



Exploring Eco Printing For Wall Art

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ABSTRACT

Eco-printing is a method of printing the fabric with the help of leaves and flowers. The colour of the print is absorbed by the fiber present in the fabric. Many plants have the ability to give print on fabric. The process of directly applying the print of the plant onto the fabric is known as eco printing. The objective of the study is to see the print of 3 different flowers and leaves on cotton fabric and use them as wall art pieces and use one of the chemicals to fasten print on the fabric easily. While exploring researcher is able to learn new technique which is eco-printing. While doing this process we also came to know that flowers and leaves can't be printed together at the same time because of different steaming times. 6 different art pieces were made out of it and noticed that people were willing to buy it and ready to pay a good amount.

Key Words – Eco-Printing, Eco-friendly, Sustainability, wall Art, Aesthetic

LITERATURE REVIEW

- Clothing has numerous purposes, including covering one's body, making one's identity known, expressing one's status, and adding visual appeal. Adding ornamentation to one's body and clothing has long been a favourite pastime of humans. Colourful clothing printing is one of their practices. Domestic garment printing can make use of a wide variety of printing techniques, including block printing, screen printing, stencil printing, hand printing, and many more. Eco printing is one of the newest methods. It is a method of printing textiles that involves inserting plant pieces into multiple layers of fabric and heating them for designated periods of time. The therapeutic properties of Rose Indica (rose flower) have been extensively studied and documented by (Manuja et al., 2023). While the petals of this plant are utilised in a variety of food and cosmetic goods, the leaves are typically discarded. This experimental study aimed to standardise the printing method and assess the colorfastness of botanical prints of rose leaves on silk and cotton fabric. Since no dangerous

chemicals were employed in the development process, the created prints were evaluated for colorfastness to various environmental conditions, including washing, dry cleaning, perspiration, rubbing, and sunlight exposure, in accordance with multiple ISO and AATCC standards. The results demonstrate that the cotton fabric printed with rose leaves has a vivid, clear print and holds up well in the wash, dry cleaner, and crocking tests, but fades badly when exposed to direct sunshine.

- This study was conducted by (Nurmasitah et al., 2022) to accomplish two goals: (1) to learn how different types of mordant affect the outcome of ecoprint dyeing with Tingi (*Ceriops tagal*) dye on primisima fabrics, and (2) to identify the optimal mordant combinations for ecoprint dyeing in terms of pattern clarity, colour sharpness, colour fairness, and colour absorption. This study employs an experimental approach. The three independent variables are tannins, mordantawas, and tunjung. Design clarity, colour sharpness, colour fairness, and colour absorption—all outcomes of ecoprint dyeing—serve as dependent variables. Primisima cloth, Tingi (*Ceriops tagal*) dye, and mordanting process serve as the control variables. The study's data were gathered through careful observation. There were 5 ecoprint treatment samples used in the design of this study, i.e. sample A - using mordantawas on the main fabric, Tingi (*Ceriops tagal*) dye on blanket and mordantawas in the fixation; sample B - using mordantawas on the main fabric, Tingi (*Ceriops tagal*) dye on the blanket, and mordantunjung in the fixation; sample C - using mordantunjung on the main fabric, Tingi (*Ceriops tagal*) dye on the blanket, and mordantawas in the fixation; sample D - using mordantunjung on the main fabric, Tingi (*Ceriops tagal*) dye on the blanket, and mordantunjung in the fixation; sample E - using mordan tannin on the main fabric, Tingi (*Ceriops tagal*) dye on the blanket, and mordantawas in the fixation; and sample F - using mordan tannin on the main fabric, Tingi (*Ceriops tagal*) dye on the Ecoprint treatment A—which uses mordantawas in the fixation, Tingi (*Ceriops tagal*) dye on the blanket, and colour sharpness, pattern clarity, colour fairness, and colour absorption—was determined to be the best. The world's textile production in the linear economy is approximately 400 billion m² per year. Approximately fifteen percent of the cloth that is utilised for garment production is wasted while cutting. The implementation of zero-waste principles in the practice and production of fashion is only one example of the many recycling programmes in the fashion industry that are working towards a circular economy. There is a misconception in the fashion industry that zero-waste production of aesthetically pleasing garments of any shape, variety, or size is impossible, and conventional approaches to fashion education place an emphasis on the designer's personal aspirations. They think it's too complicated and takes too much time to complete the task.
- Printmakers, textile designers, and artists all use contact printing as a creative tool. To achieve deeper and more vibrant hues in natural dyeing and printing, wool and silk are the primary textiles employed. Using a variety of plant, vegetable, and fruit byproducts and biowaste in conjunction with cotton, viscose, Tencel, Tencel/cotton, and cotton/polyester blend fabrics, this study (Ismal, 2016) details the impact of different mordants, processing conditions, and fixation methods on the most desirable patterns, textures, and colour shades. The ideal scenarios discovered, and accomplished the

desired visual effects—bright, crisp, and striking. Using egg white to mimic the protein structure of animal fibres was also a helpful technique that was developed. Because of its protein structure and sticky nature, egg white seems to amplify the print effect, leading to more attractive, vibrant designs with sharper edges. It makes plant traces, textures, and colours visible and vibrant, which plants can then use to cling to fabric. Colours were enriched, colours were modified, plant patterns were intensified, and print colour yield was improved with the use of mordants. Shades of cinnamon, brownish green, dark khaki, pink, brown, and navy were mostly made by iron, copper, and alum. Shades of pinkish, reddish, and yellowish were lighter and softer. Making good patterns requires technical know-how, practical experience and precise cooking methods. Manipulating process parameters can impart interesting surface effects. Modifying just one parameter results in a radically different design with substantial variation.

INTRODUCTION

Eco Printing, as I understand it, is a type of natural dyeing in which the colours from plant material are transferred to paper or cloth through steaming or boiling. Eco printing is a process for producing elaborate and distinctive designs on cloth or paper that uses natural, environmentally friendly plant components and leaves. This kind of art has grown in favour as a greener substitute for conventional printing techniques, which frequently use harsh chemicals and synthetic dyes. Eco printing is a flexible and eco-friendly approach to make stunning, unique designs. The type of plants utilized, the mordants used, and the technique used can all have an impact on the outcomes. Additionally, since the material doesn't utilize harmful chemicals or synthetic dyes, it is a green choice that is well-liked by eco-aware artists and artisans.

OBJECTIVE

1. To understand a technique of eco-printing
2. To create Wall art on Cotton Fabric using Eco Printing

SIGNIFICANCE OF THE STUDY

This study documents the step-by-step methodology of creating a wall art piece using eco printing Beginning with a comprehensive examination of the consumer's need in the broader market of decor products. The findings from this study eventually helped in developing a wall art which is an amalgamation of decoration, sustainability and visual aesthetics.

Although studies have found significance that Eco Printing can be used to make wall art instead of using it only for many ways of doing eco printing that are supported by such research or have a documented process explaining the sequential steps of development, as well as the shortcomings and challenges faced during the product development process. In short, this study helps fill the gap between theoretical aspects and practical application of concepts of wall art and marketing.

RESEARCH METHODOLOGY

This qualitative research study explores the New Product Development process of a Wall Art Piece. The research involved a survey, which was the final feedback survey. Random sampling techniques were used for data collection. The sample size was 30. Furthermore, the process of product development involved exploring the eco-printing technique and making wall art piece as a final product. Using the data retrieved from the first surveys, a product was chosen and then the process started.

In this specific study, the investigator tried to understand what motivates consumers to make impulse purchases based on a product's packaging and tried to accumulate all the findings into creating a product that was ultimately bought on the basis of its aesthetics supported by its functionality and aspect of sustainability.

In this specific study, the investigator tried to understand how eco-printing is done and how he can make wall art out of it and tried to accumulate all the findings into creating a product that is aesthetically supported by its visuality and aspect of sustainability.

DESIGN FLOW

The size chosen for the pieces is 12 inches by 12 inches, and there are a total of 6 distinct wall pieces with various leaves and flowers. Then, we began adhering to a technique that is crucial for obtaining precise outcomes, particularly

1. Sourcing and Selection of Fabric

The process began with selecting the fabric, and after visiting numerous stores and examining a variety of textiles, we ultimately opted to utilize heavy-weight cotton cloth. because it will readily absorb the colour.

2. Scouring

Retha powder was used to wash the fabric in this process in order to get rid of all the contaminants. The fabric will then be dried.

3. Moderating

After scouring the fabric, it is moderated by filling a bucket or tub with water. The water should be a sufficient amount to allow the fabric to fully submerge in it. We will then add 1% Iron Powder in proportion to the fabric's weight in the water, and this 1% chemical will be calculated by first weighing the fabric and then calculating the 1% in proportion to weight. Then only submerge the fabric for 1 minute. After that, remove it and twist it to squeeze excess water out of the fabric.

4. Selection of leaves and flower

This stage is crucial and harsh at the same time because it allows for the selection of leaves and flowers based on the plant and flower's name, as well as on its shape and size. Do you know that any plant or flower may be used to make prints. We employed three distinct flower types—rose, hibiscus, and marigold—as well as three distinct leaf types—silver oak, guava leaves, and recunes.

5. Preparing of Fabric

We will lay the plastic sheet first after Moderating the cloth, and then we will place the damp fabric on that plastic sheet.

6. Placing of the leaves

Following the preparation of the cloth, we put the leaves and Patels of flowers on it before covering it with another simple fabric, such as lining or cotton.

7. Rolling of the fabric

After arranging the leaves, we will take the plastic, cotton fabric, leaves, and lining fabric layers together and begin tightly rolling them, making sure there is no air in the layers as we roll.

8. Tying of the fabric

Using a strong thread, begin tightly tying the fabric after it has been rolled up, making sure it does not unravel during the process. At the end, tie a tight knot to secure it.

9. Steaming it

Now that the fabric has been tied, it's time for steaming, one of the most crucial steps in eco-printing because everything depends on steam. To do this, we take a steamer, fill it with water, place the rolled fabric inside, cover it, set it on the stove, then turn the stove on. We steam the fabric along with flower Petals for 10 minutes if the fabric is small, but for 20 minutes if the fabric is large, make sure to steam it for that amount of time. stem the fabric with leaves for 1 hour If the fabric size is tiny, size is large then steam it for one and a half hours.

10. Opening of Fabric

After steaming, remove the sample, open it, and extract all the layers away from the main fabric. Let it dry, but make sure to only dry it in the shade.

11. Final Results

The finished cloth is prepared, and we will use it as a piece of wall art by framing it.



Figure 1 Print of Marigold Petals

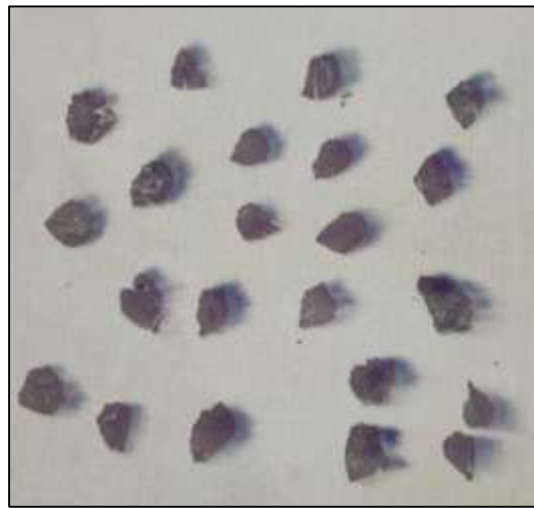


Figure 2 Print of Rose Patel



Figure 3 Print of Hibiscus Flower



Figure 4 Print of Guava Leaf



Figure 4 Print of Ricinus Leaf



Figure 5 Print of Silver Oak Leaf

WASH CARE

There are some instructions which we need to follow if we are washing it or using it as textile for dress-

- Hand wash with pH-neutral mild detergents
- Machine wash using a gentle cycle
- Low temperature/keep a cloth over the garment to iron
- Do not bleach. Keep away from citric juice
- Dry flat. Avoid direct sunlight
- Use pH-neutral soap

Response of buyers 80% of the respondents expressed interest in purchasing the finished product after seeing it, and the majority of them were prepared to pay between 600 and 1000 rupees for the wall art.

CONCLUSION

The fact that customers have given the product favourable evaluations shows that the wall art's distinctive design has been successful in grabbing their attention and persuading them to buy. It also demonstrates how important sustainability and aesthetics are in influencing consumer behaviour. As a result, the researcher is better able to comprehend eco-printing and learn that because flowers and leaves have extremely different steaming times, they cannot be printed together.

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