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Mural Painting on Shell Lime Tiles using Organic Pigments

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ABSTRACT: Mural artwork using natural dyes on shell lime surface cement tiles, highlighting the intersection of traditional techniques and modern artistic expression. By utilizing pigments derived from plant, mineral, and organic sources, the murals offer a sustainable approach to large-scale art installations. The use of cement as a medium not only provides durability but also enhances the raw, earthy aesthetic of the natural dyes. This method reflects a growing trend toward eco-conscious art practices, combining the richness of ancient craft with contemporary visual storytelling. The result is a vivid, environmentally responsible art form that transcends time and place, inviting viewers to engage with both the beauty of nature and the potential of sustainable materials in artistic practice.

I. INTRODUCTION

Millennia ago, the Indian temples and palaces are following colourful painting artworks, among all the cultural mural paintings one of the famous mural paintings are in Kerala, where its traditionally called as 'Chuvachithirangal'. Mural painting means wall painting, where the mural is derived from the Latin word 'myrus'. Mural paintings are seen in the walls and ceilings of the temples and palaces. Historic murals forms are painted using natural materials and vegetative colours [1]. The mural works in the buildings is to highlight the artwork aesthetically thereby to highlight the civilization and cultural of the surrounding society [2]. Mural had started as early as 3000 BC before the modern civilization, a prehistoric painting called 'Mira' known to be the earliest visual art. The presence of mural painting has been documented for thousands of years, as mural paintings are used to convey messages and stories about the lifestyle and habits of the people who lived before [3]. Mural painting has become a trend as a way to integrate the public art onto building surfaces to enhance the cities identification. Currently existing historical mural arts plays a role in tourist attraction that can artistically depict a city's history and cultural diversity [4]. Currently developed mural artworks on walls and other large surfaces in public spaces creates an impact on public people leaving a lasting impression and empower the communities [5].

II. REVIEW OF LITERATURE

The Kerala mural art and its traditional procedure is to paint on walls by using natural materials like herbal dyes, fruit juices and the chemicals obtained from the roots of the trees and stones. The major five colours often used in mural paintings are red, yellow, green, black and white. The mural painting base cross three stages as wall preparation – one of the important process is using a plastered mixture of lime and clean sand for smooth and even base for painting. Yellow outlining is the first step while the art is painted which is then filled with colours. wooden utensils are used as paint palettes to mix colours, mudstones to make pigments paste and the grasses and bamboos as paint brushes. Each character in mural paintings depict the stories of god and goddesses and based on the three symbolism the colouration is done. In way of depicting the stories, the ancient art forms have not died in this modern world [1].

The proposal of aesthetic improvement in the international airport by the means of mural painting, thereby enhancing the visual appeal and convey the cultural identity of the location. Examining the historical and the contemporary examples of murals by analysing their technique, styles, materials used, and the message they used as communication. Here Yemini airport arts are examined and found that there are three potential themes for mural in Yemini airport one



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is by inspiring ancient architecture, two inspiring by the nature of the earth, three getting inspired by the social conditions of the Yemini people [2].

The origins of mural paintings are being tracked by the prehistoric cave paintings to modern forms like graffiti – a stylised form of artistic expression which is described as street or aerosol art that is developed in America, specifically in Philadelphia and later in New York. This form of art became the basic contemporary of art in major cities. Highlighting the key periods, artists who contributed to the development of mural painting significantly across different cultures and eras [3].

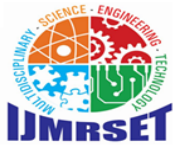
The sustainable mural art trending the urban environment explores the integration of mural art in urban settings and the challenges are examined with the potential of long-term benefits of sustaining these artworks in public areas. The existing mural literatures are reviewed to understand the issues affecting mural art as like vandalism and public perception, and the importance of community involvement and proper management existence and continued the positive impact on the urban environment, including the economic, social, culture and potential environment aspects [4].

The review of impact of the public mural art on the quality of life where an individual living in urban environment. The researchers examined the public art history in America, there the key movements are highlighted as like the city beautiful movement and the influence of the work progress administrations. The review analysis has two prominent community based mural programs, The Social and Public Art Resource Centre (SPARC) in Los Angeles and the mural arts program in Philadelphia for the better understanding in their community engagement strategies. [5].

III. METHODOLOGY

Before the mural painting is developed, a survey is conducted by sharing a set a questionnaire, along with the sketched design [fig 1,2,3,4,5,6] to the customers, knowing their preference about the mural paintings as shown in the Table1.

Sl.No	Questionnaires
1	Have you ever heard of mural paintings? • Yes • No
2	Do you prefer buying mural paintings? • Yes • No
3	What kind of mural paintings motifs do you prefer? • God/goddess • Animals • Flowers • Peoples
4	Which raw material used mural painting do you prefer? • Natural dye paintings • Acrylic painting
5	Do you prefer naturally extracted mural painting over acrylic paint? • Yes • No
6	Select the most liked mural painting product that you will prefer to buy. • Krishnar • Abstract two frames painting – Kathak face • Diagonally painted – Ganesha



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7	Under what cost do you prefer to buy this natural dye mural painting? • 500-1000 • 1000-1500 • 1500-2000
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Table.1 Sample Questionnaire

1. Mood Board

Here the mood board titled – heritage in hues beautifully showcasing the rich Indian traditional vibrant colours and culture. This mood board conveys the deep reverence of Indian heritage celebrating its historic grandeur and timeless artistic expression.

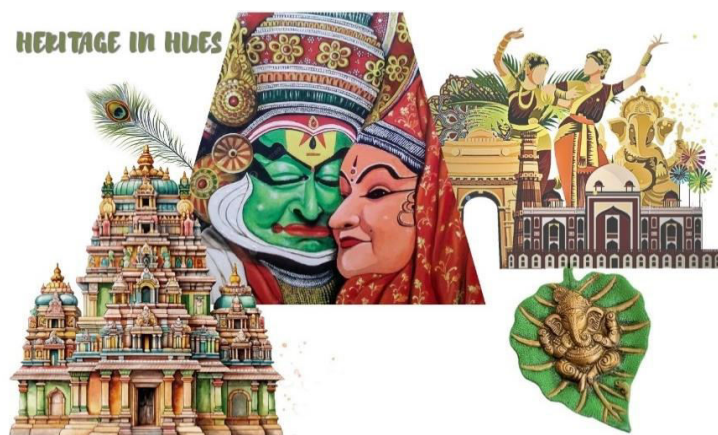


Fig 1 Mood Board

2. Design board

All the below mentioned sketches are developed with inspiration to the heritage of hues. These are the preliminary sketches that played major role in developing the product. These images were shared to no. of peoples and asked them to choose three and those sketches where shortlisted and the selected to develop the product.

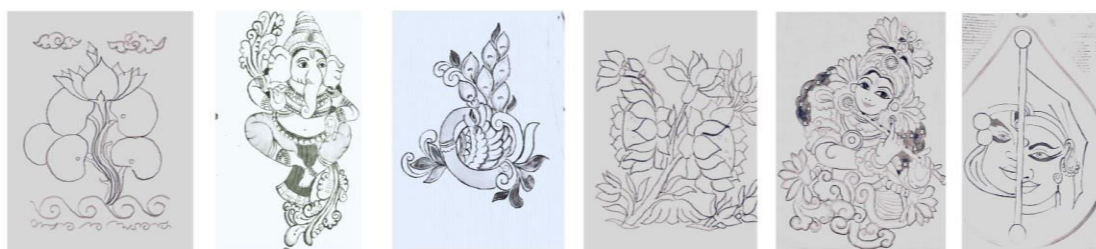


Fig 2 Design Variations

3. Colour board

The pantones shades mentioned below in the color board are the inspiration from the heritage in hues, reflecting the vibrant palette that is rich in traditional Indian culture. Solar Power, Brick Red, Forest Green, Sun Kiss, Espresso these are the pantones selected for developing the product.



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Fig 3 Pantone Shades

1. Product Development

1.1 Preparation of tiles

The cement tiles are made by using sand, water, cement - mixing it well. The square layout is made to pour the cement liquid and make them mold to square for the base for the painting. The cement liquid is poured in the square layout, steel nets are placed in between the cement liquid poured to make the tiles stay strong, pouring the cement liquid above the steel nets and letting it dry. After the tile is completely dried the first process is over. After the tiles are dried, the tiles are reversed and let it dried in the sunlight for a day again.



Fig 4 Preparation of tiles

1.2 Tile Grinding and Polishing

The sand paper is used to smooth the cement tiles surface. Leaving the uneven surface to smooth even surface. This will help the person to easily paint on the surface.

1.3 Preparation of Shell Lime

Using hot water the lime is soaked for some time and the lime dissolves in the hot water and mixing it together forms a liquid. Then the liquids are coated in the surface of the tiles for a white surface to make the natural dyes effective in the tiles.

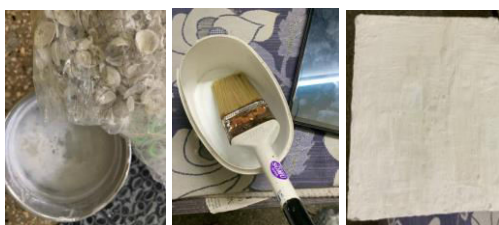


Fig 5 Shell Lime Coating

1.4 Design Mapping

After the lime layer is fully dried. The lime is again smoothened using the sand paper. A lot of lime will be removed while using this sand paper as dust and the full layers will be removed, so smoothening it softly with care makes the lime part on cement tiles look neat.



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Fig 6 - Design Mapping

1.5 Natural Dye Preparation

The natural dyes are extracted for using it in the painting for colors filling. Yellow, green, maroon, black, peach. Here to extract the natural dyes, the materials are soaked in the water. Here the green color is extracted by soaking the spinach in water for 2 days. To extract sandal color the onion peels are used here in a sustainable way to extract dye with wastage material, there comes the yellow dye – using the turmeric powder boiled with hot water, smashing the charcoal blocks into fine powder and then the powder is filtered thrice and then adding fevicglue to the powder and mix it well without any crumps in it. Then taking the soaked spinach and onion peel and boil it separately and stir it well and after certain period add allam to the boiled green and peach dye. Here comes the extracted green and peach dye.

1.6 Final Product

The extracted dyes are coated on the shell lime coated surface – 4-5 time after letting one coat dry completely. There were 3 total no. of painting using the shell surface on cement tiles – 1. Krishna, 2. Ganesha, 3. Partial kathaks



Fig7– Final Mural Painting

IV. CONCLUSION

The mural artwork developed here is a cement tile mural painting that can be incorporated in the walls. Basically, murals are suitable to make decorative wall hangings and frames rather than using functional ones. Mural painting is a captivating art form that combines creativity, storytelling, and community engagement. All mural painting techniques and materials have evolved over 2000 years, still the art forms continue to be a popular way to create large-scale art work of that art, that are accessible to all the mural painting as a significant art form can aid to the creation of cultural heritage. Through its vibrant colours and larger-than-life scale, murals have the power to transform public spaces and inspire a sense of unity. Whether it's depicting local history, promoting social causes, or simply adding beauty to our surroundings, mural painting has a lasting impact on both artists and viewers alike.

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