

**EXPANDING
COMMUNITIES
OF SUSTAINABLE
PRACTICE**



15 OCTOBER 2016



**SYMPOSIUM
PROCEEDINGS**



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Sustainability Symposium
15th October 2016

Expanding Communities of Sustainable Practice

Suzanne Archer, Sam Broadhead, Bianca Elzenbaumer

We are excited to present the proceedings from a one-day symposium at Leeds Arts University focusing on how to expand communities of sustainable practice within and beyond art and design schools. Given the need for art and design education to transform its mode of operating in times of massive ecological crises, the symposium was an opportunity to learn from cases of good practice, to get feedback on one's initiatives and to network with others eager to make art and design education an effective advocate of sustainable practice.

Communities of sustainable practice are groups or networks of educators, designers, artists, craftspeople, researchers and students who aim to place sustainability concerns at the heart of their practice. Through the symposium we wanted to provide a space for people involved in such initiatives to effectively network and strategise together in order to enhance the positive impact and reach of what they do.

During this one-day symposium, we focused on the importance of collaboration and networks in creating art and design practices that contribute to eco-social sustainability. We were especially interested in complicating as well as expanding the notions of sustainability within art and design education and how they contribute to engaging the public in sustainable and progressively transformative eco-social practices.

We are convinced that sustainability is also about meshing up and intersecting practice and theory, thus the day encompassed theoretical and practical engagements with sustainability - always with a focus on making this day productive in terms of building alliances, projects and shared commitments between the people attending.

People who are active within art and design schools who foster sustainability initiatives contributed to the debates: tutors, students, technicians, administrators, researchers and more. We especially valued contributions by students as this is where many of the most innovative initiatives come from.

This one-day event included presentations by three keynote speakers, parallel discussion sessions where participants presented their initiatives and parallel roundtable discussions allowing knowledge transfer around pressing issues that art and design education faces in terms of engaging with ecological crises.



Sustainability Symposium
15th October 2016

What We Think Affects What We Do: the power of a sustainability curriculum to bring about change

Graham Panico

Abstract

As we slowly rediscover the importance of respect and stewardship for the environment we, as individuals, communities and nations, attempt to redefine our relationship with the world and its resources. This desire to change how we live is positive and planning for the future is a political imperative but, despite this, changes are inconsistent and implementation is slow.

This lack of a co-ordinated response is due to a varying dependence on global contexts that act to erode and transform our motives but to be successful in changing perception, policy and practice sustainable initiatives need much greater urgency - now.

To be sustainable we need communal cooperation as opposed to competitive consumption and transform sustainable values into practical actions. In Education, when sustainability curricula address the roles and responsibilities of creative practice and show how it fundamentally matters we shape future practice and make worthwhile environmental investments over and above shorter corporate returns.

Collectively informing policy to enact change through practice in this way sustains communities and culture in more environmentally friendly ways and the power of the curriculum as a strategy to bring this about and inform sustainable practice in the creative industries of the future cannot be underestimated.

Introduction

This paper considers the narrative of the sustainability movement as its initial frame of reference. It asserts that a sustainability ethos in education is a catalyst for institutional change and it explores how a sustainability curriculum enables art and design practitioners to proactively engage with 'whole-systems thinking' and the principles of sustainability (Path Tree, 2016). It also identifies opportunities for educators for sustainability and advocates collaboration between stakeholders.

The Sustainability Narrative

The idea of acting responsibly to sustain the environment for future generations gained currency decades ago and Rachel Carson's book 'Silent Spring' is seen as a key text in raising awareness of the issue (Sustainable Development Commission, 2011). When Carson wrote of our 'obligation to endure' (1962: 23) her concerns about pollution arose as a consequence of what later was termed the Great Acceleration in globalisation (Roberts & Westad, 2014), urbanisation, technology and living standards that was gaining momentum then but owed its origin to the onset of the Industrial Revolution. Since then, campaigners have urged us to rethink how we interact with the world and cumulative data (Steffan et al 2015) now reinforces the basic argument that our actions have consequences.

In the present day, 'green' agendas encompass both eco-activism and mainstream international agreements (European Commission, 2015) as outdated models are challenged by more resilient strategies and present a stark choice; to live in a way that both sustains us now and helps preserve the environment for the future or to justify pollution, industrialisation and consuming finite resources as a means to an end. This presents a dilemma in an age when developed countries compete with those still developing and when we have freedom to choose alternatives before the choice is made for us; where as others in a world of immense population growth do not.

Despite this conflict the sustainability imperative is increasingly integrated in societies, and if multilateral action lacks urgency, there is a rich strata of unilateral initiatives; from academics seeking to redefine economic models and integrate them with more sustainable goals on the one hand (Waller-Hunter and Jones, 2002), to designers such as Vivienne Westwood who have decided it is time to act and campaign with the language of resistance on the other hand (2016). Pedagogic communities can play a part here, as foci for these discourses; widening participation and agreeing codes of practice to affect change locally, nationally and internationally.

Expanding sustainable practice

This paper suggests, therefore, that raising awareness through education to support initiatives at different levels is of particular value. Facilitated through a curriculum that reflects the sustainability ethos of an institution and its aspirations for students, art and design education can contribute to changing mindsets and prepare future practitioners to succeed and thrive in a sustainable way beyond its institutions.

An institutional ethos and sustainability curriculum form, together, a framework for sustainable development. Situating teaching and learning within this framework allows students and teachers to explore and enable capacities for sustainable practice, across modules and disciplines, and contribute meaningfully to change in the wider community. Its value lies in defining directions of travel and its trajectory is reflected in three action points of the Association of University Leaders for a Sustainable Future's (ULSF) Talloires Declaration (1993), which aims to 'increase awareness of environmentally sustainable development... Create an institutional culture of sustainability ... (and) educate for environmentally responsible citizenship' (ULSF, 1990). Whether sustainably-related or sustainably-focused (Kraly and Taylor, 2012) a purposeful curriculum supports the skills of analysis, synthesis and evaluation that form the component parts of learning. Its value also lies in the degree to which the learning

outcomes of programmes such as ‘BA in Art and Environment’ offered by Unity College, Maine (2016), are realised and enhanced by the learner in their practice as they become environmental citizens and capable of making choices based on informed judgments.

Support to implement this framework by networks working closely with the whole institution is essential and America leads the way in Educating for Sustainability. It does this through participation in organisations such as the Association for the Advancement of Sustainability in Higher Education and AASHE believes that Higher Educational environments are key to achieving sustainability goals and act as ‘test sites and models for sustainable practice and societies’ (AASHE, 2010: 1). When it discussed challenges, initiatives and strategies for Higher Education in its ‘Summit on Sustainability in the Curriculum’ in 2010 the association made a series of recommendations for those implementing sustainability frameworks and many are relevant for the UK. Since 2005 it now has over 750 members who participate in a Sustainability Tracking, Assessment & Rating System (AASHE, 2015) monitoring good practice; although only eighteen of these are art and design institutions.

Similarly USLF, supporting ‘sustainability as a critical focus of teaching, research, operations and outreach at colleges and universities worldwide through publications, research, and assessment’ (USLF, 2008) is a useful resource with over 430 members internationally but only four specialising in art and design. Based on membership data alone, UK institutions could show greater commitment and access greater support in this area as USLF had only twelve UK members in 2012 and AASHE still has only three. Importantly, one of AASHE’s UK members is the Environmental Association for Universities and Colleges (EAUC) which has over 200 UK members of its own, including Leeds Arts University, but similarly, the EAUC has only five specialist art and design providers in total (EAUC, 2016). This demonstrates market competition as larger universities expand their art and design programmes, but also suggests the greatest lag in sustainability awareness is in our sector and justifies, therefore, the imperative to redress this imbalance and choose innovation over inertia.

In light of the QAA UK ‘Quality Code for Higher Education’ we also have a duty to reconsider the curriculum when themes such as sustainability cross subject boundaries. ‘Part B3: Learning and Teaching’ lists ‘academic and digital literacies, education for sustainability, citizenship, enterprise and entrepreneurship, internationalism and ethical behaviour’ (QAA, 2013: 10) as significant and all of these are sustainability related or sustainability focused. If themes like these have ‘a broad relevance to the purposes of higher education and its wider context in society’ and ‘are embedded within the curriculum and form an integral part of the programme’ the QAA reminds us that ‘learning and teaching activities are designed to take them into account’ (2013: 10).

To be effective, Blewitt thought each discipline should co-evolve with sustainability and saw that as pivotal in shaping the student experience, although for him it was one of ‘unrealized potential that may in the future herald a radical transformation of learning, knowledge and understanding’ (Blewitt, 2004: 2). Institutions such as Glasgow School of Art may be realising this potential as their comprehensive ‘Draft Strategy 2015-2020’ indicates when it speaks of sustainability’s ‘relevancy in the curriculum’ (GSA, 2015: 5). They have also been proactive, through their Radial Project in student-community engagement and hired dedicated staff, in common with other institutions, to implement and oversee sustainability. This is all worthwhile and amounts to an institution wide integrated sustainability policy and anticipates future frameworks of excellence in the field.

Elsewhere, the University of Arts London has a project relating ‘Sustainable Literacy in Design Education’ (2011) to experiential learning in sustainable fashion and this is important because students often enrol with only basic awareness of the idea and little understanding of its relevance to themselves and benefit from improved ‘literacy’, via resources and sessions similar to those in American institutions (Kraly and Taylor, 2012). The Higher Education Academy also advocates sustainable literacy and describes it in its ‘Future Fit Framework’ document but emphasises it is based “‘primarily on the student’s attributes, dispositions and competencies rather than just a content-based approach around ‘what has been learnt about sustainability’” (Sterling, 2012: 22).

‘The best sustainability curriculum is one that provides the hands-on experience of living, implementing, and designing a sustainable campus, tangibly linked to the more formal curricular expectations of programs’ says Thomashow (2014: 162). This tangible link should interconnect practical, professional and theoretical skill-sets and Cleveland College of Art and Design’s ‘Material Culture Theory’ module achieves this by encouraging student’s praxis, as theoretical understanding of sustainability is explored in their making. The curriculum should enable students to connect learning, reasoning and practice in this way and promote responsible citizenship within vibrant Communities of Practice envisaged by Wenger (1998); both motivated and engaged in planning for resilient futures and supporting sustainable initiatives in areas such as volunteering, business and policy making.

Conclusion

Whilst evidence convinces us of the need for change, our own creative sector has a vital role in communicating ideas through making work sustainably and engaging audiences with it. Science might show us what matters but art, design and creative practice persuades us why it matters and wins hearts as well as minds; ensuring commitment to a cause,

The embedding of a sustainability curriculum in an art and design context should raise perceptions of its value and develop our own ideas, motives and actions for sustainability. More broadly, there is a case for sustainability curricula to be integrated in all educational settings as a facet of the citizens ‘toolkit’; raising awareness of our critical role in sustaining the environment and adding momentum to future shared commitment.

If a green revolution is needed to combat the environmental issues we face it might not happen in a year, a generation or even a lifetime but we all play a part in the sustainability narrative and should start a process resulting in change to our way of thinking because, ultimately, changing what we think will change what we do.

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The author

Graham Panico is a Contextual Studies lecturer at Cleveland College of Art and Design in Hartlepool and teaches visual and material culture across various undergraduate programmes. Prior to his academic role, he dealt in Twentieth Century Decorative Arts for many years and now has a growing interest in sustainable practice and issues relating to cultural communication and process.



Making it Relevant: a hands on approach to teaching sustainability in a Further Education context

Chris Smith

Abstract

This year, at Plymouth College of Art, we ran a cross-curricula project for all of our 250 Pre-Degree students. We called the project 'The Future'. It was a project about facing forwards, asking; what will industry, employers and the planet need from artists and designers in the (near) future? The project was run on the premise that now more than ever, there is a need for environmental awareness in society (and industry), and this is only going to increase as we move into the future.

We ran the project in collaboration with a RegenSW, a renewable energy company, and The Devon Wildlife trust. It was essentially a live client brief. Our intention was to marry together sustainability and employability in a project that enabled our students to realise that they can make art that can help change the world, whilst simultaneously enhancing their professional capabilities.

I have been exploring different ways to bring sustainability into arts curricula for the past 10 years. "The Future" project was informed by all that I have learnt so far about how to engage young people with sustainability. I would like to share some of what was involved, what we achieved and what we learnt through this project. I would like to use this sharing as the starting point for some discussion on the following questions:

- What are the challenges to engaging young people with sustainability in the arts?
- What approaches work best?
- How can we (educators) make sustainability a worthwhile, enjoyable and relevant subject for our students?

Introduction

As an arts teacher, working in the Further Education sector, I am really excited by the ways in which embedding sustainability into curricula can enhance learning and achievement for our students. I see sustainability as a 'tool' for getting our students to learn how to create work with meaning and depth, with commercial and social relevance. It brings all kinds of exciting opportunities to work with industry and employers. The subject of sustainability is great for helping our students to build 'problem solving' abilities and develop skills for employability.

Over the last 10 years, in my role as course leader for Extended Diploma Photography at Plymouth College of Art (PCA) I have experimented with various ways to bring sustainability into the curriculum both on the photography course and across other curricula at the art college. It is not always an easy thing to do, not every student wants to address sustainability issues within their studies. At times I have met responses from indifference, to resentment and even hostility toward the idea of sustainability study amongst students.

Making it Relevant

The reasons for students, in fact people in general, might be resistant to learning about sustainability are fascinating, and can potentially explain some of why humanity is seemingly slow to respond to our current environmental crisis. There is much I could say about this, however, in the interests of brevity I will bypass such discussion, and offer instead, a simplified summary of what approaches to teaching for sustainability I have found to work best. In a nutshell, I could summarise this approach as: making it relevant to the individual student. I try to make it relevant to the student's lifestyle interests, to their (career) aspirations and to their local environment/community/everyday lives. 'Making it relevant' involves really listening to the student, finding out what engages them in life, and then finding how that relates to sustainability. Inevitably there will be a link to work with somewhere; after all, almost every human activity has some kind of impact or dependence on the environment, and all human societies are ultimately dependent upon the natural environment.

Project examples

I would like to offer some examples of how I have tried to achieve this. This year, at Plymouth College of Art, I helped design a cross-curricula project for all of our 250 Pre-Degree students. We called the project 'The Future'. It was a project about facing forwards, asking; what will industry, employers and the planet need from artists and designers in the (near) future? The project was run on the premise that now more than ever, there is a need for environmental awareness in society (and industry), and this is only going to increase as we move into the future.

We ran the project in collaboration with a RegenSW, a renewable energy company, and The Devon Wildlife trust. It was essentially a live client brief. Our intention was to marry together sustainability and employability in a project that enabled our students to realise that they can make art that can help change the world, whilst simultaneously enhancing their professional capabilities.

The Client Briefs

RegenSW (Regen South West) works with industry, communities and the public sector to change the way we generate, supply and use energy. One of the many interesting ways the organization works is with the arts. Our contact at RegenSW was Chloe Uden. The brief that Chloe set our students was simple; taking the theme of 'energy is super', create exciting and dynamic artworks that positively promote renewable energy solutions. The work could be approached in any medium, providing the final outcome could be shown as a large print poster for display at bus shelters. The same brief went to our extended diploma courses in; Photography (for which I am course leader), GIGA (Graphics, Illustration and Game Arts), Art & Design and Fashion and Textiles.

Our students were given the choice to either work on this client brief, or the Devon Wildlife Trust (DWT) brief.

The Devon Wildlife Trust brief was set by Marine Education Officer Coral Smith. The brief was part of the Marine Wildlife Champions Project, a project which Coral has run with schools throughout Devon each year since 2014. Coral challenged our students to produce work in any medium that addresses five key issues in relation to marine and coastal environments:

1. Terrestrial Pollution
2. Plastic Pollution
3. Climate Change
4. Over fishing
5. Protection of the Sea

We had run the same Devon Wildlife Trust project brief for the two previous years with just my photography students, as part of an assignment we called 'Earth Stories'.

The two briefs were very different and it was really interesting to see the different ways in which the students responded to them and the different challenges they faced.

The RegenSW brief challenged our students to visualise abstract concepts, like the importance of renewables in transitioning to a low carbon economy, for instance. We tried to encourage the students to be adventurous and creative; trying to break away from clichéd pictures of wind turbines and blue skies. Some of the responses were highly original and thoughtful, whilst some of the Photography students seemed to struggle to break away from the idea of photographing a wind turbine or a solar panel. For this very reason however, it was a valuable lesson for the students to learn that client briefs can often be imaginatively challenging, and that the ability to meet such briefs with originality will give them a competitive edge. Also what I particularly liked about this brief was that it is a perfect example of modern growth area of industry that really needs the input of informed artists and designers.

The Devon Wildlife Trust brief, whilst not coming from the commercial sector, still offered students the chance to practice communicating complex and serious information in a visually engaging style. There were more options in the range of subject matter they could address, many of those that chose this brief based their work on plastic pollution and conservation of the coastline; this was a very tangible and accessible subject for them given the proximity of the college to some great coastal stretches, and also, in the case of the Photography students, because of an activity which we ran.

The Beach Clean

My colleagues and I took the Photography students to on a beach cleaning trip to the Mount Edgecumbe Estate near Plymouth. We have run the same activity for several consecutive years now; it's an immediately tangible and accessible way for the students to see the impact of our throw-away society on the environment. We prime the students for the trip first with a lecture showing them some inspirational and beautiful marine and coastal photography, and then move on to some of the many thought provoking

artworks and environmental campaigns about plastic pollution that have been produced in recent years. On the beach, the scale of the problem quickly becomes apparent. Beaches that look idyllic and timeless from a distance belie a reality of shocking truth when the students get down to actually discovering something of how much plastic there is in the being washed up, particularly in terms of micro-plastics (small bits of broken up plastic that resemble food to the unsuspecting wildlife).

After a couple of hours collecting plastic, we got the students to photograph some of the waste both on the beach, and also back at college in the studio in visually interesting ways.

The Outcomes

Whichever brief the students chose, all the tutors involved worked hard on helping the students to interpret the brief in a way that felt relevant to their interests or aspirations. The result was a fantastic range of interesting responses.

Both clients were really pleased with the range and quality of the work produced. We (the PCA Pre-Degree department) appreciated the opportunity very much; it enabled us to tick several very important boxes on the wish list for effective 16 - 19 education, according to both the PCA approach to education and also in response to OFSTED and DFE advice. This wish list of educational skills and experiences to incorporate into the curriculum included, amongst other things:

Employability, Contextual research skills, Maths (utilising environmental statistics, surveying marine litter etc), English (writing about topical issues), taking responsibility, debate and discussion.

The project followed on from a previous project called 'The Others' which focused on appreciating Equality and Diversity. By relating the two subjects we were able to look at the social dimensions of sustainability; relating, for instance, habitat destruction to colonialism, mass species extinction to genocide. We were able to thematically make good use of a college trip to John Akomfrah's 2015 exhibition 'The Vertigo Sea' at the Arnolfini in Bristol which included video work that drew parallels between whaling and colonialism.

Overall, the project was highly successful in helping myself, my colleagues and PCA meet our educational aspirations. Bringing learning for sustainability together with live industry collaborations and client briefs is certainly a direction we would like to continue with. Plans are afoot for something similar in 2016/17, we have already begun the new first year cohorts on all the Extended Diploma courses with an induction week beach clean activity, to get the students thinking about sustainability right from the start of their studies.

The author

Chris Smith is a Course Leader for Extended Diploma Photography at Plymouth College of Art. Chris passionately believes that sustainability and ecological awareness are essential aspects of all education for the 21st century, and has been finding different ways to bring this into his work for the past 10 years. Chris is also a qualified and practicing counsellor.



Sustainable Product Design: learning through live projects

Simon Andrews

Abstract

The BA (Hons) Sustainable Product Design course at Falmouth University embraces issues relating to environmental sustainability, inclusive design and social innovation, and seeks to embed these themes into design projects and the wider curriculum. The tutors develop project partners with businesses and other external organisations. Students work on live project briefs with project partners to develop design concepts that engage with sustainable design strategies whilst also considering the economic constraints organisations have to work within.

The paper draws on two case studies of live projects and seeks to establish the learning opportunities for the project partner, the students, and the academics. The project partners were a limited company and a local charity:

- Lowe Alpine (Kendal, Cumbria) - the company design and manufacture outdoor equipment and backpacks. Sustainable design approaches including de-materialisation and design for disassembly were embraced, alongside principles of inclusive design.
- Cornwall Mobility (Truro, Cornwall) - this local charity provides assistive technology for people with physical and cognitive disabilities. The project engaged with empathy testing and user-centred design strategies to establish new design opportunities.

Introduction

Live projects with industry partners are common practice on undergraduate design courses. Hurn (2013) argues that live projects are a vital element of product design study, whilst Bartholomew and Rutherford (2013) propose that they are an integral part of design students' learning. The BA(Hons) Sustainable Product Design course, at Falmouth University, has a long history of negotiating live projects to enhance student learning. Recent project partners have included Hille Educational Products and the Eden Project.

This paper draws on two case studies of live projects conducted by second year students on the course, and seeks to identify the learning opportunities generated. Both projects demonstrate the importance of collaboration and networks in developing design practice that contributes to eco-social sustainability. The learning opportunities for the project partner and academics involved are also investigated. By comparing live projects with a private company and a charity, the paper also explores the different learning opportunities and engagement with communities that these two approaches provoke.

Case study 1 - Lowe Alpine

Lowe Alpine (LA) design and manufacture outdoor equipment, clothing and backpacks. Based in Kendal, Cumbria, they are well positioned in terms of their market and access to an excellent testing ground for their products. As a company whose product range encourages active participation with the outdoors, it is perhaps expected that they would be good advocates for sustainable design thinking and environmental stewardship. Their website states, 'The environment that we climb, run, hike and bike in is important to us and we understand the impact we have on it' (Lowe Alpine, 2016).



Figure 1: Holub, S. (2014) 'Zero' short break travel bag. From: Falmouth University 3D203 module, student presentation 9th May 2014.

The Sustainable Product Design students investigated opportunities for backpack products in new or emerging markets. They developed design proposals responding to identified user needs, whilst embracing environmental and socially responsible approaches. LA were keen to investigate their reach to people either much younger or much older than their typical backpack customer. The design brief was developed to reflect this, in partnership between the author and LA, whilst responding to the module learning outcomes.

The company were particularly interested in one concept developed, the 'Zero' short break travel bag (see Fig.1). The student observed holidaymakers in her local town to establish behavioural patterns and discovered a market opportunity for a 'day pack' for women, over fifty years old. The concept adopted an inclusive design approach, making it accessible and appealing to the largest possible number of people (Eikhaug et al 2010). The bag was designed to be lightweight with an intuitive opening and closing method negating the need for fiddly clips or a zip closure.

The notion of dematerialisation (Shedroff, 2009) was also extended to the fabric used to make the bag. The component parts are efficiently 'nested' on a standard fabric length so that every portion of the material is used in production and there is no waste from off cuts. The value of inclusive design was explored and discussed with research participants and LA staff. LA designers recognised, for example, the parallels between designing a usable fastening system for people on a mountain with very cold hands, and people who suffer from rheumatoid arthritis.

The relationship with the manufacturer also fostered techno-centric approaches to sustainable design, where students benefitted from the materials and production information provided. This led to many students investigating alternative materials, with lower environmental impacts, and considering system solutions such as product repair, product take-back and cradle-to-cradle (McDonough and Braungart, 2002) approaches.

LA benefitted from a range of design concepts that explored new market areas and business models, but were also able to consider sustainable design strategies adopted by the students. LA designer, James Hadley expressed that, 'the students provided new insights into users and research areas' (2016). The student who designed the Zero bag was offered an internship with the company and contributed to the work of the design team.

Further to advancing networking and project negotiation skills, the author was able to develop research and design methodology workshops which were tailored to the project.

Case study 2 - Cornwall Mobility

Cornwall Mobility (CM) are a charity based in Truro who provide advice and support for people with physical disabilities and mobility difficulties. They work with adults and children to evaluate their specific needs and offer a large range of assistive technology and mobility products to support independent living. In particular, activities such as washing, cooking, dressing, undressing, and getting around the home, are key areas where support is provided (Cornwall Mobility, 2015).

The charity has a very large network of clients with wide ranging age and ability. They are, 'acutely aware of areas in which design improvements can be made, particularly if they are niche or orphan products which will never produce a significant return upon investment, but may be of immense help to a small number of individuals in retaining their independence' (Trehwella 2016). The combination of a large potential user group and insight into the assistive technology industry, provides an excellent research platform to drive new product development. The charity is well connected to manufacturers and suppliers and would have the potential to license design ideas to them.

The Sustainable Product Design students developed concepts that responded to the needs of users with physical disabilities and mobility difficulties, in relation to daily, domestic tasks and activities. The project began with a visit to the charity headquarters where students could experience a range of products and equipment first-hand, and discuss design opportunities with CM staff. Human-centred design (HCD) research tools, including the IDEO Method Cards (2010), were used to develop design concepts. For example, 'rapid ethnography' (IDEO, 2010) was conducted in a local care home to identify opportunities for more inclusive furniture and equipment. It was observed that residents who relied on a walking frame, or 'rollator', for

mobility naturally placed the frame in front of them when they sat down. The rollator then became obstructive by blocking line of sight, impeding communication and interaction with other residents and care home staff. It was also observed that some residents had customised their rollator frames to carry a bag on the front to store small personal items. This insight led to the development of seating and table concepts where the rollator took on the appearance and function of a side table, and the seating accommodated access from the front or the side (see Fig.2).



Figure 2: Oaten, T., Bergiers, A. and Williams, M. (2015) Care home furniture concepts. From: Falmouth University SPD205 module, student design report 12th May 2015.

The variety of design opportunities and wide client network placed a greater focus on strategic HCD research activity compared with the LA project. Many students approached groups and organisations within CM's network to establish and evaluate design opportunities. The projects allowed for more practical experience for students to consider research ethics and develop appropriate participant information and consent forms.

CM benefited from reviewing a range of design concepts that explored underdeveloped areas, but were also able to see the advantages of sustainable design strategies as well as appropriate consideration to usability. CM's Chief Executive, Edward Trehwella also commented that, 'improvement in aesthetic design - something the industry constantly struggles with - as part of an inclusive design approach has been a refreshing part of the experience of working with the students' (2016).

The students' work was exhibited at the university at the end of the project, and later at the Eden Project. Staff and residents from the care home were among visitors that came to the private view. The event provided an opportunity for participants involved in the design

research to see the project outcomes and discuss the students' ideas. It was also an excellent networking opportunity for CM staff who attended the event.

Finally, the project has provided an excellent learning opportunity for the author in relation to assistive technologies, supporting an on-going collaborative research and development project with CM to design a beach wheelchair.

Learning Opportunities

A review of the live projects allows us to broadly distinguish where the key learning opportunities exist for the students, project partner and academics (see Fig.3).

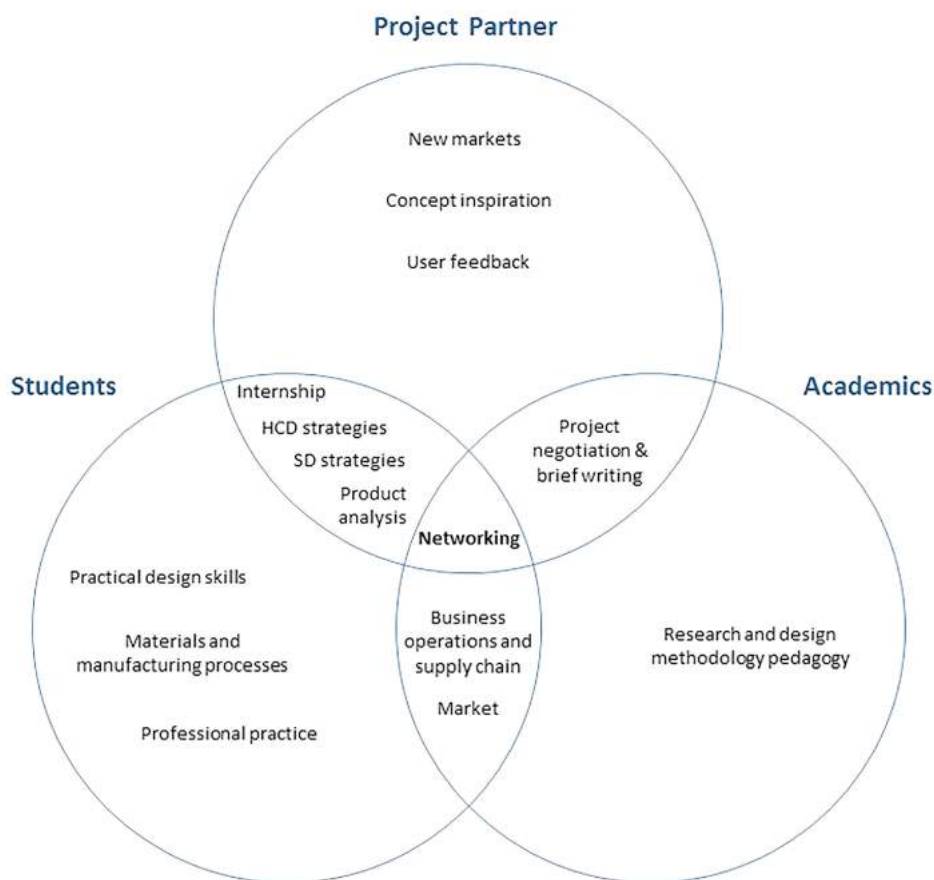


Figure 3: Andrews, S. (2016) Live project learning opportunities. Diagram by the author.

It is not intended that the diagram represents a definitive model and other learning opportunities may be identified from working with different project partners. The emphasis placed on the learning opportunities may also vary between projects as has been found by comparing the two case studies. However, the model does place 'networking' as a central component and shared learning opportunity.

Conclusions

Both projects offered the students a 'real world' perspective on a design brief, developing their professional practice with project partners and engaging with communities through HCD research activity. Project partners have benefitted from exposure to market insights, design concepts and methodologies practiced by the students. Live projects have allowed academics to develop skills in project negotiation and brief writing, and build research and teaching practice relevant to the contexts of each project. Working with a manufacturer focused the student learning towards developing an eco-social responsible product, considering market and industry constraints. The relationship with the charity, however, placed greater emphasis on HCD research techniques, with a wider network of participants, to establish user needs. Central to both live projects was the opportunity to learn through networking and expand communities of sustainable design practice.

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Walking in Urbana: sustainable pasts and possible futures

Karen Tobias Green

Abstract

In May I presented a paper at the 12th International Congress of Qualitative Inquiry at the University of Illinois as part of my doctoral research. Whilst I was there I inadvertently discovered how sustainability can be about rebuilding, reviewing and replenishing lost histories for the 'then', the 'now' and the 'possible'.

I had been using the local taxi service- the Red Flash cabs of the title - to get me from my hotel on the edges of Urbana, Illinois, to the university itself. On day three of the conference however, after a meeting with a writer who has influenced me, and who later came to my presentation, I decided to walk instead of ride. This walk, embodied in the space, place and shifting time-scape of Urbana, proved to be a game changer. My walk became also a series of photographs, a narrative and some questions - responding to what Judith Butler calls 'the subversion of an authority that grounds itself in what may not be questioned. In such a world', she says, 'questions, loud and clear, remain intrinsic goods.'



Question: How can history, temporality and storytelling help us revisit, refresh, sustain and repair the 'then' for the 'now' and the 'possible'?

Narrative inquiry is my methodology; a qualitative research method characterised by ‘an interpretive approach to research and theory’

‘Qualitative researchers study things in their natural settings, attempting to make sense of, or interpret, phenomena in terms of the meanings people bring to them.’
(Denzin and Lincoln, 1998: 2)

On day one of the conference I took a taxi to the university because I’d been told no one walks anywhere in America. I had seen that one of the theorists who led me to narrative inquiry as a methodology was running a workshop. I went along to it and afterwards she and I got into conversation. I invited her to my presentation the next day. The following morning, I took another taxi to the university to make my presentation. Sustainability be damned- I was late and I was anxious; I knew I would lose my way in the vastness of this urban sprawl. To my surprise my narrative inquirer turned up. My paper was well received and she asked a question in the plenary but at the end she rushed off and somehow I felt deflated. Another taxi back to the hotel. That night I ate nut brittle in bed and felt exhausted and homesick.

Next day I woke up to blazing sun. I abandoned my plan to get a taxi to the university and decided to walk. The sun was too much to resist and I felt somehow I needed to plant my feet on the ground. I set off in my solid soled sandals. I cannot begin to describe the stark beauty of that day. I am walking on the streets of Urbana- a metropolitan area in east-central Illinois, home to the University of Illinois at Urbana-Champaign. My first time in America.

I am walking and following the directions of the woman on hotel reception. She was distracted by another guest when she was talking to me and I often mix up my left and my right. But even so I know I’ll find a way. My way comes to me through walking and looking with new eyes. I take out my camera phone. I can’t resist the water meter appearing between the green grass of the sidewalk. It is beautiful. And it’s from Wabash Indiana. My father knows the 50 states and 50 state capitals. He used to recite them to me. He has never been to America and he never will.

In Urbana everyone seems to be mowing the lawns that surround their one storey clapboard homes. Each house is the same but different. The majority are neat, cared for. I find them lovely, and somehow very humane. Grass meets path. I asked the way and was treated with warmth and humour. “You’re a long way from home girl. Illinois was my old university. I was the first in my family to go to college. I loved it there.” She is African American and maybe in her late 60s.

Urbana has sister cities. It has huge long wide roads all bisecting in straight lines. It has so much space. It is so much space. The school I pass is empty, quiet, clean, waiting, poised. Here is Teamsters Local Union number 26. I’ve heard of teamsters. I know a bit about Jimmy Hoffa president of the international brotherhood of teamsters, his alleged mafia inks and his mysterious unsolved disappearance. But despite massive ideological opposition to unionised labour across the global economy, unions persist.

I pass a church sign. We can be at peace. If we agree with God. And if we need him, he’s on the World Wide Web. But I prefer to believe that ‘human decency is not derived from religion. It precedes it’ (Hitchens, 2007: 266).

In the face of fundamentalism, Judith Butler calls for

‘a 1000 conflicts of interpretation [to] bloom ...the proliferation of possible interpretations may well lead to the subversion of an authority that grounds itself in what may not be questioned. In such a world, questions, loud and clear, remain intrinsic goods.’ (Butler, 2005: 289)

There’s a bird on the shed. It’s not a real bird. It’s a renewable bird, a tin bird, a facsimile of a bird. Everywhere there are birds. The robins in Urbana are huge. And it’s only May. The railway crossing is unmarked by signs. This may be because it seems hardly anyone crosses it on foot. Public transport is not what I think of when I think of America. Public transport is a class issue as well as an issue of sustainability. The poor ride buses. The rest ride cars. I hold my breath as I cross. I am not myself now. I am thinking only of the physical crossing, the lack of other humans, the gritty grass, the glorious sun, the place that holds bodies, homes, transport, commerce, hearts, minds, all of this- it is concrete and steel and grass but it is not alien, it just is.

Settlers to the Americas often used their native homeland as their surname. English Brothers is a firm of builders. Their building is made of brick. Most of the houses on Carver Park are clapboard. Made of natural resources. Made more cheaply. Housing is an issue of class and race. I pass a memorial to Crispus Attucks. Memorials sustain memories. In 1770 Attucks, a former slave, became a sailor working out of Boston harbour. Tensions existed between the British militia and black sailors. A fight broke out between Attucks amongst others and some British soldiers. Attucks was one of five men killed when they opened fire.

‘Patriots, pamphleteers and propagandists dubbed the event the “Boston Massacre,” its victims became instant martyrs and symbols of liberty. Despite laws and customs regulating the burial of blacks, Attucks was buried in the Park Street cemetery along with the other honored dead’ (PBS Online, 1998).

Carver Park, according to the Urbana Courier, was the 1st large scale residential development to be initiated with private capital entirely through black families (Berube, 1997). My next landmark tells me I’m close to East Green Street where you can sell your plasma. I’ve heard extraction is painful and takes a while. North Neil Street caters for all comers: tattooing, piercing and excellence in life and ministry. The stone woman in the grounds of the university has stood since the 1800s getting wetter. Seeing her I know I’ve achieved my goal.

As I walked through the door of the union building I heard someone call my name. It was the qualitative inquirer herself. She said was sorry she’d had to rush off the day before. She said she’d really enjoyed my presentation and was very complimentary about my work. I waited to be thrilled because wasn’t this what I’d wanted? But it didn’t happen. I thanked her for her writings and the path they’d put me on years ago and after we’d spoken I realised none of it was about what had or hadn’t happened the day before, about me, or the presentation. Instead I was humbled and energised by the experience of being out of myself, amongst the space, place, history, now-ness, then-ness, knowingness, not-knowingness, heat filled shifting temporal landscape, filled with robins, inquirers, past heroes and villains, rage, justice, injustice, paper, pen, sword and silence.

On the day of the downing of the Egyptian airlines flight, we read that newspapers are for students only. Clocks fill the main hall. The time in Urbana Illinois is only relative to the time

in other parts of our world. My doctoral supervisor Carol's golden converse catch light and defy time as she walks ahead of me into a lift in the university union that evening. Leaving the conference, I'm compelled to look into Champaign, the other half of the urban sandwich that holds the university in place. Fannie May candies are made in this building. They sell for 20 dollars for a box of 4 at Chicago O'Hare airport. Family Dollar supermarket unites us in our basic needs- to eat to survive, to save to progress: to sustain our bodies. Staring into the window of the Ray Ban specialists I see that I cannot hide. My own face looks back at me. I hear Judith Butler again.

'Some undocumented or un-archived history of oppression emerges within our contemporary life and makes us rethink the histories we have told about how we got from one place in history to the present. It also... has the effect of producing converging temporalities in the present, which allows us to reorient ourselves in non-identitarian ways so that we're not just looking out for our own history or our own people, but our history turns out to be interrupted fundamentally by an effaced history.' (Butler, 2009)

The past is always with us to challenge, accuse, sustain and comfort. Qualitative research is sustainable. It repositions and reinterprets the past to illuminate the present and to point to future possibilities.

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Japanese Not Weed

Rive Studio

Abstract

Rive Studio is currently looking into how the impressive behaviour of Japanese Knotweed (JKW) can be harnessed in such a way that could be beneficial to society. JKW is notorious for being incredibly durable and spreadable, able to break apart buildings and destroy house prices. It can grow up to 20cm a day, and its roots can span 7 metres in every direction. It has the ability to spread from tiny cuttings and reports suggest that there is no 10 squared km in the UK that is without JKW (Mabey, 2012). For these reasons it has several pieces of legislation written in an attempt to destroy and abolish it, and is regularly demonised amongst members of society. However, Rive Studio is looking at how this plant that we have in great abundance in the UK could be perceived as an asset rather than a pest. Its ability to grow in extreme climates and the fact that it does not need bees to propagate makes it a plant that will survive as the effects of climate change become more severe. Rive Studio are in the process of exploring the potential of JKW as a resource within this context to learn how to live with it as an effective plant rather than a weed.

Question: How can we change the way we think about materials around us, such that, we can utilise previously neglected resources to help pave a way to a more capable future?

Portrayal and Perception Within Society

The studio became interested in Japanese Knotweed (JKW) due to how it is commonly portrayed and perceived in the UK. The words used to describe JKW resemble that of a 'baddy' in a comic book; it is referred to as an 'invasive alien species', a 'real thug' who destroys everything it comes into contact with (Royal Horticultural Society, 2016) - The Guardian describes it as a 'public enemy' (Simons, 2005) and The Irish Times 'the bully of the natural world' (Woodworth, 2016). Its qualities of being fast growing, strong, powerful and resilient are always interpreted negatively, but they could just as plausibly be perceived as positive attributes. We believe there is potential for the characteristics of JKW to be matched with situations that allow these behaviours to flourish, just as the archetypal bad character can use their powers for good instead of evil.

This is not to say that people's cautiousness with the plant are unjustified. The annual cost of Japanese Knotweed to the British Economy is estimated at £166 million due to the cost of treating it, and the negative effect on house prices (Williams et al. 2010). The site for the

2012 London Olympics alone required £70 million worth of JKW treatment before building could start (Shaw, 2014). Even on a much smaller scale, specialist treatment companies can charge up to £200 for a site visit and survey, £5000 for it to be treated and extra costs for its disposal (Japanese Knotweed, Management and Consulting, 2016). Similarly, mortgage lenders have strict terms for JKW in relation loan approval (Council of Mortgage Lenders, 2015). The adverse effects that JKW currently has on the UK economy has led to the Environmental Agency creating several pieces of legislation to prevent it spreading (Environment Agency, 2013), which contributes to the stigma surrounding the plant. Taking all of this into consideration, it is understandable why people are so willing to accept the plant as an enemy.

As part of the European City of Science Festival in Manchester, we took part in a walk with the LiFE (Living in Future Economies) Research group where we presented our initiative. As part of this presentation we asked participants to draw JKW and answer a few questions about the plant. Whilst nearly all participants spoke negatively of the plant, nearly all also didn't know what it looked like or how it spread. Some thought having traces of the plant on your shoe was enough to cause it to spread, whilst others thought that the plant was poisonous both of which are not true. Rive Studio see both the legitimate concerns and the hyperinflated negative perceptions of JKW as a challenge. We aim to explore new ways of thinking about the plant, with the hope of changing people's perceptions of resources such as JKW to turn the face of a problem into the face of an opportunity.

Settings of Exploration

We consider the exploration of JKW to have potential in two settings: A, the current situation and perceptions of JKW in the UK; and B, what a future with JKW could look like.

Category A:

There is an abundance of JKW here in the UK and whether it is alive and growing in the wild, or it is being gotten rid of, it currently serves no purpose. If this waste could be used as a material resource it may contribute to solutions for escalating current material issues such as resource depletion and waste.

Additionally, if an application could be found for JKW that was commercially viable, there would be potential to offset some of the negative financial effects the plant currently has on the UK economy. Furthermore, due to the way the plant distributes its nutrients, if JKW is cut when it's alive the rhizomes weaken and it becomes easier to kill in the future (Mabey, 2012). Consequently, if we were to harvest JKW it would be easier to fulfil the government's aim to eliminate it from the UK if that continued to be the desirable outcome.

If, therefore, JKW were to be used as a resource today it could in fact fulfil economic, political and environmental goals and therefore could play a part in altering the negative perceptions society has of JKW.

Category B:

The increasingly bleak landscapes of the future require a high level of resilience from plants that wish to survive. JKW possesses this resilience: it can survive both at temperatures as low as 17°C but can also grow in the extremely hot conditions; it doesn't need bees to propagate meaning that the declining bee population won't pose a threat to the growth of JKW and; it flowers later than other plants, providing much needed nectar for bees, therefore encouraging

the expansion of the bee population and subsequent propagation of other crops in the area (CABI, 2016). It could be that the very characteristics that currently make JKW so unpopular could be the same reasons it becomes valuable in the future.

In category A, we are looking at JKW as a temporary byproduct of the removal process in the form of waste. In category B we are situating JKW in the future therefore planning that the plant will still be alive in UK and perhaps even actively grown as a resource. This would require a huge change in society's perception of the plant.

Rive Studio's Investigation So Far

We see the potential for JKW as manifold. This can roughly be broken into two categories; its use as an edible resource and its use as a non edible resource.

In parts of Japan JKW is foraged as a wild vegetable, with the stems supposedly having a similar flavour to rhubarb. The plant is a valuable supplement source of resveratrol, replacing grape byproducts (Wang et al. 2007). Whilst we support and encourage JKW being used as an edible resource, we are focusing on the less explored potential of JKW as a non edible resource, looking at it both as a material resource for goods (building materials, packaging, craft objects, functional products); and a tool for services (building demolition, bee conservation).

The studio are researching JKW through playful experimentation, establishing different situations that will allow us to document its behaviour and speculate over the realistic or imagined possibilities this suggests. We have been dissecting, boiling, burning, heating, soaking, blending, stripping, drying, dipping, unpicking and crushing the plant, using these material interactions to form a relationship with JKW employing the method of thinking through making; giving our ideas a foundation in experience (Ingold, 2013).

This initiative proposes that this 'alien' species whose original name in Japan translates to 'remove pain' (Shaw, 2014), could indeed serve to remove the pain of our 17 depleting resources, more severe climates and landfill extremities. As a society we have a lot to gain from evolving our idea of the plant and developing our relationship with it.

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Rive Studio was formed in October 2015 by surface designer Laura-Jane Atkinson and furniture designer Eade Hemingway. The ethos of the studio is to playfully explore tangible material based solutions to social and environmental problems. For their first project, Rive Studio created three different materials out of waste destined for landfill to explore the potential of post-consumer waste as a raw resource for the future. Rive consider 'play' to be a valuable method for generating new ways of thinking when researching materials, and all work comes out of this process.



Infinity Wear: a design proposal to change the stigma that sustainability is limiting

Eleanor Edwards

Abstract

Infinity Wear is a design proposal, in the form of a mock advert, for a futuristic Wearable Technology garment designed for a sustainable fashion future. At its core, the design aims to reduce the stigma of an environmentally friendly lifestyle being 'backwards' and limiting, by proposing an alternative to 'fast-fashion', a fashion movement that encourages regular and relatively cheap updates to our wardrobes, which ultimately results in a large output to landfill.

Benefitting the long-term future of our planet should not limit our short-term opportunities and experiences, but instead provide exciting challenges and design opportunities to equip us for a future-minded lifestyle. Infinity Wear embodies the mind-set that only with innovative and exciting design can enthusiasm for sustainability truly be achieved.

Inspired by Cradle-to-Cradle design, Wearable Technology and Max-Neef's Fundamental Human Needs, which states that, it is human nature to express one's self, Infinity Wear provides a positive alternative to 'fast-fashion' allowing user's individualism without the detrimental environmental impacts particularly associated with this high consumption, fast turnover, industry.

Question: What are the technological innovations that will engage society with sustainable issues and a future-minded lifestyle?

Sustainability, an issue at the forefront of the twenty-first century, can be defined as 'an activity that can be continued indefinitely without causing harm' (Joy et al 2012: 274) or by the United Nations (1987) as the ability to meet the current generation's needs whilst maintaining those of future generations.

The media saturated topic of Sustainability is a language full of cut-backs and limitations, within which western society strives to live a forward moving accommodating lifestyle. It is no wonder that to some extent, the plea to act more sustainably is adhered to only half heartedly. For example, the extra cost for the consumer for sustainable purchases, does not encourage members of our high consumption society that there is a benefit to them. Particularly when there are products providing them an equal service available for less. Levi Strauss experienced this when they introduced a line of eco-jeans that did not reach the level of sales they had

expected, 'for most consumers, sustainability wasn't something they were willing to pay more for, but a fundamental expectation of a global brand' (Kobori, 2015).

This paper's focus is to present a conceptual initiative, Infinity Wear, which aims to be both sustainable but even more so, an attractive and exciting product for consumers to engage with by using technology and innovative design in a positive way. First, fast-fashion is examined to highlight the need for this change in design but also to highlight the qualities and benefits that should be retained. These qualities are particularly important to sell sustainability as a liberating ethos. This is done in respect to Max-Neef's Fundamental Human Needs (1991), nine classifications of requirements that when satisfied, provide quality human life. These Needs stay the same regardless of the time period; however, how they are satisfied should develop as Society does. Generation Y is identified as the main audience for this product as they are a generation in search of "diversity, sharing and discovery" (Spenner, 2014) and will be key players in the future for setting the standard Industries need to adhere to. Finally, Infinity Wear will be presented with respect to the points identified by examining fast-fashion to highlight its place within the marketplace and the benefits it could have.

Fast-fashion is an example of Cradle-to-Grave design. Clothes are produced to meet current trends and the whims of customers based on what is popular using till sales tracking technology. The designs are such that there is a planned obsolescence for the clothing, contributing to the statistics WRAP (Waste and Resource Action Program) reports that the UK sends 350,000 tonnes of used clothing to landfill each year (2012). This use of technology is a poor way to inform design and the rivalry between companies to have the lowest production costs drives unsustainable practices that impact both the Environment and Society and are stretching resources and individuals past durability (Fletcher and Grose, 2012).

For instance non-organic wool and cotton production discharges large amounts of greenhouse gases such as methane and nitrous oxide into the atmosphere (Koener, 2008). In addition, they are both water intensive processes. The World Wildlife Fund (2013) states that production of one cotton t-shirt can take 2,700 litres of water, not including the water used during the Use Phase, for example for cleaning.

However, fast-fashion does have benefits on a more psychological level by allowing a much larger economic sector of society to fulfil their human needs, such as participation, identity and creation as identified by Max-Neef (Fletcher, 2008), as fast-fashion aims to 'mimic current luxury trends' (Joy et al 2012: 275) that not everyone would be able to afford.

Unfortunately these psychological benefits for the Consumer are the point of exploitation from the Industry, as the planned obsolescence previously mentioned renders these human needs 'dissatisfied' when new trends are introduced. This is due to the economic benefits the Industry experiences outweighing those of sustainability.

The Fashion Industry has begun to take responsibility and aims to increase the sustainable nature of their production but as Levi Strauss experienced, Society doesn't interact well when Sustainability is presented with limitations to the Consumer. By its very definition fashion is sold on its ability to be liberating. Benefitting the long-term future of our planet should not limit our short-term opportunities and experiences. Instead, it should provide exciting challenges and design opportunities to equip us for a future-minded lifestyle.

Infinity Wear embodies the mindset that only with innovative and exciting design can enthusiasm for Sustainability truly be achieved.

Infinity Wear is a wearable technology garment that would be fully programmable allowing for infinite styles of clothing to be available to download to the one base item. Wearable technology is a growing industry and research sector, and Infinity Wear aims to fill the gap between today's fashion and a lot of wearable technology that are accessories to our already bulging wardrobes.

The garment aims to utilise the technological and industrial pillars that Western Society depends on but with careful and considerate design. In particular William McDonough and Michael Braungart's (2009) *Cradle to Cradle* ideology, that being, a circular system in which any inputs are able to be reused in either the same system or another after the use in the initial form is finished without degradation of quality. In the instance of Infinity Wear the intention is that the fibres used for the material would be able to be reused in another garment or the initial garment would be easily resized to adapt to human body changes.

Infinity Wear programmability would be due to its fibres that can be assimilated to fibre optics allowing the wearer to program their clothing to change the colour and pattern. This is the unique selling point, put to the Consumer in the sense that this would not only save them money by having the infinite options in one item, but also Infinity Wear would have the ability to allow Consumer Customisation, thereby increasing the satisfaction of the Fundamental Human Needs. The fibres are not only programable but also coated with dirt-repellant properties decreasing the cleaning time and costs for the User, and by extension, ensuring low water usage in the Use Phase of the garment. The Use Phase of a garment can have 'two to four times' (Fletcher and Grose, 2011: 92) the impact on the Environment than during production due to frequent washing.

In terms of the business model, Infinity Wear would be marketed on a pay monthly contract, similar to mobile phones; decreasing upfront costs as seen with a lot of wearable technology garments. CuteCircuit have a dress selling for £2,500 using both wearable technology and Cradle to Cradle design practices beyond the budget for the majority of fast-fashion consumers. The contract system would allow access to a regularly updated selection of programmed styles but also the possibility for further purchases to personalise ones wardrobe and continue the economic sustainability of the fashion industry. Furthermore this system would allow for easier access to more independent designers as there would be a marketplace for these more local 'shops'.

Although selling Sustainability presents a challenge, Society, especially those of the Generation Y, defined as people born between '1980 and 1994' (Lyons, 2016), although these dates vary slightly depending on the source, are more likely to engage with issues they feel are important and brands that are actively attempting to solve the global issues (Earley, 2015). Generation Y's search for new experiences and discovery is where fast-fashion and Infinity Wear come into play. This is also where Infinity Wear would target its market, as it is designed to provide a new clothing experience benefitting not only them but also the planet and future generations.

For such an important issue for this Century, current and future generations, the approach Humanity takes requires the collaboration of industries and a meeting of minds, in particular those with the power to design for change. As Fletcher (2008) suggests there is no one-size-fits-all solution, this Paper and the Initiative presented does not purport to be a complete, formulated design for the future of fashion, but a proposal of possibility and a means of illustrating how design and technology can be used in a positive way in the promotion and realisation of a sustainable future.

Engaging consumers with Sustainability is an issue for now, and as this paper presents, design and technology are tools that can be used to solve this issue by making Sustainability not only fashionable but liberating and exciting. Infinity Wear is at the proposal stage but hopes to be a case study for the possibilities for Sustainable design. Cementing itself with a positive language that encourages consumers not only through the Sustainable nature but also through the greater possibilities presented to them.

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The author

Eleanor Edwards is a recent graduate of the BA (Hons) Visual Communications Course at Leeds Arts University. Based upon her 3rd year COP3 dissertation project, where she had to present theoretical research with a practical response, her focus was how technology could be used in design to improve our environmental sustainability within the fashion industry. The outcome was a mock advert for a garment inspired by Wearable Technology. The garment's fibres would be programmable to allow the user to select an infinite range of appearances.



Visual Communication and Speculations: designing transitions towards a more sustainable future

Margaret Rynning

Abstract

This paper considers how visual communication design can contribute to a transition towards a more sustainable future by proposing speculative scenarios of possible, preferable and drastically new ways of living and by doing this enable discourses that may lead to changes in society. Transition design suggests a framework towards a new and more sustainable way of designing by creating visions for sustainable transitions that may lead to theories of change and new mind-sets and again new ways of designing. I will argue the importance of visual communication design in Transition design, through a collaborative and trans-disciplinary project concerning graphic design and art direction.

A scenario towards a more sustainable future

Envision a society with a payment system that thinks ahead of you in order to control overspending, minimizes waste and keeps an economic balance in the society so that every person get their share. In this society, a monthly quota is allotted and overspending is not possible. If someone desires more than allotted, they have to wait until next month to buy it. This speculative 'smart' payment system is presented through visual identity and communication design elements printed on everything to be bought in the envisioned future society. The visualization makes it possible to relate to the omnipresent payment system.

This uncanny scenario by Oda Wahl, Mariella Toppe Hove and Maria Kanstad (Fig. 1) is an example of a student work as part of a collaborative project concerning graphic design and art direction students aiming to use visual communication and speculative design reflecting issues of sustainability. As educators, we tutor design students to be able to address issues at a larger scale than the need of clients. Designers and design students can do more than solving problems; they can also find the problems and redefine them to attain better results (Dunne and Raby, 2013, Chick and Micklethwaite, 2011). But how? I will in this paper explore, through pedagogical exercises where students are involved, how *visual communication* has an important role in the transdisciplinary framework of Transition design developed by Irvin et al (2015). I will also argue how Transition design may scaffold students in designing more sustainably in the future. The paper is structured as follows: First I will clarify the main terms used in this paper. Secondly I present one student project and relate it to the model of

Transition design to present visual communications role in Transition design and finally I will conclude the importance of 'alternative student projects' in order to help students develop new mind-sets.



Figure 1. Student project: In order to live more sustainable SmartCoins controls consumption. A chip is implemented in the arm, when buying something the chip is scanned. A hologram display on the underarm shows consumption and how much is left of your monthly quota.

Sustainability; terms and approaches

Sustainability is the term developed and defined by the UN Brundtland Commission in 1987 as 'development that meets the needs of the present without compromising the ability of future generations to meet their own needs' (Drexhage and Murphy, 2010: 2). Sustainability presumes that resources are limited.

Speculative, critical design is a conceivable approach for designers where design is used to focus on possible, probable or preferable futures in order to trigger debate and serve as catalysts for enabling difficult discussions (Dunne and Raby, 2013, Auger, 2013). Speculative design as a framework is related to design fiction and requires imagination and creativity. The speculative approach may 'guide students towards asking important questions about graphic designs' social and political roles ... which may potentially lead to behavioural change' (Skjulstad & Rynning, 2015: 4).

Transition design is a new area within design, developed at the School of Design at Carnegie Mellon University in 2012, that proposes a design-led transition towards a future sustainable society. The purpose of Transition design is a complete change of society. It suggests that we live in 'transitional times' and argues that design is important in these transitions. Transition design is a transdisciplinary framework ideally consisting of teams from different fields, also outside of design. It proposes the needs of drastically new ideas and visions of sustainable futures. The framework of Transition design provides designers with a method that links constructions of scenarios of the future to how designers can evolve and develop their mind-set in order to designing with a more sustainable and possibly more place-based lifestyle in mind (Irwin et al 2015). The framework presents 'four mutually reinforcing and co-evolving areas of knowledge, action and self-reflection towards sustainable living: Visions, theories of change,

posture and mind-set and new ways of designing' (Irwin et al 2015: 20).

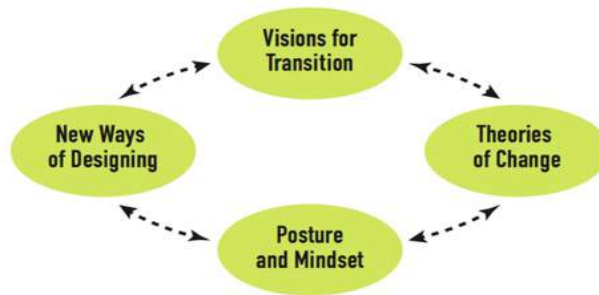


Figure 2. A simplification of the model of Transition Design Framework (Irwin et al 2015:20)

Creating change through future visions

As part of a current investigation into speculative design a project concerning the overusing of resources and the use of payment systems to control it, was given students at Westerdals Oslo ACT University College. The students were to explore speculative visions for the future (Dunne and Raby, 2013; Auger, 2013) as a pedagogical method of understanding the power of design and how design may change future postures and mind-sets. The speculative scenarios were brought to life through visual identity design applied to relevant areas and artefacts. Social media was used to simulate public engagement in order to create debate.

The student project 'Kontra' by Line Rosvoll Holmen, Sara Abraham and Eirik Burhol (figure 3) suggests a society in which people can either choose between a modest lifestyle, or if they want luxury products, paying through spending time in a Kontra prison as a necessary parallel payment system, which is only to be used for luxury products. In Kontra-prison people are publicly exposed as 'spenders'.

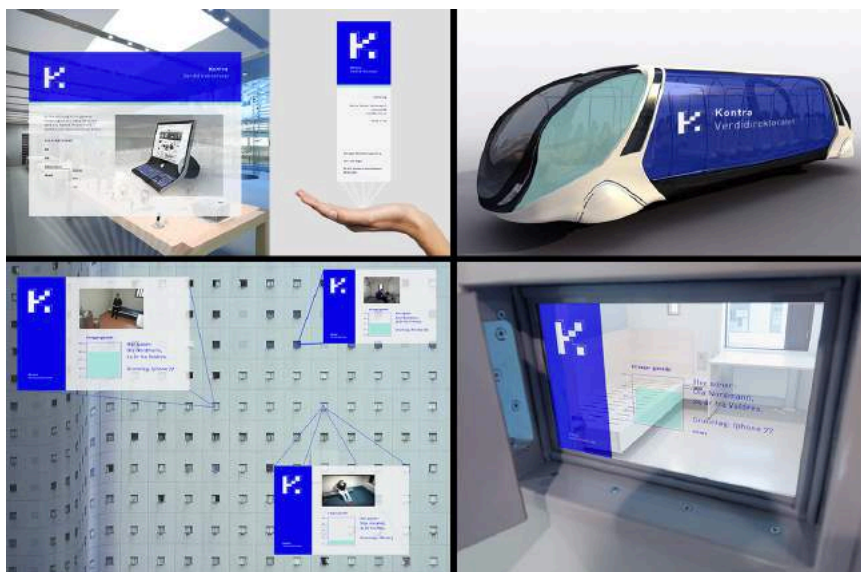


Figure 3. Student project. Price tag with regular prices and Kontra prison-time prices. Bus that will take people to the prison. The prison is projecting images and information about the inmates outside of the building.

This student project of visual communication, presenting a speculative thought-provoking scenario, may be a possible near future action, using a payment system to control our overusing of resources, in order to achieve a more sustainable society. The clear visual identity design of the scenario may make the audience relate to the issue, although they understand that this incident is not real.

Discussion and conclusion

Graphic design and art direction are encompassed, but not the main focus in Irwin et al's (2015) transdisciplinary framework. Transition design is proposed to be a continuation of service design, design for social innovation and design for policy (Meroni, 2007; Staszowski, et al. 2014; see also Irwin et al 2015). Graphic design and art direction are often central parts of all of these design disciplines using graphical elements in order to communicate new solutions created. Communication design has a significant role in visually articulating visions for transition and graphical visualisations have the important ability to speak to our emotions, not only to our rational minds. Therefore, I suggest that visual communication design may have a significant role in Transition design.

The student projects presented here are exploring future scenarios within the area of visions for transition (Irwin et al 2015: 20) based on theories of speculative design, creating possible future developments critiquing today's lifestyles. As stated by Irwin et al (2015: 21) 'transformational societal change depends on our ability to change our ideas about change'. I propose that visual communication design presented through a collaborative student project can be applied to the framework of Transition design and that visual communication is an important part of Transition design. However, the visual design in itself is not enough to pursue a transitional message, but it may be a starting point leading to changing perspective and reflectiveness. As educators, we hope that introducing projects such as this 'Payment for the Future' will motivate students to think beyond the needs of future clients and lead not only to problem-solving, but also problem-finding in future design projects. The framework of Transition design may scaffold graphic design and art direction students in adapting new postures that may result in a confidence in their contribution as designers towards a more sustainable future.

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Margaret Rynning is an Associate Professor at Westerdals Oslo School of Arts, Communication and Technology University College. She has a background as a graphic designer, working for design agencies, specialising in visual identity. As an Associate Professor she has been focusing on issues of sustainability through identity projects together with students at various University Colleges across Europe. She also has an on-going inquiry into speculative design.



Sustainability Symposium
15th October 2016

Making Our Futures: ecological arts and sustainable design

David Haley

Abstract

The presentation features a unit course that addresses the future conceptually, tangibly and critically through ecological arts and sustainable design practices. Adopting a 'question-based learning' approach to 'real world' challenges, students consider their potential to intervene and re-invent social and cultural systems, environments and lifestyles, economics, technologies, and their impact on Climate Change, species extinction, natural resources depletion and diminishing civic services as artists and designers.

The curriculum includes topics such as 'Global Citizens, Global Learners', 'Education for Sustainable Living', 'Indigenous knowledge as Art: another way of creating and being', 'Art As Emergent Evolution' and 'Whole Systems Ecological Design'. Students develop a project of their own, or work collectively on a project that involves theoretical and practical research methods, and may engage third sector organisations, place-specific issues, and collaborators from other disciplines.

The course was developed over eight years through Master Classes and charrettes in universities in Taiwan, China, Spain and the UK. In each case, Climate Change was the common context for considering diverse local and global responses to the situation. The aim being for each cohort of students and members of staff to learn from each other, while making the time and space for 'capable futures' to emerge.

Question: How can arts and design promote resilience for adaptation?

'Context is all' (Morin 2008)

I recently co-wrote a book chapter that included the following provocation:

We live in a complex world. For some this is complicated, challenging and frightening, while for others it is rich, exciting and inspiring. The realities of uncertainty, indeterminacy and chaos rarely figure in 'formal education' at any level, and when they do they are most often presented as abstract or theoretical issues within particular disciplines. However, those realities are central to our well-being and survival. In 1984, Glaswegian artist, Paolozzi, stated that 'what is needed is a new culture in which way problems give way to capabilities' (1984). When it

comes to identifying such problems within university curricula new capabilities need to be found within Education for Sustainable Development (ESD). Although this article focuses on Art and Design in Higher Education (HE), the context is much wider. (Haley et al 2016)

Despite the UN 17 Goals for Sustainable Development, Climate Change (16) and the Sixth Extinction (13 & 14) are the two most important issues we face, bar none. But how can art and design address these issues?

In 1995, inspired by the 1992 Rio Earth Summit, I joined the pioneering MA Art As Environment Course at Manchester Metropolitan University (MMU) to redefine my practice as an ‘ecological artist’ and address Climate Change. By 2003 I had become a Research Fellow and Course Leader of Art As Environment. Then, in 2013, I decided to end the course, because I was tutoring more students from other courses than I had on my own course, and I was heavily engaged in PhD supervision, developing the MIRIAD Researcher Development Programme, and had established the Ecology In Practice research group. But to maintain my links with the MA Programme, I decided to adapt a module that had started in 2007 as Master Classes in ecological arts at the University of Barcelona and Guangzhou Academy of Fine Art. It focused on what I consider to be fundamental for all of us, ‘how do we make our futures?’

Through ill health, the unit, ‘Making Our Futures: ecological art and sustainable design’ (MOF) didn’t start until October 2015.

Making Our Futures

The concept developed from my belief that, as well as contributing to knowledge, art has the potential to shift the way we think (Bohm & Peat, 2000), but to do this it has to operate on an equal, ‘post-disciplinary’ basis (Meyer-Harrison & Harrison, 2008). Putting this idea into practice drove my development of ‘Question-Based Learning’ (Haley, 2011).

The convergence of art and design cultures revealed formal and informal modes of learning that sometimes clashed, but through persistence, could be resolved through non-formal learning that emerged from a common engagement with ‘integral, critical, futures thinking’ (Slaughter, 2004). This project gave students the capabilities to explore their unknown, uncertain and indeterminate futures, to discover their own capacity for resilience and adaptability.

The Programmes

Previous MOF programmes in Barcelona, Guangzhou, Kaohsiung, Beijing, and Zhengzhou focused on local issues; river ecology and urban development, sea level rise, interdisciplinarity, ‘the Art of Sustainable Living’, ‘Material Culture/Asking the Right Questions’, ‘Resilience’, ‘Post-urbanism’, and ‘City Living/Living Living Cities’. Each intensive programme of lectures, seminars, workshops and project facilitation focused on a sequence of propositions, some fundamental questions, information, guidance and more questions:

- What is given? The art of observation
- What do we need to know? The art of urgency
- How may we approach the issues? The art of learning
- The problem with problems

- The ennobling question
- How to make an intervention
- To map a field of play
 - How big is here? - (Meyer-Harrison & Harrison 2008)
 - How long is now? - (Brand 1999)
 - Who is here now? - (Haley 2008)
 - “What is the most important thing that I can do now, at this moment, to bring the whole to life” from A New Theory of Urban Design (Alexander et al 1987).
- Whole systems ecology
 - Diversity
 - Interdependence
- Forms of resilience
- How will we make our future(s)?
- Make time a matter of urgency

For the 2015 MA unit at MMU, I included workshops from members of staff from other disciplines, to introduce ‘Global Citizens, Global Learners’, ‘Education for Sustainable Living’, and ‘Indigenous knowledge as Art: another way of creating and being’. Also, within the 2015 ESRC Manchester Festival of Social Sciences, I initiated with other colleagues Walkabout the City? (Haley et al 2016), an event comprised of two walks, for thirty multi-sector participants, staff and students from all Faculties. The walks started with one key question, ‘How is the city a place to protect and nurture life support systems now and for the future?’ (Prowse & Vargas, 2015). MMU’s new Birley Fields Campus and the city itself prompted questions of sustainability and the most pressing social, cultural and environmental issues of our time. Visiting the Biospheric Foundation, an intensive farm project created by MMU PhD student, Vincent Walsh, prompted discussion about the viability of urban food production. As a psychogeographic convergence of diverse thinking and physical practice, this project saw the emergence of Transdisciplinary Knowledge being generated by the participants (Nicolescu 2006).

As it happens all the MOF students decided to focus on different aspects of ‘waste’. Researching their chosen topics they became the drivers of their own learning and creativity, culminating in a day-long presentation of their work at Manchester Museum’s new Study, where they engaged members of the public and demonstrated their research in:

- Waste fleeces as a felted growing medium
- Linen seed smuggling, concealed in waste linen material
- New aesthetics for up-cycled products

LiFE, Professional Platforms and Fruitful Futures

This year, the MOF module evolved into a second unit for Professional Platforms. The LiFE (Living in Future Ecologies) research group provided the context for MOF students and others Masters students to progress their ideas with members of staff experienced in research, academically and professionally. It provided opportunities for students wanting to shift the way we think about and create our futures by engaging with ecological arts and sustainable design at a professional level.

LiFE was formed in June 2015 as an interdisciplinary group of researchers wanting to critically

intervene in the sustainability discourse, create ‘capable futures’ and innovate the everyday through arts and design practices. It is currently developing projects concerned with:

- 1) industrial scale waste management,
- 2) biodiversity conservation / land management
- 3) urban food production
- 4) future lifestyles
- 5) the circular economy

LiFE runs occasional events, called ‘Opsio’ (Gk. Walking backwards into the future), designed to showcase futures thinking initiatives, and is planning to run a series of ‘Salons’ as think tanks to focus on specific future living issues. Professional Platform students were expected to take part in such events.

Students working individually or collectively identified an issue and pursued a project that is related to, or synergistic with current LiFE projects. They were supported by members of staff with experience and expertise in: Art/ Design/ Art and Design Theory/ Interiors/ Object/ Artefact/ Materials/ Space/ Psychology/ Parapsychology/ Hospitality/ Food/ Ecology/ Architecture / Education for Sustainable Development / Environmental Policy / critical futures thinking. The students acquired LiFE skills and capabilities associated with both theoretical and concrete aspects of research, to invent practical applications, or envision novel futures.

‘Pomona Encounters: The Art of Fruitful Living’

For the Manchester European City of Science, this July, the students were invited to ‘design-fit’ their projects into another walk; this time from St Ann’s Square to Pomona Island, between the Bridgewater and Manchester Ship canals.

The walk was inspired by the ecology of food, the potential for urban food production and Pomona, the Roman goddess of fruit. 21 walkers encountered a cornucopia of paradoxical tales about biodiversity and urban planning, carbon-free air miles, invasive species for healthy living, and old toolkits to design new nature. Through Gaia Project Press (distributed by Cornerhouse Publishing), LiFE is now producing an edited collection of provocative stories to inquire how we may live in the future. The book, ‘Fruitful Futures: Imagining Pomona’ will be launched at a LiFE Salon, as part of Design Manchester in October 2016.

Are art schools the best place for art, let alone art that expands communities of sustainable practice? The question, then, is that given the current political environment, how might schools of art and design adopt and sustain such programmes? Manchester School of Art is a good example. Ecological arts and I have been ‘deleted’ from the newly positioned Manchester School of Art, as it loses its faculty status to become a school within the Faculty of Arts and Humanities. Similar moves have taken place over recent years at Chelsea, Cumbria, Dartington and Falmouth. Within the Abstract of the book chapter mentioned at the beginning of this paper, there is the following passage:

‘Evolution and whole systems ecology, thrive on emergent novelty, diversity, and the resolution of opposites. Creative arts and design learning, teaching and research must be encouraged to do the same, otherwise, we risk developing ‘art by design, design by statistics and research by bureaucratic policy’ (Haley, Vargas & Ferrulli 2016).

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Introducing Sustainability to Creative Employment Seeking

Eleanor Snare

Abstract

This presentation discusses the outcomes of a creative employment programme run with final year students in the School of Design based on the Japanese concept of 'ikigai'; 'the reason for which you get up in the morning'. Ikigai has been identified as key to a long, happy life (Buettner, 2009; Sone et al, 2008) and, along with Maslow's self-actualising behaviours (1970), was used to encourage professional sustainability among students.

The programme aimed to transform how higher education feeds into creative careers by using an expanded view of sustainability; the material of a person as an asset to be preserved, and work as a method of sustaining that.

It was also a response to unsustainable elements of creative work which are often replicated in contemporary higher education, including high levels of stress and 'churn', short-termism, and the loss of worker agency. The programme's long-term goal is to make the creative industries more sustainable through behaviours of next generation workers.

I will discuss the framework, key lessons and positive impact of the programme. I'd like to share my experience with other educators and offer the programme as a way to advocate and expand communities of sustainable practice.

Question: How can we introduce professional sustainability in higher education through the way we run our courses?

Aims and background

Students are suffering acutely from stress and mental health issues; 90% of students feel very or reasonably stressed by university work (NUS Scotland, 2010) and universities have highlighted an increase in the number of students requesting support for their mental health (Sherriff, 2016; Coughlan, 2015).

Harvey ascribes feelings like these to "the neoliberal ethic of intense possessive individualism and financial opportunism" (2010: 175). Newly-increased costs of 'marketised' education result in increased demands to use one's degree effectively, which often translates to finding and keeping a 'good job'. Yet in this pursuit students can become myopic; they fall prey to "increasingly individualistic isolation, anxiety, short-termism and neurosis" (Harvey, 2010: 176).

The solution is to introduce sustainability into employment seeking. A broad, holistic view of sustainability, centring on human sustainability, can:

- Alleviate isolation through highlighting community support
- Encourage a long-term view, and
- Set up behaviours which sustain and develop human capital, rather than deplete it.

With this solution, students are better able to manage expectations of and their transition to professional life. They're more likely to pursue relevant, enjoyable careers as they work on their long-term life plans, rather than short-term 'quick fixes', which has a beneficial impact on an institution's image.

Ikigai

An employment programme was developed which introduced sustainability through 'ikigai', a Japanese concept translating as 'the reason for which you wake up in the morning' (Buettner, 2009). Sone et al (2006) and Buettner (2009) identify ikigai as a positive influence on physical longevity and emotional happiness; it parallels the positive impact of finding 'meaning' in life (Stegar, 2009) and the continuing process of self-actualisation (Maslow, 1943).

Ikigai focuses on the preservation and development of human potential and capital through understanding oneself and striving for growth. In this way, it is a foundational sustainable practice which starts with the most essential resources of all - the human mind, energy and spirit. Education is an investment in these resources, and work the realisation and rejuvenation of them.

With ikigai at the heart of an employment programme, broader discussions could take place about the importance and development of human capital - not only social or economic capital. Through approaching themselves sustainably, students' concept of sustainability was expanded and could begin to affect change across their life.

The aims of the programme were:

- To introduce students to ikigai and the tools they could use to approach it
- To encourage sustainable personal development through programme content and modelled behaviours
- To prepare them for the realities of creative employment

The behavioural template for work is set in education. By pursuing a sustainable approach to employment during university, starting with human capital, the next generation of workers will be able to provide a radically different template that contributes to expanded communities of sustainable practice.

Practical application

The programme was run over 11 weeks with final year Fashion Marketing students, with seven in-person sessions and four self-directed sessions over the Easter break. Communication was through a weekly email newsletter for 10 weeks, containing a session recap and homework

as downloadable PDFs, which were also provided as print-outs in the session. Some e-mail content included images and video. A Facebook group was set up before the Easter break to communicate with students during the holiday.

Marketing concepts were used as tools to approach ikigai, helping structure the programme:

- Ikigai as the ‘core objectives’
- Strategies for achieving ikigai
- Tactics for implementing the strategies

Many careers programmes focus purely on tactics (such as writing a CV) without considering the ‘core objective’ - the ultimate purpose of the activity. Keeping the objective in mind ensures strategies and tactics are meaningful and relevant for participants.

Weekly in-person sessions were a combination of explanation, discussion, and independent and group activities. A breakdown of the programme’s content can be found in Table 1. Sessions took place on campus in flat classrooms and were informal and relaxed. Attendance and homework were not compulsory; instead, students were asked to sign a ‘contract’ at the start of the programme, which outlined what was expected of them (Figure 1).

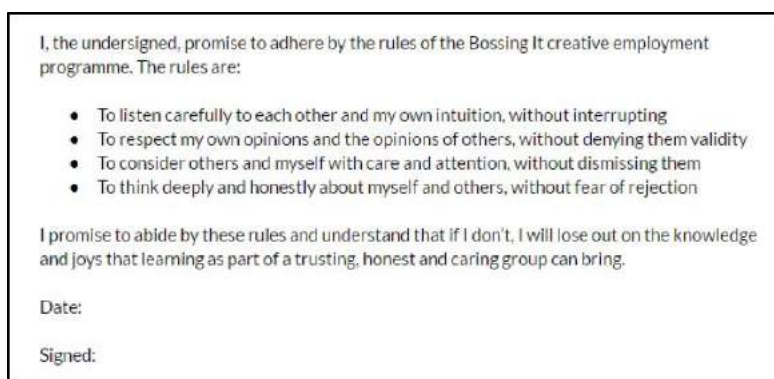


Figure 1: Programme content breakdown week-by-week with overall and specific aims

Table 1: Programme content breakdown week-by-week with overall and specific aims

WK	Content	Homework	Overall aim	Specific aims
1	Introduction to course and explanation of ikigai	Describe your perfect week Consider your core objective Attend the careers event	To introduce students to ikigai and the tools they could use to approach it To encourage sustainable personal development through programme content and modelled behaviours	To ease students into thinking about ‘ikigai’ through self-reflection and understandable tools
2	School wide careers event	List 20 skills you have Choose a top 10 Choose a top 3	To introduce students to ikigai and the tools they could use to approach it To prepare them for some of the realities of creative employment	To broaden students’ minds on job opportunities To conduct a broad skills audit through self-reflection

3	Discussion of skills	<p>Articulate skills as general areas</p> <p>Evaluate your skills through 1-5 Likert scale</p> <p>Evidence your skills using quantitative and qualitative evidence</p>	<p>To introduce students to ikigai and the tools they could use to approach it</p> <p>To prepare them for some of the realities of creative employment</p>	<p>To conduct a detailed skills audit</p> <p>To communicate the importance of reflecting on and recording skills</p>
4	Discussing different approaches to money and finances, and the links to skills, evidence of skills, stress and ikigai	<p>Reflect on discussion</p> <p>Find roles and their salaries which require your skills</p> <p>Research and list future monthly outgoings</p> <p>Work out your potential future salary and 'balance' from outgoings</p>	<p>To introduce students to ikigai and the tools they could use to approach it</p> <p>To encourage sustainable personal development through programme content and modelled behaviours</p> <p>To prepare them for the realities of creative employment</p>	<p>To tackle the difficult subject of money openly and honestly</p> <p>To show how money and sustainable personal development fit together</p> <p>To help students make educated choices about salary</p>
5	Easter: exploring ikigai	<p>Choose three 'ikigai' options</p> <p>Talk to friends and family about it</p> <p>Practice one 'ikigai' for a week</p>	<p>To encourage sustainable personal development through programme content and modelled behaviours</p>	<p>To experiment with ikigai through practice</p> <p>To start modelling personal behaviours</p>
6	Easter: inspirational figures	<p>Practice one 'ikigai' for a week</p> <p>Find and document someone who inspires you</p>	<p>To encourage sustainable personal development through programme content and modelled behaviours</p>	<p>To experiment with ikigai through practice</p> <p>To understand your own goals through admiration</p>
7	Easter: future ideas	<p>Practice one 'ikigai' for a week</p> <p>Create a vision board</p>	<p>To introduce students to ikigai and the tools they could use to approach it</p>	<p>To experiment with ikigai through practice</p> <p>To understand your own goals through visuals</p>
8	Easter: build your network	<p>Reflect on your experience of ikigai</p> <p>Contact five people with interesting jobs</p>	<p>To introduce students to ikigai and the tools they could use to approach it</p>	<p>To reflect on the experience of ikigai</p> <p>To build a network of contacts</p>
9	Explaining strategies for achieving ikigai and one-to-one time	<p>Brainstorm a range of strategies to achieve your ikigai</p>	<p>To introduce students to ikigai and the tools they could use to approach it</p>	<p>To consolidate what students have learnt so far</p>
10	Explaining tactics for achieving ikigai and one-to-one time	<p>Brainstorm a range of tactics</p>	<p>To introduce students to ikigai and the tools they could use to approach it</p>	<p>To consolidate what students have learnt so far</p>

11	Planning		To introduce students to ikigai and the tools they could use to approach it	To consolidate what students have learnt so far
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Engagement

22 students began the programme, between 10 to 15 students attended each session, and around five students attended every session. The programme was voluntary and attendance was lower during the final deadline-heavy weeks. During sessions, students were fully engaged, asking questions, encouraging discussion and helping others to learn.

Results from the weekly email communication show programme engagement outside of the sessions. Figures 3 and 4 show the open rate and click-through rate (CTR) for the email communication.

Week	0	1	2	3	4	5	6	7	8	9
Open rate %	61.9	76.1	61.9	63.6	54.5	50	45.4	40.9	36.3	45.4
CTR %	14.2	33.3	38.1	27.2	31.8	9.0	9.0	22.7	0.0	22.7
						Easter break				

Figure 4

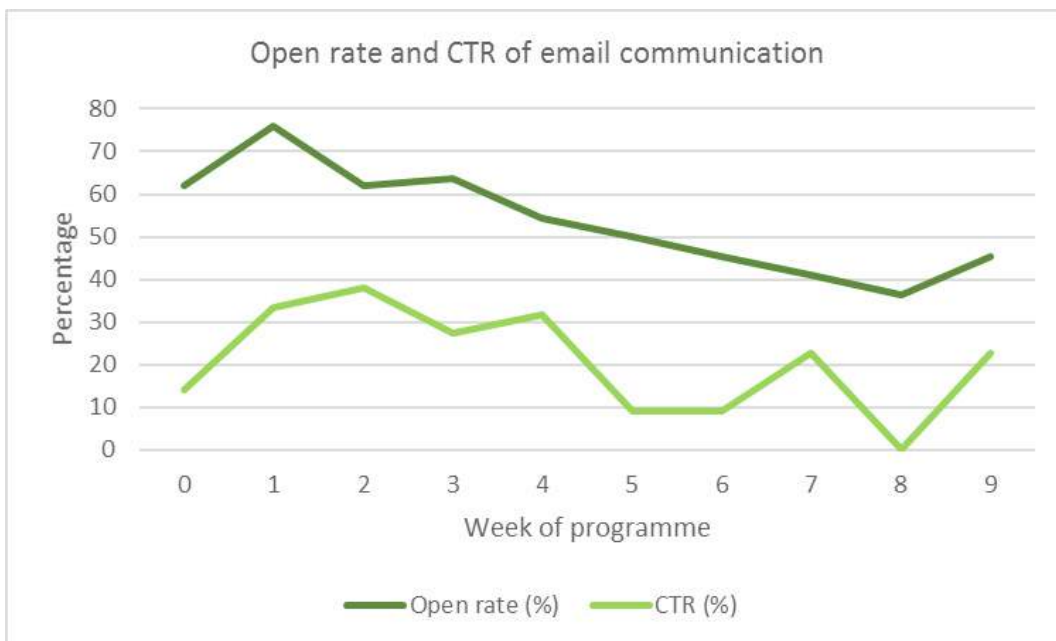


Figure 5

The average open rate was 53.6% and average CTR was 20.8%; a strong result compared to the industry average open rate of 16.2% (MailChimp, 2016)¹. The relatively low CTR may be because email links were PDF duplicates of in-session print outs. There was a significant drop in CTR and a slow decline in open rate during Easter.

Engagement with the Facebook group was low; only 11 students joined and interaction was minimal. This may be because:

- The Facebook group was predominantly used through Easter (when other forms of engagement also dropped)
- Content shared by the facilitator was a 'prompt' to check email, not to elicit response
- Content was sporadic, which reduced the likelihood of it appearing in students' newsfeeds

Impact

A qualitative and quantitative feedback survey was given to students², and although limited responses were received, their feedback helps indicate the programme's positive impact.

Students approached the course expecting it to be tactical - "more about CVs and cover letters". Ikigai was a brand new concept for these students, and its application to a range of employment ideas was challenging yet ultimately rewarding.

"It let me know that it is important to know myself in order to know what I can do and should do."

"...it was more about actual purpose which I really liked"

"[The facilitator's] approach to careers was on a larger, more thought provoking scale. The programme's focus on ikigai made us look at our whole lives rather than just a job."

When respondents were asked whether the programme had influenced their behaviour (in a rating from 1, not at all, to 5, strongly influenced their behaviour):

- 80% rated it as 4 in influencing their understanding of personal and professional value
- 60% rated it as 4 or 5 in influencing their management of a work-life balance
- 60% rated it as 4 in influencing their behaviour when working full time

When asked if they'd undergone any stand-out behavioural changes as a result of taking part in the programme, responses focused on how expectations had changed.

"It helped me to manage my expectations of life after uni"

"...not expecting there to be one exact right way...calming down in my approach to finding work..."

¹ MailChimp records the open rate of users' email lists according to their industry; 16.2% is the average open rate for the training and education industry. This average can fluctuate slightly and was recorded on 23 August 2016 via user login.

² Feedback was conducted via Google Forms between 1 August 2016 and 12 August 2016 and anonymised. All quotations in this section are taken from students' responses.

Finally, when asked what they would take from the course into the future, answers showed a positive impact on students' relationships to employment and creative community:

“the idea of finding my ikigai and understanding how to share it with others”

“...knowing that we're all in the same boat and it's okay to not know exactly what you're doing”

“That there is no one path to achieve your goal”

“To look for personal fulfilment in a job.”

This feedback suggests the programme successfully achieved its aims for the most part:

1. Students were introduced to ikigai and the tools they could use to approach it, which was considered challenging but rewarding.
2. Students were successfully encouraged to embark on sustainable personal development, through programme content and modelled behaviours. Evidence of this includes that 80% of respondents felt the programme had strongly influenced their behaviours related to personal and professional value.
3. Students were prepared for the realities of creative employment, but this goal could have been pursued more clearly during the programme through concrete advice or 'tactical' sessions.

Advice for facilitators

Results show that a sustainable approach to employment-seeking is desired and makes a strong impact on students' behaviours.

Facilitators should carefully consider when the programme takes place during the year to encourage consistent attendance. To balance workload and provide 'tactical' support, facilitators should work with specialist providers to deliver the programme. Sustainability needs to be embedded into the facilitator's behaviour so communication channels and use should be selected carefully. Finally, facilitators should be aware of the significant pastoral work required in running this challenging yet rewarding programme.

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Beyond the Classroom: pedagogy for the real world

Roger Bateman

Abstract

‘The nature of sustainability, and the prospect of unsustainability, require a fundamental change of epistemology, and therefore of education. Changes are necessary in curricula, pedagogy, policy and institutional structures.’ (Jones et al 2010)

Social design highlights design-based practices aimed towards collective and social ends rather than predominantly commercial or consumer-orientated objectives. This paper shares staff and students experiences of participating in an interdisciplinary approach to social design practice and describes the key aspects that arose from the implementation of a collaborative approach to teaching on the MA/MFA Design Programme at Sheffield Hallam University.

Taking the conference theme of ‘expanding communities of sustainable practice and a sub-theme of a holistic design curriculum, the paper particularly highlights the value of situating learning beyond the classroom in real-world contexts supported by a community of practice. Holism here relates to the recognition that learning is socially situated, that it draws on the individual strengths and resources the student bring and that by involving practitioners from different specialisms learning has the potential to bring about real-world transformation and change beyond the boundaries of the subject discipline.

Introduction

Research informed teaching is very much at the core of the MA Design Programme at Sheffield Hallam University. Students are in the first instance able to learn about research findings specific to their subject area (research led teaching). Students learn about research methodologies and processes (research orientated teaching) and finally students are offered the opportunity to engage in real-world research projects (authentic learning or situated learning). This is illustrated in a first semester module that investigates Social Design (SD) and more broadly Socially responsible Design (SRD). The overall SRD project strategy focuses on enabling students to participate in socially responsive design practice with a particular focus on developing collaborative interdisciplinary student-generated responses to working in partnership with people. The inter-disciplinary make-up of the teaching team, drawing on expertise from design and health and engaging with staff from the Lab4Living means that students can be supported and ‘sign-posted’ to key resources. Lab4Living is a trans-disciplinary research group at Sheffield Hallam University based on a collaborative community of researchers in design, health care and creative practices (Langley et al 2016).

Today, the word “design” means many things. The common factor linking them is service, and designers are engaged in a service profession in which the results of their work meet human needs (Friedman and Stolterman, 2015). Over recent years the design profession had undergone profound transformation continuing to do today as designers and design pedagogy struggles to keep up with equally rapid changes in the world.

The emergent area of social design can be defined variously. In his book ‘Design, When Everybody Designs: An Introduction to Design for Social Innovation’ Ezio Manzini (2015) writes; in its original meaning, social design is a design activity that deals with problems that are not dealt with by the market or by the state, and in which the people involved do not normally have a voice. Armstrong et al (2014) make the following differentiation; although all designing can be understood as social, the term ‘social design’ highlights the concepts and activities enacted within participatory approaches to researching, generating and realising new ways to make change happen towards collective and social ends, rather than predominantly commercial objectives.

This concept is not new. In one sense it has always been recognised that designers have an important role to play in contributing to society. John Ruskin, William Morris and Christopher Dresser writing in the nineteenth century were conscious not just of the quality of the objects produced but also about how they were being manufactured and the wider social conditions relating to their production (Bateman and Craig, 2016). More recently social design has become synonymous with the work of Victor Papanek (1985), Ralph Erskine (1978) and Manzini. Manzini continues to champion design for social innovation through DeSIS, Design for Social Innovation and Sustainability, a network of university design labs that work with local, regional and global partners for change and sustainability.

The Projects

To date the MA Design Programme has explored a number of projects under the heading of Social Design. This paper briefly introduces two of those projects

1. Designing out Vulnerability
2. Community, Design & Engagement.

Both projects focused upon each student designer becoming part of a multi-disciplinary and cross-disciplinary community of practice (COP) of between 6 and 7 students who share their COP content for garnering feedback from the other COP’s. Each physical COP was augmented by a single virtual COP using facebook as a platform for socially oriented learning.

Methodology

The SD module has five core goals:

- Exploring social design outside of the classroom.
- Widening students understanding of their role as designers.
- Creating a shared exchange for teams of students, staff and external agencies.
- Enhancing collaboration between student, staff and external agencies.
- Exploring the use of online content as catalyst for pedagogical change.

Action Research

The project used a participatory action research methodology (Swantz, 2008; Wadsworth, 1998) with the 2015 project forming a research cycle informed by work in 2014 and the 2015 project informed subsequent project iterations for work in 2016 that further explored and widened collaborative co-creation in real-world scenarios.

Theoretical Frameworks:

The project is founded upon social learning theory informing the choice of ‘scaffolding’ that support the types of interaction and assessment strategies implemented within the project, forming a type of ‘design framework’. The theoretic frameworks used are:

- **Social Constructivism:** Vygotsky (1978) argued that learning is a collaborative process. Social constructivist pedagogies are interested in enabling students to develop creative, critical thinking, and collaborative skills, rather than focusing upon course content (Evans, 2005 in Cochrane et al 2011).
- **Communities Of Practice:** Communities Of Practice are made up of groups of people with a common interest who act as peers as they explore issues within a particular context (Lave and Wenger, 1991).

The Projects

1. ‘Designing out Vulnerability’ In 2014-15 the MA/MFA Design Programme worked with dementia sufferers and the open knowledge sharing platform fixperts.org. Initial sessions offered students the opportunity to hear from specialists in dementia care and on-going contacts were made contact with a large third sector organization in the form of Alzheimer Society.



Figure 1. Dudley & Geoff courtesy of Gillot, Gulliford, Richardson

2. 'Community Design & Engagement' In 2015-16 the MA/MFA Design Programme worked with Sheffield City Council on a project in the Page Hall district. The overall aim of the 'Community Engagement and Design Project' was to employ design thinking and design knowledge to co-create, with local partners, socially relevant scenarios, solutions and communication programs. The scope of this project is wide reaching and will take some years to full explore. The role of the students was to help build up a collection of potentially socially relevant scenarios for the Page Hall district with their contributions to be seen as starting points for wider discussion and not end points for implementation. Traditionally a working class district, Page Hall has over the last few years seen a dramatic population shift with the influx of approximately 1,500 Roma with the vast majority being Slovak or Czech.



Figure 2. Page Hall District, Sheffield, UK. Courtesy of R.Bateman.

Throughout both projects students were required to document the process through film and video (Shrum et al 2005). Methodologically in an action-research context this was a key aspect of the student learning in relation to reflecting back on these with different stakeholders, offering a way of capturing learning as well as building skills in reflexivity. These films also provided a vehicle through which to disseminate the project and will form learning objects, to be viewed and used by future cohorts of students.

By working in this way students are supported to understand ways of accessing communities and how to develop projects, avoiding Katie Swenson's (2012) concern regarding some curricula, which fail to 'teach students about how projects actually happen' (Bateman and Craig, 2016). It also meant that support could be offered in relation to navigating and coping with the emotional complexities that working with people living with illnesses or long-term conditions such as dementia or migrants living on the poverty line can evoke.

Discussion

This project represents an important first step in building understanding of how to develop curricula to equip students with the skills required to work in social design projects. Social learning theory (Bruner) posits that isolated facts do not take on meaning and relevance until learners discover what these tools can do for them. Our study very much reflects this position and closely corresponds with Siemen's (2004) assertion that true learning occurs when the learner is able to make personal connections between the learners' own goals and the broader concerns of the discipline (Bateman and Craig, 2016).

However if change is to be supported and sustained it is important to design educational opportunities so that they are sustainable. As such Communities Of Practice made up of groups of people with a common interest are a valuable way to support group and interdisciplinary work. Lave and Wenger (1991) assert that new peripheral (or partial participation) community members learn from the active members of a community, and learning occurs as they are gradually brought into an active role or full participation in the community. The process of moving from a position of legitimate peripheral participation to full participation within a community of practice involves sustained activity and requires time for the ontological shifts that must occur.

An ontological shift is "the re-assignment or re-categorizing of an instance from one ontological category to another" (Chi and Hausmann, 2003: 432), or simply put, a reconceptualisation. The sustained engagement of a community of practice creates a supportive framework for cultivating participant ontological shifts as members reconceptualise their roles from individual experts to members that facilitate co-generated content (ibid).

Conclusion

The work undertaken constitutes a small study into teaching social design within a Postgraduate Design module. The authors believe that social design has a place in design education as threats including increasingly precarious economies, financial and social inequity, global warming and war are real issues impacting on world citizens. Opening up the right forums for discussion and experimentation, including the right mix of skills and knowledge to enrich discussion needs careful consideration and facilitation. Our work to date has focused on placing social design within a module and employing cross-disciplinary and interdisciplinary working and learning. Our current project (2015-16) widens the learning experience and is taking place over a year-long period with multiple entry and exit points. This project includes the local City Council, city residents and design students and will finish in October 2016.

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Roger has taught at Various UK and overseas HEIs and in 2004 joined Unitec in Auckland New Zealand where he was an Associate Professor and Head of the School of Art & Design. In 2010 he returned to the UK and took up a post at Sheffield Hallam University where he was responsible for taught Art & Design Postgraduate Courses. He is a member of the SHU Art and Design Research Centre and has research interests in Design + Pedagogy + Social Innovation + Sustainability.



Linking Social Design Project

Diana Robinson Trápaga

Abstract

Groups of low-income women from the Mexican state of Oaxaca migrate to Baja California and settle in Maneadero, an agricultural zone, to obtain work. These women learn how to embroider when they are young. Helped by two women in a much better social and economic position, this small community added embroidery to various items to generate sales and increase income. However, their work was poorly marketed and their efforts ended in disappointment. Teachers in the School of Design at CETYS Ensenada wanted to determine if creating a concept and brand by adding design to the women's projects would increase sales. Students worked in multidisciplinary groups. They became aware and sensitized to this group of women in need. Students studied and analyzed the market, searched for references and created branding to help these women. Applications created included digital media, videos, social media, digital promotions, print materials for exhibition units, labels, and patterns with images inspired by Baja California's beauty. The goal, transforming by design, was to make goods produced by this group of migrant women competitive, to help them with production, and to reinstate their traditions and pride. The results were positive, reflecting a good start.

Question: Is it possible to make groups in need competitive by adding design? (Transform by Design).

Introduction

Mexico is a country in need, with 121 million inhabitants. Twenty-one percent of these inhabitants consider themselves indigenous. The states of Oaxaca, Yucatan and Chiapas account for 42.6% of the indigenous-speaking population in Mexico. Four of six women have no academic education (CONAPO, 2016). Men and women from the south migrate to the northern part of the country looking for better opportunities. Sometimes they settle in northern Mexico, although generally they cross the border. This case concerns a group of women from the state of Oaxaca, many of whom have several children. These women migrate to Baja California, northwest Mexico, and settle in the Maneadero Valley, an agricultural zone in Baja.

Oaxaca

Oaxaca is the fifth state in Mexico. It is located in the south-western part of the country and is comprised of approximately 600 kilometres of coast. It is a state with great ethnic and linguistic diversity, many traditions and much folklore. More than 18 different ethnic groups live in Oaxaca.

Oaxacan women learn how to embroider when they are young girls. It is considered a feminine art. Girls from all social classes, poor or rich, are taught to embroider and weave at a young age. They obtain the skills and knowledge to use the needle and thread. Most ethnic groups make their own clothing throughout their entire life. They work certain designs according to the occasion: weddings, ceremonies, offerings. Oaxacan textiles are a cultural heritage and characteristic of the state (Quiroz, 2012). Migration from the state of Oaxaca is high due to:

- High rates of marginalization and poverty
- More than half of the population live in rural communities
- Few jobs, low income
- Families encourage migration.

According to information from the Population National Council CONAPO, Oaxaca has a high indicator for marginalization, meaning 80.35% of the population cannot satisfy their basic needs such as health care and housing (CONAPO, 2015).

What about Maneadero

Maneadero Valley follows the Pacific coastline for twelve kilometers south of the city of Ensenada. It extends for 4,200 hectares of prolific land which mainly produces chiles, tomatoes, asparagus, Brussels sprouts, and export-quality Persian cucumbers and flowers. The valley generates approximately 5000 jobs, for which the workforce is primarily female (SEFOA, 2015). Women migrate there to work in the harvest. The wages are low and their living conditions are poor, though better than in their hometowns.

Forming the group Migrant Women Sowing Dreams

Mayte Cuahutle and María de Jesús Angoa, two Mexican women of elevated social and economic position, learned about this small community and were challenged by these migrant women's issues. They became acquainted with them and discovered they all knew embroidery techniques, so Mayte and Maria decided to support the migrant women by providing the materials to create this traditional art. The development of empathy seemed a perfect place to start. Mayte and María were very sensible about needs, respecting interests, ways and traditions. They encouraged the migrants, explaining how they could earn extra income by selling their needlework, something Mayte and Maria had known since they were young girls. Several women gathered; some showed interest while others walked away.

Mayte and Maria started working with the group which they named "Migrant Women Sowing Dreams", or "Mujeres Migrantes Sembradoras de Sueños." Their objectives were:

- Encourage work
- Help them earn extra income
- Dignify their traditions

- Elevate their self-esteem
- Provide support.

Mayte and Maria solicited donations from friends-- three sewing machines, two tables, cloth, rings, thread, needles and a room where they could gather to work. The small community started embroidering and sewing the applications on different items such as aprons, table mats and bags. To promote Baja California, the motifs embroidered were images associated with tourist attractions. Products were sold in local bazaars and events in Ensenada, Tijuana, San Diego, and among friends. Though a strong effort was made, only minimal income was earned. Their work barely sold. What started out as a good beginning grew into a disappointment.

Linking project

The main opportunity in the situation was that by adding design to the project, they would create a concept and a brand which would enhance sales. Teachers in the School of Design at CETYS Ensenada University, forty-five minutes from Maneadero, linked the project to the Branding class of the first semester 2016, to students from the School of Graphic Design and Engineers on Digital Graphic design.

The objectives:

- Transform by design, help this group of migrant women produce in a more efficient way by adding attractive designs to their handiwork.
- Sensitize students to this group in need and make them aware of this social issue.
- Engage empathy.

Methodology

First the case was explained by the teacher in class. Guidelines for the project were addressed which responded to the following questions:

- Who are they
- What is their situation
- What do they need.

Mayte Cuahutle was invited to talk to the class. She explained how she and Maria started the project and introduced the Design students to the project's mission, vision, and history. Mayte provided an explanation of their logo and described their promotional efforts. She shared her experience and actual situation, as well as potential sales opportunities and possible sales barriers. She spoke about giving. "People listen to our story, but don't buy our product." She communicated the dream to help make a difference in the lives of these women beyond better income. Students learned greater awareness about helping those in need.

Students studied and analyzed the market, searched for references and investigated other national and international associations or foundations that help groups in need. They researched how to communicate their objectives and values; how to build interest and encourage helping. Some organizations work in a similar way, selling products they produce; others exist through donations. Each student investigated three different cases, for a total of thirty different projects compared and analyzed.

The objective was to create a branding strategy to enhance sales. We identified possible actions:

- Redesign the actual logo.
- Create digital promotions for digital and social media, videos.
- Design printed materials such as: labels, pamphlets, posters, business cards.
- Build an exhibition to be used at bazaars and events.
- Create a pattern book with embroidery images inspired by Baja California's beauty.

First the students worked individually to redesign the logo (Fig.1) according to the values of the group. Each design was evaluated, and the one that worked the best was selected for the project. The elements used in the logo were a tree and a needle, both of which were used in the previews logo, and a hummingbird, which was added, because it migrates and the female bird builds the nest (Fig.2).



Figure 1



Figure 2: Logo redesigned, student Iris Castellanos

After defining the logo, students visited the community. The visit sensitized students about the migrants' workplace conditions, needs and way of life. Students got acquainted with the women, their children and their temporary residence. Founders Mayte and Maria guided the alumni during the visit. Students decided to make a donation during their visit. They decided to donate chairs, as the migrant women had none in their workplace (Fig. 3,4,5,6).



Figure 3 and 4



Alumni worked in class to build the concept for the campaign. It would be both an emotional and inspirational campaign to communicate that we all have the same dream: to take care of our family, live happy, and grow in harmony. This was summarized in the phrase: “We all have a dream.”

Production process

The professor organized students into groups to work in three multidisciplinary teams. Graphic Designers, Engineers in Graphic Design and Marketers combined their knowledge and expertise as follows.

- Red team - responsible for printed applications including exhibit stand, uniforms, pamphlets, labels, and postcards (Fig. 7 and 8).
- Green team - responsible for designing the embroidery images and creating patterns for the women to use as guides (Fig. 9).
- Blue team - responsible for digital applications such as Facebook, videos, promotions, and Internet website (Fig. 10).



Figure 7 and 8

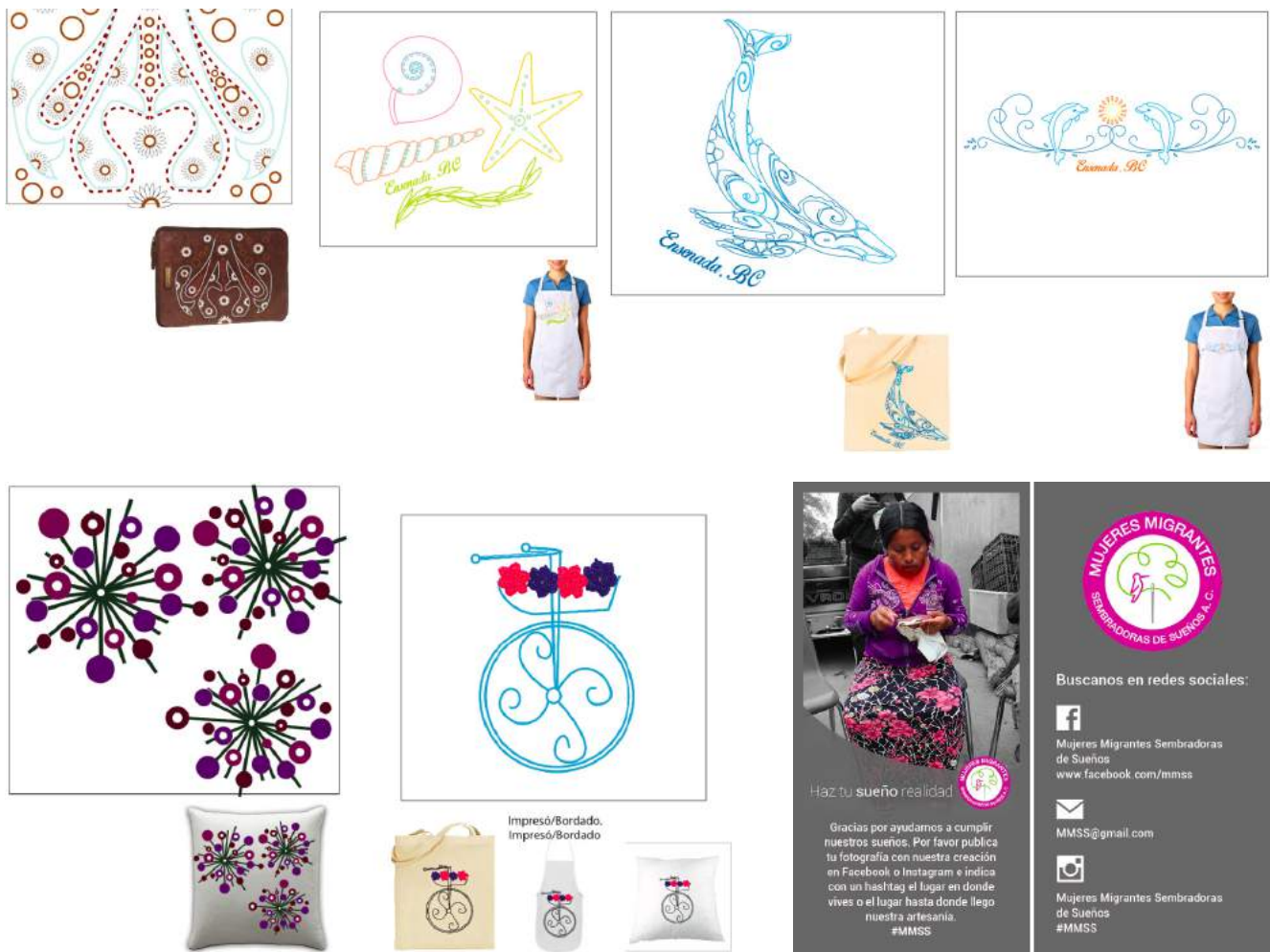


Figure 9 and 10

Conclusion

Linking a social project to a design class created an opportunity to help others in need. It enhanced empathy, the core principle undergirding the design thinking strategy. In this case students developed empathy with persons from a different culture, with varying interests as well as social and economic issues. The emotional issue in the project yielded the most transcendent result. It engaged empathy as the students learned to respect others' traditions and beliefs. For example, because of their traditions, there are certain images the migrant women don't like to embroider and the production process was adjusted to allow extra time for this work.

Founders Mayte and Maria were very pleased with the result of design, especially by the commitment of the students with the project. Migrant women felt embraced and cared for, which helps their self-esteem. They are now working with the new patterns which will be sold at local events in Ensenada during August. This will allow us to measure the results. It is important to continue this work by linking it with other subjects, or having graphic design students collaborating as a social service with the group.

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The author

Diana Robinson was born in Mexico City. From 1989 to 1993, she studied Graphic Design at Iberoamericana University, Mexico City. From 1993 to 1996, Robinson worked as Junior and Senior designer at Entorno Tassier studio, developing branding, packaging and publishing projects. From 1996 to 1998, she worked at Mexico Communicates as a web designer, Veracruz Mexico. In 1996, Robinson opened Robinson Design Studio. In 2000, she moved to Ensenada Baja California, Mexico, she joined as a professor with the School of Design at CETYS Ensenada.