

*The Influence of Culture in Pattern Wisdom Development Between Praewa Pattern of
Phu Tai Ethnic and the Javanese Batik Methods*

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Abstract

The traditional textile patterns embody the significant influence of conservative values within local communities, particularly in the context of rural ethnic groups in Southeast Asia. This research aims to study the application of cross-cultural approaches in design, specifically focusing on the contrasting textile cultures of Thailand and Indonesia within the Phu Tai Ethnic group. The research examines the Praewa Queen silk pattern, representing Thai identity, and the methods of Javanese Batik style, representing Indonesian identity, in the development of new pattern designs that align with ethnic wisdom. The research methodology involves experimenting with pattern transformation, combination, and separation between the two targeted objects, both of which share a similar transformation process with different intentions and methods influenced by the local environment and cultural factors. These factors encompass not only ways of life but also the textile culture inherited from ancestors. The research aims to explore the new positioning of pattern art as a prominent aspect of sustainability and heritage preservation within the creative sector. The study's significance lies in maintaining the availability of different design methods applied in diverse ethnic environments. These methods serve as a basis for implementing culture-based design and act as literary sources for cross-cultural research in fabric-related interests. Additionally, the study examines the influence of each wisdom in defining the ways of life of the Phu Tai ethnicity and the Javanese community, particularly in relation to the function, decoration, and new identity of textile design.

Keywords: Pattern, Cross-Culture, Textile, Home Décor

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Introduction

The development of local wisdom status in the creative industry sector serves as a reference for economic reform, not only in terms of product industrialization but also in preserving the historical heritage inherent in a country. This historical identity and the standards attached to it become an important part of local wisdom (Crilly, 2010). Applying local wisdom in the concept of home décor textiles is a crucial component for embracing architectural imperfections in the interior section (Parmar & Malik, 2007), especially when combining the vast conceptual design of home products with the cultural influences of Thailand and Indonesia. Developing a sustainable design method based on intellectual property and skill development is crucial in facing the challenges posed by multicultural productivity, particularly in the Southeast Asian cultural approach to interior applications like textiles for home decoration products, which play a significant role in interior trends (Tarafder, 2019). Countries that seize the opportunity of historical flexibility in their creative industry development exemplify the concept of empowering traditional concepts, which have had a significant impact (Inglehart and Baker, 2000). The combination of the concept of creative industry development with a focus on sustainability and the integration of national identity, heritage, and locality, such as the practices of the Phu Tai community (Sattaphon, 2007), can be seen as a method that embraces the diversity of historical conflicts and methods applied within the scope of a country's identity (Adrianti & Zainsjah, 2020).

The "Phu Tai" tribe primarily resides in Sakon Nakhon, Nakhon Phanom, Kalasin, Mukdahan, Amnat Charoen, and Yasothon provinces in Northeastern Thailand (Ethnic Group in Thailand Database, 2022). These areas showcase the modernized aspects of Phu Tai culture, particularly in Mukdahan, Mahasarakham, and Nakhon Phanom. In modern applications, the concept combines various patterns and utilizes traditional coloring methods using natural sources. Phu Tai from Kalasin province is renowned for its silk products (Khuenkhaew, 2017), which have distinct styles compared to other ethnic groups. The identity of the queen silk, known as Praewa, is embraced by Phu Tai women as a shoulder cover with a color scheme consisting of red and brown (Upphapong et al., 2013). The intricate patterns are achieved through manual weaving techniques. In contrast, Indonesia is well-known for its batik art, recognized by UNESCO in 2009 as an important intangible cultural heritage. Batik involves a distinct fabric painting process that sets it apart from other forms of textile production. This differs from the method used in creating Praewa patterns. Batik has become a national identity in Indonesia and is chosen as a collaborative pattern design element (Saddhono et al., 2017). The combination of these two textile traditions, Praewa from the Phu Tai tribe and the batik style from Indonesia, brings together unique techniques and cultural elements to create new and innovative designs.

The study aims to explore the influence of local community preferences on the preservation of their way of life, particularly in relation to the preferences of ethnic groups in Thailand and Indonesia. The research focuses on combining different pattern methods to express the significant influence of local community character between Batik as intellectual properties (Burhanuddin et al., 2020) and Praewa as a historical track of wisdom (McIntosh, 2009). These patterns serve as national branding for Praewa and Batik cultures, renowned in Thailand and Indonesia respectively. The research methodology involves conducting experimental methods and analyzing community approaches. A comparison is made between two different methods of pattern combinations. The analysis includes categorizing and comparing natural color sources, drawing from the practical aspects of Batik history, art, and application. This data is then applied to the Praewa combination, utilizing the natural color

sources that outline the element of nature (The Color of Asia, 2013) using materials available in Thailand. The comparison also incorporates synthetic colors, collaboration in design, and considers multicultural influences to explore new possibilities in pattern design methods. The study seeks to position the development of the creative sector by maintaining the ability to approach local wisdom in the application of decoration products. It aims to create new methods and concepts in design that represent cultural identity and legacy, providing a reference for the study of multicultural approaches and their combinations. Overall, the research aims to contribute to the understanding and development of the creative sector, emphasizing the importance of cultural heritage and its role in shaping new identities and possibilities in design.

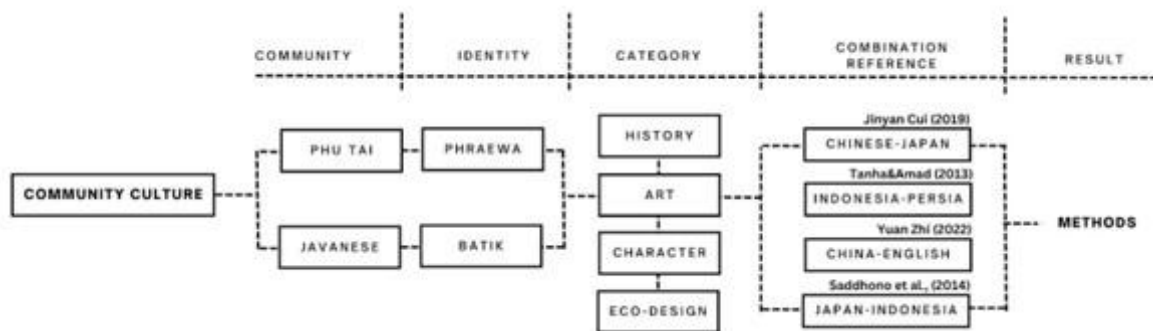


Figure 1. Conceptual Framework (Personal Modification, 2023)

Discussion and Conclusion

The application of batik in Javanese culture, particularly in the Yogyakarta region, holds significant cultural and social meanings in the methods of tie-dyeing (Sugiyem, 2008). Different patterns are associated with specific philosophical and symbolic representations that resonate with the community's social standards. Some patterns are considered auspicious, symbolizing fortune and prosperity, and hold ceremonial significance for specific occasions. For instance, within the Yogyakarta sultanate, classical batik patterns are divided into sacred modules, which are traditionally restricted for use within the palace (Steelyana, 2012). One such pattern is the Parang Batik Motif, representing the ever-moving sea waves. It signifies the continuous improvement of one's relationship with God, nature, and others. Another significant motif is the Kawung Batik Motif, which carries profound philosophical meanings related to universal energy and the sanctity of human life. This motif was historically associated with the kingdom's power and wisdom, particularly linked to the king's leadership.

In Indonesia as a whole, batik is widely embraced across different age groups and is not limited by age or status. It serves as a representation of cultural wisdom and identity (Nimas Ayu et al., 2019). As part of the government's efforts to preserve culture, there is a charter that mandates all Indonesian citizens, including students and workers, to wear batik every Friday. This practice aims to promote and preserve the cultural heritage of batik throughout the nation. Contrarily, the patterns used in Thai batik do not have specific meanings in general. They follow the ordinary cultural interest within the community. The patterns often derive from flowers, relating to the community's beliefs, historical significance in local wisdom, architectural facades, pattern combinations, and the art of decorative plates in heritage pattern design. Traditional Thai home patterns are influenced by traditional wisdom accents that are typically applied to the facades and interior details in decoration. The meaning of Thai batik patterns depends on the artist, and there are no specific patterns for batik, except for special occasions. Unlike Indonesian batik, which provides specific pattern

meanings for ceremonial occasions, Thai batik accepts all patterns for such occasions. However, silk material is restricted in the Islamic community for use in prayer sections. In Thailand, batik can be applied to various pattern meanings and ceremonial contexts. It can be used in all aspects of batik making and can be combined with other pattern identities. For example, the patterned silk of 'Khor Chao Fah Siriyannavari' was created for the princess of Thailand but can be applied to any textile design across Thailand, including Thai batik art.

In Mukdahan, there is a tourism village that offers visitors insights into the daily lives and traditions of the Phu Tai ethnic group. The village serves as an educational and cultural branding platform (Nambutr, 2005), allowing visitors to experience the customs and practices of the Phu Tai people. For example, the Bai Sri ceremony uses banana leaves to welcome visitors, and offerings are made to Buddha as a prayer for protection. Another example is the Ban Dong Noi community in Mahasarakham, which adopts a different approach to cultural development. They utilize more flexible materials and focus on enhancing the advantages of their local habitat (Phakdeesuwan, 2010). Collaboration plays a significant role in community development as they leverage their resources and creativity based on daily life experiences. This approach helps improve the branding of their ethnic identity within the limited boundaries of the village. Nakhon Phanom is another important location for the Phu Tai tribe, known for its conservation areas dedicated to bamboo weaving. The region is renowned for its bamboo plant sources, with the Nakhon Phanom Forest conservation area being particularly significant. The products created in this region are influenced by the different species of bamboo, which impact their shape, quality, and quantity (Chotiwtutideacha et al., 2019). Additionally, studying the impact of location on the culture and products of communities outside the Phu Tai ethnic group provides valuable insights into how local wisdom is influenced by various materials and environmental factors.

In the concept of cross-culture, as mentioned by Cui (2019), one important step in combining designs is to describe the legacies and associated stories of each culture to understand the similarities in symbols. In the main design of Praewa and Batik, a foundational module is used with specific areas designated for separation, and a bunch pattern is included in the footage area of the design. On the other hand, the Batik pattern fills each section, contributing assertive patterns in geometric shapes to create a strong and intricate design. After identifying the motifs, the process of classification is carried out to elaborate on them and create new design elements. The combination of Praewa and Batik brings together two distinct identities in terms of shape, meaning, and messages conveyed by each pattern. This combination aims to create a new cultural character by selecting keywords related to the main identity. The combination pattern is divided into three complementary sections. Firstly, the Praewa pattern serves as the basic design, incorporating geometric patterns into a unified design. This adds depth and complexity to the overall composition. As Zhi (2020) illustrated, the literature incorporates the latest design concepts into the aesthetic concept using innovative fabric and trend literature.



Figure 2. Pattern Possibility (Personal Modification, 2023)

The application of the pattern design concept of Batik style combined with the pattern identity of Praewa illustrates a similarity between two identities. It can be seen as a form of mimicry or re-creation of two different cultures in the pattern identity, without directly quoting or referencing specific patterns. This approach allows for the transformation of suitable design patterns and the creation of a new aspect of style design. By combining the visual elements of both Batik and Praewa, without focusing on specific symbolic meanings, the idea of blending the two pattern characters emerges. Batik patterns are known for their flexibility in lining and intricate detailing, while Praewa patterns consist of repeated pixels. The repetition of significant modules in both textile cultures plays an important role in shaping the overall pattern and creating a harmonious textile design that relates to existing designs. This combination of patterns allows for the creation of a unique and cohesive design that incorporates elements from both cultures without explicitly conveying specific meanings or symbolism. The focus is on the aesthetic appeal and visual harmony of the pattern design.



Figure 3. Pattern Possibility (Personal Modification, 2023)

The combination of color and pattern details illustrates the different styles of color implementation. In the Praewa identity, colors are related to ceremonial occasions, with specific colors serving special functions and representing the pride of weaving skills, particularly in the female role. On the other hand, in batik culture, the focus is more on the pattern style rather than specific color application. Classical batik often features dark-toned colors that are associated with nature, conveying an elegant and classy style. The design methods of batik allow for a freestyle approach to drawing without rigid limitations. In contrast, when applying natural colors in Praewa, there is a risk of color contamination in the intricate design due to environmental influences during the making process. This highlights the importance of careful color selection and control to maintain the integrity and clarity of the pattern in Praewa textiles.

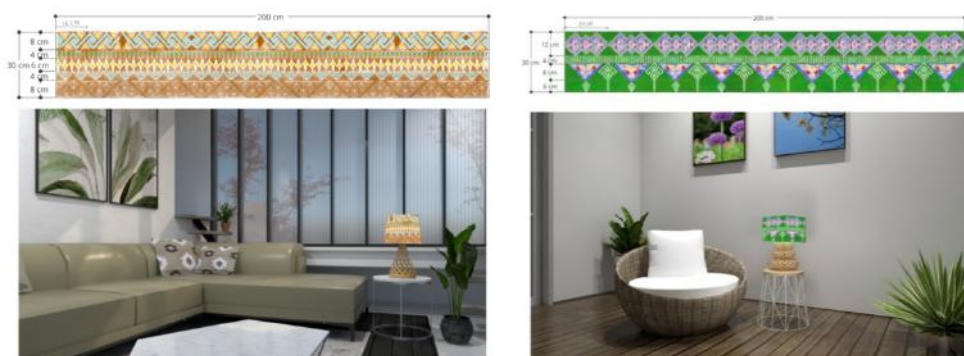


Figure 4. Pattern Application Possibility (Personal Modification, 2023)

In the relationship between textiles and interior trends, patterns play a significant role in creating suitable decorations for home textiles that can transform the ambiance of a room into a classical and elegant design. The value of patterns in design and concept is evident in how

they can influence the overall vibe of a space. Illustrations can showcase the differences in ambiance that each pattern can create in a living room. Whether it's through the choice of pattern, color, or the shaping of home decoration products, patterns have the power to evoke different effects. Traditional patterns, for example, can provide a visual balance that combines both functional and aesthetic value. They serve as practical elements that enhance the experience of the room, acting as focal points and accents that synchronize harmoniously with the overall visual theme and composition. By carefully selecting and incorporating patterns into home textiles, one can create a dynamic and visually appealing environment that reflects personal style and adds depth to the overall design. Patterns have the ability to bring life and character to a space, transforming it into a unique and captivating setting.



Figure 5. Pattern Application Possibility (Personal Modification, 2023)

The creative application of technical elements in interior design brings vibrance and luxury to the room concept, particularly using lavish textiles. The natural approach and connection between color and ambiance are essential in developing patterns that enhance the overall aesthetic. By incorporating nature-inspired elements, the design creates a sense of serenity and promotes relaxation for the users. The connection to nature is impactful, especially in specific areas of the room, as it provides a collaborative sense of serenity. By bringing in elements from the natural world, such as colors, textures, and patterns reminiscent of nature, the design fosters a sense of connectivity with the outdoors. This connection helps reduce stress and promotes a calming atmosphere within the indoor space. The integration of nature-inspired elements in interior design not only adds visual interest but also creates a harmonious and soothing environment. Whether using botanical patterns, earthy color palettes, or natural materials, these design choices contribute to a holistic and rejuvenating experience for the occupants.

Methods and Materials in Batik Experiment

In the handmade process of Indonesian Batik, the act of drawing patterns onto the fabric is crucial for achieving the desired design. Skilled Batik artisans pay close attention to this step to ensure the balance and integrity of the overall pattern. By carefully managing this process, they maintain stability and avoid any distortion during the patterning phase. The application of wax plays a significant role in Batik. Different areas of the design and the desired color outcomes require varying amounts and types of wax. Each detail in the pattern necessitates a specific combination of wax to achieve the intended effect. For instance, if a cracked effect is desired, only paraffin wax may be used. On the other hand, when working with basic colors that should not mix, a combination of paraffin, beeswax, and Damar oil is employed. To prevent the wax from cracking during the repeated dyeing process, artisans apply wax multiple times. This is particularly important when working with natural colors. Typically,

after five or six repetitions, the wax may start to show signs of cracking, requiring re-application to maintain the desired color outcome. The use of natural colors in Batik allows for various color variations and the application of multiple colors on a single fabric. This is made possible because the wax materials fully cover the designated areas, ensuring that there is no contamination during subsequent coloring steps. Overall, the precise application of wax in Batik is essential for achieving intricate patterns and vibrant color outcomes. The meticulous attention to detail during the drawing and waxing process ensures the integrity and beauty of Indonesian Batik textiles.



Figure 6. Thailand Batik Natural Color (Umasin, 2023)

In the batik process, the application of natural colors often requires more repetitions compared to synthetic colors. This is because natural dyes typically produce softer and more subtle shades, and multiple dye baths are needed to achieve the desired color intensity. After each dyeing step, the fabric is boiled to help set the color and ensure its permanence. On the other hand, synthetic colors are generally dyed only once, and the final color result is determined by the combination of color powder and water. Synthetic dyes provide a wide range of vibrant and intense colors that can be achieved in a single dyeing process. In batik design, it is possible to combine both natural and synthetic colors in one fabric. Artisans may choose to use synthetic colors for the initial dyeing stages to create a base color, and then incorporate natural colors in subsequent steps to add depth and variation to the design. When using natural colors, artisans often rely on plant sources that contain sap or pigments to ensure the color adheres to the fabric. These plants are boiled or simmered to extract the color, and the fabric is immersed in the dye bath to absorb the natural dye. In cases where natural colors do not have sufficient natural sap, a reducing agent may be added to extract and fix the color onto the fabric. Fixation is a critical step in the batik process as it helps ensure that the colors remain intact and do not fade or wash out easily. Fixation methods can vary depending on the specific dye used, but they generally involve heat or chemical treatments to permanently set the colors onto the fabric. By combining the unique qualities of natural and synthetic colors, batik artisans have the flexibility to create a wide range of color variations and effects, resulting in visually stunning and captivating textile designs.



Figure 7. Indonesia Batik process (Personal Modification, 2023)

The synthetic color results from a direct dye process without repetition to achieve dark colors. The thickness of the color substance in the soaking process sets the standard for pigmentation in the fabrics, ensuring a steady color fixation without any harmful environmental effects during the final coloring process. The fabrics used in batik, especially in Indonesia, are made of cotton materials, which provide stable absorption of color pigments.



Figure 8. Indonesia Batik process (Personal Modification, 2023)

In Thailand, fabrics used for batik textiles typically consist of 100% cotton and silk. Cotton is the more commonly used material, while silk is reserved for more expensive fabrics. Natural colors are often used in eco-design batik in Thailand, creating unique products for special requests. In the finishing process of natural color batik in Thailand, the fabric is soaked in sea water after the fixation process to preserve the color. In contrast, the synthetic process of batik in Thailand does not involve the use of sea salt. The wax used in Thai batik differs from that used in Indonesian batik. Thai batik wax typically contains paraffin and either pine oil or coconut oil. One distinguishing feature of Thai batik is the cracking effect, which does not allow for the combination of multiple colors on a single fabric. This characteristic sets Thai batik apart from Indonesian batik and adds to its artistic appeal.

In the detailing pattern of Praewa, synthetic color methods are often preferred over natural color approaches. This is because using natural colors can risk color contamination, which may affect the original pattern. Synthetic color methods allow for more control and consistency in achieving the desired color results. However, for long-term production processes, it is possible to incorporate natural color approaches and create combinations in various parts of the Praewa identity. One unique aspect of Praewa is the unintentional color contamination that occurs during the wax cracking process. This unintended color contamination can result in new pattern combinations, adding an element of unpredictability and creativity to the design. The cracking of the wax creates distinct patterns that follow a natural and organic process, but it cannot be controlled manually. These cracking patterns become an integral part of the detailing patterns in Praewa, adding to its artistic appeal and uniqueness.

The Process of Natural Color



Figure 9. Natural Color Equipment (Umasin, 2023)

The natural color process in batik production is indeed more complex and time-consuming compared to the synthetic process. It involves several steps and can take 4-6 weeks to achieve the desired darker tone color. To begin the natural color application, the fabric goes through a process called scouring, which involves cleaning the surface to ensure better absorption of the natural color. The raw materials are soaked in water for 24 hours and then boiled for several hours until the volume is reduced. During the color extraction process, areas of the fabric that are not intended to be colored are covered with batik wax to prevent color contamination. Once the color is ready, the fabric is dyed for a specific duration, typically ranging from 10 to 30 minutes, and then dried. The dyeing process is repeated a minimum of 10 times to achieve the desired dark red color. Finally, mineral substances such as Alum, Limestone, and ferrous sulfate are used to create color gradations. Alum is used to show the raw color, Limestone for lighter shades, and ferrous sulfate to darken the color. Different combinations of these minerals can be used to achieve specific color effects. Overall, the natural color process in batik production requires careful attention to detail and a longer production timeline, but it offers unique and rich color results that are highly valued in traditional and eco-design batik.



Figure 10. Red Color Natural Source (Personal Modification, 2023)

In the extraction process of green color using mango leaves, typically 1 kilogram of mango leaves is boiled with 2 liters of water. The leaves are first collected and blended into small pieces before being added to the boiling water. The mixture is then boiled for approximately 3 hours. To achieve a dark and vibrant green color, the percentage of mango leaves used in the extraction is around 20% of the total weight. This ensures a higher concentration of pigmentation that can be absorbed by the fabric during the dyeing process. During the dyeing process, the fabric is repeatedly soaked in the extracted mango leaf solution. This repetition is done a minimum of 10 times to ensure that the color is fully absorbed, and the desired shade of green is achieved. Each repetition contributes to the overall depth and intensity of the color on the fabric. Fixation is an important step in the finalization of the color. It helps ensure that the color remains stable and does not fade or wash out easily. The fixation process may involve various techniques and substances depending on the specific requirements and desired outcomes of the design process. Overall, the extraction and application of color from

mango leaves require meticulous attention to detail, including the right ratio of leaves to water, proper boiling time, and repetition in the dyeing process. This helps to create a rich and vibrant green color that can be incorporated into batik fabrics.



Figure 11. Green Color Natural Source (Personal Modification, 2023)

The extraction of turmeric for batik involves boiling it twice, which is different from other natural color sources. This process helps extract the pigments and create a concentrated liquid that is suitable for the painting style of batik. The turmeric liquid has a thick texture, which ensures that when it is applied to the fabric, it remains confined to the intended areas and does not contaminate other parts of the design. During experimentation, the fixation process for natural color using turmeric, as well as the subsequent mineral fixation, did not result in significant changes. The yellow color obtained from turmeric remained steady and did not show preferences for lighter or darker shades. The yellow gradation achieved through turmeric extraction remained consistent without significant variations in hue or intensity.



Figure 12. Indigo Color Natural Source (Personal Modification, 2023)

Not all natural color sources from plants can be effectively applied in the batik process. For natural colors to work well, they should contain plant sap, which helps create vibrant colors on the fabric. Some natural sources can be used in batik, but they may not have a strong impact on the color outcome. The OTOP (One Tambon One Product) list includes different styles of natural color application. While some natural colors can be used in silk strains, they may not be suitable for the steps involved in batik making. In Thailand's batik tradition, the application of natural colors is dependent on various factors such as weather, air quality, humidity, and other environmental conditions. These factors can influence the color outcome on the fabric. Exploring different plant sources and testing their sap for batik application is necessary to achieve desired color results. Natural colors can be applied in multiple shades, but it requires careful management of the cracking effect and color combination that contaminate a single fabric. The complexity of using multiple colors in batik and managing the contamination requires additional effort, resulting in higher production costs compared to using a single color. Typically, two different colors are used, and they undergo separate steps to manage the contamination through wax stamping and dyeing processes. The first step involves applying wax and dyeing the fabric with the dark color, followed by boiling the fabric. In the second process, the fabric is dyed with the light color, ensuring the wax is used to prevent the unwanted color from seeping into specific areas.



Figure 13. Pattern Cracking Possibility (Personal Modification, 2023)

The cracking detail of the pattern in the experimental design showcases the unique effect of the natural color approach. The contamination that occurs during the cracking process can be incorporated into the design, resulting in a new pattern identity for Praewa with pixelated and rigid patterns that can be applied in various textile applications, including façade or interior design. The use of natural colors offers a broader range of possibilities in textile design. Incorporating natural color extraction with the three traditional minerals commonly used in Indonesian batik allows for a significant exploration of design results. This combination adds depth and complexity to the colors and patterns, resulting in visually captivating textile designs. By embracing the natural color extraction process and combining it with traditional mineral fixation techniques, designers can create unique and culturally rich patterns that reflect the heritage and artistry of batik.



Figure 14. Natural Color Gradation (Personal Modification, 2023)

Due to the complexity of the natural color process and the limited availability of extraction sources, the production of batik in natural colors is not done on a mass scale. Instead, it is typically produced upon request or targeted towards upper-class customers as limited edition products. Each handmade piece of natural color batik can result in a unique color and artistic identity, further enhancing its exclusivity. According to Umasin (2023), the pricing for synthetic cotton textiles in batik starts at around 300 THB per pattern fabric, with varying dimensions typically around one meter or one module. In contrast, the pricing for natural color batik, which involves a minimum of ten dyeing repetitions, starts at around 1,500 THB per fabric. For silk materials used in the batik process, synthetic color application on silk starts at a price of 3,000 THB, while natural color application on silk begins at a higher price of 10,000 THB. Batik in Thailand can be applied to various sections of fabrics in textile design. It is not limited to clothing but can also be used in interior applications, particularly in fabric design for upholstery such as pillows and curtains. Silk materials are often preferred for such applications, while cotton fabrics are recommended for furniture combinations, providing a range of options for incorporating batik patterns into interior design.

In conclusion, the application of pattern design in the batik making process, incorporating the detailed approach of Praewa identity as a cultural pattern, offers an opportunity to explore the connectivity between different pattern identities. The process of production plays a crucial role in preserving the intricate details and techniques involved in natural color batik. The incorporation of cracking methods in the Praewa detailing creates a unique identity, characterized by flexible lining layers. Meanwhile, the batik process brings a rigid line

pattern to the Praewa design, resulting in a combination of abstract patterns that showcase similarities and harmonious visual elements.

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