

EMPOWERING PANDAN ARUM BATIK: THE ROLE OF COLOR GUIDEBOOKS IN DESIGN AND SUSTAINABILITY

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Received: 18th December 2024/ **Revised:** 20th March 2025/ **Accepted:** 21th March 2025

How to Cite: Yudhistya, A. K., Lasmy, Anindya, W., & Alya, A. Q. (2025). Empowering Pandan Arum Batik: The Role Of Color Guidebooks In Design And Sustainability. SEEIJ (Social Economics and Ecology International Journal), 9(1), 47–57. <https://doi.org/10.21512/seeij.v9i1.12741>

ABSTRACT

Pandan Arum Batik is one of the batik industries located in Pandanmulyo Village, Malang Regency. This home-based batik industry produces various kinds of batik with various techniques, namely written batik, stamped batik, and now expanding to ecotik (eco-print batik). This paper explores the empowerment of Pandan Arum Batik artisans through the development and utilization of color guidebooks as a tool for design innovation and sustainability. Traditional batik craftsmanship faces challenges in maintaining consistency, creativity, and environmental responsibility, particularly in the selection and application of natural dyes. By introducing structured color guidebooks, artisans gain a practical resource to enhance their design processes, ensuring color harmony while preserving cultural identity. The study examines how these guidebooks contribute to improving production efficiency, minimizing waste, and promoting sustainable practices within the batik-making community. Additionally, it highlights the role of knowledge transfer and collaborative efforts in strengthening the artisans' skills and market competitiveness. Through a combination of qualitative research and field observations, the findings underscore the significance of structured design tools in preserving heritage crafts while aligning with contemporary sustainability standards. This initiative not only supports economic empowerment but also fosters innovation in traditional textile industries, demonstrating that sustainability and cultural preservation can go hand in hand.

Keywords: Batik Industry; Colour Guidebook; Community Empowerment; Pandan Arum Batik; Sustainability

INTRODUCTION

Batik has become part of the traditions and industry in Indonesia, almost every region has different characteristics of batik crafts, both in terms of materials, manufacturing methods, and results/designs [1]. The batik industry is growing quite rapidly in Malang in line with consumer needs. Even though the batik industry in Malang Regency is not as massive as the batik industry in Yogyakarta or Surakarta, the batik industry in Malang is no less high quality. Malangan Batik, one of which is produced by Batik Pandan Arum, has typical Malangan motifs such as the Malang mask, Batu Apple and City Hall Monument which are not found in other batik [2].



Figure 1. Situation in Community Partner
(Source: Author's Documentation)

Batik is a traditional Indonesian art form that involves decorating fabric using a wax-resist dyeing technique [3]. Recognized by UNESCO as an Intangible Cultural Heritage of Humanity, batik holds deep cultural and historical significance in Indonesia. Each region has its own distinct patterns and motifs, often inspired by nature, folklore, and philosophical meanings. For example, Yogyakarta and Solo are known for their classic batik designs with intricate patterns and earthy tones, while coastal areas like Pekalongan produce vibrant, colorful motifs influenced by foreign cultures [4]. Traditionally worn during ceremonies and special occasions, batik has evolved into modern fashion, home décor, and everyday wear. The process of making batik, whether hand-drawn (batik tulis) or stamped (batik cap), requires great skill and patience, reflecting Indonesia's rich artistic heritage. Today, batik continues to be a symbol of national pride and identity, celebrated both locally and

globally [5]. Indonesian coastal batik from the island of Java has a long history of acculturation, with diverse patterns influenced by various cultures, and is the most developed in terms of patterns, techniques and quality of workmanship compared to batik from other regions [6]. Technically, batik is divided into three, namely written batik, the process of which is completely done by hand or can be known as handmade [7]. Apart from that, there is stamped batik, where the process of depicting motifs uses a bronze plate that has been smeared with wax [8]. Lastly is printed batik where the motif is digitized using illustration software and then printed using a machine [9]. The process of making batik, especially written batik, takes quite a long time. Judging from the long manufacturing process, it is not surprising that the price of a piece of written batik cloth tends to be high [10].

Pandan Arum Batik is a producer of Malangan Batik which has typical Malangan motifs in the form of Malangan masks, Stone Apples, City Hall Monument. Pandan Arum Batik is located in Dusun. Dawuhan, Pandanmulyo Village, District. Tajinan, Malang Regency. This home-based batik industry, which was founded in 2010, produces various kinds of typical Malang batik with various techniques, namely written batik, stamped batik and now expanding to ecotik or eco-print batik. Eco-print batik is a new trend in the batik industry, which is a type of batik whose manufacturing method uses natural dyes from tannins or leaf, root or stem dyes placed on a piece of cloth. As the name suggests, ecoprint comes from the words eco or ecosystem which means biological or natural environment and print means print [11]. The system of tracing leaves and then boiling them, is similar to the process of making batik, so it is often called ecoprint batik. However, the motifs produced by this ecoprint system are more contemporary than batik drawn or printed with classic batik motifs. The leaves used can be found almost throughout Indonesia as a characteristic of Indonesian flora, such as secang wood, Mengkudu roots and leaves, teak leaves, Distance leaves, Ketapang leaves, and so on [12]. To choose the fabric itself, it must come from natural fibers so that the color produced from leaf tannin is able to be absorbed perfectly and lasts a long time. Using natural colored fabrics and

materials will reduce health risks such as allergies and even environmental pollution from the manufacturing process.

In the production aspect, the problem faced by partners is that they still lack understanding in color combinations. Batik is generally produced using several color combinations. Therefore, in this activity, the team created a color guidebook that partners can use as a reference in choosing colors to create a harmonious batik appearance. This community empowerment program is based on the research results of the proposed team lecturers in the previous period. In this community empowerment activity, the team provides counseling and assistance to partners to be able to make a good color combination, including in the production and post-production processes. This community empowerment program is very important to help business actors to elevate the products.

IMPLEMENTATION AND METHODS

The issues that partners confront have been identified and must be resolved through a community empowerment program, according to the scenario analysis that was previously developed. It is anticipated that this community will enhance service partners' well-being. Lectures, conversations, and training simulations are the techniques employed.

Lecture and Discussion Method (1) First, the administrators who are partners in this community empowerment activity will receive lectures and counseling. The material provided includes explanations of color theory and color composition. The discussion method used in this activity is done in an attempt to better understand the issues that partners are facing, with the hope that solutions can be found together.

Training Method (2) Training and demonstration activities are follow-ups to previous lectures and discussions conducted by the community service implementer. The following are the learning and training resources used in this activity: (1) Color mixing training using natural dyes; (2) Training in making color compositions to produce harmonious colors.

RESULTS AND DISCUSSION

Preparation Stage for Community Service Activities (1) It begins with identifying the purpose and goals of the activity, understanding the needs of the target community, and researching the best ways to address them. From the Focus Group Discussion with Mrs. Rahayu as the owner of Pandan Arum Batik, the main problem related to production aspects were discovered. Some of the obstacles experienced by Pandan Arum MSMEs regarding batik production are related to the use of synthetic dyes which produce waste. This waste mainly comes from the batik dyeing process which still uses synthetic dyes naptol, remasol, indigosol, and the like. The chemical dyes in batik are not environmentally friendly. If waste flows into the ground, these materials will certainly damage the soil ecosystem. The reason is soil bacteria are unable to degrade chemicals. If carcinogenic substances enter the body, they can endanger human health. Besides being dangerous for humans, naptol and indigosol dyes can cause organisms in the water to die. This is because these dyes can change the biochemical oxygen demand (BOD) and chemical oxygen demand (COD) values in water. The oxygen (O₂) content which is needed by aquatic organisms will decrease if dye waste enters the water.

Apart from that, another problem related to the production process is coloring, service partners do not yet have an understanding of color combinations using color theory. Therefore, in this service activity, the service team will make a color combination guidebook, especially for textiles. Apart from that, the team also provides a catalog of colors produced from natural dyes.

Utilizing Color Guidebook in Batik Industry (3) In this Community Empowerment program, the team proposed a color combination guide in the form of a color guidebook which contains a color guide that can be used by Pandan Arum Batik in creating batik color combinations. Utilizing color guidebooks has emerged as an invaluable resource for artisans and designers in this field. These guidebooks not only streamline the creative process but also provide insights into the cultural significance and historical context of various colors used in batik. By incorporating these references,

artisans can elevate their work, ensuring the effective communication of emotions and narratives through color.

One primary advantage of using color guidebooks is the structured approach they offer to color selection. The art of batik involves intricately applying wax to fabric before dyeing, meaning that every color chosen must harmoniously blend with the others. Color guidebooks categorize shades based on complementary and contrasting relationships, enabling artisans to experiment with combinations that enhance the overall aesthetic. This systematic approach reduces the risk of producing unsightly clashes while guiding artisans toward more visually appealing outcomes.

Moreover, color guidebooks play a vital role in preserving cultural heritage. In many batik-producing regions, certain colors carry specific meanings and are associated with cultural symbols. By consulting these guidebooks, artisans can better understand the significance of colors in traditional narratives, ensuring that their work honors the cultural roots of batik. This practice not only enriches the designs but also reinforces the importance of cultural identity within the textile industry, allowing artisans to educate consumers about the stories behind their creations.

The implementation of color guidebooks also contributes to consistency and quality control within the batik industry. As artisans adopt standardized color palettes outlined in these guides, they can achieve uniformity across different production runs. This consistency is crucial, especially for marketers and retailers who seek to build brand recognition and consumer trust. Customers expect quality and consistency, and utilizing color guidebooks equips artisans with the tools necessary to meet these expectations, thereby enhancing their marketability.

In addition to helping seasoned artisans refine their craft, color guidebooks are indispensable tools for newcomers in the batik industry. They provide essential information on dye properties, application techniques, and the process of color mixing, which is vital for beginners who may lack experience. By offering clear guidelines for navigating the complexities of color selection and

application, these guidebooks enable aspiring artisans to experiment confidently and develop their unique styles while respecting traditional practices.

Furthermore, as the batik industry evolves in response to modern trends and global markets, color guidebooks can encourage innovation. The guidebooks can serve as a springboard for experimentation, allowing artisans to explore unconventional color pairings while still retaining the essence of batik craftsmanship. This fusion of tradition and modernity can attract new audiences and infuse vitality into the industry.

Lastly, the use of color guidebooks fosters collaboration among artisans, designers, and educators within the batik community. As more individuals adopt these resources, a shared language around color emerges, facilitating discussions about best practices and creative processes. Workshops and educational programs can incorporate these guides into their curricula, ensuring that knowledge about color theory and batik techniques is disseminated effectively. By encouraging collaboration and knowledge exchange, the entire industry can benefit from a stronger foundation built on shared understanding and collective growth.

Design Process of Color Guidebook Development (4) The design process of developing color guidebooks for the batik industry is a multi-faceted undertaking that begins with extensive research and collaboration among various stakeholders, including artisans, designers, and color experts. Initially, it is essential to gather a comprehensive understanding of the different dye materials used in batik, particularly natural dyes derived from plants and minerals. This stage involves documenting the properties of these dyes, such as their colorfastness, mixing characteristics, and the cultural significance of various hues. Engaging with local craftsmen and historical experts during this phase ensures that the guidebook will reflect traditional color wisdom while also capturing contemporary trends.

Once the foundational research is complete, the next phase involves creating a visually appealing and user-friendly layout for the guidebook. This includes selecting a format that allows for

easy reference, such as organized color swatches accompanied by descriptions of each color's origins and meanings. Designers must consider the inclusion of practical elements like color palettes for specific batik styles and techniques, along with illustrative examples that showcase the application of the colors in actual batik pieces. Moreover, developing a design that resonates with both seasoned artists and beginners is crucial, as the guidebook aims to serve a diverse audience ranging from traditional artisans to modern fashion designers.

Finally, after the initial drafts are created and reviewed, the process culminates in meticulous testing and feedback. This stage may involve distributing prototype versions of the guidebook to selected artisans and educators within the community. Their feedback is vital for refining color accuracy, usability, and cultural relevance. The revisions based on this feedback will ultimately lead to the final version of the guidebook, which not only supports the technical needs of its users but also serves as an inspirational tool that honors the rich heritage of batik. By balancing traditional practices with modern design elements, the resulting guidebook can significantly enhance the creative possibilities within the batik industry.



Figure 2. Color Guidebook for Pandan Arum Batik

CONCLUSION

In conclusion, integrating a color guidebook into the batik industry offers significant advantages for both artisans and businesses. For artisans, a color guidebook serves as a vital tool for inspiration and consistency, helping them navigate the complexities of color combinations and patterns. This ensures that their creations not only adhere to traditional aesthetics but also resonate with contemporary trends. By providing a structured approach to color selection, it can elevate the quality of batik products and enhance the artist's ability to experiment with new designs confidently. For businesses, adopting a color guidebook can streamline production processes and improve product consistency across different batches. It facilitates better communication between designers, manufacturers, and clients, reducing misunderstandings and ensuring that the final products meet the expected standards. Ultimately, the use of a color guidebook can lead to more cohesive branding and marketing strategies, helping batik businesses to establish a distinctive identity and stand out in a competitive market. By leveraging the guidebook's structured color insights, both artisans and businesses can contribute to the growth and innovation of the batik industry.

Acknowledgments

This paper is supported by Community Empowerment, BINUS University as a part of internal Community Development Internal Grant entitled “TEKNOLOGI TEPAT GUNA, PENERAPAN PEWARNA ALAM SEBAGAI ALTERNATIF MATERIAL RAMAH LINGKUNGAN UNTUK MENDUKUNG PRODUKTIFITAS INDUSTRI BATIK MALANG” with contract number 045/VRRTT/III/2024.

BIBLIOGRAPHY

Darmayanti, T. E. (2022). Training on making patterned cloth with the shibori technique to improve the skills of the inmates of the Sukamiskin Kelas Ila Bandung women's prison. *Community Empowerment*, 7(2), 313–319. <https://doi.org/10.31603/CE.5900>

- Dwi, T., Seni, A. K., Rupa, S., & Desain, D. (2022). Perancangan motif batik modern teknik cap kertas dengan sumber ide Keraton Kasunanan Surakarta. *Hastagina: Jurnal Kriya dan Industri Kreatif*, 2(1), 67–79. Retrieved from <https://jurnal2.isi-dps.ac.id/index.php/hastagina/article/view/1458>
- Kurniawan, G. P. (2022). The implementation of motivating management function in local batik entrepreneurs: A case study on Lesoeng Boutique and Batik Ponorogo. *Bulletin of Pedagogical Research*, 2(1), 20–25. <https://doi.org/10.51278/BPR.V2I1.235>
- Licias, C., et al. (2020). Strategi UMKM untuk meningkatkan perekonomian selama pandemi Covid-19 pada saat new normal. *OECOMICUS Journal of Economics*, 5(1), 46–62. <https://doi.org/10.15642/OJE.2020.5.1.46-62>
- Lutfiyani, I. Q., et al. (2022). Pengembangan UMKM melalui optimalisasi branding dan penggunaan media digital di Desa Sindangbarang, Kabupaten Cilacap. *Jurnal Pusat Inovasi Masyarakat*, 4(1), 70–84. <https://doi.org/10.29244/PIM.4.1>
- Nengsih, Y. K., Husin, A., Shomedran, S., & Saputra, A. (2022). Pelatihan dan pendampingan pembuatan batik eco print pada kader PKK sebagai peluang home industry creative di Desa Limbang Jaya Ogan Ilir. *Dikmas: Jurnal Pendidikan Masyarakat dan Pengabdian*, 2(4), 1235–1252. <https://doi.org/10.37905/DIKMAS.2.4.1235-1252.2022>
- Nursiyah, D. S., et al. (2022). Liong sebagai sumber ide penciptaan motif batik pada busana casual wanita. *Suluh: Jurnal Seni Desain Budaya*, 5(2), 55–65. <https://doi.org/10.34001/JSULUH.V5I2.4445>
- Rahayun, G. R., & Pamungkas, S. J. (2022). Efektivitas pemanfaatan ecoprint sebagai media pembelajaran IPA tema peduli terhadap makhluk hidup di sekolah dasar. *Jurnal Basicedu*, 6(5), 8851–8854. <https://doi.org/10.31004/BASICEDU.V6I5.2405>

- Rizki, S., & Pebriyeni, E. (2023). Visualisasi burung hantu melalui teknik batik tulis. *Relief: Journal of Creative Research*, 2(1), 20–32. <https://doi.org/10.26887/RELIEF.V2I2.3276>
- Samin, B., Sambongrejo, Blora, et al. (2022). Batik Samin Sambongrejo Blora: Simbol identitas budaya. *Solidarity: Journal of Education, Society, and Culture*, 11(1), 127–141. Retrieved from <https://journal.unnes.ac.id/sju/index.php/solidarity/article/view/58808>
- Sedyastuti, K. (2018). Analisis pemberdayaan UMKM dan peningkatan daya saing dalam kancah pasar global. *INOBISS: Jurnal Inovasi Bisnis dan Manajemen Indonesia*, 2(1), 117–127. <https://doi.org/10.31842/JURNAL-INOBISS.V2I1.65>
- Sofiyan, M. (2022). Irengan dan Bangjo sebagai varian warna motif batik klasik di Tegal. Retrieved from <https://digilib.uns.ac.id/dokumen/88513/Irengan-dan-Bangjo-sebagai-Varian-Warna-Motif-Batik-Klasik-di-Tegal>
- Yuliarti, I., Jaya, A. S., & Herawati, H. (2022). Pelatihan batik cap dalam rangka meningkatkan kreativitas pengunjung Rumah Batik Komar Kota Bandung. *Jurnal Dehasen Mengabdi*, 1(2), 105–114. <https://doi.org/10.37676/JDM.V1I2.2697>