

Research Article

Northeastern Thai Local Wisdom as Creativity Sources: A Case of the Collaboration Concept in Weaving Methods Using Tung Strings and Bamboo Strains as Lamp Design

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Abstract

The research on local wisdom in northeastern Thailand as a creativity source is part of the study of the bamboo weaving method's application to new concept design in the scope of cross-culture. Observing cultural community character and applying it to evaluating design between Northeastern cultural characters resulted in the development of a new weaving concept involving tung strings and bamboo strains. In approaching the bamboo weaving scope, the methods for selecting the population were purposeful and quota sampling, which aimed to emphasize the importance of creativity development, treatment of the material sector, and culture in the product function approach. Managing the community's design thinking step activity in the woven product as a source of creativity helps determine the framework based on conditions to set new goals for product development based on the philosophy of art in shape and methods used by the local community. Weaving is a social activity practiced by people in northeastern Thailand. On occasion, woven products are used as functional items, tung as decorative items, and silk weaving as an identity.

Keywords: Weaving, Isan Culture, Transformation Pattern, Lamp Design

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Introduction

The location advantages that attract creative workers are well-positioned to concentrate on the creative sector (Stolarick et al., 2010). The most important cultural area is in the Northeastern part of Thailand, with its rurality and most populous region (Suwanlee & Som-ard, 2020). The Northeastern is known as Isan culture in exploration materials that have their treatment, occasion, and the preservation of local materials developed to maintain an object that is recreated in a new concept design. In the northeastern region, bamboo handicrafts established a hundred manufacturers in every province, but there is a lack of product development, even though bamboo is still a sustainable economy and dominant in product models, with over 60% of household products using it (Saenwa, 2020). Meanwhile, according to Meethaisong (2021), rice cultivation is the main occupation in the food culture of the Isan people presenting the relationship between beliefs, culture, and habits that are continuously related to the local wisdom fundamental in terms of art. Mahasarakham is one of the areas that used weaving cultivation and bamboo material as supporting items in the religious ceremonial and folklore in Isan (Mahasarakham Local Custom, 2020). The study is intended to help with the research goal of creating pattern modules from Praewa to create a lamp design in traditional weaving, as well as future research in the scope of Isan culture implementation to various aspects of beliefs, habits, and tradition.

A new perspective on the cultural approach in Thailand's massive national product listing project by OTOP (One Tambon, One Product), with Northeastern Thailand (Isan) listing nineteen of the twenty provinces in the program. Of the total of 218.226 products in Thailand, with a percentage of 31.22%, Isan assists with approximately 68.134 products across all categories on the OTOP list (OTOP, 2022). Bamboo weaving is an essential component of creative sector development. New styles of bamboo collaboration products must meet the requirements for product development and distribution in domestic and international markets (Upphapong et al, 2013). A visual concept is a combination of materials and methods made of various smaller parts that respond to reactions to the contrasts of color, form, as well as material (Tabuena, 2022). Diversity is necessary for creative thinking; therefore, it is essential to gather diverse materials and methods and approaches to innovative design (Prud'homme van Reine, 2017). This research categorizes the type of woven products by varied materials in developing the local community in traditional product development in maintaining the design thinking process of transforming in repetition, patterning, and combination to collaborate and develop weaving based on Isan's representative innovation in lamp design.

Objective

1. To create the lamp product design based on traditional methods representative of Northeastern Thailand's identity related to locals' customs.
2. To develop a new concept design of Northeastern Thailand's weaving style in the Phu Tai woven pattern with Tung strings and bamboo strains as the conceptual approach of culture and materials.

Research Methodology

The sample area was decided for the scope and limitation study using a purposive sampling method that used maximum variation sampling to seek the typical subject from all available provinces in the Isan region. The critical reason that the woven object in some areas impacts another sector of the local community is to determine the total population cases of varied materials in small numbers as an area of research. The research focused on the knit between Loy, Tung, and Bamboo in the local community. The twenty areas of Northeastern Thailand (Isan) selected three provinces as research areas and represented by the data analysis and woven bamboo as Isan representative products with its own local authenticity. The representative area of research focuses on Mahasarakham, Mukdahan, and Nakhon Phanom.

a. Observation of activity in Isan local communities in the scope of the culture and ceremonial activity in the Isan culture woven methods into:

- Day 1 Mahasarakham: The Buddha Statue Loy Weaving
- Day 2 Mukdahan: The ceremonial welcoming party of the Phu Tai community
- Day 3 Nakhon Phanom: The treatment of Bamboo trees in conservation forest

b. Identity and Philosophy application

- Step I: Identify the categories of culture application of Northeastern Thailand (Isan) representative areas.

- Step II: Transforming patterns and methods classification.
- Step III: Application of new methods and patterns.

c. Conceptual Framework

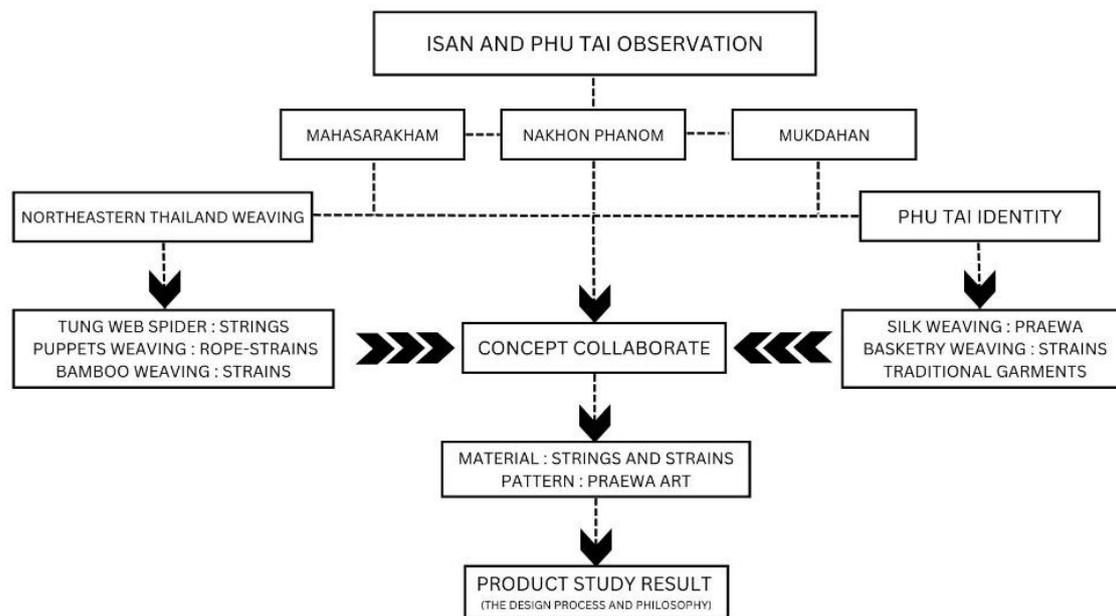


Figure 1 Conceptual Framework
source: Putri, Butla & Prompongsaton, 2022

Results/Findings

Observations in Isan local communities to examine representative culture and cultural assimilation are as follows: Cultural resource management in the human dimension has important rules for both local wisdom and experience in traditional art (Yilmaz & El-Gamil, 2018). On the other hand, the section on design process scope in areas of design activities, design choices, and design results connected in the combination (Ravasi & Stigliani, 2012) looking at the cultural scope to make new collaboration designs and applying the human dimension rule that connects creative thinking in traditional ways to maintain the characteristics of local communities' product implementation regarding new concept design applications in combination between two or three different ethnic groups with equal roles in the design process. For instance, Phu Tai ethnic groups with close cultural areas such as Mahasarakham as opposed to methods of material weaving, Nakhon Phanom, with a popular ethnic group, and Mukdahan in the Mekong influence both history and culture. The observation in three provinces as representative areas found different impacts based on community activities, beliefs, and ways of life, with the approaches of three different influences of culture mentioned and identity in product development in a combination of materials and representative of Northeastern Thailand.

1. Mahasarakham

The manufacturing of traditional fabric symbols (patterns), discovered in Maha Sarakham Province as a symbol (pattern) of traditional silk in the Isan area, obstructs the target's requirements in expressing material with individuals, both the pattern's styling and the folk's preconceptions in changing society (Phakdeesuwan, 2010). To tackle the habitual culture in silk fabrics identity, innovative approaches of creative thinking in community development introduce the weaving puppets to bring the folklore in the Ban Dong Noi community on the activity of weaving. Knitting is divided into two categories as a secondary occupation in the daily life of the community, such as the Loy strain that decorates the foam-based creature of Buddha with detailed patterns in small strain type. Another woven intention is based on folklore characters and the local designer's interpretation. Farming is the primary activity. The locals take raw Loy to process it as a strain by

splitting the outer skin of Loy into pieces and drying it until the humidity decreases. Also, the foam base comes from another community puppet expert, and after the drying process finishes, it is ready for the weaving activity and then divided into two different sections of the community. Young people in the village community spend time expanding types of puppet characters to create shadow puppets, and older people weave the statue of Buddha. The locals create circular activity in areas of woven fabric based on interest and additional income that make new local products with the material around them.



Figure 2 The Buddha Statue Weaving Process
source: Personal Documentation, 2022



Figure 3 The Buddhism Story Characters
source: Personal Documentation, 2022

2. Mukdahan

Mukdahan Province continuously improves the tourist industry sector in tangible and intangible ways through cultural approaches (Nambutr, 2005) including The Cultural Tourism Village Ban Pao, located at Mukdahan listed as the OTOP as the local community in the production of locality in all sectors such as food, basketry, and other traditional influence in the small enterprise industry. The Phu Tai culture creates a high-value tradition that the community maintains to continue in all aspects to show their culture that relates to tourist attractions in local features. The Phu Tai people of Mukdahan that reside in the rural section that is visible in the cultural area with less damage have unique living styles, traditions, cultures, and customs connected to nature and spirit (Boonpila, 2015). The collaborative efforts of the local community and the provincial government in branding and accessibility for the village, as well as its well-maintained infrastructure, serve as a guide for international interest.



Figure 4 The Phu Tai Culture in Welcoming Ceremony
source: Personal Documentation, 2022

The traditional function of bamboo woven products is still present in ceremonials related to tribute in welcoming ceremonies by religious activity. Mukdahan Province's relationship with woven bamboo products has a tremendous impact, including cultural and religious ceremonies, as it is identified as the most significant position along the Mekong River's coastline.

3. Nakhon Phanom

In Thailand, there are about 69 species scattered throughout the country, and about 27 are found in the forest area, the most common of which are *Thyrsostachys siamensis*, followed by *Dendrocalamus membranaceus* and *Gigantochloa albociliata*. The Northern Region has the highest number of bamboo species followed by the Central Region, Northeastern Region, and Southern Region (INBAR, 2021). The context and environments reflected by visitors represent the community at the large output in cultural tourism and outcome cultural background (Chunhabunyatip, Chuaysook, & Aromrucks, 2020). In Nakhon Phanom, environmental protection influences product development as a creative component (Chotiwtutideacha, Taeporamaysamai, & Wongadisai, 2019). Particularly in the Isan area, at Ban Dong-pa-Yung Nathon, a district in the bamboo conservation as environment utilization of *Bambusa blumeana* Schult (Pai Seesuk), with short shoots and a long medium-diameter strip called *D. membranaceus* Munro (Pai Saang). The Pai seesuk with a short strip creates a high-quality kratip product because of the stable humidity and solid strain compared to Pai Saang with the longest strip and a limited number of knits. The methods of bamboo treatment affect long-term bamboo plants.



Figure 5 The Bamboo Forest Conservation
source: Personal Documentation, 2022

Pai seesuk is commonly used to make kratip with a small diameter to maintain quality, whereas *Pai Saang* is used to make kratip with a larger diameter due to the circle scope of weaving. The shoots are cut into small pieces, and the tidy processes of bamboo have manually divided the strains into three sections with a cleaver. For more flexible bending, bamboo strains are cleaned using sharp pinching and are ready for weaving. The weaving module separates into two pieces, the lower with wood and the upper covering the

media. Meanwhile, the methods use varied sizes of strain to make the weaving circular and tube shaping to keep the heat circulation of sticky rice inside.



Figure 6 The Kratip Process
source: Personal Documentation, 2022

Discussion

The research focuses on test design using two different methods and design concepts to create the lamp product in the living room as two alternative practices applied to the methods. Praewa pattern is the diagonal applied pattern with detailing used as the basis of lamp patterns with different processes from silk products, the weaving of bamboo, and collaborating with Tung concept of strings. The use of strains and string in a collaborative process to solve the problem of creating new patterns with different materials.

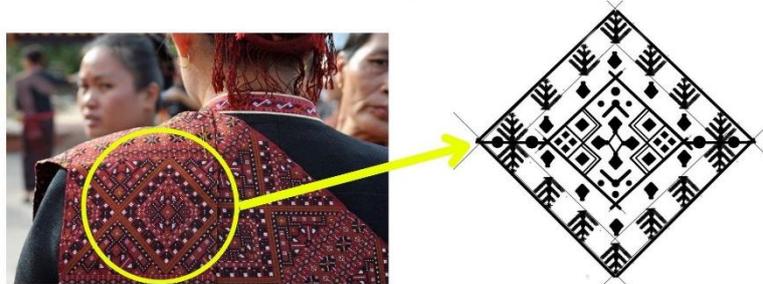


Figure 7 Praewa Pattern Transform
source: Personal Modification, 2022

The diagonal Praewa deviated from the module pattern and denoted the area of pattern combination that reflected the Praewa identity while retaining the Praewa visual without removing all details. Attach the diagonal shape as the general shape and as one that is accessible to create in all types of media.



Figure 8 Praewa Pattern Transform
source: Personal Modification, 2022

The application of finalized and processed Praewa patterning was used in the application of detail patterns. The detail area enlarges to a complete pattern side by side and combines each other as a new pattern with the Praewa unity and harmony.

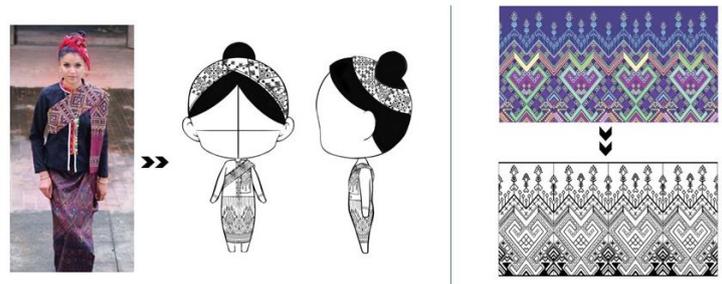


Figure 9 Praewa Pattern Transform
source: Personal Modification, 2022

Three categories of parts such as upper, middle, and lower areas in lamp products categorized into applying designs. The upper part is where bamboo strains material and weaving application using pixel and weaving methods. The application of the Praewa pattern collaborates with the Tung design as a method of making tung and the color combination found in the Tung concept. The design methods combine into one medium as a collaboration of bamboo and rope weaving as a unity. The unit pattern is divided into three different sections, the lower part media is bamboo weaving, the middle area is string weaving, and the upper side is a combination of materials using bamboo and string.

In application, the design splits into two concepts with the source of design reference and uses two dimensions as a standing lamp. The first lamp dimension follows the function of a side lamp without complementing furniture, and the other is a side lamp that complements the table side. An application lamp around the living room with an ambiance between warm and colorful that shows two different characters in lighting ambiance.

GENERAL PREVIEW

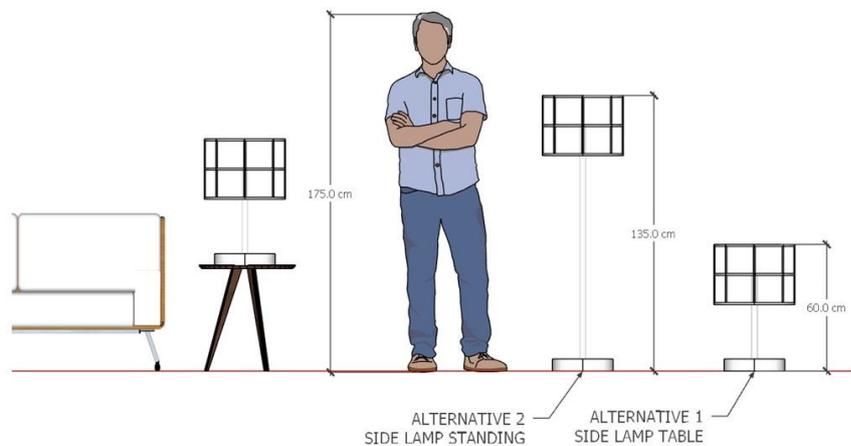


Figure 10 Design Preview
source: Personal Documentation, 2022

1. Design Application

Design thinking separates from research narratives on the perception of advantage with current techniques and concepts, such as defined and clarified, in comparison to associating with creativity obligation (Kleber, 2018), application designing the lamp, uses different applications in three section methods, the upper section consists solely of strings, while the lower section is a combination. The middle part of the cover lamp uses bamboo strains weaving. On the contrary, the Tung concept applied in design takes part of material combined with Praewa pattern identity. Meanwhile, the conceptual tradition of perceptual illustration of nature as well as unity, expressing the natural and harmonious style of design, could indeed define folk's conceptual thinking and aesthetic emotions generated by the appearance of cultural and creative products (Deng, Zhou, & Zhang, 2022). The design follows empathizing, definition, ideation, prototyping, and testing stages to

maintain the design process systematically with the base of the pattern coordinate and material combination applied in the media with different areas based on the Praewa upper pattern uses material bamboo strains and rope strings, the middle part uses string weaving, and the lower uses a woven bamboo pattern.

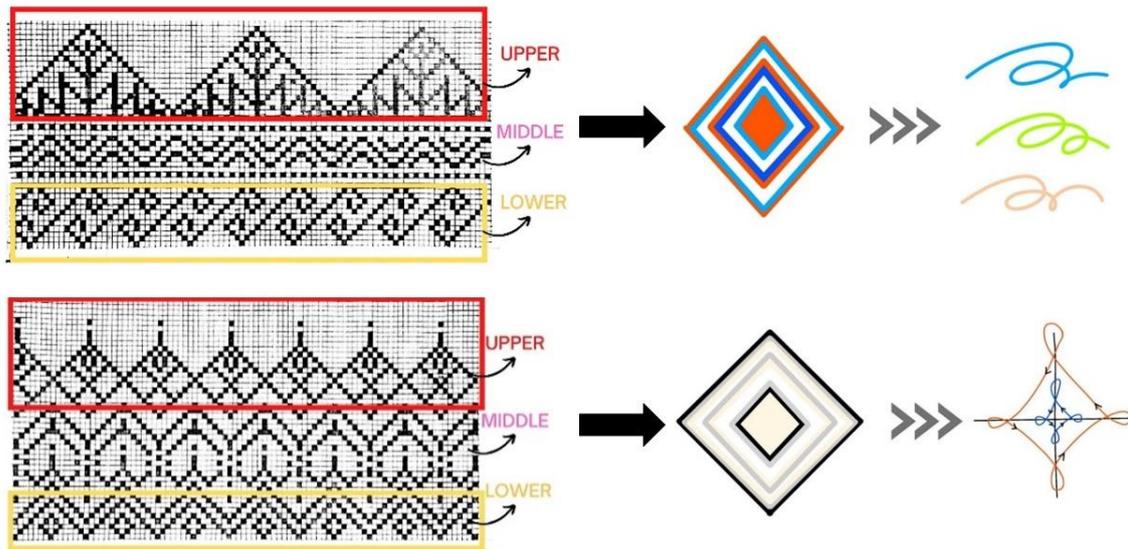


Figure 11 Pattern Transform as Lamp Cover
source: Personal Documentation, 2022

The Praewa pattern modification is made with tung string and bamboo strain, which are used in coloring methods to synchronize. Tung uses bright colors for vibes, and the lighting is in a monochrome tone to follow the scenes with the lighting effect from the bulb lamp. The illustration design shows different colors combined for the table lamp. The application of LED bulbs with colors changes according to user interest. The different colors appear on one lamp cover and create a different ambiance.



Figure 12 Illustration Design
source: Personal Documentation, 2022

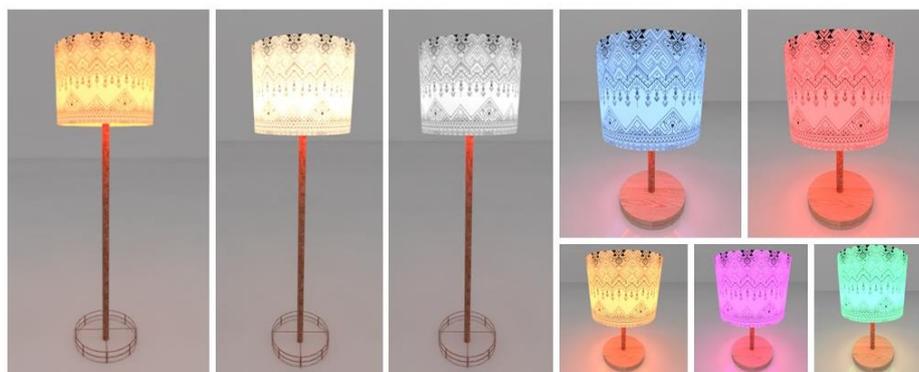


Figure 13 3-Dimension Visual Lamp
source: Personal Documentation, 2022

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The string methods applied from the tung methods weaving, with the combined color white, ivory, and black. And the bamboo strains use the original color and black color. Commonly, Tung design uses a colorful concept, and the first alternative was using tung color concepts in bamboo weaving methods with the Praewa pattern. The illustration design shows the lamp using warm colors, while the application to maintain different scenes of lamp presentation the different ambiances of scenes shown by the application of daylight, cool white, and warm white.

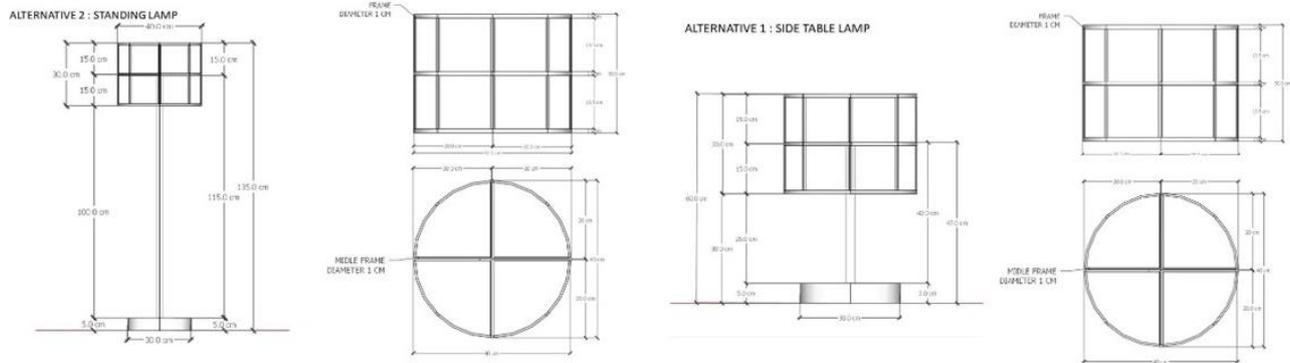


Figure 14 Design Dimension
source: Personal Documentation, 2022

The product dimensions are based on ergonomic measurements in the scope of side table standardization, as well as the frame size to hold the weaving materials and join each patterning section between the lower, middle, and upper parts of the patterning design.



Figure 15 Application of Upper Pattern
source: Personal Documentation, 2022

The first section of the pattern uses the strings in Mahasarakham methods of weaving Buddha puppets in the Praewa pattern combination of detail in a diagonal shape. The methods used show a difference without the base of foam or solid base to support the strains that affected the shaping of patterning.

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Figure 16 Application of Middle Pattern
source: Personal Documentation, 2022

The middle section is the appliance of materials and patterns. The strings are layers between each patterning in the outer section weaving and the inner area using the upper side.



Figure 17 Application of Lower Pattern
source: Personal Documentation, 2022

On the contrary, the lower section applies the weaving pattern from bamboo material. To connect between monochrome colors, the original color of bamboo strains combines with the black coloring bamboo strains and knit the transforms from Praewa detailing in a diagonal shape as tung form. The materials for the lower base use bamboo strains with two assorted colors, while the original color of the bamboo strain and the black color are in a combination pattern in the module.

The module application in each section shows a different result of the application of the methods, such as the shape that follows the solid weaving in Mahasarakham puppets creates a different configuration without the base of weaving as a dynamic curve. The Buddha in Loy weaving has a steady shape with a foam base, and the strings lamp design weaving has a flexible composition with different outcomes of the Praewa pattern in the three-dimension application.



Figure 18 Application Pattern
source: Personal Documentation, 2022

A different implication of lamp design application is the character of the material that shows as one component of the feature design. The upper section creates a dynamic curve by patterning and weaving methods, while the middle area uses the coverage that shapes the weaving as a steady weaving that uses the strains. The last section is a solid combination of bamboo material knits in application to collaborate all sections into one object of design.

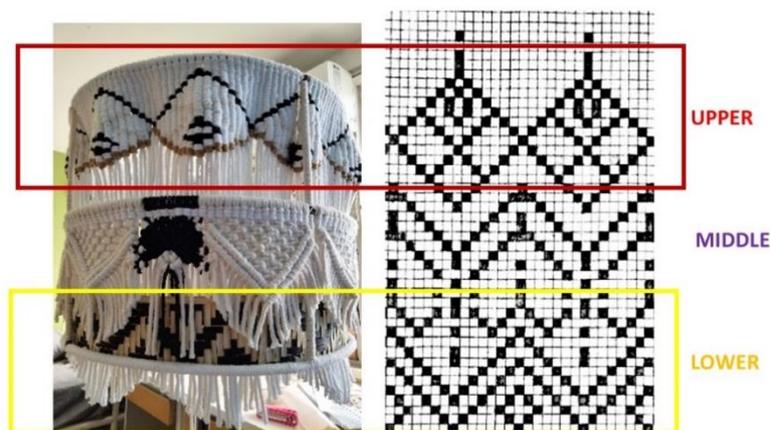


Figure 19 Application Pattern
source: Personal Documentation, 2022

Suggestion

In the study of Northeastern Thailand's art and culture, various concepts of culture make a new application design in collaboration with materials, art, identity, and culture exploration in creative products in the Mekong river's cultural influence comes from both provinces and ethnic groups. The suggestion as advice for people interested in the study of traditional applications in design concepts is as follows:

1. The sample area of culture application in Northeastern Thailand categorizes a variety of ethical identities. For instance, selecting the culture collaborations should be based on the importance of creativity development in the community to study the influence of assimilation between cultures and functions in creating a unity and harmony concept.

2. Using local methods in material experiments could generate renewable information about application methods, allowing a different technique to be used in the product creation process.

3. In the study of cultural identity combinations, the surrounding areas of the community and material relating to local wisdom should be considered in the culture-representative application of product developments.

Conclusion

The concept of cultural combination to create an artwork is an experimental design in collaboration with the methods of Northeastern Thailand assimilation culture between habits, materials, and function treatment using in local identity to identify the art of traditional process in culture philosophy. The collaboration product is the result of approaching the information of cross-culture application in the Mekong River's cultural influence. In all the sample communities in the study, the different object of technique symbolizes the preservation of culture that maintain and sustainability of the traditional methods and the concept of applying renewable function product in all experimental design as the lamp product design.

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