

Interdisciplinary educational approaches to clothing longevity

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Keywords

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Abstract

How do we encourage and enable interdisciplinary systems thinking approaches to sustainable fashion design and business education? In preparation for a workshop at the 2017 PLATE conference, this paper introduces the context of a toolkit – The Clothing Durability Dozen (Cooper et al., 2016b) – aimed at enabling students to collaborate and learn about clothing longevity across disciplines and creating a better understanding of the roles that different departments can play in placing sustainable design strategies at the heart of the clothing industry. In line with education for sustainable development (ESD) principles, objectives include stimulating learning and promote core competencies, such as critical and systemic thinking, collaborative decision-making, and taking responsibility for present and future generations. In the workshop, participants will trial and contribute to the development of the toolkit and any necessary supporting material, the final version of which will be available for use as an educational tool.

Introduction

The Defra funded project ‘Strategies to improve design and testing for clothing longevity’ at NTU (2014-16) explored the technical, behavioural and strategic obstacles to implementing innovative and sustainable product development processes for extended clothing lifetimes and reduction of clothing waste (Cooper et al. 2016a). This followed WRAP’s Valuing Our Clothes report, which estimated that 350,000 tonnes of clothing goes to landfill each year in the UK and identified life extension of clothes as the most effective strategy for reducing waste and the overall impact of clothing across garment lifetimes, from production to end-of-life (WRAP, 2012, Cooper et al, 2013).

Identification of the knowledge, skills, processes and infrastructure that could support design for longevity informed the development of a toolkit – The Clothing Durability Dozen – to enable clothing companies to collaborate across different departments, as it was found that the knowledge and skills often exist within the industry, but a more joined up, strategic approach is required, recognising that design for longevity should be an essential element of the entire fashion system (Goworek et al. 2013).

It has also been recognised that interdisciplinary systems thinking approaches to sustainable fashion education are necessary to teach new skills and aptitudes required in the global fashion industry (see for example: Williams, 2016; Earley et al, 2016). A movement supported by the United Nations, education for sustainable development (ESD), has advocated the holistic integration of sustainability

in all higher education disciplines (UNESCO 2003, 2005 quoted in Armstrong & LeHew, 2014), with objectives to stimulate learning and promote core competencies, such as critical and systemic thinking, collaborative decision-making, and taking responsibility for present and future generations (UNESCO, 2017). It is also evident that a gap exists between design education and professional practice: departmental silos in education tend to work in isolation, preventing students from learning about working and communicating across disciplines, which is an essential part of industry working practice (Claxton & Kent, 2017; Earley et al., 2016).

An educational version of the Clothing Durability Dozen toolkit (Cooper et al., 2016b) has consequently been developed with the aim of enabling students to learn about clothing longevity as a sustainable fashion strategy, whilst considering the roles played by different interrelated departments in a fashion company, e.g. fashion designers, textiles designers, technologists, buyers, design managers, marketers, business strategists, and supply chain management. It takes an active, participatory approach to problem-based learning, involving students from a variety of educational departments playing different industry roles, underpinned by education for sustainable development (ESD) principles.

In preparation for a workshop at the 2017 PLATE conference, this paper introduces the context and background to the educational tool kit’s development, which workshop participants will trial and contribute to. The final version will be available as an open access educational tool.

Education for Sustainable Development & Clothing Longevity

ESD aims to create interactive, learner-centred teaching and learning settings that support interdisciplinary collaboration and the development of the key competencies needed for promoting sustainable development (UNESCO, 2017). In the context of sustainable clothing and fashion education, this has been explored through diverse methods such as role-play (Williams, 2016), tool kits, (Earley et al, 2016), board games (Dobrosmyslova & Tångne, 2013), co-design workshops and digital platforms (Ballie, 2012; Hur et al, 2013), alongside conventional approaches such as lectures, workshops and student presentations (see for example Re:Dress, 2016). All advocate active learning through collaborative working and creative practice to better understand the context and background e.g. issues of sustainability in the fashion and textile industry and approaches to make things better. This is supported by design education theorists, advocating sense-making through making and doing. Gauntlett (2011) for example, argues that a hands-on approach to learning, and a spirit of enquiry and questioning, is required to make students thoughts, feelings or experiences manifest and tangible. The need for designers to develop empathy, curiosity, deep industry and sustainability understanding have been found to be key collaborative skills required to work across disciplines, essential for systems level change in the fashion and textiles industry (Earley et al, 2016).

Educational resources to support this include the TED 10 tool kit of sustainable fashion and textile design strategies, which are a very effective way of introducing key sustainability terms and approaches (TED, n.d.) and the Eco Chic Design Award Educators' Pack (ReDress, 2016), which include topics such as garment lifecycles, zero waste approaches, upcycling and reconstruction with supporting workshop activities and slideshow to introduce issues and case studies. These can facilitate active learning through making and encourage systems thinking, but are aimed exclusively at fashion and textile design students, working within predefined departmental silos. These educational silos and a general lack of set tools, staff knowledge, understanding and confidence to deliver have been identified as challenges in incorporating sustainability into textiles and apparel education (Armstrong & LeHew, 2014).

Industry guides have been developed recently to support industry practitioners, highlighting both the benefits of clothing longevity as a sustainability strategy and the challenges of integrating this into current industry practice. WRAP's Sustainable Clothing Guide (2017), for example, has been developed for industry, specifically focusing on life extension approaches to sustainability. Key approaches to achieving and enhancing clothing durability are outlined with a range of engaging tips, case studies and recommended action points for companies, including the importance of getting together with colleagues to plan and implement change across

departments. Similarly the forthcoming Design for Longevity online platform, developed by the Danish Fashion Institute, aims to support sustainable fashion by helping designers and product development teams to adapt design practices towards longevity and circularity (DFI, 2017). Its authors recognise that designers do not often have the agency to enable change directly though, usually working in departmental silos on restrictive briefs without the authority to make change, but state that the platform aims to equip them with the knowledge and understanding to challenge existing ways of working (DFI, personal email communication, May 10, 2017). While both could be used as teaching aids or engaging and informative reading material for students, they are passive guides and neither include practical tools for facilitating collaboration between departments.

The educational version of the Clothing Durability Dozen tool kit aims to work towards addressing these gaps in HEIs by supporting the continuing professional development of academic staff whilst also allowing students to develop knowledge, understanding and key ESD competencies required for enabling sustainable change when in future industry roles.

The Clothing Durability Dozen

The Defra clothing longevity project built on previous research (Cooper et al., 2013; WRAP, 2013; Cooper et al., 2014) by drawing on technical innovations combined with knowledge of consumer perspectives, new product development (NPD) practices and commercial objectives (Cooper et al, 2016). Findings from a series of research activities resulted in the development of a tool kit for the industry, the Clothing Durability Dozen, intended to be a collaborative training resource and point of reference for industry practitioners and students.

The tool kit has been designed to enable clothing companies to collaborate across different departments, as it was found that largely the knowledge and skills exist in industry, but a more joined up, strategic approach is required to pool resources and make change happen. Containing clear concise materials, examples, and links to related or existing materials, such as WRAP's aforementioned Sustainable Clothing Guide (2017), the twelve topics cover areas specific to life extension in a wide and holistic way:

1. Designing for Durability
 2. Understanding Consumers
 3. Testing for Durability
 4. Transparent Supply Chains
 5. Product Labelling
 6. Lifetime Guarantees
 7. Cleanliness, Laundry & Care
 8. Ease of Maintenance & Adaptability
 9. Enabling Repair
 10. Creating Emotional Value
 11. Alternative Business Models
 12. Communicating & Promoting
- (Cooper et al., 2016b)



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Figure 1. Front cover of Clothing Durability Dozen toolkit (Cooper et al., 2016b)

It will allow brands to recognise, map out and celebrate what they are already doing in these areas, and plan how they can go further. In an educational context, it is intended for use by groups of students from different departments such as fashion, textile and knitwear design, fashion management, marketing, and business courses. By role-playing industry positions, it will allow students to actively learn about and understand clothing longevity as an industry sustainability strategy together. By doing this, it offers a new approach to bridging the gap between education and industry practice.

The workshop

The aim of the workshop is to develop the educational version of the Clothing Durability Dozen toolkit by gathering feedback on the content, format and delivery from a variety of stakeholders.

The workshop will take the form of a facilitated role-play workshop to trial the toolkit across educational

disciplines, e.g. fashion design, textile design, fashion technology, fashion management, fashion marketing and communication, business management, supply chain management etc., followed by the opportunity to provide feedback on the toolkit content, format and delivery.

Objectives include:

- Demonstrate and encourage interdisciplinary systems thinking approaches to sustainable fashion design, specifically clothing longevity;
- Gather feedback on the toolkit design, content and delivery with educators, researchers, students and industry representatives;
- Build participants' knowledge and understanding of clothing longevity as a sustainable fashion strategy

Outcomes

Outcomes of the workshop will be data gathered by observing participants, gathering feedback and design suggestions to inform final version of the educational toolkit. The final version of the toolkit and supporting educational material will be shared with participants for use as a teaching aid.

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