A Transformative Approach: Integrating Education for Sustainable Development (ESD) and the Sustainable Development Goals (SDG) into Fashion Education to Transfer Values from Product to Practice.

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ABSTRACT

As the fashion industry faces growing scrutiny over its environmental and social impacts, future professionals must possess expertise in sustainability practice alongside traditional skills in product development and quality enhancement (McKinsey and Company, 2023). Education for sustainable development (ESD) equips individuals with the knowledge, skills, values, and attitudes to contribute meaningfully to sustainability and the global climate agenda (UNESCO, 2020). Following the CoDesignS ESD framework, this paper outlines a module development plan that integrates ESD and the Sustainable Development Goals (SDGs). The specific learning objectives for SDGs target the domains of Head (cognitive), Heart (socio-emotional), and Hands (behavioural) through the "three H" approach, engaging students in a transformative educational experience. This approach enables deeper engagement with the SDGs at both personal and industrial levels (CoDesignS ESD, 2024). Students engage with the Nexus Approach toolkit, which highlights the interconnections between SDGs (SDG Toolkit, 2024). They analyse multi-tiered fashion supply chains and design actionable, systems-based solutions for integrating SDG principles into a selected brand. The goal is to equip students with strategic and practical skills to address sustainability challenges holistically, balancing environmental, socio-political, and commercial objectives, thereby fostering systemic change in the fashion industry.

Keywords: Sustainable Development Goals (SDGs), Education for Sustainable Development (ESD), Experiential learning, "three H" approach, Nexus Approach.

INTRODUCTION

The fashion industry significantly contributes to the global and national economy, driving economic growth, employment, and investment. In the UK, the fashion sector contributes £62 billion to GDP, supports 1.3 million jobs, and generates £23 billion in tax revenue, making it a key creative industry (UK Fashion and Textile Association 2023). However, its extensive supply chain, spanning design, retail, manufacturing,

logistics, and technology, also has a substantial environmental impact, contributing to pollution, waste, and resource depletion. Despite these challenges, the industry continues to create diverse employment opportunities and attract international investment. At Manchester Metropolitan University (MMU) and the Manchester Fashion Institute (MFI), where sustainability is a strategic pillar, our research and teaching activities addresses systemic challenges including waste reduction, ethical production, and circular economies, alongside sustainable and recycled materials and eco design principles. This approach equips our graduates with critical skills and practical knowledge to contribute to the evolving industry while aligning practices with sustainability goals. Fashion buyers play a crucial role in international sourcing and supply chain management, where many sustainability issues arise. Understanding these complexities is essential for buyers to make informed decisions that promote ethical and sustainable practices. However, the industry lags behind targets due to consumer resistance to paying premiums for sustainable products, heightening the climate crisis urgency (McKinsey and Company, 2024). ESD in fashion can reframe industry priorities, shifting from product-centric innovation to systemic sustainability. ESD fosters critical thinking and ethical reasoning, helping learners understand the interdependencies in the fashion lifecycle (Leal Filho, 2018). Integrating SDGs in fashion education informs students about the impacts of their decisions and empowers them to develop solutions promoting circular economies, equitable labour practices, and ecological resilience. Embedding ESD principles moves fashion education beyond product-focused approaches, creating change-makers who bridge theoretical sustainability frameworks with practical applications (CoDesignS ESD, 2024; Fletcher and Grose, 2021).

Aim:

To integrate Education for Sustainable Development (ESD) and the Sustainable Development Goals (SDGs) into a fashion buying module, equipping students with skills to address sustainability challenges and transfer values from product to practice.

Objectives:
1. To implement the "three H" approach (Head, Heart, Hands) for engaging students cognitively, socio-emotionally, and behaviourally with the SDGs.
2. To apply the Nexus Approach toolkit to analyse fashion supply chains and design actionable solutions for integrating SDG principles into a selected brand.

LITERATURE REVIEW

The integration of sustainability into fashion education has become a cornerstone of fashion programmes globally, driven by the urgent need to address environmental and social challenges (Zabidi and Jamaludin, 2023). Educational institutions are incorporating sustainability across multiple disciplines, including consumption, product development, design, business, and retail, aiming to educate students on

sustainable practices and equip them as future innovators (McKinsey and Company, 2023). To foster meaningful engagement with sustainability, challenge-based learning approaches are increasingly being employed. These methods immerse students in real-world issues such as sustainable supply chains, waste management, and ethical production practices (Ma, 2023). By applying theoretical knowledge to these practical challenges, students enhance their creativity, critical thinking, and problem-solving skills (Anderson and Krathwohl, 2001). Experiential learning further enables students to generate innovative solutions, equipping them to lead sustainability efforts in the fashion industry (Barth et al., 2015). However, much of the industry's sustainability focus remains on improving materials and production processes. Efforts advocate for using higher-quality, sustainable fibres like organic cotton, adopting standards such as GOTS and the Better Cotton Initiative (BCI), and exploring recycled and bio-based materials as alternatives to synthetics (Textile Exchange, 2023). Universities worldwide are leading the integration of sustainability into fashion education, celebrating innovative approaches that address environmental and social challenges. The University of the Arts London (UAL) emphasises circular design, waste reduction, and material innovation, encouraging students to create sustainable collections and address ethical issues in production (University of the Arts London, 2023). The Royal College of Art's Fashion Futures programme focuses on design innovation to tackle key sustainability challenges (Royal College of Art, 2024). Aalto University prioritises circular design and sustainable material sourcing, exploring the entire lifecycle of fashion products (Aalto University, 2022). The University of Leeds addresses textile waste and carbon footprints through its Sustainable Fashion and Textiles pathway, fostering collaborations with local businesses (University of Leeds, 2023). Parsons School of Design (2022) and the University of Northampton (2022) enrich curricula with sustainable design labs and practical learning, focusing on circular economies and waste reduction. MFI is embedding ESD and carbon literacy training across all programmes. Sustainability efforts include digital technology, zero waste initiatives, SDG-focused teaching, and circular business models, supporting future initiatives like Extended Producer Responsibility (EPR).

Opportunities for Strategic Enhancement

While current efforts in fashion education have made valuable progress, there is an opportunity to enhance their impact by fostering a more strategic, systems-based approach. Although material innovation and zero-waste practices are crucial, they may not fully address broader systemic challenges such as supply chain inequities, energy consumption, and policy reform, which are critical for fashion buyers. To strengthen these efforts, institutions should integrate interdisciplinary teaching that connects fashion studies with environment, policymaking, and systems thinking (Barth et al., 2015). This will enable graduates to lead not only at the product level but also across the industry, from implementing circular economy principles to influencing global policy. By embedding a systems-oriented perspective, educational institutions can bridge the gap between theoretical sustainability frameworks and real-world

application, equipping graduates to drive meaningful change in the fashion industry. ESD represents a transformative educational approach, aiming to empower individuals with the knowledge, skills, values, and attitudes necessary to create a sustainable future. ESD integrates key sustainability principles such as environmental integrity, economic viability, and social equity into education at all levels, promoting holistic understanding and action-oriented learning (CoDesignS ESD, 2024

Implementing the SDGs with ESD exceeds traditional academic disciplines, fostering systemic thinking and problem-solving skills essential in addressing global challenges like climate change, poverty, and biodiversity loss. In the fashion sector, ESD's role is particularly critical due to the industry's vast environmental and social impacts. By embedding ESD into fashion education, institutions can cultivate future leaders who understand the systemic nature of sustainability issues, from resource extraction to waste generation, and are equipped to drive change within this complex and interconnected sector (Sterling and Orr, 2001; Barth et al., 2015). The London College of Fashion's Centre for Sustainable Fashion developed the Education for Sustainability in Teaching (EST) strategy, incorporating sustainability into curriculum through experiential learning and ESD principles. An approach that fosters critical thinking, socio-emotional skills, and interdisciplinary understanding, equipping students to tackle global challenges and drive transformative change within the fashion industry. Active learning projects further enhance engagement with real-world supply chain and sustainability issues (UNESCO, 2020; Centre for Sustainable Fashion, 2022). These approaches promote deeper engagement with the social, environmental, and economic dimensions of sustainability through active learning, implementing projects that address real-world supply chain challenges (Salinas-Navarro et al., 2022)

CURRICULUM DESIGN METHODOLOGY

To drive transformative change, education must focus on systemic sustainability, linking material innovations with strategic SDG applications. Incorporating the Nexus Approach (SDG Toolkit, 2024) into the fashion buying module encouraged students to view sustainability as an interconnected system, considering how supply chain, resource allocation, and policy interact to shape industry practices and global sustainability goals. The 'Head, Heart, Hands' approach integrated cognitive, socio-emotional, and behavioural learning, ensuring students acquire knowledge, develop empathy, and translate these into actionable skills (Sipos, Battisti, and Grimm, 2008). Reviewing assessment submissions will identify if students have engaged with sustainability issues beyond product and consumption, motivating responsible action. Group discussions and case studies engage cognitive, emotional, and practical learning, fostering accountability and proactive problem-solving (Sterling and Orr, 2001; CoDesignS ESD, 2024). By incorporating systems thinking and scenario planning into module delivery, students were encouraged to explore the interconnections between environmental, economic, and social dimensions of

sustainability. This approach helped students gain a holistic understanding of the industry's complex issues, enabling them to propose solution-based actions in their end-of-module submissions (Van der Heijden, 2005).

This paper explains how these principles were applied in a specific module for fashion buying students at MMU. The module followed a structured week-by-week schedule that progressively deepened students' understanding of the SDGs, focusing on both individual actions and industry-wide applications. Tools such as Life Cycle Assessment (LCA) and the Triple Bottom Line (TBL) were integrated, enabling students to analyse the impact of decisions at various stages of the fashion production process (Elkington, 1997; McDonough and Braungart, 2002). Aligning the content with the SDGs ensured that students grasped the role of fashion in achieving sustainability goals, equipping them with methodologies to design and implement sustainable supply chain practices (Salinas-Navarro et al., 2022)

Module Assessment

The assessment required students to develop a sustainable action plan for a fashion brand. They began by selecting a brand that aligned with their personal interests and values, conducting preliminary research to provide an overview of the brand, its target market, product range, existing sustainability practices and communication strategies. While material innovation and zero-waste practices are important, the focus of the assessment expanded beyond these product-centric strategies. Using the UNESCO Nexus approach (SDG Toolkit, 2024), students identified a minimum of three interconnected SDGs relevant to the brand's objectives and values. This step required an analysis of the alignment between the selected SDGs and the brand's corporate social responsibility (CSR) or environmental, social, and governance (ESG) strategies. By exploring these frameworks, students began to move away from isolated product-focused solutions, acknowledging that addressing sustainability in fashion requires a more strategic, systems-based approach (Niinimäki et al., 2020). They recognised that, although innovative materials and zero-waste strategies are essential, they may not fully resolve broader systemic challenges such as inequities within the supply chain, energy consumption, or the need for policy reform (Fletcher and Grose 2021). Students were asked to explain their rationale for selecting these specific SDGs and assess the brand's strengths and weaknesses in relation to its environmental, socio-political, and economic impacts. This process encouraged them to think critically about the larger structural changes necessary in the fashion industry to achieve true sustainability.

Module Projected Outcomes

This paper outlines the approach taken in a final year 30-credit module on a fashion buying programme, providing a structured methodology with practical outcomes for module leaders to implement within their own programmes. By January 2025, students will submit their SDG action plans, which will be evaluated through a mixed-

methods research design. This will focus on content analysis of student submissions, followed by focus groups or semi-structured interviews to gain deeper insights into their learning experiences and engagement. The work continues to be underway, and the presentation will include evidence of the outcomes and impact on the students. The goal of this research is to evaluate the effectiveness of integrating the UNESCO Nexus approach principles (SDG Toolkit, 2024) and selected SDGs into the curriculum. Outcomes will evaluate how students identify actionable sustainability strategies, design systems to monitor progress, and reflect on the broader implications for the fashion industry, addressing challenges, opportunities, and contributions to systemic change.

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