Design Interventions in Bell Metal at Ektaal Cluster

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Abstract

Revitalization of crafts is widely talked about as the need of time for the survival of crafts and craftspeople, especially in India. Crafts are pertaining to practices of making objects with indigenous knowledge passed down from generations. In a country like India crafts make the backbone of the economy as majority of the population has their primary mode of income. Today, globalization and industrialization has caused a setback in crafts as there are cheaper alternatives available for the same in the market. Employment opportunities have paved way for migration of craftsmen to other work sectors. It is necessary for revitalize the crafts sector to avoid loss of indigenous knowledge and practice. This process of metal casting has been used for over 4000yrs in India and is still practiced in major clusters. The major clusters that practice bell metal casting in Chhattisgarh are in Bastar, Kondagaon, Surguja and Ektaal (Raigarh). Both Bastar and Kondagaon are well established at international levels, creating products infused with different materials and crafts such as wrought iron. Ektaal is comparatively backward, the artisans are not promoted at a large scale at international level but are slowly making their mark at the global market. In this paper we will discuss about the Interventions at Ektaal cluster, which were deemed necessary for the craft to survive in the present market conditions. The main objective is to understand the impact of revitalization in the cluster, through various social, technological and design interventions by Government scheme and organizations. The method adapted for the study is based on literature and one to one physical survey of craftspeople, and government officials. The study established the issues, impacts and setbacks of the technology and design interventions.

Keywords: Bell Metal, Cluster, Crafts, Dhokra, Ektaal, Intervention.

1. Introduction

India is a developing nation, with handicraft as its unique aspect. These handicrafts are placed in the interior parts of the country, being more popular in villages, small towns, and hamlets. It is one of the largest employment sectors after agriculture in rural India [1]. For these reasons and more handicraft has become one of the targeted initiatives to address issues of rural livelihood and poverty alleviation [1]. Chhattisgarh is a tribal dominant state with lush green forest, waterbodies in forms of lakes and rivers, several caves and rocky formations and varied landscapes. The major land cover of Chhattisgarh is dense forest with many reserved areas flourishing with flora and fauna. The geography and cultural history of the region has placed varied tribes in the region. These tribes are inspired by their immediate surroundings, creating art and crafts showcasing their lifestyle and surrounding environment.

1.1. Bell Metal Craft - ‘Dhokra’

The Jhara, a sub-tribe of Gond of Ektaal practices the Bell metal craft. This process of casting metal has been passed down through many generations. The craft is hence locally known as ‘Jhara Shilp’. The process of developing the craft is done through various stages. In the first stage the mold is casted using mud, which is sun dried. In the second step the entire mold is wrapped with bee wax which is applied in different styles. The mud is applied over the bee wax, and the sun is let to dry in sun. Once’s the mold dries metal is melted and poured in the mold, which is allowed to cool down and then broken giving the metal figurine. The raw material used for the craft was initially sourced from the surrounding environment, mixed with metal scrap available in the vicinity. The terracotta required for the mold is brought from the riverbed and surrounding fields. The wood required for burning was also sourced.
from the surrounding areas. The bee wax used for the ornamentation and shaping the figurines was initially brought from the surrounding jungles, which is now available in the markets. The various objects created by the craft is inspired from the local folklore, lifestyle, and mythology. [2] [3]

2. Methodology

This study is primarily empirical, but both primary and secondary data have been effectively used in this study. Secondary data were collected from various literature sources. The primary data was collected from Raigarh District of Chhattisgarh. A sample of 150 crafts persons were selected based on simple random sampling. The techniques of primary data collection were Observation method and one to one open ended interview with the craftspeople and officials of Chhattisgarh HastShilp Board.

3. Background of the cluster –

Ektaal has been recognized as a natural cluster by the government of Chhattisgarh and has 428 craftspeople registered till date.

3.1. History of the cluster

Around hundred years ago, several Jhara artists settled in Ektaal village by constructing small cottages. These tribes are migrants from Odisha. They were living their life by exchanging their article with Rice and paddy and necessary food items. Basically, the tribes are farmers here, but they have a great mastery in this art. Dhokra art is the major source of income for the Jhara Tribes around 100 families have been traditionally making bell Metal Sculptures. Around 1984, some senior officers of Bhopal (MP) based National humanity museum (Bharat–Bhawan) visited Raigarh and purchased the idol of “Raksh Dev” and “Budhi Mai” and took it to Bhopal. These idols got a good credit in the exhibition organised in Bhopal that year Mr. Arjun Singh, then chief Minister of MP presented Sikhar Sanman award to Mr. Govind Jhara for the tremendous achievement in traditional art. This incident embarked the recognition of the village as a craft village and after the formation of Chhattisgarh in November 2000, it was soon declared as a cluster by the state handicraft department. Some of the important festivals celebrated by the villagers are Vishwakarma Pooja, Rath Yatra & other regional festivals. [4]
3.2. Geographical location of the cluster

Ektaal is a small village, in Raigarh district of Chhattisgarh. The village is the border with Chhattisgarh and Odisha; hence a lot of residence apart from Shaadri and Chutiya nagpuri, which is the tribal dialect, also speaks Chhattisgarhi and oriya. The village is surrounded by green mountains and agricultural fields, with a lake surrounding it.

![Google map of Ektaal Chhattisgarh](image)

3.3. Families in the Cluster

There are 112 families in the cluster, who practice the craft as their only source of income. All the members of the family are involved in the production, old, young, men and women. The entire job is divided between the members from procurement of raw material to finishing of the product. Almost all the families belong to the Jhara tribe, some from other communities have also adapted to the craft and have been crafting since more than 30 yrs. Most of the people are related to each other.

4. Infrastructure and production in the cluster –

The craftspeople of Ektaal belong to Jhara tribe, and they way of living is still very similar to their ancestors. Although the children of the village go to school, most of the craftspeople are also educated enough to read and write for themselves. Some children go to private school since the government schools do not have enough teacher and facilities. There are no sanitary facilities available there is one toilet between 4 houses. The streets of the village seem like openings between two houses where all craftspeople make their products, the community functions as a family.

![Condition of Infrastructure at Ektaal cluster](image)

![Sketch of the street in Ektaal cluster](image)
4.1. Workshops

The streets and the front yard of the houses are used as the workshops. There is a shed provided by the Jindal foundation, in between the houses where they have provided the cluster with wax molding machine. There is a complete work shed with all machineries provided by the Department of handicraft for the cluster. There is also a shed where the brick furnace is made. The roof of the houses and the streets are used for drying the products after every stage. Since the interiors are too dark and hot for such work most of the work is done in the backyard, foreyard or in the street between two houses. Winter is the best season when they have a suitable weather to make the products. In monsoon the production is the least or most difficult.

4.2. Machineries

The work shed provided by the State handicraft department, includes all machineries for buffing, polishing, coloring, and finishing the products. Apart from this all artisans in the clusters own a buffing machine by themselves. The apparatus or machinery used for making threads of wax is situated at the internal work shed where the artisans can use the machine, but they must get their own stencil for the kind of wax threads they desire for their product. Artisans who do not own any machinery for polishing or buffing usually borrow from the other artisans. The machines in the work shed can be used by all the artisans in the cluster for which they have to pay minimal fees to maintain the workshop and to get any material required for proper functioning of the machines.
4.3. Types of Products

The products in the cluster vary from artefacts, toys, diyas, pen stands, spoons, photo frames, key chains, Jaali work, door handles and jewelry. This cluster excels in making fine jail works, and usually do small scale objects. The craftsmen in the cluster cannot do big investment and hence do not make large scale products. There is limitation of the size of furnace that is built in the cluster, which limits creation of large sculptures. Since the cluster is good at making intricate details and small jaalis they are now training along with the Dhokra artisans of Odisha to adapt their jewelry making techniques and styles. Since there major marketing channels are exhibitions, the transport of large-scale items become more difficult and hence are not much attempted at.

4.4. Costing of Products

The cost of raw material is quite high, therefore their investment on production increases. There is no calculation of the cost of transport for raw material; the production cost right now only includes the cost of raw materials. The raw materials required are - wax, dhoop, oil, brass metal where the cost price of wax is Rs. 200 per Kg, dhoop is Rs. 300 per Kg and oil is INR 160 per kg. The ratio of the mixture is 2:1:1/4. The costing of products is done on product and kilo bases, the smaller products are sold on per piece costing whereas the bigger models, artifacts or items are sold on bases of INR. 800/kg. This cost has been decided by the government of Chhattisgarh, too which many artisans are unhappy since most of the times it hardly covers the cost of the raw material required.

4.5. Retail Outlet

The artisans make their sale thru middlemen, exhibitions and retails outlets sponsored by government. The zila parishad has provided the artisans with ‘Jhara shilp emporium’ a store run and maintained by the zila parishad. There are multiple shops provided to the artisans for selling their products individually by the department of handicraft.

5. Issues identified in the cluster –

The craftspeople of the Ektaal Cluster face the effect of globalization and have been going under various interventions through NGOs and Government organizations. There are some issues related to the cluster which have been identified by both the craftspeople and intervening bodies. Some of the issues identified are listed below:

- Lack of fund for production
The artisans do not have sufficient funds to produce products at a large scale and sell. They are dependent on loans and schemes of the government for helping them financially to be able to produce objects of higher value.

- **Lack of machineries**
  The work shed provided by the department of handicraft is not as much as of advantage, if the artisans could be provided with funds or machinery to be bought at an individual basis, they would be able to get more advantage.

- **Lack of recognition in the Caste reservation**
  The Jhara community as of now is not registered under any of the castes of the Indian constitution. They are a subtribe of the Gond but are presently not recognized as schedule tribes, schedule caste or other backward classes. This also leads to loss in being able to get advantage of government schemes. The application to gain status of a tribe is still pending.

- **Procurement of raw material**
  The artisans face a lot of issue in procuring material from the riverbed as sometimes the farmers who own the land demand high prices, also they do not get sufficient subsidy given for raw materials and tools.

- **Interference of middlemen**
  Due to lack of access to market there is an interference of middlemen at the cluster who, purchase their product at a very low cost and sell the same at a very good price in the valued market segmented market thereby reducing the overall profit margin for the artisans.

- **Lack of access to market**
  The products manufactured by the artisans are of high value which is not consumed in the local market. There are no online selling provisions for the artisans yet which they think could provide a better source for selling their products. There is no training they have had in packaging and due to that they have a loss in selling their items directly at national and international market.

- **Lack of infrastructure**
  The basic sanitary facilities are not provided to them; most of the artisans in the village cannot afford to build their houses and hence cannot build these facilities by themselves. Also while monsoon season there is a lot of difficulty in the production since it takes longer time to dry and the artisans do not have sufficient space to make and keep their products.

### 6. Interventions in the cluster –

The various organizations such as the Chhatisgarh Handicraft Development Board, Zilla parishad, Khadi gram udyog and Jindal foundation intervening the clusters have used the following methods to revitalize the craft in the cluster –

- Training workshops - Design, Technology, Market
- Study tour - the craftspeople are taken for study tour to various other clusters.
- Loans - the organisations offer various loan schemes for the craftspeople
- Infrastructure development - building workshops
- Exhibitions and Haats - craftspeople are given incentive to sell their product thru them.
- Online marketing - The Chhattisgarh hasthshilp board is launching to help the artisans gain direct advantage.
Table 1: Application of interventions

| Organization | Intervention                  | Ektaal implementation |
|--------------|------------------------------|-----------------------|
| CHSVB        | All                          | Y                     |
| Local bodies | Market, Financial            | Y                     |
| TRIFIED      | Design, Market, Financial    | N                     |
| Institutes   | Design, Technology           | N                     |
| NGOs         | Design, Technology, market   | Y                     |

7. Impact of interventions on the cluster –

Interventions are the actions or process of Interference by an organization or a body into another organization's affairs. It could be an action take to improve a disordered condition or to prevent a result or course of events. In crafts sector interventions are mainly conducted by Government and other Institutions for Improving Factor Conditions, Demand Conditions, institutional and Industry conditions of the sector. [5]

There are various impacts due to interventions on a cluster, through different means and which affect different aspect of the craft and craftsmen. ‘Any suggested change or improvement must be absorbable and non-disruptive. It must take place in small incremental steps, each step leading to the establishment of an intermediary equilibrium state. The bond of ease and comfort between a craftsmen and his craft should never be broken.’(Rajesh Kochhar)

The interventions in the Bell Metal craft of Chhattisgarh have overall increased the value of craft in the market and has also helped revive more craftsmen in to it. The major aspect lied on the base that this is the only source of income for thousands of artisans and thus requires efforts to be established. These interventions have had direct impact on the lives of the craftspeople, in their thinking and manufacturing process. With all advantages there are certain disadvantage, so as much has the efforts of intervention led to success of craftspeople survival it has also led to decline in the traditional thought process. Few Impacts which have been identified are:

7.1. Upgradation of casting technique

The technique of casting metal involves combining two molds connected to each other, in a pot form of mold scrap metal is kept and the wax mold on the other and burnt till metal from one mold pours itself on the other. The problem with this technique is that with same amount of firewood there is only one product that was being produced. After training programs in technique of the craft the crafts people developed a method of melting metal separately and then pouring into the wax molds which helped make the product faster and use less firewood overall.

7.2. Use of Buffing machine

Ektaal cluster crafts people had raw products initially they did not polish or color them. Thus, they faced a lot of loss in market due to unfinished product. Due to various study tours, trainings and exhibition, the crafts people learnt and adopted the use of buffing and polishing, which increased the market value of their products.

Fig 10: Craftsman using buffing machine for finishing the products
7.3. Making of homogenous product

Initially all the crafts people used welding technique for making a whole product, for example they made the legs and body parts of an animal separately and then welded it together for completing the product. After certain design and technique training program, they learnt the technique of adding it before casting.

Fig 11: Homogenous products developed

7.4. Introduction of color to the products -

Many middlemen used the technique of color to increase market value of the products. Hence the crafts people also learnt the coloring technique on Bell metal. There are various machines that are used to color the products, these are new ideas which are not completely adopted by the crafts people since it is very new and not familiar to their ancient techniques.

Fig 12: Coloured figures

7.5. Jewelry making -

The Ektaal cluster crafts people are masters in making jaali designs, although the Bell metal craft has jewelry making as a part of their products, Ektaal cluster had not practiced it for some years, due to study tours to Odisha and west Bengal clusters they learnt the technique of making jewellery which they had lost in time.

7.6. SHG (self-help groups)

Competition arising in the market and due to the encroachment of the middlemen there was a lot of social differences and conflicts. The craftspeople did not share knowledge about the products they made or the places where each one of them sold their products. The Government under the Ambedkar Hastshilp Vikas Yojana (AHSY) made the crafts people form groups which were called self-help groups, these groups consist only of women members although there is no restriction to which gender be a part of the group. These groups have indirectly help strengthen the society in bonding with each other at the work level too.

8. Setbacks of the interventions –

- Most of the interventions, tried and tested on the Bell Metal clusters have been proven quite successful, but the concern lies in bringing in much change, thru learnings from other clusters.
• Traders have left such an impact on the craftsmen, that their invaluable creations are now being quoted in the formers vocabulary such as “Tribal Dolls”;” Mother Goddess”.
• Apart from National / State level division in policy, there should be a craft level policy also, where a craft in certain region can flourish due to its sister craft.
• Most of the design interventions have not been able to explore the future potential of the craft, for example, how can a product be produced in lower cost, faster, with more precision.
• To able to make much diversification by combining two materials, in Ektaal cluster there is no other craft that exists along with it, thus making it difficult to revive in combination with other crafts. There are few measure or combination of materials that happens at small scale where steel hardware is used as a base for the product.
• The selection of designers is not schematic and are randomly picked from either the internet or recommendation.
• The workshops run for 3 / 6 months but most of the time is given off, which decreases the quality of the workshop outcome.

9. Conclusion –

Crafts have been an economic activity, as seen in the jajmani system, where the client decides to invest in a craft because of its aesthetics, price point and efficient usefulness. Thus, artisans need design interventions to compete with the cheap industrial products. Due to lack of availability in raw material and discouragement of the forest department to use the resources there is an urgent need to have technological changes. One of the changes that has been very successful and helped in creating better finished products and saving metal is that of casting metal in the mold externally. It has also led to less use of firewood. The various interventions have opened possibilities of the craft to explore the design interior design and architecture space. As seen in the present products, the craftspeople have begun to make door handles, furniture and may more products which is slowly taking this craft in the construction sector.

The market intervention is based on the platforms provided to the craftspeople, this does not include their financial status before and after the intervention, but mere opportunities that have been provided to them thru various selling platforms.

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