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PROJECTSPACE: LINKING DESIGN EDUCATION WITH BUSINESS

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ABSTRACT
Design graduates are increasingly called upon to work in cross-disciplinary ways in order to respond to the challenges of designing services and products. Working in multidisciplinary teams on live projects involving external organisations can help prepare students who learn how to work in collaborative teams, address specific needs of clients and assimilate feedback from a wide range of experts. Identifying suitable projects that reconcile with course learning outcomes, supervising student groups, and managing the relationship between all the stakeholders requires a sophisticated infrastructure. The potential benefits however, with regards to keeping courses relevant and maximising the employability of students, are considerable. The Centre for Design & Innovation (www.c4di.org.uk) has developed a web portal called ProjectSpace, a project brokering system. This is a unique facility that provides a mechanism for the University to engage with external partners, to manage groups of students and provides a shop window for what the University can offer (www. projectspace.org.uk). The system has recently been piloted with design students in Digital Media and Graphic Design from Gray's School of Art, undertaking a project with Skills Development Scotland (SDS). ProjectSpace provides a mechanism for displaying project briefs, key deadlines, assigning both academics and students to projects and a confidential content management system allowing selected parties to view ongoing work. A wide range of issues has been highlighted by this project, including contractual arrangements, project supervision, fit with the curriculum and the management of expectations between stakeholders. This paper reports the outcomes of the SDS pilot project.

Keywords: Multidisciplinary, web-portal, service-design, project briefs

1 INTRODUCTION

There is a growing requirement for design graduates to work in a cross-disciplinary manner [1] [2] [3] [4] [5]. Industry is seeking recruits with a portfolio of skills, and Universities, wishing to provide courses where employability at the end of the course is maximised, need to look closely at how they can assist with this. Students who gain early exposure to live industry projects will benefit in terms of their own personal development as well as gaining valuable exposure to potential recruiters. Increasingly students are being encouraged to think about all the skills they can bring to the table and not to simply identify themselves by the course they are studying [2]. Recognising skills such as leadership, time management, team working, ability to motivate and inspire, ease with which one can pitch a new idea etc can open up many more job opportunities and help steer the student into a career choice which fits best with their skill-set. Universities who pioneer this approach can enhance their industry-friendly reputation, attracting students and industry partners alike. The challenge for Universities is in how to best manage this new model of learning. The Centre for Design and Innovation (c4di) has developed a web portal called ProjectSpace. This provides a project brokering system for managing live projects with businesses and multidisciplinary groups of students. The model for this system was inspired by the Project Bureau concept supporting post-graduate students at Hogeschool voor de Kunsten in Utrecht http://www.hku.nl/web/show which has been working for a number of years supporting multi disciplinary post graduate students working on live industry projects. The principal difference is that ProjectSpace is designed to support under-graduate students studying on different courses.

2 THE PROJECTSPACE WEB PORTAL

This online mechanism allows the University to engage with external partners, manage groups of students and provides a shop window for what the University can offer (www.projectspace.org.uk).
Industry partners are invited to post possible projects on the site. Students and/or academics from a variety of disciplines can indicate their interest in any given project. An academic is assigned to manage the students' applications and to work with the industry partner to develop a brief. On agreement of the brief by industry partner and academic lead, the cross-disciplinary team is then finalised along with timelines, key milestones and learning outcomes. The ongoing work is then posted online at agreed times to allow academics leading the project and industry partners to view the work being undertaken by the students and to comment accordingly.
There are a number of precedents for this type of website some of which have operated successfully for some years on a commercial basis. These include Nine Sigma [3] and Innocentive [4].
The portal uses a open source content management system based on Joomla. It is designed to work in conjunction with Moodle which is the virtual learning environment (VLE) used by the host University. Moodle provides the communication tools and academic support for the students. The main feature that is not provided by standard VLE is the externally facing shop window for completed projects. This is an important feature for any project website as this is how new projects can be developed with external partners who need to see completed examples of what can be achieved by student groups. This is also important for managing expectations between the various stakeholders.

3 PILOT WITH SKILLS DEVELOPMENT SCOTLAND

C4di was approached by representatives from Skills Development Scotland (SDS) who were interested in working with students on a specific project. This successful project provided the opportunity for the web portal to be tested, functionality to be developed and a clear direction identified for the next phase of the ProjectSpace development. SDS was developing a new web service to assist their customers' ability to manage their own careers. Within this, it was identified that a specific diagnostic tool to help customers build on their confidence and self-assurance was required. The aim of the brief provided by SDS was to research and prototype a tool that met this need across all four channels used by SDS i.e. online, face to face, via partners and through the contact centres. Students were selected from two design courses, Digital Media and Graphic Design, to participate in the project that lasted five weeks. Initial meetings were held to discuss the brief. Academics needed to ascertain that the learning outcomes of the existing course could be met e.g. would the use of Adobe Flash which was to be taught that semester, be acceptable. A five-week window was identified to execute the pilot and suitable crossovers in the students' timetables highlighted which would allow the students to work together. Providing opportunities for interdisciplinary groups of students to work together does rely on courses being designed in such a way that they periodically align so that joint projects can be delivered. This is difficult enough within one discipline area such as design and is even more problematic if we want to open projects up to include some computer science and business management students. However the benefits to the students can be considerable if it can be achieved.

4 MANAGING THE RELATIONSHIP WITH THE INDUSTRY PARTNER

There is a key role to be played in managing the expectations of the industry partner from initial contact through to project completion and the lead academic for the project would be central to this.

4.1 Project Briefs

The briefing stage is crucial in establishing the expectations of the industry partner and the likely disciplines involved in the project. Whilst guidance may be sought from the industry partner on the latter it should be noted that one of the many benefits of this model, facilitated through the ProjectSpace portal, is to provide the industry partner with the opportunity to work with a variety of disciplines in a collaborative way which may not be obvious to them or indeed feasible in the commercial marketplace. The SDS pilot had many strands that could have been further developed via students in other academic disciplines eg psychology, human resources and marketing as well as the design disciplines employed.

4.2 Lead-In Time

Industry partners need to be given guidance on the optimum time for students to work on such projects and the likely duration of such projects. The first approach by SDS was made in June, briefing meetings held in August/September and the project commenced in October. Partners need to be aware of the lead in time and preparation required for such a project. The SDS project lasted just over five weeks during which time the students had to assimilate a significant amount of information and develop their ideas in conjunction with the prescribed learning outcomes of their courses. In such a tight timescale, the industry partner needs to know that only early prototypes can be achieved. ProjectSpace provided a central portal to hold information on the aims and objectives of the project, agreed timetable and key milestones.

4.3. Partner Input During Project

Students were asked to upload their work on a weekly basis so that the industry partner could view it. This was done following weekly face-to-face meetings with SDS where constructive comment was provided. Students were then given a further day to refine their work before posting online. This facility provides reassurance to the industry partner that their direction and guidance has been understood and the following week's work would then continue on from this. In addition it gives students valuable experience of testing their ideas with industry clients.

4.4 Confidentiality

A precondition of the SDS project was that the students were made aware of the potential commercial sensitivity of their work and each student was asked to sign a non-disclosure agreement. This was a useful exercise for the students, providing them with a fuller understanding of what is entailed in a live industry project. The portal needed to be adapted so that students, academic staff and SDS participants could view material online, accessed only via passwords.

4.5 Intellectual Property (IP)

Students also signed an agreement that passed IP rights to the University. The University subsequently signed an agreement that passed IP rights on this specific project to SDS. In such a short project where only early prototypes were anticipated, the University was happy to enter into an arrangement where IP rights were handed to the client. This arrangement broke new ground as normally the IP rights remain with the undergraduate student. The concept of ProjectSpace is to provide industry partners with exposure to a multi-disciplinary academic team and, in so doing, to explore the potential for new ideas and initiatives that they would not find in the commercial marketplace. These early ideas may provide the catalyst for a Knowledge Transfer Partnership or other project of commercial value to the University where IP rights would then be renegotiated. From the student's perspective, they are gaining an insight into how IP is likely to be handled if they were an employee. Practically it may also prove extremely difficult to assign IP to one student within a multi-disciplinary project. For both the IP and confidentiality arrangements it is anticipated that the next stage of development for Projectspace would include standard documents which student and industry participants could download.

5 SUPERVISING STUDENT GROUPS

Whilst there may be a number of academics involved in a single project, establishing an academic lead is essential. The lead would represent the University in liaison with the industry partner and would also oversee the smooth running of the project internally.

5.1 Timetabling

The two disciplines involved in the pilot, Digital Media and Graphic Design, had sufficient allowances in their timetables to provide time to work together. To roll the model out to a larger audience would however require changes and a flexible approach adopted at School and University level. This would enable sufficient opportunity for students to elect to work on projects via ProjectSpace with a greater selection of disciplines participating in the knowledge that they would have pre-agreed times in the week when they would meet. This is particularly important for students in earlier years where timetabling tends to be more rigid.

5.2 Monitoring Progress

In the SDS pilot, seven groups comprising of three to five students were involved. Keeping a track of progress on each of these groups was assisted by the ProjectSpace portal where key pieces of work demonstrating how they were developing the brief were uploaded weekly allowing SDS representatives to share and cascade project progress within their wider organization. Additionally it was identified that a useful function of the portal would be to build in a 'blog' function so that individual students could upload comments that would only be viewed by academic staff and external clients. This facility could allow an additional platform for students to interact with industry partners. It would also enable academic staff to identify any areas in which they needed to intervene e.g. to provide extra support or address group members who were not participating fully. The next stage of development for Projectspace would include a 'blog' function where external partners could be granted access for the life of the project. This is not possible with the current University VLE system. Assessing group projects requires a specific assessment protocol that was worked out before the project and circulated to the lecturers delivering the project. Assessment methods adopted for this pilot included: peer review questionnaires, measured against attendance project engagement, group and personal marks.

6 INVESTMENT FROM INDUSTRY PARTNER

Grant funding was available from SDS to assist with the not insignificant amount of man-hours spent in taking the pilot from initial concept to fruition. Equally beneficial however was the expertise provided by SDS involving guest speakers, workshops, opportunity for students to visit and meet frontline staff, substantial background research and weekly input, and providing guidance and mentoring from key team members. The facility on ProjectSpace for industry partners to provide an indication of their likely investment both monetary and in kind is not currently operational as this area requires further research and development. Without doubt, the success of the SDS project was helped enormously by the active involvement of the industry partner and this needs to be highlighted in future projects. Following the success of the SDS pilot, active involvement with external partners is built into all live brief projects lead by the participating design courses; Design for Digital Media and Graphic Design.

The next phase of the portal is likely to include a facility to measure the man-hours spent on a project by both students and academics. Subsequently this information can then be used in the 'shop window' function of the site that will contain narrative making reference to the considerable collective expertise available to industry partners who participate.

It is the intention of the ProjectSpace development team to make the software freely available to any university who may wish to develop it further.

7 BENEFITS FOR INDUSTRY, STUDENTS AND UNIVERSITIES

Accommodating a new model within an existing curriculum can be challenging and labour intensive at the initial setting up phase. The ProjectSpace portal evolved in the course of the project into a useful and confidential content management system used in different ways by all parties involved. Subsequent projects will benefit from this. The portal will also continue to evolve as input from all parties is monitored and reviewed. The University can now start to benefit from the promotional 'shop window' aspect of the portal, building a portfolio of case studies to be viewed on ProjectSpace that will demonstrate its ability to work with industry, attracting students and industry partners alike. As this portfolio builds, potential industry partners will be able to view for themselves the potential benefits of working with students in a way which is quite different from commissioning a commercial partner but which has the potential to provide startling results. SDS was very pleased with the results of their project, commenting on the maturity of the work produced by second year students and the diversity of ideas. Indeed a key point for them, and instrumental in their desire to run a further project in the next academic year, was the abundance of workable ideas produced by seven separate groups of students. Collating such a volume of ideas from in-house experts and external commercial agents would have been extremely difficult to achieve in the short timescale allocated to the project and very expensive. The ProjectSpace portal provided the re-assurance that the client required to view the work of the students regularly and remotely if needed. In the intensive period in which the project was undertaken, the client could easily tap into the site to view weekly progress. The students benefitted

from an interesting project that will be developed now by SDS. This is extremely beneficial for the students in building a portfolio to present to future recruiters. They will have had invaluable exposure to a real project which will allow them to experience what it is like to work in industry, develop project management skills and also to analyse where their skill-set lies within a multi-disciplinary team environment. Budget permitting, SDS has indicated that they would now be keen to invite a couple of the students to do internships in summer 2012 – a tangible endorsement of the benefits of nurturing closer links between design education and business.

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