

To: The Secretary of the House of Representatives Standing Committee on Industry, Science and Innovation

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From: A/Prof. Pam Green
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Re: Inquiry into research training and research workforce issues in Australia

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The inquiry into research training and research workforce issues in Australia is a welcome initiative. Research training is central to the advancement of knowledge and innovation through the development of future researcher and innovators. This in turn contributes significantly to the national economy through the enhancement of our international research standing, expanded employment opportunities, and growing links with, and responsiveness to, industry and the professions.

Swinburne University of Technology is pleased to submit a response to the Standing Committee's Review. This response represents the perspective of a relatively small university seriously committed to growth in quality of research initiatives, internationalisation, research concentrations, niche opportunities, links between research and teaching and learning, and research outputs/ outcomes of international and national standing.

Swinburne University is keen to participate in opportunities such as conferences, seminars, or forums to expand on any of the issues outlined below and to respond to matters arising throughout the inquiry.

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The National Landscape in Research Training

Australia's position within the global knowledge economy depends, at least in part, upon the opportunities for growth with respect to innovation, and significant knowledge production through the efforts of knowledge workers including both researchers and research degree candidates. In recent decades we have witnessed global massification of education on the basis of access and success. Such massification, along with increased mobility of research candidates (with technological advances, enhanced communication), needs to be matched with ongoing and expanded investment in research. Increasingly, Australia's higher education landscape is characterised by a research performance regime in which knowledge production is managed within a competitive structure. While Australia is no exception here, we are systematically driving global change in that 'the funding of research capacity and research training is now almost entirely performance driven' (Green & Usher, 2003, p. 37). This trend has continued since the inception of the Research Training Scheme in 2000, followed by the Research Quality Framework (ended with the change of government in the latter part of 2007), and more recently with the Excellence in Research for Australia (ERA) initiative. Completion times have become a critical factor in the allocation of research monies to universities. Within this context of performativity (Lyotard, 1984), there is a need for immediate action. Research degree programs need to be strategically managed and research training is an upwardly moving imperative.

In the early 1990s, research degree framework options were expanded in order to grow global and local markets, and also to cater for different emphases with respect to knowledge production (inclusive of both mode 1 and mode 2 type knowledge production: Gibbons, Limoges, Nowotny, Schwartzman, Scott & Trow, 1994). A diverse range of doctoral options arose including PhD by publication, PhD by project/exegesis, and professional doctorates. The extensive take-up of professional doctorate programs in disciplines, such as Education, Business, Psychology and Design, was indicative of such development, and evidence of the commitment to connect the academy with industry and the professions. The move to expanded research programs that are 'differently doctoral' has pushed us to work in increasingly flexible ways but with a continued commitment to quality processes and outcomes. Such developments have contributed to the growing complexity of the national research training landscape in terms of research higher degrees options, practices and outcomes. This, in turn, has increased the imperative to expand and deepen the commitment to research training for both researchers and research students in traditional and non-traditional disciplines, but also across disciplines.

No longer do research candidates necessarily focus on preparing for an academic career. Doctoral graduates face a multiplicity of employability options, both known and those that are yet to emerge. The notion of graduate capabilities, that goes beyond skills, inclusive of conceptual knowledge, procedural knowledge and higher order meta-cognition functions such as reflective practice and awareness of one's ability to problem solve, coupled with the need to prepare research students for an unknown future (Bowden & Marton, 2003), pushes us to focus on the nature of the research degree journey and the opportunities for capability development within that experience. A core aspect of the research degree journey is research training in order to facilitate the development of graduate capabilities (such as independence, entrepreneurialism as well as leadership and management); quality research pursuits and outcomes; timely and successful research degree completions that enhance employability and other opportunities yet to be found.

Global markets for research candidates are highly competitive. Potential candidates search for first class supervision (expertise, status, resources), but also consider available fiscal support that compensates for the lack of employment during the candidature, and that enhances the quality of the research process, the student journey and the outcomes (completions; publications, networks, employability). A greater number and range of research scholarships,

at globally competitive levels, are needed in order to attract both local and international students. For over a decade there has been a national decline in domestic research higher degree (RHD) commencements. Australia must address 'the brain drain' to global opportunities so to retain our brightest and most innovative talent. An increase in RTS places would assist in retaining local talent especially if opportunities for scholarships were increased and made more flexible. Australian Postgraduate Awards (APAs) should be made more flexible and made available on a part-time basis. Another option might be a reciprocal APA arrangement in which a local student studies overseas and swaps with an international student who studies here for the duration of the candidature or part thereof. Further, scholarship levels, with respect to stipends, need to be bench marked against those of our international colleagues. If a shortfall exists, this needs to be addressed so that we can keep our best local talent and also attract talent from overseas. In addition, the benefits of an IPRS need to be examined. We argue that each IPRS needs to be accompanied by a government funded stipend award, of an appropriate level, in order to make the award more attractive to the intended recipients. Given that many research students study part-time and do not have the benefits of a scholarship to free them entirely from work commitments, we argue for a 'package' of centrally funded short term scholarships to assist the completion of the degree (such as a write up scholarship; a data collection scholarship; appropriate international experience relevant to the completion of the degree). In universities where some academic staff are yet to complete a doctorate, short term flexible centrally funded schemes, with explicit reporting on progress, would encourage and actively facilitate such a completion. We argue strongly for an extended range of centrally funded, flexible scholarships to attract talented students which in turn enhances timely and successful delivery of innovative research within our research programs. Such scholarships need to be accompanied by extensive opportunities for research training. Given the trend towards panel supervision and the move to supervision within and across collaborative groups, such as CRCs, we argue for the opportunity to split completions between universities. This would mean that research training support would need to be at a range of levels.

We suggest a tripartite model where nationally funded research training occurs at three levels, namely:

1. National level: cluster groups based on common threads, such as substantive areas or discipline groupings, or methodological approaches; technical training; multidisciplinary groupings according to stage with respect to candidature;
2. University level: a central program offering seminars and workshops on a range of topics from RHD policy and procedures, what counts as research, progress, thesis writing, publication, ethics and IP, research literacies, quantitative approaches, qualitative approaches, career opportunities, examination, supervision matters as well as leadership and management;
3. Faculty level: a range of discipline specific (or candidature issue specific) offerings to all research candidates, such as writing workshops, completion 'camps', technical strategies, English language support, oral presentations, ongoing research options for honours and Masters by coursework students.

A research mentorship model, operating at the same 3 levels above, is also needed. The mentorship model could support research active staff, including research supervisors and especially early career researchers, on matters pertaining to research supervision, research publication, research grants, as well as ethics and IP.

The need for increased research training is an imperative that faces all Australian universities. Given the need to respond to both national and global markets, universities are under the microscope in terms of the quality, currency and flexibility of the research training offered. We argue for increased central funding for research training so to enhance the student

experience, to ensure ongoing quality, and to give further opportunity to innovation, as well as the production and dissemination of significant research knowledge in all universities. The quality of such expanded research training opportunities needs to be scrutinised. Ongoing quality research into research training is needed in parallel to the development of more sophisticated, accessible and comprehensive programs (both face to face and online). Swinburne University would welcome the opportunity to participate in such research into research training.

References:

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