanship is good	17	56.6	12	40	1	3.3
8.	Developed product caters to the present trend	18	60	12	40	0	0
9.	There will be good marketability for the products designed	15	50	14	46.6	1	3.3
10.	The design is unique and different from ordinary Kalamkari	19	63.3	10	33.3	1	3.3
11.	Overall appearance of the product is appealing or unique	18	60	9	30	3	10
		High		Appropriate		Low	
	Cost factor	N	%	N	%	N	%
1.	Cost of designed kameez material	8	26.6	18	60	4	13.3
(Values in parenthesis indicates per centage)		(N = Number of Respondents)					

It is appropriate from the results given in Table 8 that, all the factors evaluated, for the designed kameez material has scored “strongly agree” ranking except the parameter, about placement of the design. This material received higher ranking of above 60% in almost seven parameters out of 11 mentioned. Use of sculptural motif on garment was „strongly

agreed” for this material over all other four materials. This parameter was followed by colour combination used. The motif selected was rated 5th rank in the preliminary evaluation but all the parameters after rendering and display attracted higher ratings for almost all parameters.



Figure 6: Finished design on Kameez material - V.

It is noted that majority of consumers *i.e.* 60 per cent agreed that, the cost of designed Kameez material is “appropriate” both in terms of designing as well as cost of finished materials. The image of the final product is given in Fig.6.

4. Conclusion

The selected five dress materials motifs numbers were 19, 20, 5, 2 and 1 were ranked I, II, III, IV and V respectively. The designed products were evaluated against 11 parameters. Appropriateness of sculptural design and colour combination was rated high for kurti material over other materials. All the prepared products were evaluated by the judges for different parameters which consumers strongly agreed“. As rated, the placement of design was found to be good in dress material III, the color combination was appropriate for dress material V over others. Likewise, the scale of the motif to the garment and quality of workman ship was good for dress material II. And it was recorded that dress material II and V were rated to be in with the present trend. Dress material I was the one which was strongly agreed by consumers that the design developed was unique and different from ordinary Kalamkari designs.

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