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Education for Sustainable Fashion: Transformative Learning, Literacy, and Systemic Responsibility

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Abstract

The environmental and social impacts of the global fashion industry demand educational responses that extend beyond technological innovation and regulatory reform. This paper advances a theoretical framework for Education for Sustainable Fashion grounded in transformative learning and sustainability literacy. Situating fashion within the Sustainable Development Goals (SDGs), the study highlights the industry's interconnections with climate action, responsible consumption and production, labor justice, and economic resilience. Drawing on Education for Sustainable Development (ESD), the analysis argues that sustainable fashion education must integrate systems thinking, ethical reflection, critical digital literacy, and experiential engagement. Transformative learning theory provides the pedagogical foundation for challenging dominant consumption paradigms and fostering shifts in

values, identities, and professional orientations. The paper further conceptualizes Fashion Literacy as a domain-specific articulation of sustainability literacy, encompassing cognitive understanding of lifecycle impacts, critical evaluation of supply chains and sustainability claims, and the enactment of responsible consumption practices. Emphasis is placed on curriculum integration, institutional transformation, and participatory learning environments capable of bridging knowledge and practice. By aligning fashion education with broader sustainability transitions, the framework contributes to the preparation of designers, educators, policymakers, and consumers who can participate critically and constructively in systemic change. Sustainable transformation in fashion is thus positioned as fundamentally educational, requiring reflective, ethically grounded, and culturally informed engagement.

Keywords: Sustainable Fashion Education, Transformative Learning, Sustainability Literacy, Fashion Literacy, Sustainable Development Goals

1. Introduction

The accelerating ecological and social pressures associated with the global fashion industry have intensified scholarly and policy debates concerning the need for systemic transformation. The sector is widely recognized as a major contributor to greenhouse gas emissions, water consumption, chemical pollution, and textile waste, while simultaneously relying on complex global supply chains that often reproduce labor precarity and social inequalities ^[1]. The prevailing fast-fashion model, characterized by rapid production cycles, declining garment durability, and expanding consumption volumes, reinforces linear economic logics that are fundamentally misaligned with ecological limits and circular economy principles. Recent analyses further demonstrate that sustainable fashion intersects directly with multiple Sustainable Development Goals (SDGs), including responsible consumption and production, climate action, gender equality, and decent work, underscoring the multidimensional nature of the challenge ^[2].

Although technological innovation and regulatory reform are indispensable components of sustainability transitions, structural change in fashion systems cannot occur without cultural and educational transformation. Education for Sustainable Development (ESD) emphasizes the cultivation of systems thinking, anticipatory competence, normative reflection, and strategic action as foundational capacities for addressing complex socio-ecological problems ^[3]. Within the fashion domain, these competencies are particularly critical because consumption practices are deeply embedded in identity formation, aesthetic expression, and social belonging. Sustainable fashion education must therefore move beyond technical instruction in materials and production processes to engage learners in critical examination of consumption norms, symbolic meanings, and global interdependencies. Bibliometric and thematic analyses of sustainable fashion research reveal an expanding knowledge base

that increasingly calls for integrative design education, cross-disciplinary approaches, and alignment with sustainability frameworks [4].

Transformative learning theory provides a robust theoretical lens for conceptualizing the educational shifts required in this field. Transformative learning involves critical reflection on taken-for-granted assumptions, perspective transformation, and the reconfiguration of values and identities [5]. Empirical research in higher education contexts confirms that transformative approaches can be measured and fostered through carefully designed pedagogical interventions, particularly in business and economics education where sustainability challenges established growth paradigms [6]. Organizational-level studies further demonstrate that sustainability transitions in higher education institutions require collective and transformative learning processes rather than isolated curricular reforms [7]. These findings suggest that sustainable fashion education must be embedded within broader institutional cultures that support reflexivity, dialogue, and systemic thinking.

Moreover, sustainability education is increasingly recognized as a macro-level driver of economic and environmental governance. Empirical evidence links sustainability-oriented education indices with improved resource governance outcomes in resource-dependent economies, highlighting the broader societal impact of educational investment in sustainability competencies [8, 9]. At the micro-social level, sustainable consumption research indicates that consumer behavior in fashion is shaped by a complex interplay of moral norms, perceived responsibility, social influence, and structural constraints [10]. Educational interventions must therefore address not only knowledge acquisition but also value orientation, agency, and collective practices. Studies of community-based initiatives such as ecoclubs demonstrate that participatory environments can support the transformation of sustainable lifestyle practices, reinforcing the importance of experiential and socially embedded learning [11].

In parallel, digitalization reshapes the conditions under which sustainability is communicated and interpreted. Sustainability narratives in fashion are increasingly mediated through algorithmic platforms, influencer cultures, and visually saturated marketing ecosystems, where environmental claims may coexist with intensified consumption stimuli [12]. This context demands the integration of critical literacy perspectives into sustainable fashion education. Conceptualizations of information literacy emphasize the capacity to critically evaluate sources, interpret multimodal content, and navigate complex knowledge environments [13], while emerging discussions of future-oriented literacy stress adaptability and ethical discernment in rapidly evolving socio-technical systems [14]. Embedding such literacies within fashion education strengthens learners' ability to distinguish substantive sustainability initiatives from symbolic or strategic greenwashing.

In related science education research, energy literacy has been shown to be a significant dimension of sustainability-oriented teacher preparation, particularly among pre-service primary school teachers, since understanding energy concepts and their environmental implications supports more informed educational practice [15]. This literacy-oriented perspective is consistent with science education research showing that scientific literacy differs across

educational groups and requires systematic cultivation from primary education through teacher preparation [16].

Against this backdrop, the present study advances the argument that Education for Sustainable Fashion must be conceptualized as a transformative and literacy-oriented endeavor situated within the broader framework of sustainability transitions. By integrating systems thinking, ethical reflection, critical media literacy, and experiential engagement, fashion education can cultivate environmentally responsible practitioners and critically aware consumers capable of contributing to systemic change. The introduction thus establishes the theoretical and empirical foundations for examining how transformative learning and sustainability literacy can reorient fashion education toward ecological accountability and social justice. This article is a conceptual review and theoretical framework paper. It synthesizes literature on sustainable fashion, transformative learning, and sustainability literacy in order to propose Education for Sustainable Fashion as a transformative, literacy-oriented educational framework.

2. Fashion Industry and the Sustainable Development Goals

The global fashion industry occupies a structurally ambivalent position within the framework of sustainable development. As one of the most resource-intensive and globally dispersed industries, fashion intersects with multiple Sustainable Development Goals (SDGs), simultaneously contributing to economic growth and environmental degradation. Its environmental footprint is substantial, encompassing greenhouse gas emissions, intensive water use, chemical pollution, and textile waste generation across complex international supply chains [1]. The predominance of fast-fashion production models reinforces linear patterns of extraction, manufacturing, consumption, and disposal that contradict the principles of responsible consumption and production embedded in SDG 12. Recent thematic analyses further confirm that sustainable fashion research increasingly frames the industry within the SDG agenda, emphasizing the necessity of systemic integration rather than isolated technical fixes [2]. Beyond environmental pressures, fashion production is deeply entangled with social justice concerns. Labor exploitation, wage disparities, gendered inequalities, and unsafe working conditions remain persistent features of many global supply chains. These issues directly relate to SDG 8 (Decent Work and Economic Growth), SDG 5 (Gender Equality), and SDG 10 (Reduced Inequalities). Consumer awareness of labor conditions has grown; however, empirical research indicates that ethical concern does not automatically translate into consistent purchasing behavior, as decisions are mediated by price sensitivity, social norms, and perceived accessibility [10]. Sustainable fashion, therefore, requires addressing structural determinants of consumption rather than relying solely on moral appeals to individual responsibility.

The economic dimension of fashion's relationship to the SDGs introduces additional complexity. The industry provides employment to millions of workers worldwide and constitutes a significant contributor to national economies, particularly in emerging markets. Consequently, transitions toward sustainable production models must balance environmental limits with economic resilience and social protection. Circular economy strategies—such as material

innovation, repair services, rental systems, and resale platforms—are increasingly promoted as pathways to reconcile ecological responsibility with economic viability. Systems-based policy approaches developed in adjacent sectors, including bioplastic packaging and resource governance, highlight the importance of multi-sectoral coordination and regulatory alignment in achieving circular transitions [17, 8]. These insights underscore that sustainable fashion cannot be isolated from broader industrial and policy ecosystems.

Digital transformation further reshapes fashion's position within sustainable development. Consumption patterns are increasingly influenced by algorithm-driven marketing systems, influencer cultures, and visually immersive digital platforms that simultaneously amplify sustainability narratives and stimulate accelerated purchasing cycles [12]. This paradox complicates the alignment of fashion with SDG objectives, as digital economies can both disseminate sustainability awareness and intensify overconsumption. Understanding this dual dynamic requires integrating environmental analysis with critical perspectives on communication infrastructures and platform capitalism.

From a governance perspective, sustainability-oriented education has been linked to improved environmental and resource management outcomes at national levels, suggesting that educational systems play a pivotal role in supporting broader SDG implementation [9]. In this direction, scientific literacy has also been identified as an important factor influencing how political decision-makers approach climate change, reinforcing the broader societal importance of literacy-based education for sustainability governance [18]. In the fashion context, aligning industry practices with sustainable development therefore necessitates educational strategies capable of cultivating systems thinking, ethical reasoning, and critical consumption competencies. Rather than treating fashion's environmental and social impacts as peripheral externalities, the SDG framework situates them within an interconnected matrix of ecological, economic, and human development objectives.

Taken together, the relationship between fashion and the Sustainable Development Goals illustrates the systemic character of sustainability challenges. Environmental degradation, social inequity, and economic dependency are mutually reinforcing dimensions that require coordinated responses across production systems, policy frameworks, and cultural practices. Education emerges as a critical mediating mechanism in this landscape, preparing individuals and institutions to navigate tensions between growth imperatives and ecological boundaries while fostering responsibility and innovation. The following section examines how educational processes, particularly transformative learning approaches, can contribute to reshaping fashion systems in alignment with sustainable development.

3. The Role of Education: Transformative Learning and Behavioral Change

Education constitutes a central mechanism through which sustainability transitions in the fashion sector can be conceptualized, enacted, and sustained. While regulatory reforms and technological innovations address structural

dimensions of environmental degradation, durable transformation depends on shifts in values, interpretive frameworks, and everyday practices. Education for Sustainable Development (ESD) explicitly situates learning as a driver of systemic change, emphasizing the cultivation of competencies such as systems thinking, normative reflection, anticipatory reasoning, and collaborative problem-solving [3]. Within the fashion domain, these competencies are particularly salient because consumption is not merely a functional act but a culturally embedded practice intertwined with identity formation, aesthetic expression, and social signaling. Consequently, sustainable fashion education must extend beyond the transmission of environmental knowledge and engage learners in critical reflection on the symbolic and structural conditions that sustain unsustainable consumption patterns.

Transformative learning theory offers a robust pedagogical foundation for this endeavor. Transformative learning involves the critical examination of taken-for-granted assumptions, leading to perspective transformation and the reconstruction of meaning structures [5]. In the context of fashion, such transformation may entail questioning the normalization of rapid trend cycles, disposability, and status-driven consumption. Empirical work in higher education demonstrates that transformative orientations can be systematically fostered and assessed, particularly in fields traditionally aligned with growth-oriented economic paradigms [6]. At an institutional level, sustainability integration requires collective and organizational learning processes that reshape curricula, governance structures, and academic cultures, rather than isolated course-level interventions [7]. These findings underscore that sustainable fashion education must be embedded within broader institutional commitments to sustainability.

However, cognitive transformation alone does not guarantee behavioral change. Systematic reviews of sustainable consumption in fashion reveal that pro-environmental behavior is mediated by a complex constellation of determinants, including moral norms, perceived behavioral control, social influence, economic constraints, and trust in sustainability claims [10]. This gap between awareness and action indicates that educational strategies must address affective and social dimensions of learning. Pedagogical approaches grounded in experiential engagement—such as repair workshops, upcycling projects, collaborative design challenges, and wardrobe reflection exercises—translate abstract sustainability principles into embodied practice. Place-based science education can further strengthen this connection by using local environmental problems as authentic learning contexts; for example, water pollution in Lake Pamvotis has been proposed as a meaningful framework for teaching environmental and scientific concepts in high school and college education [19]. At the same time, research on preschool educators' views indicates that environmental awareness can also be supported through distance education, suggesting that sustainable learning may be cultivated not only in face-to-face experiential contexts but also through appropriately designed digital pedagogical environments [20]. Research on community-based sustainability initiatives, including ecoclubs, demonstrates that participatory environments can support the transformation of lifestyle practices by reinforcing collective

norms and shared agencies ^[11]. Such findings highlight the importance of situating sustainable fashion education within socially interactive contexts.

Digital environments further complicate educational efforts. Sustainability messages circulate within algorithmically curated platforms where ecological narratives coexist with intensified marketing stimuli and aspirational consumer imagery ^[12]. In this landscape, critical literacy becomes indispensable. Theoretical analyses of information literacy emphasize the capacity to evaluate sources, interpret multimodal communication, and recognize ideological framing ^[13]. Emerging perspectives on future-oriented literacy stress adaptability, ethical discernment, and reflexivity in navigating rapidly evolving socio-technical systems ^[14]. Integrating such literacies into sustainable fashion education equips learners to critically interrogate sustainability claims, identify greenwashing practices, and resist manipulative consumption cues embedded in digital infrastructures.

Beyond individual behavior, education exerts influence at broader socio-economic scales. Empirical studies linking sustainability education indices with improved environmental governance outcomes suggest that educational investment contributes to structural shifts in resource management and policy orientation ^[8, 9]. These macro-level findings reinforce the argument that sustainable fashion education is not limited to shaping consumer preferences but participates in cultivating future professionals, policymakers, and innovators capable of redesigning production systems. Technical and vocational education initiatives in sustainable apparel production further demonstrate the importance of integrating technological competence with sustainability principles in skills training ^[21].

Taken together, the role of education in sustainable fashion encompasses cognitive transformation, ethical engagement, behavioral experimentation, and institutional reform. Transformative learning processes enable critical interrogation of dominant consumption paradigms, while experiential and community-based approaches support the enactment of alternative practices. The integration of critical digital literacy strengthens learners' capacity to navigate complex communication environments, and macro-level evidence underscores education's contribution to broader sustainability governance. Education thus emerges not as a supplementary intervention but as a foundational driver of systemic change in fashion systems.

4. Fashion Literacy as Sustainability Literacy

The increasing complexity of sustainability challenges in the fashion sector necessitates a conceptual framework capable of integrating environmental knowledge, ethical reasoning, critical interpretation, and behavioral enactment. Fashion Literacy can be theorized as a domain-specific articulation of sustainability literacy, translating the general competencies associated with Education for Sustainable Development into the culturally embedded practice of clothing production, communication, and consumption. Sustainability literacy has been defined as the capacity to understand systemic interconnections among ecological, social, and economic processes and to act responsibly within those systems ^[3]. Yet, when treated abstractly, sustainability literacy risks remaining detached from everyday practices. Fashion, as a visible and identity-laden domain of daily life,

provides a particularly salient context in which sustainability literacy can be operationalized through embodied decision-making and symbolic participation.

At the cognitive level, Fashion Literacy entails understanding lifecycle impacts of garments, material sourcing, manufacturing processes, and post-consumption pathways. Bibliometric mapping of sustainable fashion research demonstrates a growing emphasis on circular design, lifecycle analysis, and innovation in sustainable materials, indicating that technical knowledge is central to contemporary discourse ^[4]. However, cognitive awareness alone is insufficient. Systematic reviews of sustainable consumption highlight that consumer behavior in fashion is shaped by attitudinal factors, perceived responsibility, social norms, and structural constraints ^[10]. Fashion Literacy therefore extends beyond informational competence to include ethical evaluation and contextual judgment.

The ethical dimension of Fashion Literacy involves the capacity to recognize and assess labor conditions, global inequalities, and the social externalities embedded within supply chains. Comparative studies examining sustainable fashion perspectives among university teachers and students reveal generational and professional differences in value orientation, indicating that sustainability attitudes are socially mediated and context-dependent ^[22]. Such findings reinforce the importance of dialogical pedagogies that surface divergent viewpoints and foster critical reflection. Moreover, emerging research on inconspicuous or "stealth" luxury consumption illustrates how symbolic forms of distinction may shift without necessarily reducing material throughput, demonstrating that aesthetic and cultural dynamics remain central to sustainability transitions ^[23]. Fashion Literacy must therefore engage critically with the semiotic structures through which value and status are constructed.

A cultural-communicative dimension further distinguishes Fashion Literacy from purely technical sustainability frameworks. Fashion communication is increasingly mediated by digital platforms, influencer networks, and algorithmic marketing systems that shape perceptions of desirability and responsibility ^[12]. Within such environments, sustainability claims may function simultaneously as ethical commitments and branding strategies. Theoretical perspectives on information literacy emphasize the importance of evaluating sources, interpreting multimodal content, and identifying persuasive intent in complex information ecosystems ^[13]. Expanding this perspective, future-oriented literacy frameworks stress adaptability and reflexivity in navigating evolving socio-technical landscapes ^[14]. Integrating these literacies into fashion education equips learners to critically assess green marketing narratives and distinguish substantive sustainability initiatives from symbolic appropriation.

Behaviorally, Fashion Literacy encompasses the translation of ethical and interpretive competencies into practice. This includes extending garment lifespans through repair, reuse, and responsible disposal; moderating purchasing frequency; and supporting circular business models. Educational research on sustainable consumption demonstrates that participatory and experiential learning environments facilitate shifts in lifestyle practices by reinforcing collective norms and shared agency ^[11]. Such evidence aligns with transformative learning theory, which posits that durable change emerges from reflective dialogue and lived

experimentation rather than from abstract instruction alone [5]. When sustainability literacy is embedded within fashion practice, it becomes not merely an analytical skill but a mode of cultural participation oriented toward ecological responsibility.

Conceptualizing Fashion Literacy as sustainability literacy thus provides a coherent framework that integrates systems understanding, ethical reasoning, cultural critique, and practical competence. It situates sustainability within everyday embodied experience while maintaining alignment with broader SDG-oriented objectives. By bridging abstract sustainability competencies with the symbolic and material dimensions of fashion, this framework supports educational strategies that cultivate reflective, informed, and responsible engagement in fashion systems.

5. Pedagogical Implications and Institutional Integration

Translating the conceptual framework of Education for Sustainable Fashion into effective practice requires systematic pedagogical design and institutional alignment. If sustainability in fashion is understood as a transformative and literacy-based process rather than a thematic supplement, then curriculum, teaching methods, and institutional culture must reflect this orientation. Education for Sustainable Development (ESD) emphasizes competence-based learning that integrates systems thinking, normative reflection, strategic action, and collaborative problem-solving [3]. Within fashion programs, this implies moving beyond isolated sustainability modules toward holistic curriculum integration across design, business, marketing, communication, and vocational training pathways.

Curricular integration demands interdisciplinary coordination. Sustainable fashion challenges intersect with environmental science, economics, sociology, ethics, and digital media studies. This interdisciplinary orientation is further supported by the evolution of STEM education toward STEAM and STREAM frameworks, which expand science- and technology-based learning by incorporating the arts, creativity, reading, and broader cultural dimensions into educational practice [20]. This interdisciplinary orientation is consistent with contemporary STEM education research, which emphasizes the integration of learning theories and innovative pedagogies as a foundation for designing meaningful, student-centered, and sustainability-oriented learning environments [24]. Bibliometric analyses of sustainable fashion research indicate increasing calls for integrative design approaches that connect lifecycle assessment, circular economy principles, and innovation management [4]. Embedding such perspectives into studio-based design education fosters awareness of material choices, durability, and regenerative practices as intrinsic to creative decision-making rather than external constraints. Similarly, incorporating sustainability metrics and supply chain transparency into business education encourages critical evaluation of growth-oriented models that may conflict with ecological boundaries. Empirical evidence from transformative learning research in economics and management education demonstrates that structured reflective interventions can reshape student perspectives on sustainability and economic responsibility [6].

Institutional integration extends beyond curriculum design to organizational learning processes. Research on

transformative organizational learning in higher education institutions reveals that sustainability transitions require collective reflection, cross-departmental collaboration, and leadership commitment [7]. Without institutional coherence, sustainability initiatives risk fragmentation and symbolic compliance rather than substantive change. Technical and vocational education and training (TVET) programs in sustainable apparel production further illustrate the importance of aligning technological skill development with environmental and social responsibility, ensuring that practical competencies evolve alongside sustainability principles [21]. Such alignment strengthens the connection between professional preparation and systemic transformation.

Experiential and community-based pedagogies play a crucial role in bridging knowledge and practice. Sustainable consumption research consistently indicates that social norms, perceived agency, and collective engagement influence behavioral outcomes [10]. Participatory initiatives, such as clothing repair workshops, upcycling labs, and collaborative design challenges, provide learners with embodied experiences that reinforce ecological responsibility. Studies of ecoclubs and community sustainability initiatives demonstrate that shared practices foster lifestyle transformations through collective reinforcement and social learning processes [11]. Integrating similar participatory models within formal education enhances the durability of behavioral change by situating sustainability within lived social contexts.

Digital literacy integration constitutes another essential pedagogical dimension. Sustainability communication in fashion is embedded within visually saturated, algorithmically curated environments that shape perceptions of authenticity and desirability [12]. Theoretical perspectives on information literacy underscore the need for critical evaluation of sources, multimodal interpretation, and awareness of persuasive intent [13]. Expanding these capacities through future-oriented literacy frameworks supports adaptability and ethical discernment in rapidly evolving communication ecosystems [14]. Embedding critical digital literacy within fashion curricula equips students to navigate green marketing narratives and evaluate sustainability claims with analytical rigor.

At a broader systemic level, empirical research links sustainability education indicators with improved governance and resource management outcomes [8, 9]. These findings suggest that educational reform contributes not only to individual competence but also to institutional and societal resilience. In the fashion sector, graduates who possess integrated sustainability literacy are positioned to influence corporate strategy, policy development, and design innovation. Pedagogical approaches that combine reflective dialogue, systems analysis, experiential practice, and institutional coherence therefore support both micro-level behavioral change and macro-level structural transformation.

In sum, the pedagogical implications of Education for Sustainable Fashion encompass curriculum integration, institutional transformation, experiential engagement, and critical digital literacy development. Aligning these dimensions with sustainability literacy and transformative learning principles strengthens the capacity of educational institutions to contribute meaningfully to ecological accountability and social justice within fashion systems.

6. Conclusion

The environmental and social externalities embedded within contemporary fashion systems reveal the limitations of incremental reform and underscore the necessity of structural and cultural transformation. As one of the most resource-intensive and globally interconnected industries, fashion intersects with multiple sustainability challenges, including climate change, material depletion, labor precarity, and digitalized overconsumption. Addressing these challenges requires more than technological innovation or regulatory adjustment; it demands educational processes capable of reshaping values, competencies, and professional practices. Education for Sustainable Development (ESD) provides a normative and pedagogical framework that situates learning at the center of sustainability transitions, emphasizing systems thinking, ethical reflection, and action-oriented competence.

This paper argued that Education for Sustainable Fashion must be conceptualized as a transformative endeavor grounded in both sustainability literacy and critical cultural analysis. Transformative learning theory highlights the importance of interrogating taken-for-granted assumptions about consumption, growth, and status, thereby enabling perspective shifts that align personal and professional identities with ecological responsibility. Empirical research in higher education contexts confirms that such transformation can be intentionally cultivated through structured pedagogical interventions and institutional commitment. These findings reinforce the argument that sustainability integration in fashion education cannot remain peripheral but must permeate curricula, governance structures, and professional training pathways.

The conceptualization of Fashion Literacy as a domain-specific form of sustainability literacy provides a coherent integrative framework. By combining cognitive understanding of lifecycle impacts, ethical evaluation of supply chains, critical interpretation of digital sustainability narratives, and embodied behavioral practices, Fashion Literacy bridges abstract sustainability principles with everyday cultural participation. Research on sustainable consumption in fashion demonstrates that behavioral change is mediated by social norms, perceived responsibility, and structural constraints, underscoring the importance of experiential and community-based learning environments. Furthermore, the digitalization of fashion communication intensifies the need for critical literacy skills capable of discerning authentic sustainability initiatives from symbolic marketing strategies.

At a broader societal level, evidence linking sustainability education indicators with improved governance and resource management outcomes suggests that educational reform contributes to macro-level sustainability transitions. In this sense, sustainable fashion education participates not only in shaping consumer behavior but also in preparing future designers, managers, policymakers, and educators to reconfigure production systems in alignment with ecological boundaries and social justice principles. The integration of technical competence with ethical and systemic awareness strengthens the potential for innovation that is both creative and responsible.

Ultimately, aligning fashion education with sustainability imperatives requires sustained institutional commitment, interdisciplinary collaboration, and pedagogical innovation. By embedding transformative learning, sustainability

literacy, and critical digital competence within fashion curricula, educational institutions can contribute meaningfully to the reorientation of fashion systems toward durability, equity, and regenerative practice. Sustainable transformation in fashion is therefore not solely a matter of material substitution or market adjustment; it is fundamentally an educational project grounded in reflective, informed, and ethically engaged participation.

7. References

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