



The Preservation and Transformation of Batik: A Review of Traditional Practices and Contemporary Challenges

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ABSTRACT :

The purpose of this review paper is to describe the cultural, artistic, and industrial evolution of batik, a traditional textile art form rooted deep within the Malaysian and Indonesian heritage. This article uses six academic studies to examine the way in which batik has evolved from its sacred, handcrafted origins made using wax-resist techniques (such as canting and cap) into a dynamic culture product that is faced with challenges and opportunities as it adapts to the modern globalized world. There are many symbols associated with batik, such as its historical significance, its role in identity formation, and its spiritual significance, especially for the Javanese and Malay communities. There is also a discussion of the growing divide between authentic batik that is handmade and mass-produced imitations that have a detrimental effect on the integrity of the art form. As a result of innovations such as the development of digital tools (e.g., jBatik software), eco-friendly dyes, and contemporary fashion collaborations, we can see how technology can coexist with tradition in a sustainable way. There has been a pivotal role played by designers such as Dian Pelangi in bringing batik to a new generation and reviving its relevance. There are a number of educational institutions, museums, and government initiatives that contribute to the preservation of the cultural significance and economic viability of batik. However, the paper also points out that there is a generational gap in understanding batik's heritage, emphasizing the importance of cultural literacy and using ethical production practices when producing batik. In conclusion, batik remains an adaptable yet deeply rooted living tradition with an excellent future if it is able to combine preservation with innovation and public awareness in a balanced manner.

Keywords: Authenticity, Batik, Cultural Heritage, Fashion Industry, Imitation Batik, Preservation, Sustainability, Textile Art, Traditional Techniques, Wax-Resist Dyeing

1. Introduction

Batik, a textile art deeply embedded in the cultural heritage of Malaysia and Indonesia, has undergone significant transformation over the past decades. Originally handcrafted with wax-resist techniques, it has increasingly encountered modern production technologies, resulting in both innovative designs and the threat of cultural dilution. This review assesses the breadth of recent research that contextualizes batik within identity, economy, and evolving artistic practices.

1.1. History of Batik

Typically, clothing is an invention of culture as a way to express one's identity as an individual, and clothing is often used to reflect one's appearance[1]. There have been many scholars who have discussed this concept in the past, including Claudia, Lukman, Piliang, and Sunarto. An experience that the researcher recalls from his childhood when his mother used a batik sarong to lull their baby to sleep by swinging it like a buaian (swing). In addition, the researcher observed their late grandmother in the paddy fields of Kampung Sungai Laya, Kedah, wearing a batik sarong -- wrapped around her head in a shape reminiscent of a cow's head -- as well as a lower-body garment during her daily work in the paddy fields. It is common for Indonesian men to wear traditional headgear known as blangkon or iket kepala that is often made of batik fabric, also known as headgear known as blangkon. As a rule of thumb, batik is sold in this region in lengths of 2.25 metres for use as kain panjang (long cloths or sarongs), typically paired with a kebaya dress in this region. There is no doubt that the batik sarong is one of the defining features of the Malay Archipelago, and continues to be part of everyday life in rural Malaysia and Indonesia-used by both men and women alike as a body wrap, sarong, or head covering throughout daily life.

The word ambatik is derived from two components: amba, which means "to carry" or "to bring," and tik, a word related to titik, meaning "dot." Thus, ambatik roughly translates to "drawing with dots." The most exquisite batik in Malaysia comes from Terengganu. According to Wan Hashim Wan Teh, who explained the origin of the term batik to me, he explains that it originated in the Indonesian archipelago. The Javanese word ambatik, as cited by Hussin in his volume, has also been cited as the source of batik. Here, tik is associated with titik (dot), and ba implies active engagement in work.

However, Hussin also noted a differing interpretation presented by Nawawi, who claimed that tik refers to the Malay word for "dot," while mba stems from the Javanese word meaning "slave" or "servant"—suggesting that batik originally referred to the labor-intensive act of creating dot patterns. In contemporary times, there is a common misconception that batik refers solely to its motifs and patterns. Samah contested this notion, emphasizing that batik should be defined by its production process, particularly the traditional wax-resist dyeing technique, which has deep cultural roots. Furthermore, many batik artists and researchers have identified various techniques used in batik-making, such as batik canting, batik block, and other innovative methods. Traditional batik is best recognized by these authentic, time-honored production processes. The next section will explore how these meanings connect to specific batik methods[1].

1.2. Canting or Tjanting Batik – Traditional Hand-Drawn Method

Traditional batik-making requires the use of many tools, one of which is the tjanting (or canting), a stylus-like instrument originating from Indonesia that is considered a vital part of the process. The term is derived from the Indonesian language, where it refers to the act of drawing, where it is used to describe drawing. As the name suggests, the tjanting is a specialized tool, consisting of a bamboo or wooden handle attached to a small metal cup with a narrow spout, which stores and disperses melted wax from a metal cup onto the handle. By using this tool, artisans can create intricate and delicate designs by applying hot wax in precise lines and dots to fabric, in order to create intricate and delicate designs. Because of its ability to capture precise, detailed patterns, the tjanting technique produces mesmerizing results, making it a hallmark of high-quality batiks because of its ability to capture precise, detailed patterns.

It is important to note, however, that mastering the tjanting technique requires a high level of patience, skill, and control as well. In order to avoid spills and inconsistencies in the design, the artist must maintain steady movements and regulate the flow of wax as he or she works. This process is not only technically challenging, but also a form of artistic expression, whereby each line drawn is a reflection of the maker's handiwork and cultural understanding of his craft. The use of the tjanting distinguishes handmade batik from other forms, particularly those created with stamps or industrial printing methods [2][3].

1.3. Cap/Block for Batik

The motif of batik is an interpretation of elements from the natural environment in a stylized manner that corresponds with the elements of the natural environment. There is no surprise that many of the batik designs in the Malay Archipelago are inspired by local flora and fauna as well as daily life given that the Malay Archipelago lies within a tropical climate rich in biodiversity. The motifs are a reflection of the close connection between the region and nature, as well as its cultural identity. There has been a great deal of variation in the meanings and functions of batik throughout history, particularly in Java. As a marker of social status during the feudal era in Indonesia, batik was used as a means of class identification and was divided into two main groups: the royal elite and the common people. According to the societal status of each class, there were distinct batik patterns that could be identified. It is also relevant to note that the quality, complexity, and function of batik also differs, with some fabrics being reserved for formal or ceremonial use, while others serve *more practical, everyday uses*.

It has been suggested that there are two parallel traditions of batik-making in Indonesia. According to Indonesian batik expert, there is one which caters to the royal courts (batik keraton) and another which caters to the general public (batik rakyat). There were certain motifs that were exclusively for the nobility, and commoners were often forbidden from wearing these designs, because they were symbols of power, heritage, and sacred lineage.

Beyond social classification, batik holds deeper cultural and symbolic meanings. Batik is imbued with spiritual significance and is often used in rituals. It is closely associated with traditional Javanese arts such as wayang kulit (shadow puppet theatre), and in some contexts, batik is regarded as a magical cloth—imbued with protective and ceremonial functions.

In Malaysia, particularly in Kelantan and Terengganu, the batik block method (also known as batik cap) is widely practiced. This technique uses hand-carved copper blocks to stamp patterns onto fabric. The batik sarong, in particular, stands out as one of Malaysia's most iconic and beautifully crafted batik products. These sarongs are often created specifically for local consumers, reflecting regional tastes and traditions).

1.4. The Techniques and Technologies Behind Batik

The techniques used in Malaysian and Indonesian batik-making differ in several key aspects, leading to distinct processes and visual outcomes in each country's batik tradition. According to an interview with batik artist and former architect Mrs. Haniza Hashim, the Malaysian batik sarong, which is often created using the block stamping (batik cap) method, follows a unique procedure compared to its Indonesian counterpart. In Malaysia, the blocks—typically made from heavy metals such as copper, brass, or iron—are dipped into hot, melted wax. To remove excess wax that clings to the block, artisans splash or tap the block before stamping it onto the fabric. This extra step ensures cleaner, sharper patterns.

In contrast, the Indonesian block stamping process omits this splashing step. Artisans in Indonesia generally dip the metal block directly into the wax and then stamp it onto the fabric without attempting to remove the excess wax beforehand. This subtle difference in approach reflects broader distinctions in technique, equipment, and workshop setup between the two countries[2].

Beyond the stamping process, the physical setup of the batik workshop—or the "batik kitchen"—also varies. In Malaysia, the wax-melting container is usually shallow and surrounded by a high protective shield. This barrier helps prevent splashes and allows artisans to safely flick off excess wax from

the metal blocks. Meanwhile, in Indonesia, the wax is typically melted in a regular pot without such protective shielding, indicating a different approach to handling the tools and materials.

Tool design and usage also contribute significantly to the visual identity of batik in each country. While Malaysian artisans primarily use a single-tip canting (stylus) for freehand wax application, Indonesian batik makers often use a canting with multiple tips—sometimes up to seven. This allows for greater detail and complexity in their designs. A curator from the National Textile Museum (Muzium Tekstil Negara), observed these differences first-hand during her visit to Indonesia. She noted that the tools used, particularly the multi-tip stylus, enable Indonesian artisans to create finer, more intricate patterns that distinguish their batik from Malaysian styles.

Moreover, some batik makers in both countries combine techniques—using both the canting stylus and block stamps—to produce richly layered and elaborate designs. However, these combinations require advanced skill, as artisans must be adept in handling different tools and coordinating the methods in a cohesive design process. Ultimately, the variations in tools, techniques, and workshop setups lead to distinct aesthetic results, giving each nation's batik its unique cultural identity and artistic expression. A contemporary method of producing batik is through screen printing, which differs significantly from traditional hand-drawn or stamped methods. In screen printing, three primary components are used: a screen (onto which the image stencil is applied), a squeegee for spreading ink, and dye or ink itself. In most cases, the screen is made up of a silk or synthetic mesh stretched tightly over a wooden or metal frame. Achieving precise colour alignment and high-quality print results requires maintaining proper tension.

Batik screen printing uses additional materials such as special dyes, wax, silkscreen frames, and plain white fabric. By using this method, traditional batik methods that involve a lot of manual labour like canting or block stamping can be produced faster and more consistently. In contrast to conventional batik-making processes, screen printing involves several distinct steps and materials.

Increasing demand for batik textiles, especially batik sarongs, has also led to the production of imitation batik, a more commercially viable alternative that mimics authentic batik. Imitation batik sarongs serve the same purpose as traditional batik sarongs, but are produced using mass-production printing techniques instead of wax-resist dyeing.

It is possible to mistake imitation batik for real hand-drawn or block-printed batik from a visual perspective. In fact, the researcher personally wore imitation batik sarongs from a private collection during fieldwork. However, there are distinctive features that set authentic batik apart. During a field visit the owner and expert artisan, explained how to distinguish genuine batik. She noted that authentic batik is identifiable by inspecting both sides of the fabric—the wax penetrates the cloth completely, making the design visible on both sides, whereas imitation prints typically show the design only on the surface.

There are many imitation batiks that are produced locally or imported from neighbouring countries, mostly Indonesia and Thailand. The term "batik sablon" refers to a type of screen printing, but the term batik sablon is commonly used in Indonesia to refer to this type of batik. A sablon is a type of printing method that originated from the Dutch word *sjabloon*, which, like the Swedish word *schablon*, means a template or stencil. Although similar to other printing techniques, sablon printing differs slightly in the way pigments or dyes are used in the process. The inks used in sablon are typically a combination of synthetic dyes, rubber-based compounds, and extenders, which are used as part of a combination to enhance the durability and vibrancy of the print.

There is a specific fiber density which is used in sablon printing, as well as a screen or mesh frame in this process. A stencil or negative design is applied to a screen, which is then exposed to light in order to develop the image on the screen. During this exposure process on the screen, open areas are created that are able to let the ink pass through, resulting in a printed design on the screen. When printing is being carried out, ink is poured over the screen and spread across the surface using a rubber squeegee in order to transfer the design onto the fabric or other material.

It explains that this method enables the use of vibrant, long-lasting colours on a wide variety of surfaces, such as fabric, glass, aluminum, wood, plastic, and glass. Rubber-mixed ink, due to its durability and flexibility, is ideal for use in mass production, due to its durability and flexibility. In Malaysia, this screen-printing technique—referred to as batik cetak or printed batik—has been in use since the early 20th century, providing an efficient alternative to traditional batik-making methods[3].

2. Traditional Techniques and Symbolism

The reviewed literature emphasizes the sacredness and craftsmanship in traditional batik, particularly the batik tulis (hand-drawn) and batik cap (block-printed) methods. The traditional batik is not defined by motifs alone but by the wax-resist process itself. This method is rooted in symbolic storytelling, social status representation, and spiritual functions, especially within Javanese and Malay communities[3]. [4] highlight how batik functions as a cultural identity marker—used in rituals, daily life, and even modern fashion as a form of national pride.

3. Cultural Identity and Modern Usage

The articles agree that batik represents a national identity and pride, especially among Malay and Indonesian societies. Batik patterns signify regional affiliations, status, and historical narratives. According to A241505010525.pdf, batik is also experiencing a renaissance as it is adopted in official attire, academic regalia, and national celebrations.

However, it also discusses the generational gap—younger consumers often lack awareness of batik's cultural significance, viewing it merely as aesthetic rather than heritage-laden.

4. Batik's Evolution in Today's Fashion Industry

Modern fashion incorporates Batik with a dynamic blend of heritage and innovation, as designers reinterpret this age-old textile art in a global context. In the fashion industry, where sustainability and cultural authenticity are increasingly important, Batik has evolved beyond its traditional roles in garments like kebayas and sarongs and has become a versatile feature of high-end garments as well as every day wear. Designers are adapting traditional motifs to align with modern design sensibilities by experimenting with colors, patterns, and techniques. It is common to resize or modify classic patterns so that they can be used for a variety of garments, from casual pieces to couture collections. Mixing Batik with diverse fabrics and incorporating cross-cultural design elements broadens its appeal, making it a globally relevant fashion statement [5]. Using traditional Indonesian techniques with contemporary fashion sensibilities, Indonesian designer Dian Pelangi has gained international acclaim for integrating Batik into contemporary fashion. The vibrant colors of her Batiks are combined with modern textiles and cutting techniques to appeal to young, fashionable women. In addition to elevating Batik on global runways, Dian Pelangi has inspired a wave of young designers to explore the potential of traditional crafts in contemporary design. An influential figure in the modern Batik fashion scene is Anne Avantie, who is credited with redefining kebaya, a traditional Indonesian blouse-dress. By combining Batik patterns with opulent textiles and modern silhouettes, Avantie frequently uses them in her designs to make traditional Indonesian clothing more approachable and appealing to younger audiences. Internationally, companies like Tory Burch have also dabbled in batik, incorporating its designs into their collections in ways that respect the craft while attracting customers from around the world. These collections give this ancient fabric a new look by frequently reinterpreting batik through the prism of Western fashion tastes.



Figure 1. Dian Pelangi's Spring 2013 Collection at Jakarta Fashion Week[5]

5. jBatik software

jBatik is a digital design software developed by P.T. Batik Fractal Indonesia to support Indonesian artisans in efficiently creating new batik patterns using technological tools. The software reflects the company's commitment to preserving the cultural heritage of batik through innovation. More details about the software are available on jbatik.com, while examples of finished products can be found at batikfractal.com.

Designed specifically to generate alternative batik motifs, jBatik applies the concept of fractals—geometric patterns that exhibit self-similarity, meaning each part mirrors the structure of the whole. One common example is the Sierpinski triangle, a pattern formed by repeatedly dividing an equilateral triangle into smaller ones, creating a design that echoes itself at different scales[6].

The motifs produced by jBatik display these fractal characteristics, leading to the term fractal batik. This innovation is the result of extensive research, including the analysis of fractal dimensions, which confirms the presence of fractal elements in traditional batik designs. The self-similar nature of batik motifs—such as in ceplokan patterns—demonstrate this principle clearly: from simple petal modules to full floral compositions, each layer reflects the structure of the others.

Fractal batik positions itself as a modern evolution of traditional craft, using software to aid in motif ideation and digital sketching while still respecting core batik principles. Though the design process is partially digitized, the traditional techniques—such as applying hot wax with canting tulis or cap—remain central. This blend of craftsmanship and technology illustrates how batik can evolve without losing its cultural roots, allowing it to thrive in

both heritage and contemporary contexts [6].

6. Imitation vs. Authenticity: Industry Challenges

A significant challenge emerges in the form of imitation batik, which mimics traditional designs but lacks the artistry and cultural processes (Sobri & Legino, 2020). Cheaply produced printed fabrics, often from abroad, flood local markets, undercutting authentic artisans and damaging the integrity of batik culture.

This issue is not merely economic; it poses ethical questions regarding cultural appropriation and authenticity. The declining knowledge about what constitutes “real batik” among the public exacerbates the situation.

7. Innovation, Sustainability, and Technological Influence

Several studies argue that innovation does not necessarily threaten tradition—in fact, when done respectfully, it can revitalize interest. Techniques like digital printing, eco-friendly dyes, and collaborative design projects are helping younger designers engage with batik in new ways.

The key is integration rather than replacement. It emphasizes incorporating batik education in formal settings to ensure transmission of cultural knowledge and also discusses sustainability models like eco-batik.

8. Educational and Governmental Roles

Several authors highlight the crucial roles played by educational institutions, museums, and government policies in supporting batik artisanship. Initiatives like community workshops, policy subsidies, and international promotion through UNESCO recognition have been instrumental in preservation efforts.

Yet, more must be done to empower rural artisans, ensure fair wages, and support batik as both a cultural asset and viable economic activity.

9. Conclusion

Batik, a textile art that has been around for centuries and is intrinsic to the cultural identities of Malaysia and Indonesia, remains a dynamic symbol of tradition and innovation across the region. As a product rooted in ritualistic, social, and symbolic functions, authentic batik embodies craftsmanship and cultural meaning, especially in its hand-drawn (batik tulis) and block-printed (batik cap) forms. There has, however, been a complex set of challenges that have come with modernization. Digital printing techniques and mass-produced imitation batik are at risk of diluting its authenticity and devaluing the work of artisans. While at the same time, technology offers new avenues for revitalization, such as fractal batik software and eco-friendly production methods, it has also contributed to revitalization. As well as successfully bridging the gap between heritage and fashion, contemporary designers are using batik to enhance global fashion narratives while honoring its origins at the same time. The resilience of batik is largely due to the fact that it can be adapted despite the decline in generational interest and widespread cultural misconceptions. There are many factors that play a role in ensuring the survival and evolution of a community, including education, government policy and community involvement. It is imperative that batik flourishes in the future by balancing innovation with integrity, embracing digital tools and meeting market demands while preserving the artisanal essence and cultural significance that make batik unique. It is possible for batik to continue to thrive as both a heritage art form and a vibrant contributor to contemporary design and identity through sustained cultural stewardship and creative adaptation.

REFERENCES

- [1] L. A. King *et al.*, “A non-precious metal hydrogen catalyst in a commercial polymer electrolyte membrane electrolyser,” *Nat. Nanotechnol.*, vol. 14, no. 11, pp. 1071–1074, 2019, doi: 10.1038/s41565-019-0550-7.
- [2] G. Yelemessova *et al.*, “Preparation and Characterization of Preformed Polyelectrolyte and Polyampholyte Gel Particles for Plugging of High-Permeability Porous Media,” *Gels*, vol. 10, no. 9, p. 562, 2024, doi: 10.3390/gels10090562.
- [3] A. I. Sobri and R. Legino, “Imitation of Batik Sarong Design and Features,” *Environ. Proc. J.*, vol. 5, no. SI3, pp. 99–108, 2020, doi: 10.21834/ebpj.v5isi3.2539.
- [4] H. Lias, A. R. Ismail, and H. A. Hamid, “Malaysia Textile Craft Industry: Innovation Inspired by Bamboo for Batik Block Contemporary Design,” *IOP Conf. Ser. Earth Environ. Sci.*, vol. 549, no. 1, pp. 0–9, 2020, doi: 10.1088/1755-1315/549/1/012087.
- [5] M. Xiao, “Innovative Applications and Market Impact of Indonesian Batik in Modern Fashion,” *Stud. Art Archit.*, vol. 3, no. 2, pp. 62–66, 2024, doi: 10.56397/saa.2024.06.13.
- [6] F. Ciptandi, M. Rosandini, and M. Lukman, “Application of Jbatik Technology in the Development of Motif Design for Traditional Batik Craftsmen,” *Vlakna a Text.*, vol. 29, no. 2, pp. 27–43, 2022, doi: 10.15240/tul/008/2022-2-004.