Chapter 7

Designing by Practice: A New Professional Doctorate in Design

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Author Biographies

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Abstract

The development of professional doctorates in Australia and elsewhere is relatively new, dating from the 1990s (Maxwell, 2003). Searches of literature that critique, guide and analyse the impact of professional doctorates have not looked at the discipline of design. This may well be as a result of the relatively new arrival on the Higher Education scene of the Professional Doctorate in Design. As with other theorists (Hoddell, Street, & Wildblood, 2002) members of the Faculty of Design, Swinburne University of Technology identified the need to focus on the practice and skills that were unique to practitioners of design. In response to this need the Professional Doctorate of Design (DDes) was accredited in 1999, the first intake of students was in 2001 and 2004 has seen the first submission

for examination from the program. In this paper, we reflect on that program and position it as a catalyst for the continuing development of project-based research and the act of designing as a scholarly research methodology.

Introduction

The Faculty of Design (formerly known as the National Institute of Design) is rare in the Southern Hemisphere being one of the few education providers to have a design research centre with a focus purely on design, rather than on the broad discipline of visual/art education. Underpinning all of the research programs in the Faculty is the use of design practice as the primary research method, a focus which has implications for the development of research degree programs within the Faculty of Design at Swinburne. This paper looks at the DDes, its development, the principles of 'design as practice' and its pedagogical underpinnings in situated learning.

Hoddell, Street et al. (2002:63) outline 5 varieties of doctorate qualifications in the UK: "1) the traditional research-based PhD; 2) practice-based doctorates; 3) professional doctorates; 4) the new route doctorates; 5) PhD by publication. Leaving aside the contentious nature of which form of doctoral studies (research-based or practice-based) is actually more traditional (Hoddell et al., 2002), these same varieties are evident in Australia. It is worth noting that in Australia both the practice-based and professional doctorates are grouped under the generic title of professional doctorates. The DDes, while called a professional doctorate, could better be described as a practice-based doctorate and, as discussed later, is focused on a particular type of practice — the generation of knowledge through product.

The DDes is intended to meet the professional needs of experienced designers in industry and education. Its project-based structure allows the designer to pursue a research goal appropriate to his/her discipline, while using digital technology to better achieve that goal. The emphasis of the program is design, with the new digital technology acting as both a facilitator and a channel for professional development:

The Program

DDes documentation states that the examinable outcome comprises 70% of the degree and as such the Swinburne DDes is officially recognised as a research degree (Swinburne, 2003). The minimum time that the degree can be completed in is 2.5 years. The maximum candidature time is 5 years. The description of the program below is based on minimum candidature times.

The coursework component consists of Advanced Design Research Methods, culminating in the detailing of the Major Design Research Project. This coursework component is internally examined. If the coursework component passes it forms the basis of the formal application to the University's Higher Degree Committee for registration of the candidate for a higher degree by research. If/when the candidature is approved, the candidate undertakes the Major Design Research Project. The Major Design Research Project, which is presented as the examinable outcome, is undertaken in Semesters Two, Three and Four. Integral to the Major Design Research Project will be a Project Report of approximately 20,000 words that describes the parameters of the project investigation.

The program is applicable to all design disciplines. Its project-based structure allows the designer to pursue a research goal appropriate to their discipline, while using digital technology to better achieve that goal.

Assessment

Formal assessment of the Major Design Research Project outcomes is via the mode of presentation specified in the design brief (e.g. Exhibition, CD-ROM). The outcomes of the design research and presentation must meet the highest industry standards, and are subject to assessment by External Examiners. The Project Report is assessed as an integral component of the Major Design Research Project and may be integrated within it.

The DDes and PhD degrees at Swinburne are similar as follows:

Item	DDes and PhD
Research process	Set of activities carried out in logical, well-organised manner
Supervision	Supervised by senior academic on one-on-one basis or through the use of panel supervision
Rigour	Research quality of highest standard
End product	Research outcome organized as a sequence
Examination	Examined by 2 external examiners
Time for completion (FT/PT)	Average 3.5 yrs/6yrs Minimum 2.5yrs/5yrs Maximum 5yrs/8yrs

The DDes and PhD degrees at Swinburne are different as follows:

Item	DDes	PhD
Candidate profile (who is the degree aimed at?)	Primarily practitioners	(Aspiring) academics
Typical previous research experience	Some	Honours or research Masters
Research (as % of degree program)	70%	100%
Coursework in degree program	30%	None
Research topic	Focus on practice	Any topic (within scope of School research policy)
Examinable outcome	Major Design Research Project, leading to commercial IP, and integrated Report, leading to Publication	Thesis only, leading to Publication
Contribution	Focus primarily on professional development and practice	Focus primarily on contribution to theory and knowledge

Supervision	Panel Supervision: minimum of two supervisors both must hold a PhD. One member of the must have design-practice experience. If the design practice expert does not hold a PhD then that person is appointed as a third supervisor	Two supervisors, where both must hold a PhD, but not necessarily in design

Issues arising from the program

The DDes faces problems when faced with examination of examinable outcomes. If we accept that the community sets the public criteria of meaning (Wittgenstein 1958:) then we need to look what constitutes the community for designer research knowledge. It is commonly accept that the discourse community of any discipline is the final arbiter of how an idea fits within that field of knowledge. Within the University sector the final arbiter of examinable outcomes are the credentialed researchers in the field. Universities set those criteria as holders of a doctorate and active researchers in the field. There are very few holders of doctorates in design as practice based. As an example, the only person in Australia that currently holds a practice based PhD in Industrial Design is Assoc Prof Lyndon Anderson (one of the authors of this paper).

The brief summary of the program indicates the key aspect of design as practice. Drawing on the same questions raised by (Lester, 2002) as to the purpose of the professional doctorate as similar but different to the PhD we need to understand the purpose of the DDes. As practitioners the students build up a collection of images, ideas, examples and actions that they can draw upon in the production of the final examinable outcome. The examiners must interpret these outcomes in the context of academia. If the examiner/s are not familiar with the practice of design they do not have the tools to make sense of the submission.

> When a practitioner makes sense of a situation he perceives to be unique, he sees it as something already present in his repertoire. To see this site as that one is not to subsume the first under a familiar category or rule. It is, rather, to see the unfamiliar, unique situation as both similar to and different from the familiar one, without at first being able to say similar or different with respect to what. The familiar situation functions as a precedent, or a metaphor, or... an exemplar for the unfamiliar one (Schön 1983:138).

In this way people engage with a situation. They do not have a full understanding of things before they act, but they can avoid major problems while testing the water, as it were. When looking at a situation they are influenced by and use what has gone before, what might come, what is contained within their repertoire, and their schema for making sense of what they encounter. They are able to draw upon certain routines. As they work they can bring fragments of memories into play and begin to build theories and responses that fit the new situation. The task for supervisors and

Research Committee of the Faculty is to locate examiners who are familiar with the practice of design while credentialed in the ways accepted by the academy.

Design: Art or Discipline?

The discursive field that existed, and indeed still exists, around the development of design research is discernible in the Federal and State Government reports and attendant submissions that were released during the development of the DDes. At Swinburne the Faculty has taken up a position that is critical of the notion that all forms of the arts are somewhat the same. They argue that design is a discrete discipline with its own forms of knowledge production and articulation. There is a great deal of contention, therefore, within the visual arts and design communities as to what constitutes design education and design research.

In two Senate reports (Parliament of Australia 1977 and 1985) there is no mention of design as a field of inquiry but graphic art is understood as one aspect of the visual arts. The gradual separation of the two fields can be seen in the Senate Report into the Arts (Parliament of Australia, 1995) and later the interim report of the Ministerial Review of Post-Compulsory Schooling Training Pathways (Kirby 2000a). However the discursive positioning within academia still held to the notion that design was art as seen in the submission to that later Inquiry by the National Affiliation of Arts (National Affiliation of Arts Educators, 2000).

In the Kirby (2000a) interim report we see the expansion of art-related skills to include recognition of visual communication. Kirby (2000a:7) states that employers found that the skills of new graduates appear to be most deficient in the areas of 'creativity and flair, problem solving skills, oral business communication skills and interpersonal skills'. While these strong words are not evident in the final report of that inquiry, (usually referred to as *The Kirby Report* (Kirby, 2000a, 2000b), the sentiments of the Interim Report (Kirby, 2000a) were reflected in the discursive positioning at Swinburne. It is important to note here that at this point Swinburne was still a Tertiary and Further Education (TAFE) provider.

A shift in both State and Federal Governments to construct design as a separate field can be seen in the Department of Education, Science and Training Review of Teaching and Teacher Education ((Department of Education, 2003)) and the (Anderson et al., 2004) at the State level. The majority of Arts Faculties still saw design as an element of art (see for instance the submission to that inquiry by the National Affiliation of Art Educators (NAAE) (National Affiliation of Arts Educators, 2003). That the peak representative body for design education at that time was the National Affiliation of Arts Educators (NAAE) (now National Association for the Visual Arts- NAVA) indicates the positioning of art educators in relation to design within the field.) underpins the positioning of design education and design research.
It is possible to track significant changes from the Federal Government and NAVA since that time but that is not the focus of the history of this paper (see Nelson 2004). Suffice at this point to say that the Federal Government have specified visual mediums, normally associated with design, as priority areas. However, the funded review, while focusing almost entirely on design is being carried out by art educators (National Association for the Visual Arts, 2004).

The conflation of art and design can also be understood through an examination of the history of design education.

Historical background

Members of the Faculty have developed specific courses for design students, and not for artists and designers. An example of this concerns our Drawing subjects. And when academics plan subjects, the lessons of history are a sound starting point.

The German Bauhaus school has had great influence in the teaching, practice and history of design, at least in Western countries. Chief amongst its teachers, Paul Klee and Wassily Kandinsky are often credited with the development of theories supposedly of universal benefit to both artists and designers. After the closure of the Bauhaus, many of its teachings flowed onto Ulm, Black Mountain College, and even Australian schools. The teachings of Bauhaus students Ludwig Hirschfeld-Mack at Geelong Grammar School and Gerhard Herbst at RMIT in the 1950s and 1960s are celebrated examples of the transmission of Bauhaus training in Australia.

A prominent example of Bauhaus theory, which is used to teach artists and designers alike, concerns the formal aspects of drawing and is often known as "Point, line and plane". This theory identified the basic elements of art and is often still used to teach three dimensions in Western systems of drawing. A point is one dimension, a line creates two dimensions while the plane introduces the idea of volume or the third dimension ((Kandinsky, 1947). This is only one example of many art and design principles taught by many institutions, but seldom re-examined to assess their current value. It is arguable that the "design fundamentals", on which so many design courses rely, have changed over time and from each country, and that our needs in the 21st century have demanded a new approach. And so a series of drawing subjects, devised specifically for design students has developed where old teachings are continually being challenged. Media such as watercolour, gouache and charcoal have given way to new digital rendering software. Suffice it to say that whatever its merits for the artist, drawing from the life model and nude is no longer taught to design students at the Faculty.

The focus on design as a form of art is visible in most design programs around Australia. The Faculty of Design at Swinburne has positioned itself in the discourse that sees design as its own discipline. It is not an offshoot of fine art, and demands its own specific teachings.

The Swinburne position

From its position as a TAFE Institute up until 1992, the Faculty of Design at Swinburne had established a commitment to education that was vocationally centred. To date, the Faculty delivers only those design programs deemed by local Industry to be needed, thus securing greater student employability and industry linkages. The Faculty has 5 undergraduate programs: Multimedia Design (MD), Communication Design (CD), Interior Design (IntD), Industrial Design (ID) and Product Design Engineering (PDE).

The use of experiential learning and teaching methods were one aspect of the vocationally centred programs. That position was carried into the programs that were established within the new University in 1992. By 1999, movement in Government

policies reinforced the Faculty perspective that 'job ready' graduates gave the Faculty of Design its market niche (Swinburne University of Technology, 2002, 2004), and this was reflected in a strong practical focus in the new professional doctorate program — the DDes.

The Faculty took up the notion that production and design brief skills are paramount and the requirement that the substantive element of the examinable outcome of the DDes was entrenched in policy. As suggested in the section on issues arising from the program the emphasis in Australian Universities, including Swinburne University of Technology, the emphasis on a thesis component of doctoral studies, word-based approaches to doctoral outcomes and standardised criteria for who is eligible to make judgements regarding knowledge programs such as the DDes which are likely to promote flair, creativity and problem solving often struggle to establish themselves as credible alternatives. Word-based outcomes develops in knowledge producers an imperative to theorise in linguistic modes and works against theories produced through visual and practice modes. The way to shift this bias is to create research communities which support these other modes of knowledge production. A major question then emerges: How does a Faculty of Design establish a community of practice?

LPP

In this paper the DDes can be seen as an example of situated learning — Legitimate Peripheral Participation (LPP). LPP shifts the analytic focus from "the individual as learner to learning as participation in the social world" (Lave & Wenger, 1991:43). The Community of Practice model is one that is often invoked in relation to such issues. Such communities may operate as part of discursive practices within professions, within faculties, within institutions, and within higher education in general. Lave and Wenger's (Lave & Wenger, 1991) explorations of LPP provide a useful concept to inform such moves (Zeegers & Barron, 2000). Within communities of practice, roles of various members at various stages of their activities and progress may be systematically supported, with the ideal of good theory as underpinning the communities' endeavours. In the case of the DDes professional designers are introduced to the community of practice of research. That is they are supported in their transformation from being designers to reflective designer-researchers.

During their studies, several design students perceived they were becoming researchers (social researchers, new material and digital technology researchers) and not simply designers of objects (Hockey, 2003).

The position of the supervisor as mentor, within a framework suggested by Lusted's (Lusted, 1986) discussion of the role of pedagogy, may be further explored as a major feature within LPP in higher education contexts. Details within such a framework may be worked out: the sorts of pedagogic conversations described by Palmer (Palmer, 1998) as confronting power relations issues such as those discussed by Bartlett and Mercer (Bartlett & Mercer, 2001) and Green and Lee (Green & Lee, 1999), while engaging reflective practice as suggested by Schön (Schön, 1987), and so on (see for example (Barron & Zeegers, 2002)). Others in the field of situated learning and teaching in university programs have similarly canvassed the possibilities inherent in such contexts (Laurillard, 2002 and Zeegers and Smith, forthcoming).

We have grappled with situated learning, a dimension of pre-professional or pre-service training as part of a Vygotskyan approach to learning, where all learning is a social act, presuming a mentoring-cum-apprenticeship relationship between practising professionals and novices. It is a development in university education that involves training in a work site that goes beyond theory in a university site (Zeegers and Smith, forthcoming).

Laurillard (2002) suggests that experiential learning in practice is important but should not be divorced from theory. She argues that academic knowledge enables one to make generalisation, The ability to make generalisations is necessary in professional fields if one is to demonstrate sustained creativity and flair, to carry understandings from one situation to another. We can understand this to mean that situated learning encompasses both what happens in the field or practice as well as what happens in the application of scholarship, as both of these are 'situated contexts' depending on the skill to be acquired.

Given such conceptualisations, the possibilities of curriculum design and strategies have offered exciting possibilities for new and creative doctoral studies programs in design. Not only that, but these could be applied in other disciplines in due course, as the DDes gain momentum and credibility in the context of communities of research practice. The early indications are that this will indeed be the case, especially as the newness of the current DDes projects become established as the norm as far as the Faculty of Design at Swinburne is concerned. While LPP has been an important framing concept for the analysis of the program and its original TAFE forms, the establishment of DDes themselves have opened up an extra dimension as to their form. The perspective of research as integral to the generation of knowledge in the discipline of design has meant a number of issues to be explored, not least of which has been DDes themselves as generators of new knowledge, along the lines suggested by Laurillard (2002). A second has been the opening up of the analysis of DDes as abstract and generalisable forms of knowledge characteristic of higher education programs. Their initial forms as TAFE constructs as particularised forms of training based on perceived industry demands for workers has been transformed to incorporate concepts of academic discourses within communities of academic practice (Zeegers and Smith, 2004). Initial student response from our students has been encouraging, even with only one student's thesis submitted for examination at this stage. Given this, and our continuing research into our own practice, it is with some confidence that we see our achievements to date as having made inroads in bridging gaps that have been identified in experiential learning, research activity and professional environment.

Bibliography

Anderson, L., Barron, D., Baulch, K., Ginters, L., Glover, J., Jackson, S., et al. (2004). Design Provision in Victorian Senior Secondary Schools: Final Report prepared for the Department of Education and Training Victoria. Melbourne.

Barron, D., & Zeegers, M. (2002). 'O' for osmosis, 'P' for pedagogy: fixing the postgraduate wheel of fortune'. Paper presented at the Quality in Postgraduate Research Conference, Adelaide.

Bartlett, A., & Mercer, G. (2001). 'Mostly metaphors: Theorising from a practice of supervision'. In G. Mercer (Ed.), *Postgraduate research supervision: Transforming (r)elations* (pp. 55-69). New York: Peter Lang.

Department of Education Science and Training. (2003). 'Review of Teaching and Teacher Education' Report to the Parliament of Australia. Canberra.

Green, B., & Lee, A. (1999). 'Educational research, disciplinarity and postgraduate pedagogy: On the subject of supervision'. In S. Johnstone (Ed.), *Supervision of postgraduate research in Education: Review of Australian research in Education No. 5* (pp. 207-223). Coldstream: Australian Association for Research in Education.

Hockey, J. (2003). 'Practice-Based Research Degree Students in Art and Design: Identity and Adaptation Ip'.82. *International Journal of Art and Design Education, 22*(1).

Hoddell, S., Street, D., & Wildblood, H. (2002). 'Doctorates - converging or diverging patterns of provision'. *Quality Assurance in Education, 10*(2), 61-70.

Kandinsky, W. (1947). *Point and Line to Plane Solomon R. Guggenheim Foundation for the Museum of Non-Objective Painting*. New York: Dover Publications.

Kirby, P. (2000a). *Final Report of The Ministerial Review Of Post Compulsory Education and Training Pathways*. Melbourne: DE&T.

Kirby, P. (2000b). *Final Report of The Ministerial Review Of Post Compulsory Education and Training Pathways*. Melbourne: DE&T.

Lave, J., & Wenger, E. (1991). *Situated learning: Legitimate Peripheral Participation*. New York: Cambridge University Press.

Lester, S. (2002). 'A doctorate in development, not research: reflections from a practitioner-candidate'. Paper presented at the Professional Doctorates 4th Biennial International Conference Research training for the knowledge economy, Brisbane.

Lusted, D. (1986). 'Why pedagogy?' *Screen, 27*(5), 2-14.

Maxwell, T. (2003). 'From first to second generation professional doctorate'. *Studies in Higher Education, 28*(3), 279.

National Affiliation of Arts Educators. (2000). Submission to the Ministerial Review Of Post Compulsory Education and Training Pathways. Melbourne: DE&T.

National Affiliation of Arts Educators. (2003). 'The Arts: essential learning for all teachers'. Submission toThe Department of Education, Science and Training, Canberra. *Review of Teaching and Teacher Education*. Canberra.

National Association for the Visual Arts. (2004). Unpublished proposal to the National Review of Life Long Learning in Australian Visual Art, Craft and Design Education-Stage 2 Project Outline.

Palmer, P. J. (1998). *The courage to teach: Exploring the inner landscape of a teacher's life*. San Francisco: Jossey Bass.

Parliament of Australia. (1995). *Arts Education: Senate Report from the Environment, Recreation, Communications and the Arts References Committee*. Canberra.

Schön, D. A. (1987). *Educating the reflective practitioner: Toward a new design for teaching and learning in the professions*. San Francisco: Jossey Bass.

Swinburne. (2003). Re-accreditation Document for the Professional Doctorate in Design. Prahran: Faculty of Design, Swinburne University of TEchnology.

Swinburne University of Technology. (2002). *Fexible Learning and Teaching Strategic Development Plan*, from http://www.swin.edu.au/lts/educational_strategies/graduate_attributes/

Swinburne University of Technology. (2004). *Shaping Swinburne's Future Today: Statement of Direction 2010*, 2004, from http://www.swin.edu.au/corporate/fpr/docs/statement_direct_%202010.pdf

Zeegers, M., & Barron, D. (2000). 'More than an Apprentice Model: Legitimate Peripheral Participation and the postgraduate Research Conference' University of Canberra: CELTS.