2016 Good Practice Report – Work Integrated Learning (WIL)

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Report undertaken for the Department of Education and Training

September 2016

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2016

ISBN 978-1-76051-056-5 [PDF]
ISBN 978-1-76051-055-8 [PRINT]
ISBN 978-1-76051-057-2 [DOCX]

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Executive Summary

The Australian Government Office for Learning and Teaching commissioned this report to identify good practices in work-integrated learning (WIL) in Australia through a systematic review of current approaches in universities in Australia and elsewhere. This report takes up where Janice Orrell's 2011 benchmark report left off and provides contemporary case studies of good practice evident in 13 Australian universities and from two overseas universities. There has been considerable progress since Orrell's report was published, especially around issues of scale, resources, whole of institution approaches, and integration into the curriculum. However, issues around access and equity, Indigenous student participation and international student experience remain works in progress.

This report focuses on answering the following questions: What is WIL? What evidence is there that WIL experiences have improved graduate employability? How are WIL programs organised? What are some examples of good practice? What are some of the issues around implementing WIL across a university?

For the purposes of this report a good practice is one that has been proven to work well and embodies a successful experience that has been tested and validated in and through practice and from which others, across a variety of contexts, can apply and benefit. In selecting case studies, the examples had to meet some or all of the following characteristics:

- *Effective and successful* – has proven its strategic relevance as the most effective way in achieving specific outcomes; it has been successfully adopted across a number of sites and contexts and has influenced individuals and/or stakeholders in a robust and consistent way
- *Mutual benefit* – all stakeholders (employers, industry groups, students, academics, universities) gain reciprocal and mutual benefit
- *Reciprocity and trust* – partnerships are developed and sustained on the basis of trust and respect
- *Authentic* – students are involved in experiences that replicate workplace requirements and expectations
- *Inclusive* – all students have equal access to full participation
- *Applied learning* – that links campus theoretical learning to workplace requirements and practices
- *Replicable and adaptable* – has the potential for replication and is therefore adaptable for transfer to other contexts to achieve similar objectives
- *Monitoring and evaluation* – provides the basis for the collection of evidence to improve WIL activities and outcomes
- *Integration* – activities can be integrated into the curriculum through clearly established objectives and outcomes to ensure consistent application of theory into practical situations in the workplace
- *Innovation* – 'doing things differently' with WIL practices at universities.

The report draws on three sources of evidence:

1. A review of contemporary Australian and international literature
2. An updated review of WIL projects funded by the Office of Learning and Teaching (OLT) since 2011
3. Case studies derived from practice around WIL implementation

The case studies are drawn together around six themes:

- WIL defined, models and benefits
- Approaches to WIL
- Curriculum matters

- Student experience and managing diversity
- Partnerships and stakeholder management
- Conclusions - characteristics of effective WIL - and recommendations.

While relatively short (between one and three pages), the case studies provide readers with the opportunity to gain a sense of the diversity of practice evident in Australian and other universities and act as a stimulus for testing and trialing ideas and practices within a local context. Some of the case studies are deeply embedded within their respective curricula and programs, while others describe practices and projects that are developing. Universities were chosen on the basis of successful Australian Learning and Teaching Council (ALTC)/OLT projects, investigation of websites and vignettes from the Australian Collaborative Education Network (ACEN) website.

International desktop case study reviews were undertaken for the University of Waterloo in Canada and Nottingham Trent University in the UK, the former having a longstanding reputation for co-operative education and WIL, while the latter having recently undertaken significant revision of its WIL programs. In all 40 case studies have been developed.

On the basis of the case studies, good practice in WIL has the following characteristics:
- It occurs in and over physical and virtual spaces, online and offline environments, on-campus or off-campus. This inbuilt flexibility meets the contemporary challenges and opportunities of changing workplaces, workspaces, resources and schedules.
- The engine of this kind of experience is relationships. Relationships in the workplace context are formed and solidified through initial and ongoing productive dialogical engagements.
- Learning in the workplace is not just for the academically gifted. It is for all students. It is a philosophy that rewards achievement without disadvantaging difference.
- Organisationally it is:
  - o well-governed, resourced and supervised
  - o prioritised by the institution and has institutional/faculty/departmental buy-in/investment
  - o has its institutional and industry-based champions
  - o meaningful and accessible to all stakeholders
  - o intentionally linked to and supports learning outcomes, especially around employability.

1.0 Organisation, Definitions, Context and Methods

1.1 Introduction

The Australian Government Office for Learning and Teaching commissioned this report to identify good practices in work-integrated learning (WIL) in Australia through a systematic review of current approaches in universities in Australia and elsewhere. This report takes up where Janice Orrell's 2011 benchmark report left off and provides contemporary case studies of good practice evident in 13 Australian universities and from two overseas universities. There has been considerable progress since Orrell's report was published, especially around issues of scale, resources, whole of institution approaches, and integration into the curriculum. However, issues around access and equity, Indigenous student participation and international student experience remain works in progress.

The terminology of WIL is not without its problems. While it is a term that is understood by university practitioners and students, this is not necessarily the case for industry hosts or partners. Attempts to provide alternative nomenclature have to date proven to be unsuccessful. Indeed, several variations of WIL nomenclature devised by the project team were 'tested' with university and industry representatives with feedback suggesting such terms would face similar problems to WIL. Therefore, for the purpose of this report we stick to the terminology of WIL while recognising its limitations.

We acknowledge that there are instances of good practice in universities that we may have either overlooked or not been aware of and apologise for any omissions.

1.2 Organisation of the Report

This report focuses on answering the following questions: What is WIL? What evidence is there that WIL experiences have improved graduate employability? How are WIL programs organised? What are some examples of good practice? What are some of the issues around implementing WIL across a university? In order to answer these questions, we have examined the scholarly literature, including Office for Learning and Teaching (OLT) reports and examples of good practice written in the form of case studies from universities in Australia and overseas.

The Report draws on evidence from these case studies and provides a synthesis of information around six themes:

- WIL defined, models and benefits
- Approaches to WIL
- Curriculum matters
- Student experience and managing diversity
- Partnerships and stakeholder management
- Conclusions - characteristics of effective WIL - and recommendations.

1.3 National Strategy on Work-integrated Learning in University Education

In March 2015 five key stakeholders[1] who have a commitment to improving graduate employability came together to launch the *National Strategy on Work-integrated Learning in University Education*. The objective was to build the productive capacity of Australia's workforce, improve graduate job prospects and meet the skills needs of employers. The National WIL Strategy is designed to increase opportunities for students to participate in WIL, recognising the benefits to students, employers, universities and the economy.

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[1] Universities Australia, Australian Chamber of Commerce and Industry, Australian Industry Group, the Business Council of Australia and the Australian Collaborative Education Network

1.4 Defining Good Practice

For the purposes of this report a good practice is one that has been proven to work well and embodies a successful experience that has been tested and validated in and through practice and from which others, across a variety of contexts, can apply and benefit. In selecting case studies, the examples had to meet some or all of the following characteristics:[2]

- *Effective and successful* – has proven its strategic relevance as the most effective way in achieving specific outcomes; it has been successfully adopted across a number of sites and contexts and has influenced individuals and/or stakeholders in a robust and consistent way
- *Mutual benefit* – all stakeholders (employers, industry groups, students, academics, universities) gain reciprocal and mutual benefit
- *Reciprocity and trust* – partnerships are developed and sustained on the basis of trust and respect
- *Authentic* – students are involved in experiences that replicate workplace requirements and expectations
- *Inclusive* – all students have equal access to full participation.
- *Applied learning* – that links campus theoretical learning to workplace requirements and practices
- *Replicable and adaptable* – has the potential for replication and is therefore adaptable for transfer to other contexts to achieve similar objectives
- *Monitoring and evaluation* – provides the basis for the collection of evidence to improve WIL activities and outcomes
- *Integration* – activities can be integrated into the curriculum through clearly established objectives and outcomes to ensure consistent application of theory into practical situations in the workplace
- *Innovation* – 'doing things differently' with WIL practices at universities.

1.5 Employability

There is a body of literature that makes the distinction between work-readiness and employability (Smith, Ferns, & Russell, 2014; Yorke, 2010). Yorke (2010) argues that work-readiness might be thought of as a set of conditions *sufficient* for gaining initial employment, while employability is more accurately conceived as a set of valued and valuable skills which are necessary but not sufficient for gaining employment. Importantly, a graduate needs to be both employable *and* work-ready to increase his/her chances of employment. Jackson (2013) argues that WIL is considered to augment graduate employability in a number of ways. First, it builds student confidence in their capabilities in professional practice (Billett, 2011; Martin, Rees & Edwards, 2011). Second, those who participate in WIL have a greater appreciation of the importance of employability skills (Freudenberg, Brimble, & Cameron, 2011; Patrick & Crebert, 2004), in addition to superior outcomes in certain skills (Coll et al., 2009; Freudenberg et al., 2011).

1.6 Methodology

This report draws on three sources of evidence:

1. A review of contemporary Australian and international literature
2. An updated review of WIL projects funded by OLT since 2011
3. Case studies derived from practice around WIL implementation.

The case studies, while relatively short (between one and three pages) provide readers with the opportunity to gain a sense of the diversity of practice evident in Australian and other universities and act as a stimulus for testing and trialing ideas and practices within a local

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[2] The Food and Agriculture Organisation of the United Nations (2015) good practices template was adapted to fit the needs of good practice in WIL. http://www.fao.org/docrep/017/ap784e/ap784e.pdf

context. Some of the case studies are deeply embedded within their respective curricula and programs, while others describe practices and projects that are developing. Universities were chosen on the basis of successful Australian Learning and Teaching Council (ALTC)/OLT projects, investigation of websites and vignettes from the Australian Collaborative Education Network (ACEN) website. Because of issues of cost and distance, site visits to develop in-depth case studies were undertaken from universities in the three east coast states – Queensland, New South Wales and Victoria. Western Australian case studies were identified through web searching or Skype interviews.

Case study information was collected via face-to-face and telephone interviews with key informants including members of ACEN, industry groups and professional and academic staff. Following each interview, case studies were returned to interviewees to check accuracy and gain approval. In choosing case studies a decision was made to focus on areas/disciplines where WIL is less well established (e.g. arts and humanities), rather than more traditional areas such as nursing and education. This was partly because of the regulatory requirements underpinning such programs, and also because much has already been written about clinical placement and teacher practicum in the literature. Student testimonials are also used to support the narrative of the WIL programs but are not intended as evidence of employability *per se*.

International desktop case study reviews were undertaken for the *University of Waterloo* in Canada and *Nottingham Trent University* in the UK, the former having a longstanding reputation for co-operative education and WIL, while the latter having recently undertaken significant revision of its WIL programs. In all 40 case studies have been developed which are included with this report as appendices.

2.0 Literature Review

2.1 Defining WIL
The term work-integrated learning (WIL) has been used in many ways to refer to various types of education-work experiences. It is often used interchangeably with other terms such as work-based learning, cooperative education and experiential education/learning. WIL thus remains somewhat of an "ill-defined concept" (Oliver, 2015, p. 60), which can present a "problem of definition" (Orrell, 2011, p. 5). For these reasons, the recent National Strategy on Work-Integrated Learning in University Education ("National WIL Strategy") (2015), emphasised the importance of agreeing on "a common language and interpretation of WIL", one which is easily understood and applicable by all stakeholders (p. 5).

Earlier definitions conceived of WIL as a "strategy in which students undergo conventional academic learning, mostly at a higher education institution (HEI), and combine this learning with some time spent in a workplace relevant to their program of study and career aims" (Coll et al., 2009, p. 14). Patrick et al. (2008) extended this notion, proposing WIL as "an umbrella term" for a range of approaches, practices and strategies seeking to incorporate theory with the practice of work within "a purposefully designed curriculum" (p. 9). This view of WIL as an umbrella term has become embedded in ensuing literature, including the recent National WIL Strategy (2015).

More recently Oliver (2015) has attempted to move away from the notion of WIL as an umbrella term, proposing that "work-integrated learning" is more of a means to an end, with that end being employability, rather than an end in itself (p. 63). This association between WIL and employability has been noted by other WIL practitioners, scholars and reports (e.g. Calway & Murphy, 2007; Ferns, Campbell, & Zegwaard, 2014; National WIL

Strategy, 2015). Indeed, improving employability outcomes for students has been identified as one of the key aims of WIL, in particular assisting students in the transition from university to work and improving productivity outputs for employers and the wider economy (National WIL Strategy, 2015). Oliver (2015) proposes that learning can occur at various levels and across a range of tasks which can either be 'authentic' (the task resembles those required in professional life) or 'proximal' (the setting resembles professional contexts) (p. 62). With these insights in mind, WIL activities or experiences may be on a continuum depending on how closely they resemble tasks required in professional life, and how well the settings resemble professional contexts (Oliver, 2015, p. 63).

While definitions may vary, two particular characteristics of WIL pedagogy – 'integration' and 'intention' – are prominent in the literature. As Ferns et al. (2014) state,

> *These (WIL) pedagogies are not tokenistic engagement with the workplace, but are deliberate approaches that aim to blend the study undertaken by students within the classroom with the experience of practices in the workplace* (p. 2).

Integration refers to the meshing of theory and practice, or what Billett (2009) describes as the integration of "experiences (in educational and practice settings) in developing the understandings, procedures and dispositions required for effective professional practice" (p. v). Notions of intentionality or purposefulness have been used by Orrell (2011) and Patrick et al. (2008) in order to highlight the importance of embedding such experiences within the curriculum, and scaffolding learning so as to maximise learning outcomes for students. This may require the use of particular pedagogical approaches and/or learning activities such as reflective practice, debriefing or assessment of student learning (e.g. Billett, 2009, 2015; Jackson, 2015; Smith et al., 2014).

2.2 WIL in Practice

Work-integrated learning includes a range of workplace experiences and practices. It is based on particular education models such as experiential learning, service learning, cooperative education and curriculum design approaches that include internships, fieldwork, engineering sandwich courses, clinical placements, teacher practicums, work placements, simulations, case studies, project based work and volunteering. Although there is no necessity that these models, experiences or practices be located within an actual workplace or community, it is often implied that they are. Another common assumption is that these activities fall under the umbrella of situated learning (Gardner & Bartkus, 2014). What we see, however, is that WIL can take place on-campus within the classroom, virtually, internationally, and across public, private or not-for-profit sectors. WIL is often distinguished from service learning (SL) in that the objectives of SL tend to have a broader focus, i.e. on development of social responsibility, civic engagement and personal transformation. Further, SL often takes place in community settings with the dual aim of strengthening communities and contributing to student learning outcomes (Gardner & Bartkus, 2014; Warren, 2012).

Definitions of the various WIL activities vary considerably and are highly contextualised. While there are obvious similarities and overlaps between university and industry definitions and applications of WIL activities, there are as many or more differences. WIL experiences can be differentiated by their purpose, duration, modes of delivery, the extent of industry/community engagement and whether the experience is embedded within the curriculum or an optional add-on. Other notable differences include the awarding of academic credit (and, if so, whether the experience is required as part of professional accreditation) or if the work placement is paid or unpaid. What is clear is that there exists a

considerable amount of ambiguity and non-specificity in terms of definitions regarding WIL activity durations, learning outcomes, university and industry responsibilities as well as overarching terminology.

There are a number of taxonomies and typologies that have been developed to capture the range of WIL experiences (e.g. Groenewald, Drysdale, Chiupka, & Johnston, 2011; Sattler, Wiggers, & Arnold, 2011; Rowe, Mackaway, & Winchester-Seeto, 2012). O'Shea (2014) provides a useful conceptualisation, classifying WIL activities into four categories:
- Complex workplace-based WIL experiences
- Complex on-campus simulated WIL experiences
- Simple on-campus preparatory activities, and
- Simple workplace-based preparatory activities (the two latter ones are both generic and professional).

Each of these experiences can offer different benefits and support different learning outcomes (see also Billett, 2009). For example, engineering sandwich programs which require students to undertake an often lengthy individual work placement that is integrated into their degree program are markedly different from simulation activities in a health related field, where students may practise procedures. The focus of the former might be on gaining exposure to direct and relevant workplace experience to better understand the culture and demands of the profession, while the latter may focus on providing students with opportunities to practise and refine skills before they are expected to perform them in a clinical setting. International volunteering activities which students undertake outside their discipline area may offer unique benefits such as developing an enhanced sense of social and civic responsibility. Team project work undertaken online with a long distance partner may provide opportunities for students to develop generic skills such as teamwork, communication, problem solving and critical thinking.

The term internship, like WIL, is commonly used as an umbrella concept used to house a variety of other work-based learning experiences. One such work experience is the 'co-op' or the more formal, cooperative education scenario. A co-op generally refers to a three-way partnership and multi-work term agreement between a student, employer and college/university. In the traditional sense, a co-op involves at least three work terms interspersed and alternated with school terms. In most cases, students receive academic credit for the work experience, which can result in a five-year degree program as opposed to the customary four years. Generally, co-ops are full-time, paid positions.[3]

Whilst there are similarities in terms of the language, practices and outcomes of WIL, understanding and enactment varies by region, country and university. Internships, for example, may be considered full-time or part-time, paid or unpaid, one-term or semester work placements, and may be student-, faculty-, or institution-initiated. Co-ops, on the other hand, are generally considered collaborative ventures between universities, employers and students. They are usually multi-semester or multi-term, full-time and paid positions. In a study on internships and co-ops, Gault, Leach, and Duey (2010) observed that "given these often subtle distinctions between co-op and intern programs, it is not surprising that universities sometimes use the terms interchangeably" (pp. 2-3). Some conceptualisations of WIL focus on the perceived benefits of internships for students and employers in terms of real-world experience and enhancing employability, while others emphasise the learning outcomes of internships and co-ops, as an experimental means of assisting students to define and redefine their career paths.

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[3] https://www.career.vt.edu/COOP/Terminology.htm

2.3 Benefits of WIL

There is an extensive body of literature reporting the benefits of WIL to students, partner/host organisations and universities (e.g. Patrick et al., 2008; Smith et al., 2014). Specifically, for students WIL is thought to contribute to a range of educational and personal outcomes including the development of generic/professional skills, enhanced employability and work readiness (Jackson, 2013, 2015; Silva et al., 2016; Smith et al., 2014), the application of theory to practice (Coll et al., 2009), development of professional identity (Jackson, 2016; Trede, 2012) and citizenship (Gamble, Patrick, & Peach, 2010)[4], preparation for transition into the workforce (Chillas, Marks, & Galloway, 2015; Jackson, Ferns, Rowbottom, & McLaren, 2015) and higher earning potential/employment rates (Council of Ontario Universities, 2014; Gault et al., 2010). Some findings on the impact of work placements on skill development however, are inconsistent (Wilton, 2012) and/or the extent to which WIL contributes to enhanced employability outcomes can vary across disciplines (Peters, Sattler, & Kelland, 2014), highlighting the need for further empirical work in this area. More longitudinal studies are also needed to determine ongoing benefits to student employment prospects. A further limitation of WIL employability studies is that most are based on student and/or industry self-reported perceptions (e.g. Chillas et al., 2015; Gault et al., 2010) not employment data. Silva et al. (2016) is an exception, investigating graduate unemployment rates in Portugal before and after the introduction of internships.

For universities, WIL can be a way of attracting prospective students and a vehicle for facilitating strong partnerships with industry and community (AWPA, 2014; Patrick et al., 2008). Such partnerships can lead to better engagement and retention rates for universities, and enhanced opportunities for university and industry/community collaborative research (AWPA, 2014; Ferns et al., 2014; Patrick et al., 2008; Wilson, 2012). Industry/community organisations can use WIL to respond to recruitment needs and fulfil skills shortages (Chillas et al., 2015; Gardner & Gross, 2013; Jackson et al., 2015) as well as gain access to new knowledge, build connections with universities and provide professional development opportunities for their staff/supervisors (Ferns et al., 2014; Patrick et al., 2008). Wilson (2012) observes that the mutual benefit of university-industry partnerships is not always recognised, and more could be done by universities and employers in this regard to enhance these partnerships (see also Cooper & Orrell, 2016).

3.0 Good Practice as Derived from the Case Studies

In this section we present examples of good practice around the following themes: approaches to WIL, curriculum matters, student experience and diversity, and partnerships and stakeholder management.

3.1 Approaches to WIL

3.1.1 Whole of University Commitment

A number of universities have incorporated WIL as an integral part of the University Strategic Plan. These universities are responding to specific institutional and local needs of their organisations as well as providing a point of differentiation from their local and national competitors. These plans are translated into specific priorities and operational plans around learning and teaching, community engagement and research. Some make a clear claim around enhancing employability of graduates, while others focus on developing strong links with business, industry and community stakeholders and enhancing the student experience.

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[4] Much of the evidence for citizenship skills can be found within the service learning literature (e.g. Finley, 2012)

Curtin University opted for a multi-faceted, staged approach to embed a WIL culture across the organisation. The approach has the following features:
- establishing a clear and coherent institutional framework which sets out aspirations and outcomes
- a comprehensive communication plan
- the implementation of assorted approaches to staff and student engagement
- creating extensive internal and external collaborations to efficiently communicate achievements and outcomes.

During the Building an Institutional Framework phase of the project, several key tasks were fundamental to the University accepting WIL as a core practice. WIL Guidelines were developed to establish an agreed definition for WIL and to settle on a university-wide framework for developing partnerships with industry and community. [5] These guidelines inform curriculum and engage students in relevant, skill-based experiences and assessed through authentic assessment practices.

The Swinburne Advantage is a whole of institution initiative offering work-integrated learning as part of a degree. There are a variety of ways for students to engage in WIL activities ranging from professional degree requirements, to professional placements and internships, industry-like projects; study tours and accreditation placements. Some of these activities provide students with payment for their participation, while others do not, as they are a course accreditation requirement. Time involvement also varies depending on the type of activity in which students are involved.

Whole of institution employability and career development strategies are also evident at the *University of Wollongong,* development of a Graduate Capabilities Framework at *Deakin University* and the Professional and Community Engagement (PACE) program at *Macquarie University* (see appendices).

Internationally, the *University of Waterloo* in Canada has a whole of institution approach as is evident in the University of Waterloo Strategic Plan 2013 – A Distinguished Past – A Distinctive Future.[6] Over the next five years, this institution's foundational strengths will serve as a springboard, propelling *Waterloo* towards a single goal: to be recognised as one of the top innovation universities in the world. The whole of university commitment is expressed as:

> *"Waterloo will make experiential education integral to how all students learn, broaden the type of work-integrated learning opportunities available and offer more international and research opportunities. This approach will build world-ready graduates who are at home in culturally diverse environments."[7]*

3.1.2 Delivering WIL
WIL activities can be undertaken via a number of delivery modes (e.g. on-campus, the workplace, online) and can be for academic credit or an optional 'add on'. High quality placements have been found to impact more significantly on student employability outcomes than simulation and other 'non-placement' WIL (Smith et al., 2014), often referred to in the literature as 'alternative models' (e.g. projects, fieldwork, simulations,

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[5] Curtin University 2014. *The WIL guidelines.* https://ctl.dev.curtin.edu.au/wil/local/docs/WIL_Guidelines_pdf
[6] *University of Waterloo Strategic Plan 2013.* https://uwaterloo.ca/strategic-plan/sites/ca.strategic-plan/files/uploads/files/c002637_strategicplan2013.sept3_.lowres_final-s.pdf
[7] https://uwaterloo.ca/strategic-plan/eight-themes/experiential-education-all

service provision). However, conceptions of WIL have broadened in recent years, recognising that 'placement' is not necessarily the most effective or appropriate WIL experience for promoting all types of learning outcomes. A useful conceptualisation of the continuum of ways WIL is offered is provided by Fincher et al. (2004) who distinguish between 'full immersion' WIL where activities are located within industry and supported by coursework, and 'half-way houses' where work is predominately located within academia, but for 'real' clients (and thus half way between classroom and industry practice). There are many more combinations that offer different benefits and support different learning outcomes (Billett, 2009), as well as addressing issues such as increasing student competition for placements, the provision of WIL to large cohorts and equity issues (i.e. to better meet the needs of part-time, mature age, 'difficult to place' students etc.). These varieties more effectively recognise the diversity of students, 'workplaces' and academic needs (e.g. Mackaway, Winchester-Seeto, & Rowe, 2013).

3.1.3 Curriculum Renewal

Two cases in particular describe how the motivation to do something different was the starting point for rethinking the curriculum- what and how it was taught. The Faculty of Science at *Monash University* developed the Bachelor of Science Advanced (Global Challenges) which is a niche program for students who are high achieving, entrepreneurial and who want to make a contribution to society. Students develop in-depth knowledge in a science discipline as well as skills to address complex global challenges and convert ideas into solutions for the challenges of contemporary society. By developing skills around real-world problem solving, persuasive communication and leadership students develop a suite of skills that will position them for a diversity of careers ranging from consulting to their own entrepreneurial business – see also *University of Technology Sydney (UTS)* redesign of curriculum in case study appendices.

Monash University and *The University of Melbourne* have recently undertaken significant curriculum renewal to ensure that theory and practice are linked within workplaces through internships and other applied learning. The common thread is the focus on authentic learning and assessment. Students develop both content knowledge and the application of that knowledge in a work setting, with graduate capabilities such as an ability to work as part of a team, problem solving and effective communication integral to students' work experience. At *Monash* the focus has been on changing pedagogy, assessment and the content and purpose of labs. The approach is organised around three areas: authentic assessment; inquiry based learning and incorporating WIL into labs.

3.1.4 Delivering to Large Cohorts

The *Macquarie University* Law School uses an 'outside/in' consultancy model, where student groups enrolled in two law courses – LAWS499 Legal Governance and Professional Leadership and LAWS300 Social Innovation, Governance and Professional Leadership – have the option of working in tutorial based teams to provide consultancy services to external partners on campus. The model and pedagogy underpinning this approach was developed in order to address a number of challenges facing students and academics, including difficulties faced by law students in securing individual placements and catering for large and external student cohorts. This approach differs from an 'inside/out' model where students' skill development is fostered within the workplace. Through project consultancy work, students develop a number of professional skills required to participate effectively in professional working environments, even though they are not physically located in a workplace.

3.1.5 Simulation and Virtual WIL

Simulated workplace environments are designed to reflect real workplaces in their function, equipment and mode of operation, where students can experience a variety of scenarios and inter-related activities. WIL in simulated workplace environments may take place on or off campus. Simulations can be used for a variety of purposes including preparing students for professional settings, development and application of professional/ occupational skills (Edwards, Perkins, Pearce, & Hong, 2015), as well as enhancing self-efficacy and student motivation (Oh, Jeon, & Koh, 2015).

The Oral Health Simulation Laboratory at the *University of Newcastle* provides evidence-based simulation and therapy experiences for undergraduate students enrolled in the Bachelor of Oral Health Therapy. Several courses within the degree program utilise the lab, where students learn and perform a variety of dental procedures on a life-like mannequin. The lab represents a shift away from traditional apprenticeship models where students learn on real patients in a clinic, to one where they gain exposure to practice in a controlled standardised environment. A range of both clinical and non-clinical skills are fostered through scenarios where students work as a team to perform authentic tasks as they would in a real dental surgery. Learning is scaffolded so that students have an opportunity to practise all procedures at least once before undertaking a placement in a patient clinic.

At *RMIT University* the School of Economics, Finance and Marketing developed financial markets trading games and exercises that can be carried out in a classroom setting and via an online portal to equip students with the required concepts, jargon and mechanics in professional finance work practices prior to undertaking trading sessions in the *RMIT University* Trading Facility (RTF). BAFI1018 International Finance is a final-year-final-semester finance course in the Bachelor of Business (Economics and Finance). This course also provides the capstone experience in the program. The outcome, which includes SimEx (an online trading platform) and in-class and online financial markets simulation games has meant students have an authentic floor trading learning experience. The three in-class simulation games developed include introduction to financial markets game, the purchasing power parity trading games and news games. The two online simulation games that have been developed are 'bid-ask game' and 'Does PPP trading rule work?'

3.1.6 Student Research and Project Work

Research undertaken by students is evident in a number of programs. For example, at *UTS,* students, in collaboration with their *UTS* supervisor and, where appropriate, their industry co-supervisor, formulate the scope of a research project, including planning of the research work within an appropriate time scale and establishment of effective channels of communication. Students are responsible for carrying out the work productively and cooperatively, for appropriate and critical analysis of the data or information obtained, and are required to present their findings in a formal written report. They may also be required to present a seminar to other students, staff and industry partners.

Swinburne University of Technology students, researchers, industry partners and entrepreneurs aim to solve complex problems together and generate innovative solutions. Design Factory Melbourne (DFM) offers students new learning experiences through interdisciplinary and international activities. The research and learning conducted connects end-users and researchers with companies and other organisations in the early stages of product and service development, to experiment with concepts and their potential value. Students have the freedom and resources to create solutions to contemporary needs, from idea generation and proof-of-concept to prototyping and testing. Projects bring together

student teams from relevant business, design, engineering and information technology disciplines to collaborate on challenging, externally sponsored projects.

Project work can be undertaken within the workplace or on campus, with an increasing number of initiatives promoting interdisciplinary approaches. Two examples, from *Swinburne University of Technology* and *Queensland University of Technology (QUT)* show how this is being achieved. Design Factory (DFM) located within *Swinburne University of Technology,* enables students (from different disciplines including business, design, engineering and information technology) to collaborate and create new thinking and practices around innovation, while at the same time developing employability skills. A partnership between *QUT* (and other universities) provides opportunities for students in Science, Technology, Engineering and Mathematics (STEM) and professional areas to undertake industry-based projects with private businesses and local/state government departments. Cooperative Education for Enterprise Development (CEED) coordinates a competitive selection process on behalf of host organisations. Projects are usually undertaken over the duration of one semester and students receive a paid scholarship and academic credit.

3.1.7 Compulsory or Elective WIL Activities

The issue of elective or compulsory WIL experiences is neither simple nor straightforward. For students whose degree has accreditation requirements of 'workplace learning' this is not a problem –the internship is already incorporated into the requirements of the degree. However, for students where an internship is undertaken as an elective it is the student's personal interest and her/his priorities that shape decisions regarding whether or not to enrol in an internship program. The Science internship at *The University of Melbourne* is an example where the internship is an elective and where students must meet certain requirements in order to be accepted. At *UTS* there was diversity regarding whether or not an internship experience was compulsory or elective as evidenced in the case studies and practice at *UTS*. Where the internship was fully integrated into a program and required as part of professional accreditation the 'internship' was compulsory, (e.g. Engineering, Biomedical Science, Nursing and Midwifery, Education, Global Studies and Communication, Law for students who wanted admission into the Legal Profession Admission board) while in other programs undertaking an internship was an elective (Business, IT, Science etc.).

3.1.8 Paid or Unpaid WIL

The issue of paid or unpaid work is clearly defined in the Fair Work Act. Case studies from various Australian and overseas universities indicate there is diversity of practice in whether or not students are paid to undertake a WIL activity that is for credit. Students at *UTS* in the Diploma of Engineering Practice are paid for the two extended internship placements. This approach is reflected in similar engineering projects offered at other universities. For other short WIL/internship experiences students are not paid. Students at *The University of Melbourne, Monash University and Macquarie University* among others were not paid for undertaking a WIL experience. Students at *UTS* expressed diverse views regarding payment or non-payment for undertaking an internship. There were some who believed that the experience itself, especially if it gave them 'an edge' in getting a job was worth not being paid. There were others who believed that for many students undertaking unpaid work when they could be earning money would incur a financial disadvantage – they spoke of large numbers of students living below the poverty line and this requirement would put further pressure on their limited resources.

3.1.9 Finding a WIL Placement

There is significant variation across universities in terms of responsibility for finding WIL placements. In some universities students find their own placements which are then approved by the university (*The University of Melbourne*, *Monash University*, etc.), other universities, in conjunction with Careers Offices help students find placements through advertising on databases and noticeboards, while others, depending on the program, help students find the placement. This is particularly the case with international placements. By and large however, in the majority of instances, students find their own WIL placement.

3.1.10 Enablers

Policies and procedures: The majority of the case institutions had in place a suite of policies, procedures and guidelines that ensured effective institutional governance. At *Curtin University* the development of these was a first order priority. At *Macquarie University* the PACE website provided clear information for a variety of audiences, including academic and external partners. *RMIT University* provided an extensive set of resources on the web including YouTube and video resources to support students, academics and external partners.

Placement management systems: A number of universities (*RMIT University, QUT, Deakin University, Swinburne University, University of Southern Queensland* among others) used InPlace, a flexible placement management system capable of supporting a wide range of industry engagement models, in an efficient and effective manner. This software is accessible and user-friendly for students and host organisations.

Resources and support: With a focus on employability, students at *Deakin University* develop one minute video pitches that are put on the website. Me in a Minute[8] is a video strategy that promotes the acquired knowledge and capabilities of final year *Deakin University* students and graduates to prospective employers. Students are asked a series of questions in a one minute video presentation to camera, which prompts them to talk about their skills, knowledge and experience which they have gained while studying at *Deakin University* both at university and beyond. Students choose up to three Deakin Graduate Learning Outcomes and provide images or video as evidence of their acquired knowledge and capabilities.

Centralised or distributed support: There is variation across the case study universities in terms of how WIL was administered and managed. At *Macquarie University* a hub and spoke model is evident – some activities were managed from the central PACE office, while others, closer to the actual PACE units were managed at the faculty level. In each faculty there is an Academic Director and a Manager who work closely with departmentally based academics on curriculum design and pedagogy, partner engagement, student management and logistics, monitoring and evaluation of PACE academic units and activities and PACE related research activities (Clark, 2017). *RMIT University* has a distributed model with much of the WIL activity managed within the colleges but WIL resources developed centrally with support from discipline areas.

3.2 Curriculum Matters

3.2.1 Good Practice in STEM

Edwards et al. (2015) in their report for the Chief Scientist, *Work-integrated learning in STEM in Australian Universities,* identified six areas of good practice in STEM. These

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[8] https://www.youtube.com/user/deakinmeinaminute

included: aligning theory into practice, strong engagement with industry, clear expectations for students and industry, student induction processes, student support and leadership and dedication from academic staff. There are many examples of good practice across the case studies that are institution and discipline specific. Several cases provide examples of long term industry-based relationships (see for example *QUT* and *UTS*) while others describe experiences where through curriculum renewal, assessment and learning are embedded through an industry experience. There are examples where students undertake research with, and for, industry partners. A number of these are small scale (*Monash* Global Challenges, *UTS* Advanced Science Program, *QUT* CEED and *The University of Melbourne* internships) while others are scalable to ensure that large numbers of students have the opportunity to have learning in the workplace as a compulsory part of their degree.

The Faculty of Science at *The University of Melbourne* offers an elective subject SCIE30002 Science and Technology Internship.[9] This subject aims to develop employability skills, and is a cross portfolio initiative offered through the Careers Centre and the Faculty. It uses pre-placement activities to prepare students and post-placement activities to enable students to reflect on their experiences and develop a community of practice. As noted by a course convenor, the great strength of this program is that "... *it makes students aware that problems have solutions and not just answers ... and through this process they gain a heightened sense of self awareness"* (*The University of Melbourne* case study).

The placement is supplemented by pre- and post-placement classes designed to develop an understanding of science and technology professions, introduce strategies for developing, identifying and articulating employability skills and attributes and linking them to employer requirements in the science and technology domains. The placement draws on students' specific discipline skills associated with the science core of their degree. Pre-placement seminars also include consideration of career planning and professional skills and introduce students to tools that help them identify their natural preferences and level of capability in a range of employability skills.

3.2.2 Integration into the Curriculum

Integrating WIL into curricula requires a shared understanding between all stakeholders as to the purpose of the activity, the requirements of quality supervision, appropriate task allocation, effective student preparedness, and authentic assessment practices (Patrick et al., 2008). This can be achieved at course, program or at an institutional level, and needs to be intentional as reflected in learning and teaching policies and pedagogical strategies and interventions.

Stephen Billett's (2009, 2015) work emphasises the need for supporting pedagogical strategies to promote learning outcomes, both before, during and after students complete their WIL activity. At *Griffith University,* Billett is currently investigating post-placement learning/teaching experiences, with the aim of identifying ways in which different kinds of educational interventions can be enacted to secure a range of learning outcomes for students across a wide range of disciplines and programs. The initial trial and evaluation is being undertaken within healthcare disciplines across five Australian universities. Although in its early stages, preliminary findings point to the value of post-practicum experiences, which may include reflective activities and debriefing for students. However, they also emphasise the need for these to be well organised and to have a clear sense of purpose. The *University of Newcastle's* Oral Health Simulation Laboratory is similarly structured around three components: preparation, simulation experience and a debrief (Figure 1).

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[9] https://handbook.unimelb.edu.au/view/2016/scie30002

Figure 1. Phases of an integrated WIL experience

The Faculty of Science at *UTS* has adopted a 'whole of program' approach which integrates WIL into discrete subjects, with the aim of ensuring collaboration between industry and teaching. In one collaboration with CHOICE, a consumer advocacy group, students work with the organisation to compare appliances based on a series of testing criteria. The partner plays a key role, with both CHOICE and *UTS* science lecturers briefing students, and CHOICE staff members also being involved in delivery of the program. *QUT* creative industries degrees have adopted a similar program level approach to WIL with students required to complete a set number of WIL experiences, depending on the degree program (some are compulsory). The WIL component is focused primarily on enabling students to apply theoretical knowledge to practical workplace settings, and consists of three different types of industry-based experiences: internships, projects and study tours.

Often opportunities to engage with industry are not made available to students until the latter part of their degree. Some institutions however, are integrating WIL experiences through a staged approach, by scaffolding learning from first to final year. Through a pilot program, students studying Supply Chain Management in the Faculty of Business at *Curtin University* are being provided with an opportunity to meet and form connections with employers and industry leaders from their second year of university studies, well before they can apply for internships and graduate programs. The program involves students working in small groups to provide consultancy services to businesses around supply chain management processes. This exposure to employers and industry means early in their professional career students have a real world reference point for building on learning and developing industry relevant skills.

3.2.3 Assessment

Assessing WIL outcomes is a complex and challenging endeavour. The variability of learning that can occur in the workplace means that assessment needs to be responsive to individual circumstances and the particular experiences students encounter (Yorke, 2011), with traditional methods of assessment not necessarily well placed to cater for this variability (Winchester-Seeto & Rowe, 2017). Additionally, WIL presents challenges of assessing a broader range of skills and capabilities than classroom based learning, such as student decision making or global citizenship, which are "less observable and less measurable" (Higgs, 2014, p. 253). Universities are responding to these challenges in varying ways.

The *USQ* Bachelor of Psychology contains six compulsory professional skills (WIL) courses, designed to provide a scaffolded learning experience, with increasing levels of autonomy required of students as their learning progresses from first year (university based) to third-year (industry based). A variety of assessment methods have been incorporated to account for this continuum. For the first three courses, assessment requires students to demonstrate skill and knowledge acquisition/application, supported by reflective practice, while the remaining three courses focus on reflective journals, integrated literature reviews and presentations. In the latter part of their degree, students select one or more models of employability, work-based learning, career development or psychological literacy, as a means to explain and demonstrate their personal and professional development during placement experiences.

The involvement of a third stakeholder in WIL (e.g. industry/community supervisor) also distinguishes the assessment of WIL from classroom based learning. The extent of involvement by supervisors in assessment varies depending on the model of WIL and activity undertaken by students, as well as whether students are required to meet standards or competencies set by professional bodies before being permitted to practise. *UTS'*s third year professional internships for Sport and Exercise Science and Sport and Exercise Management incorporate an evaluation by the workplace supervisor as part of assessment, as well as other tasks including an internship proposal, reflective journal and report.

Other examples of note include *Monash University* and *Nottingham Trent University.* At *Monash University,* all laboratory level programs across the undergraduate chemistry program have been revised around authentic assessment; inquiry based learning and the incorporation of work-integrated learning into lab sessions. As every experiment has a work-based task, students must complete online pre-lab activities before they participate in lab experiments. This ensures that the lab experience can be relevant across a number of applied contexts. The logic is that students develop a variety of skills, behaviours and dispositions that will enhance their employability on graduation. Completion of assessment tasks through the School of Science and Technology at *Nottingham Trent University,* enables students to work towards an additional qualification - a Placement Diploma in Professional Practice. To achieve this award, they are required to complete a minimum number of placement hours, complete a logbook and prepare a report. The purpose of the weekly log/journal is to demonstrate knowledge and skill acquisition, as well as the integration of academic study and the practical application of classroom learning.

3.2.4 Skills and Capabilities

A number of recent studies have reported direct links between students' perceived ability to perform various employability skills following placements and other WIL activities (Jackson, 2013; Smith et al., 2014). Development of graduate attributes, employability/work-readiness skills and other capabilities can be fostered through institutional level frameworks and policy initiatives or via discipline specific programs and courses. Typically, these include workplace skills (e.g. information literacy, effective communication), personal effectiveness skills (e.g. problem solving, self-management), and capabilities around a range of contextual factors (e.g. discipline specific knowledge, a global perspective) (see Figure 2).
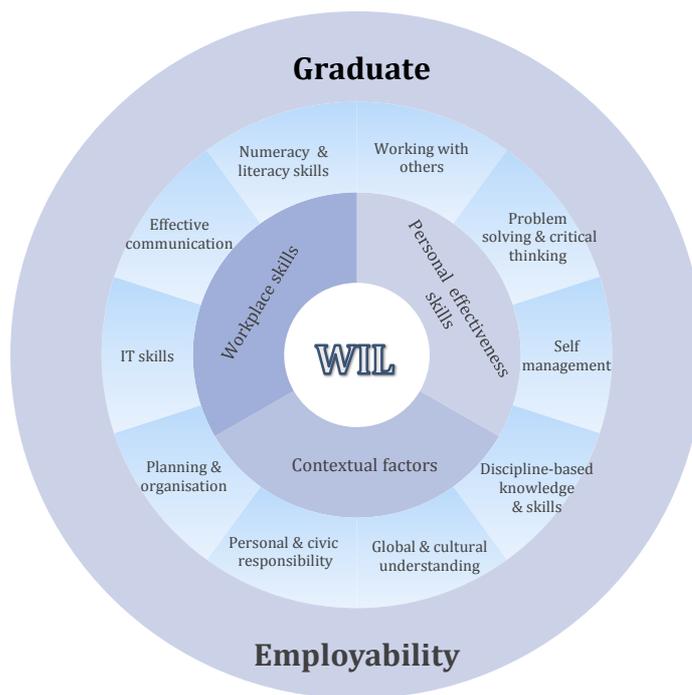
Figure 2. WIL skills, capability and graduate employability

Deakin University's whole of institution approach embeds employability as a central element of its programs. This has been achieved through development of a Graduate Capabilities Framework, where Deakin Graduate Learning Outcomes are aligned with professional accreditation requirements, and are specified at course level as overarching Course Learning Outcomes. These learning outcomes, which include discipline specific knowledge, critical thinking, problem solving, self-management and teamwork, are mapped across units, and incorporated into unit level learning outcomes and assessments. Course Learning Outcome Standards specify the level of performance in those outcomes (for example, graduates must demonstrate discipline-specific written communication skills at a specified performance level) at course level. The framework is supported by *Deakin* Hallmarks - University awards recognising students' outstanding achievement at course level of specific Graduate Learning Outcomes.

At other universities, the development of employability skills and capabilities is embedded at program/course level. The skills, knowledge and capabilities students develop will depend on the purpose and type of the WIL activity undertaken. Internships from three faculties at *UTS* - Design, Sports Science and Management, and Engineering are designed to ensure students graduate with as much practical experience as possible, increasing their professional skills and making them more attractive to prospective employers. Consultancy project work (such as through *Macquarie University's* Law School) provide students with opportunities to develop a range of generic and professional skills including teamwork, project planning, time management and professional communication skills, even though the work may be completed primarily on-campus with external partners. Interdisciplinary projects, such as the Design Factory (DFM) located within *Swinburne University of Technology* offer additional benefits such as interdisciplinary teamwork, collaboration and creative problem solving. International placements can foster cultural competence and development of more personal attributes such as resilience, respectfulness and a sense of social responsibility (e.g. *Macquarie University's* Anthropology Field School).

3.3 Student Experience and Diversity

3.3.1 International WIL Experiences for Students

Sison and Brennan (2012) argue "international work placements extend students' understanding of global practices and offer experiential learning in different cultural contexts. This valuable experience can lead to more nuanced knowledge of political, economic and cultural information which in turn can lead to media and communication students' role as cultural interpreters" (p. 178). The case study examples indicate the diversity of practices across universities ranging from study tours, internships to service learning, individual and group projects and in-country and online experiences.

Global WIL projects have been running at *RMIT University* for some years and a variety of good practice examples have been captured through videos, photos and resource materials. Some of these projects have been run entirely online (often called Virtual Global WIL), and others involve a study tour. A recent project provides Public Relations students at *RMIT University* with the opportunity to work with students from two other international institutions to develop an integrated marketing communications plan for Dundalk tourism in Ireland. Students worked across three time zones, mirroring the manner in which global business operates, and thereby providing them with valuable employability skills and developing graduate attributes. This WIL activity provided them with the opportunity to apply the knowledge and content they developed during their course to respond to a real-world challenge (see also *RMIT University* 2015 Professional Practice study tour to New York City).

The law work placement at *QUT* is a three week externship in South East Asia organised through Bridges Across Borders South East Asia Community Legal Education Initiative (BABSEACLE).[10] The Myanmar externship provides students with opportunities to develop and apply their knowledge and skills, develop their intercultural capabilities, and engage in career planning and personal development.

In 2015 and 2016, 20 *QUT* law students attended four Myanmar universities to help support and assist both law teachers and students in the area of Clinical Legal Education English, encourage interactive teaching methods and promote the growth of an ethical legal profession in Myanmar. These programs and clinics assist communities, and provide legal aid services and build the next generation of social justice, *pro-bono* minded champions.

PACE International provides opportunities for *Macquarie University* undergraduate students to gain first-hand experience working with international community development organisations in countries that include Cambodia, Vietnam, Malaysia, Philippines, India, Fiji, Indonesia and Peru. These experiences provide students with opportunities to develop a range of skills and capabilities including interpersonal skills, cultural sensitivity/competence and active citizenship. PACE360 ('Seeing, Thinking and Doing PACE Internationally') prepares students for cross-cultural experiences and introduces them to issues of power, wealth, and ethnicity operating within the context of economic, political, environmental and cultural dynamics. This is achieved through a range of online and face-to-face modules on reflective and ethical practice, development and poverty, where students are challenged to think deeply about their own assumptions and to recognise different ways of seeing, thinking,

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[10] BABSEACLE is an international access to justice, legal education organisation that focuses on ethically oriented legal capacity development and communality empowerment.

doing and being. Students also have a key role in co-creating the content of PACE360. In their final assessment, they are asked to reflect on their placement and create a new learning activity that will potentially be used to teach future intakes of students. Drawing on their own experiences and resources gathered in-country from partner organisations, students have developed games, blogs, videos and photographic essays. In a final workshop they present these to the class, submitting an accompanying short essay that among other things, explains why their chosen topic is important. (See also the Anthropology Fieldwork Course from *Macquarie University*).

3.3.2 International Students and WIL

Much of the literature on international students undertaking WIL/internships focuses on how these students are challenged by issues of cultural competence relevant to their workplace contexts (Mackaway et al., 2014) and their linguistic deficits because of the perception that international students have to be 'carried' due to their poorer English language and cultural competency skills (Felton & Harrison, 2015, p. 10). For students, key barriers include employers' discrimination and prejudices of international students due to their 'outsider' status, which is often linked to their unfamiliarity with the Australian workplace culture, and their lack of cultural and linguistic capital privileged in the Australian contexts (Tran & Soejatminah, 2016, p. 346)

Three examples – from *Griffith University*, *Swinburne University of Technology* and *The University of Melbourne* – provide examples of such creativity. Focusing on the disciplines of business, engineering, health and education, *Griffith University* led a multi-university OLT project, The Work Placement for International Students Program: WISP. The project focused on challenges, concerns and successes for international students, their supervisors/mentors and coordinators prior to, during, and after the work placements. The project has developed a model for effective practice, which demonstrates the interconnection of three constructs: professional socialisation, internationalisation and reflective practice.

The *Swinburne University* Business Analysis Internship Program developed an internship model aimed at increasing the employability and career development of international students by focusing on a holistic work-integrated learning experience covering cultural understanding and skills, work placements and graduate mentoring from industry professionals. The program involved each student being matched with a professional business analyst over a six-month period to help improve the student's employability outcomes. Students engaged with organisations through ICT (Information and Communications Technology) careers panels, networking events, guest lecturers, internship placements and through a mentor program.

The Master of Arts and Cultural Management is a vocationally oriented graduate program at *The University of Melbourne* designed to allow students to develop and refine their leadership potential and ability to function ethically, imaginatively and resourcefully to advance the arts nationally and internationally. Introduction to Arts Management is an on-site learning experience. Its core focus is to introduce students to the theoretical and practical significance of arts organisations, with a particular focus on stakeholder relations in four key areas: governance, the workforce, audiences, and communities. The subject introduces a broad understanding of arts organisations in relation to their operating environment. Particular attention is paid to the relationships between organisations and with audiences, communities, workforces and peer organisations.

The three examples described above showcase the benefits of diversity and the positive achievements of international students in terms of their professional lives, and how

personal narratives are potentially powerful in stimulating alternative thinking (Felton & Harrison, 2015)

3.3.3 Inclusive WIL
Work-integrated learning programs need to provide opportunities for all students to have the experience of work, including opportunities for:
1. Persons with a disability
2. International students
3. Indigenous students
4. Students for whom English is a second language (ESL)
5. Students with career/work responsibilities
6. Students with mental health concerns
7. Mature age students
8. Lesbian, gay, bisexual, trans and/or intersex (LGBTI) groups
9. Low socio-economic groups
10. Persons from particular religions and/or belief systems.

Recent studies point to a range of barriers and challenges to implementing inclusive WIL, for example competing stakeholder views, priorities and interests, as well as student preferences (e.g. Mackaway et al., 2013). Broadly speaking there are two groups of students who are potentially disadvantaged by current WIL structures and teaching approaches: students with more 'visible' or obvious needs such as disabled, ESL, and international students, and students experiencing less obvious or 'invisible' barriers such as mental health issues and those with parallel work and/or carer responsibilities (Mackaway et al., 2013). This distinction, and the sensitivities required of universities and industry in dealing with it, is important and an area where further work needs to be undertaken.

Case studies suggest universities are responding to these challenges in diverse ways, although many programs remained focused on high achieving students. *Macquarie University's* on-campus law consultancy model is capable of accommodating external cohorts, as well as students who may experience barriers to undertaking a placement located within the workplace. *Deakin University, RMIT University* and other universities offer simulation activities (virtual or live), which can more effectively cater for diverse students (e.g. those located in remote areas, mature age students) through more flexible models of delivery, as well as projects and problem-based assignments. *Swinburne University's* Business Analysis Internship Program specifically aims to improve employability outcomes for international students.

The National WIL Strategy (2015) has noted the importance of addressing equity and access issues in student participation in WIL. Part of this broader enabling approach is the development and dissemination of principles, guidelines and strategies for increasing access to, and participation in WIL. Particular attention has been paid to addressing the extra costs faced by students in terms of housing and transport, assistance in managing other caring, health and personal responsibilities and needs. The OLT project Building institutional Capacity to Enhance Access, Participation and Progression in Work-integrated Learning (WIL) is a collaborative and cross-institutional research initiative addressing this national call to action. A key outcome of the project is a resource for academics, practitioners and higher education institutions entitled 'Principles, Guidelines and Strategies for Inclusive WIL' (Winchester-Seeto, Mackaway, Peach, Moore, Ferns, & Campbell, 2015). The contributors note that whilst there are many examples of effective and inclusive WIL practice in

universities, there remains "no systematic approach nor agreed set of principles about how to develop genuinely inclusive WIL" (p. 1).

The Aurora Project Internship Program offers Indigenous and non-Indigenous students an opportunity to gain professional work experience and improve career opportunities available at Native Title Review Boards (NTRB), Prescribed Bodies Corporate (PBCs) and other organisations working in the broader Indigenous sector. It is aimed at candidates who are seeking work experience and have a keen interest in native title, land rights, social justice, policy development and research, all with an Indigenous focus. All placements are 4 - 6 weeks unpaid and are available in all major cities and some remote areas of Australia.

3.4 Partnerships and Stakeholder Management

Partnerships and relationships are crucial to the success of WIL, with key factors pertaining to the initiation, development, and sustaining of successful relationships including a shared vision, mutual respect, commitment, collaboration, trust, coordination, adaptive practices and co-generative learning (Sachs & Clark, 2017; see also Cooper & Orrell, 2016). Effective communication and expectation management are particularly crucial (Kay, Russell, Winchester-Seeto, Rowe, & Le Clus, 2014) with several universities investing in the development of communication mechanisms. *Curtin University* for example, has developed a communication plan to disseminate WIL information throughout the university and to university hosts and partners. This comprises written and electronic communication around reporting requirements and progress updates, as well as a monthly electronic newsletter titled the GoodWIL Newsletter. The website has also been developed and is complemented by an integrated social media strategy (e.g. creation of a WIL at Curtin Facebook page, LinkedIn group and blog).

Universities are approaching relationships with industry/community stakeholders in different ways, from *ad hoc* episodic arrangements (e.g. projects which may run over the duration of a semester) to more longstanding partnerships based on formal contracts/agreements explicitly articulating the roles and responsibilities of each stakeholder, supervisory arrangements, intellectual property and professional liability, financial and insurance details (Kay et al., 2014). Agreements are an important mechanism for managing potential risks associated with WIL, with some universities investing substantial resources into developing systems, processes and strategies in order to protect the institution, its partners and community from a range of risks (e.g. reputational, work health and safety).

Quality supervision of students (both from the partner organisation and university) is another important aspect of WIL which directly contributes to the student learning experience and skill development (Smith et al., 2014). Supervisory arrangements vary depending on factors such as the nature of the WIL activity, the availability and willingness of individuals tasked with supervising students within the workplace, the location of supervisors, and disciplinary traditions. In some cases, workplace supervisors may have a dual role, i.e. as a mentor and evaluator of student performance, particularly in professions where competency is required for entry into professional practice, e.g. nursing, teaching (Winchester-Seeto, Rowe, & Mackaway, 2016). In others, the role may be split between an on-campus academic and a workplace supervisor.

Whole of university approaches to university-community engagement are increasingly being viewed as a more effective model for facilitating employability outcomes (Cooper & Orrell, 2016). Ideally, "universities should approach the establishment and management of these partnerships with greater deliberateness of intent" with a particular focus on reciprocity and

benefits to the host organisation and/or community (n.p). *Macquarie University* has adopted an institution-wide approach to partnership planning and development, with all partners (corporate, not-for-profit, government and community sectors) managed via an integrated cross-institutional database. The university also established a partnership with Australian Volunteers International (AVI), a not-for profit organisation involved in the recruitment of skilled professionals to undertake volunteer work with partner organisations in the developing world. In the early stages of the PACE program AVI assisted the university in the establishment of protocols, risk frameworks, as well as in-country partner selection and evaluation. AVI also facilitates entry/exit programs and onsite management and support for students. Other collaborative relationships are managed centrally or through faculty teams and are founded on principles of reciprocity and mutual benefit. For example, the Anthropology Field School utilises partnerships with the Fiji Museum and *University of the South Pacific* to provide opportunities for students to make an authentic contribution to Fijian life by preserving the work of craftspeople, contributing directly to the function of the museum and conducting field research. Project outcomes therefore directly benefit the community, while at the same time promoting the development of a range of discipline specific, practice based and generic skills in students.

Like *Macquarie University*, *QUT* has also chosen to engage a third party in the provision of WIL experiences for some of their students. CEED not only links students at *QUT* and other universities with company-based projects, but also provides student scholarships, insurances, intellectual property ownership (and confidentiality if needed), hands-on recruitment and quality management services, troubleshooting (for clients and students), and academic supervision. New and alternative models of partnerships are also emerging, for example region-wide partnerships (see *Macquarie University's* Faculty of Science and Engineering case study).

A number of universities (*QUT, Curtin University, UTS, RMIT University*) have long-standing reputations for being connected to industry and well-established relationships around STEM disciplines, the focus of which is on developing work-ready graduates. CEED at *QUT* is an industry program linking students with company-based projects. These projects can be completed as part of students' coursework (final year Undergraduate or Masters). At *Curtin University* the Jurien Bay Marine Debris Project brings together two government industry partners - The Western Australian Department of Parks and Wild Life and the Department of Fisheries - to provide a relatively large group of students with the opportunity to work together to map, record and report on an issue of environmental importance (see also the *RMIT University* Engineering Learning Factory).

4. Conclusions and Recommendations

4.1 Conclusions

Scholarly evidence and good practice suggest that effective and successful student learning in the workplace is both a process- and end-orientated concept encompassing a range of approaches, practices and strategies that integrate theory within the practice of work or any meaningful citizenship activity occurring within a structured and purposefully designed curriculum. By establishing, maintaining and leveraging productive and mutually beneficial relationships between university, industry and community groups, effective student workplace learning seeks to provide high-quality experiences with the view to enhancing student learning, improve graduate employability as well as developing active citizenship

skills, building university reputations and standards, and meeting the needs of the economy and employers. Figure 3 summarises these key elements of WIL.
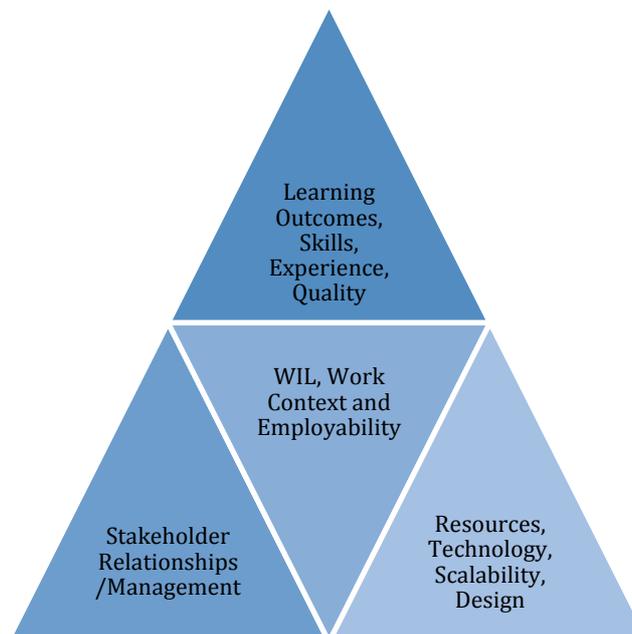
Figure 3. The interconnected elements of WIL

The segmented pyramid captures the interconnected elements that support a successful WIL program. Stakeholder management and resources provide the foundation, but are connected to the work context and learning outcomes.

On the basis of the case studies, good practice in WIL has the following characteristics:

- It occurs in and over physical and virtual spaces, online and offline environments, on-campus or off-campus. This inbuilt flexibility meets the contemporary challenges and opportunities of changing workplaces, workspaces, resources and schedules.
- The engine of this kind of experience is relationships. Relationships in the workplace context are formed and solidified through initial and ongoing productive dialogical engagements.
- Learning in the workplace is not just for the academically gifted. It is for all students. It is a philosophy that rewards achievement without disadvantaging difference.
- Organisationally it is:
    - well-governed, resourced and supervised
    - prioritised by the institution and has institutional/faculty/departmental buy-in/investment
    - has its institutional and industry-based champions
    - meaningful and accessible to all stakeholders
    - intentionally linked to and supports learning outcomes, especially around employability.

4.2 Recommendations

Recommendation 1: As the term WIL continues to be misunderstood amongst various stakeholders there is a need to find a common language that industry, universities and students understand, which incorporates the complexity and diversity of programs that support and promote student employability. We recommend that work be undertaken to 'road test' some new forms of nomenclature.

Recommendation 2: Universities develop systematic approaches to the collection of data and evidence to inform program development and quality enhancement in order to support workplace practices, the student/partner experience and improved employability outcomes.

Recommendation 3: The integration of WIL into university curricula needs to be intentional and aligned with current industry requirements and expertise, to promote new ways of thinking and working around employability.

Recommendation 4: The use of simulations and technology provide opportunities for increasing numbers of students wanting to develop employability skills through WIL. Resources should be allocated to develop pilot programs across a number of discipline areas to test the robustness and appropriateness of simulations and virtual reality technology.

Recommendation 5: Universities should take advantage of opportunities to learn from practice by implementing effective systems and processes which are underpinned by common values of respect and collaboration, and shared understanding of purpose.

Recommendation 6: In order to recognise diverse student needs, contexts and institutional priorities, different approaches to WIL are necessary, not a 'one size fits all'.

Recommendation 7: Effective preparation and support of students and industry partners is required before, during and after WIL activities in order to maximise learning outcomes.

Recommendation 8: Relationships and partnerships between higher education institutions and industry/community are structured, intentional, well planned and resourced.

Recommendation 9: The issues relating to accessibility for marginalised and disadvantaged groups are considered, investigated, and resources allocated to support the development of policies and inclusive practice.

Recommendation 10: Investigate further opportunities for Indigenous and mature age students to engage in work-integrated learning activities.

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6. Appendices

6.1 List of Acronyms

ACEN	Australian Collaborative Education Network
ALTC	Australian Learning and Teaching Council
AVI	Australian Volunteers International
AWPA	Australian Workforce and Productivity Agency
BABSEACLE	Bridges Across Borders South East Asia Community Legal Education
Co-op	Cooperative Education
CEED	Cooperative Education for Enterprise Development
DFM	Design Factory Melbourne
ESL	English as a Second Language
HEI	Higher Education Institution
ICT	Information and Communications Technology
IT	Information Technology
LGBTI	Lesbian, Gay, Bisexual, Trans and/or Intersex
NTRB	Native Title Review Boards
OLT	Office for Learning and Teaching
PACE	Professional and Community Engagement
PBCs	Prescribed Bodies Corporate
SL	Service Learning
STEM	Science, Technology, Engineering and Mathematics
WIL	Work-integrated learning
WISP	Work Placement for International Students Program

6.2 Glossary

Co-operative Education	A three-way partnership and multi-work term agreement between a student, employer and college/university. Generally, co-ops are full-time, paid positions for which students receive academic credit.
Employability	A set of valued and valuable skills which are necessary but not sufficient for gaining employment.
Graduate Attributes/ Outcomes	A university's vision of the knowledge, skills, qualities and dispositions that students will develop through higher education.
Service Learning	Experiences that aim to promote personal transformation and develop students' sense of social responsibility and civic engagement. They often take place in community settings with the dual aim of strengthening communities and contributing to student learning outcomes.
Work-integrated Learning	A range of workplace experiences and practices which are integrated into the curriculum, often with the intention of facilitating students' transition into the workforce and improve employability outcomes. Experiences occur on a continuum depending on how closely they resemble tasks required in professional life, and how well the settings resemble professional contexts.
Work-readiness	A set of conditions sufficient for gaining initial employment, i.e. the minimal requirements or qualifications needed for entry into a specific profession.

6.3 Case Studies

Curtin University
- Whole of Institute WIL Program
- Supply Chain Management
- Jurien Bay Marine Debris Project

Deakin University
- Deakin's Agenda 2020 Curriculum Framework
- Graduate Capabilities Framework
- Graduate employability, Work-integrated and Career Development Learning
- Me in a Minute

Griffith University
- Augmenting Student Learning through Post-practicum Educational Processes
- Work Placements for International Students

Macquarie University
- A Consultancy Model in Law
- Modelling Partnerships: Exploring a Whole of Region Approach to Partnership Development and Management
- Professional and Community Engagement (PACE): A Whole of Institution Approach to WIL
- Co-creating Curriculum with International Community-based Service Learning Partners and Students
- International Field School in Anthropology

The University of Melbourne
- Faculty of Science
- Arts Centre Melbourne Internship for International Students

Monash University
- Transforming Laboratory Learning in Chemistry
- Bachelor of Science Advanced —Global Challenges (Honours)

Queensland University of Technology
- Law School – International Work Placement
- Creative Industries
- Cooperative Education for Enterprise Development (CEED)
- Faculty of Science and Engineering
- Real World Learning

RMIT University
- Simulated Work Environments
- Engineering and Learning Factory
- Global WIL
- Advertising CAPSTONE

Swinburne University of Technology
- The Swinburne Advantage

- Design Factory Melbourne
- The Business Analytics Internship Program

University of Newcastle
- Simulation WIL: Oral Health Simulation Laboratory

University of Technology Sydney
- Faculty-based Programs
- Faculty of Science Placements at UTS

University of South Queensland
- Bachelor of Psychology (Hons.)

University of Wollongong
- An Institutional Approach to Employability

Cross-institutional
- The Aurora Project Internship Program

International
- University of Waterloo, Canada
- Nottingham Trent University, United Kingdom

6.4 People Consulted

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Australian Chamber of Commerce and Industry
Ms Jenny Lambert

Deakin University
Professor Beverly Oliver, Office of DVC (Education)
Professor Liz Johnson, Deakin Learning Futures Office

Flinders University of South Australia
Professor Janice Orrell, School of Education

Griffith University
Professor Stephen Billett, Faculty of Education and Professional Studies
Dr Georgina Barton, Faculty of Education and Professional Studies
Ms Carol-Joy Patrick, Service Learning, Learning Futures
Associate Professor Mark Brimble, Griffith Business School

Macquarie University
Ms Lindie Clark, PACE Office
Associate Professor Kate Lloyd, PACE Office
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Mrs Sally Parrott, Advertising and Public Relations, School of Vocational Business Education
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Swinburne University of Technology
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Mr John McPhee, Engagement Development
Ms Lucy Campbell, Swinburne Design Factory
Associate Professor Anita Kocsis, Swinburne Design Factory
Professor Glen Bates, Student Advancement

Universities Australia
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