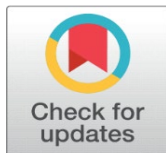
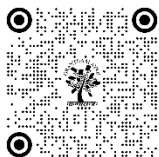


INTEGRATING UPCYCLING APPROACH USING AN INDIGENOUS TEXTILE WEAVING CRAFT

Anjali Pareek ¹ , Dr. Sulekha Ojha ²

¹ Department of Fashion Design, Jayoti Vidyapeeth Women's University, Jaipur, Rajasthan, India

² Department of Fashion & Textile, The IIS University, Jaipur, Rajasthan, India



Received 15 May 2023
Accepted 14 December 2023
Published 20 December 2023

Corresponding Author

Anjali Pareek, anjali pareek@jvwu.ac.in

DOI

[10.29121/shodhkosh.v4.i2SE.2023.466](https://doi.org/10.29121/shodhkosh.v4.i2SE.2023.466)

Funding: This research received no specific grant from any funding agency in the public, commercial, or not-for-profit sectors.

Copyright: © 2023 The Author(s). This work is licensed under a [Creative Commons Attribution 4.0 International License](https://creativecommons.org/licenses/by/4.0/).

With the license CC-BY, authors retain the copyright, allowing anyone to download, reuse, re-print, modify, distribute, and/or copy their contribution. The work must be properly attributed to its author.

ABSTRACT

This research study examines how upcycling is applied and the techniques for creating clothing in mass production, and it shows how upcycling may be a successful strategy for cutting down on textile waste. Businesses may lessen their impact on the environment and boost their bottom lines by recycling leftovers and decreasing waste in addition to minimizing their environmental impact. The study demonstrates that the quantity of trash produced varies depending on the size of the facility and the residual material kinds, and that some leftover material types can be recycled up to 80% of the time. The report also underscores the significance of transparency in comprehending and managing textile waste, and it draws attention to the fact that upcycling design is distinct from traditional design in that it depends on the properties of the waste materials. The project is situated in the Indian region of Jaipur and aims to improve weaving techniques. This paper outlines a strategy for incorporating upcycling into a traditional textile weaving technique. The study focuses on combining conventional weaving methods with cutting-edge design components to produce distinctive and sustainable items from waste materials. The process involves gathering and choosing waste materials, creating new things from scratch, and prototyping them, and assessing their commercial feasibility and cultural relevance. The findings of this study show that upcycling can be incorporated into indigenous textile weaving skills to preserve cultural heritage and encourage ecological practices. The findings emphasize the significance of considering both economic viability and cultural significance when developing upcycling projects, as well as the possibility for such initiatives to help preserve and revive conventional weaving techniques.

Keywords: Fast Fashion, Up-Cycling, Textile Waste, Macrame



1. INTRODUCTION

Fast-growing fashion consumption and the fast-fashion cycle have had a negative influence on the environment by increasing fabric waste. The artisans who have been supported by traditional workmanship for ages have also suffered as a result of this. By incorporating up-cycling design and production techniques into the mass manufacture of clothing, the fashion industry may promote sustainable practices while reducing textile waste and maintaining traditional crafts. The inability of craftsmen to adapt to competitive market conditions and consumer demands is one of the main factors contributing to the loss of traditional crafts. This

includes a lack of design expertise, which is essential for producing goods. [Adriaanse et al. \(2015\)](#)

The demand for traditional arts and crafts may drop as a result of the craftsmen's difficulty remaining competitive in the market due to their lack of knowledge and abilities. It is crucial to offer craftsmen training and educational opportunities in order to assist them develop the knowledge and skills needed to adjust to shifting market conditions and satisfy customer demands. [Black \(2008\)](#)

In this study, a fashion designer employs a zero-waste fashion design methodology to address the problems of fabric waste and the dwindling use of traditional crafts. This strategy, which reduces fabric waste and encourages ethical fashion practices, was created by the designer in partnership with traditional indigenous handloom textile crafts. Additionally, the designer is striving to show the craftspeople new, realistic opportunities that entail the fusion of craft and design. The fashion sector might benefit from this strategy by supporting ecological practices and conserving traditional crafts. According to this research, India produces an estimated 7,800 kilo tonnes of textile waste annually, which is a large quantity. 51 percent of total waste, or post-consumer waste, is produced by Indian consumers. Pre-consumer trash, often referred to as factory waste and offcuts, makes up 42% of textile waste, with imported garbage making up the remaining 7%. This demonstrates the substantial effects of textile waste in India and the significance of putting sustainable practices in place to lessen waste in the fashion sector. [Cribben \(2015\)](#)

Alternative for textile waste:

The current project focuses on the use of macramé, a knotting technique that does not use hooks or needles, to make three macramé outfits out of various textile waste materials. The study intends to show the possibilities of macramé in up-cycling textile waste and producing new clothing. An expert panel selected the materials for the study's textile waste materials. This strategy decreases textile waste while simultaneously showcasing the value of traditional crafts in sustainable design.

- The study aims to evaluate the expert opinion on the selection of textile waste materials to be used in the development of macramé dresses. This will provide insight into the potential of different textile waste materials for up-cycling and help guide the design and development of the macramé dresses.
- The study aims to understand the consumer perception of the use of textile waste materials in the production of the macramé dresses and their willingness to purchase and wear them.
- This will provide valuable insight into the potential of macramé and textile waste up-cycling in the fashion industry, and the feasibility of sustainable fashion practices for the garments production.

2. MATERIAL AND METHOD

In the study, cotton thread was chosen as the textile waste material to be employed in the macramé clothing construction. Handmade pencil sketches were prepared for each outfit as part of the design process, considering details like the color scheme, the length of the dress and sleeves, as well as the suitability and accessibility of textile waste. In the design process, the study also considered current fashion trends. on 12 size dress forms, the gowns were constructed, and the

cost was determined. This method enables the understanding of the commercial viability of the zero-waste fashion design approach and offers a workable answer for sustainable fashion production. [Eladwi et al. \(2016\)](#)

3. FINDINGS AND DISCUSSION

Creation of techniques for designing up cycled garments.

After conducting a waste analysis, the most promising categories of leftover materials for up cycling were identified and paired with appropriate design techniques. These designs were subsequently evaluated for practicality and effectiveness, and the feasibility of using the leftover fabrics in mass production was assessed by considering factors like the quantity, dimensions, and other relevant parameters of the available materials. [Fashion Revolution. \(2022\)](#)

Figure 1



Figure 1 Dress Made of Macramé

Styling old clothing is a sustainable and creative way to update your wardrobe without buying new clothes. It allows you to express your individuality by repurposing and reusing existing items in new and unique ways. It encourages the use of imagination and creativity in order to make old clothes look good again. This approach reduces the environmental impact of textile production and waste and save money. While styling old clothing can be a creative and expressive way to reuse and repurpose garments, it can also be a challenging and time-consuming process for designers. Reworking old clothing often involves ripping up and re-cutting the fabric, which can be difficult and labor-intensive. However, repurposing of garments through reconstruction or other secondary uses can save energy, water, and reduce carbon emissions compared to producing new clothing from "virgin" materials. Increasing the number of textiles that are recycled, whether for repurposing as clothing or for other uses, is an effective way to reduce waste and decrease the environmental impact of textile production. Good design is based on a clear understanding of the end user and their needs and preferences. This understanding

helps the designer create garments that are functional, comfortable, and appealing to the target market. The concept of art recreation in garment design refers to the use of existing materials and fabrics to create a new and unique aesthetic. This approach can be used to create interesting and artistic effects in clothing, and can also be a sustainable way to repurpose used fabrics and reduce textile waste. [Glam Check. \(2016\)](#)

In other words, the designer must consider the end user's needs and preferences, and the concept of art recreation is a way to use existing materials to create a new, unique, and aesthetic designs. It is a sustainable way to repurpose materials and reduce textile waste while promoting aesthetic and artistic effects in clothing. [Goldsmith \(2012\)](#)

4. OBSERVATIONS

Integrating an up cycling-oriented garment design and production process necessitates a comprehensive comprehension of the generation of textile waste and leftovers throughout the garment manufacturing process. Nevertheless, this information is frequently not accessible to designers, making it challenging to introduce up cycling approaches at an industrial level. In this context, we outline the primary factors behind textile waste and present the findings of our research on their quantities within the garment industry. [Jensen et al. \(2017\)](#)

Based on these findings, the study concludes that the macramé dresses developed from textile waste using the macramé technique were both cost-effective and aesthetically pleasing, and could be used as an income-generating new idea in the macramé enterprise. This further supports the viability of zero-waste fashion design approach and the potential of traditional crafts in promoting sustainable practices in the fashion industry. [Roy et al. \(2019\)](#)

The study added a profit percentage of 40% to the cost of each dress to calculate the estimated selling price, which was found to be in the range of Rs. 1,200-2,200. To evaluate the suitability of the estimated selling price and overall appeal of the constructed dresses, a questionnaire was developed and administered to a sample group of 30 people.

The results of the questionnaire will provide insight into consumer perception and acceptance of the macramé dresses and the estimated selling price, and help determine the potential success of the zero-waste fashion design approach on the commercial level. The results of the questionnaire showed that the cotton thread used in the macramé dresses was highly regarded by the respondents. Additionally, the estimated selling price of all the constructed dresses was considered appropriate by the sample group.

5. CONCLUSION

In conclusion, repurposing and recycling fashion waste through creative recreation methods can be a cost-effective and sustainable approach to fashion design. By using reused materials, designers can create unique and fashionable garments while also reducing textile waste and promoting sustainability [Fletcher & Grose \(2012\)](#). The reuse of fashion waste is a growing trend in the fashion industry, and it encourages designers to think about the long-term impact of their designs on the environment. Additionally, this approach can enhance the understanding of the design process for design students, and enables them to understand and apply long-term fashion trends. By designing for an extended life cycle of a product, designers

can create innovative and unconventional designs while also maximizing the use of resources. The long-term fashion trends are important in designing extended life cycle of the product, designers can incorporate simple and convenient methods to transform a product for the best usage resulting.

6. RECOMMENDATION

Exploration of Innovative Upcycling Techniques:

While this research study focused on the use of macramé as an upcycling technique for textile waste, there are numerous other innovative techniques that can be explored. Future research could delve into the application of other traditional craft methods, such as embroidery, patchwork, or quilting, to repurpose textile waste into unique and sustainable fashion garments. Investigating the use of advanced technologies, such as 3D printing or laser cutting, in combination with upcycled materials could also open new possibilities for creative and sustainable fashion design.

Consumer Perception and Acceptance Studies:

Understanding consumer perceptions and acceptance of upcycled fashion products is crucial for the success of sustainable fashion initiatives. Future research could conduct surveys, focus groups, or experimental studies to gauge consumers' attitudes towards upcycled garments. Exploring factors that influence consumers' willingness to purchase and wear upcycled clothing, such as price sensitivity, design aesthetics, and sustainability considerations, can provide valuable insights for designers and marketers.

CONFLICT OF INTERESTS

None.

ACKNOWLEDGMENTS

I would like to express my sincere gratitude to Jayoti Vidyapeeth Women's University (JVWU) and my guide Dr. Sulekha Ojha for their invaluable support during this research. The guidance and resources provided by the faculty members and researchers at JVWU have been instrumental in the successful completion of this study. I also extend my thanks to the university administration and library staff for their continuous support and assistance.

REFERENCES

- Adriaanse, L., Gomersall, S., & Stapper, M. (2015). Beyond the Fashion Revolution: An Exploration of Upcycling as a Sustainable Apparel Solution. *Journal of Fashion Marketing and Management: An International Journal*, 19(1), 31-46. <https://doi.org/10.1108/JFMM-08-2013-0076>.
- Black, S. (2008). *Eco-chic: The Fashion Paradox*. Black Dog, London, England.
- Cribben, F. M. (2015). *Unfastening Fashion: A Research Experiment with a Sustainable Locally Run Workshop in Reykjavik* (Master of Design thesis). The Department of Design and Architecture, Iceland Academy of the Arts.
- Eladwi, M. M. T., et al. (2016). *Elixir Fashion Design*. 95, 40601-40605.
- Fashion Revolution. (2022). *Upcycling in Fashion: A Sustainable Solution*.
- Fletcher, K., & Grose, L. (2012). *Fashion and Sustainability: Design for Change*. Lawrence King Publishing Ltd., London, United Kingdom.

Glam Check. (2016). Recycled Fashion Collection Ideas.

Goldsmith, D. (2012). The Worn, The Torn, The Wearable: Textile Recycling in Union Square. *The Nordic Textile Journal, Special Edition*, 16-29.

Jensen, C. L., et al. (2017). Circular Fashion: A New Paradigm for Fashion Design and Production. *International Journal of Fashion Design, Technology, and Education*, 10(2), 131-141.
<https://doi.org/10.1080/17543266.2017.1313146>.

Roy, S. K., Ghosh, S., & Sarkar, B. K. (2019). An Exploration of Upcycling as a Sustainable Apparel Solution: An Analysis of Consumer Perceptions. *Journal of Cleaner Production*, 221, 190-201.
<https://doi.org/10.1016/j.jclepro.2019.02.064>.