

FABRIC DESIGNING FOR PRODUCT DEVELOPMENT BY COMBINATION OF WEAVES THROUGH CAD

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ABSTRACT

CAD plays an important role in the creation of new designs and the production processes in the fast changing global trade. Computer Aided Textile Designing software is the new concept for designing in less time of today's era. Computers help to work easily in a short duration and more work with more production also. The application of Computer Aided Design software is used in the fields of weaving, fashion, embroidery, apparels, printing and knitting. Different weave patterns as well as a combination of two or more weave in the development of products are created by Corel DRAW. The present study was conducted in Hisar and Panipat city. Different weave patterns were created through Corel DRAW. A total of eleven different weaves were created. Out of eleven top ranked three weaves were selected for creation of weave combination designs. Total thirty weave combination designs were created. Out of thirty designs top ranked six designs were selected on the basis of experts' preferences. These six designs were selected for preparation of fabrics with different weave combination designs and color combination suitable for the development of the products. Thus, the prepared fabric used for the development of apparels.

KEYWORDS: Designs, Industries, Product, Textile & Weave Combination

INTRODUCTION

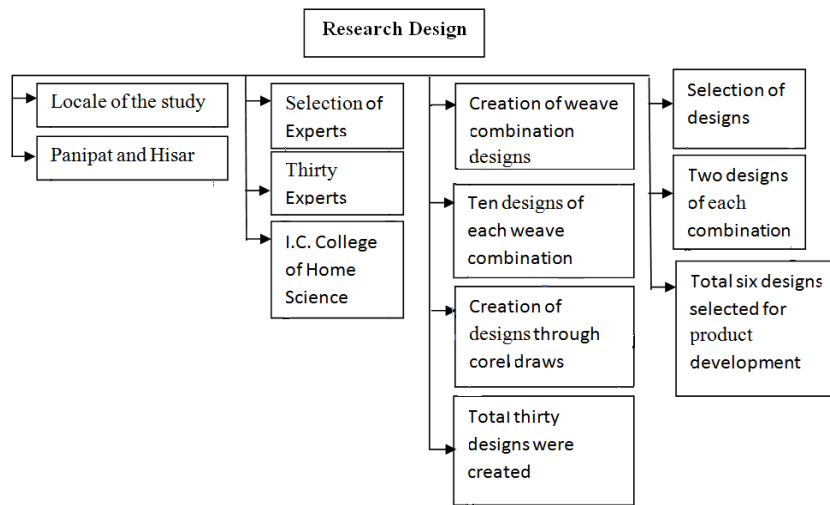
This paper presents the development of weave combination designs through Corel DRAW software-12. The best selected created designs through using this software used for the weaving of fabric using looms in industries in different colors. The development of designs is essential and continuing step in the field textile designing. Computer Aided Textile Designing (CAD) plays a vital role in facilitating the creations of new designs in short duration in fast changing global trade. It allows designers to offer more flexible and responsive service to customers and can, therefore, contribute to developing business. Different geometrical designs, floral designs; human and animal figure designs can be created easily in less time without wastage of raw material only because of the computer. (Rani, D. 2016).

As well as designing we can also create different weave patterns by the weaving of fabrics on looms. CAD is also the most common and easiest way to develop weave designs on graphs. Not only single weave patterns can be developed by Corel DRAW but the development of different weave combination is also an important aspect of Corel DRAW software. Weave combination of designs with color combinations enhance the beauty of end products this is possible only because of a computer. Through weaving instead of apparels and textile products other products like household articles, utility articles can also be developed utilizing the designs created through Corel DRAW software. Thus computer plays a vital role in textile designing, fashion designing as well as textile weaving. (Kashyap, *et. al.* 2012) emphasized that designs can easily be visualized and altered on computers in less time without tedious labor. So computerized designing can swap

drawing the design by the conventional method. The accuracy gets increased and the design can be repeated and placement can be done easily and quickly reducing the time period.

METHODOLOGY

The present study was conducted in I. C. College of Home Science, CCS Haryana Agricultural University, Hisar and ,Panipat city of Haryana state. The work done in the study was based on the creation of different weave combinations, designs, the designs of weave combination were created with the help of Corel Draw. Corel draw used for the creation of different designs and these created designs was got assessed from thirty selected expert’s from I. C. College of Home Science.Out of thirty weave combination designs, top ranked six designs were used for further work.



Selection of Experts: Experts were selected randomly from I. C. College of Home Science according to their knowledge and interest in the relevant field. Total thirty experts were selected for selection of created designs.

Creation and Selection Designs: Total thirty weave combination designs were created through Corel DRAW software. Out of thirty designs, top ranked six were selected or further work.

RESULTS AND DISCUSSIONS

Table: 1 Selection of Weave Combination Designs N=30

Sr. No.	Combination of Weave with Design No.	WMS	Ranks
1	Combination of Right Hand Twill Weave and Zig Zag Twill Weave		
	Design no. 1	2.53	VI
	Design no. 2	2.43	VIII
	Design no. 3	2.86	II
	Design no. 4	2.56	V
	Design no. 5	2.46	VII
	Design no. 6	2.90	I
	Design no. 7	2.33	IX
	Design no. 8	2.73	III
	Design no. 9	2.60	IV
	Design no. 10	2.20	X
2	Combination of Right Hand Twill Weave and Left Hand Twill Weave		
	Design no. 1	2.76	I
	Design no. 2	2.30	VII
	Design no. 3	2.50	III

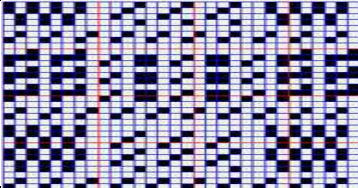
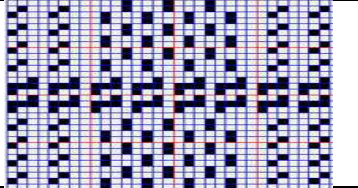
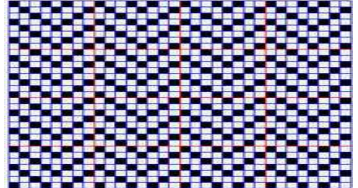
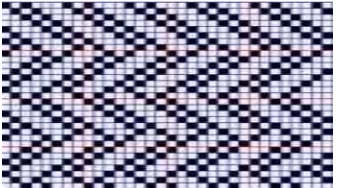
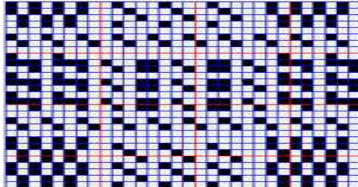
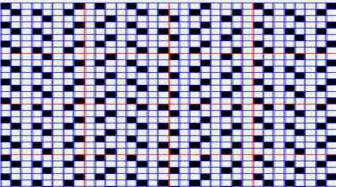
Table 1: Contd.,			
	Design no. 4	2.20	VIII
	Design no. 5	2.00	IX
	Design no. 6	2.33	VI
	Design no. 7	2.30	VII
	Design no. 8	2.40	V
	Design no. 9	2.66	II
	Design no. 10	2.46	IV
3	Combination of Zig Zag Twill Weave and Left Hand Twill Weave		
	Design no. 1	2.76	II
	Design no. 2	2.60	IV
	Design no. 3	2.33	VI
	Design no. 4	2.20	VIII
	Design no. 5	2.83	I
	Design no. 6	2.16	IX
	Design no. 7	2.40	V
	Design no. 8	2.30	VII
	Design no. 9	2.13	X
	Design no. 10	2.73	III

WMS: Weighted Mean Score

The data presented in table 1 show that amongst the designs of these are three categories; in each category total ten geometrical designs were created through Corel DRAW and these designs were preferred from experts'. In combination of (right hand twill weave and zig zag twill weave) the Design number 6 scoring highest mean score (2.90) and ranked Ist, design number 3 with a mean score (2.86) ranked IInd followed by design number 8 (2.73), design number 9(2.60), design number 4(2.56), design number 1(2.53) design number 5(2.46) design number 2 (2.43), design number 7(2.33) design number 10(2.20) got ranked IIIrd, IVth, Vth, VIth, VIIth, VIIIth, IXth and Xth respectively. In combination of (right hand twill weave and left hand twill weave) the Design number 1 scoring highest mean score (2.76) and ranked Ist, design number 9 with a mean score (2.66) ranked IInd followed by design number 3 (2.50), design number 10(2.46), design number 8(2.40), design number 6(2.33) design number 2 and 7(2.30), design number 4(2.20), design number 5(2.00) got ranked IIIrd, IVth, Vth, VIth, VIIth, VIIIth and IXth respectively. Whereas in Combination of (zig zag twill weave and left hand twill weave) design number 5 got Ist rank with weighted mean score (2.83), design number 1 got IInd rank with weighted mean score (2.76) followed by design number 10 (2.73), design number 2 (2.60), design number 7 (2.40), design number 3 (2.33), design number 8 (2.30), design number 4 (2.20), design number 6 (2.16) and design number 9 (2.13) got ranked IIIrd, IVth, Vth, VIth, VIIth, VIIIth, IXth, and Xth respectively.

Top- ranked six designs, two from each category were selected for further research work. Design number 5 and 3 from combination of right hand twill weave and zigzag twill weave, design number 1 and 9 from combination of right hand twill weave and left hand twill weave and design number 5 and 1 from a combination of zigzag twill weave and left hand twill weave were selected on the basis of the highest score. These selected designs were used for development of shoddy woollen blended fabric with different weave combinations and these will further be used for making apparel products. These lines are supported by Sharma, A. (2016) that the total numbers of 110 motifs, i.e. floral, geometrical, animal traditional motifs were collected and screened twenty. All twenty motifs were developed into a contemporary form using CorelDraw software and top five motifs, were selected. Amongst twenty developed motifs best five selected motifs may be used for creation of design and apply on saris using appliqué work.

Plate 1: Selected Weave Combination Designs for the Development of Selected Products

Design No.	Selected Weave Combination Designs	Design No.	Selected Weave Combination Designs
1	Combination of Right Hand Twill Weave 4b and Zig Zag Twill Weave 5		
Design No. 3		Design No. 6	
2	Combination of Right Hand Twill Weave 4b and Left Hand Twill Weave 4a		
Design No. 1		Design No. 1	
3	Combination of Zig Zag Twill Weave 5 and Left Hand Twill Weave 4a		
Design No. 1		Design No. 5	

CONCLUSIONS

From the study, it was concluded that the geometrical designs of weave combination can be created by successfully adapted by CAD for preparation of different textured fabric. CAD software may be used for development of different weave combination designs for apparels and then selected top -ranked designs may use in preparation of fabric. The prepared fabric with different weave patterns can be used for development of apparel, household articles and also for utility articles.

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