

Status of Bandhani units of Rajasthan (Mavar): A systemic approach for their improvement

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ABSTRACT

Handicraft an ancient art is a constant source of mental peace, equilibrium and revelation to both, one who creates and the other who perceives it. The handicrafts in our country were in a manner revered as an important part of our rich cultural heritage. Rajasthan has been known for its skillful art of Bandhani. Present study was carried out to study the existing status, organizational set up and functioning of the traditional dyeing units of Mevar (Rajasthan) and to identify the problems faced by dyeing units and to suggest their possible solution. This study revealed that these traditional, textile crafts of Rajasthan still have a lot of potential yet to be exploited. There is an utter lack of any organized effort to promote this art of tie dyeing. It is a matter of concern and the government should come forward to help these artisans

Key Words : Laheria, Bandhej, Mothera, Shikari, Bhoopalashi

INTRODUCTION

Textiles have been produced in India since antiquity. The creation and development of Indian textiles has a pre-historic origin. However, very few of the old designs still exist. Beautiful colour and design of Indian textiles holds a special appeal for the modern generation. India is very rich in cultural heritage despite this our traditional art forms are facing a slow death (Bhatnagar, 2005).

The bandhani tradition of Rajasthan has been based largely on the patterning of fine cotton fabric with figurative dyes. Many traditional centers such as Jaipur, Kota, Ajmer, Alwar, Jodhpur, Sikar, Bikaner, Barmer, Pali, Udaipur and Nathdwara continue to produce bandhani textiles (Singh *et al.*, 2000).

Bandhani is a type of tie-dye textile decorated by plucking the cloth with the fingernails into many tiny bindings that form a figurative design. The term *bandhani* is derived from the Sanskrit word *bandha* ("to tie") (Wada, 2002 and Gujarat State Gazetteers, 1971). Today most Bandhani making centers are situated in Gujarat, Rajasthan, Sindh, Punjab region (Feliccia, 1977) and in Tamil Nadu where it's known as *Sungudi* (Nasreen *et al.*, 1999 and Wada,

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2002) Earliest evidence of Bandhani dates back to Indus Valley Civilization where dyeing was done as early as 4000 B.C. The earliest example of the most pervasive type of *Bandhani dots* can be seen in the 6th century paintings depicting the life of Buddha found on the wall of Cave 1 at Ajanta (Nasreen *et al.*, 1999). Bandhani is also known as Bandhej, Bandhni, Piliya, and Chungidi in Tamil and regional dialects.

Rajasthan has been known for its skillful art of Bandhani. The sterile and physically impoverished land of Rajasthan is frequently described as 'colourful' and 'vibrant'. These epithets spring not from any natural luxuriance but rather from the traditional way of life and in particular the brilliant costumes of Rajasthanis, which enliven the desert landscape and relieve the monotony of sands, rocks and scrubby trees. The saline water of the rivers of Rajasthan facilitated the development of dyeing and printing cottage industries.

Bandhej or tie and dye, an ornament of Rajasthani culture enjoys a pride of place in the relation of handicraft. In the Rajasthan gorgeously coloured tie and dyed fabrics are associated in one form or other with every festival, season and celebration. Tie and dye work of Rajasthan is incomparable and bears a deep impression of Mughal style (Mathur, 2004).

Handicraft an ancient art is a constant source of mental peace, equilibrium and revelation to both, one who creates and the other who perceives it. The handicrafts in our country were in a manner revered as an important part of our rich cultural heritage. In India almost all handicrafts have a story which relates them to certain religious rituals and social customs, making them inherent part of its culture. One facet of such dazzling inheritance is the art of hand printed, painted and tie-dyed textiles with its infinite range of colors, designs and forms all over the country.

Nature had always a great influence on Indian artists and craftsmen. Bandhani designs normally derive their inspiration from stars at night (represented by dots) and sand dunes (the band or waves). These are the best of each Bandhani design. All the designs are made by clustering the dots in desirable shape so Bandhani is a complicated and skilled work of ornamenting the cloth with combination of colors. In Rajasthan – Jaipur, Jodhpur and Udaipur are the main centers of tie dye work. The 'lake city' Udaipur has always been a center for production of Bandhani work.

Different forms of tie and dye have been practiced in India. Indian tie and dye also known as *Bandhani* and *Bandhej* in Rajasthan is a traditional form of tie and dye which began about 5000 years ago (www.rajasthantextiles.com).

Today very few families are doing this work and the designs use are mostly traditional in nature. Presently, Government of India is giving a lot of importance of protecting the traditional textile crafts. Many schemes are being started to promote these traditional crafts by providing aids and motivating artisans by awards. But-in spite of this, these cottage industries are still under developed and very few studies are available on focusing different aspects of these textile crafts. Therefore, present study is designed to explore the organizational set up, functioning, production processing and problems faced by the handicrafts units of Bandhani in Rajasthan. The investigation was carried out with the following objectives:

1. To study the existing status, organizational set up and functioning of the traditional dyeing units of Mevar (Rajasthan).
2. To identify the problems faced by dyeing units and to suggest their possible solution.

METHODOLOGY

Local of the study :

The study was based on tie-dyeing units of Rajasthan. Identification of various centers of Rajasthan was carried out through a general survey and literary sources. Udaipur is a well known city for Bandhani or tie and dyeing. It was selected as it is the most popular place for tie-dyeing in Rajasthan and most of the Bandani units are existing in this area.

Samples selection and samle size :

The number of tie- dyeing units in Udaipur was 25. These units were not registered but each family was a self-sufficient unit in itself. List of these families was collected from gram panchayat. One person ie. Head of the family was selected from each unit to answer the questionnaire.

Research design :

An exploratory research design of survey method was used in the present study. Detailed information was gathered on processes of Bandhani work and also about the workers working in these unit.

Selection of variables:

This section deals with the description about selection and operation procedure of following variables.

- a) Profile of the respondent
 - Age, caste, mother tongue, educational qualification.
 - Type of family and economic status of respondents.
- b) Specific information about the workers of tie-dyeing units of Udaipur.
- c) Time requirement for tie dyeing work.
- d) Raw material, processes and techniques of tie dyeing.
- e) Motifs and colors used.
- f) Marketing and infrastructure of units.
- g) Problems faced by the respondents and possible suggestions.

Data collection :

Preparation of research tool and pre-testing of questionnaire:

questionnaire was prepared for respondents by framing the question to gain information about their socio-economic status, back ground of dyeing and printing art and detailed information about products and marketing. For pre-testing of questionnaire, a pilot study was conducted. On the basis of results received, necessary modifications were done in questions and questionnaire was finalized.

Data collection :

The information regarding the above variables was collected through interview cum questionnaire and also with observation method by the investigator therefore the data was first handed and factual. In order to get more information about concerning population,

effect of caste distribution, financial aid, schemes and loan facilities, the investigator visited the gram panchayat and Handicraft centers of Udaipur, Rajasthan.

Analysis of data :

Data obtained from questionnaire was analyzed for results. The data collected was tabulated or further analysis. These values were then used for analysis of variables and also for making simple comparison. Percentage value was also calculated to draw clear cut conclusion.

RESULTS AND DISCUSSION

General information :

Almost all the workers of the tie dyeing units selected for the study fall in the age group ranging from 18 to 80 years. Traditional dyers were not much educated. Only 30% tie dye workers had studied till primary school, 30% till middle schools and 20% were intermediate passed. None of them were graduate. Although the workers were not much educated but they were sending their children for higher studies. Caste wise all the tie dyeing workers equally belong to Hindu and Muslim caste. Traditionally Muslims are called as Nilgars, where as rangraj could be either Muslim or Hindu. Mother tongue of all workers was Hindi because Udaipur is an urban area. Percentage of joint families (40%) was less than nuclear families (60%) in tie dyeing units. The whole family work as a self sufficient unit. Women do the tying work and man do dyeing. Monthly income of most of the tie dyer (50%) range between Rs.1500/00 to 2000/00 and 30% workers earned more than Rs.2500/00 monthly. Income level of remaining workers was equally distributed between two income level *i.e.* Rs.1500/00 to 2500/00 per month and above 2500/00 per month.

Specific information about tie dyeing workers :

The entire dyer inherited this art from their fathers and forefathers. Therefore, it is more or less an inherited art. It was seen that most of the workers have been doing this work right from early teenage. They start with work which requires less skill and then gradually learn this art by doing and become expert through practice and experience. Workers start tying work at very early age of their life (10-14 years). Some (20%) start it in earlier also. Most of the workers started dyeing work at the age of 14-18 years. Pattern designing for tying is a complicated work which most of the workers start in their youth. Among all unit's only 20% children want to continue their parental art as they are not so educated to show other jobs. However, 80% workers do not want to continue it because of their low income and high labour requirement.

Time requirement for tie dyeing-60% tie-dyers had taken up their work as full time job and other worked on part time basis. The workers who had taken up this profession on full time basis were found to be deeply involved in this trade. They had sufficient orders for production in advance and could keep themselves engaged throughout the years. The part time workers were those who are engaged in their work along with some subsidiary occupation such as general store, farming etc. By analyzing the data, it was found the 80% of the tie-dye workers work for 8-10 hrs per day, 20% for 10-12 hrs and remaining 6-8 hrs per day.

Part time workers can be classified in two categories:

i. Those who were involved in subsidiary occupation along with tie dye for the whole year.

ii. Those who carry on tie dye for some months in a year and practice some other occupation during rest of the year. Although dyeing was the major occupation for all the workers but they cannot continue it throughout the year. In rainy season they have to stop this work because I humid atmosphere colors may bleed.

Full time workers prepare their stock in advance before the arrival of monsoon to compensate their rainy season's loss. The full time tie dyers do only tying work in rainy season.

Time required completing each product :

Table 1 shows the time required by workers for completing each product.

It is clear from the Table 1 that tie dye product *i.e.* bed sheets sari and turban require maximum days (10-15), while dupatta can be made in 2-6 days only. In tie dyeing time depends on tying speed and intricacy of design to be dyed.

Table 1 : Time required to complete each product		
Product	Number of days	
	All over	Localized
Bed sheet	15	10
Suit	8	2-3
Sari	15	3-4
Dupatta	6	2
Quilt cover	12	9
Turban	15	2-3
Odhani	10-12	3-4

Raw materials, tools and equipments of tie dyeing :

Fabric used:

Tie- dye workers a of Udaipur were getting their fabric from Udaipur itself, as fabric was easily available here at reasonable rate. Table 2 shows the distribution of respondents according to their mode of purchase of raw materials.

40% tie dye workers of Udaipur preferred to purchase from retailers in small quantities according to the order they received, as most of them were part time workers. 60% workers were getting delivery from cloth mills through agents. Cotton is the most commonly used fabric for tie dyeing. Some block printers also used silk for saris. Wool and synthetic fabrics

Table 2 : Source of purchase of raw material			
Sr. No.	Source	Frequency	Per cent
1.	Directly from factory	-	-
2.	Through whole seller	6	60%
3.	Through retailer	4	40%
	Total	10	100%

were also used for tie dyeing.

Cost of raw material depends on the quality of fabric. Fine Muslin is used for sari dupatta and turban and coarse muslin is used for bed sheets. Fabric was purchased either in bleached or unbleached conditions (Table 3).

Table 3 : Cost of raw material (fabric) per meter				
Sr. No.	Fabric	Good quality (Rs.)/meter	Medium quality (Rs.)/meter	Low quality (Rs.)/meter
1.	Cotton	40	35	25
2.	Silk	400	200	100
3.	Wool	150	100	80
4.	Synthetic	70	60	40

Dyes used :

The tie-dye workers of Udaipur mainly used direct, vat and procion dyes to color their products. Dyes were purchased from Udaipur only. Direct dyes were most often used because they give very bright shades and were fugitive and after fading, Fabric could again be re-dyed in different colors. Vat and procion dyes were used for dull and dark shades like brown, black, dark blue etc.

Tools and equipment in tie dyeing :

Thimble :

The craftsmen use a thimble (Nakhlyia) for tying. It is worn on the third finger of left hand and helps in rising very small position of fabric over the finger which is tied on front side. This is used to tie very intricate designs.

Tying thread :

Cotton thread is found to be commonly used for tying work. The diameter of thread varies on the basis of the design and on the fineness of motif used. Yarns of different counts were available for tying. For very intricate designs fine mercerized thread is used and for tying bigger portions, coarser thread is used. Some times polythene bags are also used to tie coarse fabrics like bed sheets and quilt covers.

Dyeing vessels and wooden spoons :

For dyeing fabrics in large quantities iron tanks were used but for small scale dyeing small vessels, tubs and wooden spoons were used.

Process of tie dyeing :

The basic process of Bandhani includes four steps, design drawing, tying, and finishing. Some differences in processes may be found on the basis of design and technique used.

Preparatory process :

Fabrics often do not undergo any preparatory process for tie dye work. However, some heavily starched cotton fabrics need to be soaked in water over night for removing extra

starch and then dried.

Folding :

Very fine fabric has a tendency to slip in hands while tying. To prevent this, the fabric is folded and tacked along to edges with uneven basting. The number of folds is determined by the fineness of the fabric.

Design transferring :

After tacking, the desired design is transferred on selected areas with geru or blue. For geru wooden blocks are used. This work is mainly done by male workers. Wooden blocks were being used by 60% craftsmen; nail blocks by 30% and paper pattern only by 10% craftsmen. A large number of craftsmen used pencil for sketching simple designs. Thread dipped in geru, indigo or turmeric is also used to mark simple pattern.

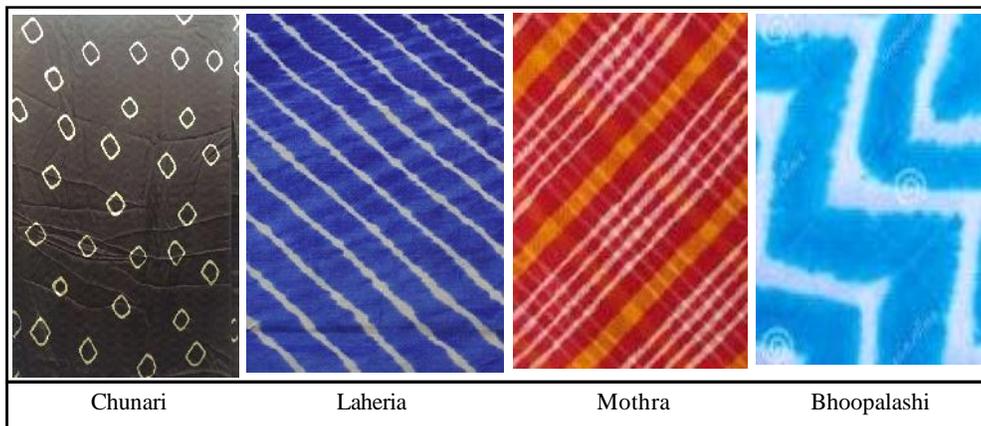
Tying :

Depending on the pattern the knots are tied on the white fabric. First tying stage is followed by the spot dyeing or color daubing stage. Different colors are daubed on certain areas of the fabric with the help of felt cloth and then daubed areas are retied. The fabric is then soaked in a bath of caustic soda or hydro sulphite of soda solution to discharge extra color from untied portion.

There are numerous traditional methods of tying viz laharya, chunri, mothra etc. Each has a variation in the folding and dyeing techniques.

The total beauty of Bandhani (tie dye) depends on the combined effect produced from motif, color and techniques of tying used. The products were also named accordingly for example- turban in five colors called 'Panch rangi' while diagonal tying techniques was referred as the 'lahariya design'. Following are some of the tie dyeing patterns used by the tie dye workers of Udaipur.

- 1) Chunari- design created by various arrangement of dot tying in a pattern.
- 2) Laharia- Diagonal tying.
- 3) Mothra- Cross diagonal.
- 4) Bhoo palshashi- Zigzag tying.



Chundari or chunari :

Chunari is the most popular form of tie and dye. It is used for sari, dupatta turban salwar suit etc. It consists of all over pattern on the fabric which is commonly variation of the dot (ekdana) design. Several multi-colored dots or dana are thus combined and arranged to form pattern on fabric.

Following are the variation is the dot pattern.

- Ekdali or ber small circles made by tying small pinches on the fabric.
- Tridali dots in the groups of three
- Choubasi dots in a group of four
- Jaldar diagonal network of bed
- Beldar flowing patterns
- Shikari human and animal figures like tiger, horse, elephant etc.
- Beddar small beds all over
- Laddu this consist
- Dabbidar this is usually made
- Chakbed As its suggest means square bed (chakchokore square) this is made With more than two colors and it bigger in size than dabbidar
- Gulmohar this consist of first daubing the portions of fabric with different color and tying. Then extra color is bleached from united portion then fabric is dyed in back ground color. The final pattern thus consists of circle of different colors.
- Sangam It is similar to gulmohar but does not consist of color daubing stage. So the final fabric consists of circles with white patches.

These are the basic patterns of dot design and a chunari may consist of various combination of their patterns.

Lahariya :

The lahariya (means lahar-waves) consist of single or multi-colored diagonal lines from two to seven colors. Single color lahariya is available in red ,orange or pink color and called as 'Rajashahi' while the multi-color is called 'panchrangi' and 'satrungi' for five and seven colors, respectively.

The magic of laharia is created by stretching the cloth from opposite corner of the material and then rolling and tying it in portion resembling a rope. This is then dyed. When the dyeing operation is over and the cloth is opened, diagonal lines appear on it.

Mothra :

The cloth for mothra is prepared in the same manner as for lahariya. The person ties only the narrow white stripes throughout the length of the cloth then it is dyed. After dyeing cloth is dried, opened and stretched. The mothra process is not yet finished. The fabric is stretch and rolled again, but beginning from the opposite corner until it resembles a rope. Once again the person begins the final tying using thin cords and then it and then it is dyed which makes the plaid. Then he ties the wide stripes using a wide corked continuously along the length of the fabric then it is bleached which whitens the united space. The final dyeing

creates the diagonal plaids.

Bhoopalshahi :

The cloth for 'Bhoopalshahi' is prepared in the same manner as for 'lahariya'. The difference begins with the winding of the cloth. The two persons, as they hold the cloth, Fold one selvedge three inches and then turn it over and over to cover the entire width of the fabric until the material looks like a flat three-inch-wide band. They tying are done in the same manner as that for lahariya or mothra.

Dyeing :

Direct dyes are mostly used for color daubing (rang teepna) stage, whereas vat and procion are used for back ground color. Direct dyes are helpful in daubing because extra amount of this could be easily removed at time of bleaching.

Traditional dyeing procedure using direct using direct dyes :

Recipe dye-1 g
Glaubers salt or soda ash 1-g
Sodium chloride or common salt-1g

Procedure:

The fabric is first soaked in hot water for 5-10 minutes. The dye and soda ash is added to sufficient amount of water. The solution is then boiled, fabric and salt are added to the solution and it is again boiled for 15 minutes. Later the fabric is taken out from dye bath, rinsed and air dried.

Traditional dyeing procedure using vat dyes :

Recipe dye- 1g
Caustic soda -1.25 g
Hydro sulphite- 1.5 g

Procedure :

First the fabric is soaked in water for 10 min. The dye and caustic soda are added to the sufficient amount of water and then heated to 80 C. Then hydro sulphite is added. Finally, the fabric is immersed into this dye bath for five min. The dyed fabric is removed from dye bath, Rinsed and dried in air. Traditional dyeing procedure for procion dyes

Recipe : dye-1g
Common salt-1.5g
Soda ash-1.5g

Procedure :

Fabric is soaked in water for 5-10min. Sufficient quantity of water is heated to the temperature of 60°C. Dye salt and soda ash are added to it. Temperature is raised and fabric is kept in this bath for 15 min. Fabric is them taken out, Rinsed and air dried.

Finishing :

The dye workers do not use any chemicals or after treatment to improve color fastness of their products. They only untie the tied cloth. Continuous threads are used for the tying so when the cloth is pull cross-wise in order to open the tied portion it can be untied early. There is no need to open each dot separately. It was found that only 40% workers used finishing process. They untie the cloth and starch it with rice starch as maida as there are cheap. 20% workers do not untie their products and the remaining untie their products partially.

Marketing :***Products and their cost :***

During the course of study it was found that following types of products were prepared by the tie-dyers.

Table 4 : Products prepared by tie dye workers and their cost			
Sr. No	Product	Cost (Rs.)	
		Cotton	Silk
1.	Bed sheet(single)	150-200	-
2.	Bedsheet (double)	250-400	-
3.	Suit	250-500	800-100
4.	Dupatta	60-200	250-500
5.	Sari	300-800	1000-200
6.	Turban	60-200	-
7.	Quilt cover	200-300	-
8.	Odhani	150-250	-

Mode payment :

All though all selected units were self sufficient units but in peak time they were taking help from outsiders. Among tie dye workers per piece payment for tying each piece instead of daily and monthly payment

Trade mark and quality control :

There is no trademark for design and products of tie dye workers. They were not using any quality measures of their work. They maintain quality according to market demand.

Medium of finance :

Most of the workers of tie dye units (60%) invest their own money, 30% invest customer's money and 10% invest middle men's money. Part time workers produce articles in a small quantity so they invest customer's money.

Problems of tie dyers and their possible solution :***Lack of finance :***

Tie dyer faced the problem of finance. Often their meager finance was also blocked if the products were not sold timely, with the increasing price of dyes, fabrics. And other things

and very little capital at hand it was difficult for them to make two ends meet.

Health problems :

Chemicals used dyeing especially with synthetic dyes adversely affect the health of workers. Chemicals and their fumes like nitric acid, hydro-sulphite and caustic soda cause lung infection. Their palm skin became sense less by continuous contact of dye and chemicals.

Social, cultural and religious constrains :

Tie dyers do not want to incorporate new designs as they want to continue the trend of traditional designs.

Industrialization and introduction of roller printing :

Availability of cheaper, machine printed imitation of tie dyed and the ever changing fashion spawned adverse market conditions for the relatively more expensive traditional tie dyed.

Unavailability of water :

This problem was reported by the entire tie- dyer. In summer and draught conditions water is not available. They have to stop their work and this adversely affects their production.

No incentives from Government :

This is a major problem reported by all tie –dyers. Although government institution is helping them to continue their art but workers are not getting desirable benefit because of poor governmental policies and middlemen.

Children not taking up their parental art :

In the present area of modernization, children of respondents were moving on to other professions which are less laborious and better paid than their traditional work.

Marketing :

It was reported that mediator who were backed by sufficient finance took advantage of poor and illiterate workers. They give them least possible wages for their hard work and take profit by selling the products in retail market.

Possible solution of problems :

1. It is suggested that government should come forward to provide more finance one easy term and bank loans can be arranged for them. This would help them in expanding their marketing opportunities and also minimize their dependence on middle men who exploit them.
2. Worker should be given technical training to use dyes and chemicals in better way, so they can prevent their skin and other body parts from the side effects of synthetic dyes.
3. Efforts should be made to motivate workers to adopt new design and innovative technique in their art. Moreover, government should assure them for marketing of their

products by providing them financial security so that they can try new adoption in their work.

4. The traditional handicraft industries shall have to be motivated to produce better quality products for sophisticated markets and complete with the modern machine printing industry.

5. Government should provide water sources to workers on loan basis or at subsidized rates.

6. With the backing of suitable publicity campaign and education amongst these poor artisans and awareness about the programmes started by government, they would be helped to prosper by minimizing the role of middle men.

7. If the marketing conditions were made better by setting up co-operatives, get major share of profits. This will the workers will also encourage the young children to take up this profession.

8. Workers should be made aware of the importance of their art.

Conclusion :

The findings of this study revealed that these traditional, textile crafts of Rajasthan still has a lot of potential yet to be exploited. There is an utter lack of any organized effort to promote this art of tie dyeing. It is a matter of concern and the government should come forward to help these artisans. Many of our traditional textile heritages are in the verge of extinction, hence we need to make efforts to preserve and revive them.

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