

Luminaries in Bamboo

- A Floor Lamp In Bamboo

Guide: Prof. A.G.Rao

Student: Prajakta Gokhale
(Industrial Design '05-'07)

IDC, IIT Bombay



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APPROVAL SHEET

The project entitled “Luminaries in Bamboo” by Prajakta Gokhale is approved for partial fulfilment of the requirement for the degree of ‘Master of Design’ in Industrial Design.

Guide : _____

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Bamboo Luminaries - A Pedestal Lamp In Bamboo

Luminaries In Bamboo

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Chapter 1 : Introduction

1.1. Introduction

1.2. Types of Luminaries

1.3. About Bamboo and Light

1.1. Introduction

When we go into a lighting store all that is seen is glass and steel lamps. Rarely a bamboo or cane lamp is spotted in the store. The people who want to buy a bamboo or cane lamp generally get them made by a craftsman or ask the interior designer to get it for them. Ironically the only permanent market one could buy bamboo craft products from are the exhibitions held in the urban areas from time to time. The existing bamboo lamps are either not of a very good quality or with not much variation in design. Thus this project was initiated.

1.2 About Bamboo and Light

Every luminary transforms itself when it is lit, a whole new identity comes through to the viewer. The beauty of bamboo lamps lies in this transformation as the weaves glow when light passes through them. To add to the drama, the light percolates through the weaves creating interesting shadow patterns on the walls.

1.3 Types of Luminaries

Luminaries in an environment are chosen by the type of lighting they give

1. Ambient lighting (wall washers, chandeliers etc)

Ambient lighting is the overall illumination of a room. It sets the general tone and can be complimented by more theatrical accent lighting or purpose-oriented task lighting.

2. Accent lighting (focus lights, track lights etc)

Accent lighting adds interest in the decor by highlighting features such as pictures, objects and architectural elements.

3. Task lighting (table lamp, reading lamp, dining lamp, etc)

A lighting for specified task which improves visual clarity, prevents tiredness and helps focus mind on the task.

4. Decorative lighting (festive lights, chandeliers etc.)

The lighting which is usually a deliberately contrived statement, to be seen as a part of the entire decorative scheme of a room.

One or more luminaries, giving the variety of lighting effects stated above, are used to create the required ambiance. In fact the same luminary can be used for different lighting types. For eg. A chandelier gives ambient lighting for the room and if it very elaborate in design it becomes a decorative lighting element too.

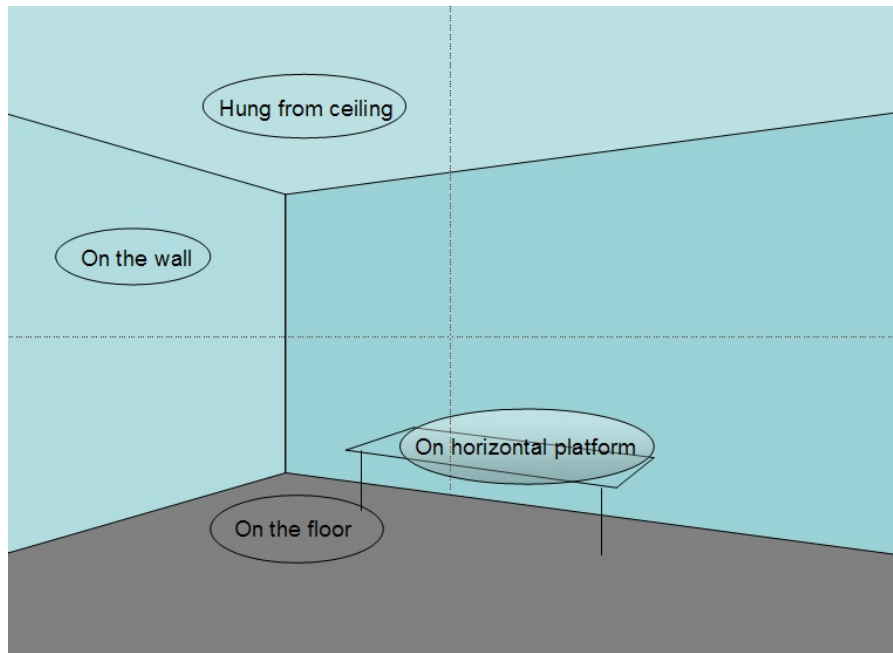


Fig 1.1 schematic view showing general positions where the lamps in room are placed

The luminaries could be broadly classified by the way they are mounted as

1. **Wall lamps** (wall washers, picture lights etc)

The lamps fixed on the walls like wall sconces which wash the wall with light or picture lights which are mounted above a frame to light up and accentuate the picture.

2. **Floor lamps** (uplighters, reading lamps etc)

The lamps placed on the floor which either throw light upward called ‘uplighters’ or the ones which throw light downwards are the ‘downlighters’ or composite lamps which don't throw direct light but create an ambient light through their volume.

3. **Ceiling lamps**

The lamps that are hung from the ceiling for eg. pendant lights for specific task like dining, or chandeliers which lit up the complete room.

4. **Table lamps**

These lamps are placed on side table or similar horizontal surfaces. For Eg. these could be reading lamps on writing table or decorative lamps on side tables.

To understand the type of lighting and lamps used in the households, further investigation was essential.

Chapter 2 : Data Collection

2.1. User Study

2.1.1 User study -stage 1

2.1.2 User study - stage 2

2.2. Market Study

2.2.1 Market study -general lamps

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2.3 Material study

2.3.1. Form Generated Using Bamboo

2.3.2. About Bamboo And Light

2.3.3. Maintainance Of Bamboo Products

2.4. Initial Product Brief



Fig 2.1 The table lamp placed on the table along the sofas in the living room.

2.1. User Study

2.1.1 User study - Stage 1

Initial user study was done to understand the kind of luminaries used in the upper middle class households.

Six households were studied and interviewed to gather information about the way lamps are used in day to day life, the preferences they have regarding the style of luminaries chosen etc.

It was seen that people prefer yellow soft light for relaxation and informal get-togethers. Some homes in fact had two set of lighting; one white light i.e. Fluorescent lighting and other yellow lighting. The white lighting was used for formal occasions or task oriented work and yellow lighting during relaxation time.

Lamps in all homes were chosen according to the furniture and decor of the house. People are inclined towards giving an ethnic touch to the ambiance with use of wrought iron, wooden furniture, use of khadi or silk for furnishings etc.

Craft based objects were seen in most of the homes like hanging lamps. There is a personal attachment to the products bought by the owners themselves. To some extent personalization of these products is attempted.



Fig 2.2 hanging lamps lighting up a corner of the living room

The living space was decorated with utmost care and flaunted nice lighting system. Some homes had recessed lighting clubbed with decorative table lamps, floor lamps etc. It was interesting to note that most of the living rooms had a corner lit with either a hanging lamp, a table lamp or a floor lamp. These decorative lamps are bought by the users and not necessarily on recommendation by the interior consultants.

A floor lamp was a very appropriate option to go ahead with as it generally is placed in the corner of a living room, bought by the users themselves, and its more of a personal possession. A bamboo pedestal lamp would surely fit in the scenario.

2.1.2 User study- Stage 2

Some homes were interviewed to understand the use of pedestal lamp and its users. Most of the pedestal lamps were placed in the corner of a room which would catch all the attention.

Generally this becomes the self standing lamp which lights up the space around it by itself and creates a very cozy corner for a relaxing time with oneself while listening to music or while having a chat with the family. When by themselves users like to sit by the lamp for a casual reading, thus most of the homes had downlighters. Users feel the need of dimming the light as per their mood or the activity in the room. The pedestal lamp is used as an ambient light source by all the users; as reading light by half the group; and also as a night lamp by a few.

The homes were decorated with wooden, wrought iron or cane furniture giving the space an ethnic feel, thus the lamps too were of ethnic style. Variety of materials are used for stands, powder coated metal and wood were the favorite. Most of the stands were not folding, but it was not perceived as a big problem by the users as it needs one time installation and they were bought from local shops. Some people who needed to move from one place to other had gone for folding stands. Some lamps that were bought from another town were also folding.

Fig 2.3 The pedestal lamps a) a reading lamp in cane, b) a lamp with wrought iron base and cloth shade.



The shades for the lamps also varied in materials. Some shades were in cloth with a plastic backing, some were made of leather. An interesting cane lamp was seen which was a reading lamp. The lamp would cast shadows on the wall but due to its alignment to the reading chair or bed no shadows were cast on the reader.



Fig 2.4 The pedestal lamp with a leather shade at one of the users home

user	stays in	Where do you buy the home furnishings and accessories from?	Do you have a pedestal lamp? what kind?	When do you use the pedestal lamp?	Is it necessary for the stand to be folding?
Mrs. Chattopadhyay	2 BHK apartment	from different places as I travel a lot	yes, a downlighter	while chatting with my family, reading or listening to music	no need
Mrs. Malhotra	2 BHK apartment	from shops in fort	yes, a downlighter	while reading	no need
Mrs. Gupta	3 BHK apartment	from exhibitions and ethnic stores	yes, an uplighter	while listening to music or casual get-togethers	yes, it helps in transportation
Mrs. Talwar	3 BHK apartment	from bandra-juhu side	yes, a downlighter	casual get-together, sitting with family, casual reading	no need
Mrs. Ray	Bungalow	often from places we visit and from shops in the city	yes, a downlighter	ambient lighting, casual reading	yes, it helps in transportation; but threading in wood have created problems
Mrs. Wamanse	2 BHK apartment	from exhibitions and ethnic stores	yes, a downlighter	ambient lighting, chatting with the family	no need
Mrs. Ingle	3 BHK apartment	from exhibitions	yes, a ambient lamp	ambient lighting, creates a cozy feel	no need

Did you ever had to change any part of the pedestal lamp?	do you need to move it often?	Is the type of lamp bought dependant on the décor of your home?	Do you face any problem while changing the bulb?	Do you think wire management is a very big problem?	Do you like the light throw down or up or composite?
yes, the shade and bulb	not much	not exactly, I like ethnic things	no	not much	composite; but more light thrown down as I use it for reading
no	not much	no	no	there should be a switch at reachable position on pedestal	a downward throw
yes, the dimmer	while cleaning	yes, bought in paris	yes, but its not very frequently	no, but the dimmer in the stand was damaged	an uplighter
no	sometimes while cleaning the floor	yes	no	hidden wires would be better	nothing specific
yes, the shade and stand is in a bad shape	not frequently	yes, bought from kashmir	no	no	nothing specific but downwards is preferred
yes, the shade	not frequently	not exactly, we thought it would fill the corner space well	no	no, a dimmer would make it better	composite but like the down light than ceiling being lit
no	yes frequently	yes	no	no	composite; also like the shadows cast by bamboo

2.2. Market Study

2.2.1 Market study - general lamps

Market study was done to understand the way lamps are sold, who buys them and why. Also to investigate what variety of lamps are available in the market.

The buyers for lamps generally are of different categories. One section is of people who buy lamps for decorating an interior space as recommended by the interior designer. Another section is of the interior designers and architects who are buying lamps for their customers. But there are also people who come to buy exclusive lamps for their own home.

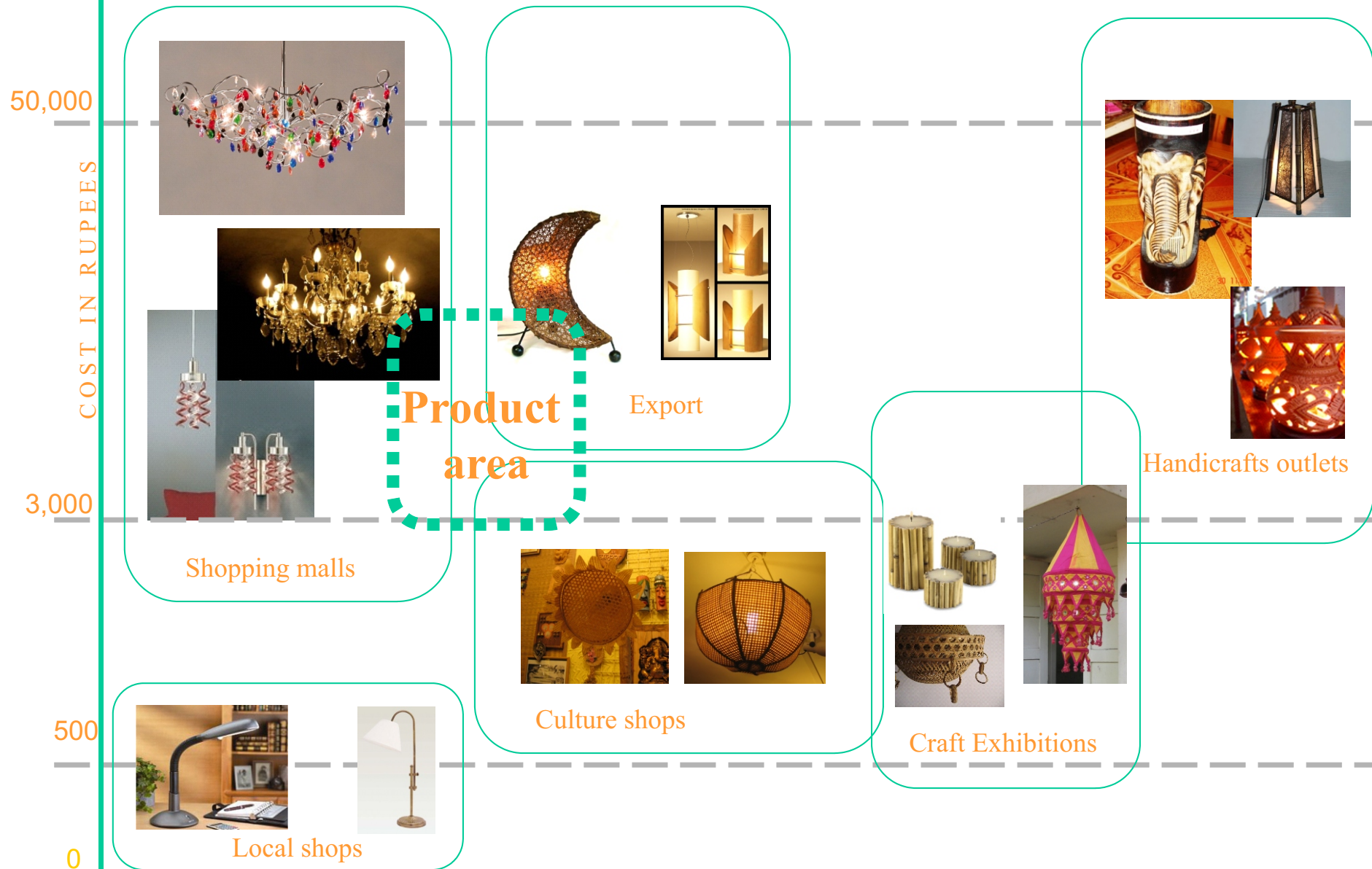
The selection of lamps depends on various things including the style, the price range, choice of materials etc. Glass and steel/ metal is currently the most seen lamps in the market. These range from a very sleek modern look to a very antique look.

There are a few craft based lamps seen in the market which use glass beads, terracota, leather etc. Many of the ethnic stores sell bamboo and cane lamps along with other items. Though it was seen that local lighting shops and shopping malls rarely have bamboo lamps.

Bamboo lamps have not yet entered the shopping malls in full swing. The consumers who come here are from all classes of society; placing bamboo lamps in shopping malls would surely popularize them. It would be a much better option to have a permanent market for these bamboo products than only showcasing them in exhibitions and through tourism outlets.

Market study analysis

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Materials : glass, metal
Style: glossy, modern

Materials : wood, bamboo, terracotta
Style: ethnic, traditional

* Images only represent the group

2.2.2 Market study - pedestal lamps

The pedestal lamps take up the windows of nearly all lighting stores. The pedestal lamps are not only available in lighting stores, but also in furniture malls, shopping malls and ethnic stores which are more of a home accessories shopping place.

Some of the stores, like the Culture Shop in Powai, Mumbai and Bombay Stores in Fort, Mumbai had a facility of mix n match with a few shades that could be matched with a variety of shades.

Some lamps are china made and some are procured from local markets. Some of these lamps are sold as the shops brand.

Some Furniture malls like the Woodmall in Thane display the pedestal lamps as a living room accessory. Some of the cheaper pedestal lamps, priced at around Rs.3000, are given complimentary with big purchases.

Pedestal lamps were in variety of designs at the kapur Lampshades in Kalaghoda, Mumbai. Metal stand with cane shade, antique finish stand and cloth shade, steel base and multiple glass shades were some of the kind of lamps that were displayed.



Fig 2.5 the crystal and marble lamp in Woodmall, Thane for Rs. 18,000

Some of the stores like @ home in Mulund, Mumbai have a range of pedestal lamps by an Austrian brand Eglo. The interesting thing about these lamps is that the shades and fitting are done so that the same shade could be used in a pedestal lamp or a pendant lamp or a table lamp etc. This is of particular use when a home is to be decorated with similar fittings.

A very nice market for the lamps is Lohar chawl in Crawford Market, Mumbai. Most of the shops here are lighting stores which have a variety of pedestal lamps that range from branded pieces to locally made lamps.

The number of pedestal lamps displayed in comparison to other lamps is less, but they are sold as exclusive lamps and are bought by people who have that taste. The cost range for pedestal lamps is from Rs.3,000 (for a simple lamp) – Rs.20,000 (for something like a crystal laden lamp)

SHOP	TYPE OF LAMP	other thing sold here are...	what is the current trend in lamps? What do people buy? style/ material/ or any peculiar thing you have noticed...	pedestal lamps sold? (Y/N) if no.. why not?	self brand? Or any specific local/ foreign brand sold?
The Bombay Store, Fort	<i>lifestyle store</i>	<i>ethnic stuff including furnishing, stationary, clothing, artifacts etc</i>	<i>'koi trend nahi kah sakte, aapni choice ke hisab se khareedte hain'</i>	yes	self brand
at-HOME, Mulund	<i>home accessories store</i>	<i>furniture, furnishing, stationary, clothing, artifacts,</i>	<i>'We had to keep more ethnic designs in the Eglo range on demand from consumers'</i>	yes	Eglo Lamps
Citylights, Thane	<i>lighting store</i>	<i>different types of electric lights</i>	<i>'single shade lamps are picked up by people easily, than the multiple shade ones'</i>	yes	self brand
Cerco Lighting, Crawford Market	<i>lighting store</i>	<i>different types of electric lights</i>	<i>'uplighter plus reading lights are a trend' 'also lamps with metal base sell more'</i>	yes	Eglo Lamps, Fabbian and local brands
Glitteria, Crawford Market	<i>lighting store</i>	<i>different types of electric lights</i>	<i>'steel-glass wala itna bikta nahi.. Bohot mehenga hai; china-taiwan wale lamp jyada bikte hain'</i>	yes	
Kapur Lampshades, Kalaghoda	<i>lighting store</i>	<i>different types of electric lights</i>	<i>'The ethnic looking lamps sell more than the moden looking ones'</i>	yes	self brand and manufacturing; also some brands are kept
Wood Plaza, Thane	<i>furniture store</i>	<i>living room, dining furniture and lamps</i>	<i>'simple waale lamps jyada bikte hain'</i>	yes	self brand
Wood Mall, Thane	<i>furniture store</i>	<i>living room, dining furniture and lamps</i>	<i>'the wooden lamps or lamps with a very distinct but simple look sell most'</i>	yes	self brand
Rsmall-lifestyles, Mulund	<i>home accessories store</i>	<i>furniture, furnishing, stationary, clothing, artifacts,</i>	<i>'furniture se milta julta lamp khareedte hain'</i>	yes	self brand
The Culture Shop, Powai	<i>lifestyle store</i>	<i>ethnic stuff including furnishing, stationary, clothing, artifacts etc</i>	<i>'sirf lamp-shade bhi khareedne aate hain'</i>	not on display as it takes up too much space	self brand

how many are...								
stored	displayed	sold in a month	has a catalogue?	what material and finishes are there in pedestal lamps?	collection changes how frequently?	how are the floor lamps delivered to the customer?	how are they bought from the warehouse? Or the importer? Or manufacturer?	who are the main consumers for pedestal lamps?
none	5 to 6 pedestal lamps	4 to 5	no	jute strings woven on metal frame	1 to 2 mnths	home delivery and installation	warehouse, imported & manufacturer	Owners
stored in warehouse	10 to 12 pedestal lamps	5 to 6	yes	steel+glass ,wrought iron+glass, steel+cloth, wrought iron+cloth	1 to 2 mnths	home delivery only	warehouse & importer	Owners, Interior designers
none	5 to 6 pedestal lamps	3 to 4	no	metal or wooden base with cloth/glass shade	2 to 3 mnths	home delivery in the city only	warehouse, importer & manufacturer	Owners
none	10 to 12 pedestal lamps	5 to 6	no		1 to 2 mnths	no home delivery, compact packing is given to customer	warehouse, importer & manufacturer	Owners, Interior Designers
none	5 to 6 pedestal lamps	2 to 3	no		2 to 3 mnths	no home delivery, compact packing is given to customer	warehouse, importer & manufacturer	Owners
not many	6 to 8 pedestal lamps	4 to 5	yes		1 to 2 mnths	home delivery and installation	warehouse, importer & manufacturer	Owners, interior designers
none	6 to 8 pedestal lamps	4 to 5	no		3 to 4 mnths	home delivery and installation	warehouse, importer & manufacturer	Owners
yes	9 to 12 pedestal lamps	6 to 7	no		3 to 4 mnths	home delivery and installation	warehouse, importer & manufacturer	Owners
none	9 to 10 pedestal lamps	3 to 4	no		3 to 4 mnths	home delivery only	warehouse, importer & manufacturer	Owners
none	no pedestal lamps	none	no		NA	NA		NA

Do you keep bamboo lamps? Why/ why not?	What type of consumers would like to buy bamboo lamps? And why?	How much would they like to spend?	what material would u like the lamp to be made of?	how many pieces would you need initially fo sale at the time?
No; not much variety is available, not fine in quality	artistic, people who have cane furniture	Rs.3,500- Rs.5,000	combination of materials is the trend than full bamboo	1 to 2 pieces
No; not available, not fine in quality, no good manufacturer	people who have similar furniture	Rs.3,500- Rs.5,000	something that looks very different and not too jazzy; terracota/metal with bamboo would look nice	1 to 2 pieces
No; not available, no good manufacturer	people with that taste	Rs.2,500- Rs.4,000	metal and carved wood combined with bamboo	1 to 2 pieces of different designs
No; not available, not fine in quality, no good manufacturer	people buy it as a status symbol	Rs.2,000- Rs.3,500	metal combined with bamboo	1 to 2 pieces
No; not available, not fine in quality, no good manufacturer	people who like ethnic stuff	Rs.2,000- Rs.3,500	metal combined with bamboo	1 to 2 pieces
No; not available, no good manufacturer	people who like ethnic stuff and have similar furniture	Rs. 4,500 - Rs.6,000	a combination of material would be a nice idea, provided it is judiciously done	2 to 4 pieces with variety in design
No; too much of maintainance, people don't buy it easily	people who buy traditional looking furniture	Rs.2,500- Rs.4,000	the shades tend to get easily damaged, thus a base of bamboo is a nice idea though it should look nice	1 to 2 pieces
No; too much of maintainance, tend to get powder easily	people who buy cane or carved wood furniture	Rs.2,500- Rs.4,000	metal or wood combined with bamboo	1 to 2 pieces
No; not available, no good manufacturer	people who buy wooden furniture	Rs.2,500- Rs.4,000	metal or wood combined with bamboo	1 to 2 pieces
No; don't know any manufacturer	people who have the taste and like a natural look	Rs.2,500- Rs.4,000	metal, wood or leather combined with bamboo	1 to 2 pieces

Bamboo Luminaries - A Pedestal Lamp In Bamboo



Fig 2.6 various pedestal lamps seen in the market

2.2.3 Market study - bamboo pedestal lamps

A very few bamboo pedestal lamps were spotted in the market. The lamp seen in Fig 2.6 a is from Shantiniketan with too much decoration on the lamp, the one in Fig 2.6b is from a culture shop in thane, this was bought from a craftsman. Some lamps use the literal form of existing bamboo craft objects like the trap and convert it into a pedestal lamp as in Fig 2.6c. The lamps by Vedha in Fig 2.6d and e are manufactured continuously but are displayed as an accessory to the bamboo furniture and showcased mainly through exhibitions. The hexagonal weave is used to create the lamp in Fig 2.6 f, this lamp has a very strong appeal and is also as simple in design. Some interesting lamps like the one in whole bamboo (fig 2.6 g) are very promising.

A shyness of blending bamboo with other materials was seen. All the lamps used only bamboo to create the form. Not much experimentation with material is seen.

There is no fixed market yet for the bamboo products, these could be sold mainly through the ethnic stores.

2.3 Material study

2.3.1 About Bamboo Craft

India is the second largest bamboo producer after china. But the bamboo craft has not found its way into the country's lifestyle yet. Bamboo craft production and use of the products is still centered around the areas where bamboo is found like in north east regions of India or in konkan belt or kerala. All these areas have different types of bamboo available thus the crafts they produce are of different nature from each other depending on the inherent properties of the bamboo available.

Proliferation of craft has taken place, throughout history, by the knowledge being passed on from one generation to the other. It has been more of a legacy. But now with the new generation in the villages moving out of the village to earn jobs in the cities, this legacy is not being carried forward. We as designers, can help revive the long gone tradition by using the age old techniques of craft and putting them across to people in a more acceptable way to be used in the daily lives of the people in the urban and semi-urban areas.

A very strong alliance of bamboo craft is cane work. These two materials have gelled so well together that the confusion between bamboo and cane is a big problem for the layman. Both the materials have their unique properties, cane is extremely flexible and has an enviable length; whereas bamboo is well known for its strength as a whole and nice translucent strips with a great blend of stiffness and flexibility, which is used by the craftsmen to create interesting forms

Various attempts are being made to revive the bamboo craft by various organizations. But the revival of designs and forms traditionally made by the craftsmen is a challenge that designers must take up. Manufacturing ‘designer’ objects with the quality standards and pace of production would be a new challenge for the craftsmen too.

With the eco-friendly drive running hot in today’s world; bamboo craft is sure to pick up a quick pace.

2.3.2 Forms Generated Using Bamboo

Bamboo craft uses bamboo in various forms sticks, strips, whole bamboo, bamboo skin etc. The beauty of bamboo lies in the fact that it sustains some tension in the strips thus it stays stiff in the woven three dimensional forms. For example the surya mukhi weave which creates a completely self forming ball. The mats made of bamboo also have right combination of stiffness and flexibility, which helps the mat take some curves, provided it is restrained properly. The traditional traps employ restraining as a property to create various forms, generally here bamboo sticks of fine thickness are tied up with cane.

With the help of various molds the existing forms could be challenged, and new forms can emerge out of the older ones.

2.3.3. Bamboo and Light Explorations

Fig 2.7 explorations of light with different bamboo weaves



Various ways of using bamboo as a shade. Some explorations went into understanding the light quality and shadow patterns these forms generate. The shade made out of sticks has a very different appeal than the weaves, the edges of the slender sticks glow in light whereas the bigger sticks create an opaque look; this beautiful contrast makes the shade more interesting.

Bamboo Luminaries - A Pedestal Lamp In Bamboo

2.3.5. Initial Product Brief

To design a corner pedestal lamp

Designed mainly as a source of ambient light and occasionally as a reading lamp

Dimmable source of light; one light source is preferable.

Combination of bamboo with other materials like metal or wood.

The lamp should blend with the interiors and not become visually heavy.

Chapter 3 : Floor Lamps

3.1. About Floor Lamps

3.2. Components of a Floor Lamp

3.3. Types of Floor Lamps

3.4. Other Design Related Issues

3.1. About Floor Lamps

Luminaries are an important part of any home interior. The overall lighting of any room is created by the complete lighting system, but some lamps hold their own individual identity in the décor and are a proud possession for the owners. Pedestal lamps fall in that category. These lamps are used for different functionalities, but they are not dependant on any other lighting system to give them their identity. The tall lamp is lit alone to brighten up the living room corner for a cozy family chat, a quite read or a relaxing time with music in the background.

Fig3.1 initial idea sketches for the pedestal lamps



Bamboo Luminaries - A Pedestal Lamp In Bamboo

3.2. Componentes of a Pedestal Lamp

Various components in a pedestal lamps could be listed as follows:

- Shade
- Bulb Holder
- Switch and/or Dimmer
- Pedestal
- Base
- Wire
- Switch in between
- Two Pin Plug



Ambient Lamp



A Downlighter



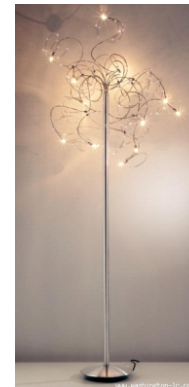
An Uplighter



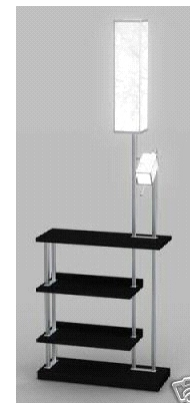
Reading Lamp



Uplighter plus Reading Lamp



Decorative/ambient light



Uplighter plus Reading Lamp plus Shelf

3.3. Types of Floor Lamps

Various types of pedestal lamps are seen here in the figure alongside

1. Ambient lamp

A lamp which gives out ambient light, mainly due to the volume

Fig 3.2 ambient lamps



Bamboo Luminaries - A Pedestal Lamp In Bamboo

2. Downlighter lamp

The lamp which acts as a downlighter throwing light onto the floor.

3.3 downlighter lamps



Bamboo Luminaries - A Pedestal Lamp In Bamboo

3. Uplighter lamp

Uplighter is a lamp that throws light onto the ceiling and walls in order to achieve ambient lighting.

Fig 3.4 uplighter lamps



Bamboo Luminaries - A Pedestal Lamp In Bamboo

4. Reading lamp

The lamps detailed specifically as reading lamps which act as a task light. These are generally adjustable to suit the user.

Fig 3.5 Pedestal lamps for reading



Bamboo Luminaries - A Pedestal Lamp In Bamboo

5. Uplighter plus reading lamp

A very interesting combination of lamps has come up, which is an uplighter with a reading lamp attached to it. Most of the lamps have a facility of dimming both the lamps, but some offer dimming only for the uplighter.

Fig 3.6 uplighter pedestal lamps clubbed with reading light



Bamboo Luminaries - A Pedestal Lamp In Bamboo

6. Decorative lamp

These lamps are the attention catching lamps with a very low ambient light.

Fig 3.7 Pedestal lamps mainly decorative in nature



Bamboo Luminaries - A Pedestal Lamp In Bamboo

7. Lamp clubbed with furniture

Some of the floor lamps are clubbed with furniture. For example the lamp in fig: is by Kundalini called 'Asana' designed by Giorgio Gurioli.

Fig 3.8 Pedestal lamps clubbed with some form of furniture



Bamboo Luminaries - A Pedestal Lamp In Bamboo

3.4. Some Design Related Issues

Height of a pedestal lamp:

If we observe a variety of pedestal lamps we will get to see that all of them are of different heights. The height of a pedestal lamp changes with various factors, I would like to throw some light on that.

Some pedestal lamps, typically the ones with traditional wooden stands, are about 150-165cm in height. Most of the downlighters come under that range. Some of the European lamps are as high as 180 cm in height; generally the uplighters, which act mainly as ceiling washers, are that tall.

The heights also depend on the kind of space they are placed in. For example in an Indian upper middle class home the spaces are not very huge with ceiling height of around 10-12 feet, here a huge 6 feet lamp would not fit well.

Other issues like cleaning, changing the bulb etc. have to be considered when deciding the height of the lamp. From this point of view the average height of the lamp must also respond to the average height of the target consumers.

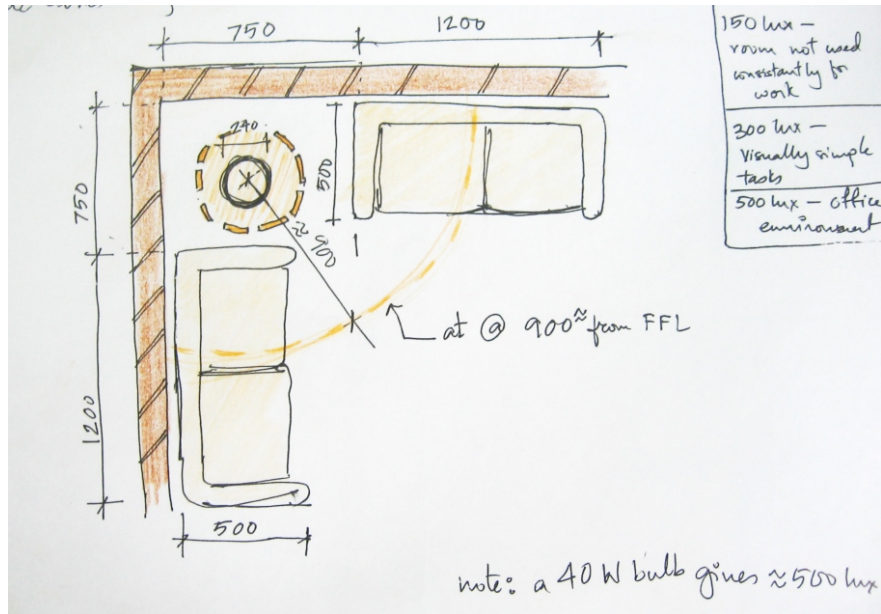


Fig 3.9. Sketch showing approximate area covered by the direct light at 900mm from floor

3.4. Some Design Related Issues

Light intensity and reach:

A light of around 150 lux is required to light up a room not use constantly. 300 lux is required for visually simpler tasks. 500 lux is required for an office environment. Thus we can say that the light that should be thrown from a the downlighter is around 300- 500 lux. A 40W bulb gives around 500 lux intensity in 1.0 m range from the bulb. The person sitting on a sofa and reading would need light till at most 900mm from the floor. Thus the lamp should be placed not farther than 900mm from the sofa, which is normally the case.

The height of the switch should be placed in between 0.6m to 1.2m on the pedestal or hanging, thus can be operated in sitting and standing posture easily.

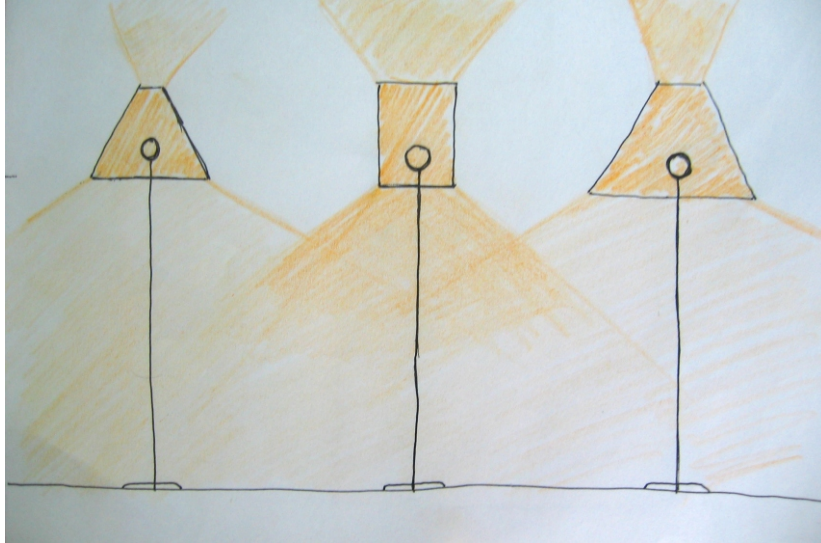


Fig 3.10. Sketch showing change lit area with change in the width of the shade mouth keeping the height of the light source constant

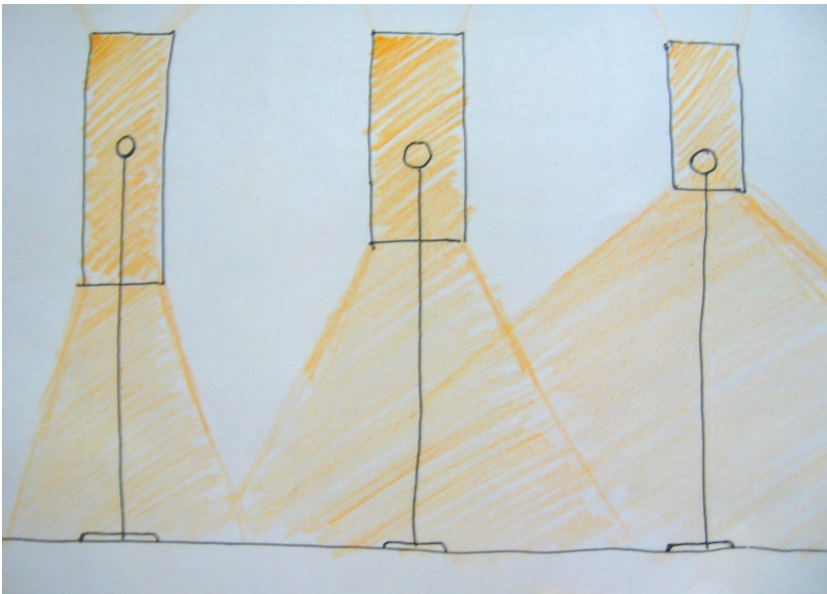


Fig 3.11.. Sketch showing change in lit area with change in the relative height of light source and shade edge

3.4. Some Design Related Issues

The light spread increases with the increase in the width of the shade mouth. As the light travels straight the relative angle between the bulb and the barrier i.e. the shade is the governing factor here. As shown in the Fig:

Similarly if the shade width is kept constant and the height is varied, the lamps with shades at lower height would cover smaller area and the shades at higher height would cover more area with light as seen in the Fig:

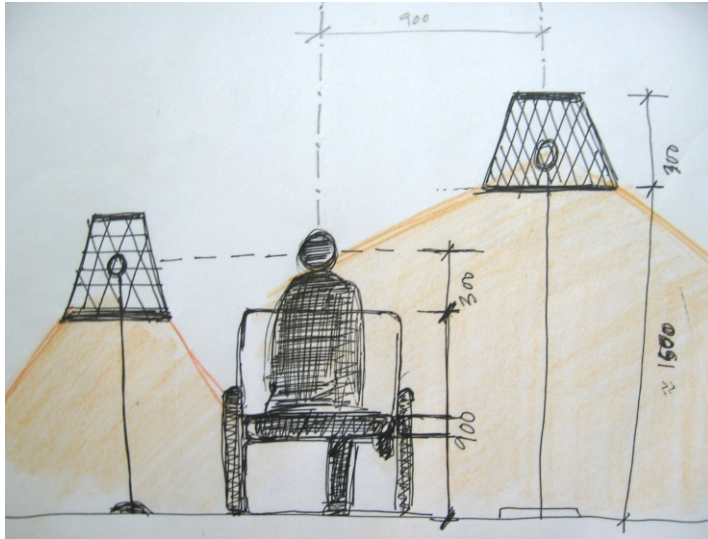


Fig 3.12. Sketch showing a shade at 1500 mm from ground

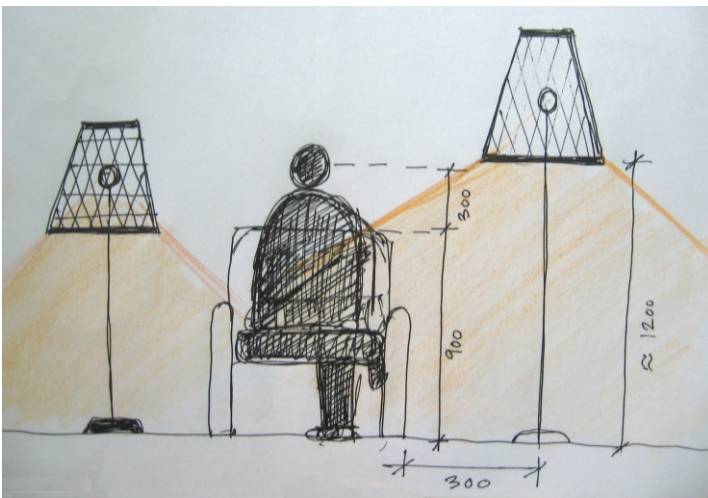


Fig 3.13. Sketch showing a shade at 1200 mm from ground

3.4. Some Design Related Issues

Height of the shade and light:

As seen from the sketches at a height of 1200 mm the shade doesn't provide light at a proper angle for reading. With a slight movement the person would lose the light. At the height of 1500 mm from ground the light is too close to the eye level which could be disturbing. Thus, an ideal height for a lamp shade bottom edge is approximately between 1200-1500 mm from ground level.

Chapter 4 : Concept Generation

5.1. Final Product Brief

5.2. Ideation

5.3. Explorations

5.4. Concepts

5.4.1. Concept 1

5.4.2. Concept 2

5.4.3. Concept 3

5.5. Concept Evaluation

5.6 Concept Development

4.1. Final Product Brief

Product	a pedestal lamp which gives low ambient light plus light for casual reading
Target consumer	higher middle class
Market price	Rs.3000/- to Rs.5000/-
Market positioning	in ethnic stores
Transportability	knock down for convenience in shipping the product from one place to other.
Manufacturing	by medium skilled craftspersons

4.2. Ideation

Ideation was done based on the theme of a 'bird'

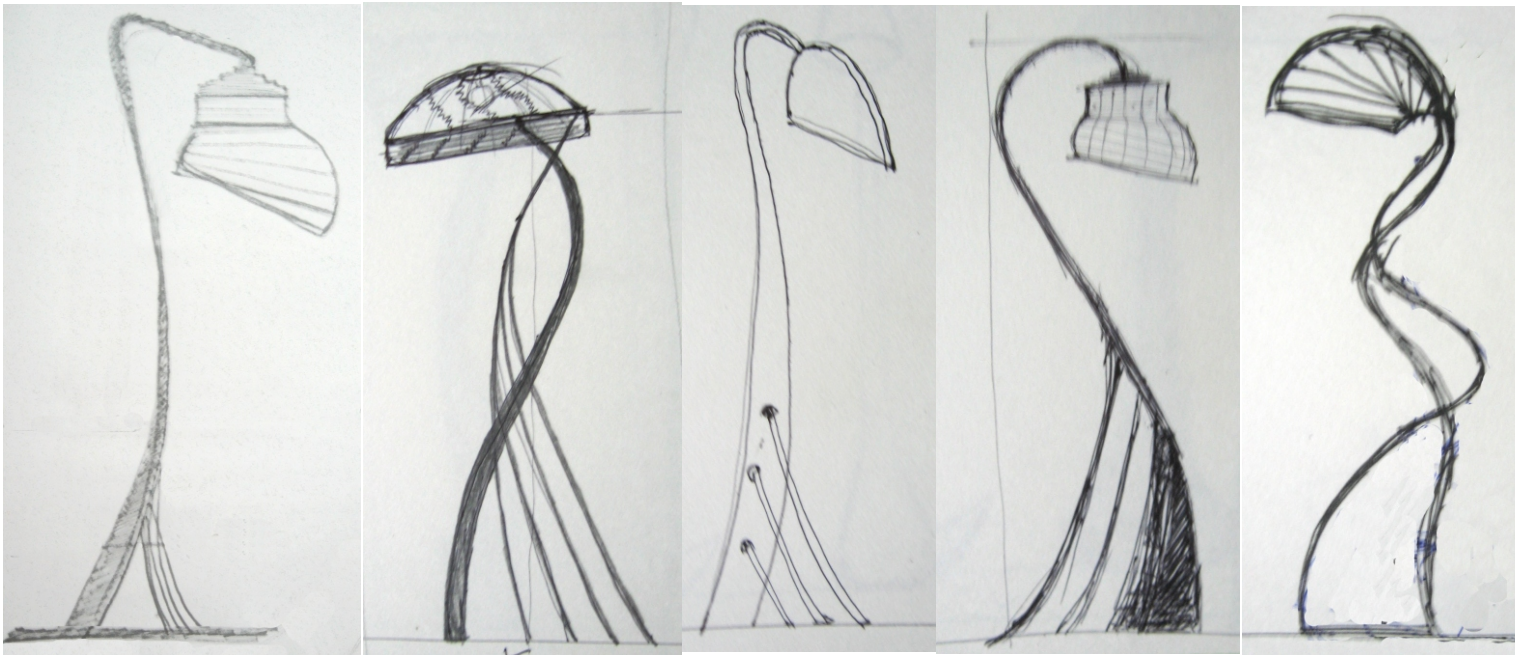


Fig 4.1. Idea sketches for the theme of bird

4.2. Ideation

Ideation was done based on the theme of a 'bird'

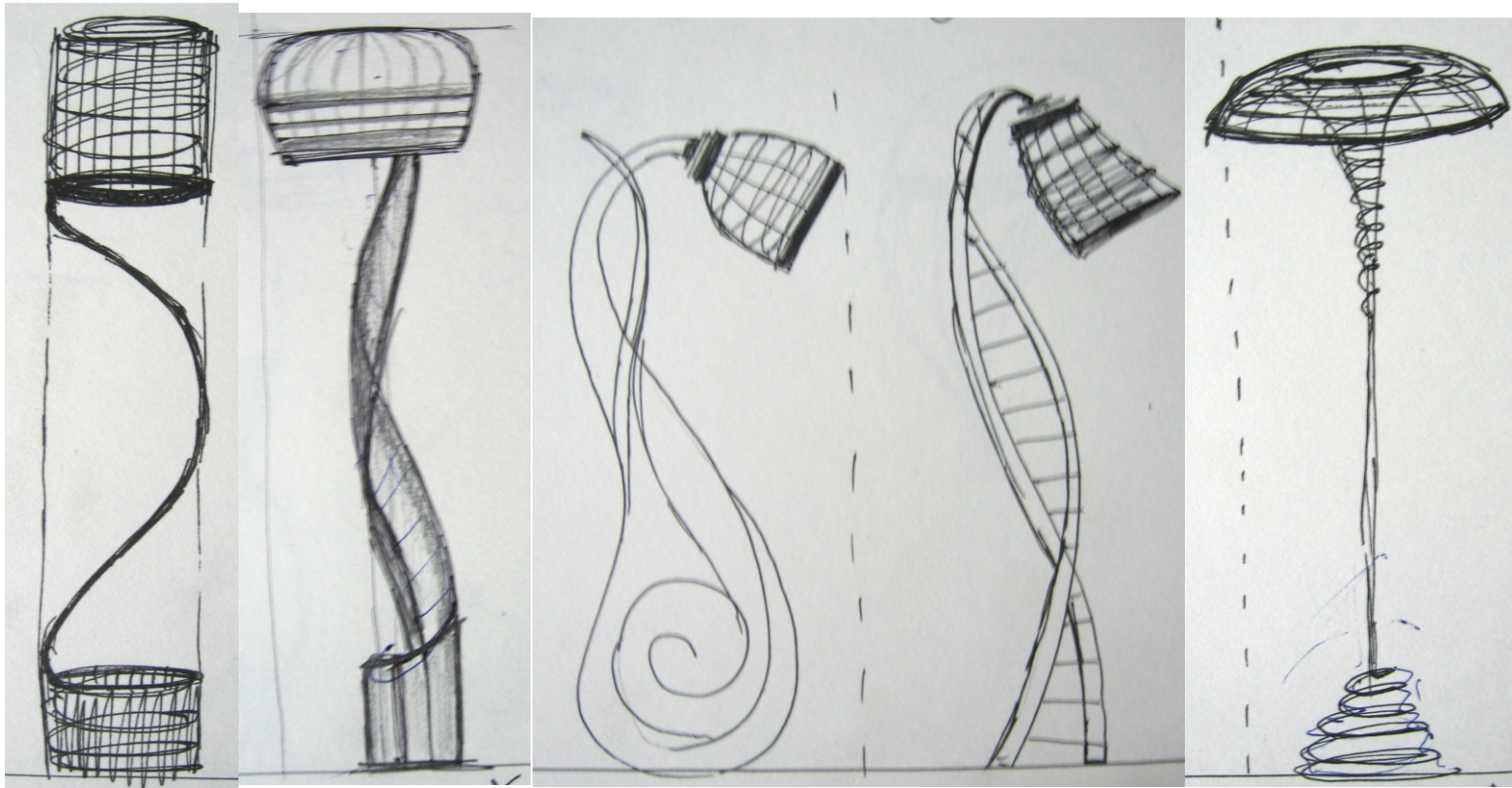
Fig 4.2. Idea sketches for the theme of bird



4.2. Ideation

Ideation was done based on the theme of a 'spiral'

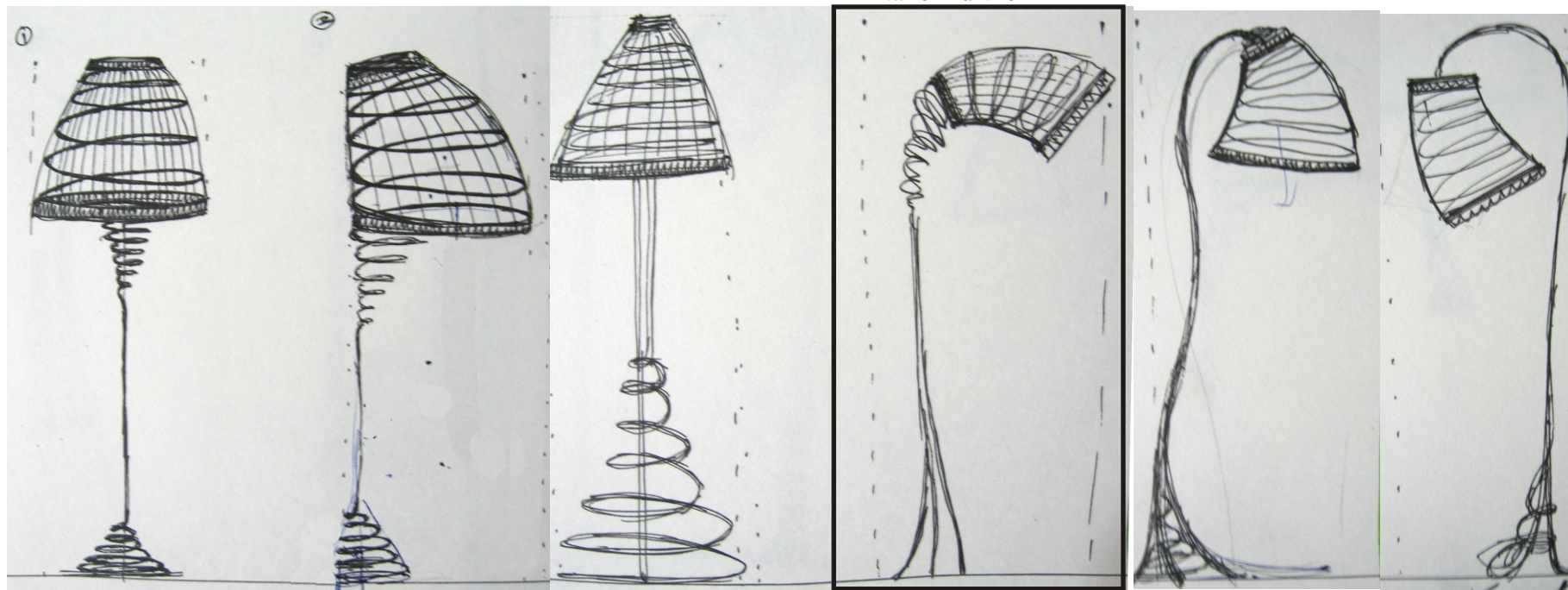
Fig 4.3. Idea sketches for the theme of bird



4.2. Ideation

Ideation was done based on the theme of a 'spiral'

Fig 4.4. Idea sketches for the theme of bird



The form marked here was found to be an appealing one and was taken further

4.4. Concepts

The most important part of any pedestal lamp is its shade; being a bamboo lamp even more so. Thus the shade was a source of inspiration that took the project further.



Fig 4.5. A traditional trap from north-east india which uses bamboo sticks and cane for winding.

4.4.1. Concept 1

A self forming shape of shade inspired from the trap woven in a spiral pattern. This trap made in the northeast regions of india uses slender sticks of bamboo tied with cane in a continuous spiral pattern This spiral pattern intrigued me enough to start experimenting with the form! The form was made a little eccentric and tried if it stays as in the mold.



Fig 4.6. A ready mold for cane lamp shade available in a cane furniture and accessories shop.

4.4.2. Concept 2

Shade form using metal frame for the structure. The slender bamboo sticks were shaped on a metal mold which lead to an idea where possibly the metal frame itself gets incorporated in the shade. A similar structure is used by the cane craft vendors who have a variety of ready molds for the shade.

4.4.3. Concept 3

Metal frame and mats used to make the shade. This concept took birth due to the fact that making mats is the most easy job that can be outsourced. In fact some mats are already available by order easily in square/rectangular shapes

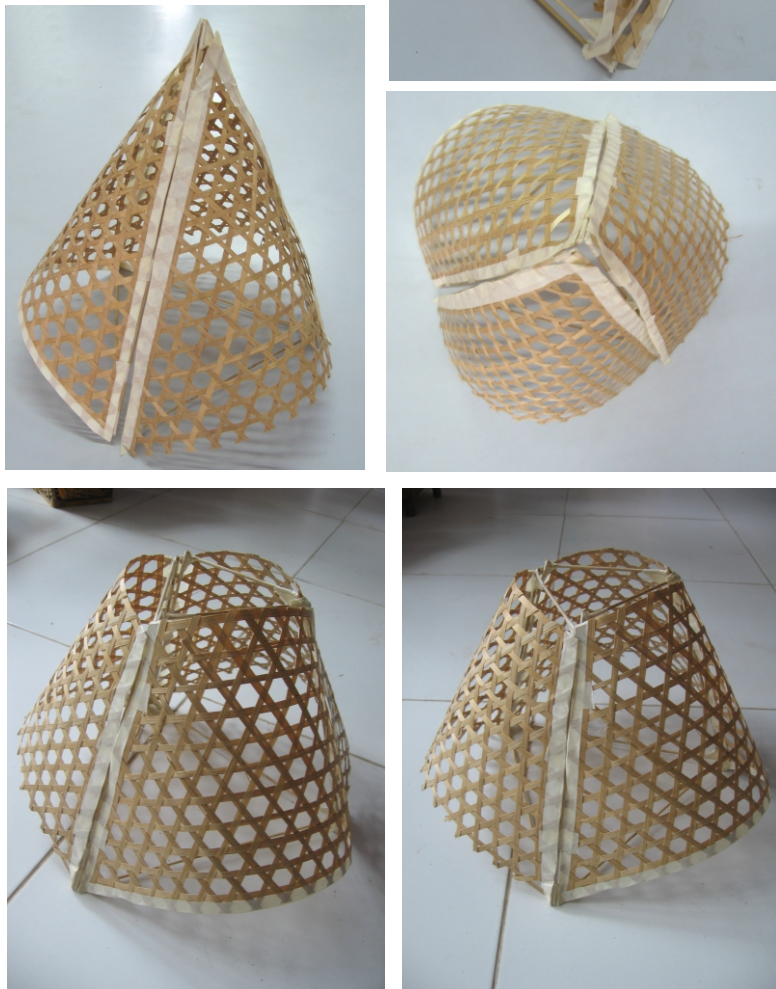


Fig 4.7. Mats molded on a frame to create shades

4.6. Concept Development

The concept of the self forming spiral shade was taken further. Various ideas were generated in terms of the shade alignment, pedestal style, material used in pedestal etc.



Fig 4.8. The mock model seen from a side; while it is lit and not lit



Fig 4.9. Images showing the lamp shade from different angles.

4.6. Concept Development

Variations in the colours were tried out. And the best option seemed to be the combination of two colours, one in the background and one for the windings.

Fig4.10. Variations in the colours of various elements in the shade





Fig 4.11. Detail for joining the shade to stand

4.6. Concept Development

The shade needs to be joint to the stand a joint was worked out which uses screws and restrains the movement of the shade and provides strong support. Two metal plates are sandwiched and joint by three screws at top and bottom. These screws go through the gaps in between the sticks.

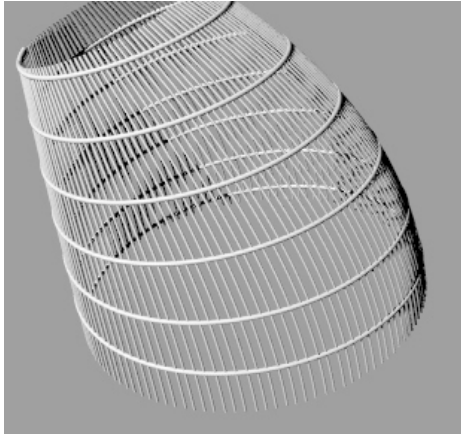


Fig 4.12 Detail of the shade in 3D



Fig 4.13. Pedestal lamp in 3D view

4.6. Concept Development

3D drawings were made to understand the proportions

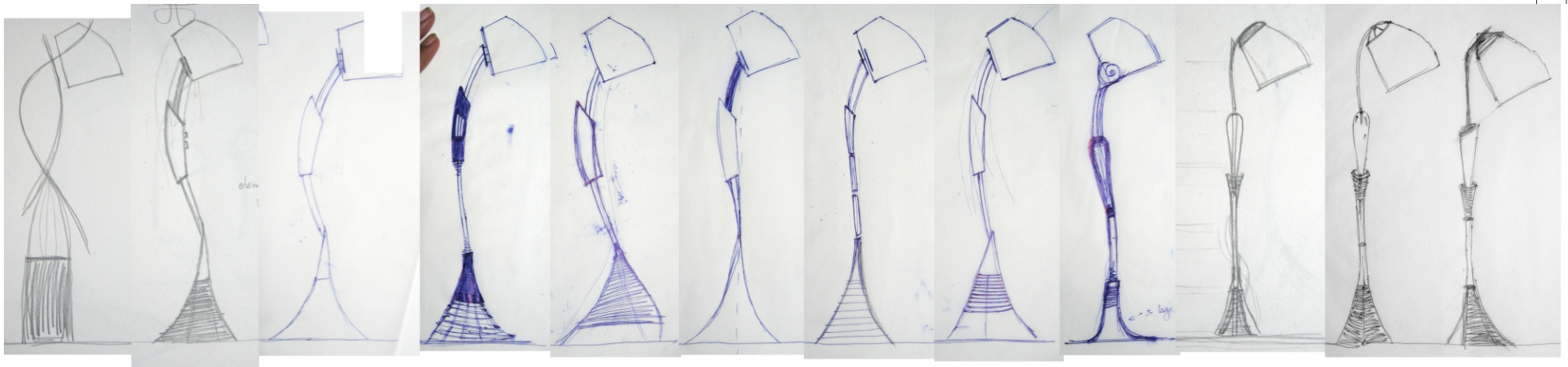


Fig 4.14. Pedestal lamp form responding to the straight lines in the shade.

4.6. Concept Development

Similar to the explorations in the shade, explorations in the pedestal were done. Many alternatives of the same concept were made to get the final form. transportability was a one of the main criterias so a stand that could be dismantled was thought of.

Fig 4.15. Alternatives in the final concept; fine tuning the proportions and elements.



4.6. Concept Development

A true scale 2D sketch was made to understand the relation of the lamp to the furniture around like a sofa etc and the user

Fig 4.16. The full scale 2d sketch placed alongside the sofa chair



Fig 4.17. Interaction between the user and the lamp.



4.6. Concept Development

To achieve the lightness in the form similar to the shade the base had to be visually light. Thus a similar form evolved as the pedestal which gives the lamp a very distinguished look.

Fig 4.18.. Merging the actual mock up models with the scene to understand the feel of the final product



4.6. Concept Development

Spiral was taken up as the concept for the lamp, which is coming out beautifully in the design. Some details are in progress and would make the lamp a complete entity.

Fig 4.19.. mock up model done in photoshop



Chapter 5 : Final Product

5.1. Features

5.2 Setup Envisaged

5.1. Features of the lamp

1. Material-- a bamboo pedestal lamp
2. Look-- sculptural and exclusive and indian
3. Function-- light volume control through dimmer
4. Cost-- far cheaper than glass-steel imported pedestal lamps and as elegant
5. Transportable- the lamp can be dismantled in parts for easy transportability.
5. Energy consumption-- use of yellow CFL
6. Maintenance– Washable shade! Dustable stand!

All in all an eco friendly lifestyle product!!

2.3.4. Maintainance of Bamboo Products

- Washable under low pressure stream of water; dry in shade after washing.
- Coat of matt melamine/ linseed oil could be applied to protect the shine.
- If to be stored for a long time put silica gel tablet with the bamboo product, to prevent dampness from affecting the product.
- Don't expose the dyed bamboo parts to sun, otherwise the intensity of colour is lost.
- Handle with care.

5.4. Setup Envisaged

A setup in mumbai like chaitanya would be ideal for this job as they have medium skilled craftsperson and a regular setup for churning out products at a regular pace.

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Chapter 5 : Final Product

5.1. Features

5.2 Setup Envisaged

5.3 Maintenance of bamboo products



Fig 5.1 Scenario showing the lamp in reference to the furniture and user.

5.1. Features of the lamp

1. Material-- a bamboo pedestal lamp
2. Look-- sculptural and exclusive and indian
3. Function-- light volume control through dimmer
4. Cost-- far cheaper than glass-steel imported pedestal lamps and as elegant
5. Transportable- the lamp can be dismantled in parts for easy transportability.
6. Maintenance-- Washable shade! Dustable stand!

All in all an eco friendly lifestyle product!!



Fig 5.2 The pedestal lamp when not lit



Fig 5.3 The pedestal lamp when lit

5.1. Features of the lamp

The pedestal lamp measuring 1765 mm in height

Fig 5.2 shows the lamp when not lit whereas Fig 5.3 shows it in the lit condition.

The shade and lower half of the stand are created with bamboo woven forms. The construction is similar to traditional fish traps using fine bamboo sticks woven with cane. The upper half of the stand and the base are made out of powder coated metal. The base is spread out relatively in area to balance the long height of the lamp. The colour contrast creates a very warm yet striking impression. The colours would surely match with the ethnic Indian look of a home. The beautiful shadow patterns are a unique feature of the lamp.

5.1. Features of the lamp

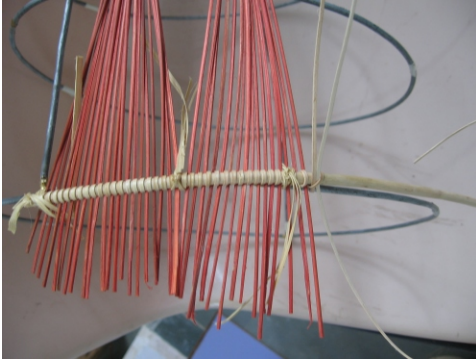


Fig 5.4 Starting of the weave for shade over a wire mold. The weaving starts at the bottom of the mold for the shade.



Fig 5.5 Detail of top edge weave. Each winding hold two sticks at the last round of weave.



Fig 5.6 Detail of bottom edge weave. Each winding holds only one stick in each round of weave till the second last one.

5.1. Features of the lamp



Fig 5.7 The top edge detail of the stand in bamboo. The stand uses bamboo sticks and cane in natural colour. The cane used for winding is dyed in red colour which matches the shade.



Fig 5.8 The bottom edge detail of the stand in bamboo. The stand rests over the metal base below.

5.1. Features of the lamp



Fig 5.9 The dimmer is placed in the upper part of the stand which is in metal.



Fig 5.10 The upper part and lower part of the stand can be separated for ease of transport.

5.1. Features of the lamp

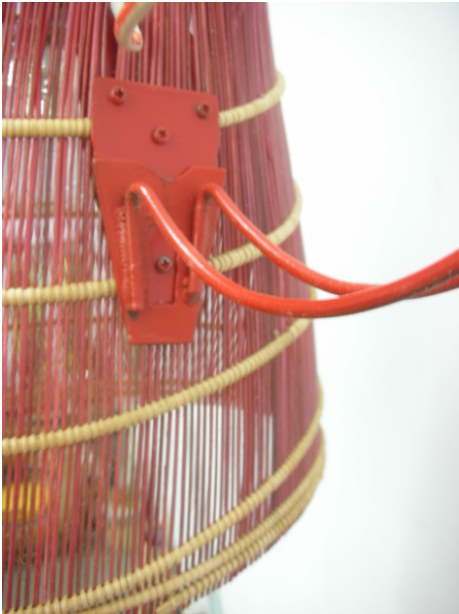


Fig 5.11-12 The neck of the lamp. The shade can be removed from the stand.

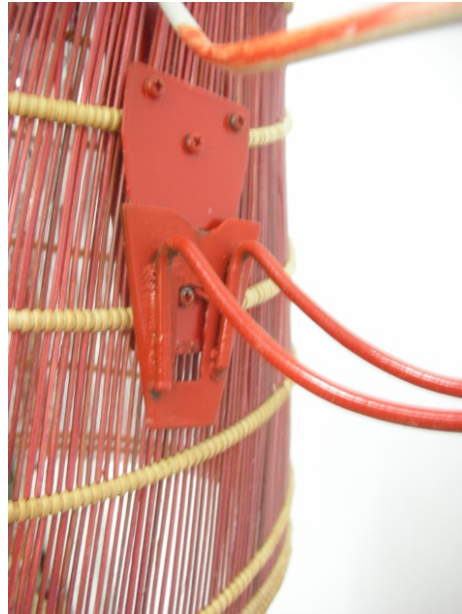


Fig 5.13 The bulb fixing detail. The same element hold the shade to the stand.

5.2. Setup Envisaged

A setup in Mumbai like Chaitanya would be ideal for this job as they have medium skilled craftspeople and a regular setup for churning out products at a regular pace.

Chaitanya service cooperative, is an innovative income generating project designed to provide a means of livelihood for young women living in the slums and pavement communities of Mumbai. Chaitanya bamboo artisans currently live in the Bhoiwada community of Parel in Mumbai. Traditionally bamboo basket makers from Karnataka, they work in mills while continuing weaving at home. Bamboo products by Chaitanya combines modern designs, traditional skills and advanced production technologies to deliver finest handicraft gifts and household items. Chaitanya's products are made from strips of bamboo, treated for anti fungus using permissible ingredients and stained with natural dyes. The organization is supported by YUVA (Youth for Unity and Voluntary Action)

www.bamboobychaitanya.com



5.3. Maintainance of Bamboo Products

- Washable under low pressure stream of water; dry in shade after washing.
- Coat of matt melamine/ linseed oil could be applied to protect the shine.
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