

Australian Doctoral Education

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Part 1: Context

1. Historical and present context

This country report provides a brief overview of Australian doctoral education for the purposes of sharing with other invited experts attending the Forces and Forms 2019 Conference in Germany. The Australian doctoral education system has been principally driven by the Australian Federal government. State legislation was originally responsible for establishing Australian universities from the 1850s onwards and they continue to formally report to state parliaments. However, since the 1950s, the Australian Federal government has contributed increasing proportions of university public funding. During the 1970s, Australian Prime Minister Gough Whitlam also allocated prime policy responsibility for higher education to the Federal Government, usually within the Federal Department of Education and Training. In the case of doctoral education, a role is sometimes played by Departments of Research and Innovation, although this varies from government to government. Each of the 43 Australian universities (40 State funded secular universities, one large publicly-funded Catholic university and two small privately funded universities – one Catholic and one secular) has the right to award PhD and doctoral degrees and Australia has a range of professional doctorates in fields such as Education; Psychology; Engineering; Creative Arts; Creative Industries; Dental Surgery; Applied Social Research; Juridical Science; Public Health and Nursing. Higher doctorates in Law, Medicine, Music and Science have been awarded since the 19th century, which was extended to include the fields of Veterinary Science and Dental Science in the early 20th century (Pearson, 2005). The first research thesis submitted in January 1893 to the University of Melbourne was “An examination of Teutonic law”, for which E. Mayhew Brissenden was awarded the Doctor of Laws (LL.D.) (Zobel, 2018). The first PhD program opened at the University of Melbourne in 1946 with other universities quickly moving to establish similar programs (Pearson, 2005).

Public investment in the Australian higher education sector has drastically declined in recent years to the point where it is now 0.7% of GDP, which is 40% below the OECD average of 1.1% (OECD, 2017). The remainder of funding for Australian universities comes from increasingly high student fees and from non-government sources. In the case of PhDs, Australian domestic students (including Aotearoa New Zealand students) do not pay tuition fees but instead are granted a Research Training Place, while international students pay between \$AUD14,000 to \$37,000 pa (FindAPhD, 2018).

The most recent Federal government review of Higher Degree by Research (HDR) training (which included Research Masters degrees) was conducted by the Australian Council of Learned Academics (ACOLA) in 2015/16. Known as the ACOLA Report, the Council was asked to examine Australia’s Higher Degree by Research (HDR) training system with specific direction to focus on employment outcomes for HDR graduates, greater opportunities for industry relevant HDR training, alignment of HDR models with international best practice, the admission and attainment of doctoral candidates¹ from non-traditional backgrounds, particularly Indigenous candidates (ACOLA Report, 2016). The report’s recommendations reveal the extent to which industry concerns are now shaping Australian HDR training government policy and the dominance of research

¹ In Australia, doctoral students are referred to as doctoral candidates rather than students because they are candidates for the doctoral degree.

norms, practices and models commonly associated with the STEM disciplines rather than those traditionally found in the Humanities and Social Sciences.

2. **Size and Demography of Doctorate Pool:**

The most recent statistics that I could find for the number of HDR degrees (includes Masters by Research Students) awarded by Australian universities are from 2013 which was 7787 (1748 in the Natural and Physical Sciences, 1615 in Society and Culture (Arts and Humanities), 1140 in Health, 1113 in Engineering and related technologies, 592 in Management and Commerce, 482 in Education, 344 in Agriculture Environmental and related studies, 341 in Creative Arts, 313 in Information Technology, 99 in Architecture and Building) (DET, 2015, Selected Higher Education Statistics). 69% of HDR candidates were domestic and 31% international in 2013. In 2013, 54% of domestic HDR candidates were female, while 42% of international HDR candidates were female indicating a gender imbalance in international enrolments. 34.5% of HDR candidates in 2013 were under 30 and 28.5% were between 30 to 39 years of age. PhDs are concentrated in the research intensive or Group of Eight universities. Doctoral candidate enrolments in 2017 are 7659 (DET, 2017, Selected Higher Education Statistics).

3. **Time-to-degree and Completion of Degree:**

The expected time to completion is 3-4 years full time equivalent and anecdotally the average completion time is usually approximately 3.5 years full time equivalent. This does not include master's degree time. Current DET data on time to completion and attrition in Australian doctoral programs are regarded as unreliable (ACOLA Report, 2016). The ACOLA Report (2016) recommended the future collection of additional data on the proportion of candidates completing within 4 years and those completing within 7 years and the median completion times so there seem to be no reliable measures at present.

4. **Purpose and Goals of Doctoral Education:**

Australian universities offer both PhD and professional doctorate programs. The purpose of the Australian PhD is to support candidates to make a substantial and original contribution to knowledge through research, scholarship and investigation in one or more fields of learning. Professional doctorate programs are designed to provide an opportunity for experienced professionals to develop an inquiry-focused and research-informed approach to learning at work. Usually the thesis word length for the PhD is between 80-100,000 words, while the professional doctorate thesis word length is between 60-70,000 words, although there are sometimes variations between disciplines. Australian professional doctorate programs (especially in Education) proliferated during the 1990s, were often closed down during the 2000s and then experienced a rebirth in the 2010s, although some universities have more recently again begun closing these programs due to low enrolments. During the last 20 years, the boundaries between PhD and professional doctorate research have begun to blur as more applied, practice-based and professional research is increasingly conducted in PhD programs and more theoretical research is undertaken in professional doctorate programs.

Part II: Structure of Doctoral Education

1. **Structure of doctoral education and *weblinks to National Policies and QA frameworks:***

In Australia, PhDs are pure research degrees focused on the production of a thesis (which includes a traditional thesis monograph; thesis by publication or thesis by creative works (creative works plus a 40-50,000-word exegesis)) completed over a three-year full-time equivalent period, although increasing generic skill coursework is now being required of candidates. Professional doctorates involve the completion of coursework, a slightly shorter thesis (see above) and may be submitted in the format of a portfolio as well as a traditional thesis. Usually there is only a written examination of doctoral theses mostly by two external

examiners, although some fields may also have a tradition of having an Oral Defence (eg. Business). Candidates are provisional until they pass a Confirmation of Candidature milestone usually after one year full-time equivalent study. Professional doctorate programs are usually (but not always) 2/3 research and include formal coursework often completed in the first portion of a 3-year full-time equivalent program. All doctoral candidates usually work with two or more supervisors in an apprenticeship-type model, although there are disciplinary variations where candidates in the STEM and Health areas may work in lab groups with a range of postdoctoral fellows and researchers additional to their own supervisors. In some Humanities and Social Science disciplines, there is a policy of co-supervision by two or more supervisors but, in practice, candidates may work more independently by themselves or with one supervisor with the other supervisor not being very active.

Prospective candidates applying for admission to Doctoral Research programs are normally required to hold a research masters degree or a bachelors honours degree with at least Honours Class 2 Division I from a recognised higher education institution. Applicants who have completed a bachelors degree and have achieved by subsequent work and study a standard equivalent to at least Honours Class 2 Division I may also be considered. Applicants with a coursework (or taught) masters degree may be required to provide evidence of research training and a substantial report or piece of research writing to demonstrate equivalence to Honours level research training. There are minimum English language requirements for those whose first language is not English. English as a Second Language (ESL) candidates must demonstrate an IELTS score of 6.5 or equivalent in reading, writing, speaking and listening.

Many Australian universities have central graduate schools who advocate for and provide services to doctoral candidates across the university. These graduate schools also provide professional development and training to both supervisors and candidates. Smaller regional universities, where doctoral candidate numbers are lower, may only have a Dean of Graduate Studies rather than a formal graduate school.

a. Main National Policies/Reforms Affecting Doctoral Education:

The Federal Australian Department of Education and Training (and in some instances a Federal Department of Research and Innovation) develops policies for doctoral education. The most recent Australian government review of doctoral education (or, in this case, Higher Degree by Research training including research masters as well as doctoral education) was the ACOLA Report delivered in 2016. For a full copy of the report, please click on this weblink - <https://acola.org.au/wp/PDF/SAF13/SAF13%20RTS%20report.pdf>. Among the ACOLA Report's key recommendations, there was an emphasis on removing regulatory and financial barriers preventing universities from developing accessible entry pathways to HDR training and on providing flexible scholarships of appropriate duration and value; providing additional funding to incentivise more industry-university collaborations and a national program to support industry placements for doctoral candidates; improved collection of longitudinal national data on course satisfaction, completions and career outcomes for HDR training and increasing the financial weightings for Indigenous HDR completions and greater flexibility in scholarships provided to Indigenous candidates (ACOLA Report, 2016, p. xviii). A key change implemented very quickly after the delivery of the ACOLA Report was the provision of double the amount of funding to universities per Indigenous HDR completion.

A Federal government implementation working group was formed to develop and monitor an implementation plan. This working group included representatives from higher education, industry and government sectors, Indigenous groups and HDR students. The working group developed 18 actions to address the ACOLA Report's findings under the five Priority areas of: pathways to HDR training; industry-university collaborations, including industry placements; equity including Indigenous participation; quality of the HDR training system and data and evidence to better monitor HDR system performance (Research Training Implementation Plan,

2017, p. 1). The most recent report of this group was delivered in July 2018. In this progress report, it was indicated that:

- several new HDR training pathways had been established and were beginning to be tracked;
- principles for greater university collaboration with industry in HDR training are being developed, with guides for universities and industries to be released later in 2018;
- the Australian Council for Graduate Research (ACGR) and the Australian Industry Group (Ai Group) will promote and monitor HDR industry internships and other initiatives especially aimed at supporting more women in STEM careers and increasing Indigenous student participation;
- further research will be undertaken to analyse the issues surrounding doctoral participation by Indigenous candidates; low socioeconomic status (SES) and regional or remote candidates;
- development and sharing of effective strategies to engage and recruit Indigenous candidates, train supervisors about how to support Indigenous candidates and support the role of Indigenous academic staff in consultation with the National Aboriginal and Torres Strait Islander Higher Education Consortium (NATSHEC) and the National Indigenous Research and Knowledge Network (NIRAKN);
- establish an Indigenous PhD forum;
- report on levels of stipend support for Indigenous candidates and monitor access to part-time scholarships for Indigenous candidates and other equity groups;
- revisions are being made to the Postgraduate Research Experience Questionnaire (PREQ) and national guidelines are being developed to develop, assess and recognise HDR candidates transferable (generic) skills;
- revision to the Good Practice Principles for Research Supervision to focus more on developing candidates' employability skills and experience;
- better manage and reward supervisor performance;
- gather more comprehensive data on HDR completions and career trajectories (Research Training Implementation Plan Progress Report, 2018).

b. Funding:

There are a range of funding support programs available to support the living allowances of PhD candidates given that domestic (and Aotearoa NZ) candidates do not pay tuition fees. These include Commonwealth Postgraduate Award Scholarships, specific project funding, industry funding, Cooperative Research Centre funding and other sources of support.

c. Quality Assurance/control:

PhD programs and professional doctorates are Level 10 Australian Quality Framework (AQF - <https://www.aqf.edu.au/>) degrees and their quality is monitored by individual universities, industry and other funding bodies, and quality assurance organisations like the Tertiary Education Quality and Standards Agency (TEQSA - <https://www.teqsa.gov.au/>). As indicated above, the ACOLA Report called for the compilation of additional data collection and evidence of time to completion and career outcomes data for HDR candidates and graduates.

d. Career paths of doctorate recipients:

There was a great deal of focus in the ACOLA Report and subsequent implementation plans on enhancing the employability skills and outcomes of doctoral candidates (see above for more detail). At present in Australia, there have only been a few one-off surveys tracking doctoral graduates career outcomes. The ACOLA Report recommended the more systematic collection of career outcomes data and steps have been taken to begin this process. In many Australian universities, career support units are more focused on assisting

undergraduate students and are often less relevant to doctoral candidates and graduates. This has been an area identified for improvement by the Australian Federal government.

Part III: Trends

1. **International Collaboration:**

As indicated above, national, intersectoral and international collaboration within doctoral education has been promoted by various Australian Federal governments since at least the turn of the 21st century. These trends are only set to become more significant in the foreseeable future. Joint degrees and co-supervision with other universities is encouraged nationally and, to a lesser extent, internationally.

2. Equal Opportunities: Are there policies in your country aiming at diversity and inclusion in doctoral education focusing on overcoming inequalities in the larger social structure?

Equity and equal opportunities to access and succeed in doctoral education has been something of a focus for Australian Federal government policy makers and universities. It has also been a driving force for many individual academics working closely with community groups and partners. As indicated above, the ACOLA Report and its subsequent implementation plans have especially focused on the pressing issue of increasing the recruitment, enrolment and completion of Indigenous doctoral candidates. Indigenous participation in doctoral education continues to be extremely low in Australia. Even though Indigenous peoples represent 3% of the Australian population, total numbers make up less than 1.4% of HDR enrolments and account for only about 0.55% of all HDR completions (Behrendt et al., 2012). To achieve population parity a Universities Australia Report suggested that 'the number of Indigenous HDRs would need to increase by over 600%' (ACOLA, 2016, p. 96). Only 0.8% of all full-time equivalent Australian academic staff are Indigenous; a figure that has remained largely unchanged since 2004 (Behrendt et al., 2012). Many Indigenous academics are studying for PhDs. The ACOLA Report (2016, p. 99) emphasised the need to adopt a 'rights-based additive approach' as opposed to a 'deficit model where actions are targeted just at Indigenous HDR candidates'. They suggested that the continuity and funding of Indigenous organisations that already seek to 'attract and retain potential Indigenous HDR candidates' was very important. They also recommended outreach programs in communities and the need for additional partnerships with industry, the health sector and Indigenous professionals (Manathunga et al., 2018 forthcoming).

Supervisory practice was regarded as highly significant, particularly given the 'relative absence of academic Indigenous role models and HDR supervisors' (ACOLA, 2016, p. 97). They recommended mandatory training in 'Indigenous research methodologies and the ethics of working with Indigenous people and communities' for supervisors of Indigenous students (ACOLA, 2016, p. 100). However, they only recommended 'optional cultural competence training' for all supervisors rather than ensuring that it was part of all regular supervision training as Behrendt and colleagues had suggested. They refer to the Laycock and colleagues' (2009) guide for supporting Indigenous researchers, Trudgett's (2014) framework for best practice supervision of Indigenous HDRs and UTS's Indigenous ethics and supervision workshops as examples of effective practice. In terms of improving cohort support and capacity building, they echo earlier reports' support for Aotearoa/New Zealand's Māori and Indigenous capacity building programs and the work of the ARC-funded National Indigenous Research and Knowledges Network (NIRAKN) (eg. Behrendt et al., 2012), while also highlighting how few capacity building initiatives are being run by universities. ACOLA re-emphasised earlier reports' calls for 'specific and sustained funding for Indigenous research training and clear accountability ... targets' (ACOLA, 2016, p. 102). They argued for increased scholarship amounts for Indigenous HDRs, weighted funding for Indigenous completions in the Research Training Scheme (RTS) block grants, setting targets and providing flexibility and incentives for HDRs and institutions (Manathunga et al., 2018 forthcoming). The progress report

of the research training implementation plan indicates some of these steps are beginning to be taken but there remains a great deal of work to be done.

The other equity areas nominated as requiring attention in Australia in the ACOLA Report were the involvement of more women candidates in STEM doctoral education and the greater enrolment of low SES, regional and remote candidates, culturally and linguistically diverse people, mature-age people, off-campus and part-time candidates and people with disabilities. As indicated above, the needs of many of these groups have not really been addressed by the research training implementation plan (for details see above).

3. Digital Transformation:

Digital transformation has of course impacted upon doctoral education in Australia, particularly assisting the supervision of distance students, the completion of interstate or overseas data collection and field work and the development of new forms of digital theses, especially in the digital humanities.

4. Most Important Aspects for Your Country:

I would argue that the most burning issue in doctoral education in Australia is the need to improve access and equity in doctoral education for Indigenous candidates. As indicated above, there is also considerable government and community concern about the employability of doctoral graduates and the issues of chronic job insecurity, casualisation and precarious working conditions for doctoral graduates within the university sector. Unfortunately, the solution mostly touted by Australian government officials and policy makers is to increase the role of industry in doctoral education policy and programs and focus funding on the STEM disciplines, rather than developing a more comprehensive strategy to enhance the funding of Australian universities, protect the industrial rights and full-time career trajectories of academics, value the work of Humanities and Social Science researchers and work in more innovative and collaborative ways with not-for-profit organisations and community groups and representatives for the good of a broader cross-section of the Australian community.

References

- Australian Council of Learned Academies. (2016). *Review of Australia's research training system*. Melbourne: ACOLA.
- Behrendt, L.; Larkin, S.; Griew, R. & Kelly, P. (2012). *Review of higher education access and outcomes for Aboriginal and Torres Strait Islander People: Final Report*. Canberra: Australian Commonwealth Government (ACG).
- Department of Education and Training (DET). (2017). *Research training implementation plan*. Canberra: ACG.
- DET. (2018). *Research training implementation plan: progress report July 2018*. Canberra: ACG.
- DET. (2015 & 2017). *Selected Higher Education Statistics*.
- FindAPhD, *PhD Study in Australia - A Guide for 2018*. <https://www.findaphd.com/study-abroad/aus-nz/phd-study-in-australia.aspx> accessed 27/9/18.
- Manathunga, C.; Bunda, T.; Singh, M. & Qi, J. (2018 forthcoming; accepted 22/1/18). Indigenising the Higher Degree Research Space: *Ampere tyerrtye-areye apurte-irrentye akngerre. Tyerrty-arey-ae antartaremele*

mwarre anetyeke. In Trimmer, K.; Hoven, D. & Keskitalo, P. (eds.) *Indigenous postgraduate education: intercultural perspectives*. US: IAP.

OECD (2017). *Education at a Glance 2017: OECD Indicators*. Paris: OECD - <https://doi.org/10.1787/eag-2017-en> .

Pearson, M. (2005). Framing research on doctoral education in Australia in a global context. *Higher Education Research & Development*, 24:2, 119-134.

Zobel, J. (2018). *Pro Vice Chancellor Graduate and International Research Update: University of Melbourne*. Melbourne: University of Melbourne.