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DEVELOPING THE DESIGN CURRICULUM: A CASE STUDY OF STUDENT CENTRED PROFESSIONAL FRAMEWORK MODULES

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ABSTRACT
Over recent years there has been an increased understanding by UK business of the role that design can play in enhancing competitiveness and innovation, there is also a growing recognition by government of the value that design can add to the economy. Aligned to this is the growing discourse surrounding the appropriate development of UK Design education.
The Design Blueprint document published by the Design Skills Advisory Panel in 2008 highlights key topics for inclusion within curriculum development as being; the strengthening of partnerships between education and industry, ensuring that design students in colleges and universities have the right skills, developing networks of visiting design professors to better connect education with professional practice, and the joined-up promotion of multi-disciplinary approaches. Building courses that provide students with opportunities to develop knowledge, skills and understanding outside the core traditional design skill-set, placing value upon the breadth and transferability of skills as increasingly viewed with importance by the design industry.
This paper details the introduction of a series of modules upon the BA (Hons) Product Design course at The University of Salford UK. The modules aim to synergize student engagement in the key areas of commercial awareness, transferability of skills and industry readiness. In conclusion the authors' provide a reflective evaluation of the modules in their first year of delivery, engaging students' staff and industry viewpoints, identifying further opportunities for the development of module content, delivery and assessment.

Keywords: Design industry, curriculum development, design skills, personal development

1 INTRODUCTION

Design's potential to play a significant role in enhancing the competitiveness, innovation and performance of business is now well established. Design, if employed effectively can add value not only in terms of intellectual capital, but to the bottom line of organizations (1). Nationally within the UK, government clearly recognizes the value design can add to economic success. Statistics estimate design to be worth an approximate £11.6 billion to the UK economy each year (2). Design, previously a 'back room' activity is now finding its way into all areas of business operations and strategic planning. In light of this, industry voices continue to grow in their calls for more commercial awareness within education and demand students who are able to apply their technical skills appropriately within a day-to-day commercial environment.
The ongoing discourse surrounding the appropriate development of UK Design Education is most significantly captured in the publication of two government sponsored reports. These reports followed a two year consultation process with both the design industry and design education. The Design Skills Advisory Panel's 'High-level skills for higher value' report (2007) outlines a national plan for skills development, and the following report 'Design Blueprint' (2008) details the practical steps required to implement the plan. These reports set out a series of recommendations, describing the steps needed to support the development of a highly skilled and more prosperous UK design sector. The objective of the Design Blueprint is to engage with partners in government, education and industry to secure the resources needed to implement and realize a design industry skills development plan (3)

Significantly for design education, as well as identifying challenges and opportunities for the sector, the reports identify significant gaps between the skills required by employers in the design industry and those being taught and learnt in schools, colleges and universities. (4) The continued expansion of designs influence and input within a diverse range of industry sectors fuels the blurring of career paths for design graduates and further increases the discussion around the demand for designers to possess complementary skills that can be applied beyond traditional design boundaries (5).

2.1 Challenges for design education

Within this context of potential wide reaching change in the delivery of design education is a key challenge for Higher Education institutions. How to provide a broad curriculum framework within which to creatively explore design ideas as part of the learning process, while responding to increasing industry demands for commercially literate, business savvy graduates? This challenge is not just one of curriculum design, as for many it may represent a shift in the philosophy and values of how our design education is planned, delivered and its successes measured.

The traditional model of product design education has largely focused around the design activity itself – the object or designed article being the most important thing and the final output that is most valued. As Product Design is no longer solely concerned with the activity of designing products, it is also concerned with the implementation of design thinking holistically within a commercial context and business as a whole. Therefore these changing realities of the design and creative industries are requiring graduates who are not just good problem solvers and excellent communicators, but people who also posses the awareness to seek out and identify problems, thinking creatively to reveal new opportunities in an ever expanding spectrum of sectors. This expectation indeed requires design graduates to be business 'savvy' with a clear understanding of the drivers that effect and shape commercial decisions.

2.2 Valuing transferable skills

Aligned to the calls for enterprise skills and business acumen being accommodated within design curricula is the relatively recent introduction of Personal Development Planning (PDP) within UK HEIs. Government guidelines recommend the introduction of progress files as a vehicle by which students engage critically on their progress through higher education (6). Recording their achievements, in a manner by which students can monitor, build and reflect upon their personal development in its broadest sense. Similarly to the integration of enterprise within the curriculum PDP aims to introduce and build an awareness of broad transferable skills that graduates can utilize in the employment market place. The Art and Design sector has in particular struggled with the implementation of these topics. PDP content for example often being retro fitted to existing activities within an established programme of study and in many cases viewed as carrying little value by both staff and students. It is the Design Blueprint document published in 2008 that engages practically in how we might more effectively address such issues within our curriculum delivery. It highlights key topics for inclusion within curriculum development as being; the strengthening of partnerships between education and industry, ensuring that design students in colleges and universities have the right skills, developing networks of visiting design professors to better connect education with professional practice, and the joined-up promotion of multi-disciplinary approaches. Building courses that provide students with opportunities to develop knowledge, skills and understanding outside the core traditional design skill-set, placing value upon the breadth and transferability of skills as increasingly viewed with importance by the design industry.

2.3 Product Design as a 14-21 Curriculum

Following the Design Blueprint report The Design Skills Alliance was created as a government sponsored body, and charged with coordinating support and skills development activities of schools colleges and industry to secure the design sectors position as a world leading centre for design skills and education (3). For colleges and universities the target of the Design Skills Alliance was to set up a network of visiting design professionals, a national programme that would connect practicing designers and design managers with colleges and universities. Many colleges including the University of Salford's Product Design course engages students with visiting design practitioners and live project briefs. The National scale and scope of these activities were an unknown quantity to the Design Skills

Alliance, an audit was required so that a central register for professionals willing to work with design education could be formed.
Good practice of teaching product design is delivered and embedded in many undergraduate institutions across the UK. A multi disciplinary Design Network would be established to enable the sharing of the practice and to accommodate the interaction between range creative activities.
The research and pilot cost was estimated as being £50,000, with a total programme budget of £725,000 over three years. The timetable of events was that during 2008 the research would be complete for the network of visiting design professionals, an alliance programme of multi disciplinary network activities would be established, and a careers guidance service launched for Creative Choices. 2009 would see a database of designers built and pilots for visiting design professionals would be underway. By 2010 the roll out of the national network would be complete.
In real terms little to none of the above practice has been seen in Product Design at the University of Salford. One of the Design Skills Alliance partners is the Higher Education Academy. They run a scheme and a series of awards to celebrate and support the professional development and recognition of staff teaching art, design and media in HE. Product Design has not featured in the eleven awards given over the past three years. The inherent creativity in Product design offers a strong link towards enterprise, manufacturing, business and engineering. It should promote itself in being a driving force behind such publications as the Cox report (2005) and the Design Blueprint. It could be considered that initiatives in secondary and tertiary education have had a more transparent outcome to linking creativity practice, education and industry. The Design and Technology Association have been very proactive in the representation of the STEM initiative and in the support of the Diploma awards. The Diploma has also been supported by the Specialist School and Academies Trust. (SSAT). By 2011 the Diploma will have a series of 17 subjects taught in schools and colleges. Included in these subjects are Creative and Media, Engineering and Manufacturing and Product Design. A new academic structure has been instigated to support these awards. Millions of pounds have been spent on centres of excellence and central delivery points. The staff across several institutions will collaborate to deliver the curriculum, students work through an integrated curriculum that includes contact with industry. Work experience is a critical assessment requirement within these courses. The diploma challenges the methodology of teaching and learning. Learners will experience regular contact with industry and outside influences. It is essential that this practice is continued throughout the learning experience of the individual, to produce graduates that are fit for purpose. At the University of Salford the Product Design course has been re written to accommodate such change, and has taken upon itself to engage in curriculum developments aligned to key issues the government reports have highlighted. The programme team fully supports the ethos of the Design Council's Blueprint on Design; developments in our curriculum reflect the values and spirit of the National Agenda.

2 PRODUCT DESIGN AT THE UNIVERSITY OF SALFORD

Since its original validation in 1992 the Product Design course at The University of Salford has developed to become a major contributor to quality design education in the UK. In April 2009 the course undertook a periodic review process required for revalidation. This review provided a timely opportunity for the course to more fully explore how it may engage with curriculum developments aligned to current UK design industry debates. In particular the course team considered the development of industry focused issues and the increasing value being placed on non-traditional transferable skills within the delivery of design education.
Over recent years the course has placed importance on developing strong links with industry, enabling a continual level of discussion and feedback with potential graduate employers. Regular collaborative projects form a key element of the course, as does the presence of industry speakers and guest lecturers. Recent industry speakers have included representatives from Samsung, Seymour Powell, IDEO and other local/national consultancy firms. Fourteen live industry projects have been undertaken since 2005, including projects with PZ Cussons, O2 communications and BASF. These relationships have provided a highly valuable source of insight into industry practices and employer expectations, as well as feedback on the appropriateness of course structure and content. Developments such as these over the review period already align strongly to the broader UK government strategies, with particular regard to areas of professional/business practice, employer engagement, enterprise, employability and Personal Development Planning as integral within the course's core curriculum.

Within the context of the revalidation process, the course team identified the opportunity to develop a series of core modules that attempt to synergize students' engagement in these key areas, with delivery across all three years of the undergraduate curriculum. Resulting in a series of modules titled Professional Design Frameworks (PDF) 1, 2 and 3 that integrate students learning in the areas of personal development, professional practice skills and employability. The modules aim to bring together these elements of the students learning experience in a coherent structured manner that supports their core practical and theoretical learning activities within the programme of study. Each of the modules have been summarized in the paragraphs below. Being delivered 'long-thin' each week through all three years, the modules align with the students anticipated progression of learning and wherever possible feed into concurrently delivered core modules within the course.

Professional Design Frameworks 1 (20 credits)

Building an awareness of personal development within the context of a holistic programme of study is an essential element in the introduction of higher education. Notions of Personal Development Planning (PDP) will be introduced in conjunction with the application of professional practice skills including IT and specialist computing software workshop sessions, engaging students in approaches to learning that utilize a variety of media resources. Students will be encouraged to engage in reflective dialogue of their own practice via the attendance of professional practice lectures and seminars, thus enabling students to engage in the development of personal learning goals.

Professional Design Frameworks 2 (20 credits)

Building upon the introduction of PDP and professional practice skills in level 1, this module further aims to develop skills and critical understanding of the concepts applied within a professional design context. Engaging students in the evaluation of design methodologies and introducing notions of business, enterprise and employability within the programme of study. Critical evaluation is developed via reflective practice of students own project work, where the selection of appropriate and effective design communication methods to a basic professional standard is assessed.

Professional Design Frameworks 3 (20 credits)

This module supports students in their final year of study. Critically, it focuses attention on defining personal objectives. Students are required to produce a self directed portfolio of work, demonstrating skills, knowledge and understanding via the use of appropriate professional techniques. Students are encouraged throughout their final year of study to develop an engagement with industry, thus providing further understanding of issues effecting professional design practice. Critical engagement in contemporary design issues and the negotiation of project management within the programme of study will demonstrate students' ability to direct and manage their own learning. This is evidenced via the production of project reports, detailing management of the design process.

The modules provide four key benefits to existing practice within the course's delivery. These are;

- Maximising the value of guest industry speakers as part of a planned and structured programme of events throughout the academic year.
- Placing value via summative assessment on students' engagement with personal development.
- A more rigorously structured engagement with the University's careers service Department.
- Providing continuity in the personal tutoring process throughout the undergraduate programme of study.

A practical example of how some of these key points are engaged within the module delivery are the use of tutorials that focus on specific elements of design practice. Such as creative methods and critical thinking supported by specialist guest speakers.

Another example is the structured engagement with the University Careers service. A value is placed in many of the transferable skills that employer's desire. As we place a weighting on these the student's perceived value of the learning content is advanced. This is supported by a programme of guest speakers from beyond the design and creative industry fields.

3 REFLECTIONS ON MODULE DELIVERY

The delivery of the PDF modules to date has had a positive response from staff, students, design practitioners and associated departments. Both the first and second year module's engages in a fifty percent input of CAD CAM. This is delivered by lectures and short focused tasks, addressing key aspects of the subject. Assessment is based around the focused tasks with an expectation, and further assessment of a quality outcome is delivered within the body of a design module. This allows the execution of the lectures to be less linear in the delivery of the subject. Importance and relevance can

be placed on specific areas of study to link with the demand required within a design module. During the semester the lecturer can switch on a weekly basis between computer applications as the student demand commands. The newly acquired skill is then applied within a design framework, this embeds and makes relevant the learning and area of study delivered during the lecture. A benefit of this delivery is that the students consider the use of CAD as one of the tools that they have available in their design toolkit. CAD runs alongside, sketching and modelling as a method of representing their creativity.

Across all three years the PDF modules commit the students to consider future careers and professional design practice. Industrial speakers are scheduled as part of the curriculum structure. However, if an opportunity becomes available a guest lecturer can speak on a given subject at short notice, without the students' expectation of it being relevant to a previous lecture. This allows flexibility in the booking of guest speakers. These short notice events are possible and have been well attended by staff and students. Duncan Spelman the mechanical designer at Texacon, UK's number 1 security product manufacturer. Duncan is ex Seymour Powell, and is now engaged in designing products with a bias towards delivering efficiency within the manufacturing process. Duncan presented a guest lecture to the first year students within the framework of the PDF module. He found it refreshing that undergraduates are given the opportunity to explore details and limitations of the manufacturing process, recalling that when he was at college he was "informed very little" about process.

The students are encouraged to actively engage in the production of a design practice portfolio. This has been run in conjunction with the subject staff, the career service and design practitioners. Practitioners who have been used on live project briefs have been canvassed with portfolios and requests for work placement. This can be viewed as an academic exercise by the industrialists and feels less intimidating as it placed within the PDF framework. Ian Cull the Design Manager of Alphason UK, is looking to appoint a student on a work placement on the strength of an opportunistic letter of application. The student worked on a live project with Ian, then used this work within his portfolio when seeking a placement. It was the recognition as being familiar work that caught Ian's eye when looking through applicants portfolios. He felt the risk of appointing lessened as he had experience of the student in the recent past.

4 CONCLUSIONS SO FAR

In conclusion the PDF modules allow flexibility within their structure to deliver depth and additional breadth to the curriculum. Students can react to the module on an individual basis and direct study in a personal and relevant fashion. Professional development has become a meaningful and relevant aspect to the study and progression of the creative student.

It is anticipated that the future delivery of PDF modules will continue to evolve, informed by staff, student and industry feedback, to become a recognized core element within the structure and delivery of the Product Design at the University of Salford. As understanding of the PDF modules potential content, and breadth of outputs become more evident, the opportunities for planning greater synergies in learning experiences across the curriculum will be explored. The course's key features of industry relevance, with the integration of business practice and cultural awareness should continue to provide students with a valuable framework within which to explore new product opportunities and innovations. The breadth of graduate skill sets demanded from industry look set to continue in their diversification across the creative sector, therefore the enriched and holistic experience offered to students upon the Product Design course should be well placed to embrace this.

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