



## RESEARCH ARTICLE

# Design and development of wall hanging and plant hangers using tie and dye

Simeon P and Vijayalakshmi D

## Abstract

The key priority of this research work is to learn about the tie and dye Craft specialization, its value and diversity, to develop and promote tie and dye items in the fashion business. Tie and dye are type of resist dyeing, which involves tying the cloth and making manipulations before dyeing them. These manipulations are called resists and prevent the applied colour from coloring the fabric. The uniqueness of tie and dye lies in producing rich visual effects of colors on the fabric through “tying” and “dyeing” the fabric. The art of tie and dye has survived the passage of time and is practiced around the globe even today. In this research two different products like wall hanging and pot holders are created using the macramé technique. The cords used are tie and dyed. The products were also checked for its marketability using a survey.

**Keywords:** Tie and Dye, Resist Dyeing, Product Development, Yarn Tie and Dye, Wall Hangings, Plant Holder.

## Introduction

Tie & Dye is a modern term for the art of selectively creating resists before the application of dye or color. The fabric's manipulations prior to dye application are called resists, as they partially or completely prevent the applied dye from coloring the fabric ([www.Fibre2Fashion.Com](http://www.Fibre2Fashion.Com)). It is an age old tradition, it has survived till this day as one of the oldest, finest and most widely used techniques for coloring the world over. India is one of the leading countries in the use of the tie and dye method for fabrics. Right from shirts to home textiles, many things are applied with the tie and dye effect. It is very notable that there isn't any limit to the designs that can be made from tie and dye. Fairly expressing tie and dye brings out a designer's capability to a further extend. The objectives of the research are to:

1. Study the tie and dye craft's history, evolution, techniques, and reality.

2. Examine the cluster's challenges and know the craft's strengths, weaknesses, opportunities, and threats.
3. Design and develop a product from the learnings from the craft training.

## Literature Review

### History and Evolution

Tie and dye has a very deep historical background, it can be traced to pre-historic times. There is tie-and-dye evidence as back as BC 300. However, the earliest written evidence comes from China & Japan accounting in the 6th century ([www.theadairgroup.com](http://www.theadairgroup.com)). The availability of silk and hemp, which are very receptive to the resist technique, made these countries' art outstanding. Some early tribes in Western China, South East Asia, and Central America tied and dyed the threads before weaving their cloth. Technically this was not tie and dye but the beauty of the designs that appeared was striking as were the patterns done with tie-dyeing. Tie and dye were introduced in different parts of the world in different periods. The craft was also evolved into different techniques as per the region. Shibori is a form of tie-dye which originated in Japan, and has been practiced there since the 8th century. Shibori includes several labor-intensive resist techniques, including elaborate stitching patterns and tightly gathering the stitching before dyeing, forming intricate designs for kimonos, obi and other accessories and garments (Das, 1888). Bandhini, the Indian tie and dye technique, is the oldest method that is still in practice. It is believed that its origin began around 5000 years ago

Department of Apparel and Fashion Design, PSG College of Technology, Coimbatore, Tamil Nadu, India

**\*Corresponding Author:** Vijayalakshmi D, Department of Apparel and Fashion Design, PSG College of Technology, Coimbatore, Tamil Nadu, India, E-Mail: [hod.afd@psgtech.ac.in](mailto:hod.afd@psgtech.ac.in)

**How to cite this article:** Simeon, P., Vijayalakshmi, D. (2023). Design and development of wall hanging and plant hangers using tie and dye. *The Scientific Temper*, 14(2):391-397.

Doi: 10.58414/SCIENTIFICTEMPER.2023.14.2.24

**Source of support:** Nil

**Conflict of interest:** None.

in Rajasthan and Gujarat. Some of the first users were the Muslim Khatri community of Kutch. It is used to make odhnis, saris and turbans<sup>(4)</sup>.

Perhaps the most renowned and complex is Batik, an Indonesian custom that includes an altogether additional tedious act of stepping or drawing wax onto a texture before you color it, to make the negative space in the last piece. Perhaps, America and the western world are the latest adopters of tie and dye. The 1960s saw the rise of tie and dye in fashion after many decades. Thanks to the hippie era ([www.theadairgroup.com](http://www.theadairgroup.com)), the craft that was started as a basic resist dyeing process involving tying the fabrics before colouring them using naturally available dyes to create patterns and styles has now evolved into various techniques and forms. However, the base-tying the materials remains the same and undisturbed through all these years. The different methods in which tie and dye is done ranges from the historic bandhani, shibori and batik styles to the latest ikat and lehariya type of tie and dye. Also, this beautiful crafts limited to paper and fabrics in the early days has cross bridges to decorate the shoes of the youth.

In India apart for the popular and beautiful bandhani type of tie & dye, others clusters and patterns can also be found like Ekdali, tikunthi, jaaldar, bheldar, etc, telia runnal, pochampally ikat, etc.,

Ikat technique is one of the oldest and ancient methods of fabric ornamentation made with the elegant touch of a weaver's hand. This yarn resist the way of embellishment for cloth is entirely different from that of the fabric ikat due to its versatility of ornamentation in the field of intricacy, fineness and artisanship of a pure designer, probably evolved from Asia. Although, shuttle-less looms with sophisticated dobby and jacquard technology are introduced into the textile industry with high productivity, the traditional textiles until date attracts its class of customer all around the globe.<sup>(6)</sup>

The craft of tie and dye has seen a great advancement in the recent years. Social media has helped in the widespread knowledge sharing of tie and dye. Tie and dye is being constantly evolving and the craft is believed to create sensations in the fashion industry forever.

#### *Importance of the Craft*

Tie and dye unlike many other type of dyeing techniques, requires man labor in its process. Hence, it is a job-generating operation in this automated world. Tie and dye is the primary income source for livelihood in many rural areas across the globe. This ranges from underdeveloped countries like Africa to developing countries like India. It offers work in a variety of ways.

Especially for a place like the dark continent of Africa where most men are affected by drug abuse and unemployment tie and dye acts as the source of revenue. It also generates women's employment and empowerment in regions across the world.

Tie and dye offers a variety of benefits to both the users and the manufacturers. Tie and dye is a extremely sustainable art of dyeing. It helps and forces people to reuse old articles of clothing to make wondrously created effects on the clothing line. It is, even more, eco-friendly and sustainable when natural dyes are used. Notably, this beautiful craft causes minimal water pollution compared to its counterparts.

#### *Domestic and Export Scenario of Tie and Dye*

Ikat tie and dye products, made in India has a considerable amount of market around the globe. It is artistic, linguistic and has a high export value over a range of products, from trade situation for most recent five years accessible with site of Handloom Export Promotion.

#### ***Existing Schemes Which Facilitate Promotion of Indian Craft- Name of the Council, Role and Activities***

Several schemes are run in India, either by the state or union government, or by the non-governmental organizations, to support and develop tie&dye and handloom sectors. The Rajasthan government runs craft development schemes to develop crafts like bandhani, which is exclusively found in their state. The initiative is run under the Ministry of Industries and is done by forming a self-help group and collaborating with several local non – governmental organizations to conduct programs.

Bandhani is very much taken care of by the Adani Foundation, which supports the Kutch region of Gujarat artisans by training them to upgrade their skills. They are trained to make traditional motifs in contemporary styles. They are also offered a platform to sell their products as corporate items through an exhibition or sale.

The National Bank for Agriculture and Rural Development (NABARD) upheld Pochampalli ikat weavers and producers to get security for the Pochampalli fine art. NABARD dispatched its group advancement program in Pochampalli town under its National Program for provincial industrialization, in relationship with the Textiles Committee of the Central Government to serve handloom silk weavers. The Foundation of Pochampalli Handloom Park is a drive toward this path ([www.Nabard.Org](http://www.Nabard.Org)).

#### ***Product Development Process***

The first step in product development is idea or theme generation. After this step, the product is development process begins. The mood board is created where various creative pictures are collected and made into a collage, giving way to a theme. The mood board and the theme acts as the base for the story. Then, a color board is developed using the colors from the mood board. These boards serve as helpful tools in the product development process. The materials used to make the product, the colors used, the design patterns etc., are based on these designer boards. Thus it gives a clear structure to the whole process. Thus the,



Figure 1: Mood Board – Vacation

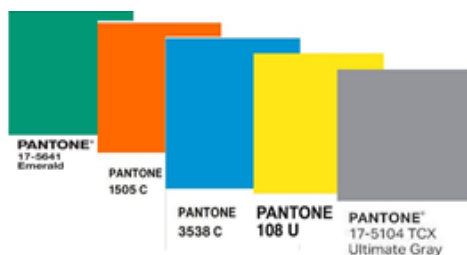


Figure 2: Colour board

product development begins after the designs are chosen and once the materials are sourced.

### Mood Board

The images for inspiration were taken from the modern design of structure and food presentation. In this we can see various images of structure like Dubai Palm tree shaped island, Garden, Dam and smoothie refer Figure 1

### Color Board

The colors inspired for the products are picked from the mood board and the chips are presented in Figure 2 with the Pantone name and code.

### Methodology

The products were made using natural dyes. All the steps were carried out as per the timeline prepared much before the product development stage. Figure 3 shows the flow chart of product development.

### Product Development

#### Steps in Making Macramé Dream Catcher

**Description** - Dreams catchers are type of wall hangings that are made with certain beliefs. These include dreamcatchers being the owner of good dreams, anything down below a dreamcatcher does not gets harmed, etc., North American Indians were the original creators of dreamcatchers. In this product macramé style is applied to make dreamcatchers. Cords are tie dyed using natural dyes using yarn tie and dye method.

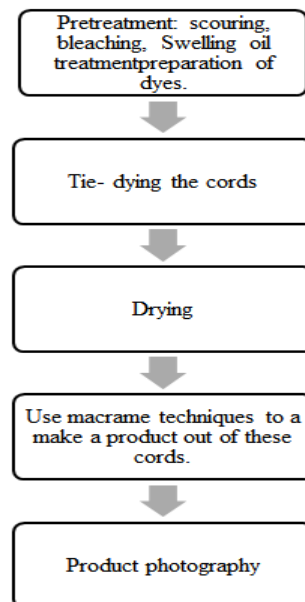


Figure 3: Flow chart of product development



Figure 4: Making loops



Figure 5: Making loops separate the threads

**Materials Required** - Natural dyes (source: turmeric, lemon, green leaves), Water, Markers, Cycle tubes, 10 tie dyed cords of 1.5meters each, A ring, Shears & a comb.

Steps in making the product:

**Step 1** - Take the necessary cords and ring.

**Step 2** - Attach the 5 + 5 cords to the ring, slanting to each other by making lark head knots.

**Step 3** - Make crossovers at the middle. Cross one cord below another cord of the opposite group.

**Step 4** - Make loops of the cords at the bottom end of the ring refer Figure 4.

**Step 5** - Expand and separate the threads of cords that are hanging below the bottom end of the ring (by combing) refer Figure 5.





Figure 6: Making holder



Figure 7: Finished product appearance

**Step 6** - Cut down the excess and shape the threads through cutting.

**Step 7** - To make a holder using another cord and make loop on the top end of the ring refer Figures 6 and 7.

#### **Steps in Making Macramé Plant Hanger:**

Macramé plant hangers are designed to display your favorite greenery from the wall or ceiling. Your plants will look resplendent dangling in your home, adding color to the room. Tie dyed cords are used in this product. The cords are of 4mm thickness, firm in strength, tightly wound and hence, will last longer.

Material required- Natural dyes (source: Beetroot, hibiscus petals coffee, turmeric), Water, Eight cotton cords of four meters each, Markers, Cycle tubes, Plant – with the vase.

#### **Steps –**

**Step 1** - Bend the 8 four-meter cords at the center and make a lark's head knot using a one-meter cord refer Figure 9.

**Step 2** - extend the strings in such a way that the two strings of the one-meter cord falls on one side. Stick them using a tape.

**Step 3** - Separate a cord on each side. Make eight square knots using the two separate cords to hold the middle part straight.

**Step 4** - untie the extra cord on the middle, turn it around and make another eight square knots starting from the right.

**Step 5** - Fold the square knots and make a gathering knot using one of the four-meter cords.

**Step 6** - hang the cords on a comfortable holder and separate the 16 cords into four groups of four refer Figure 10.



Figure 8: Raw cord used for the product

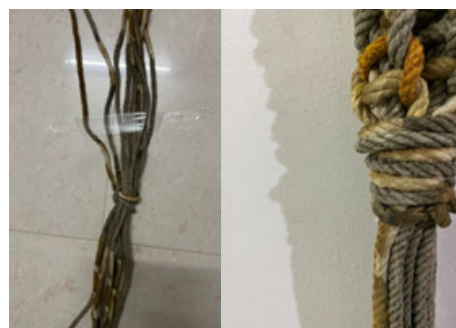


Figure 9: Raw cord used for the product

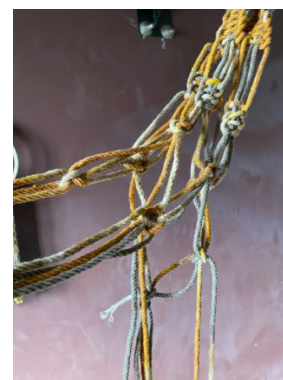


Figure 10: Knotting the dyed cords

**Step 7** - take one group and make 22 spiral cords. Follow the same for all four groups.

**Step 8** - leave a space of 5 cm and make two square knots.

**Step 9** - Few adequate space and make alternative square knots. This can be done by making square knots from two cords of neighboring cord groups.

**Step 10** - Keep and plant and know the required length refer Figure 11.

**Step 11** - Make a gathering knot using the one-meter cord and cut the excess cords refer Figures 12 and 13

#### **Steps in Making of Two Tier Plant Hanger**

Two tier plant hangers display your favorite greenery in much less space-consuming way refer Figure 14. Two plants can



Figure 11: Final Product



Figure 12: Knotting the dyed cords with ring



Figure 13: Knotting the Dyed Cords with Ring

be hung in the space occupied by the traditional one-plant hanger. Hence, it is useful to plant lovers who experience space inconvenience. The cords are tie dyed using yarn tie and dye technique and later made into plant hanger form using combination macramé knotting techniques.

### Materials Required

Soda ash, Reactive dyes, 4mm Cotton cords, Embroidery ring, Water, Markers, Cycle tubes, Plants with vase.

### Steps

**Step 1:** Attach one cord at the top center of the ring by making a larks head knot. Then attach the string at the



Figure 14: Second Tier of the Plant Hanger

bottom wrapping around the cords. Repeat the same for two other cords.

**Step 2:** Now make a square knot using the inner cords of the right and left cords.

**Step 3:** Attach the bottom ends of the right and left cords slightly widely at the bottom end of the ring.

**Step 4:** Now using the outer ends of the right and left side cords, make a square knot and attach the cords to the bottom end of the ring by wrapping the cords.

**Step 5:** Now, attach the remaining cords sideways and follow the steps mentioned earlier.

**Step 6:** Leave a space of 10 inches below the ring and make a simple knot using the cords from the left and right ends.

**Step 7:** Now make simple knots using two cords starting from the right. Leave some space (as per the size of the vase) and make the next group of simple cords.

**Step 8:** Place the plant with vase and make a gathering knot using another cord.

**Step 9:** Leave some space and make simple knots for hanging the next plant. This time start making knots from the left cords.

**Step 10:** According to the size of the vase make another set of simple knots.

**Step 11:** Place the plant with vase and secure the hanger by making a gathering knot using another cord. Cut the excess cords. Your two-tier plant holder is ready refer Figures 15 and 16.

### Suggestions for Craft Revival

The craft of tie and dye is already successful and has gained its revival in the recent past. Tie and dye is still has its place in the commercial markets. Especially tie-dyed apparel has caught people's interest even today and has a stable market. It is also practiced as a hobby activity by kids at some parts of the world.

Yet, some suggestions like – commercializing of tie and dye products through online markets, extending the material range on which the craft is being worked on, making collaborations with other crafts in producing value rich products, making tie dyed products available at a feasible



Figure 15: Second knotting the dyed cords with ring



Figure 16: Knotting the dyed cords with ring

price, etc., could be implied to make the craft's revival make a wider reach.

## Results and Discussions

A consumer survey was conducted through online mode focusing on the commercialization of the products and the results are as follows:

Figure 17 denotes the percentage of participants in age groups. Out of the participants of the survey 92% were 18-25 years old.

Figure 18 shows us that around 85% of the people who took the survey are interested in buying handmade products.

The figure 19 portrays that majority of people 75% are aware of tie and dye. This may be due to the consumers being in trend.

Figure 20 narrates us that around 90% of the people like this idea of combining tie and dye & macramé techniques to develop newer products.

Nearly 94.1% of the consumers found the products were innovative (Figure 21). They admired the natural look of the tie and dye – uneven and abstract dye finish.

The consumers were also asked to rate the attractiveness of the products and the two-tier plant hanger had been highly appreciated by the consumers (Figure 22).

AGE  
51 responses

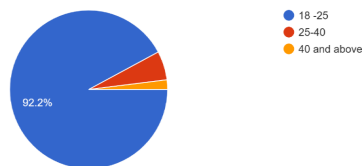


Figure 17: Age

Are you interested in buying handmade products  
52 responses

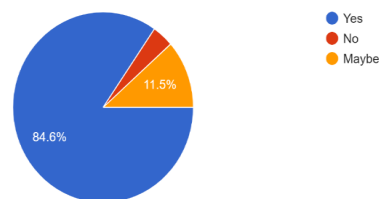


Figure 18: Interest in Handmades

Are you aware of tie and dye?  
52 responses

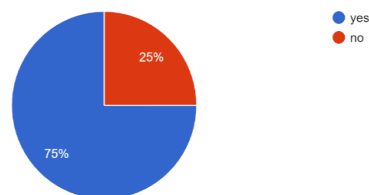


Figure 19: Awareness on tie and dye

Do you like the idea of combining tie and dye & Macramé techniques for developing new products?  
50 responses

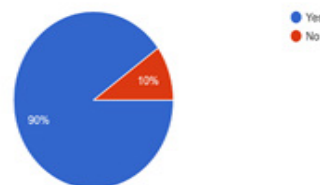


Figure 20: Combination of techniques

Are these products innovative?  
51 responses

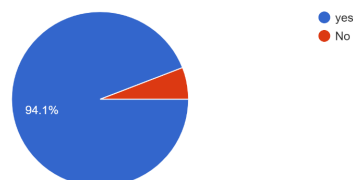


Figure 21: Innovativeness



which of these yarn tie and dye products do you find attractive?

52 responses

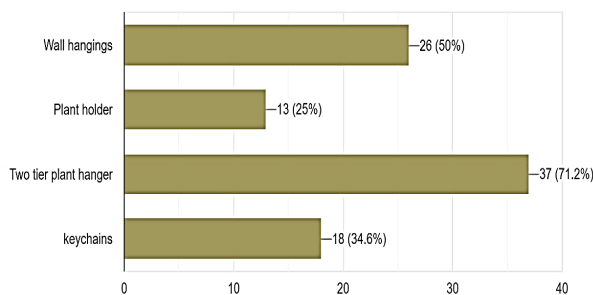


Figure 22: Rate the product attractiveness

## Conclusion

In this research wall hanging and pot holders were developed using tie and dye cords. The technique used to

produce the product is macramé. The developed products were also checked for its marketability using a survey.

A consumer survey was conducted online, focusing on product commercialization. Among the three products developed, the two-tier plant hanger gained the highest likability of the consumer.

## References

- Tie & Dye-The Evergreen Art. <https://www.Fibre2fashion.Com/Industry-Article/5609/Tie-And-Dye-The-Evergreen-Art>
- Das, C. R. (1888). "TIE AND DYE" WORK, Manufactured at Baran, in the Kotah State. *The Journal of Indian Art, 1886-1916*, 2(17-24), 63-64.
- The history of the tie-dye shirt. <https://www.theadairgroup.com/blog/2018/12/04/the-history-of-the-tie-dye-shirt/>
- National Bank for Agriculture and Rural Development (NABARD). <https://www.Nabard.Org/News-Article.aspx?Id=25&Cid=552&Nid=501>