

Harmonizing Local and Global Wisdom in the Design of Environmentally Friendly, Fashionable, and Sustainable Craft Products

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Abstract

This research provides practical insights into integrating local wisdom, a traditional knowledge and cultural practice repository, with global innovation in creating sustainable, fashionable, and environmentally friendly craft product designs. It investigates adapting traditional techniques and materials to meet the demands of the modern market while preserving cultural and ecological values. It underscores the importance of collaboration between local artisans, designers, and global stakeholders to collective action in achieving sustainability goals. The resulting craft products meet fashion and functionality standards and contribute to cultural and environmental preservation. They outdo expectations, effectively conveying sustainability messages and local wisdom and boosting global appeal.

Keywords: Local wisdom; craft product design; environmentally friendly; sustainable

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1.0 Introduction

In today's globalized world, sustainability has become a pivotal concern across various domains, particularly within the creative industries and craft product design (Anderson & Patterson, 2022). The rich tapestry of Indonesian craft design, rooted in the country's diverse cultural heritage, presents significant potential for growth by integrating local wisdom with global innovation. However, a critical challenge lies in balancing the authenticity of local traditions and addressing the demands of an international market that increasingly prioritizes environmental sustainability (Thorpe, 2021; Polak, 2020).

Local wisdom embodies traditional knowledge and cultural practices developed over generations, often reflecting a harmonious relationship between communities and their natural surroundings (Yu, 2021). This wisdom includes using Indigenous materials, environmentally conscious production techniques, and designs harmonizing aesthetics with functionality. Conversely, global creative and craft design trends increasingly stress the importance of sustainable materials, ethical production processes, and products that seamlessly blend high aesthetic value with practical use (Yair & Schwarz, 2023).

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The fusion of local wisdom with global innovation can yield craft product designs that are visually striking and environmentally sustainable. Such designs can connect traditional cultures with contemporary market demands, fostering environmental conservation while enhancing the socio-economic conditions of local communities (Zafirovski, 2022). This integration encourages the emergence of products that resonate with consumers' growing desire for ethically produced goods that respect cultural heritage.

This article is part of a research project conducted by Hendriyana in 2024, titled "*Modifikasi Desain dan Teknik Produk Kreatif Seni Kriya berbahan alam: Implikasinya pada Produk Ekspor*" (*Modification of Design and Techniques for Creative Craft Products Using Natural Materials: Implications for Export*). The study identifies and utilizes natural materials abundant in Pangandaran Regency, such as coconut frond sheets and pandan leaves. This coastal region is rich in coconut palms and Pandanus tectorius trees, providing ample resources for sustainable craft production.

The research delves into methods for integrating local wisdom with global innovations in craft product design. Through case studies and a detailed analysis of design practices, this paper demonstrates how combining local and international elements can lead to the creation of stylish, sustainable craft products. Additionally, it underscores the significance of collaboration among local artisans, designers, and global stakeholders, which is crucial for successfully implementing these designs.

Continuing the exploration of Indonesian craft design, it's crucial to highlight the role of cultural identity in shaping sustainable practices. Craft products are not merely commodities; they embody local communities' narratives, values, and skills. These aspects are essential for fostering a sense of belonging and continuity in a rapidly changing world (Fischer, 2022). By infusing craft products with cultural significance, designers can create offerings that resonate with consumers seeking authenticity in their purchases (Klein, 2023).

2.0 Literature Review

The intersection of local traditions and global trends in the design of environmentally friendly and sustainable craft products presents a unique opportunity to create items that are not only fashionable but also culturally rich and ecologically sound. This literature review explores vital themes in the research, highlighting the importance of integrating local wisdom with global practices to achieve sustainability in the craft sector.

1. Browse library reviews related to the Local Wisdom in Craft Design theme.

Local wisdom, encompassing traditional knowledge, cultural practices, and indigenous techniques, is crucial in sustainable craft design. According to Simpson (2022), local artisans often utilize readily available materials in their environment, fostering a sense of community and cultural identity. This practice preserves traditional Craftsmanship and supports ecological sustainability (Mason & Wilson, 2023; Garcia, 2021).

2. Previous literature related to Global Trends in Sustainable Design, eco-design, and technology

Global awareness of environmental issues has prompted a shift in consumer preferences towards sustainable products. The rise of eco-fashion demonstrates a growing demand for items that align with ethical consumption (Fletcher, 2020). Research by Fletcher and Grose (2012) outlines how brands increasingly adopt sustainable practices, integrating ethical sourcing, fair trade, and eco-friendly materials. This dual approach can create hybrid products that appeal to local and global markets (McCullough, 2023). For instance, using computer-aided design (CAD) or laser burning in crafting can improve precision and efficiency, reducing material waste (Rosa, 2023).

3. Previous literature related to Case Studies of the Harmonisation of eco-friendly and fashionable

Several case studies illustrate successful local and global wisdom integration in sustainable craft design. For instance, the Eco-Design Initiative in Thailand showcases how local artisans utilize traditional weaving techniques combined with contemporary designs to create marketable products that reflect cultural heritage and global trends (Rattanakhamaeng et al., 2021).

4. Previous literature related to Challenges and Opportunities

The challenges and opportunities of natural craft products include several things that should be able to support the value, function, and meaning of the product, namely:

- a. Sustainable availability of raw materials: Sustainability is a central theme in craft design discourse. Yadav and Lee (2023) define sustainability as meeting present needs without compromising the ability of future generations to meet theirs.
- b. Creativity in the design of natural material craft products education for the community Müller (2022) emphasizes the role of education and capacity building in promoting sustainable practices among artisans. Workshops on eco-friendly techniques empower local craftsmen to innovate while staying true to their cultural roots, facilitating a fusion of local and global knowledge in production.
- c. Environmentally-based processing systems and Development of production systems involving technological devices Fajar and Yulianto (2023) emphasize implementing simple mechanical tools to improve accuracy and production timelines in the handicraft industry. Prabowo (2023) further underscores the significance of adapting technology to boost capacity and effectiveness among local craftsmen.
- d. Collaboration Among Stakeholders to the Marketing System. Cohen (2023) suggests that sharing the narratives behind materials, processes, and cultural significance fosters a deeper connection between artisans and consumers. This narrative approach elevates the product and raises awareness about the importance of cultural preservation and environmental responsibility.

Collaboration between local governments, NGOs, and private sector partners is vital for supporting sustainable craft initiatives. Thompson and Thomas (2023) argue that such partnerships can facilitate access to markets and resources, enabling artisans to thrive. By working together, these stakeholders can create a supportive ecosystem that nurtures local craft industries, ensuring they contribute meaningfully to cultural and environmental sustainability.

3.0 Methodology

The design thinking method is used with the Participatory Action Research (PAR) design in this craft and design research (Swann, 2021). Participation research focuses on the concept of participation. This research model involves research partners with a focus on community involvement in research activities; in the field, it necessitates the direct active participation of the pandanus craft group to collaborate in creating more valuable pandanus application products (Buchanan, 2022).

The study population consists of *pandanus tectorius* plants and pandanus craftsmen in fourteen villages spread across a 44.85 km stretch of Pangandaran's 91 km coastline. This study aims to create an eco-design product using natural materials from *Pandanus tectorius*. The research analysis instrument employs several relevant elements related to other sciences, such as art, design, management, economics, socio-cultural, community motivation, and the environment. The Design Thinking model considers relevant conceptions during the practice-led research stage. The method chart (Fig. 01) aids in explaining the interpretation of arts and crafts to realize the results of the objectives of this research is necessary through the following approaches: *Natural resource development, Social-environmental activism, Human resource development, Economic-environmental activism, Eco branding / Geen branding, Technology's Potential Resource.*

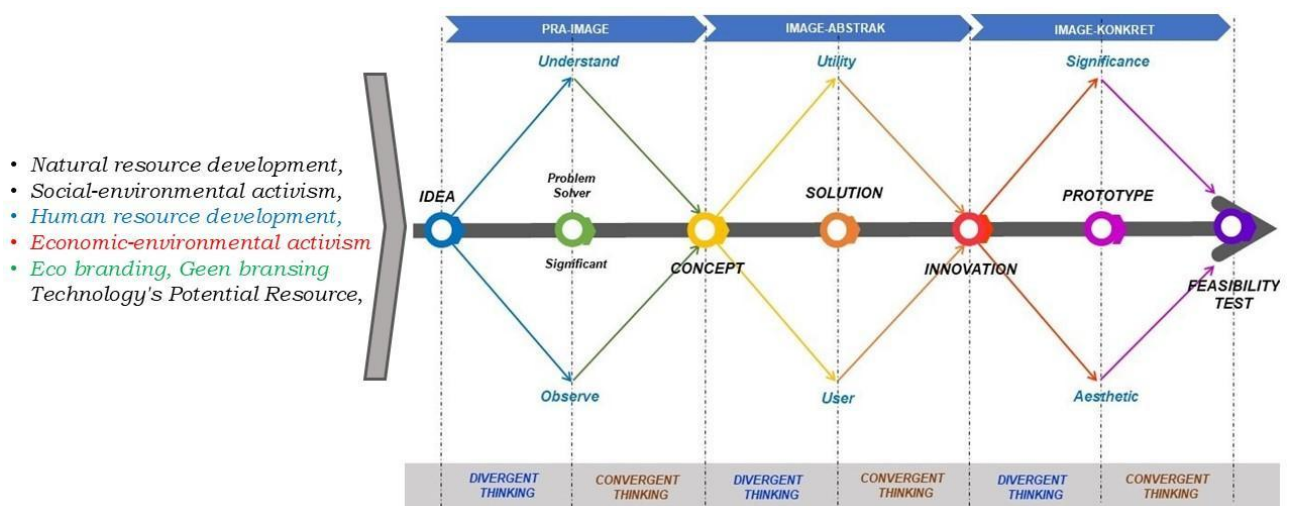


Fig. 1: Design Thinking Method with Five Approach

1. Primary research, understanding, and observing: at this stage, a study of ideas and objects of study that have significant value is then positioned to function as a problem solver.
2. The natural material craft products concept is formulated according to the research's problem, purpose, and benefits.
3. Identification of research instruments leads to the focus of activities and actions, tracing the study of the value of product usefulness and the right users, as well as a solution to the fundamental problems of the results of the primary research study.
4. Identifying supporting elements for the creation of creative and innovative works that provide added value and benefits for society in a broad context involves approaches such as natural resource development, social-environmental activism, human resource development, economic-environmental activism, eco-branding/green branding, and leveraging technology's potential resources.
5. Prototype products are a result of craftwork that not only has aesthetic value but also has broad meaning for other sectors.
6. Products that have the feasibility of various components of value, function, and meaning in the context of "Harmonising Local and Global Wisdom in the Design of Environmentally Friendly, Fashionable, and Sustainable Craft Products".

4.0 Findings

The application of cultural products "Hasta Cipta Preneurship" refers to the Development of a business or entrepreneurship that focuses on products that come from the cultural heritage of a region or community. The concept combines creativity, innovation, and sustainability to create economic value while preserving culture.

Eight Key Elements of Cultural Product Preneurship:

1. People, *preneurship* actors of cultural products

2. Idea, a *preneurship* actor of cultural products who has creative and innovative ideas
3. Humanism refers to an approach that emphasizes human values, ethics, and interpersonal relationships when creating and distributing cultural products. With a humanist approach, cultural products are seen as commercial goods and a means to build identity, strengthen communities, and create broader social awareness. This makes cultural products more than objects; they reflect the human experience and uphold values.
4. Support in cultural products refers to various forms of support that assist in developing, preserving, and distributing cultural products. This includes support from the community, government, and the private sector, as well as elements of education and marketing. Support for cultural products is not only about assisting but also about creating mutually beneficial networks to preserve and promote cultural heritage
5. Reproduction is not only about physical reproduction but also about the values contained in the cultural product. Reproduction generally refers to reproducing, maintaining, and disseminating existing cultural elements, including arts, crafts, traditions, and other cultural practices.
6. Venue, in the context of cultural products, refers to a location or place where cultural products are exhibited, produced, or performed. Venues are essential in the artistic experience and people's interaction with the product. A venue is a place and an essential element that can strengthen interaction and appreciation of cultural products.
7. Market and Marketing
Today's consumers are more conscious of their choices' environmental and social impacts. They are looking for products that function well and look good, carry a meaningful story, and contribute positively to the world. Craft products that blend local traditions with global trends offer this unique value. The industry should take note of this shift and adjust its marketing and design strategies to meet the growing demand.
8. Product refers to goods, services, or experiences from a culture's values, traditions, and creativity. Cultural products include many forms, including arts, crafts, food, and rituals, which have a particular meaning and significance for the communities that produce them.

Examples for Application



Fashionable

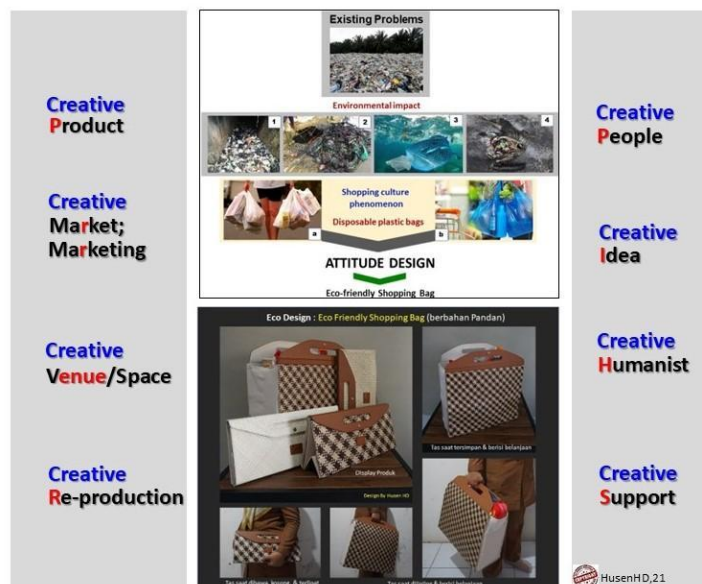


Figure 02: An example of the application of the "Hasta Cipta Preneurship" concept

5.0 Discussion

From the focus of the discussion description in this article, the author conveys more about the implementation and application of Natural resource development, Social-environmental activism, Human resource development, Economic-environmental activism, Eco branding / Geen branding, and Technology's Potential Resource through the application of pandan woven material craft products. With product examples, local and global wisdom will be realized in the craft industry. So far, craft products have always been positioned in traditional, local, and underdeveloped areas. Therefore, this article discusses the other side of the theoretical thing about the guiding elements of "Hasta Cipta Preneurship" namely more on the benefits of the use of natural materials, increasing the knowledge and skills of craftsmen related to design and Craftsmanship, the impact on the environment, the potential of the global market with issues of waste, leisure and the environment.

5.1 Cultural Preservation and Innovation

Blending local and global elements effectively shows how cultural preservation can be achieved through innovation. By integrating traditional techniques and materials into modern designs artisans can produce unique items that honor cultural heritage while appealing

to contemporary tastes This method helps keep traditional crafts relevant in a globalized world (Rogers & Smith, 2024; Fernandez & Liu, 2021).

Preservation of traditional culture with coloring techniques with natural color materials from types of leaves and stems such as Daun Ketapang, Tegeran, Tingi dan Secang.



Fig. 3: Preservation of Culture with Natural Dyes
(Source: Photo by Evie Azizah, 2024)

Focusing on local materials promotes sustainability and reduces dependence on imported industrial materials that can harm the environment. Materials like natural fibers, *pandan*, *mendong*, bamboo, and natural dyes are sustainable and generally better for consumers' health and the environment. Adopting these methods helps reduce waste and boost energy efficiency in production, aligning with global sustainability goals (Fry, 2009; Harris & Turner, 2024).



Fig. 4: Preservation of Pandan Weaving Through Innovative Patterns (Abstract Motifs) and Material Combinations (*Pandan*, *Mendong/Fimbristylis umbellaris*, and Bamboo)
(Source: Photo by Evie Azizah, 2024)

5.2 Sustainability and Environmental Friendliness

The principles of sustainability and positive environmental impact can be achieved through a) using locally available materials through intercropping methods; b) production processes that generate minimal waste; c) simple processes that do not involve air-polluting machinery; d) and degradable materials that break down naturally when the product is no longer in use (Harris & Giannoulis, 2022).

5.3 Integration of Local and Global Elements for Fashionable Products

The study demonstrates that blending local wisdom, such as traditional crafts and native materials, with global design trends can create products that preserve cultural heritage and appeal to contemporary markets (Norman, 2020). This integration requires a careful and thoughtful approach, where traditional values are upheld while incorporating relevant innovations from global trends. For instance, conventional weaving techniques can be adapted to create more modern patterns that align with global tastes (Chen & Burns, 2021; Fletcher, 2020). This approach shows that sustainable design does not have to sacrifice modern aesthetics or functionality. Instead, it can enhance products by adding richer stories and deeper values (Armstrong & LeHew, 2020).

5.4 Community Empowerment

Empowering local communities through sustainable design has a twofold impact. It improves artisans' livelihoods by giving them access to larger markets and adding value to their products. At the same time, it supports cultural preservation by keeping traditional practices alive and relevant. Artisans can adapt to modern market demands by providing training and education while preserving their cultural identity. This sustainability model addresses not just environmental concerns but also social and cultural aspects.

5.5 Environmental Impact, Economic and Social Impacts

One of the primary keys to production sustainability, namely the sustainable availability of raw product materials, is to obtain the availability of raw materials sustainably, which is carried out through intercropping. This will undoubtedly have an impact on the preservation of the natural environment, as well as add economic value for pandan farmers.

Through the participation of the local community, the farmer community, and pandan artisans, namely by planting and processing raw materials for Padanus leaves, it has been able to provide results as a sustainable provider of raw materials. The increase in raw materials for pandan leaves, such as woven materials or ropes, has strengthened cultural identity while providing economic benefits. Each farmer harvests pandan leaves, with a dry leaf yield of 23 Craftsman x 30kg/mg = 690 kg/mg; 690 x 4mg = 2,760 kg/mo; 2,760 x 10 months = 27,600 kg/year. When the market price was at its highest, 17,500/ko, the additional income of the artisan community was 50 x 17,500 x 4 = 3,500,000/month with only labor capital, without spending costs and processing materials.

Empowering local communities through sustainable craft production can have significant economic and social benefits (Brown, 2021). Growing market demand for such products can boost artisans' incomes and stimulate community development (Smith & Jones, 2022). Moreover, this empowerment fosters resilience within communities by cultivating a sense of pride and ownership over their cultural heritage (Gonzalez, 2023; Taylor, 2022).

6.0. Conclusion

Aesthetics are closely related to creativity, and creativity is greatly influenced by the ability to trigger sensitivity and responsiveness to the response to existing potentials, such as environmental potential, natural resources, local artisan resources, and socio-cultural and technological developments.

This study demonstrates that harmonizing local and global wisdom in the design of environmentally friendly, fashionable, and sustainable craft products is both a viable and beneficial approach. This integration helps preserve cultural heritage and creates appealing and relevant products for the modern market. It also reduces environmental impact and empowers local communities. The findings indicate that a holistic approach to product design can promote ecological and social sustainability, making a meaningful contribution to the design industry and society.

The execution of this research represents an innovative step with numerous benefits. However, to fully realize the potential of this approach, further research is needed to address existing gaps with all its shortcomings. With deeper insights and a more comprehensive approach, this model could significantly contribute to ecological, economic, and cultural sustainability across various communities worldwide.

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Paper Contribution to the Related Field of Study

This paper contributes to sustainable design by integrating local cultural elements with global innovations to create eco-friendly and aesthetically pleasing craft products. This research empowers local communities by leveraging traditional wisdom and introduces design practices that support ecological sustainability. Additionally, it provides a foundation for design education and creative industry policy, which offers valuable insights for advancing both practical and theoretical aspects of sustainable design.

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