

PRACTICE MAKES PERFECT: PRODUCT DESIGN AND EXTERNAL COLLABORATIONS

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ABSTRACT

How should practitioners and enterprises contribute to product design education? This paper looks at the strengths and challenges of working with design practitioners and enterprises.

Lecturers are employed on part-time specifically because they are current practitioners. Issues can arise between the demands of teaching and practice. Companies who are keen to work with the University and their motivations vary, so one has to weigh up the relevance of live projects and competitions.

Local organizations are approached to support students' research because of their resources, expertise and experience. The focus is on sharing business practice. These sorts of collaborations have led to Knowledge Transfer Partnerships and career opportunities for graduates. Alumni return as design practitioners themselves seeking employees. The Product Course at Northampton also works with charities and social enterprises. This type of practice gives rise to a different set of issues and skills. Understanding of social value is key for users, students and the organisations.

This approach shares good practice and experience with whole cohorts. The variety of opportunities suits companies and often educates them about the value of design. The paper presents a number of experiences and projects to explore the issues of practice in education. It is not always a smooth process. Agreements are not always easy to make. There can be ethical issues. University administrations are still learning to work with outside organisations.

Despite the challenges, this paper would argue that such collaboration with practitioners has proved itself invaluable and should be pursued. Practice makes perfect.

Keywords: Practice, local enterprise, collaboration, undergraduate product designers

1 INTRODUCTION

How should practitioners and enterprises contribute to product design education? There are strengths and benefits for both courses and businesses from collaboration. There are also challenges of working with design practitioners and enterprises. This paper uses a number of project case studies to explore the issues of surrounding the role practice in Product Design education. Its approach is more ethnographic than statistical. It is about reflecting on and sharing experience of working as a senior lecturer and practitioner at the University of Northampton. In the course of a twenty-three year career attitudes to the role of practice in teaching Product Design seem to have changed. This paper looks at three areas of teaching where the outside and internal meet; practitioners are employed, links are made with local business and collaborations are set up with voluntary organizations and charities. Staff and administrators have changed. The course and institution have had re-establish ways of working with practitioners. The aim of this paper is to share and pass on experience and ask how practice ought to contribute.

2 EMPLOYING PRACTITIONERS

Employing artists and designers to teach undergraduate designers has a very long history in British Art & Design schools. A Crafts Council Report [1] illustrates this collaborative practice

... teaching may well be regarded by craftspeople as an integral rather than supplementary feature of their work.

In a paper given at previous conference in Denmark it was argued that traditional crafts' educational heritage of a master's teaching apprentices continues to be an important model for teaching practical

design skills [2]. In 1970s David Pye [3] dealt with design and workmanship with his focus and values the application of principles learnt from practice.

Product design courses need drawn on external industrial expertise; an experience of quality practice. Visiting experts are invited in to give master classes. They come to inspire and talk about their work. The University of Northampton organizes a week, held each January - Subject Futures Week when all the teaching is off timetable. Product designers can go to presentations in other design disciplines. This year for example staff from Mecanoo, came and presented the design process involved in the new Birmingham Library. The previous year it has been Assemble Studio, explaining how their collaborative projects had developed, leading to a Turner Art Prize in the same year. The virtuoso class is common in the Arts with musicians [4] and actors.

Part-time and full-time employees from other University departments such as careers departments or business schools are brought into teach. They provide a different context and develop different core skills in areas such as marketing that are not necessarily covered in the studio. These are practitioners from other disciplines. Product designers will be working with these sorts of experts in their future careers. So bringing in their kind of knowledge is valuable. This year Sociologists and Film Studies experts introduced to different approaches to academic writing and business research skills. Case studies from design practice [5] in the Convivial Toolbox indicate how important it is to draw in other types of practitioners in the early stages of the design process. Product design courses can mimic what happens in practice. It would be good to do more of this but timetables can be inflexible and different faculties do not find it administratively simple to collaborate.

Computer technicians are required to teach software programs or workshop staff can pass on their valuable practice based expertise to students. They can teach them, for example, to operate specialist workshop equipment. At times obstacles are put in the way. Some staff members at this level are not employed as lecturers so they are not supposed to be teaching. In some cases they are treated as demonstrators and have to be accompanied/observed by lecture grade staff. The University system seems to under value the importance of their knowledge. Students are often well aware of the expertise and choose to work closely with them. For Product Design student producing models in this way are inspiring. They generate more understanding [6] than models three-dimensionally printed by an external supplier. Some students, it must be said, will seek to sub-contract the making experience, leaving components and finished models to be produced to order by workshop staff. Which type of practice should we be encouraging? Teaching through demonstration or enhancing the briefing skills required to sub-contract samples to a specialist technician? The opportunity to experience learning through making has diminished over the last decade dedicated staff and workshops are now being shared with more courses. More complex and expensive equipment is not as easily accessible. In our instance we are moving to a new campus where the expectation is that digital will dominate, with CAD files being passed to technicians. The concern is that the opportunity to learn from practice will be diminished.

Practitioners are often contracted as hourly-paid staff covering specific topics or for just a particular project. Topics such as business planning, drawing, or design history are often out sourced. The tutors seem to be valued more, if they have specific design practice or business experience, but industry experience is not always seen as essential. At our University staff members have been employed on part-time and fractional contracts specifically because they are currently design practitioners. This was standard practice across the sector. [1] The recent recession and changes in some employment legislation has changed this practice. Part-timers were brought back annually but now they can gain employment rights, these long term relationships seem less popular. Secure part-time involvement is harder to find. For University Human Resources teams short-term contracts, flexible hourly contracts make it easier hire and fire at short notice and contracts could be ended as swiftly. Part-timers are not always treated very well [7] leading to campaigns by the academic union. They often expected to teach before paperwork is prepared and with little preparation time. A University's wage bill is usually the most expensive outgoing, so a cut back on part-time hours is far easier than cutting full-time staff. The argument is often given they are more expensive per hour than permanent staff so fractional and full time posts are advertised whenever possible. Practicing designers are thus encouraged to become more involved moving from a few hours to fractional posts, this can provide better employment terms and allow them to plan their time better.

In recent years we there has been a reduction in the number of part-timers - Associate Lecturers as in the Product design department. In our own area even the number of internal Associates, staff brought

in from other faculties has been reduced. Cross charging between faculties was seen by the administration to be problematic. Lecturers were encouraged only to take on teaching in the faculty that employed them. At the start of this academic year the course had no Associates to the surprise of an incoming manager. This has meant that there is more stress on having permanent staff with appropriate industry experience. This is linked to over work and the increasing amount of administration work required by full-time lecturers. These tasks cannot easily be undertaken or delegated to fractional staff not on site full-time and who have other commitments. Within six months the policy was reversed with a designer-maker and two engineers joining the team. There seem to be cycles where valuable practice stopped only to be reintroduced at a later date.

In the past year a new Senior Lecturer in Product Design has been appointed. He had been running a practice and working on a fractional contract at another University but decided to move to take up a full-time teaching role. He has been active in introducing commercial clients to work with students on live projects and to support them with KTP applications. Later in the year, Three-dimensional Department's manager moved back into architecture after three years in post. Handing over his practice to others to take up the post full-time had not been easy and he decided to return to design practice. He now works as an Associate retaining a teaching day, but that is an unusual step usually only taken by someone nearing retirement. He valued master classes and visiting lecturers sharing key skills and experience. This possibly may reflect a different type of design training as an architect.

Employing practitioners has it has been argued important to product design education. Employment contracts and working arrangements must allow for part-timers to contribute flexibly. University structures and processes must support the sharing of internal and external expertise. Design education occurs through practice, observation and real world involvement. It will always be a balance, as issues can arise between to the demands of teaching and practice but role of the University in providing the right employment and consistent employment strategy seems key.

3 SERVING THE NEEDS OF LOCAL INDUSTRY

Serving the needs of local industry has a long history. Northampton University could be said to have its modern foundation in four separate specialist schools: an Art & Design School, a Technical college, a Teacher's Training Academy and a Nursing College [8]. The Art, Design and Technical College were established in a specially designed building in the 1930's. Students attended on day release and evening classes from local businesses. Courses were established to meet the requirements of local industries. The engineering school still runs daily release such courses closely linked to industry's requirements. The region developed new industries to set along side traditional craft based production of shoes. In the 1960's the town was the hub of the British toy industry [9], lift technology and innovate machine tool production. Today the area remains a distribution centre with firms seeking help with design although the products may not be produced locally.

What types of firms has the Product Design course been involved with? Some students come from local companies. Fairline, a local leisure boat company supported a junior member of staff to take the degree whilst working part-time. His final project did relate to his *day job*. It would have been too large a project for a student to undertake without the support of a company. The links with the firm continues with two student placements occurring over the summer of 2016, both of which could result in posts with the company upon graduation.

Recent successful collaborations have come from graduates working with local companies. A playground equipment company has employed three graduates. RPC, packaging company has sponsored a live project for second and first year students. A graduate from the course led the project. Tensator, an American owned company producing barriers and queuing systems in the region, similarly, was encouraged to come into the University by a course graduate.

Lecturers introduce their external business contacts to the Product Design team. An architect's contact resulted in a summer project to design a new water bottle. A member of staff on a fractional post introduced the toy distributor John Crane Ltd, to the course team. In this case, a live second year project led to a Knowledge Transfer Partnership (KTP). They have continued to collaborate on research, sponsored an exhibition [9] and employed two students from the course.

Some companies who are keen to work with the University so approach the course or are introduced by another department. Sometimes they seem on the surface to want *free* design work and a lot of fresh ideas without paying commercial rates for the work involved. The course team will respond to the proposal if it fits with curriculum, will introduce students to new skills and vital practical

experience. Three short projects of this kind were taken on in 2015: a bird feeder, light bulb packaging and a well-being inspired piece of furniture. Sometimes the project grows beyond the skills and capabilities of a particular group of students. If appropriate we pass the client onto a graduate or local company so that can see the design through to production. Sometimes contributions to costs and prizes to students are easy to agree and are worthwhile. On other occasions, agreements are protracted and funds are slow to materialize. Learning how to handle design projects by working for a commercial client is very valuable. It often raises the level of verbal and visual presentation. Even the challenges and problems of meeting client's unrealistic expectations provide useful lessons.

Links between local business and the Design school have a long history. Technical Colleges and Art schools were supported by local industries. Applicants, students and graduates all seem to appreciate external practice experience integrated into the curriculum. It certainly provides them with job opportunities makes them better prepared for their future careers. Surprisingly despite this long history there is no standard *rules of engagement*. New contracts and agreements are drafted each time as policies, staff and administrators change.

4 PRACTICE IS NOT ALL COMMERCIAL

Sometimes the Course takes on larger projects and competitions that involve local institutions. A project sponsored by the Sorrell Foundation involved schools. This project helped the transition from school to University. It may have increased applications. It helped undergraduates understand the difference in approach from learning design at school and University. Sorrell's involvement also alerted students to the relevance of their type of business practice and patronage to their future careers. The project involved designing products to improve the school experience. Product Design sits in a Three-dimensional Design department alongside Architecture Technology and Interior Design, so this project provided practice in designing products for the build environment. This introduced a different ways of commissioning and managing a design as well as exposing the students to design in marketing companies.

Product Design at Northampton are working with charities and social enterprises and these collaborations have are particularly successful. This type of practice gives rise to a different set of issues. Like the Royal Society Arts (RSA) Student Design Competition [10] these collaborations result in projects that have the potential to change lives. This suits the University's plans and Ashoka Changemaker status [11]. Research funding has been sought to understand better how product design is undertaken in social enterprises. This understanding of social design practice is key to getting the most from such projects for users, students and the organizations involved.

The RSA projects layout the challenge very well and provide a wealth of research materials. They define the design task. The issues often inspire final major projects. In the past three years, we have encouraged students to follow through and submit to the competition. In 2015 Christopher Doyle won for a toy that encouraged creative play and recycling. An interior design student won with for a mobile desk space in 2016. Three students have been short listed in 2017. Every year now, participation with the RSA results in strong final year projects in graduates' folios. Employers are aware of the competition so the RSA briefs can give them a point of comparison when looking at applicants from a diverse range of institutions.

Local charities like Age UK and Sue Ryder have worked with Product students advising on individual projects or being involved over several years in a KTP. Here the impact can be important to the wider community; larger than just providing a practice experience for the students [12]. A number of final year students' projects have a social context and application, for example, walking aids, shelters, and equipment for disaster relief. Recently, lecturers have been trying to assist graduates to get their products into the market, where they will make a difference to the disadvantaged. Experience of external practice is key to this kind of commercial advice.

Northampton competes with Universities that offer sandwich courses. Some students find a placement and take a year out before their third year. Companies are encouraged to take on student on a part-time basis and in the vacations on placements. After an HND some graduates take a year out before returning to top up to a BSc, after their experience of practice. Graduates also return to the department with projects to share with the next generation. Small business units and consultancies on campus also provide opportunities to share facilities and experience. Some have offered small parts of projects to students, such as helping with model making. Increasingly the University would like to see expensive equipment used by outside commercial partners. The student access has to come first and access to the

machines need to be managed and administered. In effect design technicians are setting up a service company. This type of external access highlights the workshop experience in a different and more relevant way to undergraduates.

Our approach of integrating work experience into the course shares good practice and experience with whole cohorts. If students just spend a year out it is a more individualized experience and not everyone benefits. It suits a variety of enterprises that do not have a need for a large design studios and only need design input on specific projects until the enterprise grows. We are often educating the companies about the value of design and how to brief and manage design projects. Many of the KTP's such as those with Sue Ryder and John Crane were focused on setting up a design studio in an organization that had never owned or managed its own design. Sue Ryder [12] specifically approached us because they were buying products that they thought were exclusive only to find the products were sold with impunity to anyone who approached the manufacturers.

Introducing practice experience into education is not always a smooth process. Agreements are not always easy to make. The University authorities are often not aware of what is required. They can just see collaborations as an income earners rather than a learning experience. External companies can see it as a shortcut to get a whole collection of fresh ideas with little or no investment. Are undergraduate students merely cheap alternatives to freelancers? The University has set up an employment agency so that students can be paid properly for short task based projects. Some firms have delayed paying what has been agreed. The invoices sent to bookkeepers who are divorced from the students and staff that have worked with on the project; payments are just treated as commercial invoices and not patronage.

Are we undercutting professional design practice? External examiners and employers ask us to engage students with practice. Employers want to meet and work with undergraduates. It is almost an extended interview. Academics are not generally undertaking anything akin to commercial consultancy through this type of involvement. If academics approve a project because it is not commercially viable at that stage and we can add value through research.

What about intellectual property and liability issues? Universities are still learning to work with outside bodies. Each time we review what is being asked and what will be passed to the company. There is never a promise that the task will result in a product ready to go to market. Sometimes that is the company's expectation. The project stops short and they are guided to external expertise. The course and University are learning from practice and every project is slightly different.

5 CONCLUSION

Practice is at the centre of our teaching. Course teams are made up of designers who have industrial experience but have chosen to teach full-time, staff are employed on a fractional contract are usually running design practices rather than teaching at two institutions. Associates or part-timers are selected with specific experience. University education is now funded differently an employment legislation has changed putting pressure on the way practitioners are involved directly in teaching.

Businesses, social enterprises and organizations of all sizes are involved with Product Design education at Northampton. Many come with very different expectations. Some with ideas of giving back and others wanting lots of fresh eyes looking at their design problem. Each project or competition needs consideration to what it brings to the undergraduates and how it fits with the curriculum. Managers and administrators in both the University are still learning from practice and often relearning the value of practice. External enterprises do not always understand how these sorts of projects need to work for all involved, especially for the student. So academics become design managers. These projects take an investment in time beyond their teaching hours and often rely on the academics commercial practice.

Despite the challenges of changing employment policies, lack of standardised rules of engagement, this paper argues that learning for practice and practitioners is at the core of design education and should be pursued. Practice makes perfect.

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