

Australian Academy of Science submission on the *Australian Universities Accord Interim Report*

The Australian Academy of Science commends the work of the Australian Universities Accord Panel in producing the interim report and the acknowledgement that further work is needed to reflect the role of research in the higher education system appropriately.

In our [earlier submission](#), the Academy made clear its view that Australia needed the expertise generated by universities if it were to prosper securely, sustainably, and equitably in a fractious and unpredictable world. Our submission emphasised that Australia has the 93rd least differentiated economy in the world – no place for comfort or complacency.

What will we need to make the change? Universities – supported and resourced to enable them to do what is expected of them, namely:

- educate future generations by instilling both contemporary knowledge and the capacity to adapt to the unpredictability of the future; and
- learn more about the very nature of our world and identify ways to make it better for everyone.

Universities have many important characteristics; two are particularly relevant to this submission. Through their government-inspired obligation to conduct research in at least some of the fields they teach: 1. they educate in an environment that encourages accepted wisdom to be challenged, critiqued, modified and developed; 2. they contribute to the well-being of the local (and international) community through improved understanding of the world in which we live and which we share.

Accordingly, the Academy proposes:

- An unambiguous commitment to research in the Australian university system, with fit-for-purpose base funding complemented by (not substituted with) research project funding.
- Replace the broken funding system that, bluntly, puts university research at risk and therefore risks the well-being of all Australians with a funding system that is sustainable, patient and long-term.
- Sensibly evaluate the impact of Australian research.

Detailed responses to the Accord Panel interim recommendations on university research are in Appendix A.

[The fundamental role of higher education.](#)

Universities are not just knowledge banks. They don't just hand on what is known today to standards set whenever the material they use was written or was accepted as 'truth.'

They are institutions our communities have relied on for centuries for their advancement through the challenge of contemporary wisdom, consequential change and learning, and for teaching members of the community that knowledge changes with learning.

What we know and understand is constantly disrupted by new findings or different interpretations, just as new discoveries and developments are disrupting research itself all the time.

While the people doing the disrupting come from many walks of life, universities have a particular role to play in preparing the nation for its future: educating people to think critically, to question, and to critique with the confidence to challenge and to lead change as more is learnt.

That form of education is a recognised and supported role for universities in many countries – but in Australia it is commonly challenged with an emphasis on teaching rather than educating; instructing rather than learning. Today's 'textbooks' versus tomorrow's needs.

The critical environment established by research and continuing scholarship is the key. Students in a university study in a place where knowledge is seen as something that will change and learn how to choose between options and adapt.

The Academy therefore proposes that the Accord:

- Include an unambiguous commitment to research in the Australian university system and provide it with fit-for-purpose base funding complemented by (not substituted with) research project funding;
- Maintain and enhance regulatory and legislative protections and obligations for Australian universities to maintain the quality of research within the system.

Unsustainable system for funding university research

Through universities and the broader science system fostering national research excellence and expertise, we afford Australia a level of independence to prioritise and address challenges that are unique to our nation and are key to our prosperity. This important role for higher education institutions cannot be built on funding instability and lack of direction. It requires rethinking how we support research and learning in this country and aligning it with our national priorities.

According to [analysis](#) by Emeritus Professor Frank Larkins, *The sector's research performance has strengthened over the past decade with HERD funding reaching a new expenditure high of \$12.2 billion in 2018...*

So far, so good. But the 'model' that produced it is not fit for purpose:

...This level of performance was possible because of the increased proportion of HERD expenditure provided from discretionary income as an outcome of exceptional growth in annual university operating revenues. In 2008 for every \$100 of external funds obtained universities were providing internal R&D support of \$70. By 2018 universities were supporting research to the level of \$103 for every \$100 externally sourced.

The public funding model for science and research is broken:

1. It puts a price on success – the more a university wins from external sources, the more of its internal revenues it has to divert to support that research;
2. It is dependent on growing discretionary internal revenues that now come largely from international student fees.

The interim report recognises the inherent instability in our broken system for funding university research. However, the proposed directions are limited. They do not address the fundamental issues of an unstable and insufficient funding system created by an overreliance on the funding generated from international and domestic student fee revenue.

While the Accord does not have the scope to consider wider system issues, no review or recommendations regarding university research can occur in a vacuum. Changes to the role, responsibilities, focus, settings, governance or legislation of university research will invariably influence the operation of the broader research system, which has a central problem: 176 research funding programs across 14 Commonwealth Departments.

Accordingly, **the Accord should recommend that the Australian Government commissions an independent science and research system review without delay.**

The Accord should recommend **that Government make an unambiguous commitment to lifting investment in R&D expenditure** and to working with the higher education and industry sectors to execute a 10-year plan designed to reach overall R&D investment at least to the OECD investment average. The design of a ten-year plan would be necessarily informed by an independent science and research system review.

Equity of access to education

Equity of access to higher education was a key focus of the Interim Report and the Government's initial response to it. This is commendable. The transformative nature of education should be available to all.

However, providing equitable access to education fundamentally requires practices that are enabled by the products of research. For example, better connectivity resulting from decades of research in physics and computer science enables access to education by people in regional and remote areas. Adequately supporting both teaching and research is important to address societal inequities.

Evaluating the value of Australian research

The interim report's call for better and richer metrics is welcome. Research metrics can bolster public and funders' confidence in their R&D spending by showcasing the concrete impact and value derived from investments.

When developing new evaluation tools, the foundational and crucial role that fundamental research provides must not be lost. New metrics must also reflect the importance of fundamental research that may not have obvious and clear translation.

The evaluation of Australian research offers an opportunity to broaden our notion of impact. There is a need to modernise the way that data is collected on researchers, their research funding and outputs. Future evaluation should not be limited to journal publications and proxies for innovation like patent data. Being able to measure instances of knowledge exchange – whether it's into policy processes, industry collaborations or even science communication – are important contributions where expertise enriches our society and economy.

To discuss or clarify any aspect of this submission, please contact Mr Chris Anderson, Director Science Policy at Chris.Anderson@science.org.au.

Appendix: Research recommendations and Academy comment

Protecting the basics:

a. significantly increasing immediate investment in the ARC	Strongly Support. Increasing base funding or the ARC allows for more capacity towards funding the full cost of research. The review needs to consider if current rules and incentives within the system are artificially inflating the amount of grant applications received by the ARC and NHMRC.
b. increasing funding for First Nations knowledges and for collaboration and partnerships between First Nations communities, governments, and universities	Support.
c. moving NCRIS to a future fund style of funding.	Not supported. NCRIS should be a core responsibility of government and new or refreshed funding for national research infrastructure should not be dependent on returns from a Future Fund style of Fund. The fate of the Education Investment Fund is instructive in how these funds can be impacted by budget rules around offsets, accounting treatments and the vagaries of political fashion. NCRIS and funding for the Research Infrastructure Investment Plan should become permanent measures in the Commonwealth budget, not terminating measures.

Improving the research training system to support and attract students to research careers:

a. increasing PhD stipend rates	Support. The stipends should be increased, and the Research Training program budget increased. Currently, where universities offer higher stipends, they can come at the cost of fewer Australian born HDR/PhD students
b. offering postgraduate and postdoctoral researcher's extra skills-oriented training in parallel with PhD study or postdoctoral work	Support and recommended by the 2015 Review of Research Training by ACOLA
c. creating research training targets for equity groups	Support
d. encouraging taxation adjustments to make industry-linked and part-time research training scholarships tax free, in line with full-time scholarships	Support
e. encouraging institutions to offer innovative PhD and professional doctorate models, including using portfolio, project, and multi-part dissertation formats and revitalising HDR coursework offerings.	Support

Better sharing and translating research:

a. developing a mechanism that keeps universities, industry and government informed of research capabilities in the	Support. There are a number of approaches, but we suggest regular capability reviews discipline area by discipline area. These should be done at a national level and be about identifying capability gaps and future needs
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higher education system and research problems faced at a national level	
b. incentivising university/end-user collaboration programs, such as the ARC Linkage Grants, the Trailblazer Universities Program, Australia’s Economic Accelerator, the Cooperative Research Centres Program, National Reconstruction Fund and the R&D Tax Incentive.	Support rigorously aligning with the national science and research priorities, subject to open, transparent and regular evaluations. Legislation restricting access to R&D Tax incentive data should be revised.

Tertiary Education Commission

<p>a. the benefits of establishing a new national body, a Tertiary Education Commission, working with the Minister and Department, which could:</p> <ul style="list-style-type: none"> i. be based on the principles of independence and expert decision-making to provide oversight, coordination and expert advice to the higher education sector ii. lead relevant analysis, including with other agencies, to provide advice to government on policy and funding settings to enhance student, teaching and research outcomes iii. function as a pricing authority for Commonwealth higher education funding for the purposes of a potential student-centred, needs-based funding model iv. negotiate new mission-based compacts with institutions to deliver against local, regional and national priorities and needs v. over time, and in partnership with the states and territories, be expanded from higher education to encompass the whole tertiary education system to pursue greater opportunities for alignment and collaboration between the higher education and VET sectors. 	<p>Support. An Australian Tertiary Education Commission, based on the principles of independence and expertise, is an opportunity to take a national view of how teaching and research programs are advancing Australia’s interests. As expert voices on a range of higher education and research matters, including the important intersection with national policy development, the unique expertise of Learned Academies within and across disciplines is independent of universities and governments and should contribute to the Commission.</p>
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