

CONSULTATION ON GROWING INDUSTRY INTERNSHIPS FOR RESEARCH PHD STUDENTS THROUGH THE RESEARCH TRAINING PROGRAM

6 August 2021

The Australian Technology Network of Universities (ATN), in collaboration with The University of Newcastle, welcomes the opportunity to contribute to the Department of Education, Skills and Employment's consultation on growing industry internships for research PhD students through the Research Training Program (RTP).

ATN is the peak body representing Australia's five most innovative and enterprising universities: Curtin University, Deakin University, RMIT University, University of South Australia (UniSA), and University of Technology Sydney (UTS). The University of Newcastle is an important research-intensive anchor institution in the regional gateways of the Hunter and Central Coast. Together, we are home to almost 12,000 higher degree by research (HDR) students.

ATN is focused on enterprise, impact and finding solutions to issues facing our economy and society. The research we do has real-world impact and this extends to our HDR students.

We are leaders in collaboration with industry partners and other universities to leverage the right skills in research, engagement and commercialisation. Our research drives benefits for the economy, for people's health and safety, and for meeting the world's biggest challenges.

Along with innovative, flexible, workplace-connected teaching and a deep commitment to access and social justice, research with real-world impact is a core part of ATN universities.

ATN has recently launched ATN Frontiers, a new professional development program to transform Australia's next generation of HDR students into industry leaders. The program brings together students from all disciplines and encourages them to blend their research with their own vision of the future, while establishing linkages with industry and navigating disruptive innovation.

Given ATN's commitment to industry-engaged research and developing graduates ready and able to bring innovative ideas to industry, we welcome the Government's initiative to encourage PhD student engagement with industry. We make the following recommendations to improve the program, based on our collective experience with industry engagement.

ATN recommendations:

1. Internships should commence at a time that suits the student and their industry partner.
2. Students, universities and industry partners should have flexibility in the way they structure the internships.
3. The definition of 'research end-user' should be reconsidered and clarified.
4. Additional support should be provided for Research Masters students to undertake internships and other industry-engaged activities.
5. Inequities within the current system that preclude international PhD students from accessing internships should be addressed.

ATN also supports the Australian Council of Graduate Research's advocacy on the implementation of PhD internships.

Recommendation 1

Internships should commence at a time that suits the student and their industry partner

Under the guiding principle that the internship should be planned and conducted in the best interests of the student, their research and their industry partner, there should be flexibility to commence and complete the internship at any time.

Every candidature, research area and industry partner is different, partnerships take time to develop and an internship requires careful planning and agreement between the student, university and industry partner. Students and industry partners may benefit the most from a student that has a mature understanding of their field of research, or they may benefit from shaping the focus of the research at an earlier stage. A more flexible approach to timing will likely mean a more successful alignment of capability and deployment.

Our concerns with the proposed commencement within 18 months include:

- Many students are still undertaking literature reviews and exploratory work in the early stages of their candidature and may not yet have a fully conceived research project or be well placed to provide expertise to industry and learn from industry partners
- A substantial internship early in their research project has potential risks for the timely completion of the research and production of the thesis

These risks can be managed and the appropriate support provided, but this is best done by collective agreement, negotiation and management with the student, university and industry partner. This is why limitations or restrictive requirements on the commencement of the internship are inappropriate and potentially counter-productive.

Students should be encouraged to consider an internship and potential industry partners early on in their candidature and plan for this in their research project, in negotiation with their university and industry partner. By allowing the bulk of the internship to occur later can provide a better opportunity for the student to apply their transferable skills and knowledge and to make a meaningful contribution to their industry partner.

Recommendation 2

Students, universities and industry partners should have flexibility in the way they structure the internships

Similarly to flexibility in commencement of the internship, flexibility should be allowed in the structure of the internship. It is appropriate to set some rules and guidelines for internships, such as the 60-day equivalent requirement, to ensure that there is sufficient engagement, depth and structure.

Industry partners may prefer the internship to occur in a full-time or part-time block or intermittently. The nature of the internship may also lend itself to various forms of engagement, such as occasional in-person attendance complemented by regular online interaction. Requiring the equivalent of 60 days should not necessarily mean full days or continuous blocks.

Flexibility and innovation are also key to encouraging PhD students that are not from the 'traditional' Bachelor-Honours-PhD pathway. The PhD cohort is more diverse than ever. Many PhD students have existing and ongoing industry experience and some have an industry partner as an integral part of their project. The program should be adaptable enough to allow PhD students to combine part-time work with part-time research.

For example, for PhD students that are already industry-engaged professionals working may struggle (financially and in terms of their existing employment) to arrange for an internship taken as a three-month block. This is a particular concern for PhD students in health and medical fields.

The internship program should also allow for emerging innovations in the way that PhD candidatures are being conducted. One such innovation is the project-based PhD at UniSA where PhD applicants are invited to apply for a project supported by an existing project team or grant. In this circumstance, it is likely that there will be teams of PhD students involved with an industry partner and the Department's scheme should allow for this.

The key to a successful internship is collective agreement, negotiation, communication and management involving the student, university and industry partner – a tri-partite agreement that suits the goals and needs of all parties.

Recommendation 3

The definition of 'research end-user' should be reconsidered and clarified.

It is timely to reconsider the existing definition of 'research end-user' in context of the new circumstances in which it is being used. Given the aims of the PhD internship program and the significance of changes, additional clarification should be provided about the definition and its application.

In particular, we note the following points:

- Health and medical institutes play an important role in utilising and disseminating research, putting research into practice, and contributing to public health outcomes. Some are attached or affiliated to universities as a product of deep partnerships, but they have similar form and function as other institutes. Given one of the aims of this scheme is to “build new employment pathways beyond academic roles,” these institutes should not be automatically excluded as potential industry partners given their role in the health system.
- Similarly, for candidates engaged in research related to higher education policy and practice, where a university would be the most likely end-user of their research, meaningful internships may not be easily found outside the higher education sector.
- In some sectors (such as creative arts, design, trades, and allied health) a significant number of employers are sole traders. Clarification that an individual acting as a sole trader qualifies as research end-user would be welcome. If there is no recognition of sole traders as end-users, this will significantly impact the options for industry placements for candidates in those areas and may further impact broader research engagement within those sectors if candidates need to look elsewhere if the internship becomes an imperative for industry engagement.

Recommendation 4

Additional support should be provided for Research Masters students to undertake internships and other industry-engaged activities

The ATN Frontiers program is available to ATN Research Masters students, as well as PhD students. This recognises the potential and capability of all HDR students. For some students and industry partners, the Research Masters program could be more suitable and more achievable due to the shorter timeframe for achieving milestones and outcomes. This could also be used as an opportunity for the university to build up a long-running relationship with an industry partner to encourage their involvement with PhD internships.

Supporting internships and other industry-engaged activities for Research Masters students could be used as an opportunity by the Department and universities to pilot and evaluate other approaches that could be rolled out more widely.

There is a concern that if Research Masters students do not have this support then institutions may stop offering such programs because the RTP pool of funds is being diluted with the internship weightings only for PhDs.

Recommendation 5

Inequities within the current system that preclude international PhD students from accessing internships should be addressed

There is a significant cohort of international PhD students – over 22,000 students in 2019 (over 38 per cent of all PhD students). These students make a significant contribution to research in national priority areas, with international PhD students making up:

- 62 per cent of engineering PhD students
- 59 per cent of information technology PhD students
- 47 per cent of agriculture and environment PhD students
- 44 per cent of natural and physical science PhD students.

Providing international PhD students with the same opportunities to extend their skills and be industry-ready is a clear opportunity for Australia to retain outstanding talent and knowledge in both our universities and industries.

There is a lack of infrastructure in terms of programs and support, that would enable international PhD students to participate in internships. A whole of government approach is required to enable systemic inequities to be addressed to enable the participation of these important PhD students in internships.

For example, international students do not have the flexibility due to visa conditions to undertake internships that would require them to either take a leave of absence or study part-time during their candidature. This limits their capacity to extend their skills and networks with industry. Currently, the only time that international students can take up an internship is after submission of the thesis, while it is under examination and they are still a candidate. The Department's proposal of starting an internship within the first 18 months would effectively exclude international candidates and further entrench current inequities within the system.