

USER PERCEPTION AND PREFERENCE STUDY ON BATIK MOTIFS FOR USE IN UPCYCLED PRODUCTS

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ABSTRACT

User perception and preference play a crucial role in accepting upcycled products, with 85% of respondents valuing aesthetics as a key factor. The waste fabric is processed through creative innovation and upcycling to enhance its value. Batik was chosen for its cultural significance, with Buketan motifs as an example of motif application. This study examines user perceptions and preferences regarding Batik motifs on upcycling products, focusing on aesthetics and functionality. An online survey gathered responses from 68 female participants aged up to 35. Thematic analysis identified patterns in user views related to aesthetics, functionality, and cultural value. Findings suggest that Batik motifs can enhance the visual appeal of upcycled products and add cultural identity, though some motifs may lack versatility. While users see market potential, premium pricing could limit acceptance. This highlights the importance of balancing creative product development with sustainable thinking and customer acceptance to enhance the appeal of upcycled products with batik-based aesthetics.

KEYWORDS

batik, upcycling, user perceptions, user preferences



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Introduction

Understanding user perception and preference is crucial in designing relevant and desirable products. Positive perceptions not only increase consumer purchase interest but also influence their decision-making when choosing products. [1]. Moreover, consumer preferences help producers meet market needs, enhance competitiveness, and ensure product sustainability [2], [3]. User perception and preference are closely tied to aspects relevant to their daily lives. One of the elements closely associated with users is *Batik*, an iconic symbol of Indonesian culture. Therefore, this research focuses on applying *Batik* motifs in patchwork-based products, aiming to understand how consumer acceptance and preferences can influence product design.

Batik, in general, not only holds high aesthetic value but also serves as a symbol of Indonesia's cultural identity. Each *Batik* motif carries stories and philosophical meanings that reflect the local wisdom of various regions [4]. However, despite being valued for

its cultural significance, some traditional *Batik* motifs are considered less flexible for use in modern design. To address this challenge, the *Buketan* motif can be an example of an adaptive motif suitable for contemporary products. Featuring elements such as flowers, birds, and butterflies, the *Buketan* motif is renowned for its beauty and versatility in various design contexts [5]. Its application demonstrates how traditional values can be harmonised with the demands of modern products.

This survey-based research is directed at women aged a maximum of 35 years because this group tends to be socially active and more open to *Batik*-based product innovation. The survey aims to explore their views and impressions of *Batik* and their interest in products such as *Batik* bags. From the results of this survey, it is hoped that insights will emerge that strengthen the understanding of consumer preference patterns for *Batik* so that design opportunities that are relevant and attractive to the modern market can be found. Qin et al stated that cultural aesthetics can positively affect customer behaviours, particularly among young generations and cultural elements contribute to cultural sustainability[6]. Understanding the perceptions and preferences of the respondents in this research survey will lead to an impression of how *Batik* can change the user's view of the value of materials or products. Saepudin et al, conclude that emphasizing sustainability, cultural authenticity, and the uniqueness of products can cater to a broader audience, encouraging environmentally responsible consumption [7]. Changes in views can be used in upcycling *products* to solve global environmental issues due to *fast fashion*.

Fast fashion itself is the cause of environmental issues that have created a significant increase in textile waste. Most waste produced is from materials such as polyester that have a bad impact on the environment [8]. Textile waste that is not managed properly can pollute soil and water and interfere with public health [9]. One type of textile waste that has great potential to be reused is patchwork, which is leftover pieces from the production process. Although often overlooked, patchwork can be recycled and added value through creativity and innovation [10].

Effective utilization of patchwork can be achieved through upcycling, which is the process of converting waste materials into new products with higher aesthetic and functional value. Popa and Curteza [11] mentioned that *upcycling* allows materials that have reached the end of their life cycle to re-enter the market with new qualities. In this context, the application of *Batik* motifs on patchwork fabric not only provides an aesthetic touch but also supports sustainability by reducing waste and extending the life cycle of the product. For *this upcycling* to be successful, the resulting product needs to consider consumer perceptions and preferences to be accepted in the market.

The *Buketan* motif is used in the discussion as an example of adaptive motifs that are relevant to modern trends. The versatility of the flora elements in *the Buketan* shows

how traditional designs can adapt to modern trends and be applied to a variety of products, such as bags and accessories. Thus, *the Buketan* motif serves as an illustration of how cultural values and innovation can combine to create products that are relevant, sustainable, and in demand by modern consumers.

In the end, this study will map user perceptions and preferences related to *Batik*, with an overview of examples of patchwork-based bag products, through a survey of women up to 35 years old. The results of the survey are expected to provide insight into the image of *Batik* that appeals to consumers as well as the reasons behind their preferences. The discussion will use the *Buketan* motif as an example of an adaptive motif to show how traditional elements can be combined in modern design. This research will also explore the potential of patchwork upcycling as a sustainability solution while strengthening the aesthetic and cultural value of the product.

Method

This study uses a qualitative approach to understand user perceptions and preferences related to *Batik* motifs in general and their application to products such as bags. Vaismoradi and Snelgrove mention that qualitative analysis techniques such as thematic analysis are useful for understanding user perception in social and cultural contexts [12]. The focus of the research is to explore the image and reasons for users' preference for *Batik*, without including visuals or examples of the application of *Batik* motifs on patchwork fabrics in the survey. The *Buketan* motif was not referred to in the survey but will be used as an adaptive example in the discussion to highlight the flexibility of *Batik* motifs.

1. Data Collection

Data was collected using an online questionnaire disseminated through the Populix.com platform. The questionnaire consists of several categories of questions:

- Demographic Profile: Age, gender, employment status, and domicile.
- Experience and Interest in *Batik*: The level of interest of respondents in *Batik*-based products and their experience of using them.
- *Batik* Image and Preferences: Respondents' perception of the impression or image of *Batik* and the reasons behind those preferences.
- Views on *Batik* Bag Products: An exploration of respondents' interest in using bags with *Batik* elements, as well as the context of their use.

The survey was conducted in two periods with 68 female respondents aged a maximum of 35 years. Respondents were chosen because this group is considered more active in social activities and more open to *Batik*-based product innovation.

2. Data Analysis

The data is analysed thematically, namely through the identification, analysis, and interpretation of patterns or themes in responses. The analysis steps include:

- Data coding to find themes related to aesthetic, cultural, and functional perceptions.
- Grouping responses based on the imagery or impression that the respondent chooses.
- Interpreting data to understand the patterns of preferences and reasons behind respondents' choices, as well as exploring user expectations for *Batik* bag products.

3. Research Limitations

This research has several limitations. The focus is only on the perceptions and preferences of women up to 35 years old, so the results cannot be generalized to other demographics. In addition, the survey only explores users' views on *Batik* in general without using visualization of motifs on patchwork. The *Buketan motif* will be discussed as an example of an adaptive motif in the discussion section, not as an object of evaluation in the survey.

Discussion

1. Respondent Description

The user's view, which is the focus of this study, is obtained from the Populix.com survey page where the respondent's data is widely open in accordance with the specified references and criteria. In this study, the user reference was limited to female respondents with a maximum of respondents at the age of 35 years as the age that tended to remain active in activities. The Populix.com page also allows respondents from various regions or regions in Indonesia so that the data results can be broader and more comprehensive. In the survey, demographic data was obtained in the form of gender, economic status, age, provincial or regional domicile, and employment status.

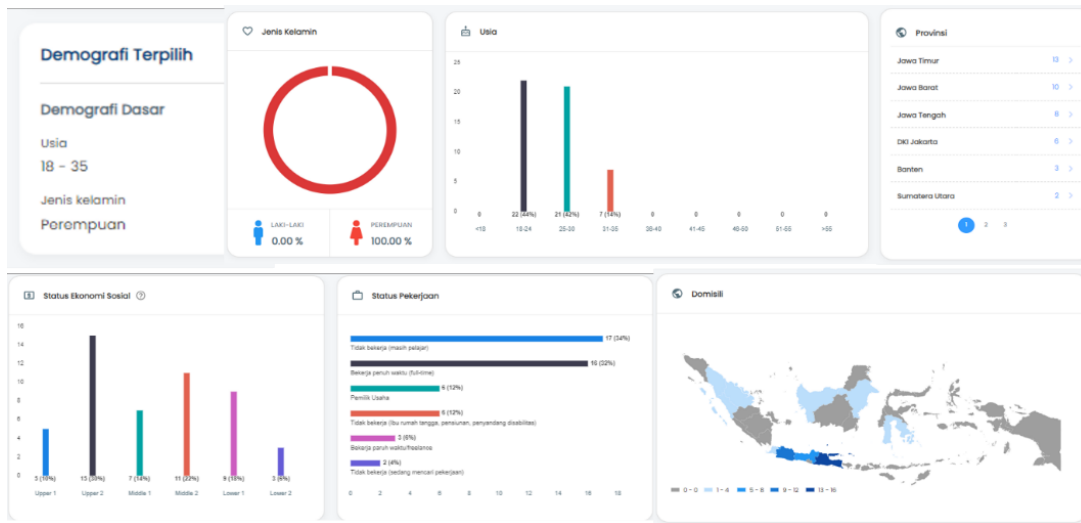


Figure 1. Respondent Demographics [Source: Populix.com Angelika, 2024]

Based on the demographic results, it was found that the highest respondents were in the age range of 18-24 years and 25-30 years. Respondents also tend to be in the middle to upper social status, with student employment status to permanent workers. The domicile of the respondents tended to be relevant to *Batik*, namely on the island of Java as the most respondent. Respondents in this survey were divided into 2 survey periods with a total of 68 respondents.

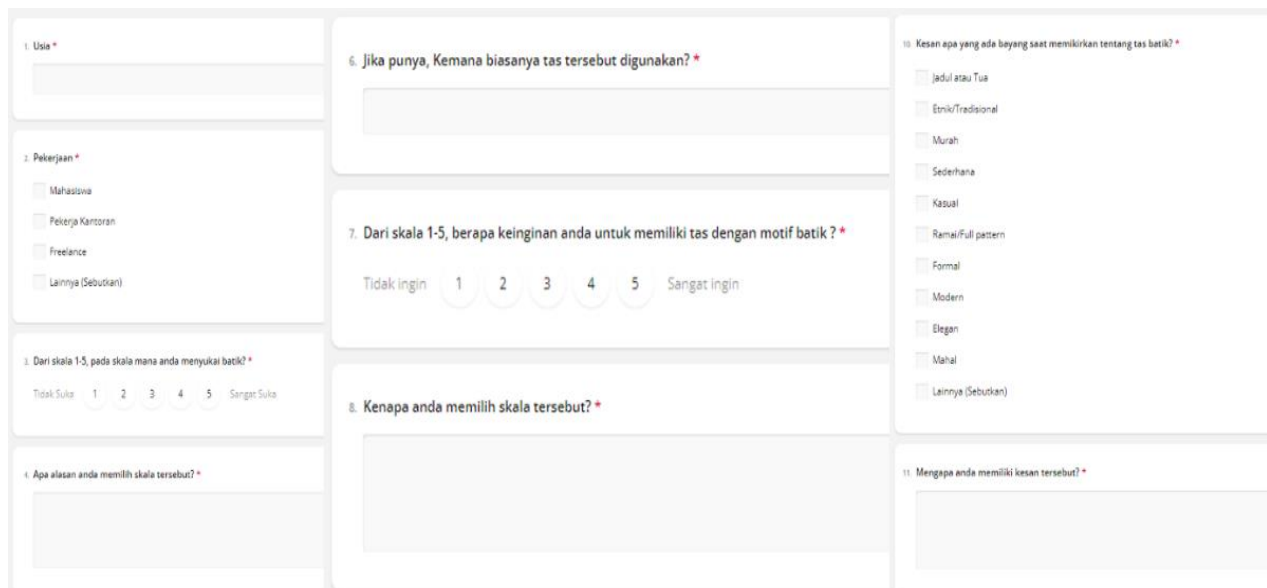


Figure 2. List of Questionnaire Questions [Source: Populix.com Angelika, 2024]

The questions asked to the respondents were to see the respondents' interest in *Batik* and how the respondents viewed *Batik*, what impressions and images the respondents saw. This is done to see how much interest users have in *Batik* or *Batik* elements and what image users feel in *Batik*. This is also related to how users will or have used products with *Batik* elements in their activities. In this study, the product taken was a *Batik* bag.

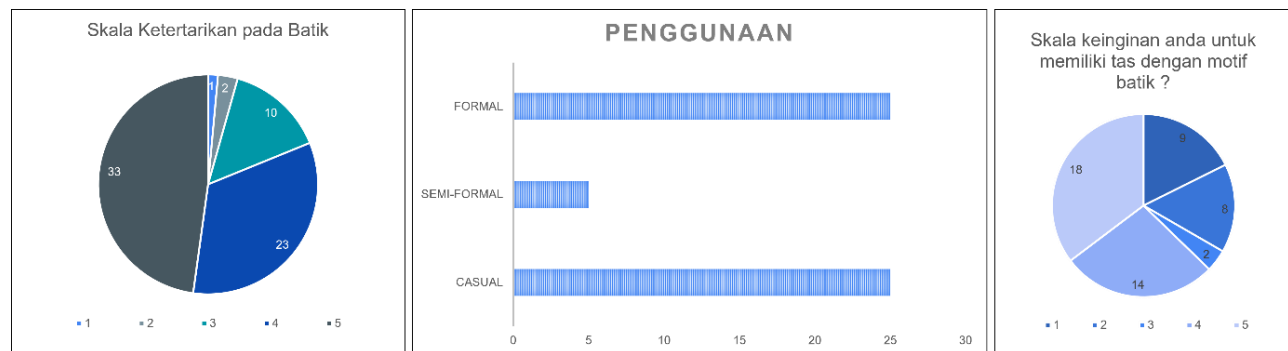


Figure 3. Survey Respondent Results Chart
[Source: Angelika, 2024]

Based on the results of the survey, the results are mapped into several charts that show that respondents tend to be interested in *Batik*, as seen from 33 respondents who chose a scale of 5 (very liked) in interest in *Batik*. The reason respondents are interested in *Batik* with a scale of 5 (very much) is that they appreciate *Batik* as a cultural identity, the beauty of the motifs, the uniqueness and flexibility of its use and make *Batik* a local product that is proud and loved. This shows that the respondents' interest is based on cultural values and the beautiful and unique impression possessed by *Batik*, the value of nationalism is also seen as the attraction of *Batik* for respondents. The next result is the tendency of users or respondents to use products with *Batik* elements which in this context are condensed on *Batik* bags. The results showed that generally respondents used *Batik* bags in casual or daily activities and formal activities. The survey results also show that there is a desire from users for bag products with *Batik* elements. This can be seen from 18 respondents who chose a scale of 5 (very desirable) and 14 who chose a scale of 4 (desirable). For respondents, this result is based on respondents who appreciate *Batik* motifs and consider them elegant, unique, and suitable for collection. Despite its limitations in its use for formal events, *Batik* bags are still seen as fashionable and an option to express love for Indonesian culture. These results show that bags with *Batik* elements are considered attractive by users because they combine aesthetics, culture and function in the product.

The views of users from 62 respondents in this study show that users with an age range of 18-30 years, students and workers with a middle and upper economy tend to be interested and have a desire to have products with *Batik* elements. This happens

because of the cultural value, aesthetics and sense of nationalism from users if it is associated with *Batik* elements in the product. *Batik* is considered a national and cultural image that should be appreciated and loved, even though users feel that there are limitations in the use of products with *Batik* elements. However, the uniqueness and beauty of *Batik* motifs are one of the aesthetic values sought after by users.

2. User Perception and Preferences Results

In the survey, it was also found that the image or impression of *Batik* was captured by the respondents as users in this study. The image or impression captured by the respondents can lead to insight into how product development is carried out so that the impression remains reflected in the product. Based on the survey, it was found that the image that respondents tend to see from *Batik* is ethnic or traditional, and elegant.

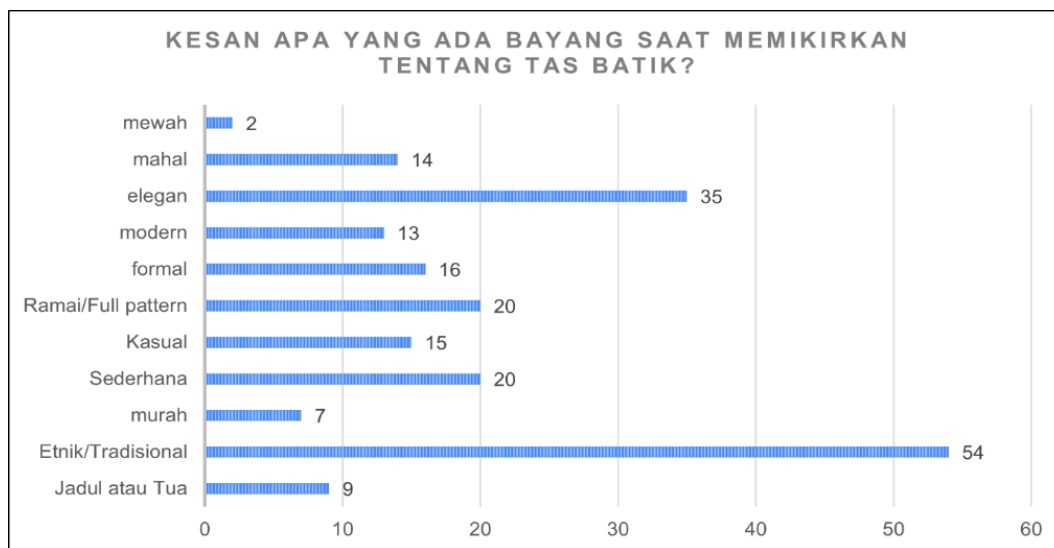


Figure 4. Survey Respondent Results Chart
[Source: Angelika, 2024]

Table 1. Categorization and Analysis of Impression Results and Reasons
[Source: Angelika, 2024]

Impression	Reason
Old School or Old	Because <i>Batik</i> depicts traditional things, it is often used by people of age, sacred motifs, dark colours, not <i>up-to-date</i> , or no innovative designs.
Ethnic/Traditional	It is very reflective of Indonesian culture, synonymous with bustling motifs, gives a traditional impression, is often used in formal events, and depicts strong cultural values.
Cheap	Often sold in street markets or traditionally, it looks simple but pocket-friendly, sometimes it doesn't look luxurious.
Simple	Giving a casual but elegant impression, it doesn't look expensive, the design is often simple but still has aesthetics.
Casual	It can be used at various events, looks relaxed and accessible, and gives the impression of comfort and informality.
Ramai/Full pattern	<i>Batik</i> motifs tend to be dense and diverse, often giving the impression of being too crowded, looking traditional and full of distinctive motifs.

Formal	Suitable for use in formal events, giving an elegant impression, <i>Batik</i> motifs are often associated with formality in Indonesia.
Modern	<i>Batik</i> with modern designs gives a fresh, unique, and more attractive impression, and often looks elegant and suitable for <i>the latest</i> fashion.
Elegant	<i>Batik</i> is considered elegant because of its unique and classy motifs, which can give an expensive or exclusive impression.
Expensive	Some <i>Batiks</i> , especially premium ones, give the impression of luxury and expensive, depending on the material and quality of the product.
Luxurious	Premium <i>Batik</i> with high-quality materials can look very luxurious and exclusive.
Unique	<i>Batik</i> motifs have their own uniqueness and can be an interesting <i>fashion statement</i> and distinguish them from other products.

Respondents considered *Batik* to be ethnic or traditional and elegant because several reasons caused interest and perception of *Batik* bag products to be felt by users. The reasons in Table 1 are grouped into several outlines of understanding as follows.

a) Cultural Imagery and Traditional Identity

Batik depicts strong Indonesian culture and characteristics and reflects traditional values. The design with *Batik* motifs tends to be diverse and has the characteristics of the *Batik*-producing area. *Batik* can be a product that is used formally in national and international events. The use of *Batik* is also considered by respondents as a way to maintain culture and show love for local products.

b) Aesthetics and Elegant Impression

Products with *Batik* elements are considered beautiful, unique and elegant because of the motifs that give a premium impression. *Batik* can also provide a combination of casual and formal impressions so that products with *Batik* elements tend to be felt flexible to be used in various situations. *Batik* is considered to have an impression that looks classy and can be a *fashion statement* for users.

c) Personal experience and collection

Batik is considered by respondents because of the sentimental and classy impression when viewed from the environment of users who use *Batik* in formal situations. *Batik* is also a collective item because of a variety of unique motifs. Users also feel a sentimental experience when buying products with *Batik* elements because there is a sense of attachment to culture.

d) Flexibility and Functionality

Batik motifs by users are considered still relevant and not outdated, where their flexibility can be used at various events ranging from casual to formal. *Batik* is also

considered something inexpensive but is still expected to provide a premium and classy look.

e) Challenges and Limitations

Products with *Batik* elements are sometimes considered expensive items but are considered comparable when viewed from the quality of the material and its uniqueness. The challenge and limitation of products with *Batik* elements felt by users is the existence of several motifs in *Batik* that are not flexible to use.

In the end, the impression or image that arises from *Batik* is an accumulation of a reflection of unique and elegant Indonesian culture. *Batik* is a design element that is suitable for use in casual to formal activities even though users feel that there are limitations of *Batik* motifs that are limited in their use. *Batik* is also felt to provide emotional experience and cultural meaning so that it becomes a special attraction regardless of the challenges and limitations felt by users. So users generally have a perception of *Batik* as an element or item that can be used in design to provide cultural and elegant value to the product. Users place *Batik* in the preference of items for formal activities because of its classy and unique impression. Users' views on *Batik* as an image of Indonesian culture can also increase the value of a product.

3. User Perception and Preferences for *Batik* in Bag Products

The survey shows that *Batik* is seen by respondents as a design element that combines aesthetics, culture, and national identity. Respondents associated *Batik* with its uniqueness and high artistic value, making it an attractive option for both daily use and formal events. The main reasons for their interest include:

- a) Aesthetics: *Batik* is seen as elegant and unique, with motifs that give a premium impression.
- b) National Culture and Identity: Respondents felt that using *Batik*-based products was a form of appreciation for Indonesian culture and an expression of love for local products.

The use of *Batik* in bags is considered to provide flexibility because *Batik* bags can be used in both casual and formal contexts, although some motifs are considered less suitable for very formal events. It emphasizes that users are not only looking for functional products but also the symbolic and emotional value of the products.

4. *Upcycling* as a Sustainability Solution through *Batik* and Patchwork Fabric

In the context of *upcycling*, patchwork is one of the ideal materials because it utilizes textile waste and provides added value through design innovation. Patchwork combined

with *Batik* creates a product with a new meaning while contributing to environmental sustainability by reducing the impact of textile waste.

Upcycling is not just about increasing the functional value of materials, but it also involves aesthetic transformation. Popa and Curteza [11] emphasized that *upcycling* should consider how user perception plays a role in product acceptance. This survey confirms that users' preferences for *Batik* are not only based on appearance but also on the meanings and cultural symbols it contains.

5. The *Buketan* motif is an example of an Adaptive Motif

The *Buketan* motif was chosen as an example in the discussion to show how *Batik* motifs can be more flexible and relevant in modern design. Budianto and Sunarya [5] mention that the *Buketan* motif, with its main elements consisting of flowers, birds, and butterflies, has long been appreciated for its beauty and ability to adapt in various design contexts.

Ornamental Varieties on *Buketan* is a flower arrangement with a combination of birds, and butterflies as its decorative elements. On *Batik Buketan Pekalongan* by Budianto and Sunarya [5] are divided into two, *Batik Buketan* Dutch and Chinese *Peranakan*. The difference between the two is in the choice of colour and the arrangement of the flower arrangement.



Figure 5. Motif of *Buketan* Oen Soe Tjoen Pekalongan (Chinese Style) and Motif of *Buketan* Van Zuylen Pekalongan (Dutch Style)

The Dutch tend to have cold-dark colours (right) and unrealistic combinations of flower arrangements—mixing spring and autumn flowers—while the Chinese (left) tend to have bright colours and realistic flower arrangements [5]. *Batik Buketan* tends to be more flexible in its decorative variety and is not bound by prohibitions in its use so it is one of the fast-growing and commonly used *Batik* by the community.

The *Buketan* motif offers a combination of aesthetics and flexibility, which makes it easier to apply to a variety of products, such as bags and *fashion accessories*. Referring to the context of upcycling, where materials such as patchwork require designs that are easily accepted in the market but still retain cultural values is an important meaning

of this motif as an example. *Buketan* demonstrates that traditional motifs are not confined to specific functions; they can be seamlessly integrated into modern products when the motifs are designed to be flexible and adaptable.

6. Challenges in the Application of *Batik* Motifs

Although *Batik* motifs such as *Buketan* offer various advantages, some challenges are still found in their application:

- a) **Limitations of Events:** While the *Buketan* motif is versatile, some users feel that the *Batik* motif is not always suitable for very formal occasions, such as funerals. Conversely, other users believe that certain types of *Batik* can appear too casual.
- b) **Price and Quality Expectations:** *Batik* is regarded as a premium item by some users, which contrasts with the perception of patchwork products as low-quality. Merging these two elements can be challenging due to users' differing mindsets and the need for design to maintain the premium nature of *batik* while incorporating low-quality patchwork materials.
- c) **Creativity in Design:** To remain attractive to young consumers and keep up with *fashion* trends, *Batik* motif-based products require creativity in design and continuous innovation.

7. Implications and Recommendations for the Development of *Batik* and Patchwork-Based Products

The findings of this study offer several important insights for developing products that integrate *Batik* and patchwork.

- a) **Flexible Design Exploration:** Integrating *Buketan* motifs in semi-formal products, such as bags, purses, or other accessories. This helps to expand the range of uses of *Batik* motifs in various contexts.
- b) **Product Variety and Price Range:** Provide products with price variations to reach consumers with different purchasing power.
- c) **Sustainability and Culture Campaign:** Educate consumers on the importance of sustainability and how the use of *Batik* helps preserve Indonesian culture.
- d) **Collaboration with Local Designers and Artisans:** Engaging local designers and artisans to create innovative products and strengthen the local economy.

The use of *Batik* in patchwork products enhances aesthetic value, strengthens cultural identity, and promotes sustainability. Although the survey did not specifically evaluate the *Buketan* motif, it was used as an example of how adaptive design can help patchwork-based products be more relevant and accepted by consumers. Considering

user preferences, products that blend *Batik* and patchwork have the potential to be an innovative choice in an increasingly environmentally conscious market.

Conclusion

This study highlights that incorporating *Batik* motifs, such as the *Buketan* motif, into patchwork fabrics enhances the visual appeal of the products while reinforcing their elegance and cultural identity. Users' perceptions of *Batik* motifs are significantly influenced by their aesthetic value and cultural significance.

Despite some limitations, including the appropriateness of motifs for formal contexts and consumer price expectations, products that combine *Batik* with patchwork can attract consumers who appreciate local culture and environmentally friendly products. Therefore, patchwork-based items featuring *Batik* motifs, particularly the *Buketan* motif, can be a valuable addition to the fashion and design industry.

These products offer unique aesthetics, high cultural value, and sustainable solutions. Additionally, *Batik* can elevate the appeal of patchwork or upcycled products, making them more attractive to consumers. The implementation of innovative and functional design can facilitate broader acceptance among those seeking products that blend cultural richness with visual beauty.

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