

Opportunities for developing stewardship in the Australian PhD

1. The story so far...

In Briefing Paper 1 (2016) *Teacher-development strategies and PhD programs* we categorised, from a literature review, three main approaches to university teaching preparation and development for PhD students: (i) teaching development through coursework; (ii) teaching development through practice; and (iii) teaching development through informal learning. We noted that in many cases, universities were continuing to offer often very good courses, workshops and programs about teaching development to PhD students but that these often sat alongside rather than being intentionally integrated with the doctoral program, the 'research heart' of the PhD. Three examples of such doctoral programs include QUT's Teaching Advantage Program (Greer, Cathcart & Neale, 2016); UWA's Postgraduate Teaching Internship Scheme (Partridge, Hunt & Goody, 2013); and the University of Auckland's Doctoral Academic Leadership Initiative¹. We concluded the Briefing Paper with an argument flagging the importance of integrating teaching development for PhD students into the central experience of research learning.

Briefing Paper 2 (2016) *Stewardship: a way of analysing, integrating and providing intention to the curriculum of the Australian PhD* introduced the concept of stewardship, revisited the scholarly arguments on the notion of curriculum in doctoral education, and suggested that learning in the traditional PhD might be conceived as happening in four learning spaces: as part of the research project/thesis, in supervision, the intellectual climate, and in courses, workshops and programs. Thought about as curriculum and animated by the three dimensions of stewardship (generation, conservation, and transformation) we advanced the idea that these four learning spaces - conventionally for researcher development - could be more intentionally utilised as spaces for teaching development, thus addressing the challenge of integration outlined at the end of Briefing Paper 1.

Briefing Paper 3 (2016) *Embedding teacher-development strategies into PhD learning spaces* confronts the challenge of integration head-on. It showcases how these four

¹ The University of Auckland's Doctoral Academic Leadership Initiative invites an intake of students via an application process. The yearlong initiative includes four themes: academic leadership, research, teaching and professionalism. Further information <https://www.clear.auckland.ac.nz/en/dali/about.html>

learning spaces: research project/thesis, supervision, the intellectual climate, and courses, workshops and programs can also contribute to ways of thinking and practising related to teaching and teacher development. Drawing on interview data collected in five universities (four Australian, and one in NZ) with doctoral students, early career researchers, and staff that organise teaching development programs specifically for doctoral students, this paper provided examples in practice. In doing so, the aim was to demonstrate how these learning spaces are generative not just for research but also for aspects of learning about teaching.

2. Aim of Briefing Paper 4

In this paper, we build on the ideas and arguments developed across all three previous papers to return more purposefully to the idea of stewardship. We turn our attention again to the four learning spaces identified earlier to probe how they might be productively put towards stewardship - that is - developing a broader set of outcomes more suited to the realities of today's research workforce. By continuing to work with Golde's (2006) three facets of stewardship - generation, conservation and transformation - we hold on to the importance of doctoral students being inducted into disciplinary knowledge and conversations. While there is a very real sense that the world now requires doctoral graduates who can solve ambiguous and hard to define problems that no single discipline can, in this project, we do not see disciplinarity as a limitation. Stewardship's focus on *transformation* provides opportunities for disciplines to shift, change, expand and to be responsive as part of routine rejuvenation and renewal.

One argument against the centrality of the 'discipline' remaining as the learning ground is that the challenges of the contemporary and super-complex world require PhD graduates with interdisciplinary and trans-disciplinary mind and skill sets, capable of moving between different modes of knowledge conceptualisation, production and application (Nowotny et al., 2001). Yet as Barnett (2009: xvi) reminds us,

[t]hey [disciplines] are not fixed edifices, which the student simply has to surmount or knock against - or even fall from. They are rather fluid regions, with intermingling and conflicting currents, in which the student can - to a significant extent - chart her own journey.

A second view against keeping the PhD focused on disciplinarity (under stewardship at least) is that given the precarious employment situation, graduates may not go on to post-PhD work in line with their research area. Consequently, it becomes harder to make the case that the discipline ought to remain as the substantial knowledge focus of the PhD than say, refocusing the design of the doctorate toward generic skills and transferrable capabilities. Yet we know from institutional curriculum renewal efforts related to generic attributes in the undergraduate domain, in particular, from Barrie's

(2004; 2007) work that seeing the discipline and generic capabilities as separate entities is likely to perpetuate a remedial (and bolt-on) strategy rather than engage students in a participatory view of learning. In fact without some substantial notion of the discipline, it is unclear how the shift to transferrable skills relates to the qualities of doctoral-ness.

In this project, our view is that the responsibility of the steward is not solely to defend the discipline and to conserve the status quo necessarily; it is that students should engage in learning experiences that support them to exercise informed and scholarly judgement about taking the discipline forward into new territory, and for the discipline (and the student) to be changed by those encounters. In other words, advancing the discipline depends on knowing it well enough to recognise that its future is filled with precisely the kind of challenges that will not be easy to resolve.

Given this, we make the practical argument that a doctoral curriculum underpinned by stewardship does not, on its own, add 'more' to the PhD. While we recognise that stewardship influences the shape of the learning experiences designed for the doctorate, we argue instead that it can offer a coherence – an overarching educational discourse - which is essential to dealing with the multiplicity of purposes that the Australian PhD is now expected to meet. Indeed for us, stewardship offers a way of thinking about how the practices and activities of the PhD can enable graduates and universities to address the future needs of academia, industry, community organisations and government simultaneously. A focus on stewardship is intended to provide students with the confidence and flexibility to move between these multiple destinations with both 'disciplined' minds and a care for the transformative nature of the 'discipline'. In this paper, as in Briefing Paper 3 (2016), we draw on data collected as part of the broader OLT project to offer examples of how the notion of stewardship enables us to see and reframe the PhD in ways that allow graduates to flourish in a range of employment settings.

In the context of the ACOLA review (McGagh, 2016), the Briefing Paper makes an effort to acknowledge several stakeholders invested in the doctoral education scene - each with distinct concerns about the nature and purpose of PhD that inevitably circle the other:

- The Australian Federal Government's National Innovation and Science Agenda (NISA) advocates stronger industry collaboration as part of research training;
- Universities' own doctoral education/training agendas (shepherded in the main by Deans of Graduate Studies) focuses on timely completion and the dimensions of the research student experience expressed via the scales in the Postgraduate Research Experience Questionnaire (PREQ)²: supervision, intellectual climate, skill development, infrastructure, thesis examination, goals and expectations, and overall satisfaction;

² The PREQ is administered twice a year to all Australian research degree graduates. Institutions use this data to inform their programs and also to benchmark against other institutions.

- Doctoral supervisors' concerns about adding more and more to the PhD (including teaching development) in ways that compromise the quality of students' research and their capacity to complete on-time; and
- Doctoral students' own desire for a contemporary learning experience that adds value to their post-PhD (or existing) employment situation. This acknowledges that doctoral students take on a PhD for many reasons. They might be an experienced professional undertaking PhD study aiming for career enhancement or renewal, or a student seeking first-time employment post-PhD. This diversity in the Australian cohort suggests that doctoral students need the skills, savvy and agility to imagine and articulate how to put their learning to work in academia, government, industry, community organisations, or elsewhere, and develop a level of flexibility to move between them.

As full-time academic positions in the Australian higher education sector have flat-lined and casual and contract positions grown³ (DET, 2015) it is not surprising that the straight line between a PhD and a secure position in the academy has come undone. Even when standard university positions appear on the horizon for PhD graduates, the nature of the academic work itself is changing and expanding. The 40-40-20 research-teaching-service split which has historically dominated the Australian academic workload psyche now operates inside an agenda of massification and there are now very real questions to be asked about whether the doctorate as it stands, prepares students well enough for the changing nature of academic work especially where claims about intensification (Barry et al, 2001) and increasing metrification (Burrows, 2012; Smith et al, 2013) circulate with regularity. Moreover, data reported in 2015⁴ also indicate that there are as many PhD graduates employed in the higher education (and education) sectors as there are in combined industries elsewhere, providing an even more compelling reason to address how doctoral education can better prepare students for non-higher education sector work. Under these conditions, there is a moral obligation to re-think the PhD rather than to continually rely on students' resilience to operate within the constraints of what appears to be a broken system.

By using stewardship to analyse the Australian PhD, there is great potential to radically reorganise and redesign the learning experiences which doctoral students participate in. By reframing the intention, we also open up the way we conceive of the existing learning spaces - pushing, pulling and expanding on those spaces in ways that generate new opportunities and outcomes for Australian doctoral students.

³ Department of Education 2015 data on full-time staff equivalence
<https://docs.education.gov.au/node/38391>

⁴ Graduate Careers Destination data
<http://www.graduatecareers.com.au/research/researchreports/postgraduatedestinations/>

3. Stewardship for the Australian PhD

The last 30 years has seen an explosion in doctoral education research across the world. Virtually every aspect of doctoral education practice has undergone some kind of critical scrutiny. Key areas are listed below:

- supervision and supervision development (Pearson & Brew, 2002; Kiley, 2011; Bastalich, 2015)
- doctoral writing (Lee & Aitchison, 2009; Cotterall, 2011; Aitchison & Pare, 2012);
- thesis examination (Paltridge, 2002; Mullins & Kiley, 2002; Holbrook et al., 2008; Carter, 2008);
- factors that support timely completion (Manathunga, 2005; Golde, 2005; McCormack, 2005; Kearns et al., 2008);
- teaching preparation (Stocks & Hopwood, 2008; Partridge et al., 2013; Greer et al., 2016);
- learning to navigate the publishing game (Lee & Kamler, 2008; Kamler, 2008; Hopwood, 2010);
- establishing an online scholarly identity (Ward & West, 2008; Bennett & Folley, 2014);
- the learning experiences of particular cohorts of doctoral students (Wang & Li, 2011; Gardner & Gopaul, 2012 ; Trudgett et al., 2016);
- transitioning out of the academy to employment (Neumann & Khim Tam, 2011; Yerkes et al., 2012; Jackson & Michelson, 2015; Pitt & Mewburn, 2016); and
- national and institutional policy settings for doctoral education (Neumann, 2009; Cuthbert & Molla, 2015)

An analysis of 995 articles on doctoral education across 45 journals undertaken by Jones (2013) reveals six major preoccupations: teaching, doctoral program design, writing and research, employment and careers, student-supervisor relationship, and the doctoral student experience. Taken together, there is clearly no shortage of research to inform developments in doctoral education. Models (both practical and conceptual) about how to develop doctoral programs and experiences that support student success and high quality research outcomes are being added to the literature regularly. One recent example is the Monash Doctoral Program⁵ comprising professional development, coursework and industry partnerships, and another is the University of Queensland's Career Advantage PhD Program⁶. A more conceptual approach is Cumming's (2010) holistic 'doctoral enterprise' model that includes practices related to curriculum, pedagogy, research, and work. Further, a 2014 report commissioned by the Australian government (DET, 2014) *Initiatives to enhance the professional development of research students* outlines several additional examples of innovative doctoral programs designed

⁵ The Monash PhD program <https://www.monash.edu/graduate-research/future-students/phd>

⁶ The University of Queensland Career Development Framework <https://cdf.gradschool.uq.edu.au/career-development-framework-cdf>

to address 'industry' that already exist in the Australian higher education research training landscape.

Many of these examples depict an impressive smorgasbord of workshops and short courses focused on the multiplicity of skills for employment destinations for which the national data tell us are urgently needed. Yet, unattended to in many of these initiatives are questions of moral purpose, care and integration. While it is the case that students can and do exercise agency in relation to the integration of their own learning, it is hard to imagine how they will arrive at a response to these larger questions of moral purpose on their own, *necessarily*. Indeed, relying on students to put these pieces together themselves and to bring coherence and meaning to their own doctoral program is both inefficient and precarious since responses to the kinds of questions we suggest below require a doctoral learning environment which values their importance.

- How does a student learn to (and practise) care for the field their research project is situated in?
- What are some ways students see the future of the field developing?
- What responsibility do students have to shape that future?
- How might students undertake to translate the journey, findings, and applications of their research to multi-disciplinary audiences, where those audiences might also be invited to make a judgement about quality and innovation?

By choosing to embark on a PhD - the pinnacle of higher education - a student is not only engaged in the completion of a research project that demands precise technical skill and training, they become stewards entrusted by the field to lead and shepherd new disciplinary conversations underpinned by scholarship. While the doctorate in Shulman's (2008: x) terms "carries with it both a sense of intellectual mastery and of moral responsibility", scholarship is seen not as a "function of setting but of purpose and commitment" (Walker et al., 2008:8), supporting students to cultivate both mastery and moral responsibility we believe is best enacted through modes, forms and scholarly acts of disciplinary stewardship.

The US-based PhD - the object of Golde & Walker's (2006) work on stewardship - is clearly organised quite differently to the Australian PhD. Not only are the entry points incomparable, the latter contains no compulsory coursework (although mandated candidature requirements for ethics, work health and safety, data management, and academic honesty are on the rise), no qualifying exams, and it is examined internationally typically with no tradition of viva or oral defence. In taking up the challenge offered by stewardship seriously, the Australian PhD's largely open structure provides an unusual kind of design problem. In this project, we consider the ways in which the learning spaces we identified earlier: the research project/thesis, supervision, the intellectual climate, and courses, workshops and programs can be reoriented toward

the qualities and tasks of stewardship: generation, conservation and transformation. In so doing, we ask: how does stewardship offer a way of thinking about 'doctoralness'?

4. Remaking the PhD learning spaces for stewardship

Each of the learning spaces below was originally described in Briefing Paper 3 (2016). The examples of stewardship that accompany each learning space below are taken from (and extend upon) the data collected by institutional partners (Sydney, La Trobe, Deakin, Western Australia, and Auckland) involved in this project.

(a) Research project/thesis

The example provided below for this learning space focuses on how the demonstrated outcomes of the stewardship PhD might be broadened beyond the traditional (and in Australia, the most common) written thesis, to include outcomes capturing the stewardship ideas of knowledge generation, conservation, and transformation.

Example 1: The written thesis is no longer the sole artefact of the PhD / or the thesis is redefined to become a collection of different kinds of materials (not excluding the traditional thesis). To communicate the learning process and project of the research to different audiences (and to document research influence and engagement), the student may choose to curate an online portfolio that might include a selection of the following:

- a short video of the research for 3MT competition;
- a blog describing the process of undertaking the research - key challenges, decision-points, moments of change;
- a twitter feed documenting the nature and extent of public engagement;
- some form of project visualisation with relevant images, diagrams, graphs, photographs, maps etc.;
- a podcast containing relevant recordings of conversations with students (undergraduate and postgraduate), influential scholars, and key leaders from relevant industries focused on the research;
- links to the student's written thesis, scholarly publications and other writings for professional audiences;
- links to presentations, public talks, or teaching (and reflections on the feedback from those audiences) that the student is engaged in; and
- a statement about what the student sees as their key achievement, and their future plans post PhD.

The key goal is to develop a broader engagement with both the discipline and the world-at-large, in order to demonstrate a growing capacity for teaching (via more contemporary forms of communication/translation), and a growing capacity to connect the student's research to significant issues and interests within the discipline, in related disciplines, and among non-academic audiences.

(b) Supervision

The process of supervision is intricate involving expertise in mentoring, diagnosing misunderstandings of concepts, facilitating learning of new concepts, supporting the development of advanced analytic and academic communication skills, set against the institutional landscape and disciplinary conventions. And as Grant (2003) reminds us, the supervisor is not only guiding the student's work in ways that offer a fresh contribution to a research community, they are also keeping an eye toward the management of risk to their own disciplinary and institutional reputations. The following three examples illustrate some of the ways that supervisors could build on their existing thinking and practice to incorporate more personal, moral and ethical development, more conservation of the discipline, and transformation of research knowledge in relation to policy while maintaining a focus on the core research ideas of the PhD.

Example 2: The student and supervisor are active in co-designing and negotiating the student's learning experience through the PhD. The conversation takes into account the student's personal, professional and future career aspirations, the supervisor's institutional responsibilities, the department's requirements and available resources, and the kinds of activities intended to develop the domains of stewardship. This plan might include the following kinds of activities:

- identifying a strategy for communicating the student's research to key international scholars and external audiences;
- participation in specific professional meetings and/or disciplinary conferences;
- an experience of working in an industry setting / or an exchange program at a another university;
- an opportunity to engage in undergraduate teaching; and
- occasions to learn about communicating research with/to the media (TV radio etc.)

Example 3: A group of supervisors invite their students to engage more rigorously in the history of the discipline by exploring canonical texts or key influential thinkers. One example might be a journal club or reading group that is largely student-led. As part of supervision, students commit to communicating their learning from this process in some way: at a department seminar, at a disciplinary conference, or are invited to feed these ideas into a supervisor's undergraduate Honours class.

Example 4: The supervisor invites students to collaborate on a government policy submission to address an industry/professional problem (related to the supervisor's research). The goal is for students to learn about the process, politics and players involved in policy analysis and formulation, and to consider how – in working on an authentic submission led by their supervisor – their own research might contain practical and political implications that merit consideration in the project.

(c) Intellectual climate (discipline, department and contexts outside the university)

The core research-based activities in the local department, in disciplinary communities and in industry placements – both face to face and online - support PhD students to build networks and connections with other researchers in order to progress their current and future research. The local context is also the place where students learn and are engaged in the micro-practices of enacting the discipline with others. This engagement with the local department and through it, the international disciplinary community is important because it enables doctoral students to explore and test their understandings of the concepts and ideas they are using in their research as well as their understanding of their discipline, to communicate and share their findings for use by other researchers, and to build collaborations for future research projects.

In addition to the organisational and material structures within universities themselves, many student research projects regularly take them outside of the academy or into different kinds of online interdisciplinary communities that are very often sources of intellectual curiosity and sustenance for students. These communities can be department led, student-led, and practice/community-led. The examples below showcase how these elements can be combined under the umbrella term ‘intellectual climate’.

Example 5: The department invites students to put on series of seminars/events to discuss how their research builds on the past and takes the discipline into new knowledge domains. The goal is for the department to interrogate how its PhD students develop a vision of the field that renews the department’s own research agenda and priorities.

Example 6: Each year, the department reserves a space for one/two undergraduate subjects to be led by a group of PhD students who are responsible for curriculum design, development, teaching/delivery, assessment and evaluation (under guidance and with appropriate support, mentoring and professional development). The process for being involved in the subject may well be competitive because PhD students need to develop a vision for the subject, and for student learning, based on the degree outcomes. The PhD students’ own research features heavily in the subject, and these students are expected to communicate back to the department how the subject (and undergraduate students’ experiences of it) adds to the general undergraduate experience.

Example 7: A student on an industry sponsored project is part of a multidisciplinary team working on an applied project. The student must attend project meetings providing verbal reports and tabling written progress reports on their contribution to the project. The student is a liaison between industry and the academy – sharing their learning and insights across contexts.

Example 8: The department invites external audiences (e.g., industry, government,

community organisations) to a series of showcases designed to engage PhD students in an authentic problem/challenge set by each organisation (provided in advance). The student researches the issue, and is invited into a conversation about that issue with the relevant audience. The PhD student prepares an artefact (as part of their doctoral learning experience), which the department then makes available for use by others.

Example 9: After graduation, students are expected to give an exit seminar to the department (which includes current PhD students). The exit seminar describes what the student has learned through the process, how the research extends the field, and lays out future plans for applying the research.

(d) Skills development (via workshops, short courses, online modules etc.)

Many universities offer short courses and workshops to doctoral students intended to develop particular skill-sets. These training activities support students to develop their understandings and skills in relevant research and teaching processes, for example, in preparing ethics applications, referencing, searching databases, intellectual property, writing for publication, developing a social media profile, preparing a CV, supporting student learning etc. Much of the provision for skills development is run by different professional service units across the university, for example: libraries, learning and teaching centres, graduate schools, student learning support, research offices, careers centres, and marketing, communications and engagement. Where they are lacking in resources, universities might also invite or purchase special expertise when needed: thesis boot camp, ThinkWell, writing for *The Conversation*, etc.

Example 9: By encouraging students to learn how to ‘crowd fund’ their research (perhaps with other students in cognate areas, in different institutions) it not only develops their capacity for savvy entrepreneurship, innovation and collaboration, it also provides them with a direct feedback line on how their research ideas resonate with a different public. The act of engaging a different and potentially ‘invested public’ provides opportunities for the discipline to be articulated in terms of social value, and private and public benefit.

5. The examination and assessment of the Australian PhD

At one level, the examples of stewardship promoted in this Briefing Paper can be successfully accommodated into the current learning experience of the traditional PhD. It is also likely that versions of these examples already exist and are thriving in pockets of doctoral education in Australian universities. Yet at another level, if stewardship is designed into the intention of the PhD - the purpose, the rationale for activities, the learning environment and has buy-in from the people involved - by implication, the products, outcomes, and modes of examination and assessment are also in need of transformation. This may well mean that the 80,000 word written thesis that has come to dominate the doctoral education psyche in Australian higher education across most

disciplines and professions (excepting the creative, musical and dramatic arts), is no longer the only mode for demonstrating research quality, doctoral-ness, or a commitment to the dimensions of stewardship. Indeed, the obligation to stewardship not only raises questions about what students encounter as part of their doctoral learning experience, it also points to questions about the 'product' of the thesis, its examination (what is assessed and at which points along the doctoral journey), the criteria and standards of assessment, and who is invited to participate in judgements about quality and the achievement of doctoral-ness. If we are to take seriously the challenges facing the contemporary PhD's multiple purposes, then expanding the examination process beyond the current aims, and beyond the academy, requires thoughtful and careful consideration.

One avenue for thinking through the examination of a doctorate focused on stewardship may be to conceive of the PhD as containing multiple learning pathways that the student chooses on enrolment and then endorses at confirmation (or at some other agreed upon point in the candidature). We see some of this choice already happening in the doctoral education landscape in Australia (The Monash University⁷ and University of Queensland⁸ PhD programs are examples). However, it is unclear whether students' outputs remain tethered to the written thesis. While each of those pathways - academia, industry, community, government or elsewhere - is likely to contain a boutique set of outcomes, new possibilities for supervision, a distinct and designed suite of learning experiences, options for crafting the artefact of the 'thesis', and further opportunities for involving examiners outside of academia, the overarching commitment is to stewardship and scholarship redefined. No matter the pathway, the standards of scholarship must prevail to ensure - at the very least - alignment with Level 10 of the Australian Qualifications Framework⁹.

While the term stewardship emerged as a heuristic device for doctoral education from North America, much of the ensuing effort resulting from the Carnegie initiative focused on the evaluation and quality assurance of doctoral programs (Maki & Borkowski, 2006) rather than rethinking what the student will 'make/create' from a doctorate focused on stewardship and how it is to be assessed. There are exciting possibilities ahead for a thoughtful Australian contribution to the practical implementation of stewardship in doctoral education.

6. Briefing Paper 5

In the final briefing paper (no. 5), we will bring together the ideas and examples from the project and consider how these can be made operational. We will outline a

⁷ The Monash PhD program <https://www.monash.edu/graduate-research/future-students/phd>

⁸ The University of Queensland Career Development Framework <https://cdf.gradschool.uq.edu.au/career-development-framework-cdf>

⁹ <http://www.aqf.edu.au/aqf/in-detail/aqf-levels/>

curriculum framework for the PhD – focused on a student’s candidature cycle - that demonstrates how stewardship adds value to the contemporary debates about an Australian PhD for the future. The target audience for this final Briefing Paper is Academic Boards across Australian universities.

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