How to effectively engage student’s with environmentally sustainable product design?

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‘The transition towards sustainability, in its everyday dimension, can be described as follows: in a short period billions of people must redefine their life projects’

This transition not only presents a huge challenge for product designers but also provides opportunity for designers to reframe their practices and processes.

What does this mean for design programmes?
Product Design at AUT

- New major in BDes – launched in 2008
- 70 undergraduate students – 5 postgraduate students
- Small team of staff – with a mixture of backgrounds
- Great studio spaces!
- Bedding in programme

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Programme is structured around positioning design at the interface between a deep understanding of

**People** (physiology, ergonomics, psychology, human behaviour etc.)

**Technology** (materials, manufacturing processes, high and low technologies, mechanics, engineering, product development etc.)

**Business** (marketing, consumer behaviour, IP, commercialisation, business processes etc.)

These areas becomes the drivers for the creative process. People i.e.
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How do we engage with these issues?
Everyday Interventions Project

Introduction to Sustainability – Social/Environmental
Introduction to sustainable design frameworks
Observation of ‘unsustainable behaviors’
Identify parameters
Design process
Product – Service - System

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The solution

Exploring a potential new way for every single paper coffee cup and presenting each idea of how we can use the cup for the win.

The conventional use and disposal of a paper coffee cup is a great example of the unnecessary behaviour problem that we all have today. The fact that we have developed such behaviour can be blamed through the design of the product, as it is made to be disposed of after a short cup of coffee. My solution to this problem is a series of small, inner ideas which will provide a potential new life for the product, instead of presenting with conventional coffee cups and advertising, each cup is customized with its own idea of how it can be reused after the hot content has been finished. The ideas are communicated through friendly and readable graphics on the cup itself, and have dotted cut-out parts for ease of assembly. For 7 different cup designs are presented in this project, each with a secondary purpose that fully function. But because that's not the end as there are many other unspoken creative ways in which a paper coffee cup can be reused, so on top of all there should always be a place white with nothing on it to provide coffee drinkers a chance of design and create their own unique design to keep the cup, which makes this solution more practical and sustainable.

The Paper Coffee Cup Issue

The majority of throwaway coffee we buy today tend to be contained in a small paper coffee cup topped with a polyethylene lid. Its function and aesthetics have proven itself to be very convenient and user-friendly within our busy modern lifestyle. However, the novelty and wasteful design of coffee cups has certainly been unsustainable and can hurt our impact on our environment. With every cup of takeaway coffee the cost is far more than the money we pay, as with the manufacturing trees are cut down, oil, water, and chemicals are used, then waste are released into the environment, and after staring 30-40 minutes in our hand, it immediately becomes a unwanted object, the cup eventually ends up in landfill along with all the other rubbish we've created, making every other landfill rubbish it even begins to decompose, which releases the powerful bad smelling greenhouse gases into the air.

5000 paper coffee cups are thrown away every school day at the University of Washington.

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Naivety of students about world issues
Enthusiasm – and interest from students
the ‘ECO’ book mentality
The opportunity for ‘Affective’ Teaching and Learning
Lack of strategic approach at AUT product Design
Strategies in Engaging Students in Sustainable Design
Engaging in a more meaningful way Engaging with undergrads – ‘affective teaching’
Driving with postgrads – a serious commitment
Staff Research

MOVING FORWARD

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1. Building Understanding, Knowledge and Capability

Bringing in qualified staff
Staff qualifications
Discussions - roundtable
Collaborating up with other staff at University
Beginning to teach........
2. Strategically Embedding in Programme

Programme Commitment – all projects underpinned
Staged introduction by year level
Year 1. Introduction to the basic issues – simple life-cycle thinking – impacts of decisions – eco literacy

Year 2. Introduction to basic sustainability theories – workshops idea – more sophisticated projects

Year 3. For those who embody and embrace – holistic (major project)

Post Graduate. Fundamental to those who undertake - activists
3. Challenge Students and Raise Profile

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4. Engaging a Multi-Disciplinary Approach

Engaging with Business, Engineering and School of Natural Science
Talking Department of Conservation
Talking with Biological Science Research Centres
5. Current Postgraduates

Review of LCA use by designers in SME’s
Sustainable furniture
‘Shared’ products in public spaces
Sustainable surfboard manufacturing
Domestic apartment waste management