Development of designs for table cloth through CAD software

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■ **ABSTRACT :** The present study was conducted to develop designs for table cloth through CAD software. Most preferred forty Greek motifs in eight different categories *i.e.* animal, human, pottery, foliage, stylized, architectural, geometrical and stylized flora fauna were used to develop twenty designs on AutoCAD software. Developed designs were shown to the respondents for their preferences in regard to different parameters *i.e.* innovation, placement of motifs and overall appearance and preferences regarding the 10 most preferred designs were taken.

■ **KEY WORDS:** CAD software, Greek motifs, Textile designing, Table cloth

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. (Mathur and Seyam, 2011). 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 software's not only help in producing a design but also provide easy tools to make changes as per the requirements, thus, reducing time and energy used (Bilalis, 2000). The 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. (*www.af.k12.wi.us/faculty/harris_ma/ANCIENT%20GREECE%20POWERPOINT.pdf*). In the present study, an attempt has been made to develop designs for table cloth inspired from Greek motifs using computer aided designing.

■ RESEARCH METHODS

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 and sketched manually in black and white colour on handmade sheet. Preferences regarding collected motifs were taken by thirty respondents including fashion designing students, students doing fine arts, and consumers having knowledge regarding textile and apparels. Five most preferred motifs ranked 1-5 from each category were selected to develop 20 designs for table cloth through AutoCAD software to
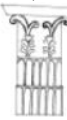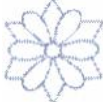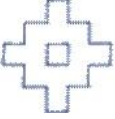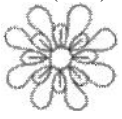
get the required intricacy and fineness. Twenty developed designs were shown to the respondents in black and white colour to take the preferences on different parameters *i.e.* innovation, placement of motifs and overall appearance. Subsequently ranks were assigned to designs.

■ RESEARCH FINDINGS AND DISCUSSION

The results of the present study have been discussed and presented follows :

Selection of motifs for table cloth :

This selection comprised of preferences of respondents for Greek motifs under different categories *i.e.* animal, human, pottery, foliage, stylized, architectural, geometrical, stylized flora fauna. On the basis of preferences of motifs by respondents, five top ranked motifs in each category were selected for development of designs the selected motifs in their preferred rank order from one to five have been given in Table 1.

Table 1 : The ranks of selected motifs on the basis of preferences of respondents					
Motif category	Name and rank of 5 most preferred motifs in each category				
Animal motif	A-10 (First)	A-5 (Second)	A-3 (Third)	A-1 (Fourth)	A-4 (Fifth)
Human motif	B-8 (First)	B-9 (Second)	B-5 (Third)	B-3 (Fourth)	B-6 (Fifth)
Pottery motifs	C-6 (First)	C-5 (Second)	C-1 (Third)	C-8 (Fourth)	C-10 (Fifth)
Foliage motifs	D-2 (First)	D-5 (Second)	D-6 (Third)	D-3 (Fourth)	D-9 (Fifth)
Stylized motifs	E-2 (First)	E-9 (Second)	E-1 (Third)	E-6 (Fourth)	E-8 (Fifth)
Architectural motifs	F-1 (First)	F-2 (Second)	F-5 (Third)	F-9 (Fourth)	F-3 (Fifth)
Geometrical motifs	G-4 (First)	G-6 (Second)	G-9 (Third)	G-10 (Fourth)	G-8 (Fifth)
Stylized flora and fauna	H-9 (First)	H-10 (Second)	H-4 (Third)	H-7 (Fourth)	H-8 (Fifth)

Preferential choice of sketched motifs :
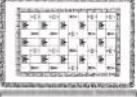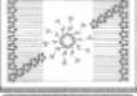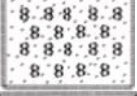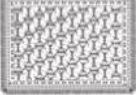
Animal motifs number A-10 got 1st rank, followed by motif A-5 at rank II, motif number A-3 rank III, motif number A-1 rank IV and motif number A-4 rank V. Human motifs number B-8 got 1st rank, followed by motif B-9 at rank II, motif number B-5 rank III, motif number B-3 rank IV and motif number B-6 rank V. Pottery motifs number C-6 got 1st rank, followed by motif C-5 at rank II, motif number C-1 rank III, motif number C-8 rank IV and motif number C-10 rank V. Foliage motifs number D-2 got 1st rank, followed by motif D-5 at rank II, motif number D-6 rank III, motif number D-3 rank IV and motif number D-9 rank V. Stylized motifs motif number E-2 got 1st rank, followed by motif E-9 at rank II, motif number E-1 rank III, motif number E-6 rank IV and motif

number E-8 rank V. Architectural motifs number F-1 got 1st rank, followed by motif F-2 at rank II, motif number F-5 rank III, motif number F-9 rank IV and motif number F-3 rank V. Geometrical motifs number G-4 got 1st rank, followed by motif G-6 at rank II, motif number G-9 rank III, motif number G-10 rank IV and motif number G-8 rank V. Stylized flora and fauna motifs number H-9 got 1st rank, followed by motif H-10 at rank II, motif number H-4 rank III, motif number H-7 rank IV and motif number H-8 rank V.

Development and selection of designs :

Twenty designs suitable for home furnishing article such as tablecloth were developed in Auto CAD software by combining preferred motifs of different categories on

Table 2: Reasons for preferences of developed designs				(n = 30)
Design. No. and Motif. No	Design in their rank order from 1-10	Parameters of design selection		
		Innovation	Placement of motifs	Overall appearance
Design no.- 15 Motif no.- E-9,G-4		25 (83.3)	30 (100)	26 (86.6)
Design no. : 14 Motif nos. : G-8, G-9, H-9		26 (86.6)	28 (93.3)	26 (86.6)
Design no. : 12 Motif no. : G-10		24 (80)	23 (76.6)	24 (80)
Design no. : 3 Motif no. : D-6, E-6, H-8		26 (86.6)	20 (66.6)	24 (80)
Design no. : 5 Motif no. : A-5, C-1, C-6, G-6, G-10		23 (76.6)	21 (70)	25 (83.3)
Design no. : 9 Motif no. : E-5, F-1		27(90)	22 (73.3)	18 (60)
Design no. : 7 Motif no. : D-2, F-5		24 (80)	21 (70)	20 (66.6)
Design no. : 10 Motif no. : A-1, D-2, E-9, G-9		22 (73.3)	19 (63.3)	22 73.3)
Design no. : 20 Motif no. : D-5, D-9		20 (66.6)	18 (60)	23 (76.6)
Design no. : 2 Motif no. : F-5		20 (66.6)	18 (60)	17 (56.6)

Multiple responses; Figure in parenthesis depicts percentages

the basis of visualization of designs suitable for table cloth. The procedure used for the development of design in auto CAD is summarized as:

Development of designs was done by using following procedure :

– Hand drawn motifs were scanned for further study for development of designs.
– Open scanned motif image on the autoCAD sheet of specific dimension.
– With the help of spin tool raster image of motif was made.
– The raster image was moved on the autoCAD sheet of specific dimension.
– With the help of scale command the image was cut to specific size.
– Designs were created with the help of different tools provided in autoCAD software. Different tools such as copy, image, rotate, cut, enlarge and reduce the size, trim were used until an aesthetically pleasing and required arrangement of motifs were obtained.
– Thus, the developed designs were saved in new file.
– Using same procedure twenty designs were created.

Preferences of developed designs :

Preferences of ten most preferred designs were taken and depicted in Table 2. Design no. 15 was developed by combining motifs number E-9 and G-4 which were most preferred by the respondents in their specific categories and design no. 15 was selected on the basis of 'placement of motifs' was preferred by all the respondents (100%) followed by 'overall appearance' (86.6%) and 'innovation' (83.3%) and thus ranked as first. Design no. 14 was ranked second which was developed by combining motif no. G-8, G-9, H-9. Preference for this design was due to 'placement of motifs' (93.3%), followed by overall appearance (86.6%) and 'innovation' (86.6%). Design no. 12 was ranked as third by the respondents on the basis of innovation (80%) followed by overall appearance (80%) and placement (76.6%). This design was developed by using motif no. G-10. Design no. 3 was ranked forth and was developed by using motif no. D-6, E-6, H-8. Design was preferred due to innovation (86.6%) followed by overall appearance (80%) and placement of motifs (66.6%). Design no. 5th

was ranked fifth and was preferred on the basis of overall appearance (83.3%), innovation (76.6%) and placement of design (70). Motifs in different categories that is A-5, C-1, C-6, G-10 were combined to give an innovative appearance. Design no. 9 was ranked sixth and preferred by respondents on the basis of innovation (90%) followed by placement (73.3%) and overall appearance (60). Two motifs E-6 and F-1 were used to give the required effect. Design no. 7 was ranked seventh which was developed by combining motif no. D-2, F-5. This design was preferred due to innovation (80%), placement (70%) and overall appearance (66.6%). Design no. 10 was given eighth rank by the respondents on the basis of overall appearance (73.3%), innovation (73.3%) followed by placement (63.3%). Motifs used for this design were A-1, D-2,E-9 and G-9. Design no. 20 was ranked ninth and was developed by combining motif no. D-5 and D-9. The overall appearance (76.6%) of this design was preferred by the respondent followed by innovation (66.6%) and placement (60%). Design no. 2 was developed by using design no. F-5 and was given tenth rank. This design was preferred on the basis of innovation (66.6%), placement of motifs (60%) and overall appearance (56.6%).

Conclusion :

To conclude, 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. Also as in the present world, fashion trends are fragile and the consumers constantly demand for innovative changes over the existing fashion. In such a situation CAD plays an important role as it helps designers to experiment with color, shade, texture and form. This effort might help in producing textile items of greater demand in market both at national and international levels.

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http://www.af.k12.wi.us/faculty/harris_ma/ANCIENT %20GREECE%20POWERPOINT.pdf

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