Research Training Implementation Plan Summary

August 2017

On 14 April 2016, the Minister for Education and Training launched the *Review of Australia's Research Training System* (the Review) by the Australian Council of Learned Academies (ACOLA). The Review concluded that Australia continues to derive economic, social and environmental benefits from a research system that is world class in many respects and that contributes substantially to the world's stock of knowledge. However, the Review also concluded there is scope to improve higher degree by research (HDR) training practices, particularly to engage with the industry sectors employing HDR graduates to increase the skills, knowledge and abilities of our future workforce.

The Review noted that improvements to Australia's HDR training system would need to be delivered by the higher education sector in collaboration with government, industry and community stakeholders. The Review made 11 key findings that articulate areas for improvement and six recommendations for government action.

On 4 November 2016, the Australian Government announced it had accepted all six Review recommendations. In response to Recommendation 1, the Department of Education and Training (DET) established a cross sectoral implementation working group to develop a specific and actionable Implementation Plan (the Plan) in response to the Review's findings.

The working group deliberated between February and July 2017. It was chaired by Professor Robyn Owens and comprised high-level representatives from the higher education, government and industry sectors, including Indigenous and HDR student representatives.

Monitoring and reporting on implementation

To ensure that the agreed actions are implemented effectively, DET will work with the identified lead organisations for each of the 18 agreed actions to monitor and report on progress. Drawing on updates from the relevant lead organisations, DET will prepare and publish six-monthly progress reports on its website commencing on 1 July 2018 until the agreed actions outlined in the Plan have been implemented. In addition, DET will collate and publish a range of data on the performance of the HDR system, as outlined in various parts of the Plan.

Priority issues

The working group developed 18 actions to address the Review's findings. These actions are arranged under five Priority Issues in the Plan:

1. Pathways to HDR training
2. Industry-university collaboration, including placements
3. Equity, including Indigenous participation
4. Quality of the HDR training system
5. Data and evidence to better monitor HDR system performance.

This summary document provides a high-level overview of agreed actions under each of the five Priority Issues and the process for monitoring and reporting on their implementation. Detailed information on each Priority Issue is provided in the full version of the Plan, including existing initiatives, areas for improvement in the HDR training system and agreed actions.

Priority Issue 1: Pathways to higher degree by research training

Goal

1. To remove the regulatory and financial barriers that prevent universities from developing innovative and internationally recognised entry pathways to HDR training that would better prepare candidates for HDR training (addresses ACOLA Review Finding 2), and to increase flexibility for universities in using HDR training funding (Finding 3).

There is strong consensus in the sector on the need for multiple, flexible HDR training pathways to support students from a diversity of backgrounds to prepare for HDR training success. Existing regulatory and funding arrangements provide considerable flexibility to support a range of HDR pathways. This flexibility has been enhanced by the recently established Research Training Program (RTP), which provides universities with greater autonomy in selecting students and providing funding to support scholarships and training pathways. The Commonwealth Grant Scheme (CGS) also supports some pathways to HDR, such as Honours and some postgraduate coursework degrees.

This framework has enabled universities to develop new entry models to HDR training, such as the hybrid Bachelor of Philosophy/Master of Research program. This model includes both coursework and independent research study over two years. There is potential for the RTP to support a wide range of new models that may produce better outcomes in line with the pathways proposed in the ACOLA Review, in terms of better preparing students for PhD training. At the same time, there are concerns about the limited scope to support relevant coursework masters degrees under the CGS.

There is also a risk that emerging models may impact on the sustainability of the system, in particular the potential for increased demand for masters places to put pressure on the availability of RTP support for PhD places. It will be important for DET to monitor these issues, undertake modelling and review the use of RTP funding in supporting HDR pathways.

Agreed actions

1.1 Monitor new pathways to HDR training, undertake modelling and review the use of RTP funding

DET to monitor and model the impact of new HDR pathways programs on the research training system, including the balance between PhD and Masters by Research places. This will include reporting on enrolments in specific HDR pathways programs, HDR completion numbers and HDR completion timeframes based on the pathways taken by students. Based on the outcomes of monitoring and modelling, DET to review the use of RTP funding in supporting HDR pathways.

Responsibility – DET – ongoing (6 monthly), with first report by July 2018

1.2 Consult on the new CGS postgraduate scholarship arrangements

As announced as part of the Government's higher education reforms, DET will consult universities, students and other stakeholders on the proposed changes to the postgraduate scholarships system.

Responsibility – DET – subject to the passage of legislation

Priority Issue 2: Industry-university collaboration, including placements

Goals

1. To develop mechanisms to increase the levels of HDR engagement with industry[1], to improve Australia's performance in industry-university collaboration (addresses ACOLA Review Finding 5).
2. To simplify the complex intellectual property (IP) arrangements with universities, which have been identified as a barrier to HDR student placements in industry (Finding 6).

There has been significant recent action by governments, universities and industry organisations to increase levels of HDR student engagement with industry. Notable examples include the Government's expansion of the Australian Mathematical Sciences Institute's (AMSI) PhD internships program through the National Research Internships Program (NRIP), new research block grant (RBG) arrangements, and numerous initiatives on the part of universities and industry bodies to integrate HDR students into industry and end-user focused activities, including through establishing scholarships for industry-focused research projects. Increasing awareness among students and businesses of the diverse range of engagement opportunities available, as well as their potential benefits, will help to drive greater collaboration activity.

The Government has also begun making changes to improve the collection of data in relation to industry-university collaboration with a view to further incentivising engagement, including implementation of the new Engagement and Impact Assessment and changes to data requirements for universities to support the new RBG arrangements. These changes will help in monitoring and evaluating the impact of these initiatives, which will be a key priority going forward.

Similarly, there has been a range of actions to support improved intellectual property (IP) arrangements in collaborative research, including the Government's development of *The Australian IP Toolkit for Collaboration* along with other initiatives introduced by the higher education and industry sectors, such as the IP model used by AMSI for its PhD internships program. While it will be important to support and educate both universities and businesses on these approaches so that they can take advantage of new engagement opportunities, further work to support a more consistent approach to managing IP arrangements is needed.

Agreed actions

2.1 Principles to guide industry-university collaboration in HDR training

The Australian Council of Graduate Research (ACGR) and the Australian Industry Group (Ai Group) to work together to develop and disseminate complementary principles that build on the range of available models of industry engagement in HDR training, including:

- principles for university collaboration with industry in HDR training (for use by universities)

- principles for industry collaboration with universities in HDR training (for use by industry partners).

The principles should promote the short- and long-term benefits of engagement, including the benefits HDR candidates can offer industry, and address issues such as the establishment of clear expectations and protections for all parties, including in relation to IP arrangements.

Responsibility – ACGR and Ai Group, in consultation with universities and industry sector stakeholders – by July 2018

---

[1] The working group uses a broad definition of industry, in line with the definition in the ACOLA Review, which includes all end users of research including businesses, governments, government business enterprises, non-government organisations, not for profit groups and community organisations.

2.2 Promote availability of HDR industry internships and other collaboration

ACGR and Ai Group to encourage their members to promote internships and other collaboration opportunities to students, including by publishing information on their websites.

Responsibility – ACGR and Ai Group – by March 2018

2.3 Monitor implementation of the NRIP

DET to monitor and report to the sector on implementation of the NRIP, including in:

- supporting collaboration

- achieving targets for women and Indigenous student participation

- supporting STEM research.

To support this process, AMSI to report annually on system level issues, in addition to providing regular project reports to DET.

Responsibility – DET, in consultation with AMSI – ongoing, with first report by July 2018

2.4 Establish baseline data and monitor internships and other collaboration

DET to build on existing data collections and processes to establish baseline data on HDR internships and other collaboration.

This would include ongoing monitoring and reporting on the implementation of new RBG arrangements and their impact in supporting greater collaboration.

Responsibility – DET – ongoing (6 monthly), with first report by July 2018

2.5 Collaborative IP templates

DET and the Department of Industry, Innovation and Science (DIIS) to develop and make available templates to inform the development of IP arrangements involving HDR students in collaborative research activities, drawing from existing IP models such as the *IP Toolkit* and the AMSI internship program agreement template. The templates should address issues including:

- establishing trust and pursuing mutual benefit to support more formal commercial boundaries

- identifying and addressing key issues and challenges at the beginning of the relationship

- confidentiality arrangements in the examination of a thesis

- arrangements to allow for the publication of students' research outputs

- agreeing on the commercial potential of the product and likely revenue after all costs have been taken into account.

The templates should be developed in consultation with industry and university stakeholders and informed by the industry-university collaboration principles developed by ACGR and Ai Group under Action 2.1, to ensure they are practical and will be adopted.

Responsibility – DET and DIIS – by mid-2019

Priority Issue 3: Equity, including Indigenous participation

Goal

1. To increase participation in HDR training and improve completion outcomes for Indigenous students and students from other equity groups, including those with low socio-economic status (SES), from regional/remote areas, and women studying in particular disciplines (addresses ACOLA Review Finding 11).

Currently, there is significant effort underway in the government and higher education sectors to improve the HDR training system. These improvements aim to better support Indigenous students and other equity groups, including students from regional/remote areas and low SES backgrounds.

Universities have implemented a range of initiatives to improve outcomes for all equity groups, with a strong focus on Indigenous students, including through the Universities Australia (UA) Indigenous Strategy. The National Indigenous Research and Knowledges Network (NIRAKN) plays a key role in supporting Indigenous researchers, including by providing opportunities for skill development and collaboration through internal and external grants. In addition, the industry sector is addressing Indigenous disadvantage through increased philanthropic support. The Government has improved the flexibility of HDR scholarships through changes to RBG arrangements and the establishment of the RTP.

Despite the work underway to support disadvantaged groups, HDR participation rates are poor amongst Indigenous people and other equity groups. Financial barriers, parental, caring and community responsibilities, and limited access to part-time scholarships and appropriate levels of scholarship support are significant contributing factors. Key priorities for further action include promotion of best practice and improved data collection, monitoring and analysis to inform future action by the sector and government. A greater level of reporting on the support provided by the sector may incentivise further action.

Agreed actions

3.1 Better data collection, and monitoring and analysis

DET to:

- explore improvements to data reporting to support a better understanding of Indigenous student participation in the HDR system, including the pathways taken to HDR, access to scholarships and completion rates.

- monitor and undertake further analysis of the issues surrounding participation rates of other equity groups, particularly of low SES backgrounds and from Regional/Remote areas.

- explore the development of a four-digit Australian and New Zealand Standard Research Classification (ANZSRC) Field of Research (FoR) code for Indigenous research, including lower cost options that do not require a broader review of all FoR codes (noting that the term Indigenous research here applies to Indigenous subject matter, not to research done by Indigenous students).

Responsibility – DET to explore with relevant government agencies and sector stakeholders – by end 2018

3.2 University Indigenous strategies and promotion of best practice

As part of their existing work to implement UA's Indigenous Strategy, UA and ACGR to work collaboratively with Indigenous stakeholders to support implementation of strategies by universities and disseminate information on best practice models, drawing on the experience of institutions that are achieving the best outcomes, including in the following areas:

- better information for Indigenous students on pathways to HDR and strategies to engage and recruit Indigenous HDR candidates, including networking and sharing of resources where universities have very low numbers of Indigenous students

- training for supervisors on how to support Indigenous students including promoting a better understanding of Indigenous research methodologies

- supporting the role of Indigenous academic staff and professors in implementation of university strategies, including the appointment of Indigenous research-only professors.

Responsibility – UA and ACGR, in consultation with the National Aboriginal and Torres Strait Islander Higher Education Consortium (NATSIHEC) and NIRAKN – by mid-2018

3.3 Indigenous PhD forum

DET and UA to explore establishing an Indigenous PhD forum to focus on enablers and barriers to Indigenous HDR participation and outcomes for Indigenous HDR graduates, in consultation with NATSIHEC, NIRAKN and Indigenous HDR students.

Responsibility – DET and UA, in consultation with NATSIHEC, NIRAKN and Indigenous HDR students – by July 2018

3.4 Monitoring and reporting on scholarship support

DET to monitor changes in scholarship support and encourage improvements in access for Indigenous students and other equity groups:

- universities will be asked to report on levels of stipend support for Indigenous students

- DET will monitor and analyse access to part-time scholarships for equity groups and related developments with the ATO Review of Advice on Scholarships

- DET will publish the outcomes on an annual basis.

Responsibility – DET and universities who choose to participate – by 2018 academic year

Priority Issue 4: Quality of the HDR training system

Goals

1. To encourage and enable the benchmarking of Australian research training against appropriate international comparators (addresses ACOLA Review Finding 8).
2. To embed transferable skills training strongly in our research training system (Finding 4), and ensure that formative and summative assessment regimes in graduate research programs align with the aims of contemporary HDR training and appropriately assess both the thesis and the transferable skills attained during candidature (Finding 9).
3. To promote consistent and high quality research supervision (Finding 10).

The ACOLA Review found that overall the HDR training system performs well in terms of quality, but also identified the potential for improvement by promoting more consistent approaches to international benchmarking, transferable skills development and quality of supervision. At the national level, DET has been improving access to information on outcomes and incentives for quality through activities such as the Quality Indicators for Learning and Teaching (QILT) initiative. University policies also include a focus on international standards for HDR quality.

Universities have made significant progress in incorporating tailored, transferable skills development into HDR training and the skills gained by HDR graduates align closely with those sought by employers. However, more can be done to ensure HDR supervisors recognise and support transferable skills development, including through improvements to academic performance expectations.

While there are many examples of good practice in assessing HDR candidates within universities, clarity is required on the mechanisms by which skills developed throughout candidature are subsequently assessed. In particular, there is potential to achieve greater consistency in relation to the place of oral and written examination in the assessment process.

Agreed actions

4.1 Revised Student Experience Survey

Subject to available resources, DET to explore opportunities to expand the current review of the Postgraduate Research Experience Questionnaire to include the establishment and funding of a survey of current postgraduate research students to support comparison with similar surveys used overseas, such as the United Kingdom's Postgraduate Research Experience Survey for international benchmarking purposes.

Responsibility – DET – by July 2018

4.2 National guidelines on the development, assessment and recognition of transferable skills

ACGR to develop a set of guidelines that define principles and the rationale of skills development, assessment and recognition, which are not too prescriptive.

Responsibility – ACGR – by end 2018

4.3 Refresh Good Practice Principles for Research Supervision

ACGR to refresh the Good Practice Principles for Research Supervision to include increased focus on the development of students' skills and attributes to reflect the aims of contemporary HDR training to equip students with employability skills and experience. (This action also relates to *'Section 3. Equity, including Indigenous participation'*).

Responsibility – ACGR – by March 2018

4.4 Better address HDR supervision responsibilities in academic performance expectations

ACGR to develop guidelines to support universities to better manage and reward performance at the institutional level, including:

- formal inclusion of monitoring of research supervision performance in performance reviews

- the development of metrics to inform regular performance reviews and other processes such as academic promotion

- clear processes for de-registration of supervisors who consistently fail to meet performance expectations

- reviewing university career structures and academic promotion processes to appropriately recognise industry engagement as well as traditional scholarly outputs.

- reviewing supervision registration processes and levels to appropriately recognise industry engagement as well as traditional scholarly outputs by HDR candidates.

Responsibility – ACGR – by July 2018

Priority Issue 5: Data and evidence to better monitor HDR system performance

Goal

1. To improve data collection to enable better monitoring and evaluation of the performance of the research training system, its value to Australia's economic and social wellbeing, and to inform the development of institutional performance incentives (addresses ACOLA Review Finding 7), as well as improving the information available to candidates in making decisions about HDR training (Finding 1).

There is a great deal of data and information routinely collected by government and the higher education sector that could be used more effectively to inform a deeper understanding of the performance of the research training system.

The Government is already making improvements through the Higher Education Student Data Collection (HESDC) and will collect information on issues such as HDR completion timeframes, end user engagement and FoR through RBG processes and by requiring universities to report Commonwealth Higher Education Student Support Numbers (CHESSN) for all domestic students supported under the RTP. The Government's Engagement and Impact Assessment (to be fully implemented in 2018) will collect and provide useful data on the research system. The pilot assessment undertaken in 2017 included a measure of HDR co-supervision by research end users. The QILT website provides a range of information for students on institutional performance.

While there would be potential value in broadening data collections at a national level to improve consistency across the sector and support a more coherent understanding of the system, this must be balanced against the need to manage the administrative burden for institutions. Further measures here need to be carefully targeted. One area in particular where there is potential for improvement is enhancing the capacity to track and monitor outcomes for students throughout their HDR training, drawing on recent improvements to university reporting.

Agreed actions

5.1 Prospective cohort studies

DET to develop a methodology to undertake cohort studies, subject to funding availability, drawing on consultation with relevant experts in the sector who have undertaken such studies.

Responsibility – DET, in consultation with relevant sector experts – by April 2019

5.2 Expanding CHESSN reporting

Subject to legislative and other implementation requirements, extend mandatory CHESSN reporting to international HDR students receiving support under the RTP, and encourage universities to also collect and report CHESSNs for all HDR students not supported through the RTP.

Responsibility – DET – by end 2018

5.3 Best practice guidelines on tracking HDR students

ACGR to develop guidelines on best practice for universities in tracking HDR students through the system and after they graduate to support better data collection and information on student outcomes by institutions.

Responsibility – ACGR – by end 2018