ISSN: P-2455-0515
E- 2394-8450

Educreator Research Journal

OPEN ACCESS

Volume–XIII, Issues–III

May – June 2026

Original Research Article

FASHION WASTE AS A SYSTEMS PROBLEM: ALIGNING STRUCTURAL REFORM WITH SDG 4, SDG 11, AND SDG 12 IN THE INDIAN CONTEXT

**** Mrs. Renuka Pritesh Kulkarni***

Assistant Professor & Programme Coordinator , Department of Fine Arts and Design, JSPM University, Pune

Abstract:

Fashion waste is frequently portrayed as the result of excessive consumer buying and careless disposal habits. However, such interpretations overlook the structural dynamics embedded within global production systems. This chapter reframes fashion waste as a systemic outcome of industrial overproduction, accelerated design cycles, speculative manufacturing, and limited producer accountability. By situating the discussion within the framework of the United Nations Sustainable Development Goals (SDGs)—particularly SDG 4 (Quality Education), SDG 11 (Sustainable Cities and Communities), and SDG 12 (Responsible Consumption and Production)—the study argues that meaningful reform requires structural intervention rather than consumer blame.

Using a qualitative analytical approach grounded in sustainability education and systems thinking, this chapter examines how overproduction operates in contemporary fashion economies and contrasts these patterns with traditional Indian textile systems that historically embodied circularity, durability, and ecological balance. Case examples including Khadi production networks, the Varanasi handloom ecosystem, and repair-based clothing practices in rural Maharashtra illustrate alternative models rooted in community resilience and material longevity.

The chapter proposes that integrating sustainability literacy into fashion education (SDG 4.7), revitalizing decentralized textile economies (SDG 11.4), and enforcing transparent production accountability (SDG 12.5 and 12.6) are critical steps toward reducing fashion waste at its source. By repositioning fashion waste as a governance and design issue, the analysis highlights the necessity of systemic transformation aligned with global sustainability commitments.

Keywords: *sustainable fashion, SDG 4, SDG 11, SDG 12, overproduction, Indian textiles, circular systems*

Introduction: Rethinking Where Fashion Waste Begins

Public conversations around fashion waste often focus on overflowing wardrobes and landfill images. Consumers are urged to buy less, recycle more, and donate responsibly. While individual awareness is important, this perspective tells only part of the story.

ISSN: P-2455-0515
E- 2394-8450

Educreator Research Journal

OPEN ACCESS

Volume–XIII, Issues–III

May – June 2026

Original Research Article

Waste in fashion does not begin in households. It begins long before garments reach consumers. It emerges through production planning, global sourcing decisions, inventory forecasting, retail competition, and corporate profit models that prioritize volume and speed.

Overproduction—the manufacturing of garments beyond realistic demand—is a structural feature of contemporary fashion systems. Surplus is not accidental; it is anticipated and integrated into pricing strategies and seasonal turnover.

In India, this industrial logic coexists with older textile traditions that historically operated within ecological and social limits. Garments were designed for longevity. Production responded to community needs rather than speculative global demand. Repair and reuse were normalized practices.

This chapter argues that fashion waste must be reframed as a systemic issue aligned with SDG 12 (Responsible Consumption and Production), SDG 4 (Quality Education), and SDG 11 (Sustainable Cities and Communities). Only by shifting attention upstream—from disposal to design and governance—can sustainability commitments become meaningful.

Understanding Overproduction as Structural Design:

Modern fashion operates on accelerated cycles. Seasonal collections have expanded into multiple "micro-seasons" per year. Digital marketing intensifies trend turnover. To maintain visibility, brands must continuously introduce new products.

This model incentivizes manufacturing beyond confirmed demand. Retailers prefer excess stock to avoid missed sales opportunities. Unsold inventory is discounted, redirected, or destroyed. Even when recycled, the environmental cost of production has already been incurred—water, energy, labour, and raw materials have been expended.

Such practices directly challenge SDG 12.5, which calls for substantial waste reduction through prevention. Prevention requires limiting production at its source—not merely improving post-consumer recycling.

Transparency is another critical issue. SDG 12.6 encourages companies to integrate sustainability information into reporting cycles. However, many brands disclose environmental goals without revealing exact production volumes. Without measurable accountability, sustainability claims remain incomplete.

Overproduction is not only a business decision; it is a governance issue. Regulatory frameworks must address surplus generation, not just waste management.

SDG 4: Sustainability Education as Structural Intervention

Education plays a decisive role in transforming production logic. SDG 4.7 emphasizes that learners must acquire knowledge and skills to promote sustainable development.

In many fashion institutions, sustainability is introduced as an optional module rather than as a foundational principle. Students are trained extensively in forecasting, branding, and rapid design development, yet often receive limited exposure to lifecycle assessment, material ethics, or circular systems thinking.

ISSN: P-2455-0515
E- 2394-8450

Educreator Research Journal

OPEN ACCESS

Volume–XIII, Issues–III

May – June 2026

Original Research Article

To align with SDG 4, fashion curriculum must incorporate:

- Lifecycle analysis of garments
- Circular design methodologies
- Supply chain transparency frameworks
- Indigenous textile knowledge systems
- Repair and reuse strategies

In the Indian context, this educational shift can draw upon traditional knowledge systems. Teaching zero-waste draping techniques, natural dye processes, and regional textile histories connects sustainability to lived cultural practice rather than abstract theory.

When sustainability becomes integral to design education, future professionals begin to question volume-based growth models. Education thus becomes an upstream intervention point, shaping industry direction before products are manufactured.

SDG 11: Textile Ecosystems and Community Resilience

Fashion waste also affects cities and communities. Urban waste systems are burdened by discarded textiles, while informal recycling workers often operate under precarious conditions.

SDG 11 emphasizes sustainable urbanization and protection of cultural heritage (Target 11.4). India's decentralized textile clusters offer insights into how fashion production can strengthen rather than weaken community resilience.

Case Example 1: Khadi Production Networks

Khadi represents more than a fabric; it is a decentralized production model involving cotton growers, spinners, weavers, and cooperative institutions. Production occurs at human scale, with minimal mechanization and lower energy consumption compared to industrial mills.

Khadi's demand-driven production historically limited surplus. Garments were valued for durability and simplicity rather than rapid turnover. Supporting such networks aligns with SDG 11 by sustaining rural livelihoods and reducing migration pressures.

Case Example 2: Varanasi Handloom Ecosystem

The Varanasi silk weaving tradition is deeply embedded in community identity. Generations of artisans contribute to complex weaving techniques requiring high skill and time investment. While globalization has introduced mass-produced alternatives, handloom production remains labor-intensive and localized.

When these ecosystems decline due to industrial competition, cultural heritage (SDG 11.4) and economic stability are threatened. Revitalizing handloom clusters strengthens community resilience and reduces dependence on mass industrial supply chains.

Case Example 3: Repair Practices in Rural Maharashtra

In many rural regions of Maharashtra, clothing repair remains common. Tailors alter garments to fit new body sizes, convert sarees into children's clothing, or repurpose worn textiles into quilts and utility fabrics. These informal circular systems extend garment lifespans without formal policy intervention.

ISSN: P-2455-0515
E- 2394-8450

Educreator Research Journal

OPEN ACCESS

Volume–XIII, Issues–III

May – June 2026

Original Research Article

Such practices demonstrate that circularity can function within everyday life, reducing waste generation at the household level while supporting local service economies.

SDG 12: Responsible Production Beyond Recycling

Recycling alone cannot resolve systemic surplus. Even the most advanced recycling technologies cannot offset the environmental cost of excessive manufacturing.

Responsible production must include:

- Transparent production data reporting
- Extended Producer Responsibility frameworks
- Incentives for durable garment design
- Reduction of seasonal overproduction cycles

SDG 12.5 focuses on prevention. Prevention requires design reconsideration. Garments must be designed for longevity, modularity, and adaptability.

Traditional Indian clothing provides valuable lessons. The sari, for example, is a single continuous length of fabric adaptable across generations and occasions. Its construction generates minimal cutting waste. Its lifespan often extends across decades.

These design principles demonstrate that waste reduction can be embedded within garment architecture itself.

Integrating Indigenous Knowledge with Modern Policy:

Indian Knowledge Systems offer sustainability practices that align naturally with SDGs. However, modernization pressures and consumer shifts have weakened these systems.

The challenge is not to romanticize tradition but to integrate its strengths into contemporary frameworks. This integration requires:

- Policy incentives for handloom and khadi production
- Sustainable procurement in public institutions
- Curriculum reform linking heritage with innovation
- Market platforms supporting artisan transparency

Such integration supports SDG 4 through education, SDG 11 through community resilience, and SDG 12 through responsible production.

From Waste Management to System Redesign:

Fashion waste is often approached through downstream solutions—recycling bins, donation drives, and awareness campaigns. While useful, these measures do not address upstream structural causes.

A systemic redesign requires:

1. Educational transformation (SDG 4.7)
2. Community-centered textile revitalization (SDG 11.4)
3. Production transparency and accountability (SDG 12.5, 12.6)

When sustainability is embedded into design thinking, production planning, and community development, waste reduction becomes structural rather than reactive.

ISSN: P-2455-0515
E- 2394-8450

Educreator Research Journal

OPEN ACCESS

Volume–XIII, Issues–III

May – June 2026

Original Research Article

Conclusion:

Fashion waste is not simply a disposal issue. It is the visible symptom of a deeper production imbalance. Overproduction, speculative inventory models, and accelerated trend cycles generate surplus before consumers make purchasing decisions.

Aligning the industry with SDG 12 requires prevention-oriented manufacturing. Aligning with SDG 4 demands sustainability-centered education. Aligning with SDG 11 requires revitalizing textile ecosystems that sustain livelihoods and preserve cultural identity.

The Indian context offers practical examples—Khadi networks, Varanasi handloom communities, and rural repair economies—that demonstrate alternatives rooted in balance rather than excess.

Sustainable fashion reform will not emerge solely from improved recycling systems. It will emerge when production logic changes—when responsibility shifts from consumers to systems, from wardrobes to boardrooms, and from reactive waste management to proactive design governance.

References:

1. *Ellen MacArthur Foundation. (2017). A new textiles economy: Redesigning fashion's future.*
2. *Joy, A., Sherry, J. F., Venkatesh, A., Wang, J., & Chan, R. (2012). Fast fashion, sustainability, and the ethical appeal of luxury brands. Fashion Theory, 16(3), 273–295.*
3. *Kapur, R., & Mittal, S. (2014). Made in India: 75 years of business and enterprise. Rupa Publications.*
4. *Meadows, D. H. (2008). Thinking in systems: A primer. Chelsea Green Publishing.*
5. *Niinimäki, K., Peters, G., Dahlbo, H., Perry, P., Rissanen, T., & Gwilt, A. (2020). The environmental price of fast fashion. Nature Reviews Earth & Environment, 1(4), 189–200.*
6. *Organisation for Economic Co-operation and Development (OECD). (2016). Extended producer responsibility: Updated guidance for efficient waste management. OECD Publishing.*
7. *United Nations. (2015). Transforming our world: The 2030 agenda for sustainable development. United Nations.*

Cite This Article:

Mrs. Kulkarni R.P. (2026). *Fashion Waste as a Systems Problem: Aligning Structural Reform with SDG 4, SDG 11, and SDG 12 in the Indian Context*. **In Educreator Research Journal: Vol. XIII (Issue III),** pp. 66-70