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Developing Sustainable Makers

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This essay will discuss my developed professional and teaching knowledge of sustainable making processes and how I have used this to focus creative learners on how to explore personal values and strengthen their sustainable making practices.

When I contemplate how I approach teaching the fundamentals of sustainable creativity to developing Designer Makers[1] at the University of Plymouth[2], the ramifications of making are pertinent, as the processes and resources needed for the activities themselves are often detrimental to the environment. The difficulty with this predicament is that, like many, I have an inherent need and want to create things; the processes of making objects and exploring ideas through creation help me appreciate my surroundings and significantly contribute to my emotional, physical and mental wellbeing.

By understanding the nature and approaches of making and designing then sharing knowledge on how it could be made more sustainably, one can create a successful outcome that is not only a 'bingo' to creativity and wellbeing but crucially positive to the environment.

With my rational side saying, 'Just don't do it' and my creative collaborative side saying 'This needs to happen' a compromise is required; a compromise with logic and responsibility which allows space for intuitive questioning and the opportunity for a 'Eureka' type happening!

When discussing object creation, I often reference Professor Daniel Miller's statement, 'Objects continually assert their presence as simultaneously material force and symbols. They frame the way we act in the world, as well as the way we think about the world' (1987, p.105). This, alongside William Morris'[3]. Have nothing in your houses that you do not know to be useful or believe to be beautiful,' (1882, p.108), prompts me to consider my personal positioning; what objects and things do I want to make, have around me and to what extent I am living within the means of sustainably and all its appearances.

My creative training started over 30 years ago, initially via school and then university, and was predominately focused on clay; as a material one can view it both positively and negatively in regard to sustainability. Crudely, clay alongside the oxides, minerals and fluxes used for colourants and glazes, can be found naturally within the earth, however, due to firing processes and the embodied energy involved, work produced can be immensely high in consumption and waste. Of course, nowadays, most of us don't dig up the elements (clay, oxides etc.) and instead opt for purchasing bagged materials of which the knowledge of origin and methods of manufacture can be limited. Additionally, if we are not alert to our usage of chemical materials for glazing, pottery throwing and exploration with plaster, there could be a situation where large quantities of unnecessary material are used and where

[1] Designer Maker 'produces an initial design and takes responsibility for its manufacture' (Gradireland, 2015).
[2] BA Product & Furniture Design and MA Design courses.
[3] William Morris 'was a British textile designer, poet, artist, novelist, architectural conservationist, printer, translator and socialist activist associated with the British Arts and Crafts Movement' (Tate, n.d.).

there is needless waste. This is a key example of where we can see modern creation becoming entangled in the difficulties of crafting sustainable design.

As I look back at my training, an interesting issue that until now I hadn't really thought about, is that aside from studying at California State University Long Beach, where there was a large urn to collect unused liquid glazes, I don't ever remember having conversations about wastage or contamination. In the 1990s, most UK institutions provided materials for free, so they were used as wished, clay was recycled by some, but not all, and unused glazes and other liquids including plaster went down the sink. One could argue that due to having no monetary expense attached to our material usage, we were simply not concerned with these issues. However, whilst I have no evidence of this, I would place greater weight on the idea that it's more to do with the fact that our teachers and those around us were just not talking about the ramifications of these actions on sustainable practices. On the plus side, in all establishments I attended, there was a key rule that you could only fire a kiln when it was at least 90% full; clearly there were people thinking about energy consumption or at least its cost! It's not that over the last 30 years making has necessarily become hugely worse, but with innovation comes new problems of waste. It may be that, like many, I have become much more aware of wasteful processes and how we might litigate, plan and design to reduce them.

Education has unquestionably moved on since I started making, and my material teaching and knowledge has expanded to include woods, metals, plastics and an array of different composites[4] both natural and manmade. New technologies and processes have been developed bringing with them alternative opportunities and challenges, and of course, innovation is only innovation if it is actually new and tackles a problem in a different way. In order to embrace these principles such that they contribute to an ecological and environmentally focused industry, it is imperative that we discuss and identify the need, purpose and value for making with students.

Over the last 15 years, via specific courses I have attended and acknowledging the necessity to develop, sustainability has implanted itself within my teaching and the way I approach education. I would commonly describe my role as teaching the thinking, inventing, designing, creating, manufacturing, constructing, building, producing and making of objects and artefacts. However, in more recent years I would be inclined to add my interest and awareness in the process of 'how things are made, how things can be made more sustainably and how this can be taught'.

What has become very apparent is that we all have a lot going on and adding yet another 'new thing' to 'do' or 'think about' could add to our weariness of creating rather than excite us to achieve better outcomes. As we don't want more 'stuff' for the sake of more 'stuff', we need to be thinking not only about the user and why they might want an item but also about the process by which and by whom it was created. For this reason, I have started

[4] Composites: A mixture of materials which can be natural, manmade or both. Depending on the materials these can sometimes difficult or impossible to recycle due to separating the components.

to work with students to explore their personal values around sustainability, in some cases buried much deeper and harder to access than one might expect.

Using mixed activities adapted from Paul Murray's *The Sustainable Self* (2011, p.69), students are asked to identity and isolate their three core values. Once recognised they interrogate their findings, including the origin of these values, if they are static or dynamic, conscious or unconscious, what value hierarchy there might be, and if the values are actually theirs or 'inherited' from others. This last enquiry is always interesting as it opens discussions around who is in their circle of influence and the possibility that a value might have been inherited from childhood and so be potentially out of date.

The next stage is to examine how these values cross over and relate to their creative selves as a Designer Maker. For many, this analysis helps develop a deeper understanding enabling the learners to actively mobilise and highlight what is important to them as individuals and subsequently as makers. It helps to focus their creative voice and gives them a strong base to start to develop, celebrate and cultivate viable sustainable actions. As connections develop, students complete a 'Sustainability – responsibilities and actions' declaration which aims to unite their individual thinking and creating, thus not adding to but clarifying their position.

To the question, asked in 2022, 'What is your responsibility?' student, Jacob Donohoe, responded, 'To design products or furniture that are made well and hold their value. I want to make pieces that people will want to keep and pass down.' According to El Green it was, 'To make informed choices in my material usage and energy consumption.' Lily Hitchcock stated, 'My responsibility is not to negatively impact sustainable progression, and instead to gradually turn my impact into a positive one.'

To the question, 'What are you doing/going to do?' El Green responded, 'Within my making practice I am going to only fire (clay) when something is exactly what I want it to be and recycle and reuse materials when I can.' Lily Hitchcock noted, 'I am educating myself and doing the best I can in my current situation to better my impact. It is important to me to be a conscious consumer and be able to think about my purchases and my actions.'

These answers indicate developing environmental impact insights to material processes and their practices.

Ultimately, I would wish my teaching to encourage and empower students to be sustainably literate, not simply functionally but critically. It is essential for them to be able to understand and action sustainable ways of doing things, individually and collectively, in order that they use materials appropriately.

Through gaining sufficient knowledge and skills that decisively act in a way that favours a sustainable practice, they are able to take ownership and responsibility within their future careers as makers, designers and innovators. Crucially we should be able to recognise and reward other people's decisions and actions that favour not simply environmental maintenance of the status quo but have a positive impact and environmental growth.

Designer Makers are like magicians; using our intimate knowledge and understanding of materials and making processes we take raw materials and develop new design solutions to create incredible artefacts. We have the ability to future proof our ecology through sustainable practices and my teaching role is to be a guide to willing participants on this journey.

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