

This file has been cleaned of potential threats.

If you confirm that the file is coming from a trusted source, you can send the following SHA-256 hash value to your admin for the original file.

be1a76d024d9f6901a1c0b38cbf040814def0a4a61f989cc4b1a4d8283733561

To view the reconstructed contents, please SCROLL DOWN to next page.

Home Decorative Product Design Inspired by Phuang Mahot

Akpong Inkuer¹ and Sittichai Pintuma²

^{1,2}Suan Sunandha Rajabhat University, Bangkok, Thailand

E-mail: ¹akpong.in@ssru.ac.th, ²sittichai.pi@ssru.ac.th

Abstract

The purpose of this research was to design home decorative products by applying the concept of Phuang Mahot, which is a symbol of auspiciousness in Thai culture, together with the study of the properties of mulberry paper as a natural material with the potential for perfume absorption. Using creative research methodology along with qualitative research. Related research experiments with Phuang Mahot stenciling materials and techniques and product prototype development under the concept of Scent of Transformation. It has outstanding properties for its response to liquids and aromas. It can be used as both an aroma diffuser and an aesthetic element that causes changes in shape and color. At the same time, the stencil technique developed from the Phuang Mahot pattern enhances the dimension of light, shadow, and rhythm of shapes, affecting the user's sensory perceptual experience. A combination of cultural concepts, materials, and contemporary design innovations. It shows the potential of interpreting Thai arts and crafts in a new way. This leads to an approach to creating added value for Thai handicrafts. Expanding the role from symbolic ornaments to products that meet practical uses and promoting the sustainability of handicrafts in the context of contemporary lifestyles.

Keywords: Creative Crafts, Mulberry Paper, Phuang Mahot, Product Design

1. Introduction

Thai arts and crafts are a cultural heritage that reflects wisdom. Traditions and lifestyles of society have been around for a long time, with handicrafts not only serving as utilitarian objects. Rather, it is a medium to convey psychological, aesthetic, and cultural values. However, in the context of contemporary society, arts and crafts are facing the challenge of adapting to usage habits. Living patterns and consumer tastes today. The application of contemporary design concepts is an important approach to add value and increase the potential of Thai handicrafts. (Tonthongkam et al., 2024; Phriwanrat, 2023)

Phuang Mahot is one of the symbols of Thai art and culture that plays an important role in the context of rituals. Celebrations and the belief of auspiciousness A distinctive feature of Phuang Mahot is its hanging pattern. It reflects its symbolic beauty and animated movement. Such patterns are not only decorative elements but also convey abundance, prosperity, and the relationship between humans and nature. (Gibbins, 2023).

Mulberry paper is a natural craft material that is simple but full of design potential. The fibrous structure of paper gives it special properties, including its ability to absorb water and color, translucency, and change in shape when exposed to liquids. These properties allow mulberry paper to be used as an interactive material, which is more responsive to applications

and environments than conventional finishing materials. In addition, mulberry paper as a natural material is in line with sustainable design concepts and responsible use of resources. (Arasakumar et al., 2025; Go et al., 2024)

In the context of contemporary design, Product development trends are not just focused on form or functionality. Integrating arts and crafts with design innovation is an approach that helps create products with stories. It has an identity and can deeply connect users to the cultural context. Several arts and design research studies suggest that the use of traditional knowledge is a great way to combine experimental design processes. It can give rise to new product models with added meaning and value.

From this concept, therefore, this research aims to study and develop the design of home decor using Phuang Mahot as the main inspiration, together with the use of the unique properties of mulberry paper to create sensory interaction. The "transformation" caused by the vibe of handicrafts not only reflects the beauty of shapes and materials but also shows the potential of Thai arts and crafts to adapt and exist in harmony with contemporary lifestyles.

1.1 Research Objective

1.1.1 To study and analyze the potential of mulberry paper for the design of home decoration products.

1.1.2 To design products that combine Phuang Mahot techniques and concepts with the physical properties of mulberry paper.

2. Literature review

Phuang Mahot is considered a Thai art and craft that plays an important role in the cultural context, often appearing in Thai rituals and architecture as a symbol of auspiciousness. Abundance and prosperity Art and culture studies indicate that the shapes and rhythms of Phuang Mahot reflect the sophistication of Thai craftsmanship and the belief system conveyed through artistic forms. Taking Phuang Mahot as inspiration for contemporary product design is therefore not only a borrowing of physical forms but also a transfer of the abstract values and identities of Thai culture into a new context. (Gibbins, 2023).

Mulberry paper is a natural material that has been used in Thai handicrafts for a long time, especially in the northern part of Thailand. Research in materials and crafts indicates that mulberry paper has outstanding properties of translucency. Water absorption and color, elasticity, and texture that feels natural. Such properties facilitate their application in product design that emphasizes a sensory experience and environmental response. In addition, mulberry paper is in line with the concept of sustainable design, as it is a biodegradable material with low environmental impact. (Arasakumar et al., 2025; Go et al., 2024)

Research involving material experimentation in contemporary design suggests that the use of material-specific properties is the starting point for design concepts. It can lead to new product models with special characteristics and user interaction. (Gay, 2022; Ingkutanon & Baisamut, 2025; Limthathanakun, 2024) The use of materials that can change shape, color, or texture when triggered by environmental factors such as water, light, or smell. It adds an experiential dimension and interest to the product in terms of aesthetics and emotions.

3. Methodology

This research is creative research that combines qualitative research methodology with a design experimentation process, which can be divided into 3 stages. As follows:

Step 1: Study of information and concepts

Study the information from the papers, research, and works related to the meaning and role of Phuang Mahot in the Thai cultural context and the physical properties of mulberry paper.

Step 2: Material and Technical Experiments

Conducted experiments on materials and manufacturing techniques to explore the feasibility of using mulberry paper in home furnishings, with a focus on perfume absorption testing. Color changes and geometric response.

Step 3: Design and development

The results from studies and experiments are synthesized into design concepts, product prototypes are developed, and the results are evaluated in terms of aesthetics, functionality, and creative craft value.

4. Results

As a result of the study of documents, research, and related works, it is found that Phuang Mahot is an element of Thai art and culture that plays an important role in the context of rituals and beliefs in auspiciousness. The style of Phuang Mahot is characterized by the arrangement of hanging elements. Rhythmic repetition and fluidity of shapes, which convey abundance. Continuity and living movement. Such symbolic characteristics have great potential for application as a stylistic concept in contemporary product design. The results of the study of the physical properties of mulberry paper have shown that it is a natural material with a specific fibrous structure. This results in the ability to absorb water and paint. It is translucent and changes shape when touching liquids. These properties make mulberry paper suitable for use as an interactive material, which is more responsive to applications and environments than conventional finishing materials.

Experiments on materials and manufacturing techniques have shown that mulberry paper can be used in home furnishing products that require effective sensory interaction. The key results of the experiment are as follows:

1. The perfume absorption test shows that mulberry paper has a good ability to hold fragrance and can spread the scent smoothly and continuously. This is conducive to its use as a component of odor diffuser products in residential areas.

2. Experiments on color absorption have shown that the color can naturally spread along the fibrous structure of mulberry paper. Creating unique shades and patterns in each piece. As a result, the product is unique and reflects the value of creative crafts.

3. Observation of the geometric response of mulberry paper after perfume and color absorption. It was found that the paper was weakened, bent, and moved by gravity. It enhances the dimension of experiential design.

In addition, the results of the experiment on Phuang Mahot paper cutting and stenciling techniques. It was found that controlling the fineness of the pattern and the proportion of solid-

airy areas directly affects the strength of the structure and the efficiency of odor distribution. This is important information in determining patterns for prototype production.

Figure 1: Showing the color and fragrance of mulberry paper

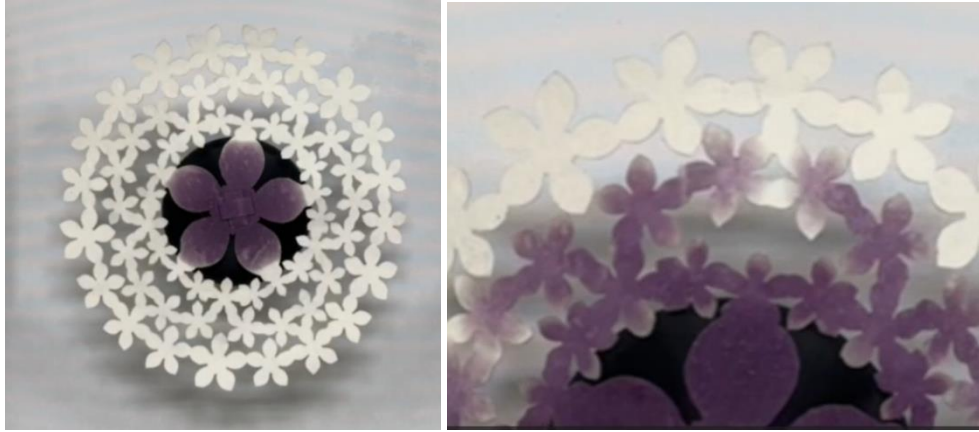


Figure 2: It shows the softening, bending and movement of mulberry paper by gravity.



Table 1: Summary of material and technical experiments in product design

Experimental Issues	Detail	results	Application In design
Water absorption properties of mulberry paper	Different amounts of water and fragrance absorption test.	Mulberry paper has high absorbability, uniformly absorbed.	It is used as an intermediary to spread fragrance and create interaction with users.
Color absorption	Experiment with dropping paint and perfume combinations on mulberry paper.	Naturally distributed colors. Unique shades are formed.	Create a unique identity for each product.

Experimental Issues	Detail	results	Application In design
Changes in shape when absorbing liquids.	Observe the deformation of mulberry paper after perfume absorption.	The paper weakens, bends and moves with gravity.	Add an experiential design dimension

The results of the use of study and experimental data are synthesized into the design process. The design process can be summarized in the following steps:

Concept Design

Scent of Transformation to convey the change caused by the scent of handicrafts by linking the meaning of SCENT as a medium of smell and emotion with TRANSFORMATION, which reflects the changes in materials. Shape and user experience The concept is defined as a guide to decisions on forms, materials, and manufacturing processes.

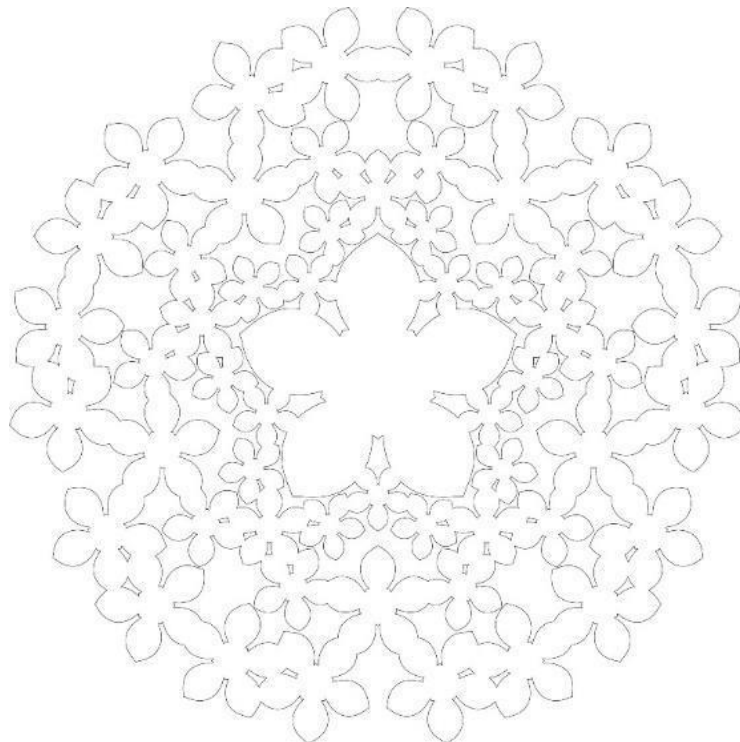
Form and Symbol Translation from Phuang Mahot

Bringing the distinctive features of Phuang Mahot include hanging. It is decoded as a stylistic element for product design, focusing on transforming symbolic values into shapes and patterns that can be used in the context of contemporary home décor.

Pattern and Structure Development

Design a stencil inspired by Phuang Mahot. Taking into account the proportion of solid and airy areas to suit the properties of mulberry paper in terms of strength. The pattern has been developed to accommodate changes in materials as fragrances and colors are absorbed.

Figure 3: Showing the pattern of stenciling.



Product Prototyping

Develop a full-scale product prototype using mulberry paper as the main material and stenciling techniques as key elements. The master is designed to serve as both a decoration and a medium for dispersing the aroma. Along with clearly showing the changes in shape and color.

Figure 4: Show Design Guidelines

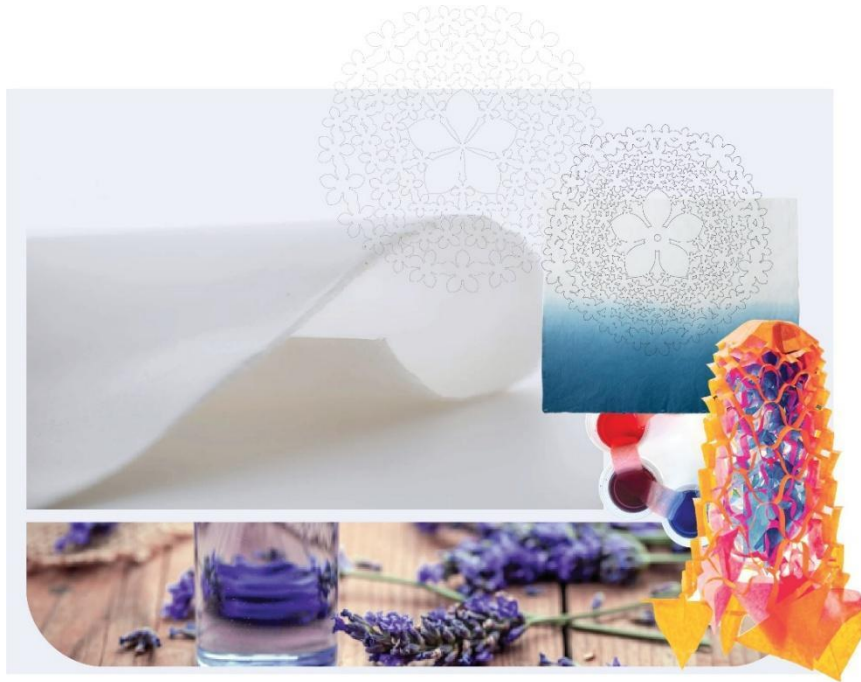


Figure 5: Sketch Design

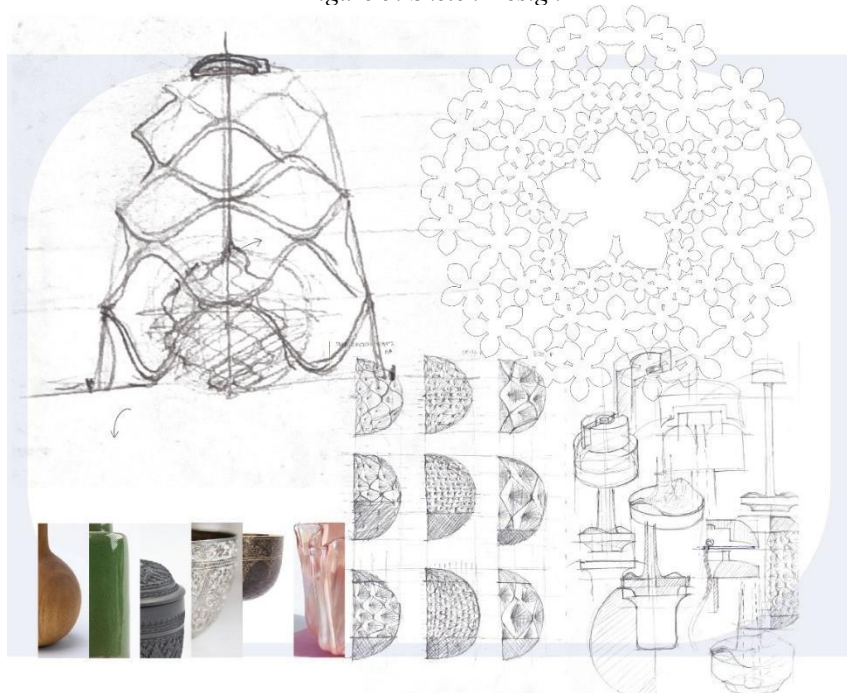


Figure 6: Show Models

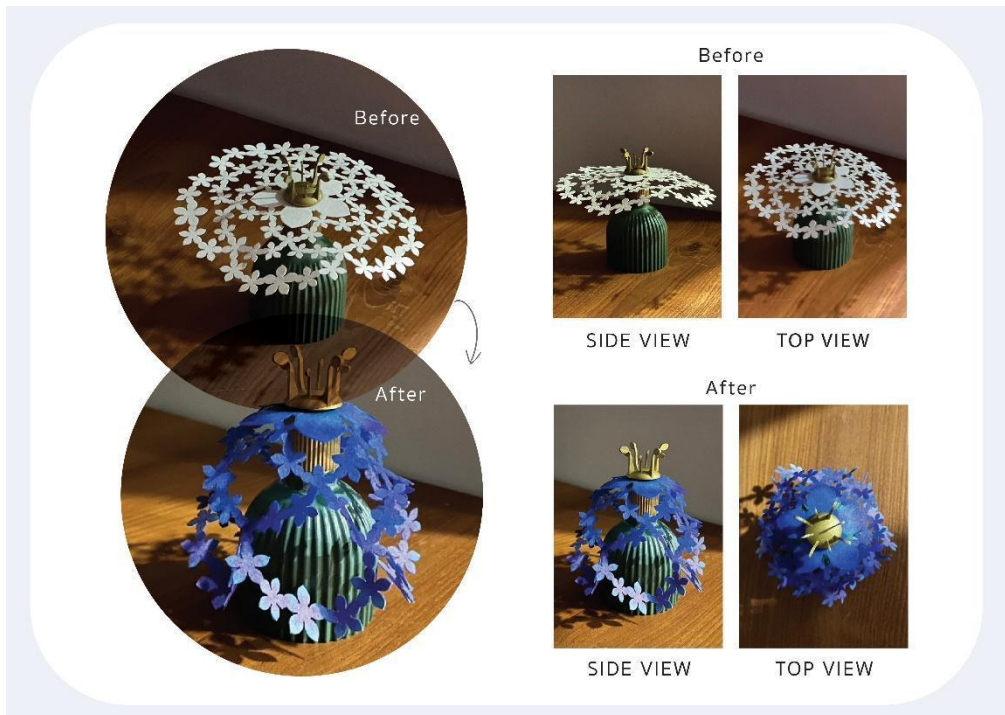


Figure 7: Prototype Products



5. Conclusion

This research aims to develop a design of home decor that reflects the beauty of change through a combination of the properties of natural materials and the Thai arts and crafts process. The Scent of Transformation design uses mulberry paper as the main material, along with an intricate pattern stenciling technique inspired by Phuang Mahot, which is a symbol of auspiciousness in Thai culture.

The design results show that the fragrance absorption and color properties of mulberry paper play an important role in creating the interaction between the product and the user. The product can act as both a decoration and a medium to spread the fragrance. At the same time, there is a natural and lifelike change in shapes and colors, which reinforces the dimension of experiential design and emotional perception. (Aryal et al., 2022; Yao et al., 2024)

Conceptually, the word SCENT means a fragrance that can be spread, and it also conveys TRANSFORMATION, which conveys change or processing, which in this case means changing the form of mulberry paper, as well as modifying the form of Thai handicrafts through a creative and innovative design process.

Therefore, the concept of Scent of Transformation reflects the changes caused by the handicraft vibe, which not only shows the fragrance distribution and the stylistic changes of the product but also the change in the form of the product. It also conveys the value, beauty, and preciousness of the process of creating handicrafts that can harmoniously adapt and pass on inspiration in line with modern lifestyles.

The results show that the design of home décor products with the concept of Scent of Transformation can significantly create a connection between natural materials, traditional arts and crafts, and contemporary design. In addition, the findings suggest that product design under the concept of Scent of Transformation is not only about the development of aesthetic works. Rather, it is a creative process that helps expand the scope of Thai arts and crafts to new uses. A design that allows for integration with other handicrafts. It reflects the potential for both creative and commercial expansion and shows that Thai handicrafts can adapt and exist in the modern way of life with value and meaning. (Nimkulrat, 2022; Hanafy & Hamdi, 2024; Banerjee, 2025)

Acknowledgment

The author would like to express sincere gratitude to Suan Sunandha Rajabhat University for its invaluable support and assistance throughout the research process.

References

- Arasakumar, E., Ranjith Kumar, S., Vasanth, V., Thangaroja, K., & Mithilasri, M. (2025). Extraction Of Paper From Mulberry (Morus Indica L.) Twigs And Its Analysis. *Plant Archives*, 25(1), 979-984.
- Aryal, G. M., Kandel, K. P., Bhattarai, R. K., Giri, B., Adhikari, M., Ware, A., ... & Neupane, B. B. (2022). Material properties of traditional handmade paper samples fabricated from cellulosic fiber of lokta bushes. *ACS omega*, 7(36), 32717-32726.
- Banerjee, S. (2025). Exploring Cultural Sustainability Through The Integration And Innovation Of Traditional Crafts With Contemporary Design. *Prestieesci Research Review*, 2(2), 286-296.

- Gay, D. (2022). *Composite materials: design and applications*. CRC press.
- Go, I. H., Jo, A. H., Jang, K. J., & Jeong, S. H. (2024). Characteristics of Bast Fibers Derived from the Bark of Three Paper-Mulberry Cultivars in Korea. *BioResources*, 19(4).
- Gibbins, A. (2023). Puang Ma Hoat: The Coexistence of Paper Cutting Art across the Regions of Thailand. *The Journal of Thai Lanna Wisdom*, 17(2), 76-98.
- Hanafy, S. I. A. E. F., & Hamdi, F. H. A. (2024). Creating Products to Support Handicrafts and Achieve Sustainable Development. *Cultura: International Journal of Philosophy of Culture and Axiology*, 21(3).
- Ingkutanon, M. & Baisamut, S. (2025). Design of decorative wall products from algae in shrimp farms. *Art Pritas Journal, Faculty of Fine and Applied Arts, Suan Sunandha University*, 13(2), 110-120.
- Limthattanakun, T. (2024). Study of Charcoal Properties for Home Decoration Product Design. *Science and Engineering Connect*, 47(3), 278-294.
- Nimkulrat, N. (2022). Hands-on intellect: Integrating craft practice into design research. *International Journal of Design*.
- Phriwanrat, K. (2023). A Designing of Home Decoration Products from a Local Wisdom, "Phetchaburi Craftsman" with Thai Innovation Art Concept. *The Fine and Applied Arts Journal*, 16(1), 105-123.
- Tonthongkam, K., Arayajaru, S., Boonsringam, N., Phonsongkroh, N., & Phusri, N. (2024). Heritage Design: Developing Products Based on Traditional Knowledge and Creating an Artisan Community in Nakhon Pathom Province. *International Journal of Designed Objects*, 18(1).
- Yao, J., Sun, M., & Yan, Y. (2024). Degradation of handmade paper: Exploration of water adsorption behavior and estimation of lifespan based on time-temperature-humidity superposition. *Polymer Degradation and Stability*, 229, 110953.