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LEARNING FOR THE REAL WORLD: PREPARING POSTGRADUATE DESIGN STUDENTS FOR EMPLOYMENT THROUGH EMBEDDING WORK-RELATED LEARNING IN THE CURRICULUM

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ABSTRACT
Employability has been the subject of considerable debate in the UK higher education sector for some time. In the case of design graduates there is evidence that employers are dissatisfied with their general commercial awareness. Glasgow Caledonian University's *MA Design Practice and Management* aims to improve students' employability skills by giving them the opportunity to spend one third of their programme working in a real-life creative company. This paper presents the findings from a pilot study with the first cohort of students (n=8) on this programme. Its objective was to explore the perceived benefits and challenges of embedding work-related learning in the curriculum. The research adopted a mixed method approach. Students assessed their own employability skills in an on-line survey at the beginning and the end of the programme. Focus groups as well as interviews with the placement providers (n=3) and the academic programme leader provided additional qualitative data. All students reported improved employability skills as a result of their real-life industry experience. The programme leader observed increased confidence levels among the students and welcomed their improved independent learning skills. Employers appreciated the knowledge transfer opportunity and valued their work with the students as a useful recruitment tool. The challenges included raised anxiety levels amongst students who are not used to such a teaching approach and an increased workload for academics.

Keywords: Employability, work-related learning, design curriculum

1 INTRODUCTION: THE EMPLOYABILITY DEBATE

Employability has been the subject of considerable debate in the UK higher education sector for many years. Ever since the Dearing Report in 1997 [1] universities have been explicitly tasked with teaching their students generic employability skills such as communication, numeracy and information technology. It is far from clear, though, what 'employability' means. Employers, academics and government have yet to agree on a definition. Knight and Yorke's understanding is still the most cited. They define it as "a set of achievements, understandings and personal attributes that make individuals more likely to gain employment and be successful in their chosen occupations which benefits themselves, the work force, the community and the economy" [2]. In the case of design graduates there is considerable evidence that they are expected to use their employability skills to drive innovation in the UK knowledge economy. A recent report commissioned by the Creative Industries' Sector Skills Council emphasizes that the design industry is "fundamental to national prosperity " and a "lever for (economic) growth" [3] because it leads the way in solving problems flexibly and creatively. Employer associations such as the Confederation of British Industry (CBI) point out that businesses in the creative industries are looking for graduates that not only have the specialist technical expertise but also the "broader business skills needed to commercialize creative ideas" [4]. The Cox Review had also called on universities to deliver design specialists who have "a wider understanding of business practice" [5]. Given that 39% of UK designers are self-employed while only 13% of the total UK workforce are [6], it is imperative for universities to equip their design graduates with the entrepreneurial skills and business acumen required for commercial success.

How have universities responded to the employability challenge for design students so far? In the UK there are indications that there is room for improvement. According to the latest figures provided by the Higher Education Careers Services Unit (HECSU) graduates from art and design programmes find it more difficult to secure a job than their peers from most other subjects [7]. For the 2010 cohort 11.3% reported to be unemployed which is significantly higher than the average of 8.5% across all subjects. Given that universities are under increasing pressure to improve their graduates' success rates in the employment market [8], concerted efforts are being made to develop curricula that give students the best possible start in their search for work. How that can be achieved is far from clear though [9]. Cranmer's research revealed that only real-life work-experience and direct employer involvement in the design and delivery of degree programmes positively affect graduates' success in the labour market [10]. Such work-experience needs to take place in a real-life setting which is as closely related to the students' future workplace as possible. Otherwise their value is questionable. While design education at many European universities has been based on collaboration between academic staff and industry experts for a considerable time [11] British institutions have taken a little longer to overcome the "ideological conflict" between business and design education [12] [13].The recent revival of the employability debate accelerated the process of including industry placements and business subjects in the design curriculum. Pryce and Whitaker cite a number of good practice examples [14]. The Quality Assurance Agency (QAA) lends further support. Its benchmark statements for art and design programmes do not make any explicit reference to employability but they stipulate that graduates must have the ability to "operate successfully in the marketplace" and be "entrepreneurial" [15]. This paper presents one example of embedding such skills in the postgraduate design curriculum through an industry- university partnership and evaluates the benefits and difficulties of such an approach.

2 EMBEDDING EMPLOYABILITY THROUGH WORK-RELATED LEARNING AT GLASGOW CALEDONIAN UNIVERSITY

2.1 The strategic context

Glasgow Caledonian University's strategic vision requires all programmes to improve their students' employability skills by embedding work-related learning in the curriculum. A central strategic change initiative, the Real WoRLD Project, was set up to advise academic staff on different ways of doing that [16]. To provide a clear definition of the terminology, the project team defined five 'Principles of Work-Related Learning' [17] which identify work-related learning as activities that provide students with learning opportunities that integrate theory and practice, achieve learning outcomes that state what the students will be able to do in the workplace, encourage and support students' interest in a wide variety of careers, require students to take on an active rather than a passive role in the learning process and accommodate cultural diversity. Examples of work-related learning activities are placements, case studies, simulations and client-based live projects. To test the feasibility of the 'Principles' five pilot projects from three academic schools were chosen. One of the pilots was the *MA Design Practice and Management* programme reported on here. This paper presents the findings from the research carried out with the students, academic staff and employers involved.

2.2 The programme context

The *MA Design Practice and Management* was designed in response to government initiatives and a greater understanding of the impact creative industries have on the economy. It works in partnership with creative companies that ensure an accredited supervised work placement for all students. Employees within the partner companies act as work-place mentors and contribute to seminar presentations and the development of case-study material. In parallel the university delivers a high level taught programme, which underpins the students' academic development from a theoretical perspective. The objective of the programme is to provide Masters students with theoretical knowledge and relevant commercial experience which is directly related to their studies and intended learning outcomes [18].

3 METHODOLOGY FOR THE PILOT RESEARCH

The data collection process was based on informed consent. Students (n=8) were asked to assess their employability skills in an on-line survey questionnaire at the beginning and the end of the pilot to establish whether there was a difference in their responses. The term 'employability skills' was divided into three sub-sections of skills sets: business skills, learning skills and transferable skills. A student focus group was conducted halfway through the academic year to explore relevant issues in more depth. Individual semi-structured interviews were carried out with the programme leader and the employers (n=3) who were senior staff from small design agencies who had hosted the students on their placements. The students came from a variety of backgrounds including product design, architectural studies and business subjects. 63% had previous work experience; 67% of those had worked in the design sector. Given the very small number of students involved, the response rate for the surveys and the focus groups was 100%. The results from the two surveys are presented as overall totals for the sample. They could not be analysed statistically because the numbers were too small. The data from the focus groups and the interviews was recorded, transcribed and analysed by coding the responses and clustering them around key themes which arose from the question frameworks.

4 FINDINGS

The responses to the surveys, the focus groups and the interviews generated a considerable amount of data. Only a small percentage of it can be presented here. This paper focuses on some representative results to outline the universal lessons learnt from the pilot study.

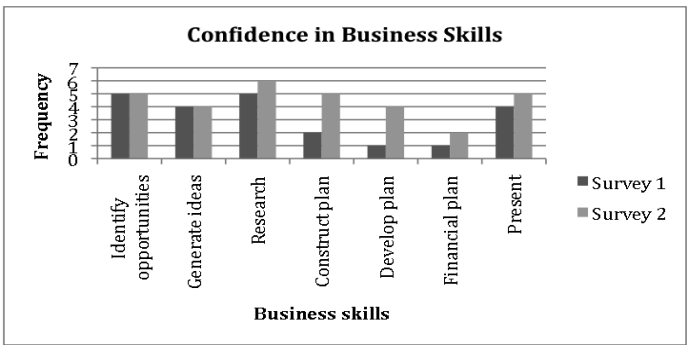
4.1 Perceptions of employability skills

When asked what they considered to be essential employability skills, the students listed the familiar generic skills so often cited in employer reports such as communication, team working and time management. They seemed very aware of the need to develop them to a very high standard in order to stand a chance in the competitive employment market. Some of them had enrolled on the MA programme because they had discovered that their undergraduate degree had not prepared them sufficiently for the world of work. They felt that the design industry required graduates with high ambition and a "*passion*" for the job. *"You have to show that you have set goals, achieved them ... and that you have made expectations of yourself and ambition."* They were convinced that a 'conventional' academic programme that did not offer practical experience could not help them develop relevant employability skills. It was the opportunity of joining a real-life design company for their placement which attracted them to the *MA Design Practice and Management*.

When the same question about required employability skills was put to the employers, they did not provide the same lists of skills. They were more interested in discussing a graduate's general attitude and work ethic. They had hosted many placement students from different universities and noticed that not all of them understood the importance of total commitment to the job. Although the students in this study had spoken of their ambition to set themselves demanding goals, they seemed to struggle with actually implementing them in the workplace. The employers felt that their understanding of commercial imperatives could be improved. One of them pointed out that some of the interns did not always appreciate the need to make a special effort if a client brief required it. *"It's just a sense of urgency, just a desire, it's not just a project, you know, this is real life, guys."* Another employer raised the same issue. He aims to recruit graduates who "*have the fire to do really well*". He was concerned though that only a minority of the students he had hosted had displayed such energy and drive. All employers took a graduate's technical skills for granted. If a specialist skills set was required for a particular task they could provide ad-hoc training. What they could not teach them was the "*desire to succeed",* an entrepreneurial, dynamic attitude that inspires them to take on new challenges. All employers felt that a university education needs to provide graduates with an entrepreneurial spirit and a desire to learn rather than just theoretical subject knowledge. In their view only the ability to adjust to constant change helps them cope with the pressures of the real-life workplace. *"They will sink or swim and the right ones will grab that and run with it."* The academic programme leader echoed the employers' views. He also felt that the ability to think on one's feet, develop independent ideas and learn from feedback were the most important employability skills. *" They need that, the ability to be pro-active, the ability to get off their chair, the ability to think, do something, take a knock, get back up, do it again, learn from that and move on."*

4.2 The benefits of embedding work-related learning

The results from the on-line surveys reveal that all of the students on the MA programme felt that their learning on the course had improved their employability skills. 57% reported that they had improved "a great deal", 43% said they had improved "to some extent". All of them attributed their increased confidence to the industry experience on the course. When asked what they had enjoyed most, they chose the placement modules because it gave them an insight into real-life working practices. *"The feeling of being involved and actively working on present projects was beneficial. There was no line between students and employees. We felt for the four weeks that we were there as if we were employees. This let us gain a real insight into the working world of design."* The results from the employability skills sections of the surveys confirm their increased confidence. 95% reported improved business skills at the end of the programme. Figure 1 presents the difference in confidence levels between the first and the second survey.



Note: construct= I can construct a marketing plan; develop= I can develop an operations plan; financial plan= I can build a financial plan; present= I can present a business plan.

Figure 1. Business skills evaluation

These results mirror the findings from the learning skills section of the questionnaires. As Figure 2 shows, the students' perceptions of their confidence had improved considerably in the second survey. Only one skill, self reflection, received a lower rating.

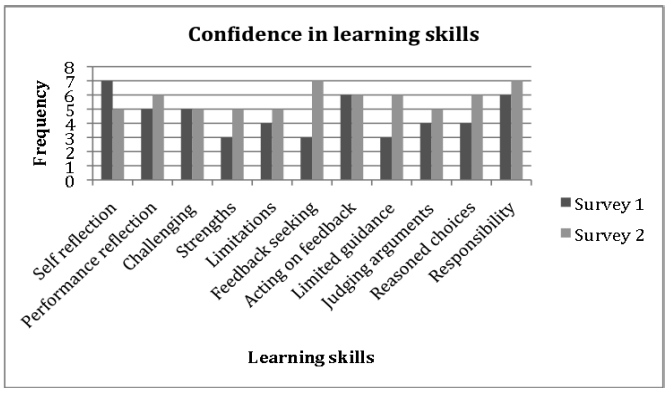


Figure 2. Learning skills evaluation

The students' answers to the open questions in the questionnaires reveal that they attributed their increased confidence levels to the placement experience. *"Both companies I worked for helped a great deal to put the theory that we learnt in lectures into practice. This, I feel, helped us more to understand what we had been taught and we could get a firm idea of how a design organisation runs."* The results for the third skills section, transferable skills, revealed a slightly different picture. Thirteen transferable skills were assessed. As Figure 3 shows, four of them (creative thinking, problem solving, team working, fact finding) received a *lower* rating at the end.

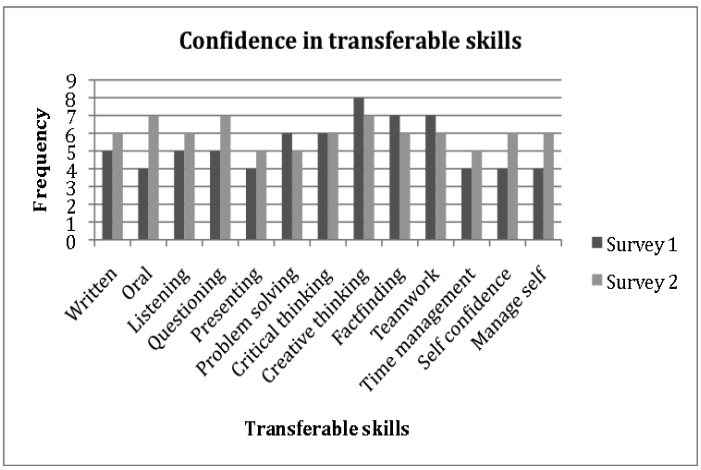


Figure 3. Transferable skills evaluation

The data from the focus group and the answers to the open questions in the survey provide a potential explanation. The students felt that the placements had taught them how much they still need to learn before they are ready to work in the competitive world of the design industry. Thinking creatively and producing results under pressure to meet a real client's deadlines was considered to be most challenging. *"Coming to the realization that some of the work completed wasn't of the standard expected…was challenging but it helped to gain focus of what was required in industry and helped to get an insight into our strengths and weaknesses."* Critical feedback from the employers helped these students realize that they might have overestimated their own ability at the beginning of the Masters programme. *"It shows you a side you can't get in the uni because you have to communicate with the professionals…and ask the right questions and make sure you're meeting what they are expecting of you."* When one employer asked a student team to improve their pitch for a client at very short notice they were shocked at first but appreciated the learning opportunity later. *"They told us to go back and do it again…it was tough but good. It helped build confidence."*

The academic programme leader and the employers identified many positive aspects of the industry-university collaboration. Employers valued their work with the students as a useful recruitment tool, a *"twelve week interview"*. They also appreciated the opportunity to make a contribution to the university curriculum. The programme leader emphasized the benefits of staying in touch with developments in the design industry and the satisfaction he gains from seeing students rise to a difficult challenge. *"This sounds very Hollywood but it's always good to see people develop, it's great to see them flourish and really move on."*

4.3 The challenges of embedding work-related learning

Students, staff and employers were asked what they perceived to be the most difficult aspects of integrated work-related learning. The students felt that the placement modules were more demanding than the 'conventional' classes taught on campus. They realized very quickly that they needed to improve their time management skills. Balancing the demands of the employers, their academic modules and their part-time jobs proved challenging for most of them. One respondent commented that "*the workload was a considerable step up from Honours* (the undergraduate programme*) which is saying something."* Another student struggled with *"the constantly intense workload"* but also appreciated the experience because *"in the real world that would be the case."*

The interview with the programme leader showed that the management of an industry-university partnership can add to the pressures of an academic's working life because it can be very time consuming. Students might need additional support to ease their initial anxiety about working for a real company. They also have to be sufficiently prepared for the placements to ensure they perform well with real-life clients and employers. Identifying the right businesses and liaising with them can also be more labour intensive than preparing for a 'conventional' academic programme taught on campus. The employers did not see any obstacles in their collaboration with the university. *"It's got to be the way forward, I mean I'm keen. We've obviously been lucky enough to employ several local graduates and we want to continue to be able to do that and so it's good for us to be able to influence what's going on in the university and have contact with the graduates that are coming through. So it's all to the good."*

5 CONCLUSION

This very small pilot study provides an indication of how valuable embedded work-related learning activities are for improving design students' employability skills. The evidence presented in this paper suggests that a Masters programme which combines theoretical learning on campus with practical learning in the 'real world' has the potential to produce graduates who are realistic in their assessment of the employment challenges in the design industries. The students' realization that the skills and the work ethic they had acquired at undergraduate level were not quite good enough to meet employers' expectations motivated them to work harder and 'smarter' at Masters level. Improving their employability skills in response to feedback from real-life employers and clients increased their confidence and prepared them for the challenges that lie ahead in their search for employment. While their positive perceptions of their own learning are one indicator of the success of the programme, the real proof will be provided by the quality of the graduate jobs they will be able to secure in the future.

REFERENCES

[1] Dearing R. *Higher Education in the Learning Society*. National Committee of Inquiry into Higher Education 1997 (HMSO, London).

[2] Knight P. and Yorke M. *Assessment, Learning and Employability*, 2003 (Open University Press and McGraw Hill Education, Maidenhead).

[3] Pryce V. and Whitaker J. *Restarting Britain, Design Education and Growth,* 2011 (Design Commission, London).

[4] Confederation of British Industry (CBI). *Creating Growth: A Blueprint for Creative Industries*, 2010 (CBI, London).

[5] Cox G. *Cox Review of Creativity in Business: Building on the UK's Strengths,* 2005 (HM Treasury, London).

[6] Creative and Cultural Skills. *Impact and Footprint 2010/11*, cited in Pryce and Whitaker, p.27.

[7] Higher Education Careers Services Unit (HECSU). *What Do Graduates Do?* November 2011. http://www.hecsu.ac.uk/research_reports_what_do_graduates_do_2011.htm.

[8] Willets D. *University Challenge*. Department for Business Innovation and Skills. 2010 http://www.bis.gov.uk/news/speeches/david-willetts-oxford-brookes-university-challenge.

[9] Jameson J. Strudwick S. Bond-Taylor S. and Jones, M. Academic principles versus employability pressures: A modern power struggle or a creative opportunity? *Teaching in Higher Education,*Vol. 17, No.1, February 2012, pp. 25-37.

[10] Cranmer, S. Enhancing graduate employability: Best intentions and mixed outcomes, *Studies in Higher Education*, Vol. 31, No.2, April 2006, pp. 169-184.

[11] Examples include: Domus Academy, Milan; University of Art and Design, Helsinki; Strate Collège, Paris; Istituto Europeo di Design (IED), Madrid.

[12] Teixeira, C. The entrepreneurial design curriculum: Design based learning for knowledge-based economies. April 2010 http://www.iasdr2009.org/ap/Papers/Orally%20Presented%20Papers/Design%20Education/The%20Entrepreneurial%20Design%20Curriculum%20-%20Design based%20Learning%20for%20Knowledge-based%20Economies.pdf

[13 Prior, S.D., Shen, S-T. and Karamanoglu, M.The Problems with Design Education in the UK; *Proceedings of the International Association of Societies of Design Research Conference*, 12-15 November 2007; Hong Kong Polytechnic University, Hong Kong.

[14] Pryce and Whitaker, 2011, pp. 35-36.

[15] Quality Assurance Agency (QAA). Subject Benchmark Statement: Art and Design. 2008, pp. 3/7 http://www.qaa.ac.uk/Publications/InformationAndGuidance/Documents/ADHA08.pdf.

[16] Real WorLD (Realising Work-Related Learning Diffusion) Project.http://www.academy.gcal.ac.uk/realworld/.

[17] McKinnon, S. and Margaryan, A. *Principles of Work-Related Learning*. 2009. http://www.academy.gcal.ac.uk/realworld/documents/Principlesofwrl180909.pdf.

[18] Wood, B. And Evans, D. MA Design Practice and Management: A Real Industry and Academic Collaboration. In: Proceedings *of International Conference on Engineering and Product Design Education,* September 2009, Trondheim.