



## ACGR Response to Australian Universities Accord Interim Report

1 September 2023

The Australian Council of Graduate Research (ACGR)<sup>1</sup> welcomes the opportunity to further contribute to the national Accord discussion by providing feedback on the Australian Universities Accord Panel *Interim Report*. We start by acknowledging the current difficulties of calculating the full value and contribution of higher degree by research (HDR) candidates to impactful research and its commercial outcomes, and on the future return on investment in leadership and innovation offered by graduate research education.

Higher degree research candidates and graduates represent future leader-entrepreneurs who are central to developing the innovations and discoveries to resolve our key national challenges in the coming years, including climate change, net zero transformation, adaptable agriculture, sustainable energy and resourcing, disaster management, ethics, health and mental health, defence and international relations, ageing, and digital and emerging technologies. As the sixth *Intergenerational Report (2023)* notes, 'Australia's ability to meet challenges while seizing future opportunities depends on choices today'<sup>2</sup>: it is through delivering a healthy and diverse higher education system, anchored by those studying the highest programs in the Australian Qualifications Framework, that the Accord Panel can ensure a productive and sustainable future for Australia.

### Industry engagement/commercialising research

The *Interim Report* has much to say about the importance of securing close ties between university research activities and their realisation as innovative and commercial outputs through industry links. Additional RTP completion weightings have added a further boost to the incremental push towards greater end-user engagement post-ACOLA (2016)<sup>3</sup>. There is a plethora of schemes that encourage the development of research with and in an industry setting; what is now desirable at a national level is a degree of consistency and simplification of the bureaucratic infrastructure that surrounds these schemes, particularly in relation to letters of intent, agreements, applicant eligibility, and IP.

ACGR argues that Australia needs KPIs beyond 'a target for the number of PhD candidates employed in industry undertaking a PhD relevant to their firm' (*Interim Report*: 13). For universities to deliver the skilled research workforce Australia needs, a diverse range of suitably trained individuals are required, including those that complete their PhD part-time and other structured research degrees while employed, who undertake internships or other work experience while studying full time, who move from the workplace to education, and those who are self-employed, developing start-ups, and so on. Setting targets for solely PhD candidates risks overlooking the role that Masters-level programs can play in developing researchers and providing rapid-response research deliverables to industry, compared with the different focus and value of the doctorate. It is arguably more important to have a general stretch target for all HDR graduates who work beyond academia during and after graduation, which may offer greater diversity of Work Integrated Learning (WIL) models to industry and wider access for prospective candidates. More work is also needed to convince organisations of the distinct value of HDR qualifications, to assist more graduates to navigate a clear career pathway into industry.

Separately, a research degree is qualitatively different from coursework. It has the aim of cultivating capability in analysing and addressing problems wherever they arise and of creating high transferability between contexts. While many HDRs do indeed work in a specific industry, others contribute to national goals in ways that also deserve

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<sup>1</sup> ACGR (est. 1995) is Australia's peak body for graduate research education. It supports excellence through establishing global best practice standards, networking and practice sharing and promotes the wider benefits of graduate research. The Federal Government and other key bodies have regularly utilised the expertise ACGR has to offer. <https://www.acgr.edu.au/>

<sup>2</sup> <https://treasury.gov.au/sites/default/files/2023-08/p2023-435150.pdf>, p. vii. Accessed 24/08/23

<sup>3</sup> <https://acola.org/research-training-system-review-saf13/>

encouragement. We note too the HDR candidate profile is unique in that many commence their studies with years, or even decades of professional experience in industry.

A national platform to facilitate more effective discussions about the shared responsibilities and opportunities in graduate research education between universities, industry, and government would be welcomed. What is required is an authentic means to communicate to government how the sector is currently engaging with industry and what is needed to streamline future partnerships. This will address the perceived disconnect between what industry wants and what universities currently offer and analyse why industry may underestimate the positive outcomes of university research partnerships. As the *Interim Report* notes, the federal government could take the lead by increasing HDR internship options in their own departments. We support the view that further 'metrics to understand industry/university and government/university research collaboration and translation are needed' (*IR*: 13). While HDR internship models from around the world provide important benchmarks, they require close scrutiny to ensure their application in Australian settings, particularly in regions where markets are thin and the tyranny of distance prevents HDR candidates from participating in industry placement programs in the capital cities.

### How many PhD candidates?

The *Interim Report* raises questions about training 'enough people to doctoral level' and providing 'sufficient PhDs in the right disciplines' (*IR*: 95). The ACGR urges caution in making conclusions about optimal numbers before further analysis of existing trends and reliable data collection are accomplished or in light of the changes and challenges our society faces, which are shifting areas of demand. We agree that there is an 'urgent need to train enough highly-skilled researchers' (*IR*: 48), but question the identification of targeted programs and qualifications (e.g., an optimal number of nuclear engineering researchers) to ensure the nation's future prosperity.

Given the reality of fast-evolving technology and workplace needs, it is almost impossible to determine what specific disciplinary skills will be required over future decades (noting that today's early-career researchers may have 30 or more years of professional research career service potential). While an important provocation for future policy setting, the question of the optimal number of HDR graduates points to an urgent need to coordinate collection of data to make appropriate decisions into the future.

It is true that domestic HDR numbers have slightly declined, while international demand for graduate research places is buoyant. The ideal future ratio of domestic to international candidates is moot. For many universities the average ratio has been around 70/30 for some years, but the Commonwealth sets a 10% cap of RTP funding to support international candidates. The ACGR suggests a reconsideration of the effectiveness and intent of this cap with a view to substantially increase or remove the 10% cap and allow a more flexible use of funds in recognition that international candidates bring additional heft to Australian research capacity and make an important contribution to soft diplomacy. In the longer term domestic HDRs will be attracted by improvements in the promotion and recognition of the importance of research and research careers, increased cost-of-living stipends and the lifting of tax on part-time stipend scholarships. The Industry Researcher strand of the National Industry PhD Program could better meet the needs of companies requiring greater research firepower.

### The structure of HDR programs in Australia today

The belief that 'the PhD in Australia generally takes the form of an apprenticeship with a more experienced researcher or research group, with the major output ... being the thesis' (*IR*: 95) is at least two decades out of date. For many years external supervisors and topic experts (including Indigenous Elders) have joined multidisciplinary teams to ensure wider applications for the research questions and methodologies posed. The 'thesis' is often comprised of a range of outputs including published works, creative exegeses, software programs, or compositions. It is a rare 'thesis' that only achieves impact after examination and never that it is only of benefit to the now indentured 'apprentice'.

It is agreed that a consideration of what comprises research training programs for the contemporary HDR candidate is ripe for further discussion. The US coursework-heavy model focuses on disciplinary breadth and arguably speaks to the traditional destination of graduates into academia. Whether 'deep coursework' (*IR*: 95) or compulsory research and transferable skills best equip and future-proof our research trainees is a topic for national debate and evaluation,

as should be a wider analysis of the effectiveness of diverse HDR pathways in affording improved accessibility ‘for all Australians wishing to undertake research’ (IR: 96). Australian universities are continually improving on the delivery of ‘transferable critical thinking and problem-solving skills’ (IR: 48). We agree that there is an ‘urgent need to train enough highly-skilled researchers’ (IR: 48), but suggest that rather than more structured programs, flexibility is required that utilises the experiences individuals bring into their research, supported by clear program learning outcomes and a range of exit pathways.

### Equity and diversity

The ACGR contends that there is a need to develop more robust and nuanced equity measures to ensure resources are allocated appropriately in relation to potential HDRs. The reliance on SES does not accurately reflect HDR candidates’ social and material realities, who have already completed multiple degrees. More nuanced mechanisms are required to focus on identifying students with disabilities, with family caring responsibilities, who are first in family to graduate research and so on. For some students research is intuitively more accessible than the coursework programs which qualify them for HDR (perhaps the case for some neurodiverse applicants). ACGR recommends the consideration of broader definitions of diversity, focusing on clear pathways to HDR, including flexible, equivalent admission requirements for HDR programs to encourage people with different academic and career backgrounds to undertake an HDR. There is a need to increase understanding of research across all levels of the education sector and the AQF to support domestic recruitment and develop talent from within Australia. In this light ACGR welcomes the establishment of a First Nations Higher Education Council.

### Tertiary Education Commission

We endorse the need for ‘expert decision making’ (IR: 14) in all the Commission’s activities and recommend the appointment of experts in Australian research training systems to provide oversight of HDR-specific initiatives. For example the *Report* is silent on supervision quality, or its place in a proposed national research training policy. The ACGR reiterates its call for a national supervision framework<sup>4</sup> to foster best practice in research training pedagogy and set national standards for excellence. The ACGR already recognises models of supervision excellence by means of its annual awards and good practice guidelines and can contribute to and advise on the framework.

It is believed that HDR candidates are responsible for up to 40% of research outputs, but there is a pressing need to develop data collection mechanisms across the sector to illustrate the value of the HDR programs, beyond scholarly publications. This work must inform government decision- and policy-making within any new regulatory framework and to guide decisions in relation to graduate research for the next 30 years. It is contested that the level of future funding directed to RTP should partly depend on the value that HDR candidates afford the Australian economy and society. To achieve this, a comprehensive understanding is required of how HDR research contributes to commercial benefits as well as broader economic, geopolitical, and social benefits. Appropriate data collection and analysis, together with an interrogation of the ‘value’ concept, would transform our understanding of the impact of HDR research, and the ACGR is well positioned to assist in the collection and interpretation of such data. This will ensure that graduate research takes a strong place in conversations about higher education and Australia’s future, instead of falling into the ‘gap’ between existing learning and teaching and research agendas.

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<sup>4</sup> refer to p.6 of the ACGR Response to the Australian Universities Accord Discussion Paper, April 2023.