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Faculty of Engineering

Department of Textile Engineering

Report on

**Study on Problems of Woven Garments Sample
Development**

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LETTER OF APPROVAL

Feb 12, 2024

To

The Head

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Daffodil Smart City (DSC), Birulia , Savar , Dhaka –1216

Subject: Approval of Thesis Report of B.Sc. in Textile Engineering Program

Dear Sir,

I am writing to you know that, the report titled as **“Study on Problems of Woven Garments Sample Development”** has been prepared by Mst Mim Akter ID : 201-23-806 & MD Lisur Rahman ID: 201-23-807 is completed for final evaluation. The student collected all information from the textile industry. The student was directly collect information.

Thus, it will largely be appreciated if you kindly accept this report and consider it for final evaluation.

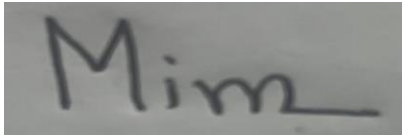
Yours Sincerely



Engr. Md. Abdullah Al-Mamun
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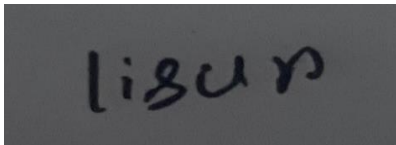
DECLARATION

Here, we declare that, the information which we present in this whole thesis, “Study on Problems of Woven Garments Sample Development” is not collected from any others and all the information which uses this thesis are collected from a reputed Textile industry..



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This is to confirm that, to the best of my knowledge, the seeker's declaration below is accurate.

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ABSTRACT

We know that woven garment samples is the most important and developed tested before starting the bulk production. In Merchandising sampling / sample development is one of the most important processes in garment industry and it plays a vital role to connected with the buyers. Problems of Woven Garments sample development is the big issue of apparel merchandising. Because of after approved actual sample buyer confirm the order. That's why sample are very important for order confirmation and bulk production. Firstly, we collect some each pack with sample comment of different buyer from Beximco Textile Limited & Progress Apparel BD Limited(Under PDS Multinational Group) . And we try to find out the problems and its percentage of same problem. And we also think that if we get the percentage of problem, then we solve those problems or we able to reduce those problems. We have collected some data from the factory about sample development & we got the result of the numbers of sample faults. We have discussed about different types of faults are found in sample development, where measurement problem contains highest percentage with 24% & also the number of faults found in sample development. The report also contains problems of the causes & the remedies in the woven garments sample development.

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CHAPTER- 1

INTRODUCTION

1.1 Introduction:

The RMG industry is one of Bangladesh's most promising and profit- generating sectors. The RMG market's reputation is well-known throughout the world. It all began in the late 1970s. It quickly became one of Bangladesh's most important economic assets. The RMG industry has grown significantly. Much money is spent on earning foreign currency, balancing export and import, and there is a big unemployment problem. For the country and women's empowerment, as well as financial assistance. In the year 2000, the development of garment manufacturing began. Bangladesh in the early 1980s. Whatever the case may be, we now earn about 80% of our foreign money. Bangladesh currently produces and trades more than 60 different items. Garments. Garments are shipped to the United States, Canada, Japan, Australia, the Middle East, and other countries. In many countries around the world the cheapest work expense is the most favored viewpoint for Bangladeshi manufacturers and exporters of clothing.

In RMG sector the Merchandiser serves as a link between the buyer and the exporter. From order analysis until shipment, he is in charge. As a result, merchandising is a very important area in the garments industry. In any event, the development merchandiser is the individual in charge of flawlessly executing orders in accordance with costing and pricing.

Understanding consumer needs, identifying and sourcing the right merchandise, deciding the right assortment, planning distribution of merchandise to different locations in the right quantities, deciding on pricing, and communicating merchandise offerings to target customers are all part of the merchandising process. However, in the textile industry, merchandising refers to the process of developing a buyer, presenting a price, confirming an order, and then executing the order to send goods on time and in good condition. It is the entire selling of clothing to overseas buyers or countries.

1.2 Objectives:

- To know about the many types of woven garments sample development problems.
- To know about woven garments sample making process and their types.
- To find out the reasons of sample failure.
- How to prevent these problems.
- To find how can we improve garment quality by minimizing the faults.
- To find , how to solve the problems of woven garments sample development..

1.3 Limitations:

When we are working that time we also find some limitations. Those are:

- We have not much knowledge about it & also in working hour, it is not easy to collect data from sampling dept.
- We also take all the data from the different type of woven garments that's why we had faced many limitations.

CHAPTER- 2

LITERATURE SURVEY

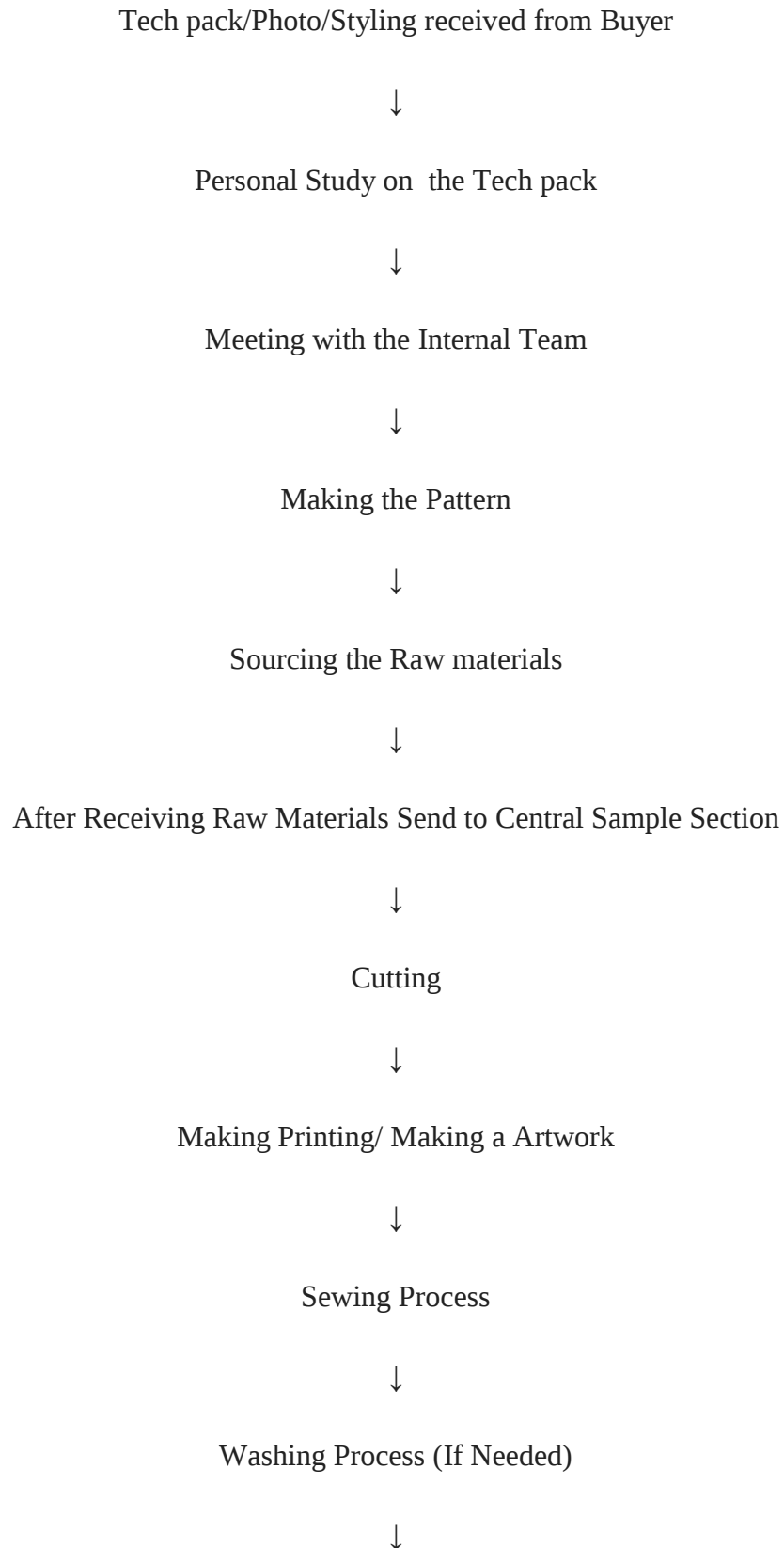
2.1 Garment Sample

Garment samples are always significant and are produced and estimated before mass product begins. It entails creating a sample of the garment or fabric that will be retailed. One of the most important procedures in the garment assiduity is slice/ sample development which plays an important part in retaining buyers. Because buyer generally place orders only after being happy with the quality of the samples. The collection of design created by fashion contrivers, as well as the designs with the great eventuality, should be chosen and collected from sample development. The garments which is need for bulk product is call sample garments. According to the specification distance, the sample that the buyer approves is known as the blessing sample, and the sample come after it's known as the counter sample. It's needed for effective product. Below are two different types of sample developing processes. Merchandising Process is the process of developing, executing, and presenting products to the buyer. It entails managing and coordinating the development of a product line from beginning to end.

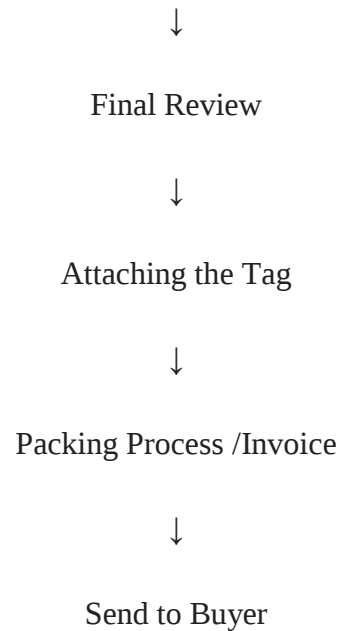
Sample:

"The conception, perception, and ideas of a fashion developer developed into product samples in regular stages of product development, with specialized and quality clarity in a development, "according to Slice in Retailing. A high-quality sample can attract further business and buyers for apparel manufacturing. It also allows the maker to explore for druthers to gain fabrics, plastering, and other garment accessories for the design at a lower cost but advanced quality which helps with cost. Sampling helps a lot in research. It is one of the most important factors which determines the accuracy of your research/survey result. If anything goes wrong with your sample then it will be directly reflected in the final result.

2.1.2 In Garment Industry Process Flow Chart of Sample Development



Finishing Process and Quality Control



2.1.3 Several different types of samples are developed for the buyers which are described below as per sequence of sampling: -

- **Proto Sample:**

Proto means first. It's the veritably original sample made in the slice process. This sample is developed for checking the design and style. As the actual fabric and trims won't be available in the veritably original stage, cover fabric and trims can be used for making the sample. After getting approval of this sample by buyer, the process of making fit sample starts.

- **Fit Sample:**

Fit sample is made again after the proto sample approved. All the details of the order distance sent by buyer to make the fit sample are taken into consideration and this sample is prepared by actual design, fabric and accessories. The garment construction and garment dimension is also taken care of in the fit sample. The fit sample is set and worn by the model within a given time, its checked and sent to the buyer. After the fit sample is approved by the buyer, then we made to make the size set sample.

- **Salesman Sample:**

Salesperson samples are also called Marketing samples. The manufacturer uses actual fabric and accessories to make this sample. It's a high- quality sample. The retailer or buyer has to pay to get this sample.

Test Sample:

For gament testing purpose use test sample,we are using to know fabric tesile test, color fastness test etc.

- **Size Set Sample:**

As we know all size samples are made under the size set sample so that we can get idea about all size sample and also help to know cartoon & Poly measurement.

- **Mock-up Sample:**

Mock up sample isn't a complete sample. It's part of garments similar as sleeve, collar, leg panel etc.

- **Pre-Production Sample:**

This sample is one of the most important in sample. When our fit sample is approved by buyer then we go for Pre-Production Sample (PPS) where we are using actual fabric, trims and accessories.\

- **Top of Production Sample:**

Top Sample is a part of bulk production. It is also called first bulk sample. Before starting our first production we make Top sample with actual fabric, trims and accessories which is same as bulk production as buyer requirement.

- **Shipment Sample:**

Shipment sample is the last sample in sampling process where we sent sample to buyer when sent first shipment.

2.2 Common problems of sample development

- Color shading problem
- Measurement problem.
- Sewing problem.
- Wash problem
- Incorrect garments label measurement.
- Shiny marks or Dirty fabric
- Printing Problem
- Fabric recovery problem (after Washing) etc.

2.2.1 Color shading Problem

Color shading problem is an meyor issue in sample development process. A garment with shade variation is considered as a defective garment. Shade variation in a garment occurs when different garment's element have different depth of colors or mismatch of shade in a garment's

part of the same garment. Shade variation in garments come due to shade variation in a fabric in an order. Shade variation in garments is caused substantially due to fabric problem. When Batch to Batch shade problem is noticed when the fabric is being painted in small batch to fulfill the whole order volume. When the slice fabric in sewing bottom, if there used fabric source are same roll also this problem is break.

Measurement problem

Actual body measurement are very important of a garment. But when a garments with in incorrect measurement is consider as a faulty garments. Measurement problem occurs only when the pattern measured correctly while creating the pattern. Because the fabric is cut based on the pattern.

When creating a pattern, look at the measurements and make the pattern a little more accurate. And when cut the fabric a little carefully while walking, this measurement problem is no longer a problem.

2.2.2 Sewing Problem

Various types of sewing problem which arises during sewing the garments –

- The stitches skipped.
- The stitch unbalanced.
- The stitch staggered.
- The stitch density is variable.
- Seam puckering.
- Breakage the needle thread
- Bobbin or looper thread breakage
- Imbalanced / variable stitching
- Staggered stitching.
- Variable the stitch.

2.2.3 Problems arising reasons

- Thread tension on the higher or lower loop is uneven.
- As a result of needle deflection.
- If the loop of the needle thread is too small.
- Sewing thread tension is incorrect.
- The needle thread part was incorrectly adjusted.
- In the bottom of the thread package, there is a twisting of needle thread.
- Sewing with low quality thread.

2.2.4 Minimizing sewing fault

1. Examine the needles position and timing in relation to the hook or looper.
2. The tension of thread should be changed.
3. The needle should be changed.
4. Changed the thread count & needle size.
5. The process of applying precise tension on a thread.
6. Choosing the proper thread path.
7. At the bottom of the thread packet, place a foam pad.
8. It's time to switch out the sewing thread.

2.2.5 Printing Problem

Here are some of most common problems of printing –

1. Color variation.
2. Bleeding.
3. Misfits.
4. Stick in.
5. Banding
6. Unwanted Pigment making on clothes.
7. Color out.

2.2.6 Garments Label

A garments label is a communicator between the product & buyer. The label contains various important information of the product. Fabric type, brand name, country origin, composition of fabrics, size, Style, PO etc are mentioned in it.

2.2.6.1 Different types of label-

1- Main Label

2- Sub Label

- Care Label.
-
- PO Label / Style Label.
- Price Label.
- Size Label.
- Composition Label.
- Special Label etc

CHAPTER- 3

EXPERIMENTAL DETIALS / SURVEY

3.1 Experimental Details/Survey

In order to compile a variety of data about sample development problems.

Beximco Industrial Park is a company that we, internship this company.

Beximco Industrial Park is one of the country's leading composite factories. In Woven fabrics processing, dyeing, printing ,washing and ready-made garments production to be available from one stop service. The project ensures sampling to supply of finished ready-made garments all from one source, ensuring in time delivery & complying quality. Beximco has evolved into a worldwide recognized and trusted name in Textile manufacturing for expert workmanship, progressive R&D, constant quality, and services.

3.2 Description of problems of sample development

All the data that was needed to highlight the problems of sample development was taken from different tack pack and buyer comments with different buyer. First the sample is created from the tag and then sent to the buyer. After sending sample, the buyer checks the quality one by one and makes various comments on that samples. Where is something wrong with the sample, all the details are highlighted through comments. To check each sample, they are weighed against different dummy bodies and different models.

After sending the sample to the buyer, the buyer highlights the problems in the form of comments with pictures. Sample problems and their remedies are highlighted.

3.3 Problems of sample development

1. Measurement problem.
2. Color shading problem.
3. Sewing problem.
4. Wash Problem.
5. Fabric Fault .
6. Label Mistake.
7. Shiny Marks.
8. Printing Fault.
9. Attaching Wrong Trims.

3.3.1 Measurement problem



Picture -1

Causes:

Measurement problem occurs only when the pattern measured correctly while creating the pattern. Because the fabric is cut based on the pattern.

Remedies:

Ensure to make the actual pattern of actual measurement. And when cut the fabric a little carefully while walking, this measurement problem is no longer a problem.

Wash Problem.

Picture-1

**Causes:**

Garments washing is the process to improve hand feel, this change the garments demand. This process increase the comfortability, look aesthetics, & also increase the product value. So, various of washing defects, the rejection of garments increases. Garments washing occurs by insufficient condition, water, chemical use etc.

Remedies:

Sufficient condition water, chemical use etc.

3.3.2 Color shading problem

Picture-1



Causes:

Most of the time shade variation happened due mishandling of fabric roll during cutting fabric in sewing floor. Shade variation in garments in caused mainly due to fabric problem.

Remedies:

When the cutting fabric in sewing floor, if there used fabric source are same roll then this problem are solve.

3.3.3 Sewing problem

Picture-1



Causes:

1. Sewing thread tension is incorrect.
2. Do not sewing until correct measurement

Remedies:

1. The process of applying precise tension on a thread.
2. Carefully sewing with correct measurement.

3.3.4 Incorrect garments label Attaching

Picture-1



Causes:

1. Negligence of the worker.
2. Hustling by worker.

Remedies:

1. Process should be done carefully.
2. Repeating the process.

3.5.6 Fabric Fault :

Picture-1



In this picture shows yarn missing and Used low quality yarn.

Causes:

1. Weaving Problem.
2. Low Quality Yarn use.

Remedies:

Used quality full yarn and set correct weaving.

1. Attaching Wrong Trims

Picture-1



In this picture shows that wrong button use.

Causes:

1. Negligence of the worker.
2. Hustling by worker.

Remedies:

1. Process should be done carefully.
2. Repeating the process.

3.5.8 Shiny marks or Dirty fabric

Picture 1



Causes:

1. The shiny mark comes because of ironing at too high temperature.
2. If the surface is uneven while ironing.

Remedies:

1. Choosing the right fabric.
2. Ironing at suitable temperature.
3. Pressing cloth with iron at a proper heat.

3.5.9 Printing Problem

Picture- 1



Causes:

1. Lower viscosity of printing paste.
2. Improper alignment of the screen.
3. Color applied unevenly.
4. Unwanted marks on cloth.

Remedies:

1. Ensuring the proper viscosity of the printing paste.
2. Proper handling of color.
3. Using proper alignment on screen.

3.6 Summary of problems found of Woven Garments Sample Development:

	Day-1	Day-2	Day-3	Day-4	Day-5	Day-6	Day-7	Total
Measurement Problem	3	3	2	4	2	2	2	18
Color Shading		2		3		1	1	7
Sewing Problem	1	1	2		2			6
Wash Problem		2	2	2		2	2	10
Fabric Fault		2		2		2		6
Label Mistake			2		2	1		5
Shiny Marks		2		3		2		7
Printing Fault			3	3			4	10
Attachin Wrong Trims	2		2			1		5
Total	6	12	13	17	6	11	9	74

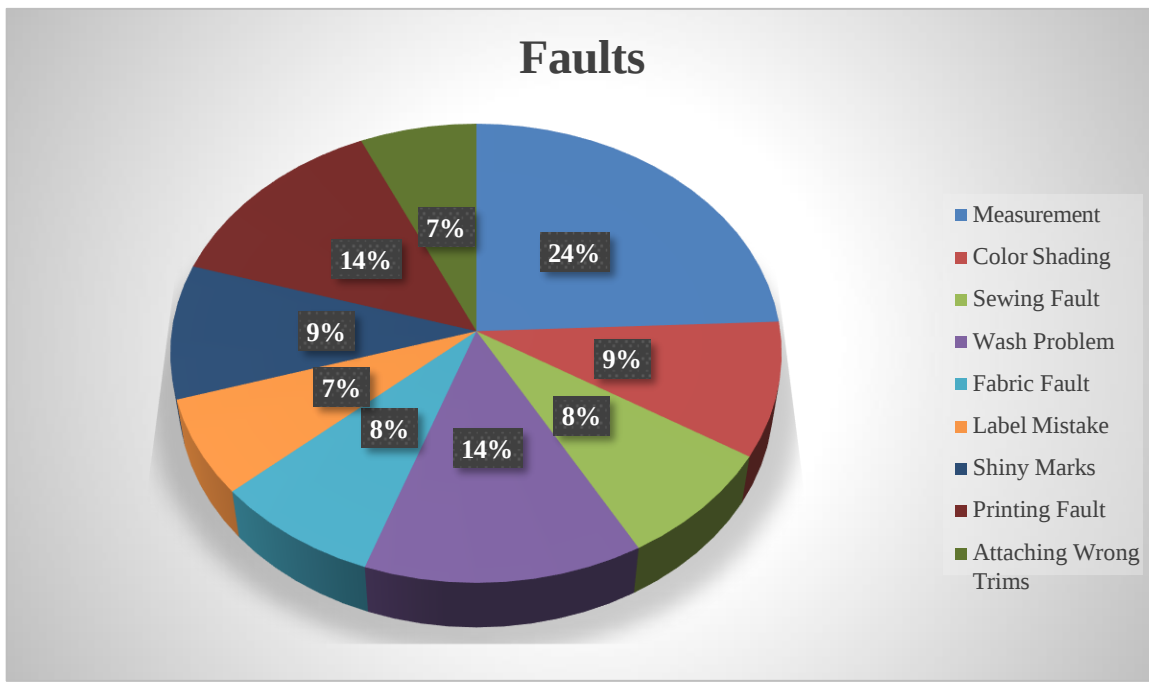
CHAPTER- 4

DISCUSSION & RESULT

4.1 Discussion & result

In this study, we discovered a variety of flaws that can occur in a variety of processes. Some flaws are quite common. Some of them are individual. In this report we have tried to find out the problems of sample development and also tried to solve those problems and get to solution.

4.2Pie Chart of Sample Development Faults:



The following pie chart shows the chance of faults set up while examining the quality of the sample garments. The measurement problem is the mostly found fault which contains 24% of the faults. The lowest in percentage is fabric recovery & label mistake which is 7% each. There are other faults are mentioned as its number of faults in percentage.

So the mostly found fault is Measurement problem. Fabric recovery & label mistake is the lowest in number of faults.

4.2 Major Defect's causes & remedies:

Here, we can see the major defect is measurement problem. There some reasons behind this fault. The causes of measurement problem & remedies are discussed here-



Picture-1



Picture-2

Causes:

- Measurement problem occurs only when the pattern measured correctly while creating the pattern. Because the fabric is cut based on the pattern.
- Small changes to design is a common problem.
- Rushing production is a cause of these kind of problem
- Lack of concentration by the worker.

Remedies:

- Ensure to make the actual pattern of actual measurement. And when cut the fabric a little carefully while walking, this measurement problem is no longer a problem.
- By checking quality on a regular basis.
- Try not to make a rush for sample making.
- Small changes must be introduced before the sample making process

CHAPTER- 5

CONCLUSION

Conclusion

In this report during sample development there are many problems inside and some problems that are always in the spotlight. The major problems of woven sample development is measurement problem. Which is shown in the report . The measurement problem which percentage is around 24%. And the other side we see that lowest percentage problem is incorrect garments label problem & fabric recovery problem which is 7%. The study highlighted we understand that an according to sampling in merchandising, "a fashion designer's concept, vision, and ideas turned into product sample , in systematic stages of product development, with technical and quality clarity in a development." A high-quality sample can help a clothes manufacturer gain more business and clients. It also allows the designer to look for lower-cost but higher-quality fabrics, trims, and other clothing accessories for the design, which helps with costs. In research, sampling is extremely beneficial. It's one of the most essential aspects in determining how accurate your research/survey results are. If anything goes wrong with your sample, it will be reflected in the final outcome. Sample development is definitely an important part of merchandising. In the same way, many problems have to face while doing sample development.

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