The Journal of Teaching and Learning for Graduate Employability

ISSN: 1838-3815 (online) Journal Homepage: https://ojs.deakin.edu.au/index.php/jtlge/

Reconceptualising and supporting graduate employability practitioners for higher degree research candidates

Michael D. O'Connor [1,2]

Corresponding author: Michael D. O'Connor (m.oconnor@westernsydney.edu.au)
[1] School of Medicine, Western Sydney University
[2] Graduate Research School, Western Sydney University

Abstract

Research supervisors and their higher degree research (HDR) candidates – including Master, Professional Doctorate, and PhD candidates – make critical contributions to research and innovation. In addition to providing research training, research supervisors have traditionally also acted as the graduate employability practitioner for their HDR candidates through preparation for work in academia. However, the effectivness of traditional HDR training models (such as the knowledge transmission, master-apprentice model for PhD training) are being reviewed in Australia and elsewhere due to changes in the contemporary employment environment. These changes include: fewer available academic jobs; increased desire of HDR candidates for non-academic careers; and implementation of government policies aimed at increasing the return on research investment, including by increasing alignment of graduate attributes with contemporary employer needs. Consequently, work-integrated learning (WIL) activities are being incorporated into HDR degrees to broaden HDR training beyond acquisition of research-focussed skills. For effective incorporation of WIL into HDR degrees, recognition is needed of the different types and roles of graduate employability practitioners required by HDR candidates, as well as improvements to training support structures, and evolved metrics for assessment of supervisor and HDR candidate success.

Keywords

Higher degree research; candidate; master; PhD; professional doctorate; supervisor; employability; alternative doctoral training program

Provocation

HDR Contributions in a Changing Supervision and Employment Landscape

The traditional graduate employability practitioner for higher degree research (HDR) candidates is the research supervisor – operating via a master-apprentice knowledge transmission model (O'Connor et al., 2023). Supervisors train candidates in research methods, enculturate them in discipline stewardship, and prepare them typically for academic employment. However, fewer academic jobs are now available and approximatelly half of PhD candidates desire a non-academic career (McGagh et al., 2016). Annually in Australia, research outcomes from approximately 64,000 HDR candidates (Department of Education, Skills and Employment, 2022) contribute to distribution of over $3.7 billion

in combined research-grant, -support, and -training funding via the National Health and Medical Research Council and the Australian Research Council (Department of Education, 2023 ; Department of Education, 2024c). Despite these significant supervisor/candidate contributions, the master-apprentice model provides insufficient return on research investment (McGagh et al., 2016), and insufficiently prepares candidates to find relevant employment or communicate their value to employers (Pham, 2023). Employers seek HDR graduates with enhanced communication, problem-solving, leadership, teamwork, financial planning, entrepreneurship, and career management skills (Sharmini & Spronken-Smith, 2020; Spronken-Smith, 2018); and candidates need access to greater knowledge and networks for non-academic employment. Yet it is unrealistic to expect HDR supervisors to have or develop skills and networks to best prepare candidates for non-academic employment – their workloads are already high (due to additional teaching and governance activities) and institutions assess supervisor success via research metrics (conference talks, publications, grant income).

Challenges of Incorporating WIL into HDR Training

To improve the breadth and economic impact of HDR skills training, Australian government policies incentivise universities to incorporate work-integrated learning (WIL) into HDR candidatures (Department of Education, Skills & Employment, 2021; Department of Education, 2024a; Department of Education, 2024b). Such WIL activities may be work-based (e.g., internships) and non-work-based (e.g., projects or simulations). Quality WIL depends on effective preparation, implementation, scaffolding, and reflection in a robust framework of co-design and clear university support structures (Campbell et al., 2021). Few HDR supervisors or Graduate Research Schools apply WIL pedagogies to HDR training. Without careful co-design, HDR supervisors and/or candidates may view WIL activities – or simply the time required to complete them – as not directly contributing to their own short-term success based on current academic research metrics. Sole reliance on such metrics while incorporating WIL into HDR candidatures presents clear risks for candidates and their supervisors (e.g., stress prioritising research vs WIL activities if viewed as decreasing academic research progress). Realisation of these risks can have negative outcomes for universities and the community: candidate attrition, fewer supervision opportunities for supervisors, loss of external partners, decreased research productivity and research income, reputational damage, and continued inadequate preparation of candidates for employment.

Recent research indicates HDR candidates benefit from more structured learning opportunities (Sharmini & Spronken-Smith, 2020), and recent doctoral feedback identified four design principles for alternative doctoral training programs (O'Connor, 2023) – including continued reliance on HDR supervisors for research training, while including WIL experts not limited to commercialisation to better prepare candidates for employment. This raises the challenge of conceptualising HDR training as involving more than one graduate employability practitioner: traditional HDR supervisors with a focus on researcher development (for academic or non-academic careers); and WIL practitioners and related content experts to provide knowledge, skills, and networks for both academic and non-academic employment (typically beyond the experience of HDR supervisors).

Identifying Best Practice Design Requirements for HDR WIL

As implementation of quality WIL requires effective co-design, scaffolding, and clear university support structures, for HDR candidates this should mean co-design around both research supervisors and WIL-related experts as complementary graduate employability practitioners. In Australia, professional development for HDR candidates is typically ad hoc (Sharmini & Spronken-Smith, 2020). In other countries, HDR candidates are benefiting from organised training programs including multi-university collaborations (UK Research and Innovation, 2024; European Universities of Technology Alliance, 2024). This author's experience and HDR literature, for example (Pham, 2023; Spronken-

Smith, 2018) indicate candidates, supervisors, universities, employers, and government will benefit if research training recognizes, supports, and rewards the contributions of different graduate employability practitioners.

To provide necessary support structures for supervisors and WIL-related experts to collaborate on HDR training, universities should foster co-design of purposeful HDR WIL activities between relevant graduate employability practitioners (academic, alumni, external partners). Doing so will upskill HDR supervisors in the aims, language, and pedagogies of quality WIL, and ensure WIL activities are recognised (Tertiary Education Quality and Standards Agency, 2022) and maximally productive for HDR candidates, supervisors, and industry or community partners. Such practitioner support structures can ensure WIL is relevant and tailored to future employment opportunities, best aligned with academic metrics of research supervisors, able to exploit the career-relevant knowledge and networks of WIL and related content experts, and responsive to future employment priorities (e.g., training in generative AI for the workplace). Importantly, universities have cost-effective, and easily-administered mechanisms for credentialled (e.g., micro-credentials, via student management systems) or self-service (e.g., digital badges, via performance management systems) matching of training opportunities to candidate needs. These systems can facilitate training scaffolded to different stages of HDR candidature and to candidates' individual career goals. Use of these existing systems can be affordable and potentially supported by RTP or other funds. Placement management software can also be used to track placement logistics and measurable outcomes for reporting, review, and training renewal – with candidate progress reviewed alongside annual research progress reviews.

Conclusion

Design and delivery of HDR WIL – and development of associated, non-traditional success metrics – are critical. So too is building WIL knowledge and capacity in academic and industry-based HDR supervisors as graduate employability practitioners. Current HDR supervisors will benefit from support structures that demystify HDR WIL activities and identify how WIL can provide value to supervisors and candidates. For example, candidates report doctoral WIL aids research progress (O'Connor, 2023). Communicating to HDR supervisors how this occurs, including case studies, will help them best incorporate new candidate knowledge into research supervision for improved research outcomes. Including supervisors in WIL design and delivery can ensure research needs of different disciplines are met, beneficial interactions with industry are fostered (e.g., HDR internships), and effective professional development in WIL for supervisors is implemented.

Current sector changes, accelerated in Australia by the Universities Accord Final Report (O'Kane et al., 2024), provide timely impetus and opportunities to implement best practice for HDR WIL. This Provocation serves as a call for meaningful engagement with improving contemporary HDR training, including recognition of the variety, skills, and professional development needs of different HDR graduate employability practitioners and their candidates. Imminent decisions for HDR WIL design, implementation, and tracking will have high-impact consequences for research and innovation. Poor incorporation of WIL into HDR degrees risks increasing candidate stress and attrition, continued unmet employer needs, and decreased competitiveness compared to countries that better train their HDR candidates. Conversely, committing to effectively incorporate HDR WIL – proportionate to the scale of supervisors' and candidates' research outputs and research funding contributions – can aid research progress without increasing perceived workload (O'Connor, 2023). Enacting institutional support structures for quality HDR WIL and associated graduate employability practitioners can help integrate research and employability skills training for realistic employment outcomes, and increase the impact of – and return on – HDR investments for the benefit of candidates, supervisors, universities, industry, and the broader community.

References

Campbell, M., Leoni, R., Thomson, K., Tunny, R., Smith, L., & McAllister, L. (2021). The construction and testing of a framework to assure the institutional quality of work-integrated learning. *International Journal of Work - Integrated Learning*, *22*(4), 505-519. https://www.ijwil.org/files/IJWIL_22_4_505_519.pdf

Department of Education. (2023). *Research Block Grant Allocations*. Australian Government. https://www.education.gov.au/research-block-grants/resources/2024-research-block-grant-allocations

Department of Education. (2024a). *National Industry PhD Program*. Australian Government. https://www.education.gov.au/national-industry-phd-program

Department of Education. (2024b). *National Priorities and Industry Linkage Fund*. Australian Government. https://www.education.gov.au/job-ready/npilf

Department of Education. (2024c). *Research Block Grant calculations*. Australian Government. https://www.education.gov.au/research-block-grants/calculating-research-block-grants

Department of Education, Skills & Employment. (2021, July). *Growing industry internships for research PhD students through the Research Training Program - Implementation Paper*. Australian Government. https://nla.gov.au/nla.obj-2996646362/view

Department of Education, Skills & Employment (2022) Higher Education Data Cube (uCube) Australian Government. https://highereducationstatistics.education.gov.au/Default.aspx

European Universities of Technology Alliance. (2024). *The ENHANCE Micro-credentials give students' the possibility to customise their education pathways according to their needs and ambitions*. https://enhanceuniversity.eu/micro-credentials-enhance-universities-customise-students-education-pathways/

McGagh, J., Marsh, H., Western, M. C., Thomas, P., Hastings, A., Mihailova, M., & Wenham, M. (2016). *Review of Australia's research training system*. Report for the Australian Council of Learned Academies https://acola.org.au/wp/PDF/SAF13/SAF13%20RTS%20report.pdf

O'Connor, M. D. (2023). Design Principles for Work-Integrated Learning-Based, Alternative Doctoral Training Programs Informed by PhD Candidate Feedback. *International Journal of Work-Integrated Learning*, *24*(4), 567-582. https://www.ijwil.org/files/IJWIL_24_4_567_582.pdf

O'Connor, M. D., Denejkina, A., & Arvanitakis, J. (2023). Preparing doctoral candidates for employment: Delivering research and employability skills training in the PhD via work-integrated learning. *International Journal of Work-Integrated Learning*, *24*(1), 19. https://www.ijwil.org/files/IJWIL_24_1_19_42.pdf

O'Kane, M., Behrendt, L., Glover, B., Macklin, J., Nash, F., Rimmer, B., & Wikramanayake, S. (2024). *Australian Universities Accord Final Report*. Australian Government. https://www.education.gov.au/australian-universities-accord/resources/final-report

Pham, T. (2023). What really contributes to employability of PhD graduates in uncertain labour markets? *Globalisation, Societies and Education*, 1-12. https://doi.org/10.1080/14767724.2023.2192908

Sharmini, S., & Spronken-Smith, R. (2020). The PhD–is it out of alignment? *Higher education research & development*, *39*(4), 821-833. https://doi.org/10.1080/07294360.2019.1693514

Spronken-Smith, R. (2018). Reforming Doctoral Education: There Is a Better Way.*Center for Studies in Higher Education Research & Occasional Paper Series 9*(18). https://escholarship.org/uc/item/4s08b4jx

Tertiary Education Quality and Standards Agency. (2022, May 4). *Guidance note: Work-integrated learning*. Australian Government. https://www.teqsa.gov.au/sites/default/files/guidance-note-work-integrated-learning-v2-0.pdf

UK Research and Innovation (2024, July 19). *Centres for Doctoral Training.* https://www.ukri.org/what-we-do/developing-people-and-skills/nerc/nerc-studentships/directed-training/centres-for-doctoral-training-cdt/