Queensland University of Technology

Cheryl Stock

Acquiring 'doctorateness' in the Creative Industries: an Australian perspective on professional research doctorates

Abstract:

Over the last two decades, particularly in Australia and the UK, the doctoral landscape has changed considerably with increasingly hybridised approaches to methodologies and research strategies as well as greater choice of examinable outputs. This paper provides an overview of doctoral practices that are emerging in the creative industries context, from a predominantly Australian perspective, with a focus on practice-led approaches within the Doctor of Philosophy and recent developments in professional doctorates. The paper examines some of the diverse theoretical principles which foreground the practitioner/researcher, methodological approaches that incorporate tacit knowledge and reflective practice together with qualitative strategies, blended learning delivery modes, and flexible doctoral outputs; and how these are shaping this shifting environment towards greater research-based industry outputs. The discussion is based around a single extended case study of the Doctor of Creative Industries at Queensland University of Technology (QUT) as one model of an interdisciplinary professional research doctorate.

Biographical note:

Associate Professor Cheryl Stock, PhD, coordinates the Doctor of Creative Industries is former Director of Postgraduate Studies, and a member of its College of Mentoring Supervisors, for Creative Industries Faculty, QUT. She lectures and publishes in contemporary Australian and Asian dance, interdisciplinary collaboration, intercultural and site-specific performance, and research methodologies. The ALTC funded *Dancing between diversity and consistency* (with M Phillips and K Vincs), examined postgraduate research degrees in the creative arts. Founding Artistic Director of Dance North (1984–95) and recipient of an Australian Artists Creative Fellowship (1994–97), Cheryl has created over 50 dance and theatre works. Secretary General of World Dance Alliance, Cheryl is co-convenor, 2014 WDA Global Summit in France, hosted by Centre National de Danse Contemporaine.

Keywords:

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The Creative Industries context in Australasia

Over the last two decades, particularly in Australia and the UK, a niche but increasingly accepted new paradigm for investigation has altered the doctoral landscape. This paper provides an overview of some of the thinking behind practice-led and professional doctoral approaches that have emerged in the context of the creative industries, with a specific focus on the Australian experience. Discussion and application of strategies for non-traditional doctoral support are based around a single but extended case of the Doctor of Creative Industries at Queensland University of Technology and posited as one model of an interdisciplinary professional research doctorate.

Whilst it is beyond the scope of this paper to undertake an in-depth investigation of the nature of the creative industries, it is helpful to make some observations on the disciplines and fields it represents. A commonly used definition lists creative industries as including 'Advertising, Architecture, Art and antiques markets, Computer and video games, Crafts, Design, Designer fashion, Film and video, Music, Performing arts, Publishing, Software, Television and radio' (see, UK Government 2012). Most definitions of the creative industries find a commonality in the linking of arts, design, media, digital content and communication technologies, and the increase of human capital through creativity and innovation, within a global economic and cultural context (Leadbeater 2007, Castells 2000, Potts & Cunningham 2008, Hartley 2005, Stock 2010). Although originating in the UK, with Australia close behind, the nomenclature, rhetoric and cluster of activities it encompasses are being increasingly adopted in the Asian region through government policy and learning institutions (Lee & Lim 2004, Yusuf & Nabeshima 2005).

In relation to the higher education sector as well as in government policy, creative industries rhetoric has been peppered by 'buzz' words such as 'innovation, creativity, life-long learning and the knowledge economy' (Laing & Brabazon 2007: 253) resulting in research being increasingly linked with economic benefits and commercialisation. The alignment of these goals in relation to doctoral studies brings into question the traditional purpose of the doctorate as an original contribution to knowledge, mostly understood through a scholarly and largely theoretical enquiry. Laing and Brabazon discuss how changes brought about by foregrounding the knowledge economy with its basis in professional practice, have altered thinking about the relationship between work, university, scholarship and creativity (2007). They further posit whether this shift promotes 'real world' knowledge and expertise over 'theoretical or research-based empirical knowledge' (266).

Universities are at the 'cusp of profound change' according to Ernst and Young's report 'University of the future' where:

> they will need to build significantly deeper relationships with industry in the coming decade. Scale and depth of industry based learning... will become increasingly critical as a source of competitive advantage for those universities who have the industry partnerships and pedagogy to do it well (2012).

This change will undoubtedly affect not only university policy, coursework and corporate education but research higher degree training and outcomes as well. Challenges to conventional PhD models through such shifts and internal as well as external pressures are examined from a predominantly Australian perspective.

Doctorates in industry and professional settings

In this context, one of the most significant changes is the increasing number of workplace-embedded or industry-based doctorates (Lang & Brabazon 2007: 254). Tom Maxwell who has undertaken research into doctoral education over almost two decades, recently cited 93 professional doctorates in Australia, most of which are specialised with a tightly focussed disciplinary basis. However, he also notes the current trend to offer more generic professional doctorates, which attract students from a range of disciplines and are also often interdisciplinary in the nature of the enquiry (personal interview, March 2011). This he calls the second-generation professional doctorate (Maxwell, 2003: 280), in which 'specialisation and abstraction' is replaced (or integrated with) a focus on 'new knowledge and understanding of professional practice' through models that provide more flexibility than the Doctor of Philosophy (PhD).

A problem identified with professional doctorates is their perceived lack of academic rigour and scholarly enquiry compared with a traditional PhD model, partly due one suspects, to the applied nature of the enquiry as well as its embeddedness in the workplace. Whilst there is probably agreement that 'the exclusive, immediate goal of all research is, and must remain, the production of knowledge' (Hammersley & Atkinson 2007: 15) disagreement still arises around what constitutes 'validity' or 'rigour' in the forms that production of knowledge may take and the methods employed. Laing and Brabazon remark, in their study into professional doctorates, that 'the imperatives of work-based case studies and problem-solving can be awkwardly tethered to scholarship' (2007: 254).

In a study on the nature of 'doctorateness' Denicolo and Park suggest that there is general agreement on the 'scholarly components' (2013: 194) of doctorates but argue that this omits some of the more 'elusive' qualities expected from doctoral students such as 'intellectual quality and confidence, independence of thinking, enthusiasm and commitment' (2013: 193). Of course these qualitative attributes can be equally applied to traditional PhDs. In considering the various kinds of doctorates in the UK, including those termed professional, Denicolo and Park pose the challenge of the growing acceptance of diverse approaches and outcomes to doctoral programs against the imperative of evaluative consistency and standards especially in non-traditional settings and international contexts. With reference to the RDF (Researcher Development Framework) they agree the UK system recognises that academic and industrial sectors will differ in their research outcomes 'and that personal aspirations and inclinations (to focus on being a manager or a mentor, for instance) will create individual profiles' (2013: 195). However, beyond maintaining the crucial peer review system of evaluation in which experience, coupled with disciplinary

knowledge, and supporting students in their journey to acquire relevant methodological approaches appears paramount, it is clear more alternative models need to be developed to accommodate a shifting doctoral landscape. The ongoing lack of a comfortable 'fit' with traditional academic doctoral study or even well-worn models of 'named' professional doctorates[1] is something still being worked through, with tensions that arise being methodological, situational and relational.

At a recent keynote address, Professor Mandy Thomas noted some revealing data around current doctoral trends globally (4 December 2012). According to her research, internationally, the average age of those undertaking doctoral study has increased to 38 years, which means many have embarked on a career prior to undertaking their studies. This coincides with the profile of practice-led doctoral students in Australia who are often mature-age artists returning to academia to undertake doctoral study whilst continuing their practice. Thomas further noted that the percentage of people who pursue an academic career after their PhD has dropped from 80 percent to 50 percent and remarked that it is quite common in Europe for industry leaders to consider a doctoral qualification highly desirable (unlike Australia where it is still often seen as a disadvantage especially in the creative arts and design). In Australia, she believes that students need to be acknowledged and rewarded for their professional and industry knowledge whilst academics need to engage more with industry.[2] Denicolo and Park in their study of UK doctorates similarly concur the field 'must adapt to new market opportunities and stakeholder (particularly employer) expectations and requirements' (2013: 192).

This paper argues that partnering doctoral study with industry or professional settings goes beyond imperatives for commercialisation or professional development to an ongoing fundamental shift in opening up alternative modes of knowledge and discovery for research, including methodological approaches; a shift which can potentially contribute to expanding and enriching the 21st century doctoral landscape, rather than watering it down. Furthermore, it is not only professional doctorates that are interrogating the nature and form of doctoral knowledge claims and outputs. Practice-led doctorates that sit within Doctor of Philosophy (PhD) programs continue to increase in the creative arts, design and media fields where alternative forms and methods are sought out as appropriate fits for the purpose of their studies.

Emergence and rise of practice-led doctorates: thesis = creative work with exegesis

Over the last decade, particularly in a creative industries context, modes of knowledge production in doctoral settings have been challenged and expanded through the acceptance of creative and design products as examinable outputs in tandem with a parallel acceptance of the 'translation' of tacit knowledge and professional expertise as scholarly endeavours (Johns 2006, Reynolds 2011), as well as the centrality of the researcher inside the research. This in turn has impacted on design strategies that seek to engage in new ways with increasingly hybridised approaches within qualitative research. Variations and combinations of action research, (auto)ethnography,

biography, narrative enquiry, case studies, critical reflexivity and creative practice are being interrogated and re-purposed. As Cresswell and Plano (2011) assert, concurrently mixed methods research combining quantitative and qualitative data and approaches is also becoming more common, partly due to the sheer volume of on-line data available along with increasingly sophisticated software tools of analysis. However, such changes are not merely functional or methodological. Researchers, especially for those whose investigations are in the production of scholarly texts or experimental hard data, are further being challenged by what Berry refers to as the 'computational turn' in terms of how 'medial changes produce epistemic ones' (ctd in Stunlaw 2011). In this approach, methods like data visualisation are no longer associated predominantly with quantitative research but also as tools for producing qualitative meanings and values of the kind that were formerly the domain of cultural and social studies and indeed the creative arts.

It may be argued that the very nature of ontology and epistemology in doctoral research is being questioned through developments such as the 'computational turn' in humanities and social sciences and the 'performative' in creative arts and design research. In these developments the propositional is replaced with the emergent where findings may encompass paradox, ambiguity and uncertainty. In this setting research outcomes are expressed in the symbolic forms of the practice itself with metaphor, allusion and affect a translating strategy to accompany the materiality of the practice.

Such a flux of forms, methods and outcomes informs the backdrop to this interrogation of a contemporary concept of doctorateness. In addition to the plethora of 'named' professional doctorates mentioned earlier, there are a number of practice-led approaches that sit within PhD programs where the nature of scholarly enquiry is being questioned. These approaches are variously known as practice-led, practice-based, creative practice as research, performative or multi-modal research. A helpful summary of these and similar terms can be found under 'Research Inquiry through Creative Practice: Some Terms and Definitions' (at http://www.dancingbetween diversity.com), whilst a useful tracking of the trajectory of these related approaches can be found in Angela Piccini's 'An historiographic perspective on practice as research' (2003). Whatever terminology is adopted, this research framework is characterised by an examinable output of a creative artwork or design prototype/product accompanied by a written exegesis that contextualises and illuminates the practice, and reveal findings that reach beyond the processes and outcomes of the individual practice to broader domains.

In its early history in the mid 1990s, practice-led research borrowed from a range of extant methodological approaches (action research, forms of ethnography, grounded theory) to validate and explicate its creative or design work as bona fide doctoral research. Since then, practice-led research has increasingly moved to a position of claiming an alternative paradigm with its own ontological and epistemological understandings (Barrett & Holt 2007, Candlin 2000, Gray 1996, Haseman 2006, 2009, Scrivener 2002); supported by a toolbox of methods formed out of the processes of practice, and articulated through the materiality and symbolic languages of that practice. Another decade on and the original claims of a unique and alternative

methodology are being critiqued and questioned whilst ongoing hybridisation of extant and 'new' methodological approaches makes the landscape ever more complex and perhaps welcomed as potentially more nuanced and differentiated. Whilst criticism continues in conservative quarters of subjectivity and a lack of verifiable standards, and unresolved tensions and challenges remain, nevertheless, it would seem by the growth of such research that it is becoming increasingly viable within doctoral studies.

In this model the 'thesis' comprises two interdependent examinable components: the creative or design output and the exegesis[3]. The latter is usually in written form but can also be presented through visual, aural and other forms of rich media documentation and contextualisation. The changing nature and role of the practice/exegetical relationship and these dual modes of knowing in relation to different disciplinary and interdisciplinary contexts have been examined in the work of Barrett & Bolt (2007), Candlin (2000), Krauth (2002), Malins and Gray (1999), Stapleton (2006) and Vella (2005). The philosophical underpinnings of the two inextricably linked components have been described succinctly by Daniel Mafe as 'emergence and criticality' (2011). Rather than beginning with a research question, problem or hypothesis, practice-led research often undertakes a series of investigations through practice during which the research questions, problems and findings emerge over time. This type of investigation involves intuition, fluidity, ambiguity and even serendipity as part of its method. At the same time (or in parallel) the researcher is critically engaged through ongoing self and peer evaluation and analysis, and in positioning him/herself within his/her field of practice. The critical and the creative are in constant dialogue, with one informing the other.

It has been argued that unless immersion in the experiential process and practice lead the research, the historic binary split between practice and theory will be perpetuated. Vella points out the necessity for 'an understanding of the artist's creative process', which embraces the 'idiosyncracies of the practice', identifying 'salient features' as well as 'hidden strengths, patterns and weaknesses' in tandem with 'addressing technical issues' (2005: 2) in the context of previous works. This, he believes guides the research journey through an ongoing series of interrogations that arise from the practice itself with analysis taking place in iterative cycles of the creative work. These and similar approaches encourage self-reflexivity in the researcher as well as engagement through informed critical evaluation.

Practice-led researchers often struggle to locate an appropriate scholarly language with which to 'translate' the findings of their practice, since they are predominantly embedded within the symbolic manifestations of the work itself. Experimenting with allusion, metaphor and the poetics of language to capture what is often ineffable and unnameable, these researchers strive to find effective written means of communicating the deep tacit knowledge in which findings reside. Such 'findings' are likely to be open-ended; evoking experiences, insights and challenging us with new ways of seeing the world, which often seem to resist textual interpretation. In a two-year study of doctoral candidates, supervisors and examiners, Phillips, Stock and Vincs note that 'supervisors and candidates believe that there could be more

flexibility in matching written language with conceptual thought expressed in practice' (2009). Grappling with an appropriate textual mode is a challenge, but it can also provide an opportunity to articulate and innovate through what designer and scholar Jill Franz calls 'the potentiality of constraints' (2009).

It is not clear that practice-led approaches are always a good fit with design, journalism, architecture, creative advertising and other 'non-arts' fields of practice in the creative industries. Whilst doctoral studies in these fields undoubtedly engage in innovative and creative practices and employ both reflective and practice-led strategies, unlike the arts sector, their research often has a more functional outcome. Marshall and Newton refer, in design, to a 'process of artifacture' as 'a contextual and situated engagement with practice' and further suggest:

> The validity of this engagement is not embodied in the rigour with which a particular method is applied, but rather the agency the enacted propositions carry with them for practice: the facility of the research work to reframe or provoke further action (2000).

This idea is not dissimilar from the sense of a creative work always being in process where the creative outcome examined in doctoral work does not represent closure (even though a 'product' may be presented for examination) but marks a particular point in a continuum of exploratory and processual research in the act of 'becoming'. However, there are differences in design and industry-led practice from arts-led practice. A useful distinction is to look at how practice-based rather than practice-led approaches might serve these sectors. In this model practice remains at the centre of the research and is integral to it, revealing insights through the practice, which lead to theory building and new knowledge about practice. These two related approaches have sometimes been differentiated by the practice-led 'product' constituting an examinable output whilst the practice-based product is viewed as a methodological tool rather than an examinable outcome in itself[4]. The 'non-arts' sectors of the creative industries, particularly design, are also more likely to employ complementary methods such as action research, case studies and user-testing in order to produce research outcomes. Additionally, this type of enquiry explicitly needs to address specific 'issues of ethics and validity' (Marshall & Newton 2000) and to negotiate the assignment of Intellectual Property (IP).

Doctorateness

Whether practice-led or practice-based, these degrees are required to demonstrate doctoral level outcomes. What this constitutes can be a matter of considerable debate in fields that deal with evaluative judgements around aesthetic qualities and experiential data. In the above-mentioned study which investigated assessment in postgraduate research degrees in the creative arts, Philips, Stock and Vincs (2009) asked examiners and supervisors (coded in responses as SE) and research deans (coded as DD)[5] to articulate their understandings of doctorateness. Predictable observations such as a substantial and original contribution to knowledge, depth, breadth and scale of scholarly endeavour, innovation, critical engagement and advancing the field, underpinned their responses. However, there were particular

inflections. These included advanced conceptual understanding embedded in practice and reflection, 'discipline mastery' as well as 'a flawless integration of theory and practice and total engagement with the material' (SE-nd) together with 'methodological contextualisation' (DD). Doctoral attributes identified, specific to this mode of practice, included demonstrating 'transformative imagination' (SE-nd); embracing the unknown; nuanced and complex articulation of practice; risk-taking and courageous investigation; 'mastery of craft plus inventivenes' (SE-d); 'a sustained processual perspective' (SE-d), and level of professional accomplishment. Whilst respondents in this study were articulating an ideal in doctoral outcomes for this type of enquiry, these additional descriptors are helpful in matching expectations with the specific methodologies that have been developed to achieve practice led/based doctorateness.

Distinctiveness in professional research doctorates

Whilst a practice-led/based approach mostly sits within the more or less conventional framework of a Doctorate of Philosophy, professional doctorates - in Australia at least - are currently evolving quite distinctive frameworks based on their need for flexibility in delivery, approaches and outcomes together with a certain confidence in asserting that distinctiveness as doctoral. Professional doctorates are not new, however. They have existed since the 1960s in the United States, with particular currency in Education and the Health Sciences. Mostly discipline-based or 'named' doctorates, they have always served a different purpose than the traditional PhD model, despite the fact that first generation professional doctorates in Australia often adopted what Maxwell refers to as the 'PhD plus coursework model' (2003: 289).

Both in the US and elsewhere professional doctorates are not the track candidates take if wishing to obtain a tenured academic position, although this is changing in some countries like Australia. One could argue that PhDs have two practical purposes: as a research training ground for entering the world of academia and/or to train professional researchers for an external environment. Professional doctorates, on the other hand, are conferred when there is demonstrated evidence of high-level expertise, innovation in, and deep knowledge of a professional field and where the site of investigation is predominantly in a professional work place rather than an academic setting. What is arguably a common outcome to both is a publicly verifiable contribution to knowledge, ideally resulting in deep, complex and nuanced learning outcomes through a sustained enquiry of systemic investigation. Thus in terms of advancing knowledge of the field, in this instance, doctorateness may partially reside in the gaps identified and addressed through advanced professional reflective practice and theorised engagement in the field, often employing Schon's strategies of reflection in action and reflection on action (1995).

Purpose and motivation for undertaking professional doctorates

It is therefore not surprising that the most common purpose cited for undertaking a professional doctorate, according to Maxwell's summary of the Doctor of Technology at Deakin University in Melbourne, is to 'broaden and deepen the leadership, creativity and innovation in advanced professional practice, resulting in new knowledge and understanding of professional practice' (Maxwell 2003: 280). An industry focus is a defining characteristic in such doctoral programs as are the requirements for students to have had substantial experience in their practice, which of course differs from the PhD where the track is often a continuation of academic training from undergraduate to Masters to a doctoral program. This difference is significant since entry in professional doctorates is aimed at mature-aged students with a high level of workplace expertise, often already in positions of leadership and more often than not working in collaborative teams; but often without recent academic training. These factors impact on the nature of the research significantly; not just the 'what' but equally the 'how' and the 'why'. The credibility tests for doctoral capacity and potential are not as straightforward as for a PhD.

Inevitably, the motivation for professionals to seek out these doctorates aligns closely with the stated goals of various awards. The following case study is informed by my 7 year experience of supporting doctoral students in both PhD and professional doctoral programs in a Creative Industries Faculty and in particular through my capacity as coordinator of QUT's Doctor of Creative Industries (DCI). In 2011, I interviewed three first year students with successful design practices (industrial, fashion and audio/visual/media) about their motivation to undertake doctoral study.[6] The fashion stylist was quite emphatic in stating: 'My consulting practice was screaming out for some kind of authority and further direction ... How can I do that with credibility and authenticity ... the DCI was something that offered me an opportunity to improve both my practice and myself and perhaps there will be something beneficial coming out of it for the broader community' (personal interview, 6 April 2011).

Interestingly, considering that a defining feature of the DCI is its industry and workplace focus, was her further comment that 'in this environment I have a chance to re-focus as a designer without a client driving the project ... and I really yearn for that coherency again within my practice that is self-driven rather than client driven'. The industrial designer put it succinctly also saying that on a personal level he wanted 'to make statements with authority', whilst more predictably: 'on a selfish and commercial level it was because I wanted to grow a better business and attract a higher level of customer through that knowledge'. Later in the interview he mused: 'people that I speak to from the DCI are here because they are ready ... it is as simple as that' (personal interview, 7 April 2011). And on probing further it appears what is meant by that readiness is a willingness to take risks, to be vulnerable and to open up to new learning experiences and challenges in an academic as well as a professional setting. The third interviewee revealed his key motivation was similarly 'the need to pin down or nail some knowledge in the area in which I have been practising' and that the DCI provided a 'highly motivating factor' to 'self-assign the task of doing that' (8 April 2011). These statements echo the thoughts of students in a UK Doctor of

Education program who reported enjoying their experience through 'forging a new identity' as 'researching professionals' (Wellington & Sikes, as ctd in Laing & Brabazon 2007: 263).

Methodological approaches for professional doctorates

There are many variations in professional doctorates as to the amount and type of coursework, the shape of professional projects and their integration into a doctoral framework. The last part of this paper outlines some of the research approaches and delivery modes that contribute to acquiring doctorateness in these contexts. In tandem with the deep experiential learning that occurs from being embedded in one's practice over time, many professional doctorates are scaffolded with integrated coursework that provides tools to articulate and analyse that learning and to structure their professional workplace projects into research outcomes. In relation to the learning context, Tennant (2004: 433), suggests that, rather than the acquisition of applied knowledge in the workplace, the workplace itself constitutes 'a site of learning, knowledge and knowledge production'. Interestingly Tennant uses the concept of 'working knowledge', increasingly adopted within universities, to argue for blurring the boundaries between PhDs and professional doctorates with an overall increased emphasis on transdisciplinary and collaborative processes and outcomes, and more flexible modes of delivery in both doctoral programs. However, this shift does not replace the university as a site for learning - moving between the two sites (in both physical and virtual settings) forms a crucial part of the dynamic of the professional doctoral experience. An important differentiating feature is the emphasis on what Maxwell (2003: 286) calls 'practitioner agency' in which the practice of the individual through reflexivity and critical thinking contributes experiential knowledge to the research endeavour.

In relation to design, Brown (2000), in his paper 'The Representation of Practice' similarly calls for 'autonomy' for designers to be able 'to reconceive their practice' but also points out the importance of this occurring 'within a narrative of research that asserts the reality of institutional practice'. With reference to the work of Bourdieu (1982) Brown also argues for 'a relational rather than structural mode of thinking' to encapsulate the unfolding of 'localised practices' through a 'model of creative intentionality'.

In considering specifics of the above principles I have drawn on the current structure of the Doctorate of Creative Industries (DCI) which in 2010 was re-purposed into a professional research doctorate from its original 2003 version as a professional coursework doctorate (designed by Brad Haseman, at Queensland University of Technology). The latter comprised half coursework and was accompanied by three professional projects examined separately. The current program consists of 3 years full-time study (or part-time equivalent) with one third dedicated to scaffolded coursework which prepare students for the independent research component via two year-long industry-based or individual research projects. Students must successfully complete coursework before they can proceed to the research component and are

required to link and contextualise both projects into a final doctoral package for external examination, not dissimilar to many PhD examination processes.

The overarching principle for the DCI revolves around the relationship between the practitioner (the site of the individual), the site of practice (the workplace) and the field of practice (the broader context). Approaches to investigating these inter-related sites are underpinned by reflective enquiry cycles drawing on a range of models from both action research and reflective practice – tools already embedded in the processes of professional practice as my students readily point out – in addition to contextualisation of the broad field of enquiry. However, what they report as different is the intensity and level of reflexivity that occurs over time through the scaffolded coursework, which takes the interdisciplinary cohort beyond self-reflection to dialogic and collaborative critical reflection in the professional research context which the program engenders (see Ghaye 2010, Chivers 2003, McIntosh 2010, Schratz 1993, Klenowski, Val & Lunt 2008). Coursework is designed to deepen enquiry, sharpen critical thinking and provide methodological tools to shape the project briefs into research, as well as to design analytical frameworks to elicit findings. Its methodologies foreground tacit knowledge and practitioner expertise, providing strategies to deal with and articulate the indeterminacies of the more subjective areas of enquiry. Over almost three years of leading this program it is clear that it is an excellent model for creative artists, perhaps more so than the now well trodden path of the practice-led PhD.

Underpinning the coursework is a sequential suite of reflective practice, critical thinking and project development units as well as public seminar presentations, which privilege practitioner expertise using reflective practice texts that cover a range of interdisciplinary approaches. At the same time students undertake a Faculty-wide Creative Industries methodology unit (subject or course), which is taken by the PhD and DCI students who work together to fulfil the requirements of the unit. This is proving an effective strategy to build an integrated doctoral culture, which emphasises commonalties and minimises a sense of hierarchy between the two types of doctorates. In addition to advanced information research skills and reflective practice and practice-led strategies, DCI students access these methods (depending on the projects) in combination with other approaches such as action research, ethnography, narrative enquiry, phenomenology, mixed methods etc. Finally, two university-wide postgraduate electives in either cognate or non-cognate areas offer specialist skills in relation to the research projects. This coursework thus prepares candidates to frame and design specific learning processes and methods into doctoral research outcomes.

Delivery modes for professional doctorates – interdisciplinary cohort model

Arguably the most effective aspect of the DCI is its delivery as an interdisciplinary cohort with entry once a year to encourage similar rates of progression, at least in the first year. As doctoral study moves more to on-line delivery, the DCI remains committed to providing a blended learning environment. This combines on-line delivery and communication via blogs, social networks, and interactive learning sites,

with face-to-face intensive modules of facilitated and peer-to-peer learning through a student cohort of between six and ten students who share diverse disciplines and practices in collaborative settings[7]. This creates an environment where students are continually challenged by their peers in reference to the innate, habitual and unquestioning ways they might perceive the world and professionally act in it.

When questioned about the delivery mode of the DCI, interviewees identified working together as a cohort the most beneficial aspect to their learning, citing 'social bonding' and tapping into the 'collaborative feeling amongst the other DCI members' (personal interview, 6 April 2011) and 'the way we are working with other like-minded people' (personal interview, 8 April 2011). The 2011 and 2012 cohort has, at the time of writing, developed 'peer' milestones in the belief that peer pressure will provide a strong motivating factor for candidates to keep each other engaged in focussing on their doctoral study through regular contact, especially when they are usually juggling complex professional and personal commitments. Immersed in both the workplace and the academy, the candidates are thus able to develop mutually supportive communities of practice that cross both sites, encouraging scholarly debates in parallel with industry dialogue. Similar outcomes were reported by Paul Burnett who compared his collaborative cohort model (CCM) with what he termed the Apprentice Master Model (AMM) (1999). In the former model he found that students felt less isolated, were more likely to complete their doctorate, gained 'a greater breadth of knowledge' (1999: 49) by engaging in peer discussions, a greater understanding of various research methods as well as writing, editing and critical feedback skills, all of which resulted in enhanced quality of their dissertations.

In such cohort models staffing support is crucial to both engender and assist the peer community of practice established. In the DCI staffing support structure the course coordinator tracks overall development to ensure effective participation of candidates, designs and delivers the coursework with relevant academic staff and case manages candidates, working closely with the student and his/her supervisors. The supervisory team comprises two academics (principal and associate) who take primary responsibility for guiding the research process and the project outcomes, while a third member, the industry mentor, provides insights and guidance from an external professional viewpoint. This serves to triangulate expectations so that industry, academic and doctoral requirements are met. Given the increasing pressure in academia for greater outputs with fewer staff, it remains to be seen if this level of support will continue to be sustainable.

Outcomes for professional doctorates

In terms of doctoral outcomes students are encouraged to imaginatively capture the research outputs they submit through rich media packages. The forms of this output can vary greatly and include training packages which may be web-based or produced as DVDs/books, an art work either in situ or electronic, a product or prototype, a performance, a theoretical treatise, a curatorial or management model, software or games development or a multi-platform publication. Project outputs are accompanied

by reflection and contextualisation of the project in relation to the practitioner's site and field and an articulation of how the aims and objectives of the research project were achieved and the methodological approach undertaken. Both projects are packaged together in a final 'thesis' which contains an overview of how the two projects are linked to produce an integrated doctoral outcome. The written accompaniment to the practice may be in the form of an exegesis, an extended framing document, a detailed project brief and critical evaluation or an analytical paper.

How professional doctorates are to be evaluated has been the subject of some debate. Laing and Brabazon (2007: 262) claim that their success 'must be analysed.... for its impact and relevance to industry or organisational performance, not disciplinary innovation or recognition by peers'. However, I would argue that the latter qualities of innovation and peer recognition are essential attributes of doctorateness although they may be differently inflected in a professional doctorate outcome.

Whilst traditional doctorates generally build on and contribute to existing theories of knowledge by establishing a gap in knowledge to which they contribute new insights, both practice-led and professional doctorates develop and build theories that are emergent and grounded in their practice. As Eisner (2002: 214) comments: the 'shift from the supremacy of the theoretical to a growing appreciation of the practical is a fundamental one because it also suggests that practical knowledge cannot be subsumed by the theoretic; some things can only be known through the process of action.' This engagement with theory is of a different order in its emergence from action and practice than theory that comes out of intellectual enquiry. This recognises that new forms of knowledge are located in both scholarly and professional contexts.

Whilst the DCI model is externally examined in accordance with the PhD guidelines, an additional document is sent to examiners outlining the professional and industry based focus of the doctorate, with specific criteria to measure evidence that the research submitted:

- contributes to the body of knowledge pertaining to the candidate's professional practice;

- demonstrates the value of the research for professional practice in the candidate's field;

- indicates the candidate's familiarity with relevant literature/practices from the field, which have been critically examined;

- reflects the candidate's skills in framing the research through the gathering, analysis and reporting of data;

- demonstrates quality in the critical and reflective analysis of practice;

- contributes to transforming existing epistemologies of practice;

- conforms to the accepted practices of academic and professional writing in the respective field.

These additional criteria are designed to assist examiners to frame responses in light of the distinctive nature and approach to a professional research doctorate, both for academic examiners perhaps unused to the differentiation from a traditional PhD, and for industry examiners who need to closely attend to the academic rigour of the thesis as well as the professional outcomes.

Conclusion

This paper has tracked some of the models and approaches to undertaking doctorates in a creative industries context, examining theoretical, practical and methodological concerns as well as investigating what doctorateness might mean and how it can be achieved in both academic and professional / industry settings. Doctoral landscapes stand to benefit from the cross-over of hybrid design strategies which are emerging to support the increasingly complex interdisciplinary nature of empirical, critical enquiry, creative and applied research. Reflexive and practice-led methods are beginning to inform areas of more traditional research, whilst industry-based and professional doctoral study is increasingly drawing on a range of both qualitative and quantitative approaches to provide serviceable and more nuanced tools of enquiry in what may become a mutual influencing of research approaches.

Although it is too soon to measure the outcomes of hybrid interdisciplinary doctorates such as the DCI, it may prove, with further development, particularly suited to the design environment and the creative arts, which encompass both applied and experiential, processual approaches. Professional research doctorates will most likely continue to foreground the extensive and specialised knowledge acquired through practice that Melrose calls "performance mastery" (Melrose 2006) and "practitioner expertise" (Melrose 2003). Valuing expertise that goes beyond sophisticated technical skills to deep imaginative, cognitive and theoretical engagement, in tandem with reflective practice and research-led practice provides a strong foundation for innovative research, which clearly fulfils doctoral requirements.

Endnotes

1. Doctor of Creative Industries (DCI) is the named doctorate for this Australian case study based on an interdisciplinary model, with well known named doctorates being in Education, Law, Business, Health, Creative Arts etc.

2. Professor Mandy Thomas is currently Professor of Strategic Research, in the Creative Industries Faculty at Queensland University of Technology. Prior to that she was Pro Vice Chancellor of Research and Graduate Studies at the Australian National University and before that position oversaw the Discovery program at the Australian Research Council. The context for this recorded keynote address was the opening of a Supervisory Retreat that specifically interrogated current challenges in doctoral supervision in the creative industries.

3. Australia tends to favour the term exegesis as the written document accompanying examinable creative practice but other terminology used includes framing document, research statement, supporting contextualisation.

4. Definitions of terminology in this area are fraught, with Candy's definitions of practice-led and practice-based research diametrically opposed to my preferred use of these two terms and

that adopted by QUT. See Linda Candy (2006) Creativity and Cognition Studios, CCS Report: 2006-V1.0 November University of Technology, Sydney, at http://www.creativityandcognition.com

5. Interview material from the *Dancing between Consistency and Diversity* project is referenced by the coding system devised for the study to track individual interviews, using N-vivo software. This lettering system references quoted comments that allow identification of a particular type of interviewee without revealing their identity. The 'd' or 'nd' suffix differentiates dance from non-dance respondents.

6. These interviews were recorded and transcribed for the purpose of collecting experiential student data but do not constitute a formal research project, in contrast to the externally funded *Dancing between Consistency and Diversity* project above.

7. At the time of writing, DCI research projects are extremely diverse including: ethnodrama in cancer patient care support, models for documentary film-making in a digital environment, a training manual for theatre directors, small home-business urban dwellings, transmedia story telling around migration, creative practice in bureaucratized project environments, the making of a reality TV show on social issues, personal narratives for social activism, gravity and the dancing body, design led innovation in small and medium manufacturing, role of the costume designer in characterisation in film and television.

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