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UTILIZATION OF FABRIC WASTE INTO BAG PRODUCTS USING SMOCKING TECHNIQUES

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ABSTRACT

The textile industry is a supplier of clothing needs of modern society today. As a supplier of basic necessities, the textile industry is required to produce goods that are in accordance with market interests and trends circulating among the public, this rapidly developing trend that causes high waste generated by the textile industry. Waste can come from the textile industry on a small scale or on a large scale. The existence of the concept of fast fashion worsens the environment, because the concept of fast fashion changes trends quickly and in a short time, as well as the use of poor raw materials so that clothes are not durable. This has made a drastic increase in fabric waste, both the fabric waste comes from the production process of the textile industry, as well as the rest of production goods that are not sold and have changed trends. Observing trends that are circulating in the community with resets, making observations about the use of fabric waste in the textile industry with literature studies and making observations about bag craftsmen with surveys on several bag craftsmen. In addition, the exploration of techniques that must be carried out by that will determine the results of the study. The conclusion that can be drawn from this study is the Utilization of Fabric Waste into Bag Products Using Smocking Techniques can be realized. The final result of this research is a product. The product is made using patchwork waste and uses fabric manipulation techniques, can be applied well and has an aesthetic appearance.
Keywords: Patchwork; Smocking; Bag

Introduction

Textile products are one of the basic human needs and the demand for textiles continues to grow rapidly due to rapid trend changes, so the industry Fashion is considered the second polluter in the world after oil (Gabriel, 2020). It has been reported that the cycle of textile products from manufacture/production to their disposal, textile manufacturing contributes to 10% of the world's carbon emissions (Lestari & Purwatmini, 2021). Rapid fashion cycles, global production scale, and overconsumption have contributed to the repeated generation of textile waste. World textile consumption reaches 100 MT / year (Claxton & Kent, 2020). Less than 1% of used clothes are recycled into new clothes. In the fashion industry, products follow a linear life cycle and are usually disposed of in landfill rather than reused or recycled (MacArthur, 2017).

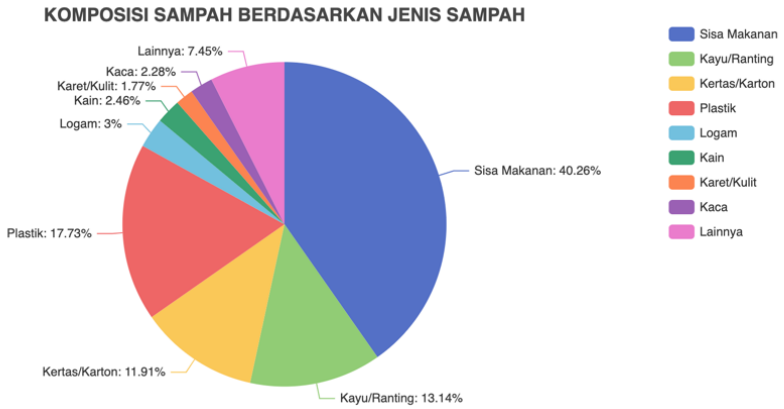
Fashion or fashion products and accessories are part of the creative industry that most follows the times. Creative industry players are required to always innovate in order to create the latest fashionable fashion designs with accessories that suit market tastes and era trends (Kurniawan, 2017)

The accumulation of textile waste that continues to grow can be caused by the large amount of patchwork residue in the series of clothing production. Waste is waste or residue from an activity, both domestic and industrial activities (Lucy, 2020). The remaining patchwork that is discarded or burned is reduced in value, even lost, besides that fabric waste is waste that is difficult to decompose, so it can pollute the surrounding environment. Waste according to inorganic waste is not easily decomposed, so it should be used by recycling again. Burning carried out to destroy solid waste can be done, but it will cause air pollution (YULIANTI, 2017).

Poor waste management will lead to other environmental problems. Buried waste can cause water and soil pollution. Patchwork is recyclable waste (Recyle). Recyle is recycling of waste so that it can be reused. One way to make use of patchwork is to make patchwork crafts (Rukma, 2021).

Patchwork can be used into various crafts such as tablecloths, bags, wall hangings, prayer mats and others. In general, patchwork is used using patchwork quilting techniques (Kusumadewi et al., 2023)

According to the Deputy of Maritime Affairs and Natural Resources of the Ministry of National Development Planning (PPN) / National Development Planning Agency (Bappenas), Indonesia produces 2.3 million tons of textile waste or equivalent to 12 percent of household waste, which is according to data from the Ministry of Environment and Forestry's SIPSN as of 2021 (Paramita, 2016)



Scheme I.1 Indonesia waste composition diagram 2021

Source : https://sipsn.menlhk.go.id/sipsn/public/data/komposisi

Based on these data, it shows the composition of waste in Indonesia in 2021. The largest type of waste is food waste which accounts for up to 40.26% of the total waste in Indonesia. Furthermore, there is plastic waste which accounts for up to 17.73% of the total waste in Indonesia. In wood/twig type waste which contributed up to 13.14%, while

cloth waste contributed 2.46%. Although the amount of fabric waste in Indonesia is not as high as food waste and plastic waste, it does not rule out the possibility that fabric waste will increase considering the growing needs of fashion at this time with a higher growth rate of society. This has led to the need for fashion and fabrics also increasing in the long term (SIPSN) (Junaedi et al., 2023).

Fabric waste can be in the form of patchwork which is the rest of the fabric sourced from convection processes, garments or industries ranging from small-scale to large-scale. Fabric waste is inorganic waste that is difficult to decompose. Fabric waste produced by the textile industry is usually disposed of or burned. Disposal of fabric waste causes the amount of solid waste to continue to grow, while burning of fabric waste causes air pollution. (Rissanen, 2013)(Krulinasari & Yusnandi, 2021)
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Bandung is famous for its textile commodities. One of the areas that is the center or center of convection is Kampung Gamis. Kampung Gamis is located in Karamat Mulya Village, Soreang District, Bandung Regency. This village is a target village that is 60% convection industry that continues to grow rapidly. Based on data from PPS (Paguyuban TTrader Soreang) there were 170 home convection in 2018. In fact, almost every house opens a convection business (Amijaya & Andhika, 2022). According to one businessman, orders on weekdays reach 2000 pieces per week, and increase before the fasting month to double (Rohmah, 2016).

nama_provinsi	kode_kabupaten_kota	nama_kabupaten_kota	kategori_usaha	proyeksi_jumlah_umkm	satuan	tahun
Filter	Filter	1 Filter	2 Filter	Cari	Filter	Filter
JAWA BARAT	3273	KOTA BANDUNG	FASHION	29635	UNIT	2017
JAWA BARAT	3273	KOTA BANDUNG	KONVEKSI	18097	UNIT	2017
JAWA BARAT	3273	KOTA BANDUNG	FASHION	31469	UNIT	2018
JAWA BARAT	3273	KOTA BANDUNG	KONVEKSI	19217	UNIT	2018
JAWA BARAT	3273	KOTA BANDUNG	FASHION	33416	UNIT	2019
JAWA BARAT	3273	KOTA BANDUNG	KONVEKSI	20406	UNIT	2019
JAWA BARAT	3273	KOTA BANDUNG	FASHION	35483	UNIT	2020
JAWA BARAT	3273	KOTA BANDUNG	KONVEKSI	21668	UNIT	2020
JAWA BARAT	3273	KOTA BANDUNG	FASHION	37679	UNIT	2021
JAWA BARAT	3273	KOTA BANDUNG	KONVEKSI	23009	UNIT	2021

The abundance of convection in Bandung
https://opendata.jabarprov.go.id/id/dataset/

The large number of clothing orders certainly causes a lot of fabric waste, convection activities in Soreang can produce 2.2 tons of fabric waste per day. Usually the waste is disposed of / incinerated (Findia & Arumsari, 2019).

The fabric waste found in Kampung Gamis has something in common, because it produces similar products, it can be found that the materials used are cotton, cigar, linen, crepe, woolpeach and royal twist. The size of the waste found is quite diverse and will be classified by material.
To reduce the negative impact of a lot of fabric waste, *an upcycle* can be carried out which is the process of converting a product that has lost its useful life into a better quality

product (Pandit et al, 2019). Waste treated with *upcycle* can be extended (Nieman et al, 2009).

In this study, based on preliminary observations, it was found that bags have an important role both for their function and aesthetics. Then research can be done by *upcycling* bag products (Ribeiro et al, 2012). To make *upcycle* bags look aesthetic, a technique can be done, namely *creative fabric* / *fabric manipulating* (fabric manipulation). *Fabric manipulating* or fabric manipulation is a technique that reconstructs the surface of the fabric to give it additional dimensions, create a full impression and create an effect on the surface of the fabric (University of The Arts London, 2012).

Based on the previous paragraph, it can be understood that fabric manipulation is a technique made from experiments sewing, folding, or using other chemicals to provide new visualizations of fabrics. Fabric manipulation techniques consist of various kinds such as *ruffles, smocking, gather, pleats, quilting* and so on. In this study, the techniques to be used include *smocking*, pleated and weaving. (Fernandi &; Ruhidawati, 2021).

The development of fabric waste processing in the form of patchwork in this proposal draft uses products in the form of bags. Bags are important fashoin accessories (Ika Mahardika, 2020). Both men and women, upper and lower classes use bags. In addition to placing goods, bags also function to support appearance. The design and texture of one's bag can attract people's attention. Using the right bag is also considered to be able to express one's fashion maturity. In addition to comfort, the latest designs that keep up with the times are also important points in fashion selection. Because basically, bags are also the same as clothes, with the right selection it can support a person's appearance (Mariyanti, 2019).

The rapid development of the bag craft business has caused intense competition between fellow entrepreneurs, especially if the types of products produced are similar. The fashion industry is required to be able to meet market needs, create products with functionality, creativity, not only physical objects, but also psychologically and socially. Products include design, color selection, shape, brand, size and so on. Bags are things whose existence is a must. Especially when traveling, bags have become a must-have for women (Azka, 2022).

The technique used in this study is smocking. The selection of smocking techniques has a diversity of shapes, patterns, and motifs of smocking making the product have its own attractiveness and characteristics. The use of smocking techniques is considered to have value for manipulating fabrics to make them look fuller, as well as providing the effect of fabric weight, coupled with dramatic effects from the texture of the technique. Fabric that looks beautiful when applied using smocking techniques is a lightweight fabric, this is suitable to be applied to the discovery of convection fabric residues. This technique also reduces the impression of tangles, because in the application of this technique the material will be folded and crossed, stacked.

Based on the background that has been described, the research that will be carried out is "Utilization of fabric waste into bag products using *smocking techniques"*.
The study was conducted with several convections in Purwokerto and Bandung

Research Method

The methodology used in this study is a qualitative method in the form of data collection as follows:

Literature study (Historical)

A literature study was conducted to gather information regarding the technique *Smocking*, application of fabric manipulation techniques, *Fashion*, fabric waste treatment, fashion trends (Imam Gunawan, 2013)

Observation

Observation is done by looking for information and observing *trend forecasts* or *upcoming fashion trends* . As well as observing the fabric manipulation techniques that will be explored. In addition, observations about the fabric waste to be used.

Exploration

Exploration is done by trying several fabric manipulation techniques and placement or use of the right techniques to produce an attractive appearance.

Data collection (Verification)

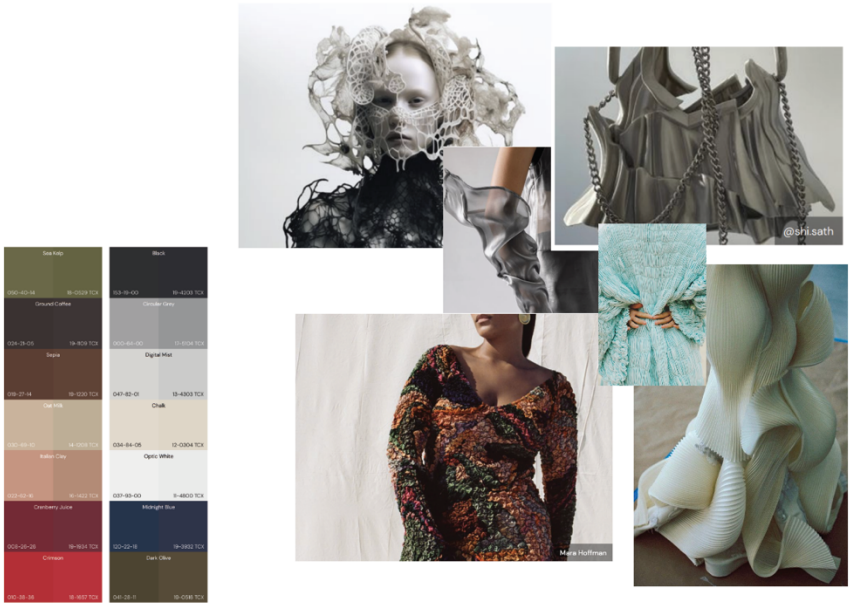
Data collection was conducted by interviewing several key sources who were considered to have adequate information and insight into the required data. Interviews were conducted with several convection owners as resource persons

Result and Discussion

General Concept

Based on targeted market data and predictions of future fashion trends, the theme used is digitopia. Describe a design that prioritizes creativity. The design emphasizes texture on the surface, so the technique used in this study is a distorted smocking technique. The grid that will be used and applied to the product is a random and wavy grid. The materials to be used in the study are crepe and royal twist materials, because based on experiments that have been done, both materials have the same characteristics, easy to smock, fall and light but not thin and not too thick, fabric joints on materials are not very healthy, not easy to slip and provide good visual and volume on the fabric

The following mood board has been created based on trend forecasts and existing data



Digitopia sub moodboard

Conclusion

Based on this research process, the use of convection waste can be developed into an alternative as an effort to reduce waste waste, especially convection residue in Soreang. The utilization carried out in research is an upcycle. Upcycle is carried out by conducting fabric analysis, exploration, engineering determination, as well as developing designs and concepts as well as adjustments to future 2025/2026 trends.

The design results in this study can be concluded that designing bag designs with smocking techniques can be successfully carried out and can be an alternative to the use of fabric waste left over from convection from the Soreang area.

The resulting bag products according to the concept and design can be achieved. Exploration carried out to find the right smocking grid so that the joint fabric is not too thick can be done by creating a grid that is not fixed. The size and shape of the wavy grid can be used so that fabric joints can be sewn and do not arise.

Bibliography

Amijaya, D. T., & Andhika, R. (2022). Pemanfaatan Media Sosial Sebagai Sarana Promosi Pakaian Gamis Di Soreang Kabupaten Bandung. *Sadeli: Jurnal Pengabdian Kepada Masyarakat*, *2*(1), 46–56.

Azka, M. L. (2022). *Analisis Strategi Pengembangan Sumber Daya Manusia Dan Produk Dalam Meningkatkan Keunggulan Kompetitif (Studi Kasus Di Konveksi Raff Bordir Kudus)*. IAIN Kudus.

Claxton, S., & Kent, A. (2020). The management of sustainable fashion design strategies: An analysis of the designer's role. *Journal of Cleaner Production*, *268*, 122112.

Findia, A. S., & Arumsari, A. (2019). Pemanfaatan Limbah Konfeksi Di Soreang Dengan Inspirasi Kesenian Sisingaan. *EProceedings of Art & Design*, *6*(2).

Gabriel, A. (2020). Analisis Strategi Bersaing Perusahaan PT. Sapta Kemakmuran Abadi. *Agora*, *8*(1).

Ika Mahardika, I. M. (2020). *b*.

Junaedi, J., Dikrurohman, D., & Abdullah, A. (2023). Analysis of Social Change in Rural Communities Due to the Influence of Urbanization and Globalization in Indonesia. *Edunity: Social and Educational Studies*, *2*(3), 431–441.

Kurniawan, C. (2017). Analisis faktor-faktor yang mempengaruhi perilaku konsumtif ekonomi pada mahasiswa. *Jurnal Media Wahana Ekonomika*, *13*(4).

Kusumadewi, A., Nurherawati, F., & Pravitasari, F. (2023). Program Pelatihan Pemanfaatan Limbah Kain Perca (Patch Work) Untuk Interior Ruangan Pada Guru Dan Orang Tua Murid Rumah Ngaji Al Ukhuwah. *Pedamas (Pengabdian Kepada Masyarakat)*, *1*(04), 971–977.

Lestari, F. A., & Purwatmini, N. (2021). Pengendalian Kualitas Produk Tekstil Menggunakan Metoda DMAIC. *J. Ecodemica J. Ekon. Manajemen, Dan Bisnis*, *5*(1), 79–85.

Lusia, R. I. (2020). *Kualitas tas laptop menggunakan limbah kain perca satin velvet dengan teknik patchwork dan hiasan bordir*.

MacArthur, E. (2017). A new textiles economy: Redesigning fashion's future. 2017. *Http://Www. Ellenmacarthurfoundation. Org/Publications>. Acesso Em*, *25*(08), 2021.

Mariyanti, K. (2019). *Penciptaan Tas Kulit Wanita Dengan Kombinasi Rajutan Bermotif Dewi Saraswati*. ISI SURAKARTA.

Nilai, P., & Produk, E. (2014). *Pengolahan Limbah Tekstil Dengan Manipulating Fabric "Quiltagami" Pada Tas Sebagai Upaya Peningkatan Nilai Ekonomikreatif Produk Fesyen Inty Nahari*. 76–82.

Paramita, I. M. (2016). *Strategi Membangun Kota*. Caritra.

Rohmah, Y. N. (2016). *Penerapan metode target costing dalam penetapan harga jual untuk mengoptimalkan laba perusahaan: Studi kasus pada UKM Agronas Gizi Food Kota Batu Malang*. Universitas Islam Negeri Maulana Malik Ibrahim.

YULIANTI, F. (2017). *Pengaruh Penggunaan Kanji Dan Pernis Terhadap Kualitas Dustex Sebagai Bahan Baku Produk*. Universitas Negeri Jakarta.