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Growing our own – recruiting high quality research students by stealth

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Abstract

Most design students assume that their education is preparing them for a career in professional practice. Until recently the idea of working as researchers or studying for a research degree was not an option.

In the early 1990s, the Art and Design Research Centre at Sheffield Hallam University was set up with a focus on “designerly” research. At that time we did not have a ready supply of suitable experienced researchers, and design graduates were not coming forward as candidates for research degrees.

The university’s policy at the time required us to include a substantial research methods element in all postgraduate courses, including the vocationally focused MA Design programme. As a result of adopting this policy in a very whole-hearted way, making research methods central to the MA and framing the creative practice of design as both research-driven and investigative, we have “subverted” a number of postgraduate students who might never have considered a research degree, but are now registered for, or in the process of transferring to, PhD studies.

This paper describes the features of the MA programme that foster an investigative culture and provides some examples of PhD students whose research has grown from opportunities encountered in the MA. It also discusses the relationship between professional practice and research and the ways in which a research-centred education can prepare graduates for professional leadership.

Background

Design education, in the British Art and Design School tradition, is highly focused on preparation for life in the creative professions. If students think about advancing knowledge or understanding it would be by following the model of their heroes – charismatic designers who periodically question the existing order and offered new ideas in the arena of professional practice.

By contrast, the idea that research might be important to ambitious young designers has not taken root. If a tutor comments that a student is “good at research”, they may be implying that this is no substitute for creative talent and it is not surprising that able graduates do not consider advancing their career through a research degree.

Designers do undertake postgraduate study to improve their professional abilities and standing and we wish to describe an approach to postgraduate study that is relevant to both professional aspirations and to the development of a research culture. The aim of our MA Design programme at Sheffield Hallam University is to prepare students for professional leadership but it has also led some talented students on to PhD studies, often to extend an investigation that they started in their MA.

In the 1990's, UK design schools, as elsewhere, undertook rapid development of their research culture. Some promoted research degrees, some created research centres and projects separate from the mainstream of design teaching. At Sheffield Hallam, we did not seek rapid growth in PhD studies since we could not create a cohort of research degree supervisors overnight and we did not wish to “sub-contract” research to hired specialists, so our first efforts went into developing a research culture within the teaching group.

This created a core of academics whose research has been both distinctive and well-regarded but did not support directly the development of research degrees. Despite this, we did gain some necessary experience through supervising a small number of PhD students in collaboration with colleagues from other disciplines.

The second aspect of this picture was the development of taught MA degrees in design starting in 1991. These were not intended to support our research culture but they have a number of features that have had that effect:

- Substantial formal training in research methods.
- Teaching mainly by “research active” staff.
- Focus on a single long project.
- Emphasis on practice informed by contextual research rather than explicit design goals.

Research Methods Training

When starting to plan our first MA degree we had little concern for research as an explicit part of the curriculum, however the university had proposed that all postgraduate students should be seen as potential PhD students and should be given some suitable preparation. We interpreted this as formal research methods training and this was incorporated in the MA curriculum. The university policy behind this was not sustained for very long in this form and, with hindsight, we were lucky to start our MA at a time when there was a new emphasis on research training.

The policy had a profound effect on the student's experience and perception of postgraduate study. The research methods module came at the start of the MA and signalled to students that they were in a different environment from BA studies. In addition, partly for economic reasons, research methods teaching was shared with students of Fine Art. This exposed the students to a wider range of ideas and expectations, leading to heated debate about the methods and aims of research and a recognition that the subject went beyond the particular concerns of any one discipline.

From the start, the research methods curriculum was concerned as much with our understanding of knowledge and the relationship of research in art and design to research in other disciplines, as with practical methods of investigation. Many students found this approach challenging and often said that they did not really begin to understand the full implications of the teaching until a year later when they were completing their MA studies. For this reason it was difficult at times for students to see research methods as directly relevant to their practice.

The MA programme was restructured, therefore, to embed research methods in the core project programme, rather than treating it as a separate "module" of the degree. The main elements in the first two semesters are titled "Project Proposal and Research Methods" and "Project Development and Research Methods". Research proficiency is assessed as a separate element but on the basis of the evidence of research in the students' core project work, rather than through a separate assignment. The research methods tutor therefore has two roles – to introduce the curriculum through lectures and seminars, and to review students' project work from a research perspective in small group tutorials, complementing students' regular meetings with subject tutors.

As this has developed we have introduced a new degree, MA Research in Art and Design, intended for students who intend to progress to PhD. In this degree the formal teaching in research methods is largely the same as for MA Design students but the students' practical work and assessment is more clearly framed as research, rather than creative practice. The distinctions can be blurred however, when one considers the relationship between investigative design practice (MA Design) and the use of creative practice as a research instrument (MA Research).

As a result, several groups of students now work together to understand research. MA Design and MA Fine Art students follow the same formal curriculum as students in MA Research and students in the first year of the PhD. When PhD students have previously completed one of the MA degrees they usually repeat the research methods programme, partly because it has developed each year and partly because they find new interest and depth in it on the second reading. Apart from the common foundation of knowledge provided, this shared experience has created a genuine postgraduate community within the department where all members have a shared experience and interest regardless of their different interests and aspirations.

Teaching by Research Active Staff

MA Design has specialist subject tutors, each responsible for one of the degree routes in the programme. Mostly these are active researchers with current research projects and good publication records through both conventional academic media and innovative practice. In one case, where a tutor with a strong research track record was not available, the subject tutor is supported by a research fellow with appropriate specialist experience.

This has two effects. Firstly, teaching in the MA is heavily influenced by the research experience of the course team. Formal teaching has its roots in tutors' published research, students are exposed to the continuing work of their tutors and associated researchers and the ideas and methods shared tend to come from a research context rather than from professional practice.

This could be a problem if research was very distinct from professional practice, but the approach we have developed emphasises research in diverse contexts outside the specialised world of designing, collaboration with specialists in other disciplines, the essentially investigative nature of creative practice and the embodiment of new knowledge in the practical outcomes of designing. We do not believe that any of this contradicts the values of professional practice and it can, in fact, be seen as a progressive approach to professional work.

The second is the effect of our research experience on course philosophy. Some of our research has led to practical innovation that both draws on and feeds into the development of knowledge. For example the work of Paul Chamberlain concerned with vibro-acoustic therapy for profoundly disabled people includes primary investigation of the problems of this audience, consideration of established theory, development of experimental "products" which provide experimental tools and continuing collaborative research into new therapeutic strategies alongside product development which supports the implementation of these strategies.

This approach has led us to believe that advances in design thinking are easier in a mixed economy of research and creative practice than in an environment which emphasises only professional practice. Professional issues are not neglected in the curriculum but the structure makes it quite

explicit that a research-driven approach to practice is the central theme of the MA.

One Long Project

The student's individual project is the main vehicle for study and is framed to emphasise the investigative nature of design rather than disciplinary skills and knowledge.

The curriculum does not emphasise core design skills or knowledge. We expect students to generate and develop design ideas to a professional standard since they have achieved good results in previous study or professional work. In reality this is not always true and one current concern is to ensure that students engage in experimental creative work at every stage of the degree.

The single project approach requires students to consider their individual learning aims and likely topics for investigation well before they enrol. Most students approach postgraduate study with a sense of the theoretical issues that they wish to explore but are surprised that we expect them to propose concrete research topics (human contexts and practical problem areas) and work through how those relate to their wider learning aims before they are offered a place on the programme.

This process is similar to registering for a research degree (we ask students to use the section of the postgraduate application form, normally reserved for PhD research proposals, to describe their project ideas). Students find this difficult but it gets them mentally engaged with their studies up to 6 months before they actually enrol. We probably lose some potential students at this stage but the benefit is that the students develop a sense of themselves as being engaged with a process and part of a group much earlier than normal.

The project itself is divided into three main stages, each of which is defined in research terms:

1. *Project Proposal (Context, Theory and Concepts)*

Students engage in contextual research to understand the circumstances surrounding their project, identify specific design problems/concepts that they will develop and seek out relevant theories that will support their work.

2. *Project Development (Experiments and Building Blocks)*

Having identified a broad design direction, students will seek out specific knowledge needed for successful execution of the design, explore design ideas through experimental creative work and evaluation and develop any functional building blocks that may be needed in the final design. There is a clear tension here between a holistic and atomistic approach and a complex design needs both kinds of thinking for success at a professional level.

3. MA (Completion/Evaluation)

At this stage the emphasis is partly on achieving a professional level of completion but success at the highest level will depend mainly on the quality, relevance and scope of evaluation as well as the "completeness" or originality of the outcome.

While the outcome is intended to be a demonstration of high level professional practice rather than a contribution to knowledge, there are some similarities between this process and that of a research project and this is not accidental - as described above our ideas for the MA have their roots in our research experience.

Contextual Research rather than Explicit Design Goals

Students are expected to identify an issue or situation likely to contain opportunities for progressive design work. Design students are often asked to reframe design problems but we go farther by insisting that they ignore any explicit design problems and approach a situation with a completely open mind.

This approach has roots in how our undergraduate programme works with industrial sponsors. Traditionally a sponsor, in consultation with tutors, proposes a design brief and students were expected to behave as professional designers responding to the brief. However it became increasingly apparent, during the 1990's, that the biggest questions facing companies lay, not in the resolution of specific design problems but in creating completely new products and services.

So we proposed projects that started with a broadly stated opportunity - for example an area of the marketplace or some specialist knowledge or technology that the company possessed - and expect students to explore diverse possibilities for new developments. The result was a greater variety of ideas and directions and the industrial partners found these outcomes much more helpful in informing their strategies for product development. The department became recognised within the university as a source of innovative ideas and a several students' proposals were taken up for commercial exploitation.

From this experience, we proposed an approach for MA in which broad-ranging contextual research was the pre-requisite for innovation and design goals were not defined until much later in the process. For example a student who started out investigating the experiences of rock climbers (based on a personal interest in extreme sports) not only discovered a serious safety problem but found that this problem was to be found also in an industrial context, where there was the opportunity to review the whole job that workers did and a design/business opportunity that was not evident at the start of the project.

Once this principle was established and some students had experienced the benefits in their own ability to innovate, the idea that research was significant

to designers could take root. Similarly, once we had some successes to report it became possible to explain these issues to potential students and for them to see research as a significant issue right from the start. Of course all design students "do research" but what was at issue was the idea that research was a serious subject in it's own right and goes well beyond the gathering of information.

Effects on Research Degrees

As a result, a number of MA students who embarked on postgraduate study to improve their professional standing as designers have decided to go on to doctoral research. Their motivation seems to come partly from the idea that success as a professional designer can come from ownership and exploitation of significant knowledge rather than the more conventional idea of a PhD as a passport to a career in research or university teaching. This is connected to the ideas of Phil Agre (2003) whose advice to graduate students on achieving professional leadership through knowledge of significant new issues resonates very well with our MA philosophy and is one of the basic concepts we introduce to students early in the MA programme

There are two ways for students to progress from MA to PhD. The more conventional approach is for a student to identify an issue in their MA work that they would like to develop further. For example Peter Walters is exploring methods of engaging with user communities following a successful experience of designing garden tools in collaboration with members of the University of the Third Age, an organisation which promotes continuing learning among retired people (Walters, Chamberlain and Press 2003).

The second route is for an MA student to embark on a project which turns out to have a scope and significance which goes beyond normal expectations of a one year project. The MA provides a vehicle to identify issues and theories but a point is reached when it is clear that there is an opportunity to make a substantial contribution to knowledge and we start to navigate towards PhD registration rather than concluding the project.

For example, Janet Shipton is investigating the ways in which people re-appropriate packaging materials for unintended uses and design strategies which might promote this form of recycling (Shipton and Fisher 2003) and Nicola Wood is investigating methods of using multimedia to support the learning of tacit craft knowledge (Wood and Rust 2003). Both projects started with the discovery, during the MA, that there were no established theories which would support effective design practice and the recognition of possible avenues for developing both theory and practice.

This relationship between research and professional practice has a further benefit for research students since the MA programme places a heavy emphasis on communication ability and fosters students' confidence in both group work (through role-play and team exercises) and verbal/visual presentation (through frequent formal presentations of their own and each others work in progress). Our emphasis on effective "story-telling" is geared

to the demands of professional practice but it is noticeable that the students carry these abilities into their research degree work and meet the challenge of presenting their work in a public arena with a great deal of confidence and clarity.

Conclusions

The experience of developing our MA programme over the past 10 years, and its effect on PhD studies, has led us to conclude that it is possible to "subvert" design graduates into an interest in research as a formal issue in their work and encourage some of them to go on to doctoral research without undermining their aspiration to succeed in creative practice as well as scholarship.

This has happened because the academic staff have been able to make sense of the connections between research on the one hand, and creative practice on the other. Our approach makes investigation central to professional practice and employs professional practice activities as instruments in our research investigations. Not only does this make sense of the need for scholarship that informs the education of professional designers but it also indicates ways in which research and professional practice can have a mutually supportive relationship, something that has been lacking in our field.

Doctoral research is still a marginal activity in design. Practitioners rarely understand it or see any value in it for them. As the current generation of "Design Doctors" complete their studies and move on in their careers we may see a greater acceptance of research and doctoral education in our field but at the present the biggest problem we face is in helping talented people recognise that research can be relevant to their aspirations. We feel that our approach to postgraduate education offers some ideas that might help this process.

References

- Agre, P. (2003) *How to Be a Leader in Your Field: A Guide for Students in Professional Schools*, Working paper, Department of Information Studies University of California, Los Angeles, <http://dliis.gseis.ucla.edu/people/pagre/> updated 8 Jun 2003, last accessed 19 Jun 2003
- Shipton, J. Fisher, T. (2003) *The Spontaneous Re-use of Packaging: Designing for Creative Consumption and Dispossession*, Proceedings of 5th European Academy of Design Conference, University of Barcelona, April 2003
- Walters P, Chamberlain, P and Press, M (2003) *In Touch - An investigation of the benefits of tactile cues in safety-critical product applications*, Proceedings of 5th European Academy of Design Conference, University of Barcelona, April 2003
- Wood, N. Rust, C. (2003) *Designing for Tacit Learning: an Investigation of Design Strategies for Multimedia Supported Learning in the Crafts* Proceedings of 5th European Academy of Design Conference, University of Barcelona, April 2003