

'ONE THING BETTER' AND 'REDESIGNING DESIGN EDUCATION' - A COLLABORATION BETWEEN INDUSTRY AND ACADEMIA

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ABSTRACT

The Design industries are in positive flux and academia is trying to follow the pace as best it can; however some of the structures within academic frameworks restrict flexibility to mimic an industrial scenario. This disconnect can be compounded by educational alignment issues where different academic levels i.e. school to university can have large gaps between academic, industry and student expectations.

This paper frames the collaboration, design and explorative stages between the authors, through prototyping a new final year module called Service and System Design. The research project intends to start with some tangible experiences for the authors and students alike and ultimately is anticipated to have wider impact within the author's institution and beyond.

For the first of the two theme based projects, the students are tasked to focus on designing 'One thing better' in the context of the module. This project is intended to generate evidence for the industry partner to understand the level of students' abilities so that the support mechanisms can be tailored for an improved outcome on the second larger project, 'Redesigning Design Education'. This project takes a deeper dive approach with the intention of students following the project theme and reflecting on their own 'design learning' experiences, using those as a catalyst guided by both industry and academic.

The research evidenced in this paper has been carried out with a pre –process focus, with the intention of provoking dialogue within the design disciplines academic and industrial communities so that further developments can be integrated into multi-disciplinary projects as the next stage of the research activity.

Keywords: Design pedagogy, Collaboration between industry and education.

1 INTRODUCTION

This paper outlines the initial steps taken by the authors in working as a collaboration between academia and industry, the motive is to facilitate cross fertilisation between the two design based disciplines (product design and interaction design) to share and develop good practice and possibly develop new models of working with trans -disciplinary cousins i.e. related in the discipline family.

The finalised outcomes of the research and development of this approach will not be forthcoming in this paper due to the scheduling of the module that is being used as a test bed for the collaboration. The projects will not be exhaustive due to the module time constraints, but will reflect a desire to improve design learning from a unified industry and academic perspective across the breadth of academic levels.

2 BACKGROUND

The two authors of this paper have crossed borders between academia and industry before, the academic author used to work with the industry authors current company and the industry author feeds his industry experiences by working with academia, the synergy developed by this approach is one characterised by negotiation and mutual empathy.

The module used a vehicle for this research is titled Service and Systems Design, which as part of the host university's curriculum modernisation plan has intended to broaden the remit of its design teaching for undergraduate BSc Product Design students into the aligned territory of service and

systems design; this is one of the salient points in the project; part of the remit for professional courses is to deliver students to industry with real impact and as a course within a school of Engineering the academic author has the opportunity to reflect on the diversity of roles that product designers can play within the creative and manufacturing industries and integrate some of the new complimentary skills highlighted in the document ‘Making the most of UK Design excellence’ [1] without losing the focus on their core discipline skills.

Since the emergence of the term design thinking there has been a renaissance in the design of products through experiences that could relate to the inception of the mainstream product design discipline exemplified by Raymond Lowey [2]-initially a window dresser and fashion magazine illustrator and Henry Dreyfus [3], whose first role was as a theatre set designer. They amongst others both identified opportunities using their core skills and placed themselves within the nucleus of emerging markets. With the competitive nature of both design consultancy and the manufacturing and creative industries, designers who in the opinion of the authors have always been a ‘nomadic’ in the nature of their dicensplinary, have always identified opportunities to improve commerce and society through the extension or re-appropriation of their core skills. Similarly the same could be said of designers who have become educators, where generally the design thinking mind can juggle the triptych of, students (users/ human values) technology (the university systems used to teach) and business needs (which reflects the changes in tertiary education where academia has adopted business efficiencies to improve provision and retention) [4]

3 DISTINCT DILUTION OR REALIGNMENT OF SKILLS?

A key issue for design educators is how to cope with this increasing gamut of both soft and hard skills as a perceived requirement by the vast array of destinations that design graduates move on to. There is a dilemma of what to ‘keep in’ what to ‘introduce’ and what to ‘kick out’. This topic has been discussed in a reasonable amount of academic papers from authors that cite the death of product design [5] through to those lamenting purely traditionalist teaching in a digital landscape [6]

A previous paper by the academic author indicated a concern regarding a knee jerk reaction to produce ‘digital only’ designers following on from issues relating to maintaining the use physical making as a vital component in the product design process and the challenges of blending both physical and digital making [7]. The research project rationale was mindful of this and other driving factors such as the recent curriculum modernisation plan, module weight and resource issues. It was judged to be important to rely on core design thinking or the ‘new hat’ of creative intelligence skills [8] already taught as a basis for the projects in order to maintain student confidence and shift the focus of those intellectual skills developed in previous modules over to the new project themes, reinforcing a humanist approach to the design process rather than delivering practical classes on application (app) construction and submitting to the allure of technology.

4 SETTING UP THE COLLABORATION

Of prime importance is the time management of the stakeholders in the collaboration and significant planning is required to block out times for academic engagement from industry and institutional support for the academic to venture into the industrial territories.

The collaboration started with a brainstorming session between the two authors and stakeholder expectations were laid on the table for discussion and negotiation on the best outcome in the circumstances. The industry author had defined project timelines in place and opportunities for outreach during the ‘white space’ in his project schedule and the academic author scheduled teaching responsibilities to weave a successful project in between. The industry author requested a move away from the didactic industry lecture in a large lecture theatre and then the subsequent deluge of internship requests with a move towards a smaller more interactive approach to co-designing with the students, which although less efficient in terms of commitment was perceived to be far more rewarding for both parties. This ethos was built on and the first meeting the cohort will have with the industry author is a visit to an exhibition on creative uses of ‘big data’[9] so the relationship starts on neutral territory with the exhibition itself to provide one of the stimuli for the second themed project. Most universities have some form of industrial liaison panels looking at higher level objectives, documents relating to this such as appear to look from above and are valuable for academics [10] but on occasion provide less immediate value at a local student facing level, this research consciously tries

to experiment with the ‘ground up’ approach to see if there is the potential for better results to be gleaned at source, which can then be fed back into the system at the top.

4.1 Support mechanisms

One method to resolve having an embedded industry link without the geographical or time based restriction is to capitalize on using the host university’s Virtual Learning Environment (VLE) with the industry partner becoming part of the team, albeit remotely on occasion; this facilitates ‘a review when ready’ approach so the industry author can review and contribute without necessarily having to be on site.

5 THE PROJECT RATIONALE

The project themes were introduced through the academic authors reflection on points raised historically in student and staff course boards, coupled with a desire to improve the student experience, learning and teaching and operational efficiency from the designers eye view and to increase awareness across the university of how design and designers have transcended discipline borders using design thinking as a component of multidisciplinary teams to improve not just physical objects but experiences, services and systems. It could be perceived to be contentious to do this so close to the UK national student survey, (NSS) [11] although emergent trends in the university sector regarding the University Green Paper on Higher Education [12] that champions the interests of students (as if that should be a new model) and transparency do resonate positively with the intention of the collaboration.

Traditionally student design projects look out from the academic environment towards the ‘real world’ and the authors thought it a good opportunity to look within, students and academics as users and industry designers collaborating to improve the systems they work within?

This approach has been successful in other areas of the public sector and education notably through the design thinking for educators project [13] where designers in industry have contributed solutions to public sector and the UK design councils projects with schools [14] &[15]

5.1 Captive users, captive audience

A perceived benefit of the students looking within the infrastructure of the university that can reinforce research skills is that there are ‘captured users’ for the design students to research and canvas for feedback from other students at varying levels of their courses; teaching staff, support staff and university executives are all relatively close to hand so using interviewing techniques questionnaire’s and experience prototyping could be more immediate and iterative than if the students are outreaching with these tools to outside stakeholders.

Another benefit is to have a captured audience in terms of lecturers and university executive to pitch to once the project is completed and this may be the legacy that the current final year cohort leaves behind for future students on their course.

5.2 One thing better, project theme

The first project within the module promotes the students to reflect on their experiences as design students by setting the theme of designing ‘one thing better’ in relation to specific aspects of their pedagogical experience. At the academic level the students have learned to write and question briefs as part of their major design project so the project briefing was facilitated as setting the thematic scene to be brainstormed in the first session, the student groups then decamp and start mapping out ideas culminating in their brief tailored to the design scenario they are investigating. The outcomes of this first project are weighted at 30% of the module, and are used as an introduction to their work for the industry author to identify how they think and deliver design work.

5.2.1 One thing better

The outcome on the areas of focus drawn from previous course boards were not especially wide and included issues such as flexibility and friendless of the VLE, the learning spaces/ studios and prototyping workshops, these recurring themes will be addressed from the design student perspective within the first project.

5.2.2 Virtual Learning Environment

Due to the ubiquity of the Virtual Learning Environment VLE in the students learning experience for acquisition of information, communication and reflection of delivered content the chance to develop and improve the VLE was predicted to be a popular choice amongst the cohort with students developing concepts with more student friendly tools a leaning toward the look and feel of a social media platform and notional performance monitors.

5.2.3 Studio culture

The university studios are rooms have been designed to accommodate a multitude of teaching activities across academic levels and timetabled sessions but they are not studio spaces in the traditional sense and maybe they shouldn't be, ideally they should reflect the creativity silo effect where a space can be reconfigured for a wide range of teaching and learning scenarios as advocated in the D:School approach to teaching and learning space layout [16]

5.2.4 Workshop

The workshop facilities have varying identities that reflect the frequency and precision of activities that students carry out, and a range of associated procedures relating to health and safety and practical skills.

The initial results of the project were very welcome and some of the projects were of a very high standard, there was as predicted a bias towards students addressing the design and usability of the VLE with prototype apps were developed using simple rather than complex authoring tools and student centered features such as, non-digital focus time, and personal performance monitors included into some of the concepts. Figure 1



Figure 1. Examples of one thing better app concepts

5.3 Redesigning design education, project themes.

The narrative of this project which is worth 70% of the module will build on the outcomes of the first project, but will intend to reflect more depth of research from literature, learning theories, and the potential for students to elect focus on a particular academic level. One theme will be the 'D-STEAM' concept the academic authors concept of sitting design firmly 'within' other disciplines as a development of STEM and STEAM [17] activities advocated within schools to provoke design awareness as a precursor to higher level study.

The other theme will be the use of 'Big Data' within design education, as a stimulus as predicted in wired magazine in 2014 [18] and the inevitable discussions on that theme that will happen during the exhibition visit.

It was apparent within the briefing session for this project that nearly every student had a strong reflection on their design learning experience prior to starting their undergraduate course, and in discussion echoed the authors comments on educational alignment between secondary and tertiary design education, however the aim of the project was to get the students to look at other forms of data and theories as a stimulus and it was a challenge for some of the cohort to transcend those reflections and embrace new concepts.

At the time of publication the outcomes of re-designing design education project have not been submitted, but examples of the projects will be presented at the conference.

6 CONCLUSION

It would be churlish to suggest that one academic paper could fully implement something so profound as charting and changing a discipline focus within the whole educational system, however using the academic paper as a platform for future debate and collaboration is perceived to be a relevant forum and the authors welcome a continuation of the debate and an extension of the collaboration to see if there are benefits from cross cultural collaboration. It is also expected that the evidence of the student projects trialled in the research project will be dissected during the summer and used as a component of the research the authors are conducting on the alignment of design education throughout all academic levels from primary through to post graduate.

It cannot be stated that the authors have defined the correct pathway for collaboration of this sort and in terms of organisational efficiency, however as a prototype for collaboration there have been some valid lessons learnt between both industry and academia on future benefits of embracing this sort of approach, the authors felt that utilising the university's communication tools via the VLE for students submitting work and academics and industry providing feedback and having a number of contact points throughout the project help resolve some of the communication and contact issues encountered in both industry and academia.

The outcomes of the project evidenced an initial enthusiasm, reticence at the mid stage and clarity as they came to the design delivery stage as they regained a touch point with their usual mode of working. For the authors there was a sense of satisfaction that the students had not been pushed beyond their limits within this process and a reassurance that the prior taught skills empowered the students to adapt in the same way that the founding members of their profession did.

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