The 24 hour challenge: creating a multidiscipline environment for design and entrepreneurship in engineering and design. Enhancing Employability through Enterprise Education

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The 24-hour challenge: creating a multi-discipline environment for design and entrepreneurship in Engineering and Design.
Schools of Art, Design & Architecture and Computing & Engineering
University of Huddersfield

This Innovation and Creative Exchange (ICE) is an inter-school enterprise opportunity exclusively for second year Engineering and Design students at the University of Huddersfield. Its primary objective is to bring the best of innovative design and industry thinking into the undergraduate curriculum and to embed the latest innovation and design methodologies into the curriculum for engineering and design students – the next generation of employees for UK knowledge-based industries.

The ICE was launched in 2012 with a guest lecture/workshop event from the Visiting Professor of Innovation and was followed by a schedule of seminars, workshops, and guest lectures to promote networking and multi-disciplinary working between the university and industry.

The highlight of the ICE programme is a two-day 24-hour challenge involving a combination of lectures, master classes and workshops involving students from Art, Design and Architecture and Computing and Engineering. The challenge environment involved the creation of multi-disciplinary teams - comprised of four to five students from different undergraduate programmes - that were tasked with developing an innovative concept under the panacea of safety extremes (in 2013) and sustainable solutions for global challenges (in 2014). Seven teams participated in the challenge (35 students) representing five subject areas across the two schools.

The teams initially defined their understanding of the brief, brainstormed ideas and then developed a solution to the challenge. This was followed by a Dragons’ Den-style event at which each team presented its idea and were given advice by academics and industry representatives on developing the innovation and taking the product to market. The winners attended a proof-of-concept (POC) boot camp. A POC business support fund enables the student projects to be supported/mentored over the subsequent 12 months while they develop their ideas into a concept or business plan.

**Contribution to student employability:**
Employability is a combination of knowledge, skills and attitudes. The 24-hour challenge enabled the students to work in multi-discipline teams in a highly demanding environment to combine all these elements of employability, thus demonstrating organisational, negotiation, communication, and problem solving skills in addition to valuing diversity and using combined initiatives to realise a solution. Students valued the opportunity to develop these skills.

“It has shown me what some of my lecturers have been trying to tell us which is that collaboration and working with people from different specialisms is when design can really take off and become exciting.”

“The challenge has made me even more interested in working with people I don’t know and also has inspired me to think about business ideas for my future career.”

**Outcomes and impact:**
The network of exchange developed a legacy of learning that promotes innovation, design thinking, new product development and further opportunities to take products through to market. It has brought industry representatives and students together from a variety of different disciplines to debate, share good practice and foster new methods of collaborating. The ICE environment and culture, fosters enterprising attitudes among all members of its community and delivers significant entrepreneurial impact within the undergraduate curriculum. Further to this, a series of intern opportunities have been initiated. The real impact on learning was demonstrated through the students’ comments on skills development, multi-discipline/collaborative working and entrepreneurial development.

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