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**BORANA ARTEFACTS AND ECO-DESIGN TO CREATE AESTHETIC PRODUCTS FOR
NAIROBI MEDITATION CENTRE.**

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Project paper submitted in partial fulfilment of the requirements for the Bachelor of Art and
Design Degree submitted to the School of the Arts and Design, University of Nairobi.

14th April 2020

DECLARATION

I declare that this project is my original work and to the best of my knowledge has not been presented in the past for the fulfilment of any degree course or certificate course in any other learning institution.

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DEDICATION

I would like to dedicate this paper to Jehovah who has brought me thus far, my parents Prof. Dr. J.K Gathumbi and Jennifer Gathumbi. Thank you both for your love and support. And finally, my dear sisters Ivy, Kui, Nyokabi and Kochi for their encouragement and support.

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ABSTRACT

Background: Meditation centres act as safe haven for those who seek to gain a deeper understanding of themselves and the world around them. Meditation is a practice that originates from the Far East and has gained traction across the globe for its power to change lives. Its transformative power has led millions of people towards greater self-awareness and realisation. Consequently, promoting healthier, fulfilling and more meaningful lifestyles. The Eastern form of Meditation is not a popular practice in most African cultures and especially those in Kenya. However, there is ongoing debate as to what practices constitute mediation.

The Problem. The lack of cultural identification in these centres proves to be a deterrent for many as meditation centres use Asian centred artefacts. For this reason, a majority of Kenyans wanting to come into these facilities are unable to churn a personal connection and end up lacking the inspiration to try mediation in these centres. This paper presents an inquiry into why African artefacts are integral objects in meditation centres.

Objectives: There are four main objectives which seek to explore and identify ways in which mediation centres actively use their spaces in an attempt to create holistic mediation environments. With this in mind, this paper seeks to examine the ways in which these centres can incorporate African cultures in its practices to ensure that customers get a well-rounded experience that takes into account their cultural and spiritual values. This will aid in the preservation of minority cultures that are on the brink of cultural erosion.

Design: A descriptive research technique is used to offer an in-depth analysis on the information obtained through the various primary data collection methods deployed. This includes observations, photographs, archival research and case studies. **Setting:** Nairobi Meditation Center. **Subjects:** The owners at the Nairobi meditation center, employees and clients at the company.

Findings: This study found little to no representation of African cultures in the centres visited. Therefore, coming to the **Conclusion** that there is a need for more investigation into ways to develop more African centred meditation centres. This will in turn offer inclusivity and diversity in decorative ornaments as well as in wellbeing and meditative practices.

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CHAPTER ONE

1.1 INTRODUCTION

The main focus of this research is the creation of products for the Nairobi Meditation Center, primarily intended on satisfying consumers' needs and desires. It has been observed in recent times that consumers want to experience pleasure in order to stimulate their senses, centered on the decorative and the symbolic attributes of design. This suggests that intricate details adds value and also extend to designs with extensive functionality and meaning. The main aspects include vision, hearing, touch and scent. Vision the most dominant sense. Our ears are capable of expanding our perception of aesthetic design, this being of a meditation session. The sense of touch is especially important for material aesthetics and physical products. Scent is known to be strongly related to memory, with studies indicating that being intentional about the aroma of a space can make for a more optimal design choice (Lehman).

The main theme running through the project is the incorporation and application of Borana culture on products. Their artefacts served a purpose, being not only decorative but sacred and symbolic. This also aims to instill an emotional aspect in that one can easily relate, identify and hence creating an emotional response or personal opinion. Research (self-care) shows that with the need to look and feel your best in the present time has resulted in people looking for ways to keep them looking younger, feeling better and in desperate need for "me time". Hence, meditation sessions have become more popular. The study involved visiting Nairobi Meditation Center and observing the activities, in a bid to assess the products in use and the considerations put into the design of the products. This also meant that the researcher interacted with the space as well. Through the photographs, taken it is evident that there is hardly any African aesthetic representation at the premises. The space is very modern with a subtle hint of the Asian style, down to the wall mounts used.

1.2 BACKGROUND OF THE PROBLEM

With all the attention focused these days on holistic remedies, organic produce and botanical beauty products, it's no surprise that interest in meditation is on the rise. People are eager to try anything that keeps them looking younger and feeling better or

just in need for 'me' time (Jenkins, 2015). This lifestyle comes with the need to look and most importantly, feel your best. There is nothing more luxurious than feeling rejuvenated after a meditation session, whether its enjoying yoga or to simply relax and unwind (agency, n.d.).

Meditation and yoga is done with the purpose of improving health, ones' mind-set and relaxation. It is conducted in search for a sense of wellness or wellbeing, where people are in need to cope with a major life setbacks or to relieve stress and promote a deep sense of wholeness. There are a lot of mental and physical benefits attained from visiting a meditation center (Miller, n.d.).

Post-Colonial African Nations epitomise many problems, the biggest one of them being loss or slow deterioration of culture, there are cultural, political and above all historical explanations for failure to bond a national identity. In that, there is hardly any cultural identity tied to their national identity. Ethnicity in Kenya remains the dominant principle for cultural differentiation in character but not in our ways of life. People seem to have forgotten their culture. Additionally, in the wave of pop culture, people identify themselves as a certain tribe but have no knowledge or familiarity with their traditions and culture. (Arero, 2007)

The Borana are part of a much larger group of the Oromo Community. Those on the Kenyan side of the border live in a large area of barren northern Kenya. As a result of their Nomadic nature, some of the communities converted to Islam, which made significant modifications in that they had to abandon some of their traditions. The urban Borana, particularly the youth living in urban areas, lack interest in their traditions and are heavily influenced by western culture (Arero, 2007) . With the pressures of modern life in urban cities, there is hardly any time for parents to educate their folk on their cultural traditions. Being a minority tribe in Kenya also plays a part in the dwindling of this culture. People hardly have any knowledge about the community, with the assumption being that they are associated with other major tribes in North Eastern Kenya.

1.3 PROBLEM STATEMENT

It is apparent that there is hardly any African representation in the centres' décor, tools and products, which mostly draw inspiration or mimic the Asian style. This is due to an

absence of culturally recognisable products despite the vastness of cultures in Kenya. There is hardly any exploration of the rich history of traditional African communities including their artefacts, methods of relaxation and wellness rituals that have been incorporated into the design of the products. The moral, material and physical world in African communities revolves around cultural identity, this being an important aspect that is not seen or felt, on trying to create a holistic and accommodative meditation environment.

Furthermore, this being an environment for self to be one with their surrounding (nature), it is important to ensure that the products are environmentally friendly.

1.4 OBJECTIVES OF THE STUDY

1.4.1 Main objective

This paper aims at establishing and integrating culture-oriented design by drawing inspirations from the Borana community, in order to create spa-themed eco-friendly products for use at the Nairobi Meditation Center.

1.4.2 Specific objectives

1. To explore how other product designers and companies have created products for meditation centres.
2. To identify and establish the materials and processes used to make products in the Borana community that can be integrated in the design of products.
3. To explore cultural factors existing in the Borana community that can be integrated in the design of products.
4. To produce and display a range of products, featured in leather, sculpture, jewellery and ceramics that are unique and suitable for use at the meditation center.

1.4.3 Research questions

1. How can the knowledge gained be applied and integrated in the design of products?
2. What are the required considerations used in making products for a meditation center?
3. What materials and techniques were mainly used in the Borana culture?

4. How can culture-inspired design be used to develop products in the four areas of product design for the spa?

1.5 Significance of study

Culture is the very fabric in a society that holds people together, giving them an avenue to identify with each other. Culture is also the way of life that enables people to navigate and survive the environment around them (Wangui, 2019). This is the very reason why it is important to promote African culture through the design of products. With proper execution, it will also help keep alive the Africanism spirit and the desire to be proud of being African. As a result, it will prevent the dwindling of the Borana culture and principles around which societies are created, thereby preserving and educating people on the culture and its beauty. This solution can bring about positive change in regard to how Borana culture is sustained, viewed, communicated, purchased and even accepted by fellow Kenyans (Wangui, 2019).

This study also explores African methods of relaxation and rejuvenation, looking at the products used, how they were used, how they were made and the tools and techniques used. This also explores the symbols and beautification methods applied after various rituals to inspire the choice of colour and patterns.

This study also aims help demystify the stigma associated with meditation.

Research discussed in this paper will also explore the use of more affordable or alternative materials that are environmentally-friendly and durable.

1.6 The scope of the study

This section puts a limitation on what areas are included in the study.

1.6.1 Geographical scope



Figure 1 Map of Kenya.

Figure 2 Nairobi Location.

Figure 3 Kilimani, Nairobi Meditation Center.

Source: google maps accessed November 14, 2019.

This study was conducted in Nairobi County in Kenya, the area of interest being Nairobi Meditation Center.

1.6.2 Thematic scope

Creating a meditation experience. This includes products and instruments for use at their meditation session. Relevant aesthetic décor to match the theme and products that are African inspired and made locally. The products should be eco-friendly and of elegant character.

This study is meant to give an insight into the creation of culture oriented products in relation to the designs in ceramics, glass and plastics, jewellery, leather and sculpture. This study mainly relied on primary and secondary sources of information to acquire information to generate the conclusion and recommendation of user-friendly and communicative products.

1.7 LIMITATIONS OF STUDY

The first major limitation is time, as the study requires more time to fully delve into than that allocated. As a result, the research relies heavily on secondary information with regards to the Borana culture.

1.8 Definition of terms

Meditation is the act of giving your attention to only one thing, either as a religious activity or as a way of becoming calm and relaxed (dictionary, Meditation, n.d.)

Culture is that complex whole which includes knowledge, beliefs, arts, morals, laws, customs, and any other capabilities and habits acquired by a human as a member of society (UNESCO, 2002).

Popular culture refers in general to the traditions and material culture of a particular society. In the modern West, pop culture refers to cultural products such as music, art, literature, fashion, dance, film, cyber culture, television, and radio that are consumed by the majority of a society's population. Popular culture are those types of media that have mass accessibility and appeal (Crossman, Sociological Definition of Popular Culture, 2019).

Eco-Friendly products are products that have been designed to do the least possible damage to the environment (dictionary, eco-friendly, n.d.)

CHAPTER TWO: LITERATURE REVIEW

2.1 Introduction

As a society with a continuous depletion in resources due to the high rate of consumption, countered by a high number of products that are discarded every day, has led to the accumulation of a lot of waste, environmental degradation and global warming (UNESCO, 2002). Especially with newer, more desirable and “better” products coming in to the market. Design however has the ability to facilitate solutions to these problems with the aim of extending the longevity of products and reducing waste through intentionally designing features, choosing materials wisely hence facilitating the process of sustainability. This is also a process of focusing on new strategies for designing second possibilities for objects that end up as waste or that need to be re-thought and for other sustainable options created. Unfortunately, even if products are designed to last a long time, they still tend to work in a paradigm life cycle.

2.2 Eco-Design

Eco-design is a new trend, necessitated by existing concerns worldwide and generated by the necessity of adopting new design principles. New design principles require the designer to provide a friendly relationship between created concepts, the environment and the consumer. This "friendly" relationship should be valid both at present and in the future, generating new opportunities for product, product components or materials from which they were made. Awareness by designers on the importance of this new trend permits the establishment of concepts that have as their objective the protection of present values and ensuring the legacy of future generations. Eco-design, by its principles, is involved in the design process, from early stages, to the stage of product design. The main objective of the designers will consist in reducing the negative effects on the environment through the entire life cycle and after it is taken out of use. The main aspects the eco-design will consider is extending product exploitation, make better use of materials and reduction of emission of waste. The design process must be started by selecting the function of the concept, materials and technological processes, creating the shape of the product through an analysis that involves optimizing and streamlining

the product (PRALEA Jeni, 2014). The final solution of the product is constrained by different requirements under the economic, market, functionality, usage, ergonomic and aesthetic considerations.

Environmental problems such as global warming are a continually growing concern worldwide. Because of the increase in environmental awareness and carbon reduction trends, green hotels have become a prominent business direction in the hospitality industry. Hotels that adopt ecologically friendly designs and operations by adopting environmental practices such as lowering pollutant emission, procuring green goods, and conserving water and energy, are deemed to be green hotels (Chung Te Ting, 2019).

DESIGN EXEMPLARS

BENTU DESIGNS

This is an independent design brand founded in 2011 engaging in product design and innovation. They highlight the amount of waste produced by the ceramic industry. Chaozhou is the biggest ceramic production base in the world which produces around 70% of daily use ceramic products globally. The collection includes tables, lampshades and benches made from a mix of ceramic shards and concrete. Rather than crushing the shards completely, they remain visible on the surface of the final products. The concrete and ceramic mix is cast into moulds and left to set as seen on figure 4 (archiproducts., 2019).



Figure 4 Concrete ceramic furniture. Sited from (archiproducts., 2019)

CHEER PROJECT BY GAURAV WALI

Gaurav is a designer from India who sought to find a use and purpose for the excess and unwanted dried pine needles in the northern regions of India, Himachal and Ulterakhand, which often caused forest fires that were devastating to the neighbouring communities (Wal, n.d.).

By separating the fibres of the needles, the fibre is then developed into a composite with the help of natural binder and wax (Wal, n.d.). The fibres can be dyed using local vegetables and spices. The finished product is biodegradable, water resistant and causes no pollution or waste set as seen on figure 5 , thus presenting a solution to the global plastic issue (Wal, n.d.).



Figure 5 Pine needle. Sited from (Wal, n.d.)

2.3 Good Design is Pleasing

Pleasing is defined as satisfactory or appealing. The visual appearance of products is important when it comes to consumer response and the success of the product. This is typically judged based on elegance, functionality and social significance. It is largely centred on the satisfaction of consumer wants, needs and desires. Focus is placed on the decorative, emotional and symbolic attributes of design (aesthetics) as consumers don't just buy a product, but they buy value in the form of appearance, experience and identity. This suggests that extreme detail adds extreme value and also extends to designs with extensive functionality. A good pleasing product attracts consumers to a product, communicates to them and adds value (functionality). Good looking products are perceived to be more valuable and having more qualities. Humans like physically appealing and shiny designs because they generate pleasure.

2.4 Aesthetic Design

Aesthetic design explores mainly decorative aspects. Consumers desire to experience pleasure in order to stimulate their senses. They prefer products that evoke emotions in them or are a reflection of their sense of style. Beautiful products are perceived as

easier to use and more valuable than plain ordinary ones. The better the book cover the more consumers believe the content to be better, even if this is not true. Aesthetically pleasing designs bring up positive attitudes in the users (Nikolov, design principles, 2017). It makes them care more about the product, more loyal to the brand and more tolerant towards its mistakes or failures. For instance, apple device users become loyal to the brand due to the experience they get from using the phones and gadgets and the aesthetic value of the gadgets. The following three important aspects considered:

Vision, is most dominant sense. We can't help ourselves from looking at what we find beautiful. Visual aesthetics have key elements such as colour which is deeply tied to emotion, shape, pattern, line, texture, visual weight, balance, scale, proximity and movement (Nikolov, design principles, 2017).

Hearing, is another way in which we perceive aesthetic design, for instance the ability to hear the engine work. Key elements include loudness, pitch, beat, repetition, melody, pattern and noise (Nikolov, design principles, 2017).

Touch, is also important in the user experience. Material aesthetics are especially important for physical products such as feeling the texture of the leather and cloth material texture. Key elements include texture, shape, weight, comfort, vibration and sharpness (Nikolov, design principles, 2017).

2.5 Design for Aesthetic Pleasure

It is important to designing products that deliver pleasure to the user through aesthetics and usability. This is majorly centred on the user experience and a lot of consideration is put into understanding them before creating. Good pleasurable design also applies to the basic design principles namely composition, how elements are organized the rule of thirds and the golden ratio. Space and balance is key, considering positive and negative spaces, focal points and contrast and similarity (Nikolov, design principles, 2017). The important pleasurable aspects include;

Physical pleasure, which is pleasure mostly derived from touch. Thus, one needs to make sure that the design is ergonomic, feels comfortable and doesn't overload the users' senses.

Psychological pleasure, is pleasure derived from feeling in control or safe. This context is heavily related to the usability of the product. It makes things look and feel simple and stable for example, a solid stable-looking chair gives more psychological comfort than one that looks flimsy and easily breakable (Nikolov, design principles, 2017).

Ideological pleasure communicates ideas and the deeper meanings to designs. Aesthetic design should give users pleasure from the start (Nikolov, design principles, 2017). Therefore, it is important to take pleasures seriously and combine them with a healthy dose of function. As Charles Eames stated, “The details make the design.”.

DESIGN EXEMPLARS

BILL BENSLEY

Bill Bensley of Bensley Design Studio is an Architect and Landscape Designer based in Bangkok. He is a cultural enthusiast immersed in South East Asian culture, which defines his work. His resort designs present the opportunity to tell a story about a place and the success in doing so. He mines inspirations from destinations including Bali, Indonesia and Bangkok, Thailand, among others. These destinations form inspiration and through his work the illustrations reveal the richness of stories that a location are capable of giving. The stories are conveyed through the facilities, materials fabrics, fixtures and fittings. Below are examples of two (Fig 6 and 7) of his hospitality projects in Thailand. (DHILLON, 2017)



Figure 6. Spa section. Sited from (DHILLON, 2017)

At the Indigo Pearl Phuket, Bensley used the sites mining history as his design inspiration.



Figure 7 Spa section. Sited from (DHILLON, 2017)

At the Indigo Pearl Phuket, Bensley used the sites mining history as his design inspiration.

2.6 AFRICAN AESTHETIC

This refers to the perception and appreciation of the nature, beauty and values of the artistic expression or representation of modern and contemporary tastes and styles in the crafts industry using African design in endless ways, providing symbolic representation that communicates that it is African to future generations and globally as well. This paper describes how inspiration from African aesthetics enrich modern product designs through appreciation, usage of material or color, craftsmanship and symbolism and how it has positively influenced the physical appearance, unity of forms and appearance in the contemporary designs.

The most common elements in African aesthetics include the moral, spiritual which encourages togetherness hence extending to happiness and prosperity, craftsmanship whereby most products were handmade and the skills passed down through generations, symbolism, based on beliefs, myths, stories, religion or even seen on their bodies (scarification), weaving (baskets), color and shape designs and youthfulness and luminosity among others.

ORNAMENTATION

Ornamental decorative accessories form a significant part of African design. The ornaments were usually made from copper, brass, iron, bone, gold, grass, beads, cowry shells, leather, ostrich shells, metallic beads, clay and ivory.

2.7 BORANA ARTEFACTS AND ELEMENTS

The Borana were nomadic pastoralists who herd livestock. They are a Cushitic linguistic group in Kenya. They live in semi-arid areas and practice small scale farming on fertile lands in the regions around Moyale and in Isiolo County (community). The Borana were ruled by 43 Abba gada after migrating into Kenya. These leaders were the defenders of Borana identity, symbolized by the guutu – a braided tuft of hair on the top of the head, and a 'kalacha' worn on the forehead. The Borantiti (council of elders) as seen on figure 8 had a moral dimension of peaceful well-being and respect for a common law (community).



Figure 8 Borana Chief.

- Key Interest in *the jewelry and the materials used.*

This is an illustration of a Borana chief wearing a traditional turban and an ostrich feather. The chieftaincy is denoted by the metal phallic symbol worn on his forehead that is referred to as Kalacha. Symbols of leadership. An illustration by Joy Adamsons collection, National museum of Kenya.

The men were responsible for ploughing the fields. This is a plough hook as seen on figure 9 known as Wagal. It is used by men to hold the plough stick and metal plough in position. It is made of iron heated on high heat till red then hammered into position (community).



Figure 9 Wagal, photographed by gibs photography. National museums of Kenya

- Key Interest in *the shape and material*

Women occupied a senior position. The Borana were polygamous and the eldest wife in every family occupied a senior position. Women had the responsibility to build houses - portable, traditional round grass huts called 'dasse' - and relocate from place to place (community).

Storage equipment.

The most prevalent household item used. The containers were used for carrying mostly fresh or curdled milk, storing water, grains and animal fat.

Container used to store grains. This container as seen on figure 10 is sisal woven and smeared with dung inside. It was placed in a holder to facilitate easy carriage (community).



Figure 10 Grain container,

Photographed by gibbs photography. National museums of Kenya.

- Key Interest in the patterns, the material and the shape

This milk container with a lid decorated with cowrie shells was made from water reeds and smeared with cow dung mixed with beeswax. It is made by women and used when milking animals (community).



Figure 11 Milk container.

Photographed by gibs photography. National museums of Kenya.

- Key Interest in the patterns, the material and the shape.

These two containers were used for storing milk and meat. They were made from plant reeds and smeared with cow dung to make them air tight and waterproof. (community)



Figure 12 Milk container,

Photographed by gibs photography. National museums of Kenya.

- Key Interest in the patterns, the material and the shape.

This is a wooden container used for milking camels. After making it, its smoked in the inside. It is held by the thighs while milking with both hands.



Figure 13 Milk Container

Photographed by gibs photography. National museums of Kenya.

- Key Interest in the shape and form.

Earthenware. This is an incense burner (as seen on figure 14) and sweet-smelling rhizome roots. Women put incense burner in a hollow in the back part of a hut and place a cage over it. They then straddle the cage so incense goes over the bodies and clothes. It is used during prayers. Locally known as Idina. Made from clay (community).



Figure 14 Incense burner

Photographed by gibs photography. National museums of Kenya. Collected in 1971-04-14 by Kimani.

- Key Interest in the patterns, the material and the shape.

Marriage the Borana way. This decorative wall hanging (*solala*) was made by the mother of a young man who was about to be married. Once married, he would hang it in his new home. Made from leather with cowrie shells sown into it (community). Sniffing tobacco was a recreational activity to the Borana. This container and pouch as seen on figure 15 was used to keep tobacco and soda (*magadi*). The tobacco container was made of a horn and partially covered with animal skin. The tobacco pouch was made from goat scrotum.



Figure 15 Tobacco Pouch

Photographed by Gibsphotography, National Museum of Kenya. Collected in 1970-01-01 by R.Gramly.

- Key Interest in the material and the shape.

A small horn with leather covered ends used for holding soda. It is attached to a thong to a soft leather pouch in which tobacco is kept. The thong is attached to an instrument which is awl one end and tweezer on the other. This is a fine leather sheath bound and stitched with giraffe hair. The aluminium tool is made by the konso smith at Marsabit and the pouch is made by women for the men.



Figure 16 Tobacco container.

Photographed by Gibs photography, national museum of kenya. Collected in 1971-02-28.

- Key Interest in the material and the shape

Communal beer for sharing. These sieves were made by a blacksmith and used by old men for drinking beer from a communal pot.

Board games. These seeds are from the *Muk Sadega* tree as seen on figure 17 were used by men to play a traditional board game.



Figure 17 Muk Sadega seeds.

Photography by Gibson Maina and Muturi Kanini.

An illustration of a Borana girl in traditional aluminium bead necklace. Seen on figure 18.



Figure 18 Borana girl

In aluminium bead neckpiece, an illustration by Joy Adamsons collection, National museum of Kenya.



Figure 19 Borana Woman

Wearing ceremonial metal jewellery. Her necklace, back ornament, rings, armbands and wristlets are all made of different metals.

- Key Interest in the jewellery, the material and the shape

Borana man in ceremonial attire. As seen on figure 20



Figure 20 Borana Man

An illustration by Joy Adamsons collection, National museum of Kenya.

- Key Interest in the body jewellery.

Pair of earrings each consisting of a coil of aluminium wire with a pendant of aluminium hanging from it as seen on figure 21. Worn on the ears by borana married women as an ornament. Locally known as Karshi



Figure 21 Aluminium Earrings

Photographed by Gibsphotography, National Museum of Kenya. Collected in 1971-02-28.

- Key Interest in the patterns, the material and the shape.

Necklace made of aluminium beads and medallions made by a smith with punched design in form of a cross, silver coin and the favourite being Maria Theresa. dollar. A number of Italian silver coins from Ethiopia are used as well. The medallions are beaten out from a cast aluminium bar and the decoration punched in by hammering in a special tool.



Figure 22 Aluminium necklace.

Photographed by Gibsphotography, National Museum of Kenya. Collected in 1971-02-28.

- Key Interest in the jewellery.

Orange and barrel-shaped plastic beads necklace as seen on figure 23 with three aluminium medallions and punched design in form of a cross. It is worn by little girls and women. The medallions were made by konso smiths at Marsabit from melted down old aluminium cooking pots which are cast into a piece of angle iron and resultant triangular shaped and then decorated by hammering the punch into it (community).



Figure 23 Orange bead necklace

Photographed by Gibsphotography, National Museum of Kenya.

- Key Interest in the patterns, the material and the shape.

Ivory armlets were worn by men as a sign of wealth (cattle) as seen on figure 24. A man without cattle was called *Qolle guutu hiikhan*, “a destitute whose hair is unbraided”. Due to this, he would not be able to perform his social obligations, marry, or participate in rituals. In effect, he lost his identity as a Borana. A person cannot be Borana by birth alone, since becoming stockless can deny that identity.



Figure 24 Ivory armlets.

Photographed by gibbs photography. National museums of Kenya.

- Key Interest in the patterns, the material, symbolism and the shape

DESIGN EXEMPLARS

Ladi Dosei Kwali

Kwali was born to Gbagyi parents in 1925 in the village of Kwali, located in the Gwari region of present-day Abuja, where pottery used to be a common occupation among women. Kwali grew up in a family in which the womenfolk made pots for a living. She first came to learn Gwari pottery-making as an apprentice to her aunt, who taught her the Gwarin Yamma techniques of coil and pinch methods of pottery. The Gwari pottery-making methods, which remained in her repertory throughout her life, produce three major object shapes: the randa (a large water storage pot), the kasko (a household storage pot), and the tulu (an elaborately decorated storage pot often used in religious festivals). The large pots used as water jars and cooking pots are beaten from the inside with a flat wooden paddle and decorated with incised geometric and stylized figurative patterns. Following the traditional African method, they were fired in a bonfire of dry vegetation. Kwali developed a mature sense of form and an intimate knowledge of clay characteristics, skills which are important to a potter. Many of her early works were

hand-built storage jars, water pots, bowls, casseroles, flasks and big jugs, which comprised impressed stylized designs of animals such as snakes, scorpions, lizards, and crocodiles. When she joined the pottery center in 1954 as its first woman potter, Kwali was trained in new methods taught there, such as glazing, wheel throwing, kiln firing, and stoneware. She became famous for her experimental and innovative works merging the Gwari style she was proficient at with the modern techniques, creating glazed dishes, bowls and beakers, with stylized animal sgraffito. She produced pots using her traditional hand-building and decorating techniques as seen on figure 25 and 26.



Figure 25 Water pot

By Ladi Dosei Kwali. Sited from (Hagan, Pinterest, n.d.)

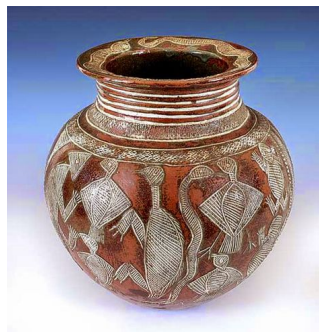


Figure 26 Water pot

By Ladi Dosei Kwali. Sited from (Hagan, Ladi Kweli, n.d.)

Joseph Nii Noi Dowuona

Is a Ghanaian ceramicist, who has worked for over 20 years. NII NOI works with clay; the pieces exhibited are burnished with pebbles to give it a smooth finish. (DESIGN, 2019). Exhibiting organic shapes exhibiting protruding bumps and spiky thorn-like

shapes of gourds, the hard-bulbous shells of fruit and the tall slender forms of cacti. Skilfully moulded by hand, without the aid of a potter's wheel these forms are part of a range of decorative, and functional contemporary African ceramics from Kpando Pottery, a business based in Ghana that takes its name from the Volta Region of Ghana, an area known for its skilled craftsmanship and distinctive pottery production. Kpando Pottery was founded by Joseph Nii Noi Dowuona, who has been working with local women for over ten years creating the designs that they sculpt. Given a contemporary look, the designs are inspired by those that have been passed down through the generations, across items such as pots, vases, water containers, platters and other vessels, and are characterised by distinctive surface relief; etched patterns and perforations. The pottery is crafted using a clay that is dug near Lake Volta, known to be the world's largest artificial lake. The clay is mixed with old broken pottery and water, hand shaped and then further tapped into shape with the aid of wooden bats. After the firing process, the hot pottery is immediately placed into a pile of bamboo shavings, a finishing process which produces a fire that gives the products their distinct shiny black patina finish. The finish gives the creations a metal like quality, that carries the fragility of the clay, and results in a strong focal piece as seen on figure 27. (Kpando Pottery Contemporary African Ceramics Made in Ghana, 2012)

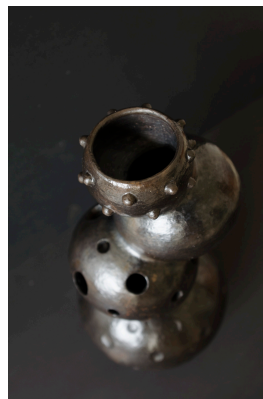


Figure 27 Anyigba Bubu

(Kpando Pottery Contemporary African Ceramics Made in Ghana, 2012)

This is the title of the piece; its literal translation is 'different world'. Despite all these differences they come together to form one whole new world.



Fig 2.25 Other pieces by Joseph Nii Noi. Sited from (Kpando Pottery Contemporary African Ceramics Made in Ghana, 2012)

CHAPTER 3: RESEARCH METHODOLOGY

3.1 Research Design

For the purpose of my research I used Descriptive research. This research design is good because it provides answers to the questions of who, what, when, where, and how it is associated with the research problem. Descriptive research is used to obtain information concerning the current status of the phenomena and to describe “what exists” with respect to variables or conditions in a situation (University, 2010).

3.2 Population

A target population is the broader group of people to whom you intend to generalize the results of your study (David, n.d.). The accessible population is the population in research to which the researchers can apply their conclusions. This population is a subset of the target population and is also known as the study population. It is from the accessible population that researchers draw their samples (Mohamed Adam)

3.3 Population Sample

From the population, a small portion of the entire group was selected by the researcher to represent the entire population. Sampling will be conducted randomly within the center. The sampling method being Purposive Sampling. Purposive Sampling according to (Crossman, Purposive sampling, 2019) is a non-probability sample that is selected based on characteristics of a population and the objective of the study. And is also known as judgmental, selective, or subjective sampling. It is also a deliberate choice of an informant due to the qualities the informant possesses (Tongco, 2006). The technique used is non-random technique that does not necessarily need underlying theories or even a set number of informants. The researcher simply decided on what needed to be known and set out to find people who could and were willing to provide the information by virtue of knowledge or experience (Tongco M. D.).

The population samples were selected upon availability of the respondents.

Description	Population	Number of subjects
Manager and staff	5	4 of 5
Clients using the Facility	15	8 of 15
TOTAL	20	12

Table 1: Distribution of sample

3.4 Methods of data collection

The researcher used various data collection methods in order to investigate. The methods include: Observation, Photography, Informal interviews, Archival research and Case study method.

1. Observation

This is the gathering of primary data by the investigators own direct observation of relevant people, actions and situations without asking from the respondent (Maina D. S., 2012). The researcher was required to spend a day or two at the Serenity spa and carry out direct observation as a method of collecting data. To ensure that the researcher has good rapport with the staff which leads to acquiring detailed information of how the facility operates on a normal day.

a) Non-participant observation

Which involves collection of information by way of investigator's own observation, without interviewing the respondents for their opinions and input. The information obtained relates to what is currently happening and is not complicated by either the past behaviour or future intentions or an attitude of respondents, as it is collected first-hand (P, 2010). As a way, not to interrupt the on-going activities. This also allowed the researcher to record through writing, visual elements that could only be recorded visually.

b) Participant observation

To experience first-hand through interacting with the space, the emotion derived. To be active in real time. This is a qualitative research method in which the researcher not only observes the research participants, but also actively engages in the activities of the research participants. This requires the researcher to become integrated into the participants' environment while also taking objective notes about what is going on (Jill, n.d.).

2. Photography

Photography is a method of documenting site data and activities using a camera or any other device containing a camera. Photography in research is most commonly used for illustration and documentation (Holm, 2014). To capture the real situation and a visual representation at the proposed site of study. The researcher also used website photographs for this study.

3. Informal interviews

Interviewing is a technique that is primarily used to gain an understanding of underlying reasons and motivations for peoples' attitude, preferences or behaviour (Maina S. M., 2012). For the purpose of this study the researcher used Semi structured interviews with help from a formulated interview guide, where the respondent e.g. the client/ member of staff answered open-ended questions. There is no restriction to answers (FOUNDATION, 2008). And open-ended interviews which also allows them to give info to their satisfaction. The interviewer talks with people in the field informally. The researcher uses jottings or brief notes taken in the field to help in the recalling and writing of notes from experiences in the field. Informal interviewing goes hand-in-hand with participant observation. While in the field as an observer, informal interviews are casual conversations one might have with the people the researcher is observing (FOUNDATION, 2008).

4. Archival research

Used to review relevant literature of the study sourced from publications such as books, journals, academic papers and web sources. Touching on key elements of the study and its relationship with design (Pearce-Moses, 2018). This also involved photographs of concepts that felt relevant to the study. This also involves primary sources held in archives, a Special Collections library, or other repository. Archival sources can be manuscripts, documents, records (including electronic records), objects, sound and audio-visual materials or other materials (Pearce-Moses, 2018).

5. Case study method

According to H. Odum, (jobs, n.d.) "The case study method of data collection is a technique by which individual factor whether it be an institution or just an episode in the life of an individual or a group is analysed in its relationship to any other in the group." Thus, a fairly exhaustive study of a person (as to what he does and has done,

what he thinks he does and had done and what he expects to do and says he ought to do) or group (jobs, n.d.).

3.5 Data Analysis Tools

The researcher used Visual analysis which is a method used to understand and interpret images. The most effective tool being, Auto photography which is a method that creates an environment where the researcher can see the world through the eyes of the participants by use of photography (Xanthe Glaw, 2017). This tool visually represents and identifies.

Content analysis is a research method used to identify patterns in recorded communication. To conduct content analysis, you systematically collect data from a set of texts, which can be written, oral or visual. The Researcher used content analysis to find out about the purposes, messages, and effects of the communicated content. As a result, the researcher can analyse communication and social interaction without the direct involvement of participants, so your presence as a researcher doesn't influence the results.

3.6 Data Presentation Methods

Presentation of all the data collected would be done using various tools such as:

1. Notes
2. Photographs

Textual data

This included case study notes, observation notes, field notes, documents and video recordings from in depth interviews.

Photographs

The data collected by photography will be presented with photographs alongside brief descriptions to give key details relevant to the study.

3.7 Clay Preparation process

The clay is collected and crushed into fine powder using stones and bricks as seen on figure 28 and 29.



Figure 28 Clay preparation Process



Figure 29 Clay preparation process

Pictures taken by the researcher.

The clay is then mixed with water and stirred, left overnight to settle and mix and absorb the water before sieving starts as seen on fig 30



Figure 30 Clay preparation process

Picture taken by the researcher.

The clay had just been mixed with water. Stirred to ensure no water bubbles and prevent lumps from forming.

The sieving process start to remove all that that was not clay including small pebbles, leaves and small sticks on a bed on the ground lined with cloth, the water will then be absorbed by the ground leaving nice soft clay on the bed lining. The sieving is done for weeks until the bed rock is full and can only be collected after the clay has lost most of its water but not completely dry. A texture like that of dough.



Figure 31, Figure 32 Clay preparation process

Pictures taken by the researcher.

The bed rock is cover using an iron sheet to prevent dust, leaves and sticks blown by the wind from mixing with the clay.

3.7.1 Throwing process

The wheel rotates with clay on the surface. Clay which has been kneaded with kaolin to harden the clay slightly is then placed (centered) on the wheel for throwing. The clay is then further softened with water and gently squeezed and pulled upwards and outwards as seen in figure 33,34 and 35. Thrown pieces are modified by adding handles and lids.



Figure 33, Figure 34 and Figure 35 Throwing process

Pictures taken by the researcher.

3.7.2 Tools used

CERAMICS



Figure 36, Figure 37 Ceramic tools

Pictures taken by the researcher

The sponge is used to dampen surfaces and absorb excess water from the clay pieces after throwing. Wooden piece for smoothening surfaces and angling the clay while throwing. The fishing line is used to separate the clay from the potters wheel. Figure 37 The other tools are used for etching patterns or making incisions.

CHAPTER 4: SITE ANALYSIS AND INTERPRETATION OF FINDINGS

4.1 Background Information

The Nairobi Meditation Center is an indoor space located along Kindaruma Road, Kilimani, Nairobi. The center was started by Mr Neo and his wife, who work as full-time meditation instructors. The center focuses mainly on the human mind. This kind of meditation was founded by Woo Myung in South Korea. As a channel to move away from the made-up world to the real world, it cleanses the mind, expanding it to the extent that it has been cleansed. The effects of the meditation can be seen by the change and expansion of your consciousness. Many of the people seeking completion usually are unsatisfied with their lives and are at a place where they feel that their lives lack meaning. Neo describes this as “a false world/ a self-made (illusion) world, which is a picture of the world that doesn’t exist.” In order for one to escape this constructed world, one must be able to discard these illusions and only then can they become complete. A complete being is without stress, has no worries about living in the present and future, has knowledge of God, is happy and has been able to get past traumas. Mr The Nairobi Meditation Center teach clients on how to meditate correctly and they have breathing exercises and a dance routine. The average age of people seeking and using this facility are 25years and above, the majority of them being between the age of 30 to 50, and composing of middle-class income. Picture taken by the researcher.



Figure 38, Figure 39 Meditation center

Pictures taken by the researcher.



Figure 40, Figure 40 Meditation center

Picture taken by the researcher.

4.2 Target Audience Response

The research sought to establish responses to the interview guides. The researcher scheduled a total of 20 in-depth interviews of which only 12 were successful.

4.3 Research questions

The research questions on which this research was grounded were:

1. How can the knowledge gained be applied and integrated in the design of products?
2. What are the required considerations used in making of products for a meditation center?
3. What materials and techniques were mainly used in the Borana culture?
4. How can culture-inspired design be used to develop products in the four areas of product design for the spa?

4.4 Application and integration of the acquired knowledge in the design of products

In an attempt to answer the first question results revealed performance suffers when distractions are present. The mind is less efficient when doing more than one thing at a time (interior architects, n.d.). According to Neo (a key informant), “Meditation mainly involves engaging the mind through thoughts and structured breathing techniques.” In

line with this, product designs for a meditation centre should blend in with the environment in order to cause less distractions. In the words of Neo, “Light allows and can help to lead the intension of the practice being done. Artificial lighting choice should be warm and also adjustable. The designer should avoid distracting elements and exaggerated decorations hence recommending the use of warm earthy tones, texture and colours. This helps the participants to achieve a certain degree of concentration and a sense of relaxation. For an indoor space, it should try incorporate greenery.”

4.5 Considerations used in the making of products for a meditation center.

In an attempt to answer the second question, results revealed that a gap existed at the center, relying heavily on the Asian heritage and lacking any exploration and a Kenyan identity.

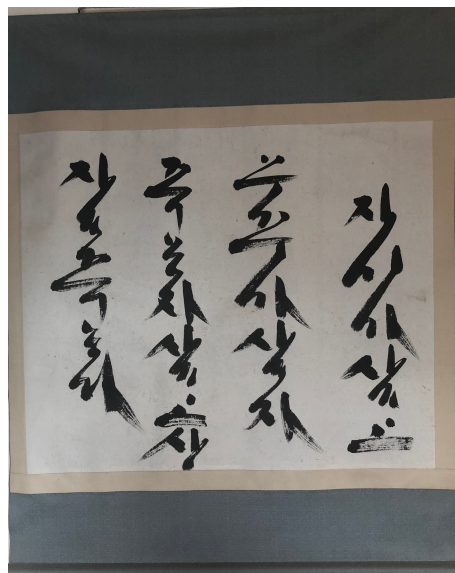


Figure 41 A wall hanging at the meditation center

Hung in several rooms at the meditation center depicting word by a famous teacher Woo Myung. Picture taken by the researcher.

Meaning comes about from the social interaction with objects and symbols in the environment and with the people (Hung, 2013). This show the symbolic attributes which play a key role in human interaction within a meditative environment. Meaning can be attached to products with the values and teachings draw from the meditation classes, achievements, levels in the growth progress and to add value by drawing

inspiration from cultures close to home. This will mainly explore sensory and visual attributes in the design of products.

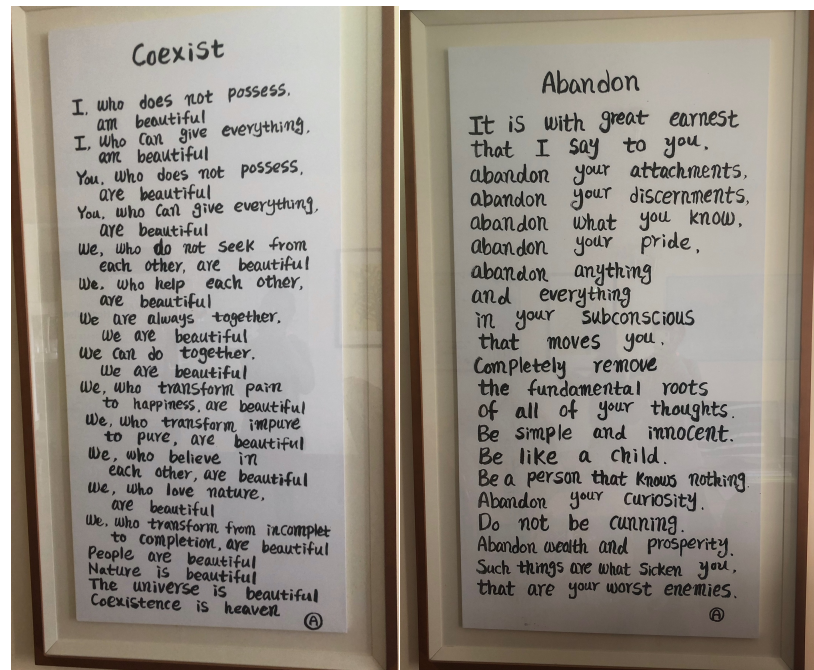


Figure 42 Charts at the meditation center

Some of the charts hanging at the center depicting the values and ethos that help an individual learn to correctly meditate. Pictures taken by the researcher.

According to Neo, meditators often seek to be in quiet, peaceful environments which is not essential but most preferred to be surrounded by nature. From his experience “they feel more at peace while meditating in nature”, hence the need to be responsible and “mindful” of their surrounding environment. This explains why products made for meditation centers need to be environmentally friendly, thereby encouraging the use of organic products and organic ingredients depicting a style that is natural and effortless. Within the facility was various exotic teas which are served to the clients. Tea has been known to help individuals to relax and calm down.

By observation, the researcher found that meditation is often done while seated. Based on his position as a key informant, Neo suggests that in order to seat correctly on the chairs, one needs to seat with their back straight and their feet flat on the ground. They should also form a 90-degree angle with their knees and they may need to scoot to the edge of the chair. Meditators are required to sit up straight so that their head and neck are in line with their spine. Other than seats, some prefer to seat on a well cushioned pillow. Below are images of the seats at the centre (figure 44 and 45).



Figure 43, Figure 44 Meditative Chairs at the center

Pictures taken by the researcher.

Further observation revealed that products at the center were portable and easy to move around. This seemed to allow and makes room for other activities such as yoga and dance, therefore making sure that there is maximum use and utilisation of space.

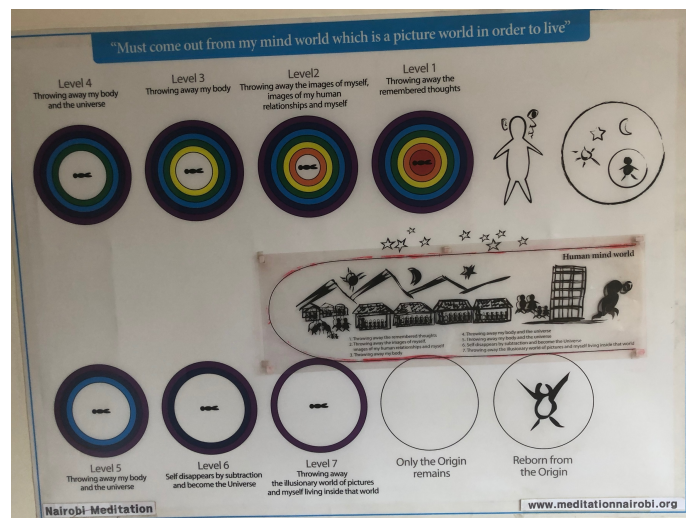


Figure 45 Charts at the meditation center

A chart hanged at the Nairobi meditation center depicting the several stages of moving away from the made-up world to the real world and hence resulting in becoming a whole being. Picture taken by the researcher.

4.6 What materials and techniques were mainly used in the Borana culture?

For Jewellery, based on literature, this researcher gathered that the Borana Community primarily used naturally-occurring beads from tree seeds, (muk sadega seeds) which

were made into beads. They also made ivory armlets from camel bones. Plastic beads, aluminium beads and silver coins were cast and decorated by hammering using special metal tools.

The Borana Community sun-dried their leather and later smoked it for preservation purposes. They mainly decorated them using cowrie shells which were sown on.

Sculptures were mostly made out of clay and wood mimicking the form of animal figures with patterns embedded on the pieces. Wooden containers were smoked on the inside for preservation purposes. Other containers were made from plant reeds and smeared with cow dung mixed with bees wax to make them air-tight and waterproof. They were then decorated with cowrie shells. The ceramic pieces were hand built and fired at low temperatures. They were mostly used for storing water, grains and others mimicking incense burners were used to smoke perfume on brides and grooms during wedding ceremonies.

Materials used were mainly cooper, brass, iron, bone, gold, grass, reeds, beads, cowrie shells, leather, ostrich shells, metallic beads, clay and ivory. Techniques were mainly weaving and scarification.

4.7 Analysis and Evaluation

Following an investigative research, it can clearly be said that Nairobi Meditation Center has not adequately set up their spaces in a way that makes the clients more culturally aware both physically and emotionally or spiritually. The key areas of investigation included: jewellery, ceramics, leather and sculpture design.

4.8 Production Schedule

For the purpose of objective four, the researcher displayed a log table of products, process, procedures and tools. The log table is attached as *Table 4.1*

UNIT	PRODUCT	MATERIAL	PROCESS	NO. ITEMS
Ceramics	1 Incense burner	Clay	Throwing	7
	1 plant pot	Clay	Throwing	
	3 Cups and platter	Clay	Etching and	
	1 vases	Clay	cutting	
		Clay	Throwing	

	1 incense stick holder		Throwing	
Jewellery	Wall hanging Wind Chimes	Bone, Horn & Brass Metal, bone beads & brass metal plates	Cutting Shaping, sanding, treating, polishing	2
Leather	Sculptural Wall hanging Wall hanging circular	Leather & cowrie shells Leather & cowrie shells	Pattern cutting stitching Cutting stitching	2
Sculpture	Lampshade Meditative chair Meditative cushion Shoe rack	Perspex & papyrus Metal & Water Hyacinth Car tire, Canvas, weaving & foam Metal & water hyacinth	Welding, stitching Weaving Welding & weaving Attaching & binding	4
Total				15

CHAPTER 5: SUMMARY OF FINDINGS, CONCLUSIONS AND RECOMMENDATIONS

5.1 Jewellery

From the findings of this study the researcher proposed to use bone, horn and brass as the materials because they are sustainable and environmentally friendly. The researcher proposed that the jewellery pieces borrow from the forms and patterns from the pieces listed from the Borana culture in the literature review.

Sketch 5.1.1: Wall Hanging

A wall hanging made from circular pieces of bone and horn, linked by gauge 18 size chains. It will start with (for hanging) and finished off with gauge 15 (3cm diameter) brass jump rings as seen on figure 47. The bone sizes ranging from 6cm to 2cm while the horn pieces ranging from 8cm to 3cm.

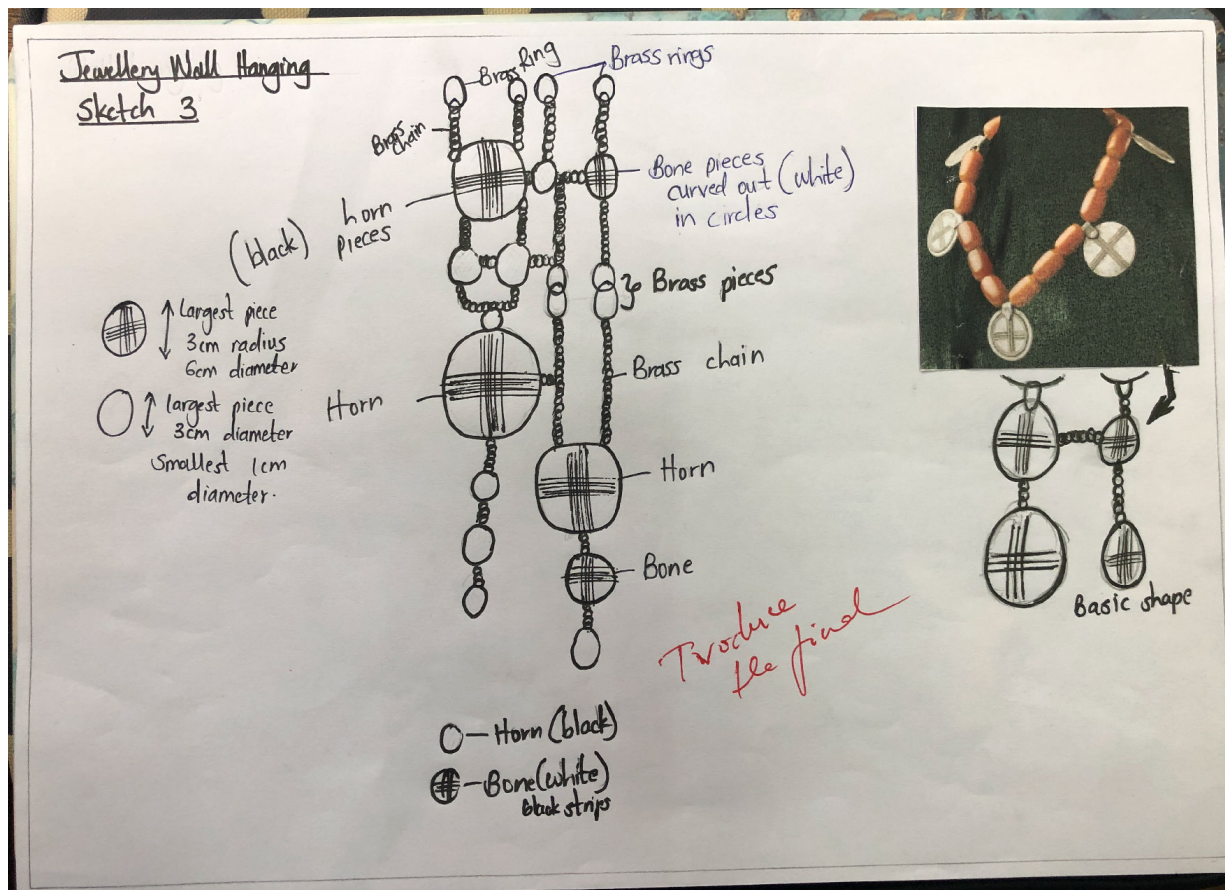


Figure 46 Wall hanging

Sketched by the researcher

Sketch 5.1.2: Wind chimes

The wind chimes will be made from wood (mahogany) with incisions, bone beads (with a batik pattern of the cowrie shell pattern), linked with brass chains (gauge 22) and finished off with almond shaped brass plate cut outs for a higher pitched sound as seen on figure 48, when they are blow by the wind.

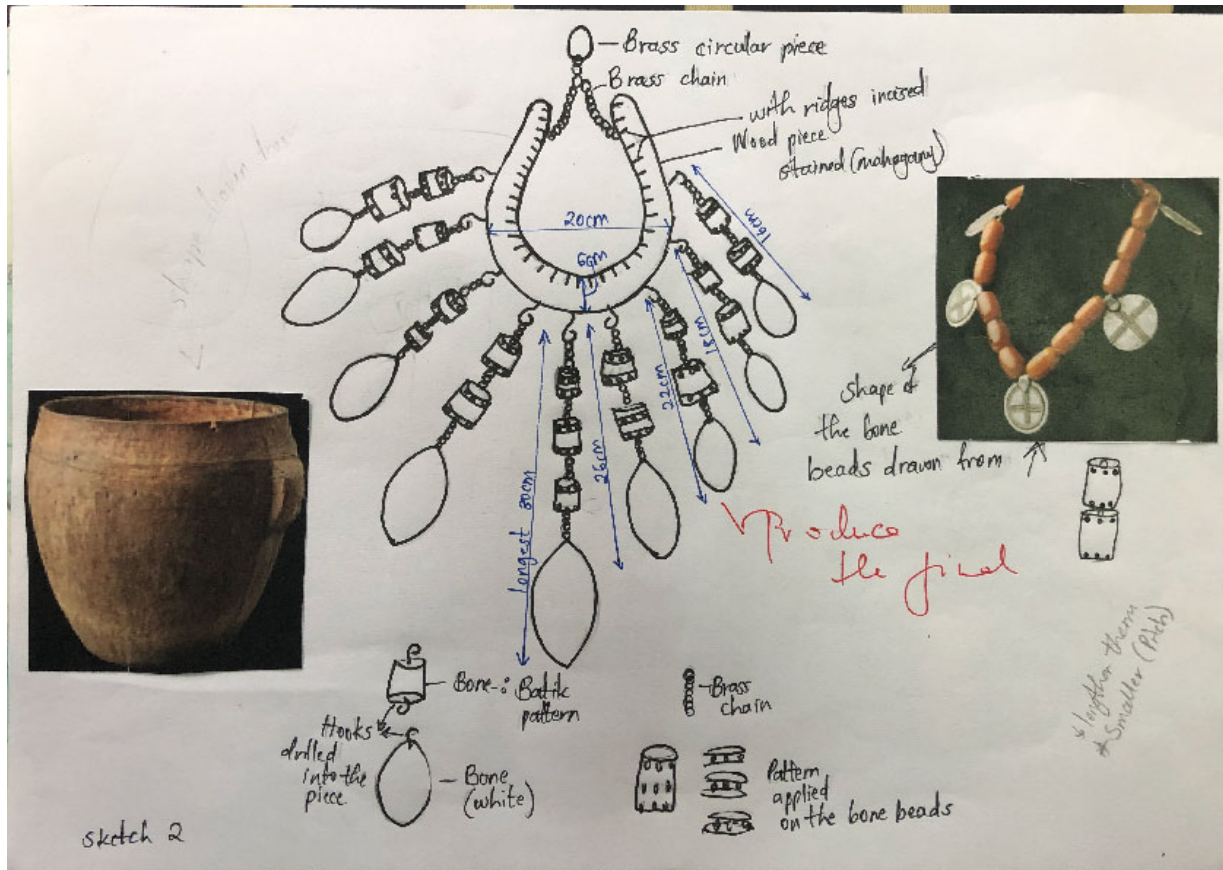


Figure 47 Wind Chimes

sketched by the researcher

5.2 Leather

Hides and skins were traditionally used as forms of clothing, as decorative wall hangings. They are also used as floor mats and table mats to make shoes (as a material). The researcher therefore used leather to make wall hangings. Technique mainly being stitching.

Sketch 5.2.1 Leather Wall Hanging

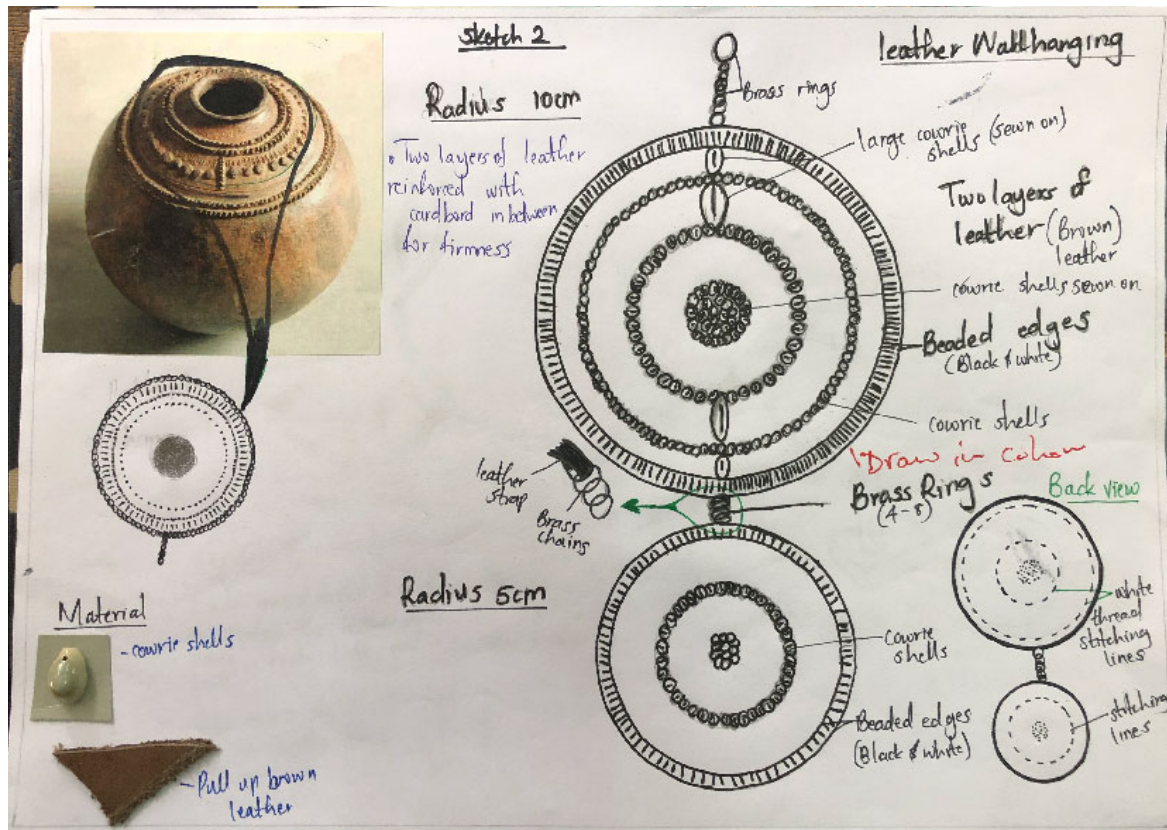


Figure 48 Leather wall hanging.

Sketched by the researcher.

Sketch 5.2.2. Sculptural Leather Piece

The materials being leather, horn circular pieces, metal stand and cowrie shells. This piece can be placed on a table top and on the floor. It can also be detached from the metal stand and be placed as a wall hanging. The techniques being stitching and reinforcing the horn and cowrie shells.

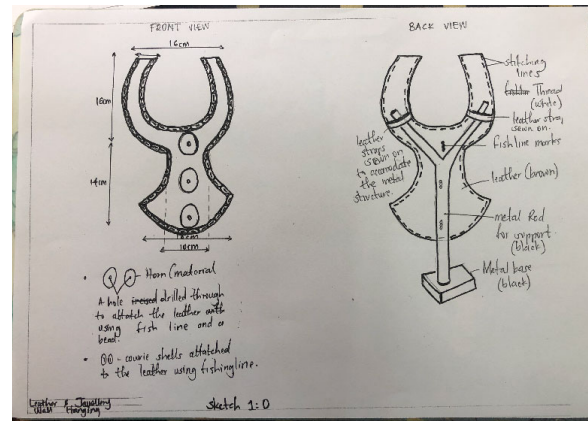
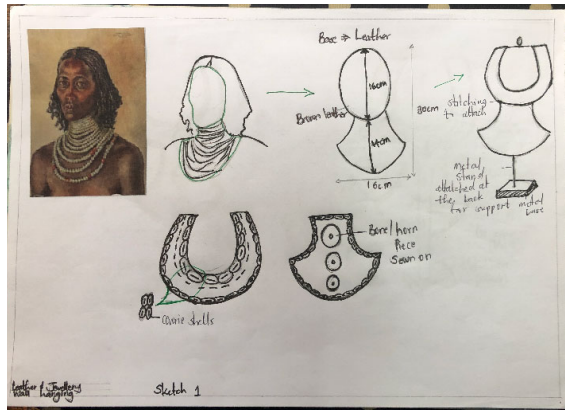


Figure 49, Figure 50 Sculptural leather piece

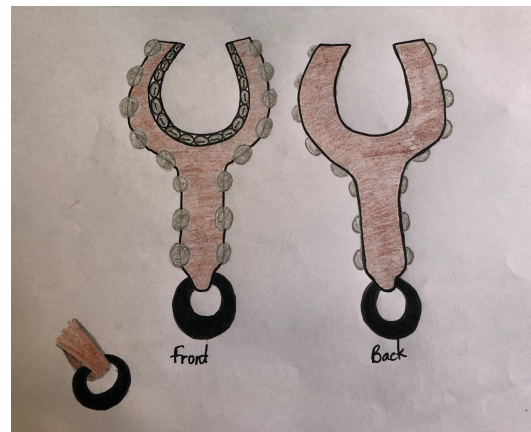
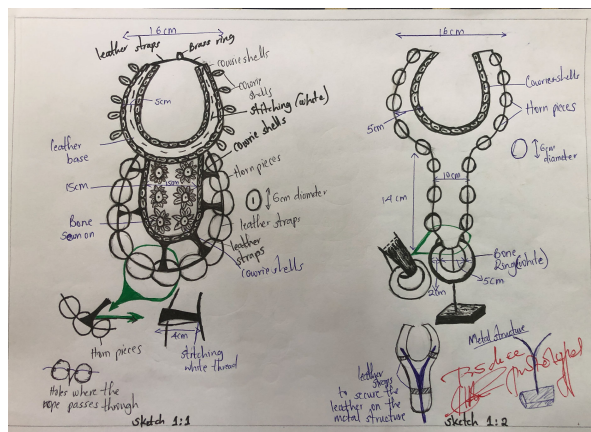


Figure 51 ,Figure 52 Sculptural leather piece

*Development of sketches to final fig 5.4 To fig 5.7 Respectively
Sketched by the researcher.*

5.3 Sculpture

The researcher recommends that sculptural forms inspired by cultural sources should not only be aesthetically appealing but highly functional. The researcher opted to use metal, leather, canvas, tires (vehicle tyre), Perspex, papyrus and water hyacinth. Techniques being weaving and welding

Sketch 5.3.1: Wall lampshade

Lighting is key component in setting an atmosphere for a meditative space. Soft lights (not too bright) are most preferred. The lampshade will be primarily made out papyrus through weaving technique attached to Perspex which will allow the light to penetrate and illuminate as seen in figure 55. Along the edges of the Perspex will be drilled holes to allow further weaving hence attaching the Perspex to the papyrus with an allowance at the top for the bulb. Below is well detail sketch (figure 54).

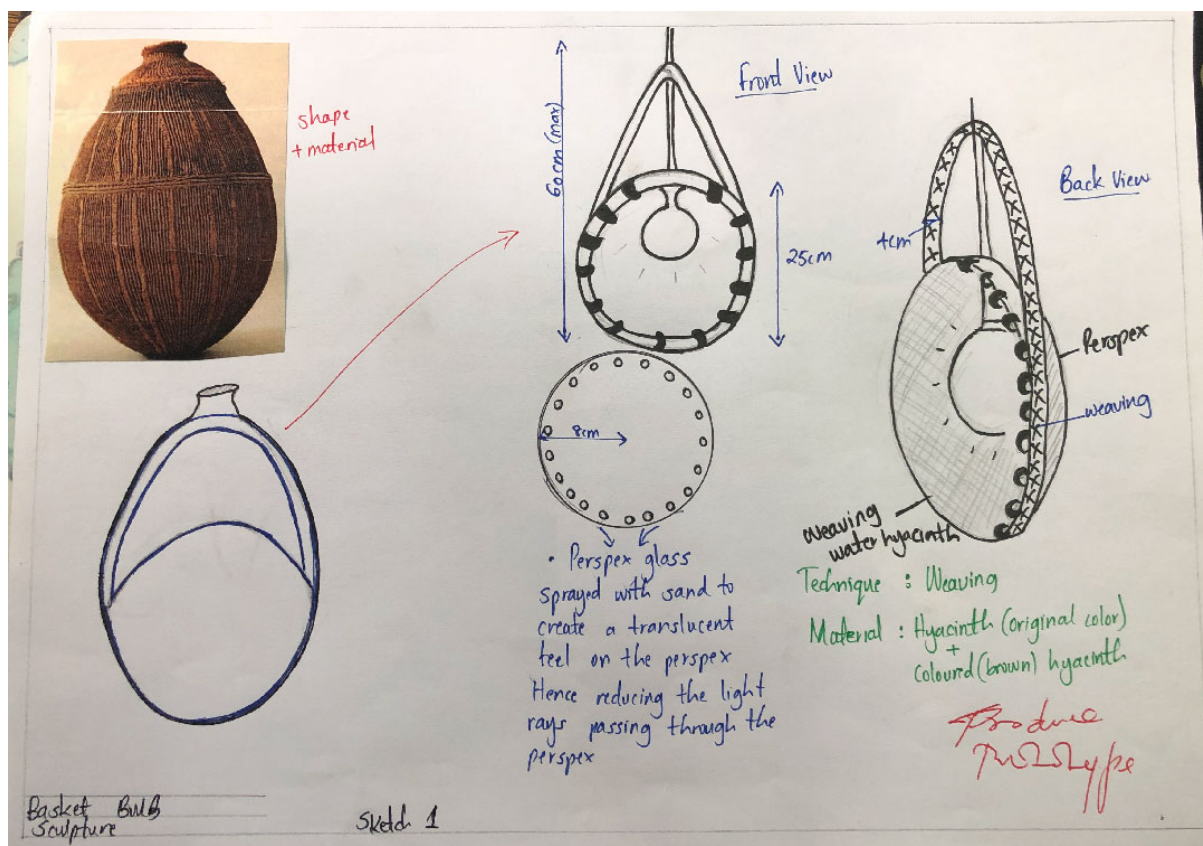


Figure 53 Initial sketch

Sketched by the researcher



Figure 54, Figure 55 and Figure 56

Respectively, Final renders of the initial sketch. By researcher.

Sketch 5.3.2: A Shoe Rack

The shoe rack will be made out of square bar metal, approximately 575 inches. This is an essential piece for a meditative space because one can't meditate comfortably with shoes on. The circular pieces will be made separately and soldered on to the metal structure. The desired colour being a brass gold. Below (figure 58) is the initial sketch and further developments and sketches.

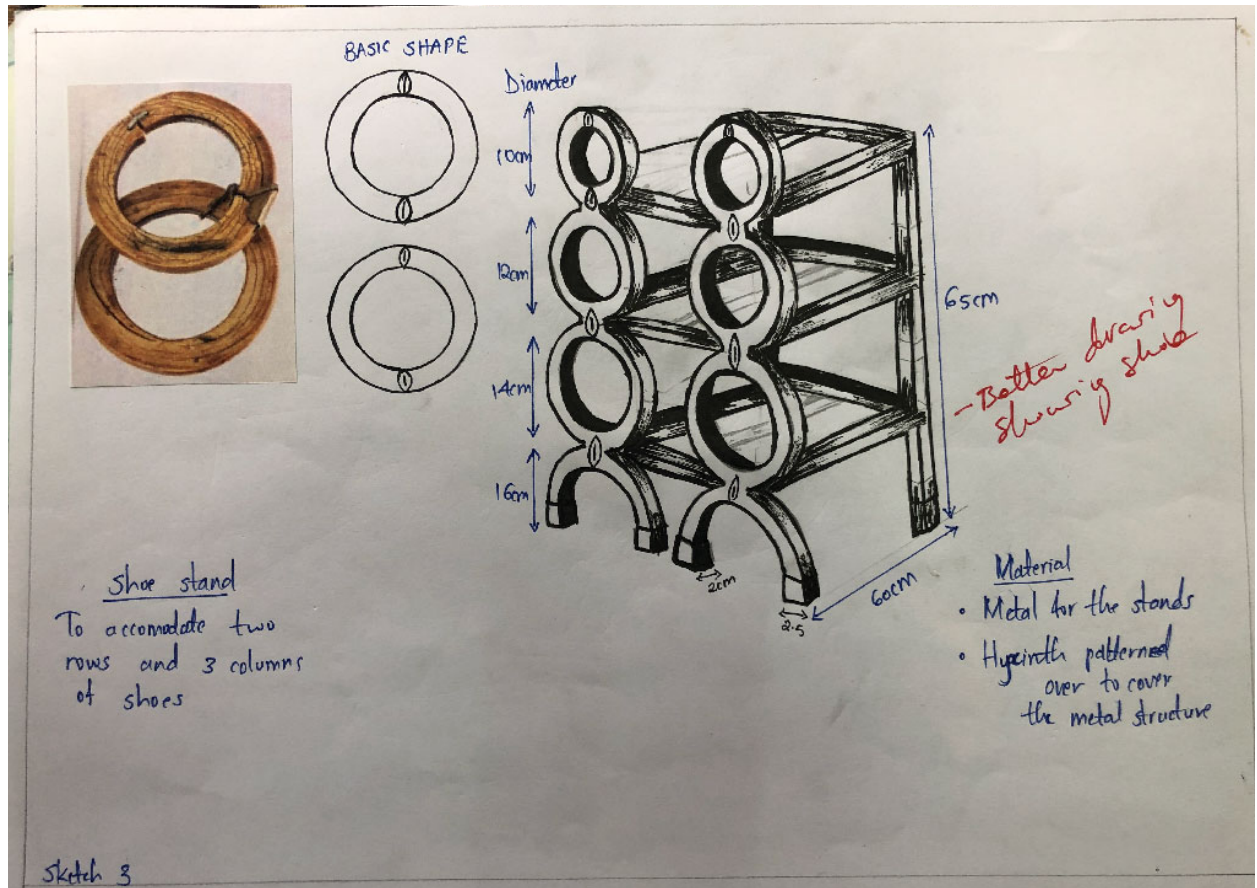


Figure 57 Shoe rack

Sketched by researcher

The sketch was altered slightly on the final illustrated render, Due to the circular pieces allowing room for extra pairs of shoes.

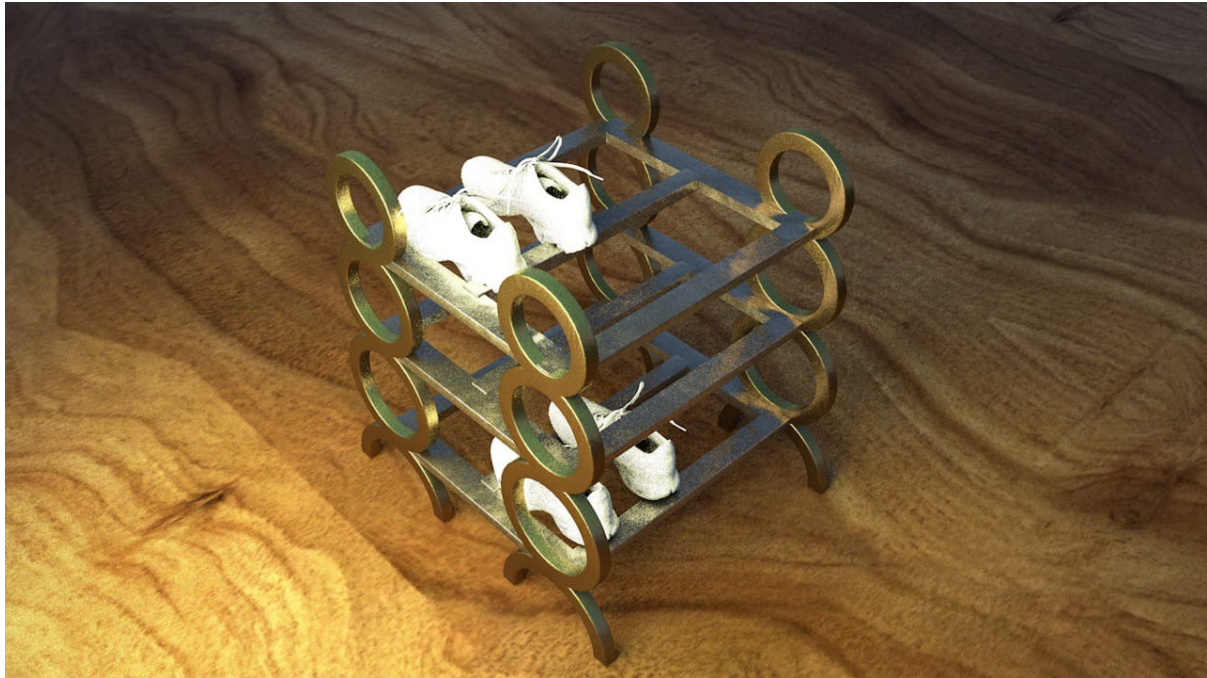


Figure 58 Rendered sketch angled view.

By the researcher

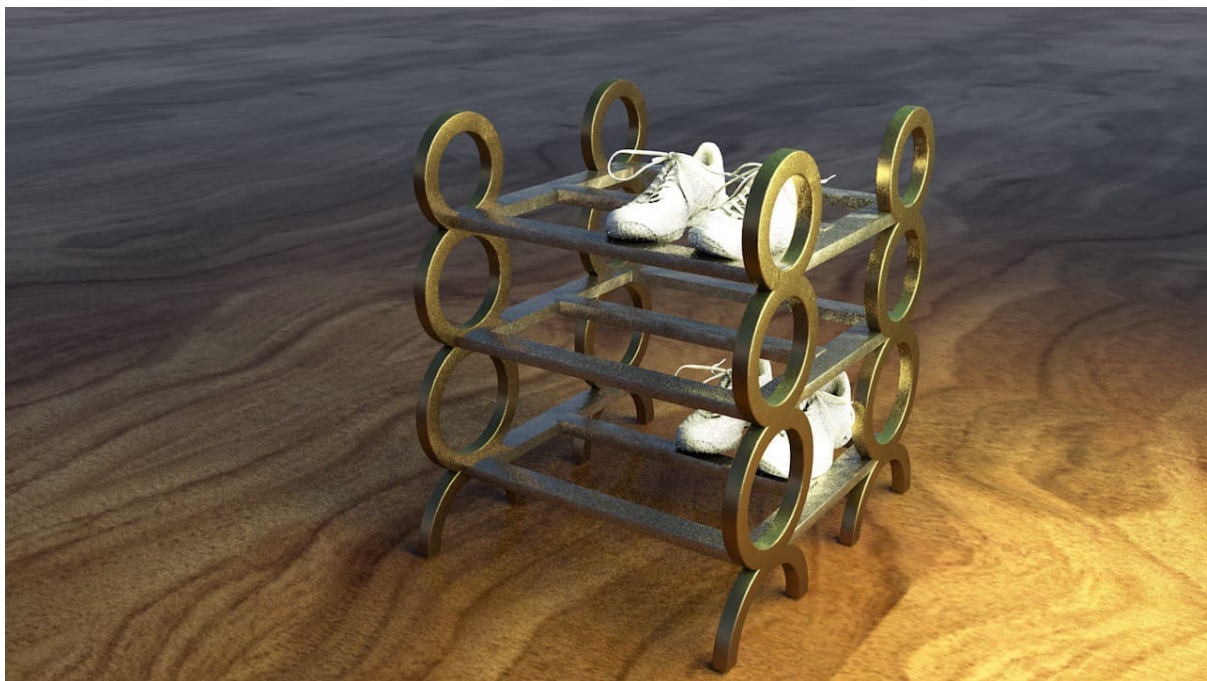


Figure 59 Rendered sketch angled view.

By the researcher.

Sketch 5.3.3: Meditative chair

If not all most people would prefer an ergonomic meditative chair. To be accommodative to all an ergonomic meditative chair is an essential for the space. The chair takes the form of a human being in the most common meditative posture with minor modifications for further ergonomic support. The chair will be made with metal frames and woven with water hyacinth.

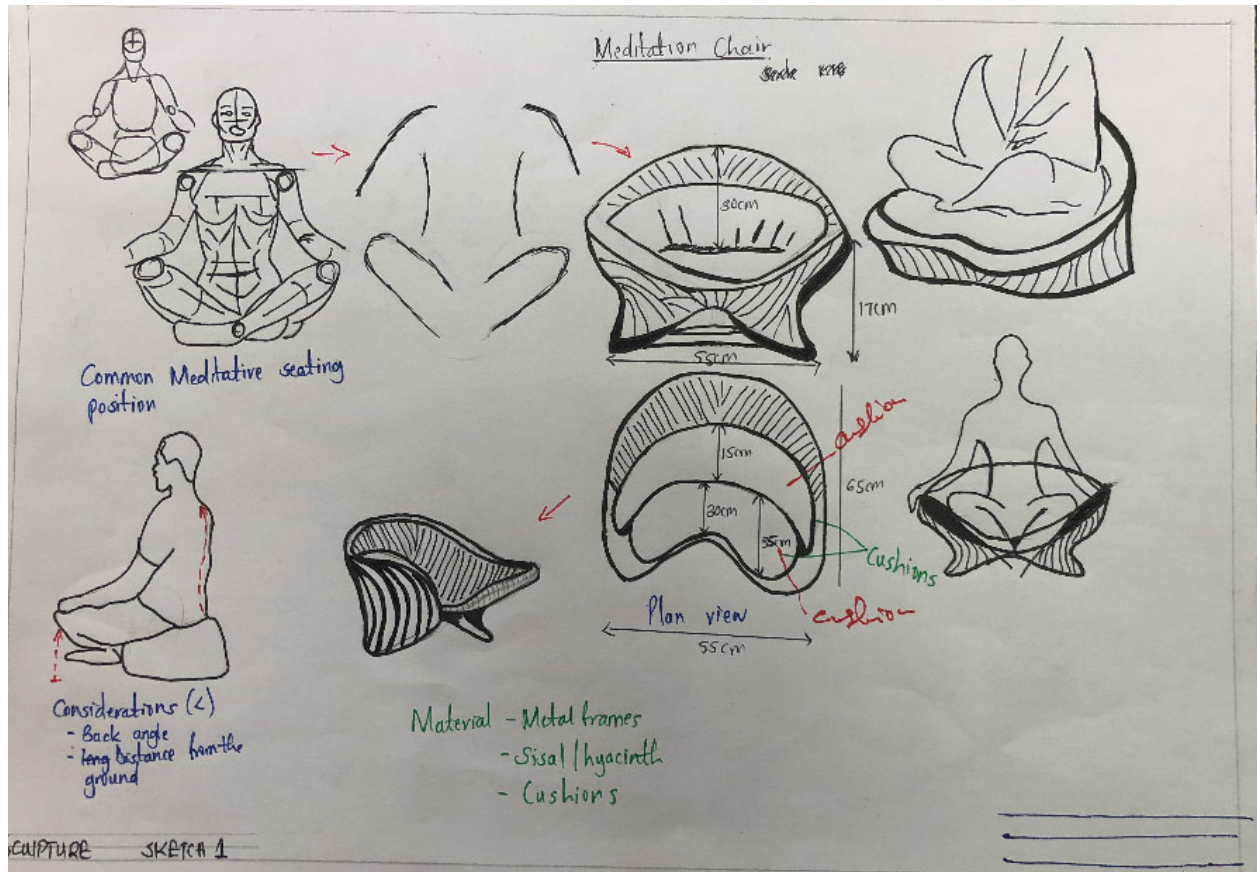


Figure 60 A Meditative chair

Sketched by the researcher

Sketch 5.3.4 Portable Tire Cushion

The cushion will be made out of old vehicle tires repurposed to make portable cushions. The hollow bit of the tire will be filled with foam and covered on both ends with butting as (sample) shown on the sketch below. Then the top base will be covered with canvas and leather. The canvas will have a pattern printed (cowrie shell pattern running across all the products). Canvas has good water-resistant properties hence best for outdoor meditation.

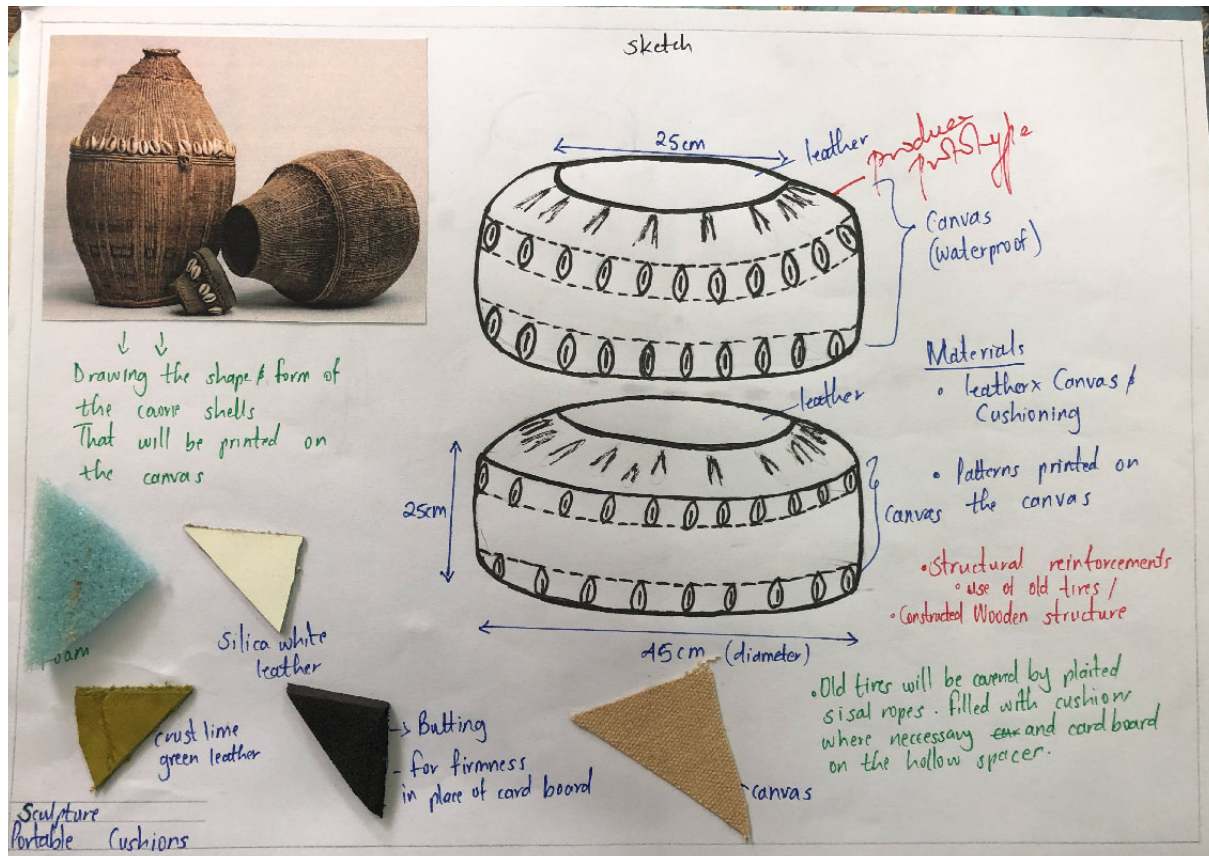


Figure 61 Portable Tire Cushion

Sketch by the researcher.



Figure 62 Rendered sketch, possible outcome.

Render by the researcher.



Figure 63 Rendered sketch, possible outcome.

Render by the researcher.

5.4 Ceramics

The researcher used clay to make the products. The technique being throwing method (on the potter's wheel).

Sketch 5.4.1 Stick Incense holder

Throwing method will be used to make this piece, on a potter's wheel. While cowrie Patterns will be painted on the surface after the first bisque firing and a layer of black ceramic glaze is applied. The piece will then be fired again.

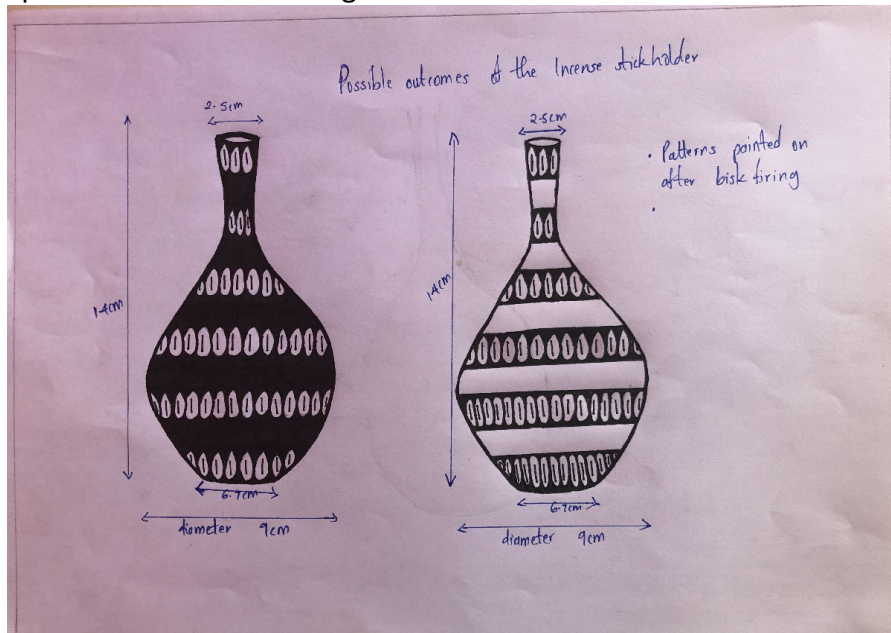


Figure 64 Stick Incense holder

Final sketches for the stick incense holder.

Sketch by the researcher.

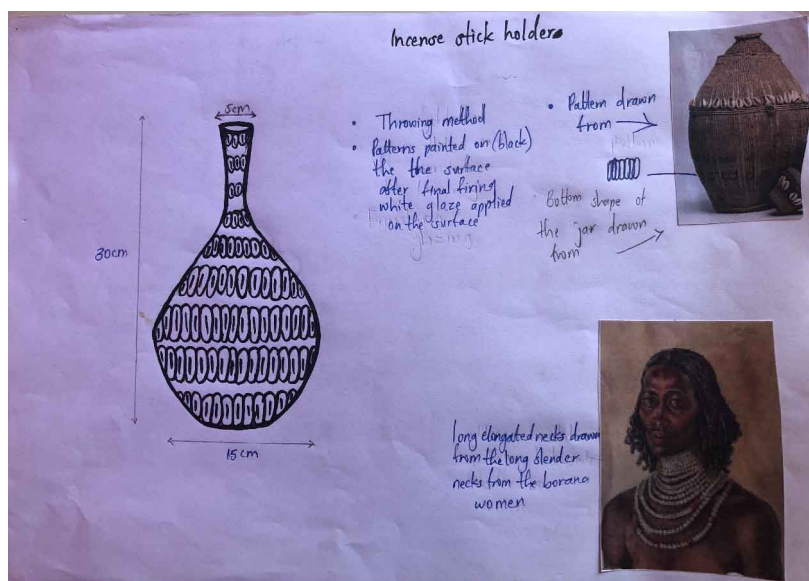


fig 5.20 Initial sketch.

Sketch by the researcher.



Figure 65 Rendered sketch.

Rendered sketch by researcher.



Figure 66 rendered sketch.

Rendered sketch by researcher.

Sketch 5.4.2 Flower vase

Throwing method will be used to make this piece, on a potters wheel. White cowrie Patterns will be painted on the surface after the first bisque firing and a layer of black ceramic glaze is applied. The piece will then be fired again.

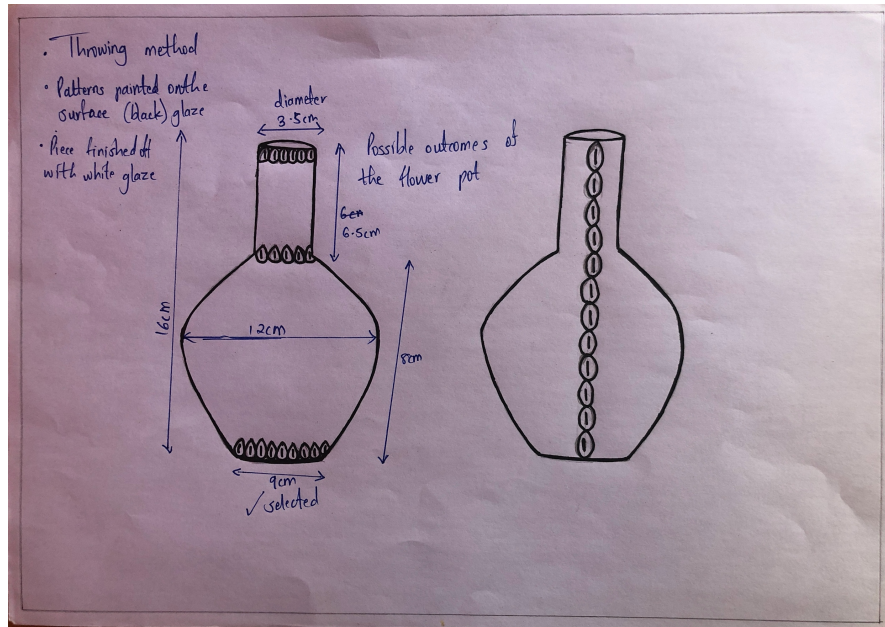


Figure 67 flower pot final sketch.

Sketch by the researcher.

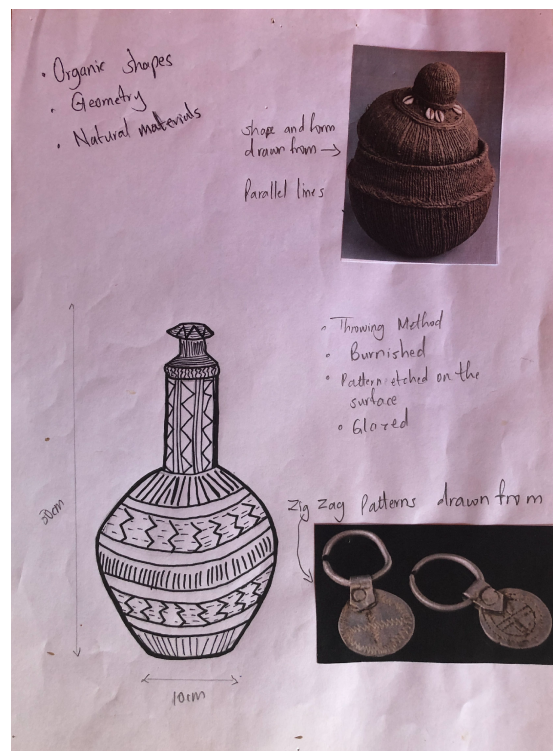


Figure 68 initial flower pot sketch

Sketch by the researcher.



Figure 69 rendered sketch.

Rendered sketch by researcher.



Figure 70 rendered sketch.

Rendered sketch by researcher.



Figure 71 rendered sketch.

Rendered sketch by researcher.

Sketch 5.4.3 Incense burner

Throwing method will be used to make this piece, on a potters wheel. A flat wood piece is used to remove clay and with gentle taps to shape the figure hence forming a bulge. Pattern as then etched onto the surface and then is white and black ceramic glaze applied after the first firing.

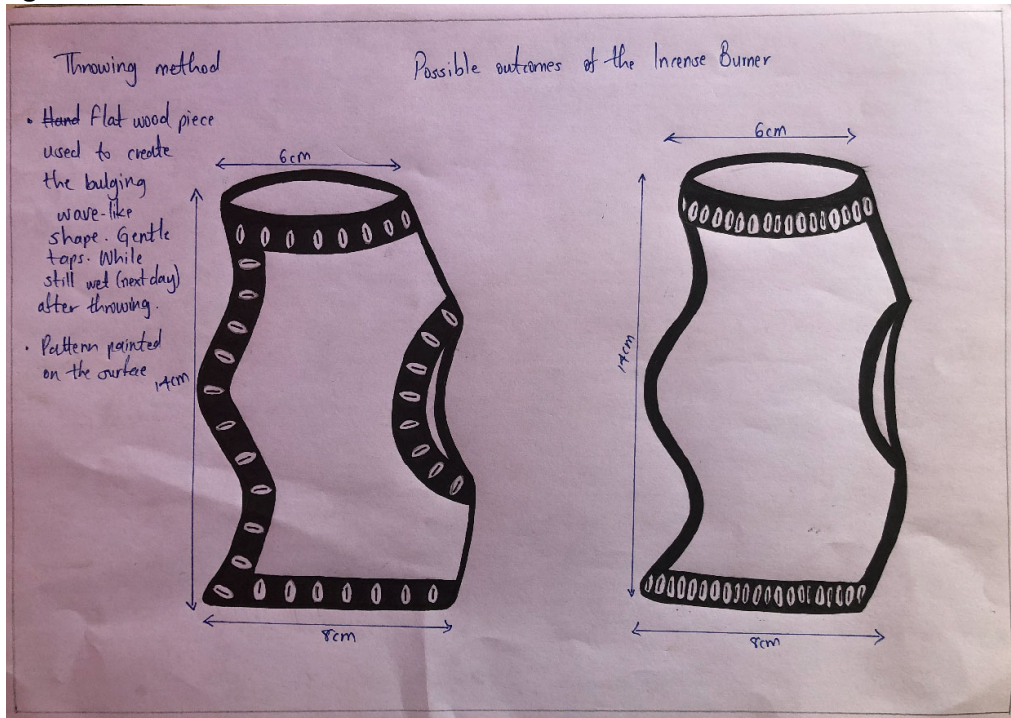


Figure 72 Incense burner Final sketches.

Sketch by the researcher.

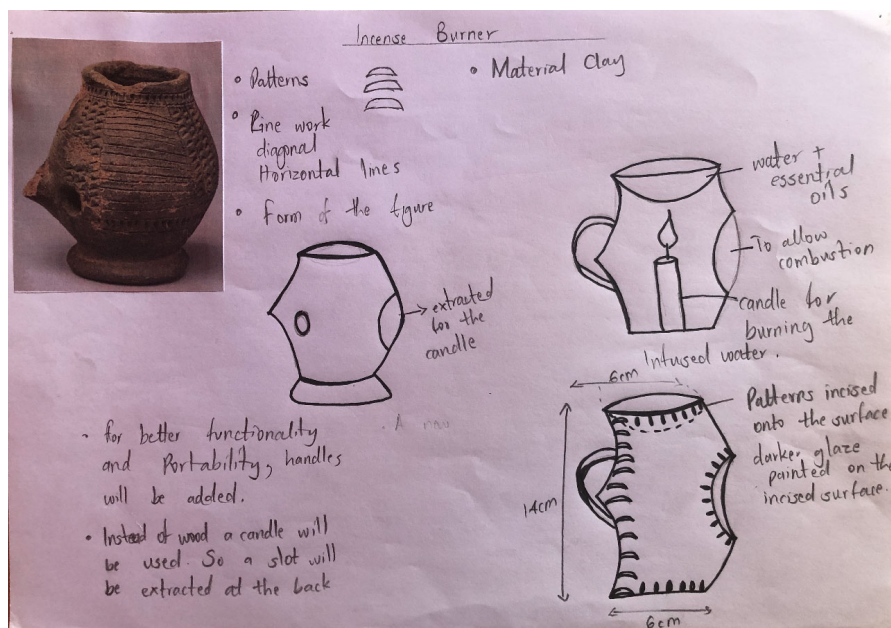


Figure 73 Incense burner initial sketch

Sketch by the researcher

Sketch 5.4.4 Cups and platter

Throwing method will be used to make this piece, on a potters wheel. White cowrie Patterns will be painted on the surface after the first bisque firing and a layer of black ceramic glaze is applied. The piece will then be fired again.

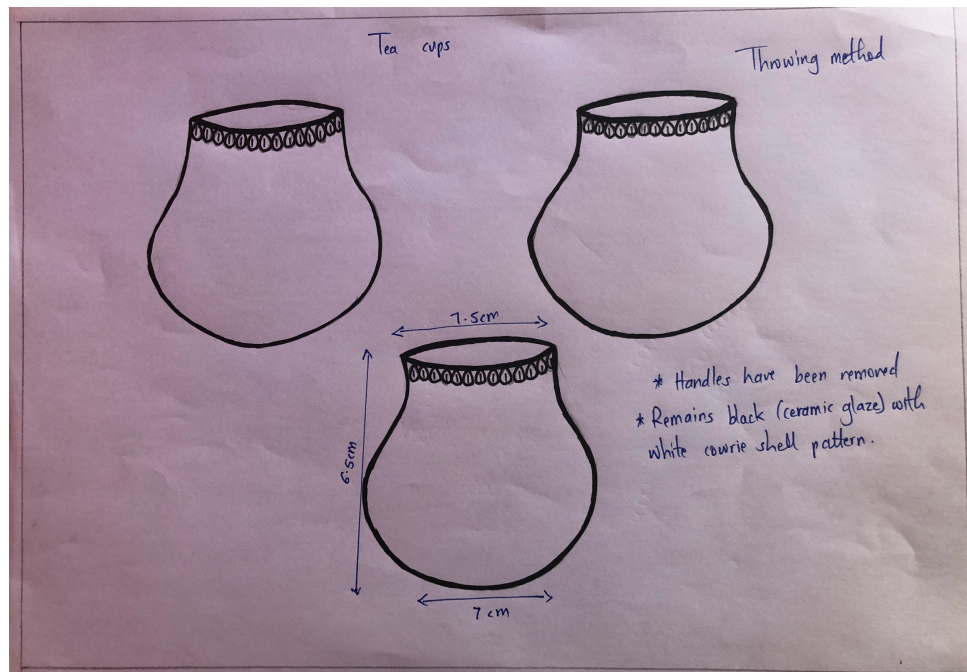


Figure 74 Cup final sketches.

Sketch by the researcher

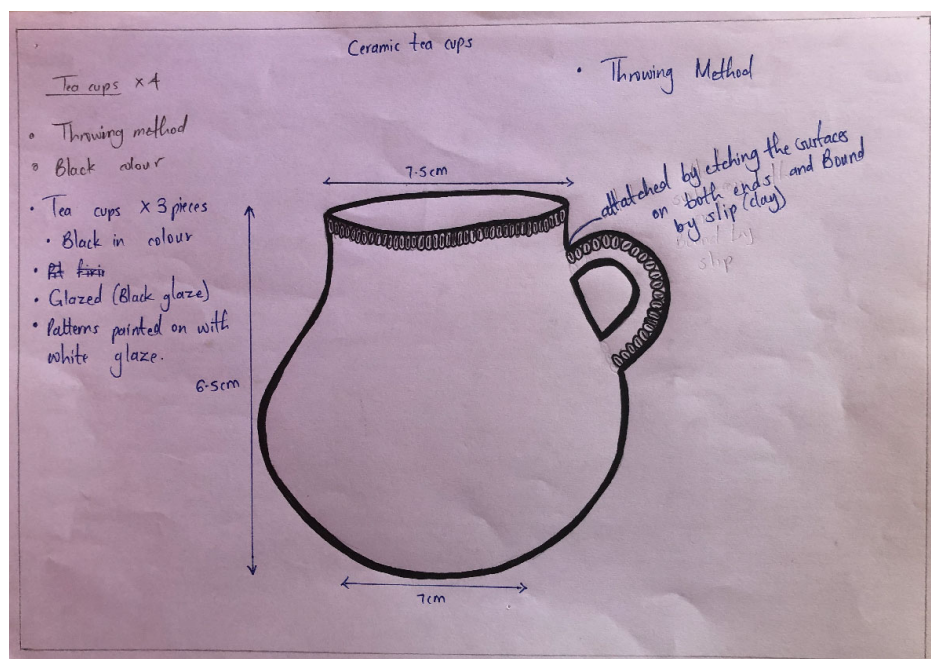


Figure 75 Initial Sketch.

Sketch by the researcher



Figure 76 rendered sketch.

Rendered sketch by researcher.



Figure 77 rendered sketch.

Rendered sketch by researcher.



Figure 78 Rendered sketch.

Rendered sketch by researcher.

Sketch 5.4.5 Plant Flat Round Bowl

Throwing method will be used to make this piece, on a potters wheel. White cowrie Patterns will be painted on the surface after the first bisque firing and a layer of black ceramic glaze is applied. The piece will then be fired again.

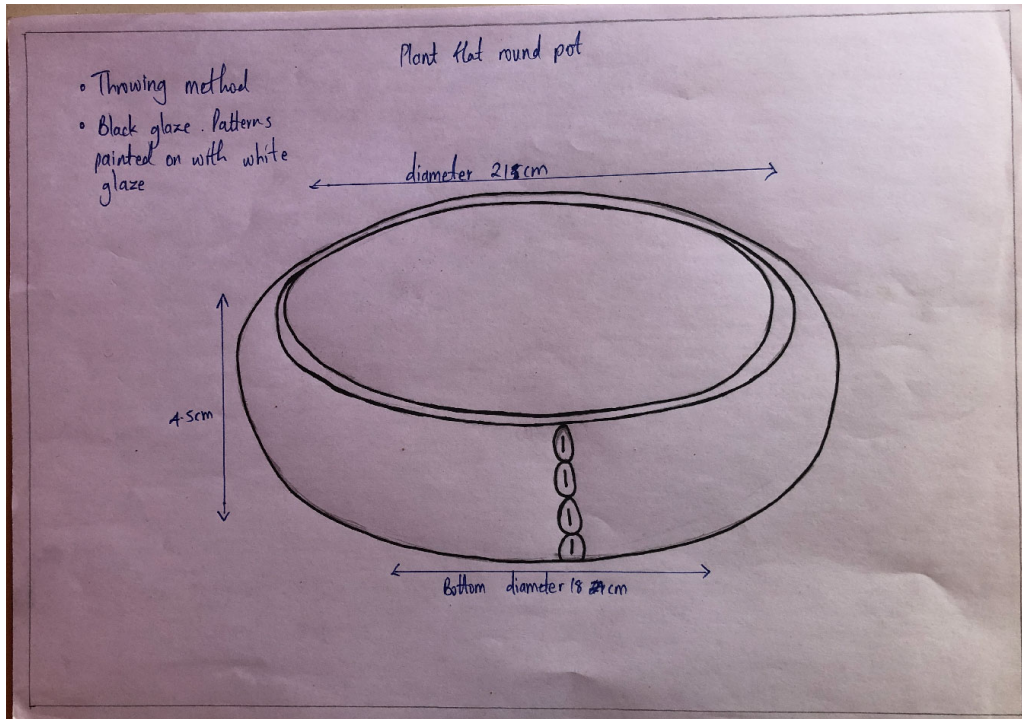


Figure 79 Final sketches for the stick incense holder.

Sketch by the researcher



Figure 80 Rendered sketch.

Rendered sketch by researcher.



Figure 81 Rendered sketch.

Rendered sketch by researcher.



Figure 82 rendered sketch.

Rendered sketch by researcher.

RECOMMENDATIONS

The researcher recommends further in-depth research on the techniques and ways the Borana people use to meditate and how such techniques can be redesigned to fit the purpose of meditating.

CONCLUSION

This research resulted in the creation of products that are user centered and that will deliberately impact the users as they interact with the products. They will also tie an identity to the products.

REFERENCES

- (n.d.). Retrieved from <https://pw.lacounty.gov/epd/rethinkla/rethink/rethink-what-is.aspx>
- (n.d.).
- 2019, c. p. (2019, june 26). (G. Wali, Editor) Retrieved from <https://www.behance.net/gallery/82116183/Cheer-Project>
- agency, e. p. (n.d.). Retrieved 2019, from <https://www.eliteprofileagency.com/services/health-and-beauty/>
- Aguirre, D. (2010). Retrieved from <https://www.idsa.org/sites/default/files/DesignForRepurposing.pdf>
- ALL ABOUT AFRICAN ART*. (n.d.). Retrieved from <https://www.all-about-african-art.com/5-elements-of-african-art.html>
- archiproducts. (2019). *bentu designs*. Retrieved 2019, from archiproducts: <https://www.archiproducts.com/en/bentu-design/about>
- Arero, H. W. (2007, july). *Coming to Kenya: Imagining and Perceiving a Nation among the Borana of Kenya*. Retrieved 2019, from Taylor & Francis Online: <https://www.tandfonline.com/doi/full/10.1080/17531050701452598>
- BANASIK, D. (2014, november). *Design Denizens*. Retrieved from <https://designdenizens.wordpress.com/2014/11/17/aesthetically-pleasing/>
- <https://journals.sagepub.com/doi/abs/10.1177/002224299505900302>
- Brian, O. M. (2016). *APPLICATION OF BWA MASKS PATTERNS IN DESIGN OF PRODUCTS FOR CLASS ONE PUPILS IN NAIROBI* . Retrieved 2019, from <https://arts-design.uonbi.ac.ke/sites/default/files/cae/artsdesign/artsdesign/APPLICATION%20OF%20BWA%20MASKS%20PATTERNS%20IN%20DESIGN%20OF%20PRODUCTS%20FOR.pdf>
- Chung Te Ting, H. S. (2019, September). Environmental Consciousness and Green Customer Behavior: The Moderating Roles of Incentive Mechanisms. *Sustainability 2019*.
- community, t. B. (n.d.). *Borana Pastoralists*. Nairobi National Museum, Nairobi, Kenya.
- Crossman, A. (2019, june). *Purposive sampling*. Retrieved from ThoughtCo: <https://www.thoughtco.com/purposive-sampling-3026727>
- Crossman, A. (2019). *Sociological Definition of Popular Culture*. Retrieved from ThoughtCo: <https://www.thoughtco.com/popular-culture-definition-3026453>
- David. (n.d.). *What is the Difference Between Population and Sample?* Retrieved from Statistics Solutions: www.statisticssolutions.com
- DESIGN, A. B. (2019). *AFRICA BY DESIGN/ ACCRA 2019*. Retrieved from <https://www.africabydesign.org/about-me>
- designs, b. (2018, november 5). (K. d. Klee, Editor) Retrieved from <https://www.dezeen.com/2018/11/05/bentu-design-wreck-furniture-ceramics-china/>
- DHILLON, N. (2017). *SPA DESIGN*. Retrieved from CLADBOOK : <https://www.cladglobal.com/architecture-design-features?codeid=31265&ref=n>
- dictionary, C. (n.d.). *eco-friendly*. Retrieved 2019, from [cambridge.org: https://dictionary.cambridge.org/dictionary/english/eco-friendly](http://dictionary.cambridge.org/dictionary/english/eco-friendly)

- dictionary, C. (n.d.). *Meditation*. Retrieved november 2019, from cambridge.org: <https://dictionary.cambridge.org/dictionary/english/meditation>
- Elsevier. (2004, november). (Elsevier, Editor) Retrieved from <https://www.sciencedirect.com/science/article/pii/S0142694X04000225>
- Fisher, B. C. (2002). *African ceremonies*. Harry A. Abrams, incorporated.
- FOUNDATION, R. W. (2008). *Informal Interviewing*. Retrieved 2019, from ROBERT WOOD JOHNSON FOUNDATION: <http://www.qualres.org/HomeInfo-3631.html>
- Hagan, B. T. (n.d.). Retrieved from Pinterest: <http://tessa-stein.blogspot.com/>
- Hagan, B. T. (n.d.). *Ladi Kweli*. Retrieved from <http://threadingthoughts.blogspot.com/2015/04/pots-on-sunny-day.html>
- HEKKERT, P. (n.d.). (P. HEKKERT, Editor) Retrieved from https://www.researchgate.net/profile/Paul_Hekkert/publication/26514491_Design_aesthetics_Principles_of_pleasure_in_design/links/0deec51b8dff36b34000000/Design-aesthetics-Principles-of-pleasure-in-design.pdf
- Herbert, M. B. (2015). *APPLICATION OF ETHIOPIAN CULTURE TO CREATE AESTHETIC PRODUCTS FOR THE KENYAN YOUTH*. Retrieved 2019, from <https://arts-design.uonbi.ac.ke/sites/default/files/cae/artsdesign/artsdesign/APPLICATION%20OF%20ETHIOPIAN%20CULTURE%20TO%20CREATE%20AESTHETIC.pdf>
- Holm, G. (2014, JULY). *Photography as a research method*. (P. Leavy, Editor, & O. HANDBOOK, Producer) Retrieved 2019, from <https://www.oxfordhandbooks.com/view/10.1093/oxfordhb/9780199811755.001.0001/oxfordhb-9780199811755-e-031>
- Jenkins, O. B. (2015). *The Borana of Ethiopia and Kenya*. Retrieved 2019, from <http://orvillejenkins.com/profiles/borana.html>
- Jill. (n.d.). *Participant Observation: Definition and Examples Video*. (Y. Williams, Editor) Retrieved from Study.com: <https://study.com/academy/lesson/participant-observation-definition-and-examples.html>
- jobs, w. (n.d.). *CASE STUDY METHOD IN RESEARCH METHODOLOGY - RESEARCH METHODOLOGY*. Retrieved from research methodology topics: <https://www.wisdomjobs.com>
- Kpando Pottery Contemporary African Ceramics Made in Ghana. (2012, may). Retrieved from atelier|55: <https://www.atelier55design.com/kpando-pottery-contemporary-african-ceramics-made-in-ghana/>
- Kuecks, C. (Ed.). (2014, April 7). *Lucidpress*. Retrieved from <https://www.lucidpress.com/blog/what-makes-pleasing-design>
- Maina, D. S. (2012). *Qualitative and quantitative research methods simplified*. Nairobi, Kenya: Paperback.
- Maina, S. M. (2012). *qualitative and quantitative research methods simplified*. nairobi, kenya: Paperback.
- Miller, R. (n.d.). *Why do people meditate?* Retrieved 2019, from Share care: <https://www.sharecare.com/health/meditation/why-do-people-meditate>
- Mohamed Adam, H. (n.d.). *Academia.edu*. Retrieved 2019, from research population: <https://www.academia.edu>

- Molokwane, B. S. (n.d.). *The African Aesthetic As It Informs The Product Form*. Retrieved from <http://citeseerx.ist.psu.edu/viewdoc/download?doi=10.1.1.117.4513&rep=rep1&type=pdf>
- Nikolov, A. (2017, April 23). *design principles*. Retrieved from UX Collective: <https://uxdesign.cc/design-principle-aesthetics-af926f8f86fe>
- Nikolov, A. (2017, April). *UX Collective*. Retrieved from <https://uxdesign.cc/design-principle-aesthetics-af926f8f86fe>
- O.M, M. (2003). *research methods: quantitative and qualitative approach*. Retrieved from African center for technology.
- Oladumiye, B. (2015). Retrieved from https://www.researchgate.net/publication/316167471_Aesthetic_Sensibility_of_Industrial_Design_An_Analysis_of_Industrial_Design_Education_in_Nigeria
- Oluwafemi S. ADELABU*, T. Y. (n.d.). Retrieved from <http://design-cu.jp/iasdr2013/papers/1419-1b.pdf>
- Orengo, O. J. (n.d.). *CREATION OF CULTURE ORIENTED EMOTIONAL DURABLE PRODUCTS FOR USE IN YOUTH FRIENDLY SPACES*. Retrieved from <https://arts-design.uonbi.ac.ke/sites/default/files/cae/artsdesign/artsdesign/CREATION%20OF%20CULTURE%20ORIENTED%20EMOTIONAL%20DURABLE%20PRODUCTS%20FOR%20USE%20IN%20YOUTH%20FRIENDLY%20SPACES.pdf>
- P, K. (2010). *research methodology london*. (S. publications, Producer) Retrieved 2019
- Pearce-Moses, R. (2018, september). *Archival Research: Why Archival Research?* Retrieved 2019, from Georgia state university library: <http://research.library.gsu.edu/archivalresearch>
- Phat, A. (2019). *EVALUATION RESEARCH: DEFINITION, METHODS AND EXAMPLES*. Retrieved 2019, from Question Pro: <https://www.questionpro.com/blog/evaluation-research-definition-methods-and-examples/>
- PICHULIK. (n.d.). Retrieved from <https://int.pichulik.com/>
- PRALEA Jeni, S. E. (2014). ECO DESIGN IN DESIGN PROCESS . *Annals of the University of Oradea: Fascicle of Textiles, Leatherwork, 1*.
- profile, e. (n.d.). *elite agency*. Retrieved 2019, from <https://www.eliteprofileagency.com/services/health-and-beauty/>
- Shava, S. (n.d.). *he SAGE Encyclopedia of African Cultural Heritage*. (SAGE Publications, Inc) Retrieved from https://www.researchgate.net/publication/280922239_African_Aesthetic_The
- spacey, j. (2016, june). Retrieved from <https://simplicable.com/cite/form-follows-nature>
- spacey, j. (2016, august). Retrieved from <https://simplicable.com/cite/more-is-more>
- spacey, j. (2018, January). *simplicable*. Retrieved from <https://simplicable.com/new/design-concept>
- TIME. (2018, november 26). (J. worland, Editor) Retrieved 2019, from [/time.com/5460054/sustainable-products/](http://time.com/5460054/sustainable-products/)
- Tongco. (2006). *purposive sampling as a tool for informany selection*. Retrieved from botanical research institute.

- UNESCO. (2002). *SOCIAL AND HUMAN SCIENCES*. Retrieved 2019, from unesco.org:
<http://www.unesco.org/new/en/social-and-human-sciences/themes/international-migration/glossary/cultural-diversity/>
- University, S. H. (2010). *Types of Research Designs*. Retrieved from Organizing Academic Research Papers:
<https://library.sacredheart.edu/c.php?g=29803&p=185902#s-lg-box-wrapper-626736>
- Wal, G. M. (n.d.). *Cheer Project*. Retrieved from gauravmkwali.com:
www.gauravmkwali.com/cheer-project
- Wangui, B. K. (2019). *INTEGRATION OF MAASAI CULTURE IN DESIGN OF EMOTIONAL DURABLE PRODUCTS FOR A STAGE SET* . Retrieved from uonbi.ac.ke:
<https://arts-design.uonbi.ac.ke/sites/default/files/cae/artsdesign/artsdesign/INTEGRATION%20OF%20MAASAI%20CULTURE%20IN%20DESIGN%20OF%20EMOTIONAL%20DURABLE.pdf>
- Xanthe Glaw, K. I. (2017, december 19). Visual Methodologies in Qualitative Research: Autophotography and Photo Elicitation Applied to Mental Health Research. *International Journal of Qualitative methods*. Retrieved 2019, from Sage journals: journals.sagepub.com
- Your Dictionary*. (1996). Retrieved from your dictionary definition and usage example: yourdictionary.com

APPENDICES 1: INTERVIEW GUIDE

1. What is meditation?
2. What is the history of meditation?
3. What kind of meditation do you practice at this center?
4. What is your take on the stigma associated with meditation here in Kenya? How can this be overcome?
5. Who designed this space?
6. What are some of the considerations put in place for the space in terms of user experience?
7. What is the average population visiting the center?
8. What is their average age group?
9. What do most people expect to gain after completion of the course?
10. What fundamental values should guide the design of products of this space?
11. What are the major items or the most important elements that have to be in the space?
12. What colours are most suitable for this space?
13. What Kenyan cultural aspects do you know of that can be incorporated into the design of the space and the design of products to be used in the space?
14. What other activities take place within the facility?