

FASHION EDUCATION IN SUSTAINABILITY: CHANGE THROUGH EXPERIENTIAL CROSSINGS

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Abstract

Sustainability is distinguished by its multidimensional, messy, big and small transformational change processes that impact the world on all scales and timelines that are both short and long. This is, whilst challenging, full of diverse possibilities. To be path makers and navigators through this complexity requires us to teach and learn skills, knowledge and understanding of our relationships with each other and with our natural world. It requires us to hone our skills of imagination as well as our practical skills of creation and communication.

Fashion is most visible through its dominant current business model of production and consumption and it has amassed vast quantities of capitals through this manifestation of its identity. But fashion is a vital way for us to connect with the world through our social interactions; it references the time and place in which we reside. Fashion should be relevant to the context of our lives, so we need to question its current practices, to evolve more appropriate manifestations of its contribution to individuals, communities and societies.

Education for sustainability offers us a means to unlock the current fashion educational paradigm, which has become, in many cases, a service led model of educational provision for current business functions. It offers the means to change towards education that is based on a nurturing of culture, creativity and critical thinking, so that we are capable of responding to global and local contexts to contribute towards thriving societies, cultures and economies.

The places, players, and their roles in this process differ substantially from traditional fashion education hierarchical models.

This paper explores this changing paradigm through a case study at London College of Fashion, guided by Dilys Williams, Director Centre for Sustainable Fashion. The project worked with thirty undergraduate students across disciplines in fashion design and communication, their tutors, and a world leading sportswear brand's design, communication and education teams. The author has developed an experiential and reflexive learning process through a number of iterations to explore design for sustainability (DfS) through teaching and learning methods that visualize our interdependence, support a mutual learning environment, and begin to explore cause and effect of our actions and interactions. This project engages this approach to explore ways in which the business could de-couple success from the throughput of material goods through this project based in the UK and the US.

Context: Fashion Education for Sustainability

The truth is that many things on which our future health and prosperity depend are in dire jeopardy: climate stability, the resilience and productivity of natural systems, the beauty of the natural world and biological diversity. It is worth noting that this is not the work of ignorant people. It is, rather, largely the result of work by people with BAs, BSs, LLBs, MBAs, and PhDs.

David Orr

This statement, from an address by American Scholar David Orr to a cohort of graduating students, challenges us to question not just education systems, but wider worldviews on the connectedness between each other and with our living world. Barack Obama (2008) describes us as having lost our sense of shared prosperity, a notion reaching deep into our sense of humanity, questioning who we are and what our longer-term goals are. Such questions are however, rarely placed at the centre of our educational compass or as the basis for proposing business progression.

We know learning is vital to survival (Wal, 2007) and that we are creatures of habit, functional addicts to unsustainable ways of living and learning, mesmerised by the instantaneous, banishing all thought of tomorrows – not necessarily in a hedonistic euphoria of delight, but more in a notion that we are getting by, one day at a time. These short cycles of thinking and living and the accessibility of the 'now' is a cultural phenomenon nowhere more visible than in the fashion industry, where the production and consumption business model has been de-coupled from the essence of fashion as a vital part of our lives, (Schor, 2002) a means to identify, connect and place us, its constituent parts and how it is created. Fashion affects the attitude of most people towards both themselves and others (Svendsen, 2006). It is a facilitator for us social animals, as experimenters in communication, our voluntary attire has intrigued us since we became bipeds, as we are the only animal that changes its skin every day (Hawken, in Fletcher and Grose, 2012). While those who can afford to change their skin every day do so at increasingly rapid speeds, discarding yesterday's skin as shrivelled and dried up from an emotional perspective (whilst remaining functionally intact), millions of others across the world are making these pieces by hand, their safety and freedom in the balance.

The de-coupling of our habits and their short and long-term effects is not confined to our fashion habits. However as fashion is such a visible indicator of our time and place, we might explore it as a conduit to possibilities for ways to

live that can simultaneously ignite our short and long-term imaginations. We need therefore to ask if fashion practices can find ways to de-couple success from the degradation of our social and ecological capitals, which they currently play a significant part in destroying. What kind of education do we need to participate in for our graduates to develop the skills and competencies for a thriving world?

A burgeoning body of work around ESD offers a great call to action for art and design education, once the home of challenge and subversion now challenged itself by the commoditisation of education. The packaging of curriculum into units resembling 'educational products' with courses whose names read more like job titles than the promise of life enrichment sound future focused at first sight, at a time when employability is high on the HEI agenda. We want to nurture our students into a world where they can stand on their own feet with financial independence and confidence through their working lives. However by building resilience into our graduates' skills in the wider changing world that they contribute to may render this curriculum at best a reference point, at worst unfulfilled expectation and stifling to contemporary possibilities. The vulnerability of this model and its consequences for personalities, communities and our planet are immense.

Propping up existing systems is not education's ambition, particularly art and design education, where challenging the status quo, asking questions and practical problem solving through creating artefacts and services are much closer to a designers' strengths and the distinctive contribution. So how can we engage fashion education's possibilities based on an expansive and creative imagining of the actions needed to create sustainability, without being first side tracked by the bottom line, existing industrial frameworks or educational targets? (Fletcher and Williams, 2012).

Re-imagining Fashion Education from a Different Starting Place

It is with the benefit of engaging in ESD dialogues, a background of 20 years working as a designer, researcher and educator in fashion and sustainability, and working with others from students to leading researchers, that the author has been able to develop practices for fashion, critiqued through sustainability and for sustainability through the contribution of fashion.

Much work around sustainability in fashion has been based on efficiencies in the current system, work on supply chain transparency, ethical trading, de-materialisation and closed-loop systems for fashion products. Whilst these are often rigorously researched and developed and systematically applied, they are not systemically altering how the fashion industry operates. And, as is the case with initiatives in other industries, they are doing little to reduce our overall unsustainability. Illustrated recently when the 'Keeling Curve' showed that atmospheric carbon dioxide has reached a new milestone of more than 400ppm, up from 315ppm when records began in 1958. A focus on the parts, tending small branches whilst sitting on a main trunk that we are simultaneously sawing off, won't help us when the tree crashes and falls. Alternatively, by taking a well-suited design approach of synthetic thinking, to see how the parts fit together, and aligning with a body of work in Design for Sustainability (DfS), we create a place where fashion education forms a dialogue and application of ESD and DfS in practice.

The testing ground for this work started in 2007 with a research project 'Shared Talent', devised and developed by the author, a people-centred learning process, inspired by sustainability thinking and values, and applied to fashion design and development. It focused on how students learn and consider the impacts of their work as part of the development into what they produce through an immersive experiential learning process, based on sustainability values, mediated through artefact creation and 'live problem' solving, to create a practical educational model of sustainability in action. A number of iterations have explored hybrid

problem based learning techniques and an iterative practical experimentation process, located in diverse geographical and cultural locations, for 'clients' including NGOs, government agencies and commercial fashion businesses.

Creating a process and space to grow key sustainability themes of **co-operation**, **participation** and **resourcefulness** (Shared Talent 3) resulted in a number of observations of the conduits for their realisation that have been used in taking the work forward.

Greater reflexivity, seen as avant-garde practice in fashion, offers a new type of aspirational behaviour that could offer an alternative ethic or code of practice. By offering a way of working that encourages exchange as a part of development, it is possible to encourage a shift from the current fiercely protective system where secrecy and hierarchy are seen as a means to creative and financial advantage, to one where competitive advantage is seen through the sharing of knowledge, inspiring individuality through distinctive application.

A first phase highlighted a thirst for information, facts and figures and a desire for 'a checklist for sustainability.' This was often followed by a sense of the 'burden of knowing', rather than being empowered by the statistics, participants feeling inertia, broken through by a phase of **problem manipulation and solution**, where thinking, learning and connecting through designing and making as active participants enabled a greater understanding of individual's own strengths and contribution to a whole.

Feedback from participants across design, making, supplying, buying and communicating suggest that **co-operation and collaboration feel good** where each participant could find '**flow**' in their work (Csikszentmihalyi, 2009).

Changing perspectives on time and scale through considering 'real time' problems encountered by a business or organisation whilst simultaneously

considering a longer-term trajectory opens up ways to work towards mitigation, adaptation and re-configuration as a dynamic evolving process.

Taking these themes through various iterations, enabled dialogue with the world's most successful sportswear brand, ideating ways to co-operate towards a goal of de-coupling success from the throughput of material goods, and to offer a contribution to our collective prosperity through processes and practices in fashion and sportswear.

Pioneering Collaboration

The culmination of extensive research resulted in the Nike Materials Sustainability Index (NMSI), with the ambition to share it as a credible open-source tool for apparel and footwear design. NMSI measures key environmental impacts of materials covering Chemistry, Energy and Greenhouse Gas Intensity, Water and Land Use Intensity, and Physical Waste, providing knowledge to make better choices. The collated data has been translated into a digital app, to guide designers/makers to make better design decisions. Nike Better World seeks to 'make better things' over 'making things better' through meaningful social and environmental change.

Compiling a team of design, management and communication students to participate in an immersive design incubator, the project was guided by principles of sustainability and Education for Sustainable Development frameworks (Sterling, 2001, Rowe 2008, UN Economic Commission for Europe, 2011) and research undertaken by the author to date, to adapt and evolve a teaching and learning experience most suited to art and design education, specifically fashion. Reference was made to hybrid Problem Based Learning techniques and adapted to suit the parameters of this live project.

The project sought to explore possibilities of a social object that could challenge and be challenged by designers through a dynamic dialogue, and be agile enough to grow and develop through its use. The collaboration aimed to provide

a bridge between data and technology with imagination and practical design, offering a platform from which to launch the first iteration of the NMSI app to the design community, and the start of a Mobilisation of Makers.

Defining Objectives

Shared objectives, measures for success and learning outcomes were agreed to

- Highlight shared values in thought leadership in industry and education
- Inform development of the Making app by exploring prototype applications
- Cross-fertilise integrity and creativity of emerging designers with industry's wisdom and expertise
- Demonstrate the value in pre-competitive business strategies
- Catalyse the design community towards a collective approach to measuring and reducing the environmental impacts of materials selection through holistic process
- Apply a sustainability-led and knowledge-based approach to design
- Offer qualitative understanding of the project in response to the quantitative data generated through NMSI

Key measures for the project

- Inform discourse towards creation of an 'app' through recording participants' explorative, analytical and synthetic thinking
- Co-operate towards a discourse of DfS for application in open-source teaching and learning materials
- Highlight quality, aesthetically relevant, technical and crafted products that illuminate sustainability thinking as a driver for innovation
- Create a social object for use in launch of the app to the design community

Criteria for learning outcomes

- Engagement in critical thinking and iterative creation processes, drawn from insights and interrogation to inform design work

- Ability to conceive original ideas, communicating them through engaging simple but powerful formats that create landscape for change
- Dynamic interaction with Making app, challenging design decision-making to achieve higher scores leading to better products
- Awareness of the dimensions of fashion as powerful communicator and identifier through crafting aesthetically compelling and technically accurate 2D and 3D work
- Creative ways to illuminate and communicate concept, process and the role of Making app within project development through a variety of appropriate mediums
- A holistic viewpoint on the fashion business, its critical dimensions in ecological, economic, cultural and social terms
- Interaction with technological innovation using considered and appropriate tools
- Collaborative working practices applicable to working with others in your own and other disciplines

Framework based on UNESCO Five Essential Pedagogical Approaches

- **Futures thinking**
Engaging people in imagining preferred visions for the future involving the exploration of assumptions and meaningful understandings and interpretations of sustainable development leading to ownership and responsibility for more sustainable futures.
- **Critical and Creative thinking**
Enabling exploration of new ways of thinking and acting, making informed decisions, creating alternatives to present choices. Involving reflecting on how people interrelate with one other, understanding cultural differences, creating alternative ways to live together.

- **Participation and Participatory learning**

The engagement of people and diverse communities is needed to build sustainable futures collectively, as they all value and include differing knowledge systems and perspectives. The participation process also creates ownership and empowerment.

- **Systemic thinking**

Essential to sustainable development, as piecemeal approaches have proven unworkable, resolving one issue while creating other problems. Sustainable development requires approaches that go beyond 'problem-solving' and/or 'cause-effect' analysis.

- **Partnerships**

Partnerships (particularly intercultural and multi-sectorial) are a motivating force towards change, empowering people and groups to take action, take part in decision-making processes and build capacity for sustainable development.

Wider Impacts

- Public Discourse – embedding a more informed and sustainable approach to design and specifically materials selection amongst the fashion design community and beyond
- Policy Making – Informing UK and European policy relating to environmental guidelines and policy for business
- Education – Informing education in and beyond fashion and apparel design and its related disciplines

Incubation

Two key elements distinguished the incubator: methods designed to foster a sense of mutuality, demonstrated through co-operation, collaboration, and competition, and data driven tools, demonstrated through the app. The programme consisted of 'check in' times with exercises to develop team

dialogue, discussion around individual, community and wider industry ambitions and their places alongside training on the app, its parameters and analysis of results.

Brainstorming Considerations in Fashion and Business for Sustainability

- Disruption of 'habitable life' due to climate changing activities (floods / climate refugees etc)
- Cost and availability of resources (oil / land / water)
- Critical resource implications (the Right to Clean Water etc.)
- Global policy decision making relating to fashion production and consumption
- Global policy decision making relating to climate change
- Relationships and power imbalances in fashion (labour practices)
- Culture and behaviour in sustainability and implications for lifestyle and consumption

Reflexivity in Practice

- 'Check' in sessions to foster collaboration, through defined qualities and characteristics
- Mentoring for collaborative skills development
- Filtering of ideas through discussion with industry expertise
- Defining of design parameters and engagement techniques with app
- Prototype development and app testing
- Refinement of app parameters through feedback to industry and experimentation in 3D
- Presentation of process and outcomes through online and ultimately face-to-face presentation to industry panel

Outcomes and Learning

Learning is vital to survival. The organism that is unable to adapt to

external change perishes, and all organisms 'learn' to some degree and in some sense of the term. Now, on the global scale, social learning is a matter of survival too given the very real threats to our global environment.

Wals (2007)

The testing of DfS through what designers do (together) and what decisions they make in design, through a qualitative and quantitative approach, bridged the solutions based approach of commercial design with a constructivist approach to education through design thinking. This enabled the measuring of impacts of decisions made in terms of resource use, energy, waste and emissions alongside the gathering of narratives of challenges and possibilities of a framework based on the understanding of our interdependencies and supporting mutual learning.

Summarising the strengths and challenges of the project and what we can learn for teaching and learning, observations arose through dialogue with participants, students, mentors, tutors and the lead researcher (author). Student reflections have been gathered through a visual and written narrative (to be shown in presentation).

Overall observed characteristics of sustainability in action include:

- An active process, where each player participates bringing a visible contribution, replacing hierarchy with trusted interconnecting networks of collaboration and competition
- A synthetic process, the parts in themselves meaningless until all held together
- Self-organizing, within a socially cohesive community and a larger understood infrastructure
- Creating value for those involved and for others
- Understanding materials, production processes and viability
- Space for the unexpected to develop

- Building trust not engendered through certifications and auditing

These qualities and characteristics resonate with Manzini's work on social design in the 'Design for Social Innovation Towards Sustainability' project. As Barry Schwartz points out in his TED talk, the Loss of Wisdom, some of the most valued human practices in a professional capacity are not mentioned in job specifications, neither are they indicated in learning outcomes or course specifications. With this in mind, we can change the kind of education that we undertake.

A product is the manifestation of a series of relationships, and when individual distinctions connect, we create the otherwise unimaginable. Education needs to foster a means for students to build relationships borne out of mutual respect, trust, curiosity and tenacity, focused on better design inspired through new knowledge. (Fletcher and Williams, 2010) Design education highlights the technical, aesthetic, mathematical, imaginative processes, but would do well to foster the co-operative process and the designers' aptitudes towards crossing boundaries of place, generation, culture and profession. Designers have a role in exploring new territories to design and make the futures we dream of, rather than making what we have less bad. Without curiosity, designers would get stuck, but without the skills to 'fit' ergonomically, socially, culturally, economically and ecologically their work lacks feasibility and viability. Currently these 'fit' dimensions tend to give precedence to the aesthetic, technical and practical characteristics of fashion design, often overlooking the vital engagement in co-operation and collaboration that form the glue that bonds fashion.

We live in times of unprecedented change and in every discipline we must find a balance between intuitive and rational skills and aptitudes to find ways for us all to thrive, and the tools and aptitudes that allow our creativity and passion to flourish within considered parameters.

Conclusions

The shape of the global future rests with the reflexivity of human consciousness – the capacity to think critically about why we think

what we do – and then to think and act differently.

Raskin (2008, p.469)

As designers, we question the personal, business, ecological, social and cultural imperatives in our work, and we can use reflexivity to further our 'understanding of ourselves and our self-location, our relationships with other humans and with the natural world.' (Morrell & O'Connor, 2002, p.xvii) Sustainability thinking requires a balance of this intuitive, instinctive approach with rational, tangible information that can inform our actions. The Making app offers unprecedented opportunity to access data directly relating to ecological imperatives in over 6,000 materials that we can use in our work. However without the parallel dimension of fostering collaboration and co-operative working practices, we limit the possibilities not only of reducing our unsustainability, but also in fostering restorative practices in human connection.

It is not education that will save us, but education of a certain kind.

Orr (1991)

For students entering an uncertain world in which imagination, ingenuity, improvisation, empathy, the ability to contribute to and shape convention, will be at least as important as technical know-how in design, materials and processes. They grasp that they will be called upon to show capacity for collaborative creativity, wanting to learn how to tie passionate energy to a sense of balance, proportion, attention and relevance. All education must aim to contribute to our collective prosperity, its paths taking us along roads of exploration and discovery based on the precision of knowledge and the possibilities of human ingenuity, otherwise we destroy both our planet and the honour and integrity of our fellows.

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