

Craftology is an Approach to the Indigenous Design of Manipur Pottery in the Present Socio-Economic Context

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ABSTRACT

Manipur is a well-known place for its strong cultural heritage and traditional practices. Making pottery is one of the age-old conventional technologies among the ethnic communities in Manipur, and they have established their rich past cultural heritage and prosperity in time. This paper aims to present the design team that conducted the 15 days pottery design workshop in Andro village in Manipur. The primary focus of this workshop is to develop a new contemporary product design using craftology as (a scientific method) to increase manufacturing competitiveness and productivity. Craftology comprises the words 'craft' and 'technology,' further, craftology was adopted to enhance the new product development and the quality of the pottery objects. The design team carried out detailed research from the available resources such as online, telephonic conversation with the artisans, etc. After analyzing the data, a meaningful contextual design was created for the artisans. Based on the research, a customized two-weeks workshop was organized for pottery craft that included learning through interactions, demonstrations, hands-on explorations and exposure towards alternate practices and techniques, surface design, product ergonomics, and after all product development based on the useability aspect of invention. This research studies has been taken an attempt that how artisans can use craftology to develop a contemporary design for the market. The interactive design research achieved through personal interviews with the potters, detailed observation of their entire product development process, and group discussion with the artisans helped to adopt this novel method.

Keywords: Terracotta Pottery Product, Design, and Hand-Building Technique, Craftology

I INTRODUCTION

Pottery making is one of the oldest crafts in Manipur. It signifies a culture of aesthetics, creativity, and craftsmanship in their rich diversity. (Bahadur, 1999). In 1932, various pottery articles were excavated and discovered by the archaeologist and shifted to Calcutta Museum for preservation. (www.ibef.org) According to the data, handicraft is one of the vital industry sectors in the state, and has its own unique identity in the in the context of our country. It has the highest number of handcraft units and the greatest number of craftsperson comprising skilled and semi-skilled artisans in the entire north-eastern region. It is also being stated that there are altogether 98051 craft units employed 379998 artisans, and pottery is one of the significant potential attributed crafts in the state. (Bahadur, 1999) In Manipur, pottery crafts are practiced in various places, such as Andro, Ningthemcha Karong, Thongjiao, Chairel, Nongpok, Oinan and Lungpi Ukhrul district. We have been

opportunity to conduct a design workshop with Andro and Lungpi potters in this research.

(a) Back ground of the workshop: Mission for Economic Empowerment of Traditional Artisans and Craftsmen (MEETAC), Department of Textiles, Commerce & Industry, Government of Manipur have been set up with an objective towards self-employment, inclusive development, and economic empowerment of traditional artisans and craftsmen of the state. (Katiyar, 2021) MEETAC has invited the National Institute of Design (NID) Ahmedabad, as a knowledge partner to revive the Handloom and Handicrafts practices across the Hills and Valley regions of Manipur. Further, 15 days "Strategic Design Intervention Workshop for New Product Development and Production Capability Enhancement for Manipur Craft" were conducted in association with of the National Institute of Design (NID) Ahmedabad.



Fig- 1 Map of Manipur

(b) Research problem and motivation for the work -

From the days of yore, terracotta products were made by hand. Later on, the potter wheel was developed (time needed) for the potters. The clay is unglazed, porous, and sintered at relatively low temperature and the final color of the products is red or black (related to special treatment) and this outcome is technically called terracotta. The present paper envisages the artisans from two different pottery clusters, namely Andro potter and Lungpi potter, who worked together for two weeks of design intervention workshop. The workshop was scheduled from 16th November to 30th November (2021) at the Andro village, where Lungpi potters been participated. The number of artisans from Andro village is 7, and all are women from the different age groups of 25 yr to 55 years. The Nungpi artisan's number is 5, and all are young generation potters. Both these two clusters work on various raw materials, the process of making objects are unique, the firing process is distinct, and the overall approach was different. The only similarity is that both Andro and Nungpi pottery is that both emphasize followed hand-building techniques for crafting their objects. The methods, namely pinching work, slab work, and coil work, are nothing but the ancient processes in pottery making, continued from the Harapan civilization till present day. Many historian identified that the potters' wheel also started at a similar period. In India, potters are available in almost every district, block-level, many cities, towns, and villages. They use potters wheel to make pottery or terracotta objects. The potter's wheel's uniqueness is that it can create a symmetrical form, circular in nature, even thickness, and specific size limitations.

Handbuilding technique has a speciality owing to the shape of a product. It creates asymmetrical shapes, uneven thickness within a limited space. One of the examples is terracotta red horse of Bankura, West Bengal. What to emphasize here is that pottery of Andro and Nungpi is practically reverse. Here, the handbuilding techniques (coil, slab, and pinching processes) are circular and symmetrical too.

‘Craft’ is a generation based practice or may be truly said a culture of made, remade, and unmade . But recently, the concept shifted towards a new dimension. Present researchers accentuate craft with technology. This means, the techniques used in this practice must meet a technological ideation. Hence the term ‘Craftology’ comes with the dual combination of words craft and technology both for modernized ideation/articulation . The term itself implies how a craft could be approached with technological thought. The present research tried to establish the term ‘Craftology’ as a ‘Design Intervention’. This means, it motivates towards socio-economic issues and related technical process attribution in one frame. Especially for terracotta/pottery, this term might be forestalled to design a contemporary form, maintaining the uniqueness the product self.

(c) Literature review - Renound Professor of NID, Ahmedabad Mr. Vijay Singh Katiyar, 2021 , identified two group of artisans from Andro pottery and Nungpi pottery and he himself is being selected by the MEETAC, Govt of Manipur, to explore the craftological ideations following 15 days pottery design workshop at Andro village, where 12 artisans have participated from both places. He has taken upon this workshop for the upgradation of present craft culture of Monipur. To reach a final outcome of the workshop, an extensive research has been performed to understand this distinct culture.

(Lahti & Fernstrom, 2021) also emphasized on in-situ of the craftman's mind. He reported that craftsman develops the skill based on their intuitiveness, anticipation, and sensitivity toward material and process to achieve appropriate methods for creating a product. In this evaluation, tacit knowledge anchors the artisans, whereas explicit consciousness serves as critique and corrective. Craftsman communication with the craft is different from oral communication. Artisan's conversation embodies both consciously and unconsciously obtained knowledge and sensitivity about the material quantification.

(ManiBabu, 2020) stated that in Andro village, women of the society are predominantly involved in pottery work whereas Andro men have been engaging in agriculture. This is interesting to note that the pottery craft required a minimum in-house workplace. Thus, females have additional advantages to continue the pottery craft and other household activities simultaneously and this helps them continuous engagement regularly towards clay preparation, crafting objects, finishing, firing, etc. The women effortlessly adapt it and their child also get an engagement to play with clay (hazardless material). In further time this encompasses a generation engagement that craft practice implies. Andro, women do a monopoly in clay craft, which exists till date. The Andro women's socio-economic reputation as a potter has a perennial relationship with society's patriarchal framework and cultural significance.

(Gachui, 2018) reported that the Nungpi Tangkhul village of Ukhrul district is renowned for black pottery work or known as Manipur black pottery. This pottery is famous for its unique form and shapes and the magnificent texture appearing on the surface after firing. Traditionally the intention is to be noted that the practice is for preparing cooking utensils to prepare Hampai owing to massive food for society. The clay composition is basically serpentine stone mixed with the common clay. Andro also follows same process of preparation. The difference between these two pottery practice is based on technicality. Nungpi emphasizes the slab and pinching process extensively and the sintered (pit firing) product appears as black colour. This black colour is due to reduction process only. Whereas the Nungpi is more intrinsic with self societal engagements. (Bahadur, 1999) illustrated that Nungpi village has been practicing pottery craft for centuries. Pottery craft plays a significant cultural role in maintaining the socio-cultural relationship with the neighboring village people. Unlike Andro, in earlier times at Nungpi, pottery is usually performed by the man of the society. In the present situation, women are equally contributing and engaging in the pottery work at Nungpi.

(Balaram,1998), highlighted a distinction between the craft and artisan and added that this is practically towards one's intellect. According to him, craft design couldn't be possible without any previous-made drawing, preliminary concept, scale, reference model, or mock-up. Craftsman's mental brief of the problem and wisdom-based solution is most important for final product. Practice such things also demands strict discipline and dedication, where artisans cannot afford any mistake at the final stage of product finishing as this involves financial implications. Henceforth, self-confidence and total control of the medium, processes, and the material are the most important parameters for craft culture.

This small research study (due to inadequate source of papers/journals) concluded that craft culture is a versatile field across society, techniques, psychological aspects or most important is tradition. This study tried to understand to approach to the indigenous design of Manipur pottery.

II METHODOLOGY

- (a) **Research Design** - This research study based on the objectives to train the artisans towards design understanding for the Andro and Nungpi pottery village. The duration of this design training workshop was 15 days, at the Andro village, where Nungpi potters were attended along with Andro artisans. The qualitative research method has been taken upon as a tool. Another objective was to understand the overall activity of terracotta design in present context. To attain the objectives case study method was adopted. The in-depth study emphasizing the comprehensive analysis of a limited number of events or conditions and related interconnections. Further, based on the research objective, five-man potters from Nungpi and seven women potters were selected to conduct the entire design workshop. For evaluation aspect understand and explain the symbolic and contextual meaning of the everyday practices of potters has been minutely studied.
- (b) **Data Sources** - The data for the study is generated from primary and secondary sources. Preliminary data were collected during 15 days design workshop through observation and the in-depth interview method. The significant activities observed during the training workshop are, a collection of clay, the base composition of clay, preparation of clay, mold making process, hand-building process, drying, preparation of furnace, firing techniques, etc. Before the actual engagement in the design workshop, the design team has prepared a detailed program day-wise for the 15 days workshop. Secondary data were collected before organizing the design workshop. The secondary research mainly focused on the characteristics of the raw material, the current production process, the existing skillset of the potters,

the existing product range/category, flora and fauna of Manipur, and the possibilities of new production techniques product diversification based on the market requirements. The design team also conducted a telephonic interview with Andro and Nungpi potters to understand the contemporary craft's situation.

- (c) **Research findings** - In Andro village, pottery-making is entirely dominated by the family's women, whereas in Nungpi village, pottery work is done by the man, and sometimes women are also contributed. The potter uses hand-building techniques like slab, pinching, and coil process in these two pottery clusters. Most artisans have acquired excellent clay modeling, sculpting, pinching, coiling, and low relief work. Nevertheless, Nungpi potters are also master infusion with other materials such as cane and bamboo with terracotta. The existing product range from these clusters is enormous, like cooking utensils, tableware, crockery, teapot, planter, gift product, etc. The product design is a relatively simple, mainly symmetrical form they have developed through the hand-building process, which is quite helpful for designing asymmetrical shapes. Nungpi potters follow the reduction firing, which is the key feature of their products. On the other side, Andro potter's designs are cylindrical and elongated. The elemental clay composition differs in both clusters; Nungpi potters use 70% serpentine stone and 30% locally available clay. It will help increase product strength after firing, and it is beneficial for cooking utensils as needed. In Andro, two varieties of clay are used, namely leichreng (red maroon earth), weather rock used as temper, and leitan (soft clay medium plastic); black clay is used as the raw material for pottery. The significant advantages of Nungpi and Andro are suitable for direct and indirect heat sources, good thermal shock resistivity, low thermal expansion, black color absorbs heat faster, and enhance the product's appearance. The clay body helps in slow cooking and keeps food warm for a longer duration also, and it maintains the test of the cooked food. The products are unglazed but, after firing, give a glaze-like surface finish, and in addition to that, the material fusion, such as cane lining, acts as a heat insulator. The design direction was identified based on the field observation and in-depth interview with the potters and after studying the existing pottery product available online or on an e-commerce site. Concepts were generated, which can be rapidly produced in their current production process. The central theme of the proposed designs are tradition into modernism, contemporary form, material fusion, minimalistic approach, surface design based on flora and fauna of Manipur, product ergonomics, useability and form function, etc. It will help them to create a brand in the national market.

- (d) **Approach and Uniqueness** - The preliminary approach was to understand the different skillset of the artisans from Nungpi and Andro by assigning them some skill assignments. The artisan's team was finalized based on their indigenous traditional skills, which helped us decide the number of designs developed during the workshop. Since artisans were from two different clusters (Nungpi & Andro), we selected the product category, based on their expertise.

Another approach was to exchange their traditional knowledge and skills, which reflected a positive impact of that knowledge-sharing process.

The third approach was to use their traditional process of developing new designs and introduce some other modern techniques to them, so they can quickly achieve desired form & shapes to expand their product range.

The fourth method was to introduce them the value addition of their products, and a simple surface design process was demonstrated to the artisans using hand tools. The design team created a wide range of patterns taking inspiration from traditional motifs and symbols of Manipur. Combining two different materials for product development was another approach to adding value to new designs and existing products.

The fifth approach was to make artisans aware of better product finishing, the importance of maintaining the same size and thickness of products, parts like handle and lead knob, reduced product weight, etc.

The artisans were encouraged to use their ideas and desired motifs and symbols during product development and develop products according to the contemporary market demand.

III RESULT AND CONTRIBUTION

- (a) **Craftology (Craft + Technology) in the perspective of Manipur pottery** - Craft research has a special value related to entrepreneurship and obviously helps in human day to day life. (Niedderer K. 2009) added new innovation in craft, keeping the traditional worth is important. But the skill of the artisans and their associated emotion are the inevitable paraters in this culture. This reflects that new understanding in the acquired experience is to be noted down. To qualify materials towards a meaningful outcome requires sensetization. This also requires emotional perceptions. (Chattopadhyay, 1984) emphasized that crafts have been the indigenous creation of ordinary humans, from the conventional to a part of the flow of everyday life. This paper reflects that the crafts might be based on the two main characteristics of crafts are aesthetics and function, which are integrated. Therefore the word 'Craftology' has a

special meaning. Craftology is a knowledge-based dialogue between experiential and propositional learning. The potters' empirical knowledge and embodied experiences with the pottery were articulated through practicing the craft. The embodied understanding of the potters is more than merely skilled training and performance of making an object. The craftsman's body and mind play a vital role in creating and recalling a broad spectrum of expertise, including the intangible aspects. These quality traits are visible in the potters' community of Andro and Nungpi.

This present study, started with an intensive discussion with the two different artisans group, meeting each other first time. The discussion primarily focuses on new concept design; all these three-dimensional and technical drawings have helped them visualize better, which they developed during 15 days workshop. The two different age group of artisans exchange their knowledge and experience during the preparation of clay composition, which is also different in practice. The artisans were given a minor assignment to make some traditional design, which they practice generally. It has helped the design team to understand their skills and expertise. This method also reveals to the design team that both potter's clay compositions behave differently, and accordingly, the artisans use their tools and techniques to make terracotta objects. The intensive discussion with the artisans helped the design team understand that the potters from both clusters never used the pottery wheel. They are experts in hand-building techniques, mainly slab, pinching, and coil work. Another important aspect is the firing process; both the artisans followed different firing techniques. A test firing was necessary to understand how different clay compositions and surface finishes behave after firing. Thus, Nungpi and Andro potter developed a few sample objects and fired them according to the black firing

process. As a result, the product surface design was exciting, but few cracks appeared in the product made by Andro clay. It is one of the key findings for the NID design team to strategize the next course of action, and thus the design team coin the term 'craftology' as the novel approach for these design training workshops. This technical amalgamation persisted the conjugation of craft with technology. Therefore, the object the sense of Craftology will ensure consistency in quality and standardization in size, wall thickness, and shape of the terracotta product. It would also help the pottery artisans increase efficiency by introducing simple clay joining, easy molding, and surface decoration to add value to their design. The below-mentioned points are the critical feature introduced to the potter's community understanding the crafts aligned with technology.

- Introduce a single-piece mold process for mass production, using plaster of paris (POP), plastice, and steel container used as a mold. It will help for easy production at small workstations like potters home.
- Demonstrate an easy way of preparing the clay slab and assembling it seamlessly using clay slip as a binder.
- Introduce the thick holo coil-making process to design new flower vases.
- Introduce the product ergonomic consideration regarding usability, safety, and human comfort.
- Explain the method of developing a new surface design based on the flora and fauna of Manipur.
- Introduce the coil work and scratch method to transfer the design into the product surface.
- Demonstrate a simple way of surface finishing using a steel spoon
- Introduce fusion of other locally available materials like cane and bamboo.



Fig- 2 workshop venue at Andro village, Imphal, Manipur



Fig- 3 clay preparation



Fig- 4 women potter from Andro



Fig- 5 demonstrating the molding process



Fig- 6 learning from each other



Fig- 7 Furnace loading



Fig- 8 Final product Firing

- (b) **Crafting new clay product** - All the clay products created in the design training workshop have a unique personality of the region and the cluster. The product diversification was recommended based on the intensive market research, understanding the skill set of the pottery artisans, material processing, the use of hand tools, and production method, which they are regularly practicing. The products range from tabletop accessories, home décor, planters, tableware, serving wares, etc. During the design workshop, the design team observed the enthusiasm for accepting the new design by the potters. The easy-to-make molds, use of ready-made containers as mold, slab joining techniques, and use of clay slip and intuitive and simple form development helped enhance quality and quantity of production, keeping the existing skillset as strength of the potters. The product form was contemporary, elegant, and straightforward, and it can meet the current market requirement.

Clay work itself is a very time-consuming and laborious process. At the beginning of the workshop, the craftsman started preparing the large-size product first to get sufficient time for drying before firing. The craftlogy method has helped the artisans to complete all the designs within the stipulated time frame of the workshop. The surface ornamentation in the clay products, using flora and fauna of Manipur, added value to the creation and enhanced the product's visual appeal. The product firing was quite challenging for the design team as both the potters' communities followed different firing processes to fire their product. They need to ensure that there should not be any wastage after firing. The craftlogy approach helped the artisans to achieve their desired outcome with minimal breakage. At the final stage of the product development, the NID design team has demonstrated a new design strategy to blend cane and bamboo with clay objects. The artisans say increasing their design's value proposition is a magnificent step they accomplish during

the design training workshop. Below are a few products

as an outcome of the workshop.



Fig-9 Food steamer



Fig-10 Casserole



Fig-11 Jug



Fig-12 Teapot



Fig-13 Pen stand



Fig-14 Serving Bowl set



Fig-15 presenting clay product to the Hon. Minister Shri Biswajit Singh, Govt of Manipur

(c) **Socio-Economic and livelihood of the potters' community** - Mission For Economic Empowerment of Traditional Artisans and Craftsmen (MEETAC), department of Textiles, Commerce & Industry, Government of Manipur has several schemes for the upliftment of the craft sector. (Rane, Punekar & Shende, 2016) Stated that the Ministry of Textiles, Department of handicraft, and handloom, the Government of India has also introduced several schemes to better the craft community in Manipur. Other organizations like the Khadi and Village Industries Commission (KVIC) and Directorate of Handloom and Handicraft, Govt. of Manipur runs lots intervention in the area of capacity building, craft training program, marketing program, design training program, social well-fare scheme, one-time financial support to buy raw material, buyer-seller meet, etc. in Manipur. (<https://pib.gov.in/PressReleasePage.aspx?PRID=1745155>) Mentioned that in August 2021, Prime Minister Shri Narendra Modi interacted with the women's self-help group in 'Atmanirbhar Narishakti se Samvad' under the Deendayal Antyodaya Yojana-

National Rural Livelihood Mission (DAY-NRLM). The Prime Minister also released capitalization support funds to Rs 1625 crore to over 4 lakh SHGs. In addition, he releases Rs 25 crore as seed money for 7500 SHG under the PM Formalisation of Micro Food Processing Enterprise.

Pottery is an essential part of the socio-cultural, religious, and economic interests of Andro and Nungpi artisans. (Gachui, 2018) Underlined that the primary constraint is the motivation of the potters to continue this tradition mainly due to financial reasons. Even though a large section of society demands pottery because terracotta utensils give better food tests, recent research says it has good nutrient value. In Manipur and other neighboring states, these pottery has great demands; subsequently, it has gained popularity all over India due to exhibition cum sell organized by the center and state government from time to time. It has encouraged the community and young artisans of Andro and Nungpi to practicing pottery craft as their primary activity. It is visible in this design training workshop, where all future generation potters have participated, and they inspired many young artisans

in their neighboring village to practice this indigenous craft.

Our appeal is that buying a Manipur pottery product is helping preserve and continue this ancient, centuries-old tradition of pottery alive and contributing and helping by providing a sustainable means of living for the artisans who make these excellent crafts.

IV CONCLUSION

A fifteen-day design training workshop that allows us to work with the artisans in their village has been an enriching experience. The human-centric design approach always helps to focus on people's first perspective. Working with the craftsman/women in the field emphasizes universal sensitivity and realization. Engaging with the potters family, simple day to day conversation with the artisans, challenges faced during learning, identifying the appropriate solution based on the available resources, understanding their lifestyle, participating with their rituals, celebrating failure and success together as a team, has brought us to be part of their extended family members. The potters have well-accepted craftology as a novel method to increase their production process to meet the market demand.

Black pottery of Manipur is a unique clay craft in India. One of the fundamental reasons is its colour black. It is one of India's recognized and known traditional pottery practices owing to its uniqueness. The clay after firing is less porous & hence reusable after washing. It increases the possibility of a more versatile range of products other than the traditional cooking vessels. Unlike other potters in India, instead of throwing on the potters' wheel, the uniqueness of the Nungbi & Andro potters is using hand-building techniques such as slabs and pinching for making symmetrical forms. The potters in Nungbi & Andro excel in finishing and burnishing skills, which adds to the possibility of a widely accepted handmade product. Terracotta cookware shares good demand in today's current market, while this is challenging for the rural potters in other parts of India to fulfill. Nungbi potters have this added advantage due to the ideal raw material naturally available to them. Where Andro is famous for making pitchers used not only for storing water and brewing liquors but also for keeping clothes, storing cereals, etc. The earthenwares of the Andros gained significant popularity in the surrounding villages as well. Apart from traditional products used in day-to-day life, potters must have developed products according to the present market need. This workshop helped create a new range of diversified products according to market demand. Such initiative might help for economical up-gradation and livelihood of artisans engaged with their respective craft traditions. Nowadays, people are becoming more concerned about the environment and

shifting towards sustainable products, thus creating many future pottery communities of Manipur.

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