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Visual Value of Ready-to-Wear “Shankara” with an Upcycling Approach

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Abstract

This study aims to analyze the visual value of the Ready-to-Wear fashion product “Shankara,” which was designed through an upcycling approach using denim waste. The research was motivated by the increasing problem of textile waste, particularly denim, which is highly consumptive in production and often discarded despite its structural durability. Upcycling is positioned as a sustainable fashion strategy that not only reduces environmental impact but also reconstructs the aesthetic value of discarded materials. The study employed a quantitative descriptive method with expert validation techniques to systematically evaluate the visual quality of the product. The research object was a menswear set consisting of a cropped jacket and cargo pants made from discarded denim combined with traditional woven fabric. The assessment instrument was developed based on 48 aesthetic design indicator, covering aspects of color, line, silhouette, proportion, balance, unity, focal point, texture, and ornamentation. Three expert validators conducted the evaluation using a dichotomous (Guttman) scale with two response options (“Yes” = 1, “No” = 0). Data were analyzed by calculating the Aesthetic feasibility percentage using Riduwan’s formula (2015).¹ And then interpreted according to product feasibility categories. The results showed that the “Shankara” fashion product achieved an aesthetic feasibility level of 94.4%, categorized as Highly aesthetically feasible. These findings highlight that the upcycling approach not only contributes to environmental sustainability but also produces fashion products with strong visual aesthetics, thereby enriching the discourse on sustainable fashion design.

Keywords: visual aesthetic value, denim waste, ready-to-wear

INTRODUCTION

The surge in clothing production over the past two decades had transformed fashion from a basic necessity into a disposable commodity, leaving behind a massive and difficult-to-manage trail of waste. This phenomenon is consistent with the findings that highlighted fast fashion as a driver of consumerist culture in Indonesia with serious environmental impacts.³ Nationally, textile waste contributes a significant proportion to the total annual waste generation, while globally textile waste reaches tens of millions of tons per year.⁴

² Wulandari, Hunaifi, and Wiguna.

³ Fadhel Muhammad and Imam Fadhil Nugraha, “Fast Fashion Dan Budaya Konsumerisme Di Indonesia: Tinjauan Melalui Persepektif Green Theory,” *Triwikrama: Jurnal Ilmu Sosial* 8, no. 7 (2025): 11–20, <https://cibangsa.com/index.php/triwikrama/article/view/673/585>.

⁴ Nadia Olivar Aponte et al., “Fast Fashion Consumption and Its Environmental Impact : A Literature Review,” *Sustainability: Science, Practice and Policy* 20, no. 1 (2024): 2381871, <https://doi.org/10.1080/15487733.2024.2381871>.

Rapid consumption behavior has been accelerating disposal cycles, which continue to increase alongside the growth of the fast fashion industry.⁵ Overconsumption has become a worrying global phenomenon, characterized by high purchasing power, short usage periods, and rapid disposal, all of which indicate a sustainability crisis in the fashion production and consumption system.

This is consistent with findings that emphasized how the fast fashion business model can drive excessive behavior with short clothing cycles.⁶ Other studies also show that even secondhand clothing consumers still replicate the rapid consumption patterns of fast fashion.⁷ Among the various types of textile waste, denim occupies a highly problematic position because its production process consumes excessive amounts of water, energy, and chemicals, while also being closely linked to fast fashion consumption patterns.⁸

Conventional denim manufacturing is further criticized wastefulness in terms of energy and chemicals.⁹ In addition, the strong and durable character of denim ironically contributes to the accumulation of post-consumer waste when products lose their visual appeal, even though they remain structurally wearable. This issue indicates that the problem of denim waste lies not only in production, but also in how design can reconstruct its visual value to make it relevant again within the fashion cycle.¹⁰

Research has also shown that denim waste accumulates due to the loss of aesthetic value.¹¹ As a response to this issue, upcycling has developed as a strategy within the framework of sustainable fashion that seeks to transform discarded materials into new products with added value through the design process. A number of studies have shown that techniques such as pattern reconstruction, patchwork, surface manipulation, and material combination are capable of producing new garments from denim waste.

For example, studies have emphasized the technical aspects of material processing as well as environmental sustainability strategies.¹² However, in-depth analysis of the visual value of upcycled products based on aesthetic assessment

5 Susanna Horn et al., "From Fast Fashion to Sustainable Consumption : Consumer Behaviour from Purchase to Post-Use," *Journal of Sustainability* 1, no. 2 (2025): 1–25, <https://doi.org/10.55845/jos-2025-1244>.

6 Aponte et al., "Fast Fashion Consumption and Its Environmental Impact : A Literature Review."

7 Meital Peleg Mizrahi and Ori Sharon, "Secondhand Fashion Consumers Exhibit Fast Fashion Behaviors despite Sustainability Narratives," *Scientific Reports* 15, no. 1 (2025): 34968, <https://doi.org/10.1038/s41598-025-19089-1>.

8 Hakan Güney et al., "Investigation of the Water Footprint of Denim Fabric Production at Factory Scale," *Clean Technologies and Environmental Policy* 27, no. 11 (2025): 6405–20, <https://doi.org/10.1007/s10098-025-03206-9>.

9 Kazi Rezwana Hossain and Mohammad Faizur Rahman, "Textile & Leather Review Reducing the Environmental Impact of Denim : A Comparative Study of Green and Conventional Manufacturing Practices Reducing the Environmental Impact of Denim : A Comparative Study of Green and Conventional Manufacturing Practices," *Textile & Leather Review* 8, no. 1 (2025): 38–71, <https://doi.org/10.31881/TLR.2024.163>.

10 Orizza Anggun Ferayanti, Fairuz Widad Zahirah, and Priska Nanette Kristiyanto, "Sustainable Fashion Melalui Upcycling Limbah Denim Dengan Teknik Pewarnaan Tekstil Ramah Lingkungan," *Jurnal Pengkajian Dan Penciptaan Seni Kriya* 22, no. 1 (2025): 1–17, <https://jurnal.isi-ska.ac.id/index.php/ornamen/article/view/7081/4375>.

11 Nadira Zahra Syihab, Arini Arumsari, and Liandra Khansa Utami Putri, "Pemanfaatan Limbah Denim Sisa Produksi Dengan Menerapkan Metode Upcycle," *E-Proceeding of Art & Design* 11, no. 6 (2024): 8531–45, <https://openlibrarypublications.telkomuniversity.ac.id/index.php/artdesign/article/view/25222/24142>.

12 Novia Hidayatunnisa, Dewa Ayu Made Budhyani, and Putu Agus Mayuni, "Pengembangan Busana Ready-to-Wear Berbahan Limbah Denim Dengan Sumber Ide Ombak Laut," *Jurnal Bosaparis: Pendidikan Kesejahteraan Keluarga* 15, no. 2 (2024): 164–74, <https://doi.org/10.23887/jppk.v15i2.69374>.

remains limited, and therefore this study seeks to fill that gap. In the context of fashion design, visual value refers to the aesthetic quality reflected through the application of design elements and principles, such as color, line, silhouette, proportion, balance, unity, texture, focal point, and decorative elements or ornaments.

Visual value is not only assessed from beauty alone, but also from the integration of design elements that create overall visual harmony. This is in line with Sri Widarwati's aesthetic theory, which emphasizes concept and compositional balance.¹³ Therefore, aesthetics are used as an analytical framework to evaluate the extent to which upcycled products possess conceptual unity, compositional balance, and clarity of focal point.

The study of visual value becomes essential to ensure that upcycled products are not only oriented toward sustainability aspects, but also possess design quality that is aesthetically and functionally appropriate. This study focuses on the ready-to-wear fashion product "Shankara," a student design that utilizes denim waste as the primary material and combines it with tenun bulu as a representation of traditional textiles. The product consists of a cropped edgy-style jacket and loose cargo pants that showcase explorations of woven denim textures along with the harmonization of colors and geometric motifs of tenun bulu. The study was conducted to analyze the visual value of the product through expert assessments based on the elements and principles of fashion design.

This study is important because it contributes to strengthening the discourse on aesthetics in upcycled fashion practices, particularly in the context of student creativity. Academically, this research enriches the literature on the relationship between sustainability and visual design quality. Practically, the findings can serve as a reference for students and creative industry practitioners in designing upcycled fashion that is not only environmentally oriented but also possesses aesthetic richness for use in various occasions. Although numerous studies have discussed denim waste upcycling within the context of sustainable fashion, most of them have focused more on technical aspects of material processing and product reuse. For example, Syihab and Arumsari emphasized the utilization of denim waste through upcycling methods to reduce environmental impact.¹⁴ While Anggun, Widad, and Nanette focused more on environmentally friendly dyeing techniques.¹⁵ In-depth studies that specifically analyze the visual value of upcycled fashion products through aesthetic design indicators remain relatively limited. In fact, in fashion design practice, the success of a product is determined not only by the sustainability of its materials but also by the visual quality formed through the application of design elements and principles. Thus, this study aims to analyze the visual value of the ready-to-wear fashion product "Shankara" as a result of the upcycling transformation of denim waste through an aesthetic approach.

METHOD

This study employed a quantitative descriptive method to assess the visual value of upcycled fashion products based on the elements and principles of fashion design through expert evaluation. The descriptive method was chosen to describe and explain the visual value of the ready-to-wear fashion product "Shankara" as a result of the upcycling transformation of denim waste, based on expert assessment, without conducting experimental treatments or product comparisons.

The upcycling process was carried out at the Ikaten Studio from February to March 2025, while expert validation was conducted directly in Semarang City and Sragen Regency in December 2025. The research object consisted of a ready-to-wear menswear set called "Shankara," which included a cropped jacket and cargo pants made from denim waste combined with tenun bulu. The product creation process was carried out through upcycling techniques, including pattern reconstruction, surface manipulation, texture exploration, and material combination.

¹³ Mochammad Charis Hidayatullah et al., "Sustainable Design Approach : Eksplorasi Limbah Denim Menggunakan Teknik Sashiko Kearifan Lokal," *Jurnal Desain Indonesia* 07, no. 2 (2025): 186–98, <https://jurnal-desain-indonesia.com/index.php/jdi/article/view/595/107>.

¹⁴ Syihab, Arumsari, and Utami Putri, "Pemanfaatan Limbah Denim Sisa Produksi Dengan Menerapkan Metode Upcycle."

¹⁵ Ferayanti, Zahirah, and Kristiyanto, "Sustainable Fashion Melalui Upcycling Limbah Denim Dengan Teknik Pewarnaan Tekstil Ramah Lingkungan."

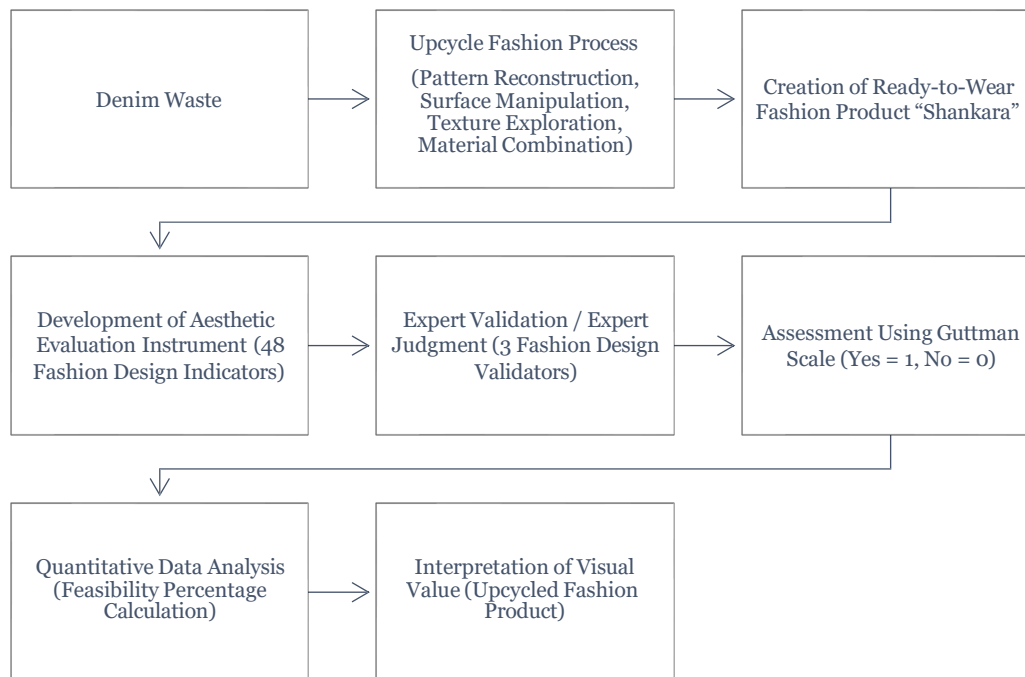


Figure 1. Research Flow of Aesthetic Evaluation of Upcycled Fashion Products
Source: Annesha and Titisari (2023)

Figure 1 presents the research flow adapted from the *Upcycling Fashion Practice Design Model in the Utilization of Used Clothing Waste* (Annesha & Titisari, 2023), consisting of the stages of idea & concept (denim waste), design & production (upcycling techniques), post-production (Shankara fashion product), and evaluation.¹⁶ The aesthetic assessment instrument was developed based on fashion design indicators relevant to aesthetic studies, covering aspects of form/appearance and presentation.

The assessment instrument used a dichotomous (Guttman) scale with two response options, namely "Yes" and "No." A "Yes" response was scored as 1, while a "No" response was scored as 0. The validation data were then analyzed to obtain the Aesthetic feasibility percentage through expert validation procedures, thereby providing an overview of the visual quality of the upcycled fashion product. The research procedure was carried out through several stages, namely the identification of denim waste, the process of creating fashion products through upcycling techniques, the preparation of aesthetic evaluation instruments, product validation by fashion design experts, and quantitative data analysis to determine the level of aesthetic feasibility of the product.

The research flow can be seen in Figure 1. Data collection was carried out through expert validation (expert judgment). The validators consisted of three experts with competence in the field of fashion design and aesthetics. The assessment instrument comprised 48 fashion design indicators, using a validation sheet for product feasibility that was developed based on aesthetic design indicators, including aspects of color, line, silhouette, proportion, focal point, unity, balance, fabric texture, as well as decorative elements or ornaments on the garment.

Each indicator was evaluated based on the alignment between the questions in the instrument and the visual condition of the product. Data analysis was conducted by summing all scores obtained from each validator, then calculating the aesthetic feasibility percentage by comparing the total score obtained with the maximum score, multiplied by 100%, using the feasibility formula proposed by Riduwan, this procedure was also applied in the study by Wulandari et al.¹⁷

16 Bella Annesha and Bintan Titisari, "Model Desain Praktik Upcycling Fashion Dalam Pemanfaatan Limbah Pakaian Bekas," *ATRAT: Jurnal Seni Rupa* 11, no. 2 (2023): 141–52, <https://jurnal.isbi.ac.id/index.php/atrat/article/view/2848/1797>.

17 Wulandari, Hunaifi, and Wiguna, "Kriteria Kevalidan Media Pembelajaran PAKABI (Papan Kantong Bilangan) Untuk Pembelajaran Matematika Materi Nilai Tempat Bilangan Kelas II SD."

$$\frac{\text{Total Score Obtained}}{\text{Maximum score}} \times 100\%$$

The percentage results were then categorized into product feasibility criteria based on the score interpretation guidelines by Riduwan, as adapted in the study by Ardiansyah et al.¹⁸ the criteria are presented in Table 1:

Table 1. Feasibility Criteria

Score Range	Feasibility Criteria
81 – 100%	Highly aesthetically feasible
61 – 80%	Feasible
41 – 60%	Fairly Feasible
21 – 40%	Less Feasible
0 – 20%	Not Feasible

Source: Adapted from Riduwan (2015) in Ardiansyah et al. (2025)

The interpretation of results was carried out descriptively by linking the feasibility scores to the aesthetic indicators used. This study was limited to the visual analysis of the final product based on expert evaluation. It did not include consumer preference testing, market testing, or economic impact analysis. Aesthetic assessment was employed as the analytical framework to evaluate design quality, while upcycling techniques were positioned as the method of product creation.

RESULTS AND DISCUSSION

This section presents the results of the feasibility test of upcycled denim fashion products based on aesthetic evaluation. The assessment was conducted by three expert validators using a checklist instrument (Yes/No) covering aspects of color, line, silhouette, proportion, focal point, unity, balance, and texture. The validation results showed that the “Shankara” fashion product achieved an aesthetic feasibility level of 94.4%, indicating that the design produced has met most of the aesthetic indicators of fashion design.

These findings are consistent with the study that emphasized denim upcycling not only serves as an environmentally friendly solution but also enhances the aesthetic value of fashion products.¹⁹ In contrast, research assessing the aesthetics of upcycled tote bags using Djelantik’s aesthetic theory, focused more narrowly on accessories.²⁰ Their research showed an aesthetic score of 91.75% categorized as “very good,” but the scope was limited to accessory products.

Meanwhile, the Shankara study expands the discussion into the realm of ready-to-wear fashion with more comprehensive aesthetic indicators, thereby providing a new contribution to strengthening the visual aspects of upcycling fashion practices. In addition, Anggun, Widad, and Nanette highlighted environmentally friendly dyeing techniques in denim upcycling as a sustainability strategy.²¹ Their focus was more on material experimentation rather than on the aesthetic evaluation of the final product.

18 Farhan Ahmad Ardiansyah, Wijianto, and Widya Noventari, “Pengembangan Media Pembelajaran Pendidikan Pancasila Menggunakan Situs Web Kodular Pada Materi Hak Dan Kewajiban (Studi Fase E SMA Negeri 1 Teras),” *Jurnal Global Citizen : Jurnal Ilmiah Kajian Pendidikan Kewarganegaraan* 13, no. 2 (2024): 1–9, <https://doi.org/10.33061/jgz.v13i2.11162>.

19 Nofi Rahmanita, Mega Kencana, and Yurisman, “Upcycling Denim as an Eco-Friendly Fashion Solution,” *Journal of Scientific Research, Education, and Technology (JSRET)* 4, no. 3 (2025): 1332–46, <https://doi.org/10.58526/jsret.v4i3.797>.

20 Siti Aisyah Qisti Sentosa, Sri Listiani, and Suryawati, “Aesthetic Assessments of Upcycled Products Made by Fashion Design Student,” *Practice of Fashion and Textile Education Journal* 5, no. 1 (2025): 27–34, <https://doi.org/10.21009/pftej.v5i1.48842>.

21 Ferayanti, Zahirah, and Kristiyanto, “Sustainable Fashion Melalui Upcycling Limbah Denim Dengan Teknik Pewarnaan Tekstil Ramah Lingkungan.”

Thus, the Shankara study complements the literature with a more systematic aesthetic perspective, differing from studies that emphasize technical or cultural aspects. The results of the expert validation showed that most of the aesthetic indicators were well fulfilled. The aspect of color was assessed as being able to maintain the character of denim material while simultaneously presenting a modern impression that aligns with the concept of ready-to-wear fashion.

However, on one indicator related to the suitability of color with the character of wearers aged 18–30 years, one validator gave a “No” response, indicating that the interpretation of visual character can still be further developed. In the aspects of line and design composition, most indicators were assessed as meeting aesthetic criteria. However, the second validator provided several notes regarding the use of lines and the strength of the design concept, which were considered to still have room for improvement. This indicates that although the product has generally met visual standards, design exploration still has potential to be further developed.

Product Feasibility Test Result Based on Expert Validators

The visual value assessment of the ready-to-wear fashion product “Shankara” was conducted by three expert validators using a dichotomous scale instrument with two alternative responses, namely “Yes” and “No,” so that each indicator was evaluated solely based on whether the established criteria were met or not. The instrument consisted of 48 indicators developed from the elements and principles of fashion design, covering aspects of color, line, silhouette, proportion, focal point, unity, balance, texture, and decoration.

Based on the validation results from the three validators across 48 assessment indicators, a total of 136 “Yes” responses were obtained out of 144 overall responses, resulting in a Aesthetic feasibility percentage of 94.4%. Thus, the upcycled denim fashion product is categorized as Highly aesthetically feasible in terms of aesthetics. Nevertheless, there were 8 indicators assessed as “No,” indicating the need for refinement based on the validators’ feedback.

Table 2. Validation Results of Three Expert Designers on the Shankara Product

Validator	Number of Assessments	“Yes” Responses	Percentage	Category
Validator 1 (Saifudin Aulya Akhsan)	48	47	97.7%	Excellent
Validator 2 (Dominica Rila S.C., S.Pd., M.Pd.)	48	41	85.4%	Excellent
Validator 3 (Risfani Rahmawati, S.Pd.)	48	48	100%	Excellent
Average	144	136	94.4%	Excellent

Analysis of Color and Visual Harmony

The validation results indicated that, in general, the upcycled denim fashion product falls into the “Highly aesthetically feasible” category (94.4%). However, several indicators were assessed as “No” by the first and second validators, suggesting that there are aesthetic aspects that still need to be refined.

a. Color

Most validators stated that the main color was appropriate to the theme and the character of the wearer. However, the first validator gave a “No” response to the indicator “The color reflects the character of wearers aged 18–30 years (modern, elegant, not gaudy or childish).” This indicates that although the color composition was harmonious, the representation of the target age group’s character could still be strengthened. In other words, aesthetically the color was technically appropriate, but conceptually it did not fully represent the intended market segmentation.

b. Line and Silhouette

In the aspect of line, the second validator gave a “No” response to the indicator:

1. Horizontal or diagonal lines are used in a balanced manner.
2. The overall lines appear harmonious and consistent with the design concept.

These findings indicate that the structure of design lines has not yet fully reinforced the intended

concept. Although vertical lines were generally assessed as supporting body proportions, the exploration of line direction and the consistency of the visual concept were considered to still have room for refinement. In terms of form, the second validator also noted that “The garment shape corresponds to the character of the wearer” was not yet fully optimal.

This suggests that the relationship between silhouette design and the identity of the target users still needs to be further deepened conceptually.

c. Proportion, Focal Point, and Balance

In the aspects of proportion and focal point, the second validator gave several “No” responses to the indicators:

1. Accents or ornaments are not excessive.
2. There are no other elements competing with the focal point.
3. The focal point reinforces the character of the garment.

d. Unity and Texture

In the aspect of texture, the second validator assessed that the indicator “Decorations such as sequins, lace, or borders blend with the main material” was not yet fully fulfilled. This indicates that the integration between the main upcycled denim material and the additional decorative elements still needs to be refined in order to appear more cohesive both visually and conceptually. Nevertheless, in general, the unity of design elements (color, form, texture) was still assessed as harmonious by all three validators.

Discussion on the Transformation of Visual Value Through Upcycling

Before the design process, denim waste had limited use and did not possess high aesthetic value. After undergoing the upcycling process, the following transformations occurred:

1. From leftover material to ready-to-wear fashion.
2. From waste material to a product with aesthetic value.
3. From unstructured pieces to a conceptual design.

However, the validation results show that the enhancement of aesthetic value does not solely depend on material transformation, but also on the strength of the design concept. The second validator emphasized that the alignment between the concept and the design outcome still needs to be sharpened.

This indicates that in upcycle fashion practice, material transformation must be accompanied by a deeper exploration of design elements so that the aesthetic

value truly increases conceptually, not merely visually. Unlike previous studies that focused more on sustainability and the reuse of materials,²² This research adds the dimension of aesthetic evaluation based on expert validators as an indicator of product value enhancement.

Comparison with Previous Research

Methodologically, this study places the evaluation of the visual value of upcycled fashion products through a structured aesthetic assessment. The evaluation was conducted using an instrument consisting of 48 indicators covering aspects of color, line, silhouette, proportion, balance, unity, focal point, texture, and decorative elements.

Unlike several previous studies that emphasized the exploration of material processing techniques such as patchwork, rust dyeing, or embroidery,²³ This study focuses on the aesthetic evaluation of the final product through expert validation. This approach enables a more systematic assessment of the visual quality of ready-to-wear garments produced from the upcycling of denim waste.

CONCLUSION

Based on the research findings, it can be concluded that the ready-to-wear garment “Shankara,” designed through the upcycling of denim waste, possesses visual value categorized as excellent, with a

²² Ferayanti, Zahirah, and Kristiyanto.

²³ Hidayatullah et al., “Sustainable Design Approach : Eksplorasi Limbah Denim Menggunakan Teknik Sashiko Kearifan Lokal.”

feasibility level of 94.4%. This assessment was obtained from the validation of three fashion design experts who evaluated aesthetic aspects based on indicators of color, line, silhouette, proportion, balance, unity, focal point, texture, and decorative elements.

The research findings show that the upcycling approach not only contributes to reducing textile waste but also has the potential to produce fashion products with aesthetically feasible visual quality. Thus, upcycling can serve as a relevant design strategy in the development of sustainable fashion.

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DECLARATION OF CONFLICTING INTERESTS

The authors state that there is no conflict of interest in the publication of this article.

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Maria Krisnawati is a lecturer in the Fashion Design Education Study Program at Universitas Negeri Semarang. She is actively engaged in academic activities, research, and student supervision in the field of education and fashion design. Her involvement in this study demonstrates her commitment to supporting the development of student creativity and the application of sustainability concepts in fashion design.