**The Will and the Skill in Education for Sustainability**

**[Paper 27]**

*Designing Tomorrow’s Campus: Resiliency, Vulnerability, and Adaptation*

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**Abstract**

Sustainability is possibly the biggest critique that fashion education has ever known. By its nature connecting a vast range of disciplines, fashion explores technical, philosophical, artistic and economic parameters within and beyond its material dimensions and might therefore challenge a broad range of societal practices.

Design education more broadly, as with industry, is steadily taking on bold language around sustainability, but this is not always matched with deep change in disciplinary practice. Whilst new skills for sustainability are increasingly being endorsed as crucial for graduate employability by business and governmental agendas, those needed to shape a radically new kind of future are often poorly defined.

This paper outlines research into ways in which the educational space might negotiate the needs of the present with the future using evidence from a university-business collaboration. It explores fashion’s potential to inform sustainability practice in relation to and beyond fashion education using analysis of participant interviews, curriculum creation and participant feedback to navigate relevant knowledge and values and their recognition in academic terms. It involves actors from a diverse student body, teaching staff as well as business practitioners. It will be of value to those interested in the transformation of education through sustainability, referencing a range of change levels identified through the research.

**Introduction**

*‘*Achieving sustainable development requires a change in the way we think and act*’* (UNESCO, 2012).

The imperative of sustainability has offered an urgent, yet widely ignored call for action on the part of governments, businesses, educators, learners, citizens and other spheres of humanity. Against this backdrop, collaboration between academia and business is increasingly acknowledged as an explorative space to realise present and future necessities and possibilities. This paper explores how transformation and education as sustainability (Sterling, 2001) might be formed through a combination of teaching and learning the *skills* that inform restorative action and the *will* that enables it through values-led enquiry. These findings have been drawn from research conducted as part of a five-year partnership between the London College of Fashion (LCF)[[1]](#footnote-1) and the Kering group[[2]](#footnote-2). The aim of this partnership is to explore and identify new ways to ‘empower imagination’[[3]](#footnote-3) through sustainability and fashion, and consists of 4 intertwining strands; annual public talks, student mentoring and awards, co-created curriculum at master’s level and a research project. This paper focuses on the first phase of research and curriculum development and is made up of 5 parts:

1. A framing of this academic-business collaboration;
2. An overview of emerging themes around sustainability actions;
3. The prototyping of a scales of transformation assessment model;
4. The creating of conditions for sustainability to be enacted;
5. Conclusions and recommendations for designing tomorrow’s campus.

The emergence of transformation design in industry and academia includes the ambition to proactively transform systems and organisations themselves (Burns, et al., 2004). Applying this as a process of transformative learning, according to Cranton means ‘the revision of previously unquestioned perspectives and assumptions based on critical reflection and critical self-reflection, leading to more open, permeable and better justified perspectives’ (quoted in Landgren and Pasricha, 2011, p.189). However, in universities and businesses, questioning systems whilst working inside them is increasingly at odds with the speed of information flow and expectations of time poor students, tutors and businesses. If the ambition is to cultivate ‘minds capable of creating new possibilities’ (Stern, 2006), this means not just learning through education, it requires learning *within* educational systems (Jones et al., 2010), and it requires learning within business systems as well. Designing tomorrow’s campus is about transforming student learning and our own learning as educators, businesses and citizens. It must also include a revision of assessment techniques and what we recognize as success. The acquisition of knowledge, applied as action is often visible, public, tangible and recognizable, it can build confidence and momentum. Consideration of perspectives and the application of values is often private, intangible and less easily quantifiable, whilst critical in moving from a remedial to a transformative position. Through this paper, we propose a triangulation between a model for curriculum content creation, conditions for teaching and learning and a prototype tool for assessment and the measuring of change over time.

Research was undertaken using Grounded Theory techniques through a series of 9 semi-structured interviews with academic, industry and student representatives. Transcripts of interviews were analysed to identify sustainability actions taking place within the organisations and their effectiveness as identified by interviewees. These were clustered into emerging significant and crosscutting themes. A Grounded Theory methodology was chosen for its relevance in studying evolving processes, in gaining insight of an emerging field and in analysing qualitative data (Urquhart, 2013). Participants were selected as representatives of different degrees of seniority and types of role. The commonality between participants was that each had some involvement in the partnership and some connection to sustainability in their roles. This was supported by a literature review, examination of a prototype course co-created through the partnership. Participants include members of Centre for Sustainable Fashion (CSF), members of Kering’s sustainability team and a cross disciplinary team of students from the schools of Design, Business and Communication.

1. **Industry-Business Collaboration**

There is a much to learn from a close dialogue between ideas in incubation through education, and ideas in application through industrial practice, but care must be taken to acknowledge that some incubator ideas might be rough and unformed, next to the refinement of industrially validated practice. It is essential that the early iterations of unfamiliar ideas be not diminished by their proximity to the polish of business practice. Universities and businesses have increasingly been encouraged to collaborate, stimulated in part by the realization ‘within both business and universities, of the central role of universities in providing high-level skills, a world-class research base and a culture of inquiry and innovation’ (Wilson, 2012, p.8). In the case of sustainability, it is vital that these skills and research go beyond that recognized within existing operations and short-term goals. Thus, universities might be viewed as knowledge hubs having a more embedded role in society, in order to contribute to its development. There lies a tension however between short term problem solving and long term generation of new ways of living and being, which affects businesses, students and us all.

The framing of the partnership was based on a premise of benefit in the short, medium and long term, relating to 4 partnership elements. Partners agreed that academia has a role to play as a vital influencer of the practical world but that it must do this without its critical activities being co-opted (Simmonds, et al., 2001). Findings from interviews with participants from each of the relevant partner organisations substantiate this approach. Furthermore, we find that to successfully create conditions for change, it is imperative to simultaneously look critically at both industry and education. The first phase of this partnership has solidified the understanding that academia and business must transform themselves and each other.

Our research finds that some sustainability professionals seek to give students an efficient transfer of a body of working practice knowledge regarding sustainability in their discipline. This was reported as motivated by the imperative of sustainability and a lack of such insight in participants’ own educational experience. A corresponding desire was also evidenced in students’ requests for case studies and ‘ten-point’ plan type resources. This desire for quick fixes and efficient knowledge transfer is not however sufficient when dealing with complexity and the ambiguity of the current ever shifting world (Gulwadi, 2009; Landgren and Pasricha, 2015). For universities and businesses to investigate deep change requires us as academics and businesses to undertake the same transformative processes that we encourage in our students. As educators, we must balance our responsibilities between a wide range of stakeholders with differing expectations. This involves taking risks, becoming vulnerable and fielding consequences that we cannot as yet predict. This can be an uncomfortable contradiction to the educator’s role of preparing students for success and defining detailed workplans or in achieving education or business targets. Through mutual support, the aim is to create conditions for the future to be conceived and created by those who actively participate in its making.

1. **Emerging Themes**

Organisations often approach sustainability as an iterative process, informed by scientific, economic, cultural and participant related phenomena. By examining the types of sustainability actions and their processes of interaction and development, we may then be in a position to speculate about tomorrow’s campus and the ways in which sustainability might be taught, experienced and evolved. Firstly it was necessary to identify the sustainability actions already occurring in academia and industry; thus an analysis was made through interviews to illuminate exemplars of current practice. Whilst limited by the singular representation of each type of organisation, it should be noted that LCF is home to tutors and students from over 150 countries, the largest college in a university of over 17,000 students, and that Kering represents 20 world leading fashion companies with studios, offices and stores in over 120 countries with over 37,000 members of staff. Transcripts describe actions taking place in academia and industry and the subjects’ assessment of their effectiveness, alongside a range of other related reflections.

***Table 1 A précis of sustainability actions identified as taking place in the academic institution and industry organisation, grouped by theme.***

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| **Actions reported by industry partner** | **Actions reported by academic partner** |
| Bold vision / desire for innovation and major longer-term changes (not just efficiencies), coming from the top. | Encouraging sustainability perspectives, that push boundaries, often surpassing the teacher’s own knowledge. |
| Fostering a knowledge exchange between international students and business. |
| Infrastructure for sharing: collaboration across the group and throughout industry plus outside of business (NGOs, academia, etc.) | Facilitate dialogue across courses and be able to talk about the big picture of teaching to share ideas. |
| Evidence-based decision making rather than the use of emotional or instinctive criteria. | Engaging in speculative creative acts – guided by own research assessment. |
| Standing back – looking holistically at how things fit into the bigger picture. |
| Use mediation / relationship building to bring about change. | Designing visions for a sustainable future through research projects of many different scales with different types of partners. |
| Be proactive as a company to make changes that are going to be needed in the future world. | Teach students for a future that does not yet exist; encourage outliers. |
| Not a strict hierarchy; flow of information up the chain of command as well as down. | Supporting knowledge and investigation that comes from the students, as well as the teacher. |
| Empower the students to be part of a community, to take ownership. |

A second level analysis of the interviews was then carried out by referencing actions against reflections and feedback from the first phase of the co-created masters course. Emerging themes were identified and developed into an initial hypothesis of the crucial factors for consideration in the design of education for or as sustainability. These are listed in table 2 and discussed in detail below.

***Embracing the maverick***

Analysis of the findings evidences openness to change and being able to identify and champion novel and appropriate ideas before they are more widely recognised. It is however acknowledged that such change-making involves hard to define capabilities such as empathy, negotiation and brokering cross-cultural dialogue. Additionally, it means bold and also careful experimentation, based on an ecological paradigm for fashion. In such a scenario education develops graduates who are social activators. These individuals see sustainability as an opportunity for their practice to be creative, experimental and based on alternative success measures, whilst being cogniscent of the essential aesthetic, viability and feasibility elements involved in fashion’s interactions.

***Push/pull strategies (the double helix)***

Two broad thematic strands emerge through the findings, the push:pull, first described by the author in a previous paper (Williams, 2015). Where push offers a knowledge-led understanding of relevant issues in order to make informed decisions, often including tangible, quantifiable elements, which can be assessed. These are often hard-data driven, or scientific in nature, offering tangible guidelines to follow and can drive consensus in practice. The pull is characterised by a values-led exploration of self and ethical considerations in relation to personal, cultural and moral stance, which act as enticements and inspiration based on a system of commitments, beliefs or political stance. Numerous examples of these two strategies were identified in the data along with suggestion that push strategies fail in effectiveness or are limited in their scope without ‘pull’ counterparts.

***Practical Heroes***

A recurring lamentation by students and some industry and academic participants was the lack of exemplars, counterbalanced by other academic participants questioning whether such a ‘how to’ guide could exist or if it would be effective. There exists a tension between the desire for practical applicable knowledge and values into working solutions and more radical alternatives. Students expressed difficulty in connecting their evolving sustainability principles and values with practice. This might otherwise be identified as a values-action gap, which was particularly evidenced in student submissions of ‘manifestos’ and ‘possibilities’, where the latter lacked application of the ambition of the former. It is recognised that the space for students to experiment in practice that bridges knowledge and values is essential to generating practical, risk-taking or heroic examples that might deepen understanding of the matter at hand. New kinds of heroes, role models and leaders might encourage confidence in those who are cautious in exposing unheard of ideas.

***A Navigation system***

Significant elements of the data suggest the need for an expansive landscape to be drawn around sustainability as concept and practice, as trade offs and fundamentals. This might provide guidance in teaching and learning which merges skills and capabilities for a contingent world with the most up to date knowledge and a means to start from different places and undertake a range of journeys according to participant skills, time and scope for risk or ambition. Such a navigation system might bridge current contexts with future requirements; ‘The future is never a blank space ahead of us; it is littered with what the past has thrown in.’ (Willis, 2014, p.153). Whilst a great many toolkits for sustainability exist, the multiple points of intervention in the system, through a range of academic and industry contexts, suggests that the potential for sustainability can only be realised through a multidimensional approach.

***Table 2 Emerging Themes***

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| **Emerging Themes** | **Summary findings (student feedback, interviews researcher reflections)** |
| Embracing the Maverick | Go beyond known and accepted practice and parameters |
| Negotiate change-making actions and interactions |
| Create cultural consensus |
| Take and manage risk |
| Make change before it is recognized, be able to link vision, possibility and application |
| Developing the Double Helix | Knowledge-led understanding informs decision-making |
| Values-inspired commitment leads to active participation |
| Measure a new set of skills and capabilities |
| Bridge possibility into tangibility |
| Identifying Practical Heroes | Create networks, not hierarchies |
| Adapt to a changing context by engaging empathic care-taking and risk-taking |
| Develop agency for individual and collective action |
| Lead from beside, see pattern not parts |
| Foster exchange between a diverse cohort |
| A Navigation System | A literacy for sustainability and fashion |
| A lens to view systemically, holistically and interdependently |
| A companion guide rather than a toolkit |
| A system that creates conditions for innovation |

A point of consensus found amongst academic participants specifically, was a self-identified role in modifying the use of design in a non-traditional way. Actions identified specifically by industry participants can be summarized into 4 categories:

1. Breaking sustainability aims and targets into manageable, pragmatic pieces;
2. Increasing strength in governance and also in company culture;
3. Data collection and environmental monitoring;
4. Risk management.

These findings remind us of the differing and similar risks affecting academia and industry and the potential that ideas too risky for one might be tested out in the other. Whilst not generalizable, this qualitative primary research cross-referencing industry, tutor and student identified actions for sustainability within a context (fashion) represents a range of elements connecting nature, society, education and industry.

1. **Scales of Transformation**

The ambition of the academic-industry partnership in this case is to realise a transformation towards an ecological paradigm in business and education.

*‘Through this, we seek to shape the future of sustainable fashion and the whole industry of apparel and accessories.’* François-Henri Pinault, CEO of Kering

In developing and delivering the course, it became clear that an alternative means of assessment was required, of teaching, learning and of student attainment. Formal assessment criteria in place at the university lacks flexibility and does not provide a baseline for education for sustainability and change over time. The push-pull or double helix of learning outlined above requires us to quantify knowledge gained alongside skills, capabilities and application of values for sustainability. A system has been piloted to map teaching and learning for sustainability that can be identified through course work through a set of principles developed at CSF (table 3) to plot change towards transformation (table 4). In this way, we are able to see relational elements of sustainability against levels of change. Thus we can map where and in what respect change is taking place to better understand strengths and gaps in teaching and learning design for sustainability in fashion curriculum.

CSF has evolved these six pedagogic principles for sustainability education through practice and with reference to UN Economic and Social Council (2011) and other scholars (Sterling, 2001; 2013; Ryan and Tilbury). These principles have informed a range of the centre’s teaching and learning projects over the past five years, (Williams, 2013) but without analysis in direct relation to them or against scales of change.

An initial scale of change was developed and tested out by the author and N. Stevenson in 2010 with a range of tutors from across fashion courses and subsequently developed through this current research linking sustainability principles to scales of change. We tested this matrix using examples of student work submitted through this collaboration (table 4).

In marking submissions along the scale, reference has been made to Sterling’s definition of transformative learning, a process that is deeply engaging and changes levels of values and beliefs through a process of realisation and re-cognition (2003, p.94). Sterling categorises ‘hard’ system approaches as first order change, ‘soft’ system approaches as second order change, and whole systems thinking as transformatory or 3rd order change (2003, p.12). Using a scale to mark what he sees as the ‘historic movement from the still dominant modernist paradigm, to the idealist/constructivist position or movement, he points towards the emergent postmodern ecological worldview (2003, p.90). This construct is also based on Bateson’s theory of learning levels (2003, p.93), echoing Pepper’s distinction between reformist and radical environmental approaches (1999, p.7). Applying these theories into a framework, we piloted an appraisal method for the teaching and learning on this course. The aim was to create a novel quantitative measuring of activity towards transformation and to plot evidence of pedagogic practices in student project work and reflective journals.

Universities are intended to be spaces where paradigms are challenged and new knowledge is generated (Moore, 2005b), but this question of how universities can realise this powerful role is much debated. Paradigm shift is defined by Harman as ‘a basic way of perceiving, thinking, valuing, and doing associated with a particular vision of reality’ (in Sterling, 2010, p.5). It requires a change in perceptions, values and understanding of reality. It is anticipated that this scale might offer a means to map and identify locations of such change over and beyond the project.

*Methods*

1. To review best practice pedagogical principles for sustainability;
2. To define levels of transformation towards an ecological paradigm;
3. To seek evidence of application of these principles in student work;
4. To map work on a matrix of principles and transformation scales, to assign a numeric score; and
5. To set a baseline for the project and develop scale for further application.

**Table 3 CSF Pedagogic Principles for Sustainability**

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| **Futures Thinking** |
| Futures thinking engages people in imagining preferred visions for the future. It involves exploration of assumptions and of meaningful interpretations of thriving. This process of envisioning futures can lead people to take ownership and responsibility for individual and collective prosperity. |
| **Critical and creative thinking and Informed Decision Making** |
| Critical and creative thinking enables people to explore new ways of thinking and acting. It involves reflective and reflexive processes to better understand how people interrelate with one another and with nature, recognising cultural differences and creating alternative ways to live well together. It relies on informed decision-making through the acquisition of relevant knowledge and data. |
| **Participation and participatory learning** |
| The participation and engagement of people is needed to collectively builds sustainability futures. Engaging diverse communities is essential, as they value and include differing knowledge systems and perspectives. |
| **Systemic thinking** |
| Thinking systemically is essential to sustainability, as piecemeal approaches have proved not to work – instead resolving one issue while creating other problems. Design for Sustainability requires an approach which goes beyond analysis in terms of ‘problem-solving’ and/or ‘cause-effect’. |
| **Interdisciplinarity** |
| Diverse partnerships are a motivating force towards change. They enable people and groups to take action, to take part in decision-making processes, and to build capacity. Intercultural and multi-sectoral partnerships can offer critical perspective sharing and foster new thinking and doing. |
| **Place-based learning** |
| Situated learning offers context and roots to place and culture. An education rooted in the physical location as well as cultural concerns brought by participants’ home countries must be taken in to account in the quest for a relevant ecological literacy in the discipline. |

For the pilot, this matrix was used to chart each of 8 final group projects developed by students during the co-created course. In order to compare the work, we gave each of the projects a score against each principle ranging from 0 – 3, corresponding to the order of change, 0 being business as usual sustainability and 3 being work that may mark a radical new context or paradigm.

See table 4 for an example of the scales generated to assess each project.

**Table 4 Example of Scales Generated for Each Project**



In this way projects can be granted an average score, potentially equating to the level of change. This method has enabled us to assess the average level of change and principles evident in the work completed in year 1. This gives a benchmark against which to map change within a cohort and across cohorts over time.

It is important to note that in this method, numbers and scores are used in an abstract sense. In an age of ever-increasing test taking and scoring of teaching in Western and other education systems, our aim is not to develop an additional numeric measurement to rate students and tutors, but more as an instrument by which to capture change in parts and as a whole.

Findings from the first phase of this work show an average numerical score of .97. We take this as an early indication that the student work on average is operating in a space of 1st order change. Student projects mainly replaced components in an existing system to make it better, offering singular solutions applicable in the short term in an existing industry context. Some work however, was designed to take on the system itself or to put new systems in place, but, whilst well intentioned in regards to change, most found it too difficult to imagine possibility in a changed paradigm.

Using this matrix to assess manifestation of pedagogic principles in student work offers a useful alternative to established learning criteria. It acts as a baseline for the module and a means to assess transformational characteristics of teaching and learning in the academy and could potentially be applied in industry too. A review of the elements defining the axes as well as a longitudinal study of the module offers the opportunity to mark where and how transformation might take place.

1. **Elements and Conditions for Agency**

‘As we reach heightened modernity, agency is increasingly important and increasingly difficult to achieve.’ (Giddens, 1991).

Analysis made of the emerging themes of this research (table 2) against the prototype scales of transformation (example in table 4) suggests that a values-action gap exists between the stated ambitions of participants and the level of change evidenced to date through the project. The next phase of research will involve curriculum design along the lines of the push-pull or double helix approach (Williams, 2015, p.227). This approach seeks to engage the interpretation of knowledge, application of skills and the engagement of a set of values to realize change for sustainability. There is a need however, if we are to consider the future in the now, not only to connect will and skill towards sustainability but also to connect temporal elements of past and present with a sense of the future we want (United Nations, 2015). In going beyond the known into a place that does not, as yet exist, we must imagine ourselves in a place of vulnerability and ambiguity. We must then be able to look back to decide actions to take in the now. As the empirical evidence of our research to date shows, some educator and industry participants seek ways to go beyond the now (table 1). Yet in contrast to this, some students experienced an impasse between ideas and actions, inclined towards current industry insights and case studies alongside an acknowledgement that it is difficult and uncomfortable to consider new perspectives.

There is, perhaps, a pragmatism and honesty in the students’ perspectives. If so, then how might students and their educators, create work that exemplifies their identities and values and is viable for both short and long-term prosperity? For many of these students, the future is a place where risks of failure whilst being in the current system seem too big and their consequences too apparent, ‘it is now easier for us to imagine the end of the world than an alternative to capitalism.’ (Frederic Jameson cited in Dunne and Raby, 2013, p.2).

'To be honest, [the idea of a triple bottom line] is almost paralyzing in my mind. Assuming you could hold all three of these values equally, how can you ever feel confident in a decision you make when there are inevitably consequences somewhere along the line?' LCF Student participant.

The application numbers for the course (oversubscribed by 2 to 1 in the most recent application round) suggest that students seek sustainability in curriculum, borne out in wider studies (HEA, 2014), but our findings evidence barriers in students applying agency to take unprecedented action, a shift in paradigm is, as yet, far from sight. Curricula that allows for a better understanding of the interrelationship between learning, identity and agency in (fashion) education might be a catalyst to realize the ambition of transformation in conceptual and practical terms. For until students are able to enact agency, the learning generated will remain unpracticed and change stay unrealized.

The encouragement of autonomous values and actions through a process of critical thinking is at the heart of Western arts educational theory and practice (Biesta and Tedder, 2006). Sustainability education situates such ideas within an ecological and social paradigm, with agency as the ability to connect across this wider relational context of self in the world. If we seek to develop such curriculum, students may be more able to apply influence over and to steer the course of their own lives in support of nature and society*.* Reflection, a catalyst for critical thinking(Gulwadi, 2009), has been undertaken in a number of ways through the prototype course, via group online diaries, individual written and verbal responses to key texts and workshop experiences, privately and through group discussion. In an educational environment that is diverse in culture, educational practices and language (over 100 languages are spoken at LCF), it is vital to consider different educational perspectives and their relationship to sustainability. Chinese education for example, based on a Confusionist model, differs greatly from many sustainability approaches such as mutual learning, critical reflection, learning by doing etc. (Iannelli and Huang, 2013). It is hoped therefore that the double helix model of values and knowledge being developed through this research can offer on the one hand, a guide-rope of scientific evidence, key texts, case studies and information sets, and on the other hand, a personal reflection and study of values and a range of ways for students to express the results of self reflexive thinking. Only then can we create increasingly necessary conditions for agency as *‘the capacity for actors to critically shape their own responsiveness to problematic situations.’ (Embayed and Mische in Biesta and Tedder, 2006).*

Elements of agency described by Biesta and Tedder have been adapted in response to the research findings from the project to date, to critically consider in the next iteration of the course. The table below outlines parameters for agency developed through this research, drawing on the first year of the project and evidenced gathered from the author’s longstanding teaching experience.

***Table 5 Elements of Agency***

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| Considerations | Dimensions | Practice |
| Temporal | Past (reflective)  Present (reflexive)  Future (projective) | Backcasting / forecasting exercise  Reflection time during sessions  Future Scenario planning |
| Composition | Affinity groups | Each student group to include members from each school and range of skills whilst all from with sustainability interests |
| Configuration | Course timing, content  Pace, level | Course placed directly before students  Make their decisions about their own masters projects, configuration dependent on flexibility in curriculum |
| Exchange | Create trusted space  Break down hierarchies | Peer to peer exchange, online and face to face, cross course groups |
| Action | Assessment criteria reflects change towards transformation | Pilot scales of transformation |

*Agency should not be understood as an individual’s capacity, but should always be understood in transactional terms, that is, as a quality of the engagement of actors with temporal-relational contexts of action, that both actor and environment are affected by the ‘engagement’* (Dewey and Bentley, 1949; Biesta and Burbules, 2003).

Consequently, in the design of tomorrow’s campus, there is a need for an ecological understanding of agency, where we teach and learn through interacting with nature, communities and economic systems across a temporal landscape. This calls for immersive learning, experiential methods and a reflexive process that flows between consideration of self and individual actions and those relating to others (directly and indirectly involved). The agency elements described above might allow us to see challenges as a web of dynamic interactions rather than an insurmountable status quo juggernaut. This opens up the ability for transformation of students, tutors and the world, with the progressive transformation of ourselves (Landgren and Pasricha, 2015; Moore, 2005a) being perhaps one of the greatest parts of the shift.

**Concluding Comments**

If we are to realize a step change from business-as-usual-sustainability through to acting in an ecologically framed outlook, then we must create and recognize qualities in people and products in relational ways. The double helix education model described in this paper, links knowledge-led aspects of learning about fashion as products, services and business with values-led ones that articulate and realize human dreams and capabilities. When assessed against scales of transformation (table 4) with sustainability principles on the horizontal line, a range of expansive possibilities might be visualised. The third element of triangulation in developing future campus is developing conditions and processes for the enabling of agency (table 5) offering the opportunity to apply learnt and novel ideas in society, business and the academy. It is hoped that the elements described through this paper will be applicable to colleagues across sustainability education in a range of disciplines and practices.

‘Many students come to class saying that they cannot change anything because they are not the boss. By understanding reality as relational and socially constructed and by developing their ability to question in a critically reflexive way, they realize they can influence situations.’ (Cunliffe, 2004).

In teaching, assessing and rewarding knowledge-led and values-led achievements, we remove the blinkers that focus solely on job readiness as the accumulation of testable knowledge and expand a scope of reference to include ways of thinking and doing that relate our own values to an interconnected world.

Whilst drawing out emerging themes, scales and conditions for the application of agency, a non-linear approach has been taken. An emphasis on the quality of interaction linking conceptual problem *dissolving* (Ehrenfeld, 2009) with practical problem *solving,* has been described as the will and skill of sustainability.

Through this curriculum, parts of (fashion) education are brought together physically, philosophically and pragmatically. In doing so through sustainability, a new discipline starts to be defined, where fashion is seen as a relational process of human and material interactions grounded in nature and society.

Designing tomorrow’s campus is about creating spaces, configurations, compositions and exchanges that invite diversity and experimentation that can achieve agency for transformation. In this way, we identify, develop and apply teaching and learning for skills and capabilities that might evolve a new kind of ecologically and ethically literate (fashion) graduate, ‘*a synthesis of artist, inventor, mechanic, objective economist and evolutionary strategist*’ (Buckminster Fuller).

Through the dynamics between the participants, tutors, students and professionals and the practices involved, we have seen an indication that there is scope for jumping out of the comfort zone of small efficiencies or 1st order change, to challenge assumptions about our own and others’ usual practice. There are signs too that, if we can guide students to develop the will and the skill to insert a lever into the system in well chosen places, they might create the opening for other ways of seeing, knowing and doing, and thereby those levers can make for a radical present before our very eyes.

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**Biographical Note:**

Professor Dilys Williams FRSA is Director of Centre for Sustainable Fashion, a University of the Arts Research Centre, which she established in 2008. Dilys’ work contributes to the study of fashion as a life well lived within ecological boundaries and practices of human equity. This study is applied to new forms of education, business, public and political engagement. Her place on the Evening Standard’s London’s 2015 Progress 1000 list evidences the public and academic influence of her work. Dilys publishes widely on fashion and sustainability in academic journals and published books.

Katelyn Toth-Fejel is an artist, designer and educator. At the Centre for Sustainable Fashion, Katelyn is a research assistant on educational and industry projects. Katelyn is a co-director of the design collective Here Today Here Tomorrow, showcasing different elements of sustainable fashion and accessories such as high quality handmade craftsmanship, durability, localism, recycling, organic materials, individuality, fair trade and transparent production.

1. London College of Fashion is a leading global provider of fashion education at undergraduate and postgraduate level, as well as offering short courses, study abroad courses and integrated masters. [↑](#footnote-ref-1)
2. Kering is a world leader in apparel and accessories,developing powerful brands across Luxury and Sport and Lifestyle*.*The Kering brands include Stella McCartney, Alexander McQueen, Brioni, Gucci, Bottega Venetta, Balenciaga, Christopher Kane and Puma. [↑](#footnote-ref-2)
3. In terms of sustainability, ‘empowering imagination’ means spurring innovation with processes and products that have more positive social and environmental impact, while ensuring designers and brands stay true to their own identity and values. This term is used by Kering in their public communication. [↑](#footnote-ref-3)