

Submission to the House of Representatives Standing Committee on Industry, Science and Innovation: *Inquiry into Research Training and Research Workforce Issues in Australian Universities*

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Introduction

We have undertaken research and published on doctorates (PhDs predominantly, but also professional doctorates and postdoctoral appointees) for over a decade resulting in almost one hundred publications and presentations. Between us we hold two current ARC Discovery Projects on doctorates and have held two previous ARC projects on doctorates—including one ARC Linkage Project with the Council of Australian Postgraduate Associations and two affiliates. Evans was an Associate Dean (Research and Doctoral Studies) for over thirteen years and a founding member of the Council of Australian Deans & Directors of Graduate Studies for eleven years. Macauley undertook his own PhD on an aspect of doctoral studies and has published widely in the field, especially on the use of bibliometrics. Pearson was Director of an academic development centre for ten years, and has supervised and co-authored three Commonwealth Evaluation & Investigation reports on aspects of doctoral education and postdoctoral training and employment outcomes.

Our work, both collectively and individually, leads us to identify two major points that we believe are very important for the Standing Committee to consider in its investigation of research training. These points are:

- the implications and potential of the diversity of the doctoral population for research capacity building for the nation and its universities;
- the pressing need for imaginative policy and practice to encourage and support research students, beyond full-time scholarship holders, who are engaged in research of benefit to Australia.

Recognising the diversity of doctoral candidates and the breadth of their experience

Australian (and international) university and national policies on doctoral education can be characterized as being manacled by a conceptualization of doctoral students as young (mid-20s), full-time, on a scholarship and in need of being placed in the workplace on graduation. This conceptualization ignores or underestimates the role of doctoral candidates as active participants in the research enterprise who contribute research outcomes and impacts for the disciplines, the community, the professions and the economy. It assumes that doctoral education is preparation for work, and not a *form of productive work* itself. This leads to a monocular policy focus on younger, full-time, scholarship holders 'preparing for work' which is blind to the needs and potential of the many candidates who are older and often mid-career, part-time, salaried and in a good job. New national policy should take account of the broad circumstances of all doctoral candidates, and identify initiatives to enhance their potential and actual contribution to knowledge production and innovation.

Our research shows that Australia has a diverse population of doctoral candidates with varying interests and life circumstances, previous and concurrent work experience, and varying career histories and expectations (Pearson, Evans & Macauley 2008; Pearson, Cumming, Evans, Macauley & Ryland, 2008 in press). Respondents to our national survey of doctoral candidates in 2005 ranged in age from 16 to 81 years (average 35 years) with every Broad Field of Study having candidates aged between twenty to at least sixty (see, Pearson, Cumming, Evans, Macauley & Ryland, 2008 in press). Thirty percent reported their occupation as being an academic (full-time, part-time, or on study leave). The most recent DEEWR enrolment statistics indicate that, in 2006, 39% of candidates were part-time, of whom 52% were women (DEEWR 2008). Australia is significant amongst industrialized nations in that it now has slightly more women PhD candidates (50.4%) than men (49.6%).

Our evidence also suggests that reliance on categorizations—such as sex, age, and type of enrolment—masks the reality of a highly variable doctoral student population. While we argue above that the ‘monocular policy focus on younger, full-time, scholarship holders “preparing for work”’ ignores those who are ‘older, some mid-career, some part-time, salaried and in a good job, it is important to acknowledge that these are broad, fluid groupings that do not represent the particularity of candidates’ experience, and that many candidates’ circumstances change during candidature. For example, in our 2005 survey of all (domestic and international) candidates in Australian universities (that is, at various stages of candidature, but not completed) 64% had always been enrolled full-time and sixteen percent had always been enrolled part-time; leaving twenty percent who had changed their enrolment status at least once, despite 45% of the respondents being in their first eighteen months of enrolment.

We believe that diversity is a strength of Australian doctoral education and we call for policy that eschews homogeneity and which values diversity and flexibility. To this end we encourage the Standing Committee to address those who do not fit the stereotype of younger persons preparing for entering the workforce, not just as a means of encompassing important, but often neglected, members of the Australian doctoral population, but also to address Australia’s needs for research capacity building related to social and economic development.

Research capacity building and capability transfer

The previous Government’s policy focus on the transfer of skills, competencies and knowledge during and after doctoral candidature was narrowly based on uni-directional (from university to workplace) generic skills for employment purposes. It adopted a deficit model of the graduate. Rather, it is important that universities are seen as helping to develop candidates’ existing capacities as independent researchers: producing graduates with higher order research and communication skills, who can problem solve and can adapt creatively to varying work contexts. These capabilities are best produced through participation in research practice itself in intellectually challenging diverse research environments (that encompass a combination of settings beyond, but including, the academy, such as workplaces, rural communities, virtual environments etc) with access to high quality supervision and mentoring.

Generic skills training is supplementary to this end and should be provided in ways that recognise the diverse *existing expertise* of the doctoral population. A narrow focus on skills training as an 'input' ignores the extent to which doctoral students bring skills and knowledge to their doctorate from their employment and other personal and community activities. Our 2005 national survey showed that, across a range of capabilities, candidates saw themselves as transferring skills *during candidature* from their current and/or previous employment to their doctorate as well as from their doctorate to their current employment. As one might expect, reports of these transfers were higher for part-time candidates than full-time, but they applied to both. The skills that were most often perceived as transferred from employment to doctorate (% of all respondents) were: critical thinking (65%), ICT skills (63%), time management (61%), problem solving (57%), teamwork (47%), writing (47%) and project management (45%). Many generic skills courses focus on these topics, but it seems they may be superfluous for many candidates.

Furthermore, candidates who are mid-career professionals and who are most often located in the professional fields (Education, Business, Engineering and Health, for example) typically conduct their research on issues and topics related to their profession or employment. They are also often well-placed to implement their findings and their enhanced capabilities. Recognising, developing and supporting this potential, we suggest, is an important policy opportunity.

Policy suggestions

Currently, full-time domestic candidates are normally supported by government or university scholarships worth about \$70,000 to \$90,000 tax free (over 3.5 years). In our 2005 survey other sources of funding were reported (by 13% of respondents) from various government instrumentalities, industry and philanthropic agencies. Some of these are in the nature of 'top-ups' to scholarships. Sixty-seven percent of those (30%) reporting receiving no such funding were part-time; there is very little, if any, financial recognition for their time investment and financial expenditure during candidature. Part-time candidates reported having already spent between \$3500 and \$7000 of their private funds on their doctorates at the time of the survey. Some employers also assist with costs and/or 'study leave', but this is usually minimal at best; our research shows that time is what part-time candidates crave most. Given that fully employed self-funding candidates often voluntarily choose research topics that are of benefit to their employers and/or professions, and to Australia more broadly, it is time for a new policy direction.

What is required is what might be called an Industry Research Training Scheme (IRTS). The purpose of which is to provide a framework for Government support for candidates, universities and employers to work together to develop both research capacity and research outcomes of benefit to Australian workplaces and professions ('industry' needs to be interpreted broadly). The IRTS needs to encourage flexible support strategies and services that explicitly identify and accommodate the range of needs, expertise and circumstances of fully employed candidates throughout their (generally) part-time candidature. It should encourage prospective doctoral candidates to negotiate projects with their employers or potential employers that are of explicit benefit; employers need to be given incentives to

invest in these projects; and universities need to be rewarded (perhaps with IRTS places attracting a premium) for delivering high quality doctoral supervision and support to workplace-based candidates. Universities should also be able to negotiate to meet part of the candidates' salary costs in order to be able to employ for academic work, thus bolstering the 'real world' expertise in the academy. The IRTS scheme needs to be seen as an Australian Government, university and industry partnership that provides incentives to employers to support candidate-employees with paid doctoral leave, including, for example, company tax relief for business or equivalent grants to the public and voluntary sector. The IRTS and its strategies should be explicitly directed to include disciplines where such partnerships are uncommon (for example, Education, Nursing and Social Work). While particular circumstances will vary, the critical principle is that all parties involved recognise the investment being made—research work performed by the candidate, the salary and infrastructure provided by the employer or funding agency, the expertise and support from the university, the investment by Government; and value the benefits accrued—increased research output, expanded and sustained national research capacity, greater university-industry relationships, and PhDs for the candidates.

References

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Signed on behalf of the authors on 30th May 2008 by
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