



INTERNATIONAL JOURNAL OF ADVANCE RESEARCH, IDEAS AND INNOVATIONS IN TECHNOLOGY

ISSN: 2454-132X

Impact Factor: 6.078

(Volume 8, Issue 3 - V8I3-1343)

Available online at: <https://www.ijariit.com>

Design and development of pattern manipulated blouse (easy grading) with functional features

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ABSTRACT

Clothing is one of the basic needs of human society. Thus fashion Industry becomes one of the most important industries prevailing in the world. People generally expect comfort, quality and aesthetic properties in ones clothing so as to wear it. Thus, manufacturers manufacture garments keeping in mind all these factors. As we know, there is nothing in this world which is flawless. So garments may have flaws which are been rectified in the due course and then sold in the market. Similarly, common problems faced by women while wearing a blouse are identified. Literature surveys are done to know the basics and pre-requisite needed to solve this problem. Thus, the pattern is drafted for a blouse and then it is manipulated for easy grading properties needed so as to reduce the time consumption in customized blouse. Then the functional features like issues of stain due to sweating, tightness at the hip region are solved. The fabric needed for the blouse and the fabric needed for the functional features added are sourced accordingly.

Keywords:

1. INTRODUCTION

Clothing is one of the basic needs of human society. Thus fashion Industry becomes one of the most important industries prevailing in the world. People generally expect comfort, quality and aesthetic properties in ones clothing so as to wear it. Thus, manufacturers manufacture garments keeping in mind all these factors. As we know, there is nothing in this world which is flawless. So garments may have flaws which are been rectified in the due course and then sold in the market. Thus, fashion industry is also an industry which needs a lot of updation with respect to time and people's choice. Only then the target people can be attracted towards the products. This paper titled "DESIGN AND DEVELOPMENT OF PATTERN MANIPULATED BLOUSE (EASY GRADING) WITH FUNCTIONAL FEATURES" is dealt with common problems identified in women's blouse and rectifying the same. When a garment is concerned, pattern drafting plays an important role. The stain attained at the armpit region, tightness at the hip region and time consumption in manufacturing a blouse are been identified as the common problems faced. And the solutions are been analyzed for those problems and the fabric are been sourced accordingly. Then the pattern is been manipulated for easy grading properties so as to reduce the time consumption in production. Finally the functional features stated above are included in the garment. And the new garment is commercialized in the market.

2. METHODOLOGY

Product Development

IDEA GENERATION

Pattern manipulated blouse with easy grading properties added with functional features.

PRODUCT DEFINITION

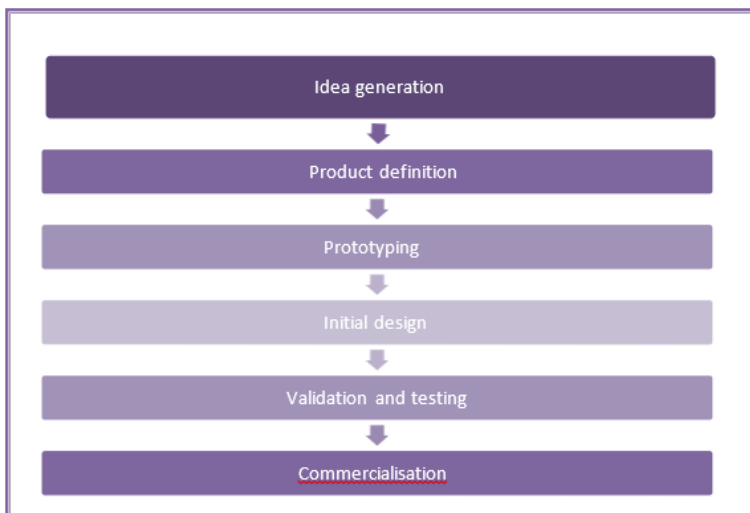
TARGET MARKET

Women and Girls who are in need of quick and fast outfit.

NOVALTY OF THE PRODUCT

- Pattern manipulation techniques available in literatures for easy grading properties which may help women with varying panel measurements are not yet used for this kind of new product development
- The customised blouse may be comfortable with measurements and fit, but they consume a lot of time. The new product developed will solve this issue of time consumption with its easy grading properties formulated

- The issues like stain due to sweating at the armpit region and tightness at the hip region are going to be solved in this new blouse for the first time
- Readymade blouse available in market does not have choice of sizes in each panel



PROTOTYPE

- Pattern manipulation techniques are implemented so as to give a variety of size options in each panel for the consumers
- Pattern manipulation done in such a way so that it could be graded and finished within few minutes
- A special pouch is been attached at the armpit region so as to absorb and evaporate sweat with fraction of a minute
- A double elastic belt is been provided so as to avoid scar or markings due to the tightness at hip region

VALIDATION

- Strength - Consumes less time, Easy grading properties and implemented additional features
- Weakness – Since it is a new product, product analysis and market analysis to be done and life cycle to be analysed, manufacturing is tough if produced in small quantity.
- Opportunity – Since it product
- Threat – Actual product has unique properties, there is a lot benefits should reach the customer of scope for this perfectly, product should not be misinterpreted

PRODUCT MANUFACTURE



➤ **Measurements required**

- 1) Full length
- 2) Bust circumference
- 3) Waist circumference
- 4) Hip circumference
- 5) Armhole circumference
- 6) Bust length
- 7) Cap height
- 8) Sleeve length
- 9) Sleeve bottom circumference

➤ **Tools for pattern making**

- Ruler
- Grade scale Measuring tape Pencil-eraser
- French curve Bell pins Tracing wheels
- Paper cutting scissors

PATTERN DRAFTING

BACK

1. Draw a vertical line AB of length = back length
2. Draw a horizontal line AA' of length = Bust circumference/4
3. Draw a square AA'BJ
4. Mark D on AB such that AC measuring the length from shoulder to apex point
5. Draw a line CH, such that C meets H at the line AJ
6. Mark E on the line AA' such that AE=Neck circumference/4
7. Mark a point F on AA' such that EF= shoulder width
8. FF' = shoulder slope
9. Join EF'
10. Draw a straight line FO, where O is on the Line CH
11. Divide the straight line FO into three equal parts and mark them X and Y
12. Measure 0.5 cm from x and mark x' inside
13. Measure 0.25 cm from y and mark y' out side
14. Measure ¼ of the waist and mark it at the waist line and name the point as J' 15. Extend the line J' to I' such that J'I'=Waist belt and draw a straight line towards line AB and name the point as B' 16. Mark M on the line B'I' such that B'M=J'M

FRONT

- 1) Trace the back pattern and make the following changes in it
- 2) Change the neck depth according to the measurements taken
- 3) At the centre front line, dart of width 0.5" and length measuring apex to apex/2 -1.5" (acc to this measurement)
- 4) The next dart at the hem measuring 1.5" in width and measuring apex to apex/2 (acc to this measurement)
- 5) And final dart at the armhole part measuring armhole to apex - 1" and width of 0.75" (acc to this measurement)
- 6) A curve is made at the hem region such that, it is measured with the width of the dart been implemented
- 7) Belt that is attached at the hem region is attached with the measurements being compared with the back, such that both front length and back length measures equal

PLACKET

- 1) Width of the placket may be 1-1.5" with respect to the measurements taken
- 2) Length of the placket is as same as the length of the front panel of the blouse

SLEEVE

- 1) Draw 0-1 measuring the sleeve length
- 2) Draw 0-2 measuring ½ of armhole circumference Square ,1,2,3
- 3) Mark 4 from 0 measuring the cap height and extend it to 5 Join 0-5
- 4) Divide the line 0-5 into four equal parts Mark them as ,y,z
- 5) Mark x' 0.25 cm outwards, y' 0.25 cm inwards and z' 0.25 cm inwards and z'' 0.5 cm inwards
- 6) Join x', y and z' for the back and x', y' and z''

➤ **Pattern Manipulation**

The basic pattern is manipulated with techniques analyzed so as to obtain easy grading properties for varying measurements.

BACK

1. Draw a vertical line AB of length = back length
2. Draw a horizontal line AA' of length = Bust circumference/4
3. Draw a square AA'BJ
4. Mark D on AB such that AC measuring the length from shoulder to apex point
5. Draw a line CH, such that C meets H at the line AJ

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7. Mark a point F on AA' such that EF = shoulder width
8. FF' = shoulder slope
9. Join EF'
10. Draw a straight line FO, where O is on the Line CH
11. Divide the straight line FO into three equal parts and mark them X and Y
12. Measure 0.5 cm from x and mark x' inside
13. Measure 0.25 cm from y and mark y' out side
14. Measure $\frac{1}{4}$ of the waist and mark it at the waist line and name the point as J' 15. Extend the line J' to I' such that J'I' = Waist belt and draw a straight line towards line AB and name the point as B'
16. Mark M on the line B'I' such that B'M = J'M

FRONT

1. Trace the back pattern and make the following changes in it
2. Change the neck depth according to the measurements taken
3. At the centre front line, dart of width 0.5" and length measuring apex to apex/2 - 1.5" (acc to this measurement)
4. The next dart at the hem measuring 1.5" in width and measuring apex to apex/2 (acc to this measurement)
5. And final dart at the armhole part measuring armhole to apex - 1" and width of 0.75" (acc to this measurement)
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SLEEVE

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2. Draw 0-2 measuring $\frac{1}{2}$ of armhole circumference Square, 1,2,3
3. Mark 4 from 0 measuring the cap height and extend it to 5 Join 0-5
4. Divide the line 0-5 into four equal parts Mark them as, y, z
5. Mark x' 0.25 cm outwards, y' 0.25 cm inwards and z' 0.25 cm inwards and z'' 0.5 cm inwards
6. Join x', y and z' for the back and x', y' and z''

➤ Sourcing

Fabric for the basic garment manufacture is sourced in accordance with the sari with which it is been provided with. A basic blouse with cotton lining cloth is manufactured as an initial stage of product development. And then the fabric needed for the functional features added are also sourced.

CoolMax

- ❖ This type of fabric is a special type, made up of polyester fibers.
- ❖ The specialty of this fiber is that it not only absorbs moisture quickly, but also evaporates the same fastly
- ❖ It is a light weight fabric and thus does not adds weight at the armpit region, as it may be uncomfortable, if it adds weight
- ❖ It keeps the user cool, dry and comfortable
- ❖ Mostly, this fiber is recycled and thus adds a feather that sustainability is maintained by its usage

➤ Addition of functional features

Functional features to solve the problems like tightness at the hip region, stain at the armpit region are added with the respective fabric sourced.

- ❖ Cool max is attached at the armpit region so as to replace the usage of sweatpads in addition.
- ❖ Thus the awkward look attained can also be avoided in addition to the comfort attained due to quick absorption and drying
- ❖ An elastic band is attached at the waist band so as to avoid the marks due to tightness at the armpit region
- ❖ In addition, this elastic band is been hidden in, thus even the elastic's presence would be unknown
- ❖ Also, this band provides grip to the user and also elongation at times when needed which adds comfort

Garment manufacturing

According to the pattern manipulated, and the functional features added, the blouse is manufactured

MARKETING MIX

PRODUCT

Pattern manipulated blouse with easy grading properties added with functional features

PLACE

The proper place for marketing this product are: Boutiques which mainly focus on party wear saris, Common sari retail shops, MBOs which have a separate section for functional wear sari

PROMOTION

The best places to promote this kind of products are Parlors, hair spa, women's yoga classes and Women's social and service clubs

PRICE

Price of this product depends upon the sari with which it is been provided with and the design been implemented on it.

3. RESULTS AND DISCUSSION

VALIDATION

- ❖ Strength - Consumes less time, Easy grading properties and additional features implemented
- ❖ Weakness – Since it is a new product, product analysis and market analysis to be done and life cycle to be analysed, manufacturing is tough if produced in small quantity.
- ❖ Opportunity – Since it has unique properties, there is a lot of scope for this product
- ❖ Threat – Actual product benefits should reach the customers perfectly, product should not be misinterpreted

4. CONCLUSION

Thus, a pattern manipulated blouse (easy grading properties) with functional features added is manufactured so as to overcome the issue of time consumption, stain at the armpit region and tightness at the hip region is solved. Finally, the performance of the garment is verified and then the cost of the garment is determined in accordance with the fabric consumption factor, time consumption factor and comfort properties. Then the garment manufactured is provided with separate panels so as to grade easily by consumers.

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