



## Employability for Science Degrees: foundations, challenges and options

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Employability describes the graduate attributes that foster future employment and successful careers (Yorke, 2006). It is a key outcome of university study, valued by all stakeholders. Students expect university study to contribute to their future. Employers expect graduates to be work-ready and to boost productivity and Governments expect university graduates to contribute towards national prosperity. Universities assess the impact of their education mission by the success and impact of their graduates. Growing graduate employability requires intentional and evidence-based learning design and delivery. Work-integrated learning and career development learning are two key learning design strategies to build employability.

Career development learning (CDL) builds student understanding of careers and industry related to their field of study. Bridgstock (2009) defines it as 'the acquisition of capabilities that are useful to the lifelong development and management of one's career, grounded in an ongoing authentic learning-based process that builds knowledge of the world of work and one's self.' It assists students to plan and manage career options, explore and present their own capabilities and gain employment. Learning about careers and industries also helps to develop graduate identity and connection to discipline.

Work-integrated learning (WIL) is a key vehicle for developing the employability skills and knowledge of graduates. It is the constructive integration of work into learning experiences which distinguishes it from more general work experience (Cooper et al, 2010). It links study and future work through learning and practising skills in an authentic, applied context and can take many forms including placements or internships, commissioned industry projects, simulations, contextualised case studies and other industry interactions.

The need for widespread adoption of WIL is accepted collectively by university and business leaders. This consensus was formalised through the National Strategy for Work Integrated Learning (Universities Australia, 2015) which was developed by Universities Australia, the peak body for all Australian universities, the ACEN, the professional body for WIL leaders and researchers, and a range of peak industry bodies. WIL is a common feature of professionally accredited courses where students must demonstrate safety for practice to achieve professional registration. WIL is becoming more widespread in generalist and specialist university courses as demand for employability grows.

In practice, WIL is a large and complex undertaking between three partners: students, employers and universities. Its success is dependent on many factors and influences, including a shared understanding of the goals of partnership, the contribution required and possible from partners, and the complications of local and disciplinary context (Patrick et al., 2014, Jackson, 2015).

Introduction of career development learning and work-integrated learning into conventional undergraduate science is typically a complex process; often requiring specialist expertise and institutional support. This presentation will explore some of the challenges that arise in developing and delivery effective employability approaches in science degrees, and some emerging strategies, including recent novel approaches.

Bridgstock, R. (2009). The graduate attributes we've overlooked: Enhancing graduate employability through career management skills.

*Higher Education Research & Development*, 28(1), 31–44

Cooper, L., Orrell, J. & Bowden, M. (2010). *Work integrated learning: A guide to effective practice*, Routledge.

Jackson, D. (2015). Employability skill development in work-integrated learning: Barriers and best practice. *Studies in Higher Education*, 40, 350-367

Patrick, C.-J., Fallon, W., Campbell, M., Devenish, I., Kay, J., Lawson, J., Russell, L., Tayebjee, F. & Cretchley, P. (2014). *Leading WIL: A distributed leadership approach to enhance work integrated learning: final report 2014*, Australian Government Office for Learning and Teaching, Sydney, Australia

Universities Australia, BCA, ACCI, AIG, and ACEN. (2015). *National Strategy on Work Integrated Learning in University Education*. Canberra: Universities Australia.

Yorke, M. (2006). *Employability in higher education: what it is – what it is not*. Higher Education Academy, York.