WORK INTEGRATED LEARNING

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# The impact of work integrated learning on student work-readiness

## Final Report 2014


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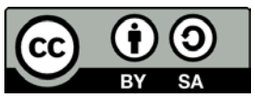



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# Project Partners

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# Reference Group

The Reference Group comprised diverse and high-profile scholars in the field of experiential learning. A combination of national, international, academic and professional colleagues formed the Reference Group which included the following participants:

| | |
|---|---|
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# List of acronyms used

| | |
|---|---|
| ACEN | The Australian Collaborative Education Network Ltd |
| ASCED | Australian Standard Classification of Education |
| AUSSE | Australasian Survey of Student Engagement |
| CDL | Career Development Learning |
| FOE | Field of education |
| GSS | General Skills Scale |
| INTEG | Integration of theory and practice (as a learning outcome) |
| LLR | Lifelong Learning |
| PPS | Professional Practice and Standards |
| PQ | Placement quality (education activity) |
| SIM | Simulation (educational activity) |
| TLA | Teaching and Learning Activity |
| WIL | Work Integrated Learning |

# Executive summary

The primary focus of this research was to determine the impact of work integrated learning (WIL) on the development of employability capabilities of students. With the emerging importance of simulation as an alternative or supplement to placement, the impacts of both placements and simulations were examined.

Five studies were conducted to address the question: *What is the impact of work integrated learning (WIL) on student work-readiness?* The term *employability* is used throughout the report in reference to students' work-readiness. In addition, some associated questions were examined relating to the conceptualisation and measurement of employment-readiness and WIL. The contribution of WIL was analysed after controlling for factors such as work experience, progress through degree, age, simulation activities and career-development learning activities. Fourteen universities participated in this project which comprised a leadership team of three people and eleven project-partners.

Results from the research highlight the scope of the impact of WIL and its unique contribution to employment-readiness. The studies drew attention to the importance of:

- curriculum and co-curricular factors
- the quality and organisation of WIL activities
- rigorous preparation of students for WIL experiences
- debriefing sessions which enable students to reflect on personal performance.

The conceptualisation and measurement of employment-readiness proceeded through a rigorous process of data analysis. The result of this work identified six dimensions of employability:

1. Professional practice and standards
2. Integration of theory and practice
3. Lifelong learning
4. Collaboration
5. Informed decision-making
6. Commencement-readiness (confidence to start a job in the discipline).

The research findings categorically confirm that WIL placements do have an impact on student work-readiness and contribute to employability capabilities, as do simulated activities. While the impact of placement exceeds that of simulation, the data exposed several key elements of the WIL placement experience that were fundamental to quality student outcomes. Furthermore, from the evidence it emerges that the student experience is enhanced when WIL is embedded and scaffolded across the curriculum both vertically and horizontally. While these overarching findings may not surprise WIL practitioners, the key factors that need to be considered in curriculum design and the student experience that emerged provide direction and guidance for developing and implementing WIL experiences. Building on previous research (Smith, & Worsfold, 2013a; Smith, 2012) this series of studies identified the key curriculum dimensions that contribute to quality outcomes as:

- Authenticity of the placement or WIL activity
- Preparation and induction processes for both students and hosts

- A facilitated debriefing session for students that enables reflection on the experience and an opportunity to consider areas of strength and areas for further development

- Access to and quality of supervision throughout the WIL activity (both from the host organisation and institution) to optimise the student learning experience and skill development

- Alignment of WIL activity and assessments to WIL-appropriate learning outcomes with scaffolded skill development and robust feedback.

The analyses show that, even after controlling for work-experience, age, progression in studies and the presence of other related curriculum factors, placement consistently makes a unique contribution to the development of employability capabilities. Most importantly, the higher the quality of the placement, the greater the benefits for students. Furthermore, simulation also makes a contribution to the development of employability capabilities, but its contribution is not as extensive or as consistent as that of placement across the dimensions of employability.
Employers' views on the impact of placement WIL on student learning corroborate the observations gleaned from other stakeholders included in the research. Employers' views confirm that placement WIL has an impact on:

1. Self-awareness of abilities;
2. Application of theory in practice;
3. Professional communication;
4. Commitment to and interest in the job; and
5. Adherence to protocols, standards of dress, and other professional behaviours.

In addition, the findings confirmed that employers who give feedback to students on their learning during placement are more likely than those who do not, to perceive students to be work-ready.

# Recommendations

1. WIL opportunities should be built into curricula to enhance students' employability.
2. An evaluation framework outlining quality assurance standards for high quality WIL should be developed.
3. Simulated work experience should be the subject of future research to determine the characteristics of a quality simulated WIL experience that impacts on the work-readiness of students.
4. The curriculum dimensions of quality WIL such as authenticity, preparation, supervision, integration of theory and practice aligned to learning outcomes and assessment should form the basis of curriculum design.
5. WIL practitioners should be appropriately skilled, experienced and supported, to ensure quality WIL experiences and outcomes for students.
6. Appropriate professional development opportunities should be developed for WIL practitioners and industry/community partners.
7. The employability dimensions that emerged from this project should be used for national benchmarking across disciplines and institutions.
8. Resilience, motivation and attitudinal change emerged as important individual outcomes from WIL experiences and should be the subject of future research.
9. Industry and community partners should be more involved in supervising students and providing feedback on student learning and workplace performance.
10. Industry and community partners and universities should collaborate on curriculum development and design, supervision of students and feedback on assessment.
11. Relationships between universities and industry/community partners should be structured, intentional and resourced.

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# Chapter 1 Context

The interest in work integrated learning (hereafter referred to as WIL) in Australian higher education has grown in recent years. As reviews of the employment-readiness of graduates have shown a degree of industry dissatisfaction with graduates of Australian universities (Yorke, 2006; Sharma, 2013) the spotlight is on the pedagogical strategy that holds the promise of producing graduates with the capabilities valued by employers. WIL has emerged as that strategy. Most recently, this growing interest in WIL was manifest in a "Statement of Intent" signed by five key players: Universities Australia, ACEN, The Australian Chamber of Commerce and Industry, The Australian Industry Group and The Business Council of Australia. This document articulates an explicit commitment to collaboration between industry and the university sector in the endeavour to nurture highly employable graduates to maintain a high level of economic productivity for the Australian economy.

WIL and its apparent contribution to employability is not new with many disciplines able to boast a long tradition in the use of placements and simulated work situations to develop graduate capability. For many professional qualifications, it is the norm rather than the exception that some form of practice-based activity develops and strengthens skills or assesses the application of theory in practice. Regardless of the professional or non-professional origins of the discipline, this report refers to the challenge of developing graduate capabilities that ensure graduates perform work practices commensurate with entry-level practitioners.

## 1.1 Economic Productivity

To sustain strong economic growth and development, Australia needs to increase the proportion of its population with a university qualification (Australian Government, 2009; Schwartz, 2009). The Australian Government has a strong commitment to equity, skills, growth and quality, and acknowledges that skilled professionals are in demand (Commonwealth of Australia, 2013). Incorporating WIL into the curriculum is integral to universities producing work ready graduates, thereby addressing the skills shortage agenda and contributing to strong economic growth and sustainability (Precision Consultancy & Commonwealth of Australia, 2007). The overarching aim is to improve the employability of Australians thereby ensuring a buoyant economy. Stakeholders, including government, industry and students, are demanding that the university curriculum includes authentic experiences that ultimately facilitate the work readiness of a student upon graduation (Cooper, Orrell, & Bowden, 2010; Hager & Holland, 2006). WIL is viewed as a mechanism for connecting the theoretical and practical aspects of professional knowledge resulting in a well-rounded employee with the ability to apply knowledge and skills in a diverse range of contexts (OECD Centre for Educational Research and Innovation, 1996).

Clearly, the expectation is for universities to produce graduates with well-developed work readiness skills (Skills Australia, 2010). In response to the emphasis on transferable employability capabilities across international and cultural boundaries, the higher education sector has focussed on the inclusion of WIL in the curriculum (Patrick et al., 2009). The intention being that WIL will ultimately nurture employability skills, thereby enhancing the likelihood of a successful and enriching career for graduates. The notion of employability has been evolving as a legitimate outcome of higher education for at least two decades. In many disciplines, this ideal outcome has been considered an appropriate end point to a degree.

## 1.2 Accountability

Employment outcomes are an accountability indicator for universities, a measure that is enhanced through the nurturing of employability skills (Yorke & Knight, 2004). In an era of national benchmarking and inherent competitiveness among higher education providers, universities are exploring strategies for maximising

employment outcomes for their graduates. A key strategy for achieving this is by incorporating WIL into the curriculum. Graduate satisfaction, also a measure used in national benchmarking, is enhanced through the inclusion of 'real world' learning experiences (Little & Harvey, 2006; Patrick et al., 2009).

## 1.3 Curricula WIL

While WIL is not a new phenomenon, the notion of explicitly building WIL into curricula through the implementation of authentic experiences and assessment is a relatively recent development in some disciplines. Work-integrated learning is an educational approach that aims to give opportunities to students to practice professional or disciplinary skills, to apply theoretical knowledge to real problems or to experience the real world of work. This is typically achieved through a broad collection of curriculum strategies. Pedagogical theory indicates that the key characteristics of placement-based WIL (experiential learning and authenticity of practice *in situ*) should be incorporated in non-placement alternatives. Examples include role-plays and work-place simulations designed to achieve a degree of experiential authenticity (Smith, 2012), and observational and anecdotal learning (Hodgson, 1984). Given that placement-based WIL is resource intensive, a goal of this research was to establish an evidence-base for the comparative benefits of placement-based versus non-placement-based alternatives that enhance experiential and authentic learning for students.

There is a growing recognition that authentic simulations produce equitable learning outcomes to WIL placements. Thus WIL has become a catch-all term for a range of curriculum strategies that bring to students the opportunity to experience aspects of the real world of work in which their disciplinary or generic skills are applied. The emerging sophistication of what is considered as a WIL strategy has led researchers to focus on those attributes of the experience that enhance student learning outcomes, rather than on the labels for a specific strategy.

While tasks vary depending on the discipline context, all WIL tasks require reflection and conscious linking of theory and practical applications. For the purposes of this research project, the term *simulations* refers to all practice-based tasks other than a placement in a work-based setting. Such tasks may include authentic simulations that reflect the work-place, virtual simulations, case studies, role plays, problem based learning, industry-based project work, mentoring from industry partners and work related presentations.

## 1.4 Purpose of WIL

Both simulations and placements can vary in terms of the degree to which they trigger and support the development of planned learning. This is true regardless of the main learning goals. There are typically four main goals for WIL:

- integration of knowledge and practice
- development and refinement of practice
- creation of new knowledge derived from reflections on experience
- exposure to the world of work.

## 1.5 Evidence of impact

Currently, there is little systematic evidence to substantiate the achievement of specific outcomes for graduates and the impact on their career paths from placement or non-placement WIL, expected academic standards associated with WIL, and best practice in WIL. For the purposes of accountability and to inform practice, it is essential that the WIL experience is evaluated from a student, staff and institutional perspective. There is a need

for a quality assurance mechanism for the delivery of WIL experiences in the curriculum. More recently, there has been a shift in focus from inputs to an explicit focus on developing and monitoring graduate outcomes (Coates, 2010).

Enhanced employment prospects cannot be assumed simply by including WIL experiences in the student experience (Yorke, 2006). Equally, enhanced employment-readiness cannot be assumed to accrue simply by incorporating a WIL component in curriculum. A rigorous accountability process is required to enable the monitoring of outcomes for students and continual improvement of WIL approaches.

## 1.6 Student diversity

Globally there is increasing emphasis on social equity with a focus on providing equal opportunities for all citizens. This has resulted in concerted efforts to improve accessibility of higher education for non-traditional students with the ultimate aim of boosting economic productivity and employment outcomes (Mason, 2010). The widening participation agenda in higher education has culminated in an increasingly diverse student cohort (Norton, 2013). Providing a quality educative experience for a varied student body presents challenges. The challenges are exacerbated in a WIL context where multiple stakeholders are involved and learning outcomes are unpredictable and dependent on personal disposition, a critical factor for student engagement (Devlin, 2011). WIL practices are perceived to lack flexibility and inclusive approaches where all students can actively participate (Orrell, 2011).

Massification in the 1990s, came with a new emphasis on return on investment. With government and students both contributing to the discussion on degree outcomes, there was a strong politicisation of the higher education system, part of which focused on the learning outcomes, especially from the generalist degrees. This led to the development of the generic graduate attributes agenda. Thus, in generalist degrees, (e.g. business, science and arts) where the outcomes are understood more broadly and relate to the changes the graduate experiences as they mature intellectually (intellectual skills, problem-solving abilities, ethical awareness etc.,), there has been a similar push in the direction of work-place relevance, as the concern for employment outcomes for graduates has become increasingly salient.

## 1.7 Employability

Through consultation with business and industry groups over recent years, a new agenda has emerged based on the premise that graduates across the board lack fundamental skills required to be operationally relevant in an enterprise context.

In parallel has been the emergence of work on employability (Harvey & Umbach, 2005; Little & Harvey, 2006) and career development learning (CDL) and the interplay between CDL, employability and work-integrated learning (Dacre Pool & Sewell, 2007; Smith & Clarke, 2009). Dacre Pool and Sewell's (p.281-287) model is emblematic of the attempt to pull many sub-concepts together into a unified whole and list the following constitutive elements in the conception of employment-readiness.

- degree subject knowledge, understanding and skills
- generic skills, including
    - imagination/creativity
    - adaptability/flexibility
    - willingness to learn

    - independent working/autonomy
    - working in a team
    - ability to manage others
    - ability to work under pressure
    - good oral communication
    - communication in writing for varied purposes/audiences
    - numeracy
    - attention to detail
    - time management
    - assumption of responsibility and for making decisions
    - planning, coordinating and organising ability
    - ability to use new technologies (not included in the list above but mentioned in many others and an important element)
- emotional intelligence
- career development learning
- experience – work and life
- reflection and evaluation
- self-efficacy/self-confidence/self-esteem

One of the enduring problems with the emerging notion of employability is the way that it continues to evolve and to grow, by accretion, with no underpinning or overarching theoretical framework to guide it. Instead, the various and vested interests of those involved in commissioning or participating in reviews, add a skill, ability, attitude, or nuance each time a review is conducted. The result is a vast array of ideas that constitute the construct of employability. Jackson (2010, 2013) identified 41 specific skill areas vying for inclusion in the definition of the concept (see Table 1). Appendix A contains a mapping of the items used in this project against key employability factors represented in the literature.

**Table 1 Jackson's (2010) list of employability skills**

| | | |
|---|---|---|
| Application and use of technology | Disciplinary expertise (DE) | Autonomy |
| Problem solving (PS) | Business acumen | Critical thinking (CT) |
| Decision management (DM) | Work experience | Leadership skills |
| Operating in organisational environment | Numeracy | Initiative |
| Multi-tasking | Professionalism/work ethic | Adaptability & change management |
| Project management | Accountability | Emotional intelligence (EI) |
| Meeting management | Life experience | Political skill |
| Coaching | Oral Communication (OC) | Self-efficacy (SE) |
| Ethics and responsibility (ERP) | Team-working | Reliability |
| Written communication (WC) | Organisational skills | Stress tolerance |
| Information management | Interpersonal skills (IS) | Attention to detail |
| Operating globally | Continuous improvement management | Entrepreneurship |
| Intellectual ability | Meta-cognition | Creativity |
| Lifelong learning | Cultural and diversity management | |

Another example comes from Oliver and colleagues (2011, p. 10) who developed the graduate employability indicators (GEI), a set of 14 measures for use in surveying students. These measures are:

- work-related knowledge and skills
- writing clearly and effectively
- speaking clearly and effectively
- thinking critically and analytically
- analysing quantitative problems
- using computers and information technology
- working effectively with others
- learning effectively on your own
- understanding people of other racial and ethnic backgrounds
- solving complex, real-world problems
- developing a personal code of values and ethics
- contributing to the welfare of your community
- developing general industry awareness

- understanding different social contexts
- overall work-readiness.

## 1.8 Conclusion

Given the dynamic nature of both the job market and the higher education sector with promises of change and accountability requirements to increase further, it is both prudent and timely that the sector gathers evidence to support the inclusion of WIL in curriculum. An experiential curriculum enhances the student experience and facilitates the development of work-ready graduates considered pivotal to a sustainable, innovative and globally competitive economy. Stakeholders including Government, industry, community and education providers acknowledge the value of WIL as a mechanism for building employability capabilities in students and as an investment in the future human capital of society. Mutually beneficial partnerships between educational institutions and industry and community organisations are integral to successful and transformational WIL initiatives. The results of the national OLT project *Assessing the impact of WIL on student work-readiness* confirms the value of WIL as a pedagogical approach that is worthy of investment (Ferns, Smith & Russell, 2014). The findings that emerge from this complex research provide the groundwork for future investigation into different approaches of curricula WIL, partnership models to facilitate authenticity, and discipline-specific WIL methods.

# Chapter 2 Project overview

## 2.1 Project aims and research questions

The suite of research activities in this project aimed to provide a systematic and rigorously derived empirical evidence-base for making judgements about the value and impact of WIL to universities, students, industry and government.

### 2.1.1 Research questions

The project research questions were:

1. What are the essential characteristics of WIL (e.g. authenticity, experiential learning) and how can these be measured validly across all types of WIL including placement-based and simulation (see page 16 for definition)?
2. How should "work readiness" be conceptualised and how can it be measured in ways that can be validly applied in all disciplines and be used as a basis for National Standards for Quality Assurance?
3. What impact does WIL have on work-readiness across a range of WIL types, including alternatives to placement WIL, and in a range of disciplines?

### 2.1.2 The five studies

Given the complex and multifarious nature of this research and the involvement of multiple stakeholders, a complex research design was warranted. A series of five studies was devised to capture an extensive collection of data, both qualitative and quantitative, to ensure rigorous and evidence-based outcomes. It was also important to establish a shared understanding of the approach to, interpretation of, and ultimately, the operationalisation of the two key concepts in the study: WIL and employability.

A. **Cross-sectional study (institutional study)**

The purposes of the cross-sectional study were to (1) identify the range of employability-relevant curriculum experiences to which students were exposed and compare their relative impacts on employability, and (2) validate measures of work-integrated learning and employability. This study was also used to establish (proxy) longitudinal data on the development of employability from different year cohorts across a variety of degree programs. Extensive consultation with the project team and a literature review informed the development of an online survey comprising 45 items. The survey was constructed using a Likert five-point scale to collect responses on the quality of the WIL experience and employability outcomes. Personal information on respondents was collected including gender, age group, mode of study, and name of qualification. The differential impact of WIL on a range of skill and knowledge areas emerged from the survey results enabling the generation of a multi-dimensional framework for measuring employment-readiness. The survey was administered to participants from first through final year studies in partner universities at which the relevant institutional executive manager approved institutional participation in the Study. Students were invited to contribute information about their work readiness and their studies, in a broadcast email sent by the participating university. There were 3336 responses from the thirteen participating universities. Exploratory factor analysis and structural equation modelling was used to analyse data.

B. **Proxy-longitudinal study (subject survey)**

This study targeted students studying specific degree programs with the purpose of gathering perceptions of work-readiness and of the impact of WIL activities. Students studying in a range of qualifications at the project partner universities were approached to participate. Subjects to be included in the study were identified by representatives from the partner institutions in collaboration with the lead team. The subject samples were selected on the basis that the students would be close to the completion of a placement at the time of the survey. Where possible, these were matched with subjects in the same field of education in other institutions where the program of study did not include a placement. There were a total of 1499 respondents across nine institutions. Qualitative data was collected to complement the findings from the quantitative study through two open-ended questions:

*What were the best aspects of your placement?* and
*How could your placement experience have been improved?*

Employment-readiness was operationalised with 18 self-reported items that asked participants to indicate their level of ability in a range of skill and knowledge areas at three stages: Time one: start of program of study, time two: start of current semester, and Time three: now. The skill and knowledge areas were those revealed during the conceptual phase of the research. The measures factored into two broad factors being

1. skills for work and
2. career-development.

Data was analysed using factor analysis, comparison tests, and some structural equation modelling.

C. **Alumni Interview Study**

Telephone interviews of approximately 15 minutes duration were conducted with recent graduates to collect views on the impact of WIL experiences on their employability capabilities. A sample of ten graduates was recruited from a selection of programs at the three lead universities. Interviewees commented on WIL placements throughout their studies and how these experiences impacted on their readiness for professional careers in their chosen fields. Participants consented to the recording of the interviews which were subsequently transcribed and emerging themes identified.

D. **Employer Interview Study**

To gather employer perceptions on the value of WIL work placements for students in preparing them for the workplace, telephone interviews were conducted. The interviews incorporated the employers' insights on WIL and reasons why they participated in student WIL placements. Questions were developed that explored ideas on potential improvements to the WIL placement experience for both the host organisation and the students. Thirteen employers who frequently host students on WIL placements were recruited through the lead universities' contacts. The interviewees were employed in varied establishments addressing seven discipline areas. Audio recordings were transcribed, the data was anonymised and thematic analysis undertaken.

E. **Employer Survey Study**

Data from the Employer Interview Study was used to inform the design of an online survey for administering to a larger cohort of industry personnel who offer WIL placements to students. Participants were recruited from a range

of employer databases at the lead institutions. Respondents to the survey numbered 163 employers from 31 industries. The survey instrument contained ten quantitative questions and two open-ended questions. Data was de-identified and analysed descriptively and thematically.

The suite of five studies was granted ethical clearance through the Human Research Ethics Committee at the lead institution in February 2012.

The studies were derived after a rigorous set of procedures, including:

- a literature review to identify candidate measures and sub-constructs
- nominal group technique discussions with participating university expert project-partners to create a shortlist
- consultation with a reference group of international experts
- final deliberations of the leadership team (Griffith, Curtin and RMIT)
- ratification of final decisions by project partners.

While each of the five studies outlined above formed a discrete component of the research design, each study and instrument design was informed by the preceding studies. Figure 1 below portrays a visual representation of the progressive development of the series of studies.

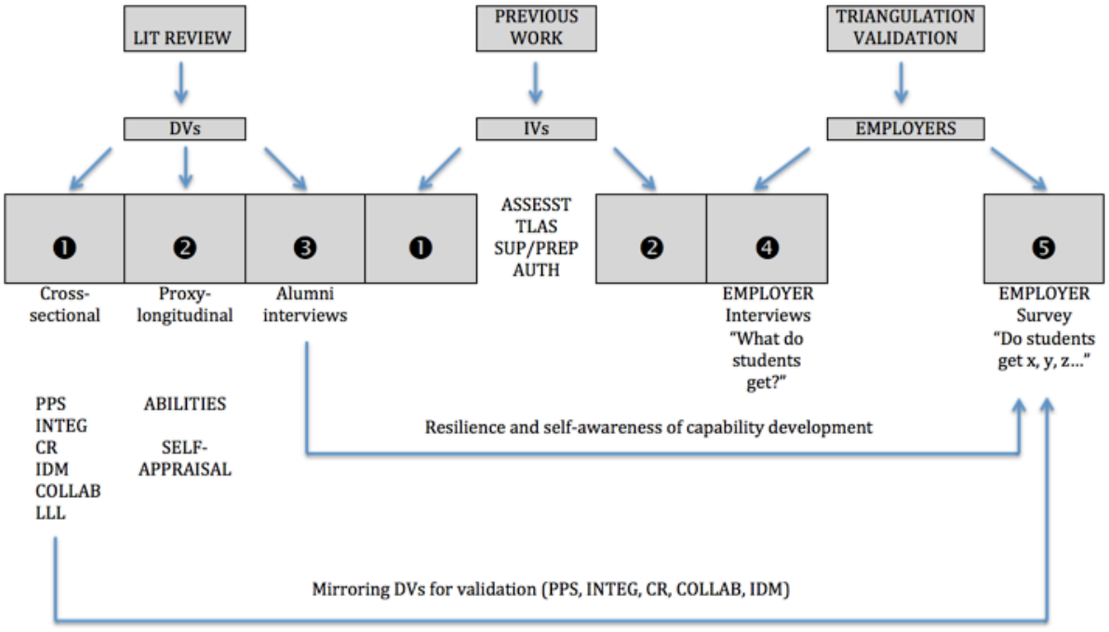


Figure 1 Overview of the five studies

PPS=Professional practice and standards; INTEG= Integration; CR=Commencement-readiness; IDM=informed decision-making in context; COLLAB=Collaboration; LLL=Lifelong learning; ASSESS=Assessment focused on integrative learning; TLAs=Teaching and learning activities in situ focused on integrative learning; SUP/PREP=Induction, supervision, and debrief; AUTH=Authenticity.

(Ferns, Smith & Russell; 2014. P.9)

## 2.2 The project team

Due to the multifarious nature of WIL, a complex research design, and discipline, institutional and student variation, a large and diverse project team was warranted to ensure integrity of the research outcomes. The project team comprised representatives from three lead universities: Griffith University, Curtin University and RMIT. The lead team were responsible for executing the research plan; developing and implementing research methodology; reporting research outcomes; and consulting with partner university representatives and the Reference Group (see p. 4 for a list of the Reference Group). In addition to the lead team, there were eleven partner institutions (see p. 3 for a list of partner institutions) invited to participate in the research. Partner institutional representatives were central to accessing robust data sources and implementing a rigorous research design. The combined expertise and experience with WIL of both project leads and partner representatives contributed to collective decision making and collaborative teamwork. This approach culminated in an informed and consolidated approach to research methods and data collection. The lead team met (via teleconference) fortnightly with partner university representatives joining the meeting on a monthly basis. The regular meetings were important for building a cohesive team with shared ambitions and establishing a strong collective commitment to the research. The representatives from the partner universities were consulted through all stages of the research with their input informing how the project progressed. Data samples were collected from each institution with the support of the representatives and their contacts. The valuable contribution from partner university representatives was integral to the successful outcomes of this research.

## 2.3 Issues and challenges

Issues and challenges associated with the project fit broadly into two categories - personnel and methodology.

### 2.3.1 Personnel issues and challenges

This was an ambitious and complex project. The complexity arose out of the need to conduct several studies in order to triangulate results for enhanced validity of the findings. Further complexity was encountered as a result of the large team of collaborating partners necessary to gather sufficient data for the survey studies. There were three co-lead institutions (Griffith, Curtin and RMIT) and eleven collaborating partner institutions. It is worth noting that this large group of experts worked well together and any differences of opinion were worked through and resolved. The lead team is grateful to the collaborating partners for their professionalism and their ability and willingness to put the needs of the larger project before personal preferences and views.

In addition to the challenges associated with managing a large and diverse group of researchers, staffing changes at the participating institutions impacted on the progress of the project. In spite of these challenges and due to the diligence and commitment of the team members, the project was brought to fruition with only minor delays to the deadline.

### 2.3.2 Methodological issues and challenges

Self-reported data have known limitations, the most obvious of which might be an expectation of self-interest bias that would drive scores up because of individuals' tendency to overstate abilities. To counteract this, a suite of studies was devised to facilitate cross-validation. Thus, the employer studies and the alumni interviews were used in part to confirm the results obtained from the broad student surveys.

A further issue with self-reported data is evident when the aim is to measure change over a period of time. This study aimed to quantify change over time, especially focused on the time between the start and the end of a

placement experience. One approach to ascertaining change over time is the repeated measures approach, in which a measurement is taken at the start of an experience and then the same measurement is taken after the experience. The problem is that self-appraisals become affected by response-shift bias. This occurs when respondents' rate their skills as high prior to an experience, and rate themselves lower after the experience. One of two outcomes may occur:

1. Prior to the experience, the respondent may perceive that they are particularly poor at a particular skill. Following the experience they realise they were more competent than their original assessment, rendering the initial rating invalid.
2. Alternatively, a respondent may initially perceive their skills as highly competent but following the experience realise that the earlier rating was inaccurately high.

To counteract this, the project adopted a retrospective approach to the question of change over time by creating the proxy-longitudinal study in which students at the end of a placement experience rate themselves "now", "at the start of the placement", and "at the start of their studies" giving three time points (three repeated measures) not subject to response-shift bias.

A final observation about the use of self-reported data in studies where comparison of two groups is needed is the well-known and well-validated effect called the Dunning-Kruger effect (Kruger & Dunning, 1999; Simons, 2013). This challenge's the validity of inferences made in comparative studies. The Dunning-Kruger effect highlights the problem of not knowing what you don't know. In this project students with no prior WIL placement experience tended to over-estimate their employment-readiness abilities. This was detected and counter-acted by analysing data by reference to placement quality and not just by reference to its presence or absence. Students with no prior placement experience rated themselves higher than those with a prior low-quality placement, and about the same as those with a prior sub-median quality placement experience.

# Chapter 3 Cross-sectional study

## 3.1 Introduction

The purposes of this study were to

1. identify the range of employability-relevant curriculum experiences to which students were exposed and compare their relative impacts on employability
2. validate measures of work-integrated learning and employability.

The latter of these validation goals led to the development of a multi-dimensional measurement model for employability.

This study also established (proxy) longitudinal data on the development of employability from different year cohorts across a variety of degree programs, though these results were used as controls for various other analyses conducted in the study. Thus, year-level was used as a proxy to support analysis of the impact of WIL on work-readiness after controlling for relevant variables.

## 3.2 Method

Participants were invited to complete a 45 item online survey. The questions comprised a mix of demographic items and research measures. The research measures utilised a five-point scale. Research items focused on curriculum inputs (quality of placement measures, simulation measures, and career development learning measures) and employability outcomes. The survey instrument is in Appendix B.

### 3.2.1 Sample

There were 3336 student responses from nine universities available for analyses. Of the sample, 68% were female, 74% were studying in 'on-campus' mode, 77% were full-time, and 77% were enrolled in undergraduate programs. The distribution of cases among the age categories is shown Table 2. The distribution of cases by commencement years is shown in Table 3.

**Table 2 Age category distribution**

| Category | Frequency | Per cent |
|---|---|---|
| < 20 years | 930 | 27.9 |
| 21-30 years | 1604 | 48.1 |
| 31-40 years | 444 | 13.3 |
| 41-50 years | 235 | 7.0 |
| 51-60 years | 101 | 3.0 |
| > 60 years | 22 | 0.7 |
| Total | 3336 | 100 |

Table 3 Year commenced study distribution

| Year commenced | Frequency | Per cent |
|---|---|---|
| pre-2008 | 103 | 3.1 |
| 2008 | 80 | 2.4 |
| 2009 | 216 | 6.5 |
| 2010 | 426 | 12.9 |
| 2011 | 655 | 19.8 |
| 2012 | 809 | 24.5 |
| 2013 | 1014 | 30.7 |
| Total | 3303 | 100 |

Of the total sample, 1003 students were in the final year of their studies and 909 were first-year students at the time of the survey (based on commencement year of 2013). Of the 1014 students who commenced in 2013, 105 were also in the final year of their studies (one-year programs).

Where discipline could be determined unambiguously (N=3088), cases were coded using the Australian Standard Classification of Education (ASCED) codes used by government. These codes are six-digits at the most granular level, and represent broad fields of education (FOE) at the two-digit level. The distribution across the broad fields of study is shown in Table 4.

Table 4 Distribution across two-digit ASCED codes for discipline (FOE)

| Discipline (2-digit ASCED) | Frequency | Per cent |
|---|---|---|
| Natural & Physical Sciences | 247 | 8 |
| IT | 89 | 2.9 |
| Engineering | 156 | 5.1 |
| Architecture & Building | 63 | 2 |
| Agriculture & Environment | 43 | 1.4 |
| Health | 537 | 17.4 |
| Education | 346 | 11.2 |
| Business | 626 | 20.3 |
| Society & Culture | 771 | 25 |
| Arts | 210 | 6.8 |
| Total | 3088 | 100 |

### 3.2.2 Instrument development

An online survey was developed for the purposes of this study. Extensive consultation with the project team was undertaken and a broad range of contemporary literature reviewed to inform the survey development. The 45 item survey used a Likert five-point scale to collect responses on the quality of the WIL experience and employability outcomes. Information such as gender, age group, mode of study, and name of qualification was also included. Results allowed the estimation of the differential impact of WIL on a range of skill and knowledge areas and generated a multi-dimensional framework for measuring employment-readiness. The survey was administered to participants from first through final year studies in those partner universities at which the relevant institutional executive manager approved institutional participation in the study. In a broadcast email sent by the participating

universities, students were invited to contribute information about their work-readiness and related aspects of their studies. There were 3336 responses from the thirteen participating universities.

## 3.3 Data analysis

### 3.3.1 Exploratory factor analysis

An exploratory factor analysis was conducted using the principal axis factoring procedure in IBM/SPSS (v.21). An iterative procedure was then used to remove items on the basis of three criteria: cross-loadings with multiple factors (>.4), low factor loadings (<.32), and theoretically incoherent combinations of item-meaning and apparent factor meaning.

Because factor analysis cannot adequately take into account this overlapping variance, Structural Equation Modelling (SEM), which takes into account the correlations among the factors, was then used to further refine latent variables and their associated items. From this exploratory work a factorial solution that had a good fit to the data when tested in a confirmatory framework using structural equation modelling (IBM/AMOS v.21) was derived.

### 3.3.2 Independent variables – curriculum dimensions

Curriculum dimensions (see page 6) operated as independent variables for a variety of planned analyses. These measures included authenticity, supervision and preparation, debriefing after the WIL experience and the alignment of activities and assessment with integrative learning. Simulation and Career Development Learning (CDL) items were also created by the project partners for this study.

Table 5 contains survey items for the independent variables and the associated scale names used in the subsequent analyses.

**Table 5 Independent variable scales and associated items**

| Scale | Item | Loading |
|---|---|---|
| Authenticity | 2.4.1. undertake work relevant to the learning outcomes? | 0.83 |
| | 2.4.2. undertake work relevant to the goals of the organisation you were placed in? | 0.81 |
| | 2.4.3. contribute worthwhile outcomes for the organisation (such as a product, or change in practice or policy)? | 0.53 |
| | 2.4.9. work with responsibility or autonomy? | 0.63 |
| Integration in TLAs | 2.4.4. apply theories you had learned in class? | 0.85 |
| | 2.4.5. apply or develop skills you had learned in class? | 0.86 |
| | 2.4.6. critically evaluate theories you had learned in class? | 0.82 |
| | 2.4.7. critically evaluate workplace practices you observed or engaged in? | 0.74 |
| | 2.4.8. reflect on applying your discipline knowledge in the workplace? | 0.78 |
| Assessment aligned with integrative learning | 2.5.1. Your use of theory to justify practice decisions | 0.70 |
| | 2.5.2. Your professional practice competencies / skills | 0.70 |
| | 2.5.3. Your reflections on the experience | 0.85 |
| | 2.5.4. Your reflections on the practices you witnessed in the workplace | 0.88 |
| | 2.5.5. Your reflections on the applicability of discipline knowledge to practice | 0.90 |
| Supervision & preparation | 2.5.6. I had regular contact with an academic supervisor from the university in order to discuss my learning whilst on placement | 0.75 |
| | 2.5.7. I had regular contact with a workplace supervisor from the placement organisation in order to discuss my learning whilst on placement | 0.47 |
| | 2.5.8. I had a preparation program or resources that helped me prepare for the placement psychologically / emotionally | 0.69 |
| | 2.5.9. I had a preparation program or resources that helped me prepare for the placement to help me maximise my learning whilst on placement | 0.69 |
| | 2.5.10. I had time with my academic supervisor after the placement to reflect on my learning from placement | 0.94 |
| | 2.5.11. I had time with my academic supervisor after the placement to discuss my experiences on placement | 0.94 |
| Simulation | 2.6.1 Simulation quantity | 0.89 |
| | 2.6.2 Simulation quality | 0.92 |
| Career-development learning | 2.7.1. Activities to give you information about the industry, standards and expectations employers have of new graduates., etc., (e.g.talks by industry visitors in class time, field trips to relevant workplaces, and so on.) | 0.63 |
| | 2.7.2. Activities to help you apply for jobs (e.g. job application writing information or practice sessions; talks by experts in careers guidance; job interview practice sessions, and so on). | 0.90 |
| | 2.7.3. Services to help you plan your career or apply for jobs (e.g. individual consultations with student advisors, resume writing advice or resume writing assistance through resources such as documents, or videos on the web, etc.). | 0.87 |

### 3.3.3 Dependent variables: employability dimensions

Dependent variables are the employability dimensions (see page 6) which were predicted to be affected by curriculum factors. Employability dimensions were derived through an iterative process in four stages:

1. A literature review that examined current theorisation, conceptualisation, operationalisation and measurement of employment-readiness.
2. A forum involving representatives of the partner and lead universities at which decisions were made about which dimensions should be measured.
3. Feedback from the Reference Group on the 'short-listed' dimensions agreed on at the forum.
4. Final discussion and selection of the dimensions and associated items by the lead team.

Table 6 contains survey items for the dependent variables & the associated scale names used in the subsequent analyses.

**Table 6 Dependent variable scales (work-readiness) included in the SEM measurement model (FL=factor loading)**

| Scale (DVs) | Item | Item text | FL |
|---|---|---|---|
| COLLABORATION | WR_1.9 | work towards a compromise between opposing views when is it the best thing for the enterprise / organisation. | 0.56 |
| | WR_1.10 | make sure everyone feels heard in group discussions. | 0.60 |
| | WR_1.11 | interact appropriately with people from different levels of management / leadership / seniority in a workplace. | 0.69 |
| | WR_1.12 | recognise the "politics" of a workplace environment. | 0.55 |
| | WR_1.13 | interact effectively and respectfully with people from other cultures. | 0.73 |
| | WR_1.14 | learn from and collaborate with people representing diverse backgrounds or viewpoints. | 0.74 |
| | WR_1.31 | listen empathetically, sympathetically and with compassion to colleagues in the workplace. | 0.57 |
| INFORMED DECISION MAKING | WR_1.5 | appraise the quality of information I obtain e.g. from the web, from books or from other people. | 0.61 |
| | WR_1.6 | use information and my professional or workplace knowledge to come to reasonable decisions and then act on these. | 0.75 |
| | WR_1.7 | weigh up risks, evaluate alternatives, make predictions from data and apply evaluation criteria to options. | 0.70 |
| | WR_1.8 | collect, analyse and organise information. | 0.64 |
| COMMENCEMENT-READINESS | WR_1.1 | effectively seek work relevant to my studies. | 0.67 |
| | WR_1.2 | present myself effectively in selection interviews and processes. | 0.59 |
| | WR_1.3 | evaluate how well my skills and preferences "fit" different employment opportunities I might consider in the future | 0.63 |
| | WR_1.43 | commence a job in my field and be immediately effective as a worker / new professional. | 0.66 |
| | WR_1.44 | overall work readiness confidence | 0.69 |
| | WR_1.45 | able to obtain work relevant to studies | 0.69 |
| LIFELONG LEARNING | WR_1.36 | identify the usefulness and value of continuing to learn in order to improve work or professional practice. | 0.69 |
| | WR_1.37 | identify the knowledge I lack / need to improve to be effective in the workplace. | 0.73 |
| | WR_1.38 | identify the skills I lack / need to improve to be effective in the workplace. | 0.72 |
| | WR_1.40 | be prepared to invest time and effort in learning new skills. | 0.66 |
| | WR_1.41 | understand the theories and principles in my discipline | 0.69 |
| | WR_1.42 | understand the practices and methods used in my discipline | 0.71 |
| PROFESSIONAL PRACTICE & STANDARDS | WR_1.17 | take responsibility and act alone with autonomy appropriate to my role and level of training. | 0.65 |
| | WR_1.18 | seek out opportunities for further learning to develop my workplace or professional skills and/or knowledge. | 0.62 |
| | WR_1.19 | recognise ethical practice in the workplace. | 0.70 |
| | WR_1.20 | identify the standards of performance or practice expected in the workplace / my profession. | 0.73 |
| | WR_1.21 | develop a personal code of values and ethics. | 0.67 |
| | WR_1.22 | interpret and follow workplace procedures. | 0.69 |
| | WR_1.29 | seek clarification when I do not understand an instruction. | 0.61 |
| | WR_1.32 | effectively manage multiple and different priorities to achieve a range of workplace or professional goals | 0.60 |
| | WR_1.34 | take responsibility and be accountable for my workplace or professional practice, actions and decisions. | 0.68 |
| INTEGRATION OF THEORY & PRACTICE | WR_1.25 | judge the applicability of the knowledge gained in my studies to the workplace | 0.77 |
| | WR_1.26 | apply knowledge and skills gained in my studies to the workplace. | 0.75 |
| | WR_1.39 | recognise and value the role of theoretical ideas in work or professional contexts. | 0.62 |

*Note*. From "Conceptualising and measuring employability – lessons from a national OLT project," by C. Smith, S. Ferns, and L. Russell, 2014, ACEN Conference, Gold Coast, In Press.

## 3.4 Results

Significant positive relationships were observed between curriculum dimensions and the dimensions of employability in all cases with the exception of assessments focused on integrative learning.

Having established that each of these curriculum dimensions (excluding assessment) makes a unique contribution to the outcomes, a composite placement quality (PQ) variable was created. This was a continuous variable and was created by summing the scores of each individual item on each of the quality variables. The quartiles of this distribution (percentiles 25, 50, 75) were used to create demarcation points in the distribution. This process resulted in the formation of a new categorical variable for quality of placement in 4 bands being low = 0–25P, sub-median 25P–50P, supra-median 50P–75P, and high >75P. This variable was called PQ4. It should be noted that the exclusion of assessment from this calculation will have had very little effect on the quality scores because of the mediation of its relationship with the dependent variables (dimensions of employability). PQ4 was used to partition the 'had placement' group of students into four quality-levels.

It should be noted that the assessment measures were not included in the calculation of the PQ4 quality variable, not because assessment is not important, but because the assessment items and the teaching and learning items both measured the same idea – alignment of assessment and activities in situ with integrative learning. Only one is needed to measure the contribution to quality.

Figure 2 shows that the relationship between commencement-readiness and the levels of placement quality which steadily inclines. This validates the finding that as quality increases, outcomes improve.

The Dunning-Kruger effect (see page 25) can be readily seen when the placement quality variable (PQ4) is used as a grouping variable and the results for students grouped according to the quality of their placement experience is compared with those students with *no placement* experience. In Figure 2 the group mean for the *no placement* group lies between the means for the *low quality placement* group and that of the *sub-median quality placement* group.

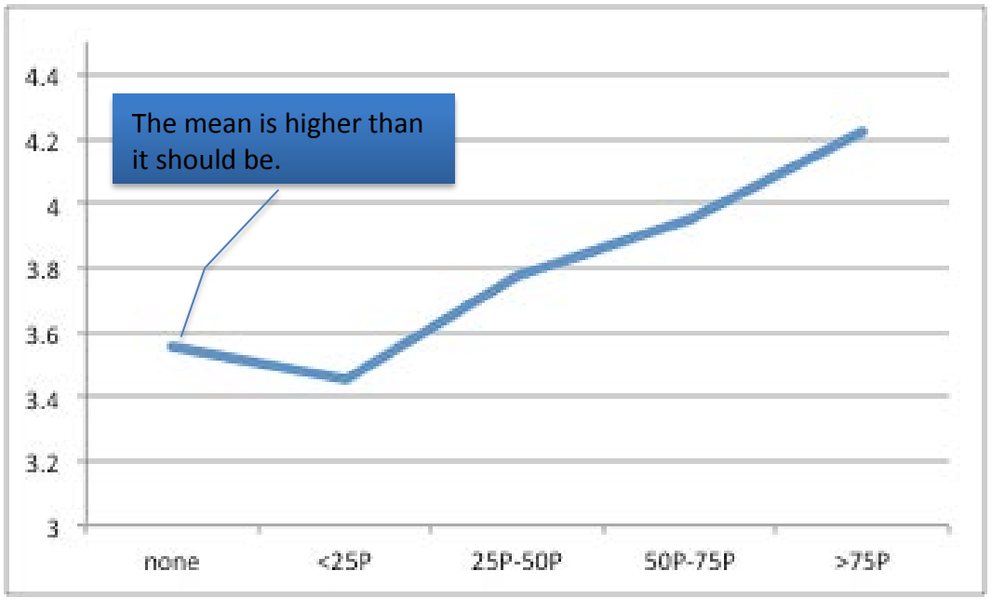


**Figure 2: Means on the commencement-readiness variable for each of the placement quality groups and the Dunning-Kruger effect in action**

This pattern, in which the scores for the *no placement* group were higher than those of the *low quality placement* group, was consistent across all the employability dimensions. This does not imply that having a low-quality placement is even worse than having nothing because this difference is most likely to be the result of students in the *no placement* group over-estimating their abilities.

For all variables the impact of placement quality is consistent and significant with higher quality placements producing perceptions by students of superior ability than lower quality placements.

### 3.4.1 Role of simulation versus placement

Questions in the survey were structured to allow a comparison of the relative contribution of simulation in comparison with that of placement in developing employability skills. Students were grouped according to the following WIL experiences in their studies:

- simulations only
- placements only
- neither simulation nor placement
- both simulation and placement

Taking into account the fact that placement quality was the most important determinant of the development of employability; the placement only group were also coded according to the quality of their placement experiences.

People in the simulation only condition were compared with people in six other conditions – neither simulation nor placement, four qualities of placement, and both simulation and placement (all placement qualities pooled). The X marks the conditions in which simulation only students scored means significantly lower than those in each of the other conditions listed. The results are reported in Table 7 for each of the employability dimensions.

**Table 7 Comparison of simulation only, placement only, both and neither**

| "Simulation only" is significantly lower than → | Neither | ====== Placement quality ====== Low | Sub-median | Supra-median | Hi | Both |
|---|---|---|---|---|---|---|
| Commencement-readiness | | | X | X | X | X |
| Informed decision making | | | | | X | |
| Integration | | | | X | X | X |
| Lifelong learning | | | | X | X | X |
| Collaboration | | | | | X | |
| Professional practice and standards | | | | X | X | |
| Significance is at p<.05 adjusted for multiple comparisons with unequal variances in the groups (Dunnetts's T3) | | | | | | |

The results show that for all employability dimensions, a high-quality placement is better than simulation only, and for most variables, above average placement quality is better than simulation only and for the commencement-readiness dimension even below-average placements are better than simulation only.

An important caveat to bear in mind with these results is that simulations are not all the same quality. Aviation

simulations are extremely high-quality and highly authentic, but the authenticity of simulations vary considerably. In the present study, the quality of simulations was measured by reference to students' views of how closely the simulation matched reality. For those who had no previous placement or work-experience, answers may have been, at best, a guess. Thus, simulation quality should be an important focus of future investigations.

### 3.4.2 Regression analysis – determining the unique contributions of placement, simulation and CDL to employability

A series of hierarchical regression analyses was run to ascertain the unique contribution made by each of the curriculum dimensions after controlling for age, gender, work experience and progression through the degree program. To isolate the impacts of the curriculum dimensions these control variables were included in a regression analysis alongside the curriculum dimensions. In this way the unique contributions of the curriculum dimensions were determined after taking account of the association between the employability dimensions and the control variables.

The results are summarised in Table 8 which shows the beta coefficients recorded at the intersection of each employability dimension with each curriculum dimension. Beta coefficients represent the line of regression indicative of the relationship between the two variables in a standardised way that allows them to be compared with each other.

**Table 8 Regression modelling showing significant beta coefficients and the percentage of the variance in the employability dimensions associated with the curriculum dimensions**

| | CR | IDM | INTEG | LLL | COLLAB | PPS |
|---|---|---|---|---|---|---|
| AGE | | | 0.09 | 0.06 | 0.05 | 0.08 |
| SEX | | | 0.07 | 0.13 | 0.15 | 0.18 |
| WORK EXP | 0.17 | 0.19 | 0.11 | 0.13 | 0.09 | 0.16 |
| YEAR COMMENCED | | | | | | |
| CDL[1] | 0.22 | | 0.09 | | | |
| PQ4[2] | 0.21 | 0.12 | 0.16 | 0.15 | 0.10 | 0.12 |
| SIM[3] | 0.10 | 0.09 | 0.13 | 0.13 | 0.08 | 0.09 |
| Variance explained (%) | 16.7 | 7.1 | 9.9 | 9.0 | 5.9 | 10.0 |

[1]A variable that captures both the presence of CDL and (where it is present) the quality.
[2]A variable that captures both the presence of placement and (where it is present) the quality.
[3]A variable that captures both the presence of simulation and (where it is present) the quality.
CR=work-readiness; IDM=informed decision-making; INTEG=integrative learning; COLLAB=collaboration; PPS=professional practice and standards.
N for this analysis is 2281. All reported beta coefficients significant at p<.05

These results show that for all employability dimensions work experience makes a unique and positive contribution to learning outcomes, but when as a control (along with age, gender and year of commencement) both placement and simulation make a unique significant contribution to the outcomes.

### 3.4.3 Empirically-grounded guidelines for national standards for work-readiness

The empirical data show the employment dimensions in which discipline performance is relatively stronger or weaker than the national mean. Table 9 shows the mean performance of disciplines on the six key employability dimensions. Underlining represents a mean that is significantly lower than the national mean and **bold** identifies a mean that is significantly higher than the national mean.

Table 9 reveals some interesting observations. The first is that some disciplines including engineering, health and education, perform above the average on two or more of the employability dimensions. In these disciplines, placements have been used for many years as a routine component of the learning design. In business disciplines, which tend to score below average on several employability variables, placements are not a common component

of curriculum design. Equally interesting is the case of society and culture where the students rate their abilities in Professional Practice and Standards (PPS), Informed Decision Making (IDM) and Collaboration (COLLAB) higher than the mean, yet their sense of general preparedness for employment (Commencement Readiness – CR) is lower than the national mean.

**Table 9 Means, Ns and standard deviations for two-digit ASCED coded disciplines by six employability variables**

| two Digit Degree Code | | CR | IDM | INTEG | LLL | COLLAB | PPS |
|---|---|---|---|---|---|---|---|
| Natural & Physical Sciences | MEAN | 3.5 | 4.0 | 4.0 | 4.1 | 4.1 | 4.2 |
| | N | 247 | 247 | 247 | 247 | 247 | 247 |
| | SD | 0.8 | 0.6 | 0.7 | 0.7 | 0.6 | 0.6 |
| Information Technology | MEAN | 3.6 | 4.0 | 4.0 | 4.1 | 3.9 | 4.0 |
| | N | 89 | 89 | 89 | 89 | 89 | 89 |
| | SD | 0.8 | 0.6 | 0.7 | 0.7 | 0.7 | 0.6 |
| Engineering | MEAN | **3.8** | **4.1** | 4.1 | 4.2 | 4.1 | 4.2 |
| | N | 156 | 156 | 156 | 156 | 156 | 156 |
| | SD | 0.7 | 0.5 | 0.6 | 0.5 | 0.5 | 0.4 |
| Architecture & Building | MEAN | 3.6 | 4.1 | 3.9 | 4.1 | 4.1 | 4.0 |
| | N | 63 | 63 | 63 | 63 | 63 | 63 |
| | SD | 0.7 | 0.6 | 0.6 | 0.6 | 0.6 | 0.6 |
| Agriculture & Environment | MEAN | 3.5 | 4.1 | 4.0 | 4.3 | 4.2 | 4.4 |
| | N | 43 | 43 | 43 | 43 | 43 | 43 |
| | SD | 0.8 | 0.6 | 0.6 | 0.5 | 0.4 | 0.4 |
| Health | MEAN | 3.7 | 4.1 | **4.1** | **4.3** | 4.2 | 4.3 |
| | N | 537 | 537 | 537 | 537 | 537 | 537 |
| | SD | 0.7 | 0.6 | 0.6 | 0.6 | 0.5 | 0.5 |
| Education | MEAN | **3.8** | **4.1** | **4.1** | **4.3** | **4.3** | **4.4** |
| | N | 346 | 346 | 346 | 346 | 346 | 346 |
| | SD | 0.7 | 0.6 | 0.6 | 0.6 | 0.5 | 0.5 |
| Business | MEAN | **3.7** | 4.0 | 4.0 | 4.1 | 4.1 | 4.2 |
| | N | 626 | 626 | 626 | 626 | 626 | 626 |
| | SD | 0.7 | 0.6 | 0.6 | 0.6 | 0.6 | 0.5 |
| Society & Culture | MEAN | 3.6 | **4.1** | 4.0 | 4.2 | **4.2** | **4.3** |
| | N | 771 | 771 | 771 | 771 | 771 | 771 |
| | SD | 0.7 | 0.6 | 0.7 | 0.5 | 0.5 | 0.5 |
| Arts | MEAN | 3.5 | 4.0 | 3.9 | 4.2 | 4.2 | 4.2 |
| | N | 210 | 210 | 210 | 210 | 210 | 210 |
| | SD | 0.7 | 0.6 | 0.7 | 0.5 | 0.5 | 0.5 |
| Total | MEAN | 3.7 | 4.1 | 4.0 | 4.2 | 4.2 | 4.2 |
| | N | 3282 | 3282 | 3282 | 3282 | 3282 | 3282 |
| | SD | 0.7 | 0.6 | 0.6 | 0.6 | 0.5 | 0.5 |

Underlined = lower than national mean; **Bold** = higher than national man (one-sample t-test; p<.05))

## 3.5 Conclusion

Placement has a significant effect on all outcomes, exceeds the impact of simulation alone, and makes a unique contribution to employability outcomes after controlling for the impact of other curriculum dimensions and other variables (demographics). The proposed dimensions of employability form a coherent, multi-dimensional framework for the measurement of employment-readiness.

**Recommendations**

1. WIL opportunities should be built into curricula to enhance students' employability.
2. An evaluation framework outlining quality assurance standards for high quality WIL should be developed.
3. Simulated work experience should be the subject of future research to determine the characteristics of a quality simulated WIL experience that impacts on the work-readiness of students.
4. The curriculum dimensions of quality WIL such as authenticity, preparation, supervision, integration of theory and practice aligned to learning outcomes and assessment should form the basis of curriculum design.

# Chapter 4 Proxy-longitudinal study

## 4.1 Introduction

This study aimed to establish a more direct comparison of students who did and did not have a placement experience within a discipline area. Students in the same discipline at different institutions were paired up where some had a placement opportunity and others did not. This proved impossible in many key discipline areas in which, due to accreditation requirements and developmental histories, there were no instances of programs in which the students did not undertake a placement or clinical experience. Questions separated the respondents into two groups – those who had a prior placement experience and those who had no prior placement experience. These results were initially reported at the 2013 HERDSA conference in Auckland (Smith, Ferns & Russell, 2013).

## 4.2 Method

Employability was operationalised with 18 self-reported items that asked participants to indicate their level of ability in a range of skill and knowledge areas at three time-points: start of program of study (Time 1), start of current semester (Time 2), and now (Time 3). The skill and knowledge areas were those ascertained in the conceptual phase of the research project through extensive consultation and review of the literature. The survey instrument is in Appendix C.

### 4.2.1 Sample

A total of 1499 respondents from across nine institutions participated in this study. Sixty-five per cent of the sample was female; the majority were under 30 years of age (see Figure 3). Eighty-nine percent were engaged in on-campus study, 87% were studying full-time, 72% were working as well as studying, and 91% were studying undergraduate qualifications. Figure 4 shows that 52% of the sample had a family member with bachelor-level qualification or above and 45% were first-in-family to study at university.

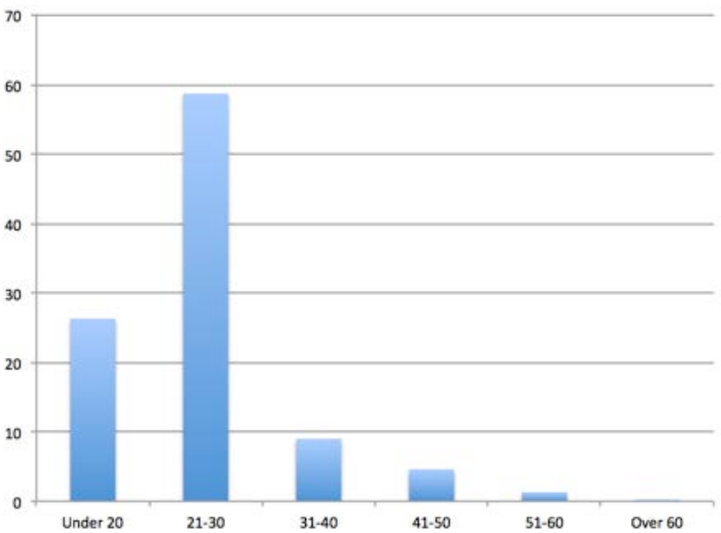


Figure 3 Age distribution

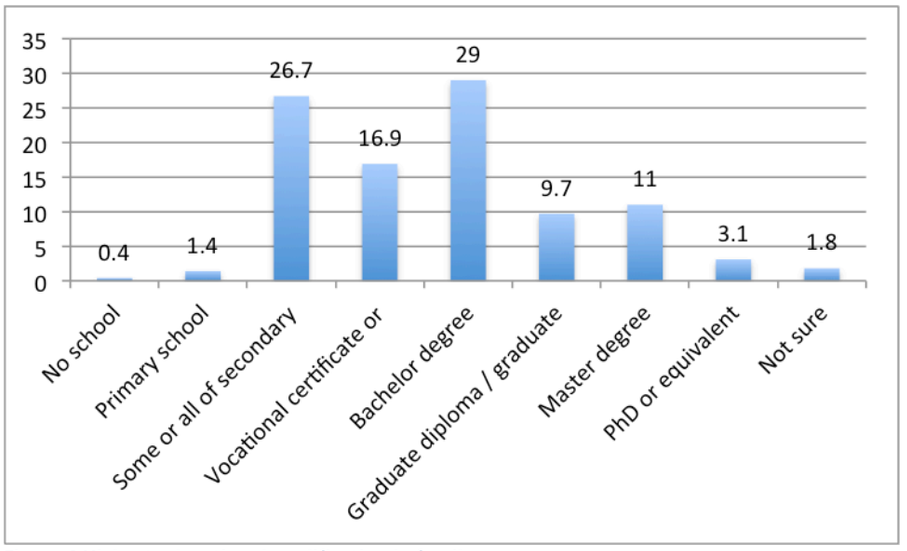


Figure 4 Highest educational qualification in family

Figure 5 highlights the diversity of discipline areas which survey respondents were studying and figure 6 shows the spread of the commencement year for the sample.

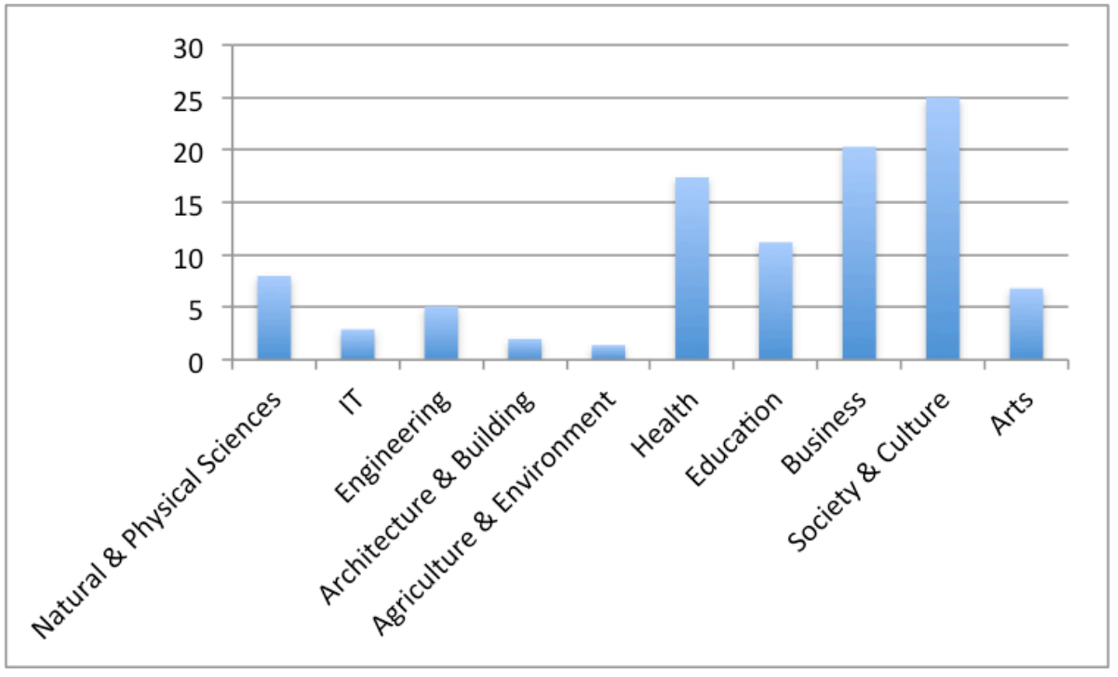


Figure 5 Distribution across the discipline / fields of education

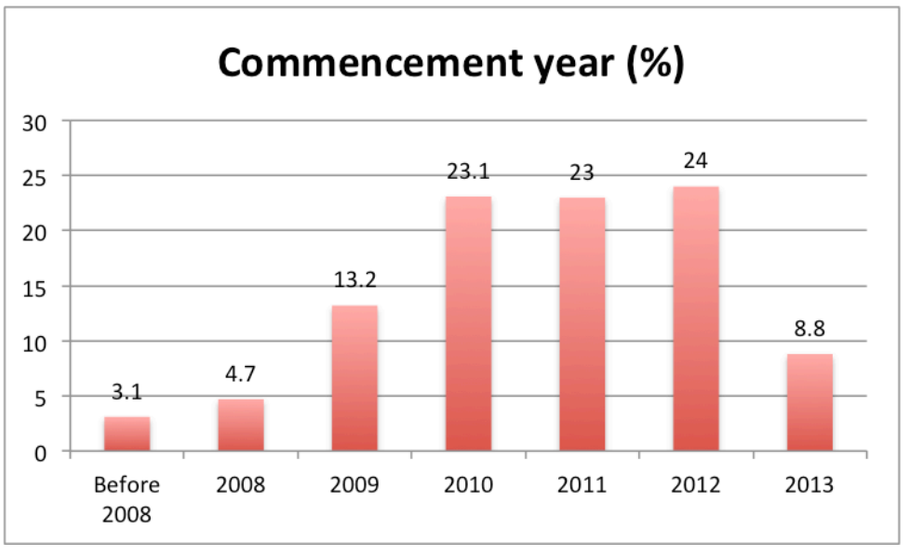


Figure 6 Commencement year

### 4.2.2 Instrument development

The 18 employability items were generated by the following process for the cross-sectional study (Chapter 3).

1. A literature review that examined current theorisation, conceptualisation, operationalisation and measurement of employment-readiness.
2. A forum involving representatives of the partner and lead universities at which decisions were made about which dimensions should be measured.
3. Feedback from the Reference Group on the 'short-listed' dimensions agreed on at the forum.
4. Final discussion and selection of the dimensions and associated items by the lead team.

Along with the 18 employability items (measured three times) there were demographic and attribution items. The survey used a seven-point Likert scale to collect responses and included two open-ended questions *What were the best aspects of your placement?* and *How could your placement experience have been improved?*

There are two employability dimensions in this study: *abilities* and *commencement readiness*.

*Abilities* This dimension is about a range of work skills (from communication and ethical practice to application of knowledge to practice).

*Commencement-readiness (CR*) The commencement-readiness subscale contains the generic readiness and confidence-to-start-work items.

There were two curriculum dimensions measured in this study: Learning activities focused on integrative learning.

*Learning activities focused on integration of theory and practice (INTEG-TLAs)* This scale measures the degree to which WIL activities focus on the application of knowledge *in situ*, or the theory-practice nexus.

*Authenticity (AUTH)* The authenticity of the placement experience is captured in this short scale.

Other variables were included for validation and benchmarking purposes. These included:

*Generic Skills Scale (GSS*)* This is a hybrid of the generic skills scale of the Course Experience Questionnaire (McInnis, Griffin, James, & Coates, 2001). It contains three of that scale's items, plus one other generated through the team's deliberations and selection processes and derived from Oliver's Graduate Employability Indicators (GEI) items.

*Australian University Survey of Student Experience (AUSSE) WIL sub-scale* This was included to create a benchmarking option. This scale is deployed in the AUSSE and measures the general quantity of application or high-authenticity components in the student experience.

*Collaboration (COLLAB)* This is a collection of four items. Three items were derived from Oliver's (2011) GEI instrument; the fourth (ability to lead or influence people) was added to measure emergent leadership abilities.

The use of three time points for the employability measures allowed proxy-longitudinal analysis of the change in responses over time, sometimes referred to as a *repeated measures approach* because the same measures are used repeatedly on the same respondents. There are recognised problems in repeated-measures designs with a phenomenon called response-shift bias (see page 24). The Dunning-Kruger effect (see page 25) where novices over-estimate their prowess was also evident in the data.

## 4.3 Data analysis and results

Factor analysis is a way to reduce the number of items by a search for underlying latent factors with which clusters of items are correlated. The responses to the 18 work-readiness items at time 1 were factor analysed, along with the other research measures in the instrument excluding demographics, using principle axis factoring (PAF) with oblique rotation in IBM/SPSS (v.21). An iterative procedure was used to remove items on the basis of three criteria: cross-loadings with multiple factors (>4), low factor loadings (<32), and theoretically incoherent combinations of item-meaning and apparent factor meaning.

Once the factor analysis was complete, scale scores were calculated for each of the variables based on the simple mean across the items of each scale for each person. Item 3.9 (worked with appropriate autonomy and responsibility) which cross-loaded equally on both the integration-focused-TLAs scale and the authenticity-of-placement scale, was included in the latter for theoretical reasons; it was considered more associated with the notion of an authentic placement where students work with appropriate autonomy. Factor analysis results are reported in Table 10.

The two scales related to placement curriculum experiences (TLAs focused on integration and authenticity) were then averaged into a continuous variable to represent placement quality. After that the 25$^{th}$, 50$^{th}$, and 75$^{th}$ percentiles of the distribution of the placement quality variable were used to create a categorical variable with five categories. One category was for no placement and the other four represented increasing placement quality (1=low quality, 2=sub-median; 3=supra-median and 4=high quality). This categorical variable was then used in a series of analyses called PQ4.

Scale scores based on the factor analysis were calculated for the Time 1, Time 2 and Time 3 variables. Thus items eight through seventeen defined *abilities* at all three time points, and items one through seven plus 18 similarly

defined *commencement-readiness* at all three time points.

The AUSSE WIL items were included for national comparative purposes and as an external criterion to validate the placement quality measure. Their inclusion in the factor analysis was to establish the basic behaviour of the instrument, especially the independence of measures. The GSS and Collaboration scales were not measured at all three time points. This was a compromise decision due to limited survey space and a complex survey. These items were also included for benchmarking and were included in analyses reported below (see Table 10).

**Table 10 Factor analysis of scales in the instrument**

| | Abilities | INTEG-TLAS | GSS[a] | AUSSE | CR | COLLAB | AUTH |
|---|---|---|---|---|---|---|---|
| **Time 3**: 5.12.3 interpret and follow workplace procedures. | 0.80 | | | | | | |
| **Time 3**: 5.13.3 recognise the "politics" of a workplace environment. | 0.73 | | | | | | |
| **Time 3**: 5.14.3 develop your work-related skills and knowledge. | 0.69 | | | | | | |
| **Time 3**: 5.8.3 recognise ethical practice in the workplace. | 0.67 | | | | | | |
| **Time 3**: 5.15.3 interact appropriately with people from different levels of management / leadership / seniority in a workplace. | 0.66 | | | | | | |
| **Time 3**: 5.9.3 recognise general ethical and social issues beyond your discipline. | 0.64 | | | | | | |
| **Time 3**: 5.16.3 understand the theories and principles in your discipline. | 0.63 | | | | | | |
| **Time 3**: 5.17.3 understand the practices and methods used in your discipline. | 0.61 | | | | | | |
| **Time 3**: 5.11.3 judge the applicability of the knowledge gained in your studies to the workplace. | 0.51 | | | | | | |
| **Time 3**: 5.10.3 apply knowledge and skills gained in your studies to the workplace. | 0.49 | | | | | | |
| 3.4 apply theories you had learned in class? | | 0.88 | | | | | |
| 3.6 critically evaluate theories you had learned in class? | | 0.80 | | | | | |
| 3.5 apply or develop skills you had learned in class? | | 0.79 | | | | | |
| 3.8 reflect on applying your discipline knowledge in the workplace? | | 0.58 | | | | | |
| 3.7 critically evaluate workplace practices you observed or engaged in? | | 0.54 | | | | | |
| 3.9 work with an appropriate level of responsibility or autonomy? | | 0.32 | | | | | 0.31 |
| 2.2 think critically and analytically. | | | 0.80 | | | | |
| 2.1 solve problems. | | | 0.76 | | | | |
| 2.3 tackle unfamiliar problems. | | | 0.76 | | | | |
| 2.4 analyse quantitative information and/or data. | | | 0.62 | | | | |
| 4.4 I have practised the skills I am learning at university in real life or simulated settings. | | | | 0.83 | | | |
| 4.2 I have worked on assignments or projects that deal with real world information or client. | | | | 0.74 | | | |
| 4.1 I have had practical experience dealing with actual work or real world situations. | | | | 0.71 | | | |
| 4.6 I have explored how to apply my learning to the workplace or other real world settings. | | | | 0.71 | | | |
| 4.3 I have experienced a role play, case study or simulation as part of a class activity. | | | | 0.63 | | | |
| 4.5 My lecturers have linked theoretical ideas to the "real world" of work. | | | | 0.57 | | | |
| **Time 3**: 5.2.3 identify the expectations employers have of new graduates. | | | | | 0.89 | | |
| **Time 3**: 5.3.3 identify your workplace/professional skills. | | | | | 0.82 | | |
| **Time 3**: 5.4.3 identify the skills you lack / need to improve to be effective in the workplace. | | | | | 0.73 | | |
| **Time 3**: 5.5.3 identify the knowledge you lack / need to improve to be effective in the workplace. | | | | | 0.70 | | |
| **Time 3**: 5.1.3 seek work relevant to your studies. | | | | | 0.68 | | |
| **Time 3**: 5.6.3 evaluate how well your skills and preferences "fit" different employment opportunities you might consider in the future. | | | | | 0.66 | | |
| **Time 3**: 5.18.3 rate your overall feeling of readiness for the workplace. | | | | | 0.55 | | |
| **Time 3**: 5.7.3 present yourself effectively in selection interviews and processes. | | | | | 0.45 | | |
| 2.11 work effectively with people from different cultures and backgrounds. | | | | | | 0.74 | |
| 2.10 work effectively in a team. | | | | | | 0.73 | |
| 2.12 lead and/or influence others | | | | | | 0.50 | |
| 2.6 communicate verbally. | | | | | | 0.38 | |
| 3.2 undertake work relevant to the goals of the org'n you were placed in? | | | | | | | 0.73 |
| 3.3 contribute worthwhile outcomes for the organisation (such as a product, or change in practice or policy)? | | | | | | | 0.57 |
| 3.1 undertake work relevant to the learning outcomes of the subject? | | | | | | | 0.47 |

Extraction Method: Principal Axis Factoring. Rotation Method: Oblimin with Kaiser Normalization. [a]Rotation converged in 13 iterations.

### 4.3.1 External Criterion Validation of PQ4

The *placement quality* categorical variable PQ4 was validated against the AUSSE WIL scale. It was predicted that if the PQ4 variable captures aspects of WIL placement design, representing increasing amounts of the authenticity and integration-focused TLAs across its 4 categories, then these increases would show up in students' ratings of the overall amount of authenticity or application focus in their programs. This was the case, as can be seen in Figure 7. Categories one through three of PQ4 each had a mean significantly lower than that of the next-category-up. The category "0" on the x-axis represents the *no-placement-experience* group of students. Their AUSSE-WIL scale mean was not different from that of the *low quality* category of PQ4, but is significantly different from all other PQ4 category means.

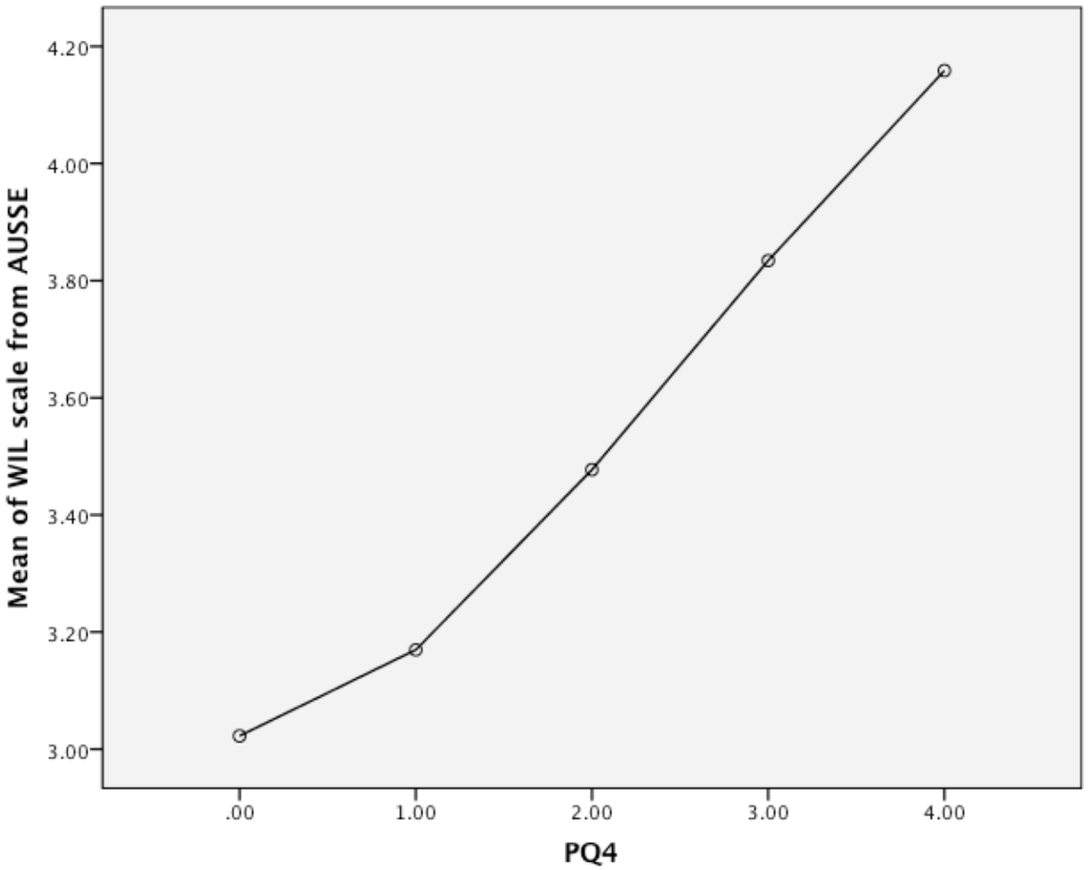


Figure 7 PQ4 categories and AUSSE WIL scale means

### 4.3.2 Impact of placement on employability variables

Figures 8 and 9 show graphically that those students who undertook a placement enjoy benefits that those who had never experienced placement did not. The x-axis represents the three time-point measures (start of program, start of semester, and now respectively).

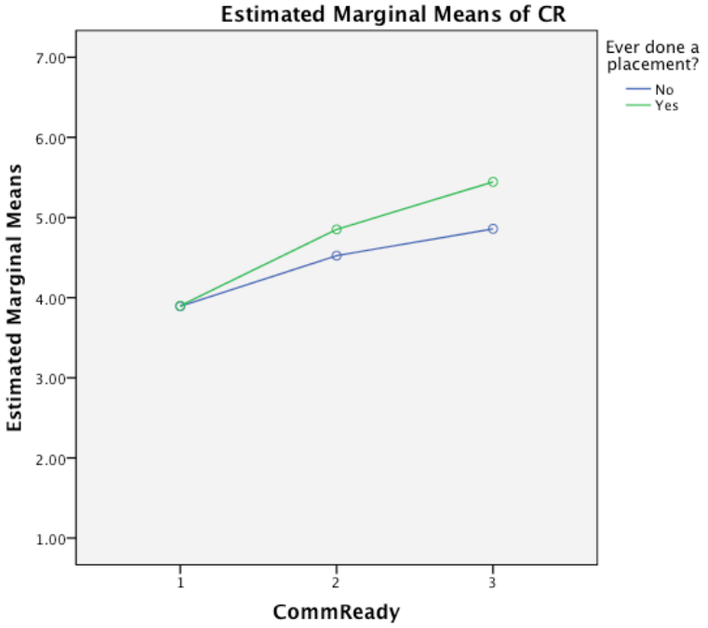


Figure 8 Impact of placement on mean Commencement-Readiness (CR)

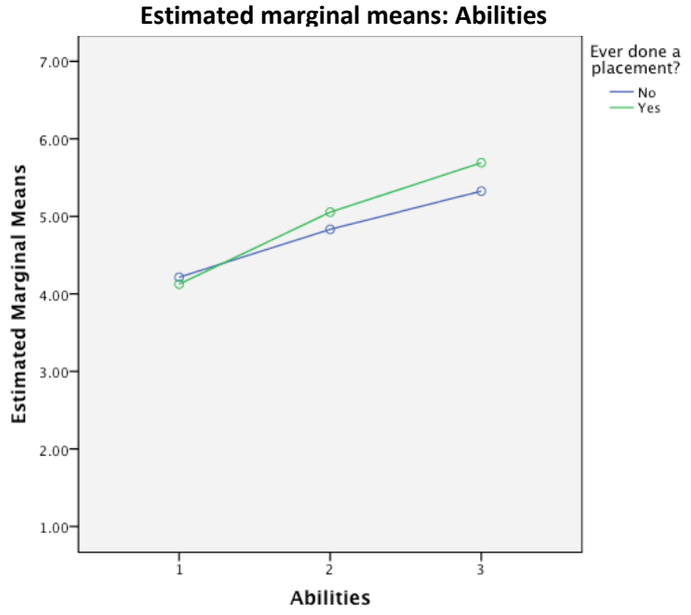


Figure 9 Impact of placement on mean Abilities

A mixed repeated measures and between subjects analysis was conducted in SPSS v.21. The repeated measures were the scores for the Abilities and Commencement-readiness dimensions taken at times 1, 2 and 3; the between subject factor was whether or not the student had ever done a placement. For both the outcome variables (Abilities and CR) the measures at Time 2 and Time 3 are significantly higher for the placement group than for the group who had never experienced placement (F(Abilities) 1018; df = 1.5,2209; $p < .0001$; F(CR) 864; df = 1.5, 2211;

p < .0001). The developmental slopes are significant for both groups but is steeper for the placement group.

From these findings it can be seen that placement makes a significant difference to the development of commencement-readiness and abilities. These results confirm the findings in the previous chapter that placement significantly and positively affects students' perceptions of their employability.

### 4.3.3 Impact of placement quality on employability dimensions

Having established that a placement experience makes a difference to students' perceptions of their employability and development over time, the question of the impact of the quality of placement experience was explored.

Figure 10 and 11 show that the four Placement Quality (PQ4) levels clearly distinguish the levels of the commencement-readiness and abilities at all three time-points. Although the differences are not significant at Time 1, they are at Time 2 and Time 3. The developmental slopes are significant in all cases but the slope gets steadily steeper as placement quality increases. Differences at Time 3 are significant except for that between low quality and no placement.

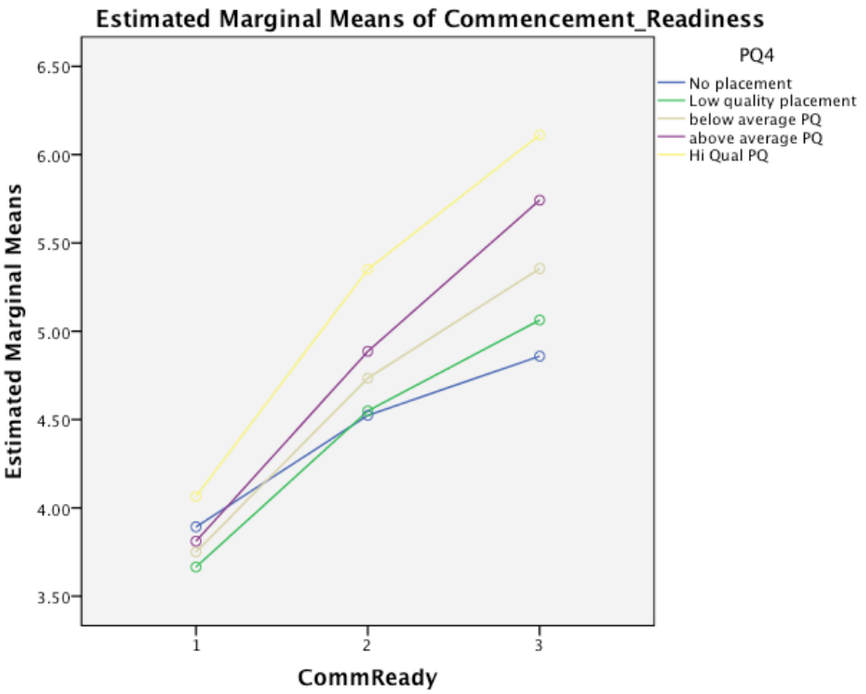


Figure 10 Placement quality and Commencement-Readiness

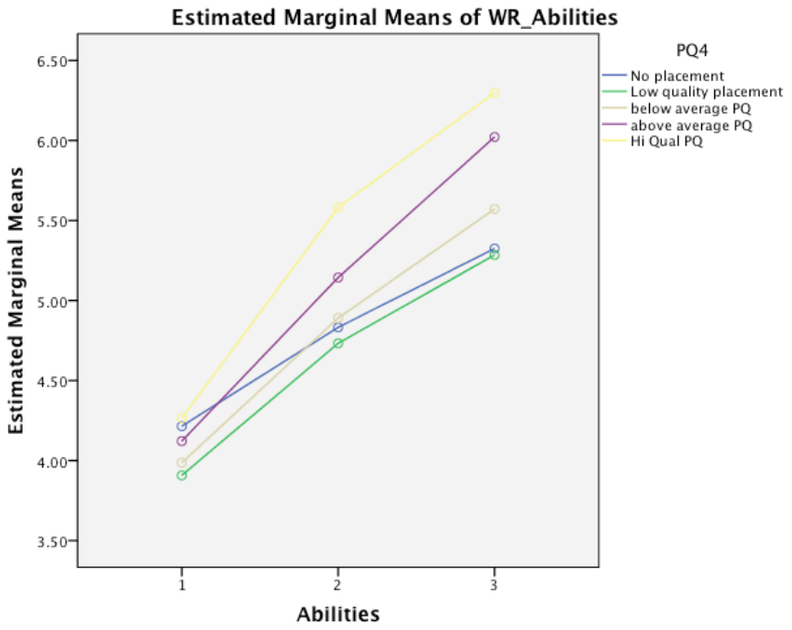


Figure 11 Placement quality and Abilities

The results show that placement quality is significantly associated with the development of the abilities and commencement-readiness over time. These results confirm the importance of placement quality for the development of employability outcomes. As placement quality requires resourcing, the results support the need to allocate adequate funding to assure high quality placement experiences.

### 4.3.4 Impact of degree of exposure to placement on work-readiness variables

Having established that placement and placement quality have a positive impact on employability, the impact of the intensity of engagement with placement (whether full-time [FT], part-time [PT], neither [none] or both) was subsequently explored.

One-way ANOVA indicated that for both the Abilities and Commencement-Readiness (CR) variables at Time 3 there were no significant differences between FT, PT, or Both, though all three were significantly better than *none* ($t(skills)=6.5$; $p<.0001$; $t(CR)=9.7$; $p<.0001$). Figures 12 and 13 show the results graphically.

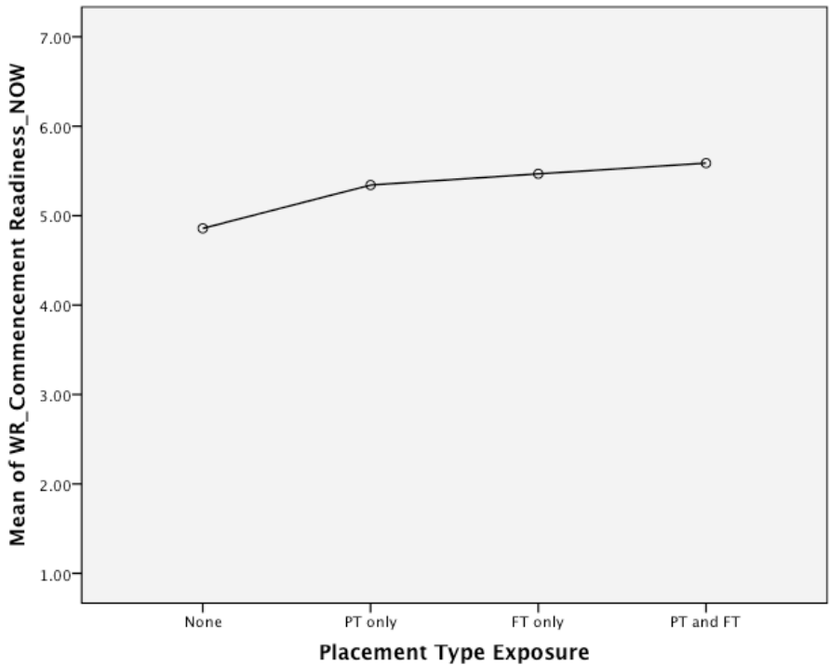


Figure 12 Effect of placement intensity on Commencement-readiness (Time 1)

### 4.3.5 The effect of amount of time spent on placement.

A linear regression analysis was conducted to ascertain the impact of the number of hours spent in placement on the acquisition of employability skills. For these analyses, placement quality and general work experience were controlled for by including them in the analysis, along with the number of part-time and full-time weeks of placement. The results for Abilities are in presented in Table 11. An "X" means that there is no relationship between the variables listed and the dependent variable, and "Yes" means there is a significant relationship between the variable listed and the dependent. Each column represents a different group in which the analysis was conducted. The results for Commencement-readiness are presented in Table 12.

Table 11 Effect of amount of time on placement on Abilities (Time 1)

| | Part-time only | Full-time only | Both PT and FT |
|---|---|---|---|
| Work experience | Yes | X | X |
| Placement quality | Yes | Yes | Yes |
| Part-time weeks | X | | X |
| Full-time weeks | | X | X |

Table 12 Effect of amount of time on placement on Commencement-Readiness (Time 1)

| | Part-time only | Full-time only | Both PT and FT |
|---|---|---|---|
| Work experience | Yes | X | X |
| Placement quality | Yes | Yes | Yes |
| Part-time weeks | X | | X |
| Full-time weeks | | X | X |

These results indicate that the amount of time does not significantly enhance student outcomes once placement quality and previous work experience are taken into account. Furthermore, it is mainly placement quality that has the over-riding impact on the outcomes. These results confirm that placement quality is a key driver of student outcomes as a consequence of a work-based experience.

### 4.3.6 Attributions of change in scores between start of semester (Time 1) and now (Time 2)

To further test the claim that placement rather than other circumstantial or individual factors is the cause of growth in students' employability; respondents were asked to indicate the extent to which they attribute a change in their abilities from Time 2 to Time 3 to either the placement or the coursework. A total of 695 students had just completed or were about to complete a placement and 803 had not completed a placement at the time of the survey. The surveys were conducted around Week 10 of semester so now refers to a common relative time in semester as does at the start of this semester. The attributions were made against all 18 of the work-readiness items and an average attribution value was calculated for each person across all 18 items. This was used as a dependent measure.

An independent samples t-test revealed a large significant difference in the attributions of the two groups. The mean attribution of the *no placement* group was lower at 2.86 than that of the *placement* group at 3.50 ($t = -12.12$; $df = 1495.9$; $p < .0001$). This means that the *placement* group attributed skill development to the placement experience to a greater extent than the *no-placement* group attributed skill development to their coursework. When the attribution scores were calculated against the placement quality categories, the difference in means from the highest quality group to the no-placement group was even more marked at 1.13, as can be seen in Figure 13.

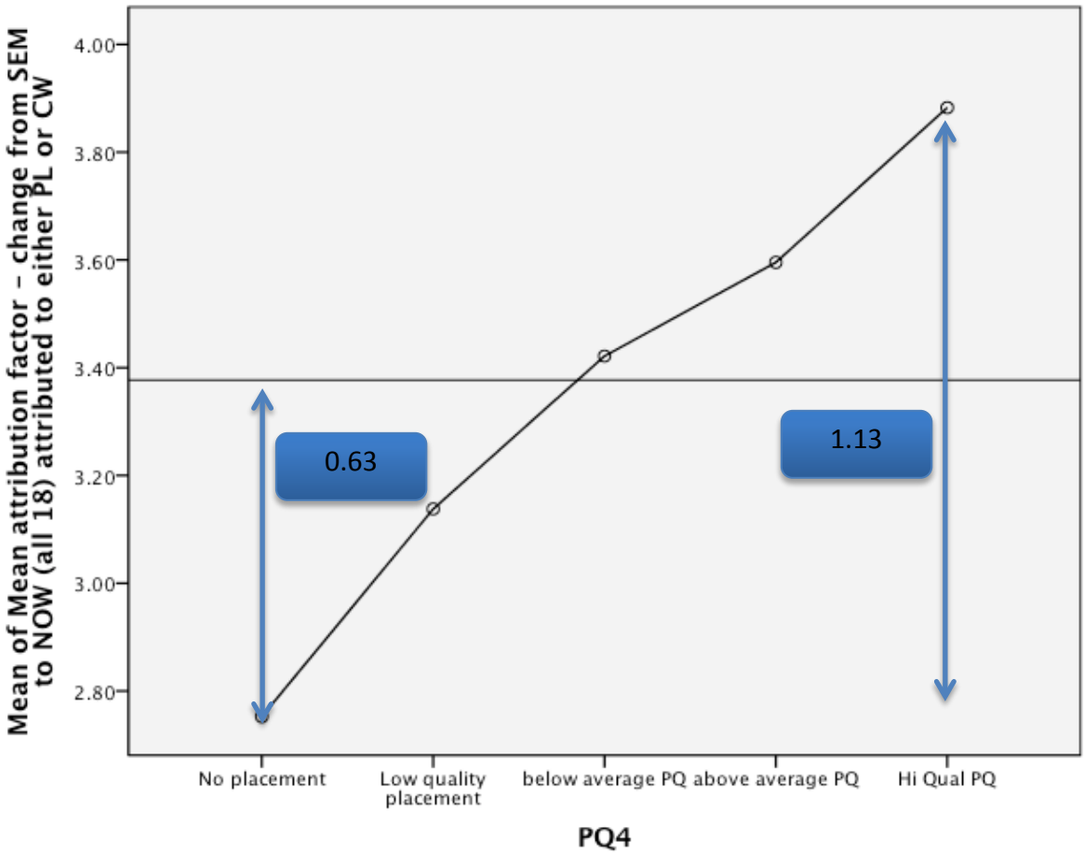


**Figure 13 Mean attribution by placement and placement quality***

*The horizontal line is the overall mean of placement group.

This analysis reaffirms the importance of the quality of placement. As in previous analyses, the higher the quality of the placement, the more significant the impact on student outcomes. The difference in skill development increased as placement quality increased.

### 4.3.7 Qualitative data

A total of 669 comments relating to the *Best Aspects* and 626 comments for the *Needs Improvement* question were collected. Codes were manually assigned from a selected codebook to segments of text. The codes were assigned according to the categories of outcome and curriculum factors that were previously determined to be valid and relevant from earlier studies. Where a comment introduced a new theme, a new code was created.

Table 13 and Figure 14 summarise the frequency of responses for each category of best aspects of the placement.

Table 13 Relative frequency of coded categories – best aspects

| Code | Count | % |
|---|---|---|
| **Authenticity** | 312 | 48.50 |
| **Collaboration** | 50 | 7.80 |
| **Diversity of Settings** | 20 | 3.10 |
| **Integration** | 92 | 14.30 |
| **Networking** | 14 | 2.20 |
| **Professional Study** | 31 | 4.80 |
| **Resilience** | 32 | 5.00 |
| **Supervision** | 28 | 4.40 |
| **Work Ready** | 14 | 2.20 |
| **Others** | 50 | 7.80 |
| **Total** | **643** | **100** |

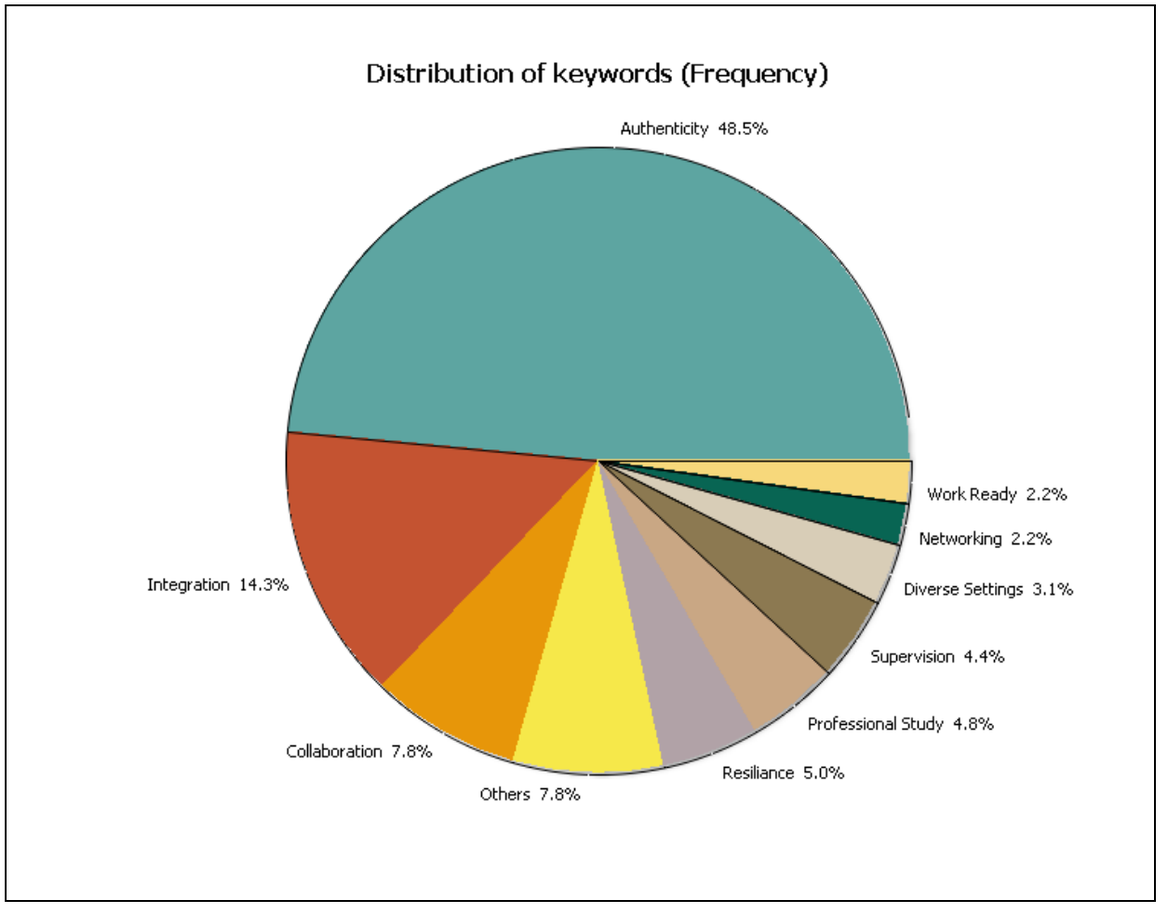


Figure 14 Relative frequency of category occurrence (best aspects)

*Authenticity (n=312)*
The most dominant theme was authenticity with 48.50% of respondents agreeing that the programs in which they took part provided exposure to real world problems and opportunities to gain experience in the industry relating to their studies. Some commented that participating in the program provided genuine insights and a sense of the responsibilities, expectations, and behind the scenes roles inherent in the workplace.

*Integration (n=92)*
Comments in this category (14.30%) described the benefits of applying theory and knowledge learnt at university to real life situations. In addition, respondents described how gains in experience helped increase understanding of the nature of research work and brought how much they enjoyed doing research.

*Collaboration (n=50)*
Responses from this category (7.80%) described gains of developing peer and professional collegiality with other students and staff while on placement. Some emphasised the excellent guidance and assistance received from mentors in the working environment. Others recognised the importance of team work and how working collaboratively in a group helped to effectively complete set assignments.

*Resilience (n=32)*
Five per cent of the respondents described gains in confidence relating to the work in the discipline field. They discussed responsibilities and how they overcame pressures from real life situations. The placements also presented opportunities to identify weaknesses and allowed them to work to their full potential.

*Lifelong learning (n=59)*
Thirty-one respondents (4.80%) recognised the benefits gained from the professional environment and how it significantly improved their application to study in different environments (university vs workplace). This encouraged some respondents to pursue further professional study.

*Supervision (n=59)*
Twenty-eight respondents (4.40%) highlighted the importance of quality supervision and feedback and support provided during placements. Some emphasised that their successes were reliant on skilled mentors and supervisors.

*Diverse Settings, Networking and Work Ready (n=48)*
Slightly more than three per cent of the respondents had opportunities to engage in a range of projects and meet diverse people. In addition to gaining real life experience, the diverse settings enabled them to focus their career interests. Moreover, 2.00% of the comments indicated that the placements provided excellent opportunities to build connections and were recognised as a good source for networking with people in the industry. This in turn was perceived to greatly enhance work-readiness of the respondents.

*Others (n=50)*
Other comments in the best aspects category included the flexibility and freedom while on work placements. Other responses expressed enjoyment in meeting with a variety of clients which helped to improve communication skills.

Table 14 and Figure 15 summarise the frequency of responses for each category of aspects requiring improvement.

Table 14 Relative frequency of coded categories – needs improvement

| Code | Count | % |
|---|---|---|
| **Authenticity** | 77 | 16.67 |
| **Flexibility** | 22 | 4.76 |
| **Placements** | 130 | 28.14 |
| **Preparation** | 22 | 4.76 |
| **Relevance** | 46 | 9.96 |
| **Supervision** | 102 | 22.08 |
| **Others** | 62 | 13.42 |
| **Total** | **461** | **100** |

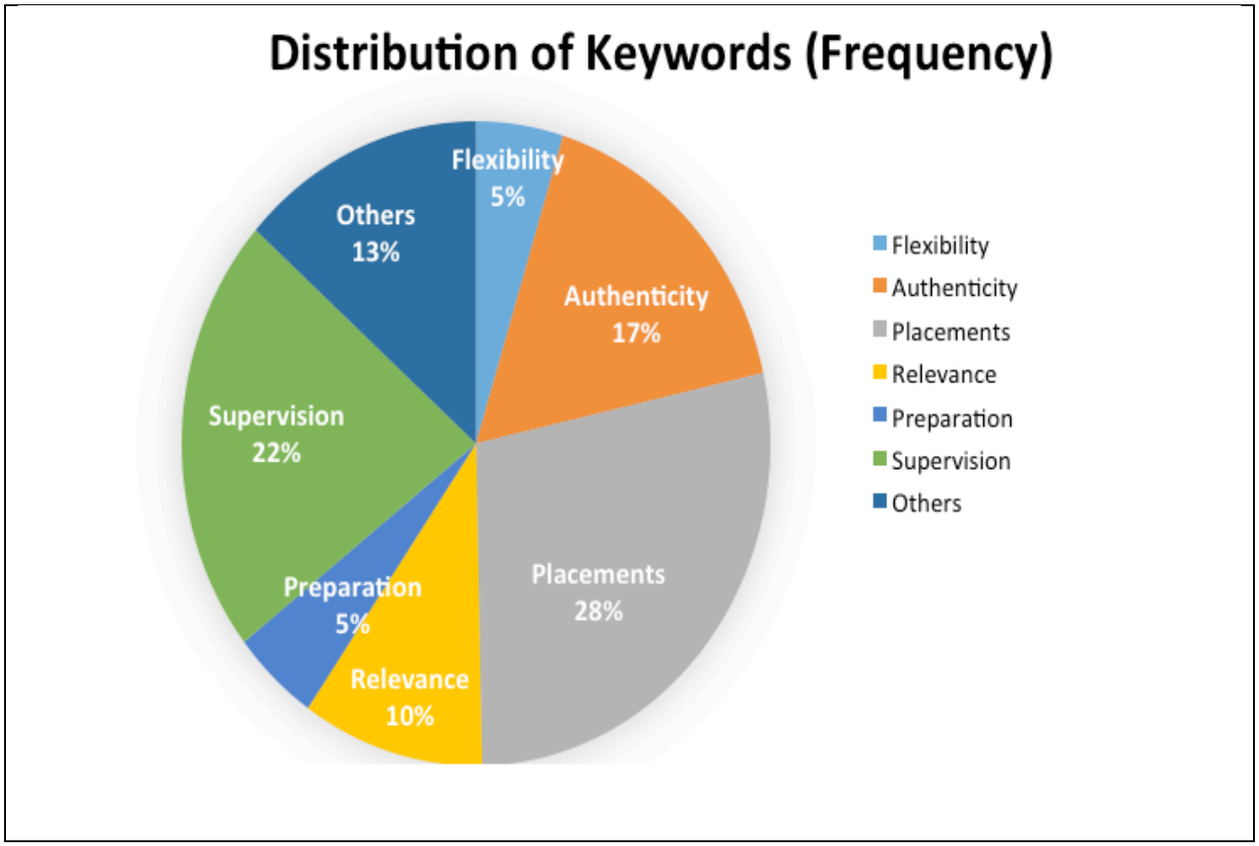


Figure 15 Relative frequency of category occurrence (needs improvement)

*Placements quantity (n=130)*
The largest percentage of respondents (28.14%) discussed the potential for future placements. The majority of this category suggested that they would like to have more similar placements. Two week placements were considered useful but respondents considered a longer period would be substantially more beneficial. This would enable participants more time to familiarise with the work environment and learn from the experience. Thirteen percent of people in this group (n=17) expressed a preference for being paid for the work they performed.

*Supervision (n=102) and Preparation (n=22)*
Twenty-two per cent of respondents commented about the supervision during their placement. Some respondents suggested the placement would have been more successful with better supervision and clearer instructions. Some placements were not well-organised or well-structured due to lack of assistance, constructive advice, support and clear goals. Twenty-two respondents suggested that improved preparation for the placement would have facilitated better outcomes.

*Authenticity (n=77)*
Seventeen percent of respondents discussed the authenticity of the placement. Some expected more practical hands-on experience, actual projects, more exposure to clients, and more responsibilities in the tasks they were assigned. Others suggested that studies at university need to be better related to 'real world' scenarios.

*Relevance / integration / authenticity (n=46)*
Forty-six respondents said that the placement was not relevant to their studies. Most of the comments indicated that the work performed was either not applicable or inadequate as it involved mainly administrative tasks not related to the discipline area and ultimate qualification.

*Flexibility (n=22)*
Some participants expected to have more flexible options for choosing their own placement. There were also discussions about flexibility in choosing work schedules as some found it difficult to manage both university coursework and a full-time work commitment simultaneously.

*Others (n=62)*
The last group of observations discussed placements in diverse settings (n = 10), collaboration between university staff and placement provider staff (n=10), feedback mechanisms (n=12), interpersonal skills (n=8), and other assorted aspects.

## 4.4 Conclusion

Experiencing placement has a positive and significant effect on students' self-appraisal of employment-readiness skills and general work-readiness. Using retrospective self-appraisals indicates that over time, students who undertake a work-placement experience significant benefits than those who do not. The intensity of placement exposure, whether students have experienced placements full-time, part-time or both, are not significant from each other but all are significantly better than no placement at all. Students who had just completed or were about to complete a placement attributed positive changes in their abilities from the start of semester (Time 2) to now (Time 3) to a much greater extent than students in the *no placement* category.

**Recommendations**

5. WIL Practitioners should be appropriately skilled, experienced and supported to ensure quality WIL experiences and outcomes for students.
6. Appropriate professional development opportunities should be developed for WIL practitioners and industry/community partners.
7. The employability dimensions that emerged from this project should be used for national benchmarking across disciplines and institutions.

# Chapter 5 Alumni interview study

## 5.1 Introduction

An interview study was conducted with alumni who had experienced WIL during their studies.

## 5.2 Method

Interviews were conducted via telephone, audio recorded and transcribed.

1. Initially, a single free response question was asked: *Please tell us a little about how your work integrated learning experiences have impacted on you.*

2. The interviewer prompted respondents to consider impacts in particular skill areas. The areas prompted were:

- attitudes to the profession (or an aspect of it) and career plans
- confidence in the discipline area
- confidence in the ability to do the job
- knowledge of workplace sub-system and structures
- general self-efficacy
- generic or transferable skills, life-long learning skills and approaches to learning
- reflectivity
- application of theory to practice.

### 5.2.1 Sample

Nine (9) alumni who have experienced placement were interviewed. These were drawn from engineering and science, business, social work and education. The sample was gender balanced in numbers, but all the males had entered technical and business fields, whereas all but one of the females had entered human services and education.

## 5.3 Data analysis and Results

The alumni interview data point to four distinct domains of impact on students.

1. learning from the authenticity of the experience
2. career development and career opportunities
3. workplace skills and knowledge
4. lifelong learning.

**Learning from authenticity includes**

- Experiencing and observing the authenticity, scope and variety of a real workplace – recognition of the rich and complex reality that contextualises work in a workplace
- Experiencing and observing the complexity – recognition of the rich and complex reality that underpins workplace operations
- Relating to a potential workplace – being able to situate self in the workplace in the future based on the exposure during placement.

**Career, field of discipline, and job choices includes**

- Confirming, clarifying or precipitating a change – the impact experience in placement has on commitment to current career trajectory (can be affirming or negating)
- Job opportunity or advantage – the advantage in the job market they gain by having had industry experience
- Commitment to facilitating effective WIL as employers or facilitators – an awareness from their own experiences that problems may arise, taking opportunities to enhance/improve WIL for students, implementing strategies for early detection and mitigation of problems, and providing support for the career development of others.

**Workplace skills and knowledge includes**

- Threshold readiness – confidence in applying for jobs and undergoing an interview
- Entry readiness – confidence in ability to apply theoretical knowledge in the workplace enabling them to fit in and manage the job
- Workplace acumen – observing/learning/reflecting on workplace structure and interactions, to build workplace insight, shrewdness, penetration, judgment, intelligence, wisdom, expertise, perspicacity, sharpness, and good judgment; understanding the structure, policies, processes and complexities, knowing how things happen day-to-day, and how to act/interact
- Workplace processes and protocols – developing confidence in the pragmatic and operational aspects of the work environment
- Workplace interactions – interpersonal communication with peers and seniors, client service and management
- Discipline expertise – enhanced sense of the value of the knowledge acquired in the degree
- Relating theory and practice / transferring knowledge – consolidation of theoretical knowledge by observing it being used operationally and integration or application of skills learnt in class with activities in workplace.

**Lifelong learning**

- Reflective practice and growth – opportunity and stimuli for reflection on knowledge, skills, learning, career
- Self-worth and understanding – validation and self-knowledge beyond work choices and self-efficacies emerge in the descriptions of self-reflection and development rather than in responses to prompts about self-efficacy.

## 5.4 Conclusion

These findings further validate the dimensions of employability identified in the cross-sectional study and the importance of authenticity as the key input. Importantly these results are derived from graduates that have made the transition to employment. Positive statements about the impact of WIL and specific reference to the constructs relevant to this project further strengthen the validation of these ideas given it is a retrospective account.

# Chapter 6 Employer interview study

## 6.1 Introduction

This study was conducted to incorporate an employer perspective and test the validity of assumptions made and inferences drawn from other studies in this research.

## 6.2 Method

The approach taken was broadly appreciative inquiry-based (Cooperrider & Srivastva, 1987). The data were coded using QDA_Miner (Provalis, n.d.)

The interview questions were

1. Why do you take placement students or get involved in WIL projects?
2. Does WIL enhance student employability and work-readiness? In what ways?
3. How could WIL be done better to improve/further enhance student employability?
4. How could WIL arrangements be improved for you?

The approach allowed exploration of

- employers' motivations for involvement in providing placements
- employers' perceptions of student outcomes, benefits and learning
- employers' perceptions of the effectiveness and quality of organisational processes
- employers' perceptions of how organisational processes and partnerships might be improved.

The interviews were transcribed by a commercial third-party research transcription service provider and coded.

### 6.2.1 Sample

Thirteen employers who provide placement opportunities for students were interviewed. The participants worked in a variety of fields including engineering, pharmacy, teaching, biosciences, design and construction, social sciences and occupational therapy.

## 6.3 Data analysis and results

### Motivations for providing placement opportunities

The following are direct quotes from employers about their motivation to accept students on placement.

- educating the next generation

  "I really enjoy, I guess, educating and facilitating learning with students. … I enjoy the opportunity to share with them my … knowledge and my belief in what our profession is …" "I think it's our job as clinicians to educate and support the next generation…" [Occupational therapy - OT:8]

- the enhancement of practice

  "…I think it's really important that people get hands-on experience, and I also believe it's important that they have a good experience. And that we teach them the right ways to start off their careers." [INT:13]

- regional development

  "… it is so difficult to get people to take positions in the county. … Of my qualified pharmacy staff um, none of them have

really trained in [STATE]. They've all come from the other states because they're prepared to come to the country. … So it's trying to get students here, and the hospital does this on a regular basis - tries to get students to come to the hospital so that … somebody might just be interested in coming back later". [PHARMACY PH:11]

- benefits to the organisation

"… our interest was because we were having trouble at the time getting staff" [Science:SCI4];

"I think the workplace expectations, in most workplaces, will be the final report that tells them something they wanted to know."[int4]

"…it's also building … collegial networks with future practitioners" [int1]

"… we tend to do it because they're affordable to be honest. We can get projects started that perhaps we wouldn't have time to do or things that are a little more cutting edge that we wouldn't perhaps want to invest too heavily in until we've had a bit of look at the area." [int 6]

"… they see it as a potential grown, and maybe a potential resource pool." [int 12]

- recruitment benefits / advantage

"… our interest was because we were having trouble at the time getting staff … so we felt that if people felt the connection with our organisation they were more likely to favour us over somewhere else which was probably going to be higher paid. So that was part of our interest."[int 4]

It also gives people an opportunity to see, just to experience a good workplace … an interesting environment to work on. If you give students a good placement, then they are more likely to tell their friends, and come back and apply for jobs. [int 12]

"INTERVIEWER:…in effect the matching is three ways[:] the student's expectations and the uni's expectations; but of course, the workplace would also have expectations. RESPONDENT: Yeah, I mean, I think the workplace expectations, in most workplaces, will be the final report that tells them something they wanted to know. But by – but some of the reasons for having a student do that instead of a staff member do that is that they build a sense of the employer as being a worthwhile employer." [INT 4]

- intrinsic reasons

"I do it because I love it. Personally I think it's a very important part of my growth and development. It keeps me on my toes." [int 1]

- giving back

I'm very passionate about it … because we were all prac students once. It's very difficult for kids to get placements; my son … had friends last year that struggled to do their final internship, therefore couldn't graduate, which is just appalling. So I've taken over, because I think it is so important for kids to get quality mentoring in schools … [int 7 educationa\]

… I personally see it as a benefit, … I found it a benefit, and I'd like to pass that benefit onto others. [int 5]

- *quid pro quo* / "paying it forward"

…I've got children, … so I hope some stage that, you know, when [my son] needs… work experience, I'm hoping someone will do the same thing. [int 2]

### 6.3.1 Student outcomes from placement

Appendix F shows the coding scheme for the qualitative data gathered in the employer survey.

The result of the coding is outlined in the coding scheme shown in Table 15.

Table 15 Coding scheme segment for employer interview data

| | |
|---|---|
| **Professional Practice and Standards (PPS)**<br>• Workplace protocols<br>• Responsibility, autonomy, agency<br>• Ethical practice<br>• Independence practice | **Commencement-Readiness (CR)**<br>• Confidence<br>• Obtaining work<br>• Using placement supervisors for referees' reports |
| **Informed Decision-Making (IDM)**<br>• Information use for work<br>• Problem-solving<br>• Evaluation of alternatives | **Application of theory/integration of theory and practice (INTEG)**<br>• Application of theory and integration of theory and practice. |
| **Collaboration and communication (COLLAB)**<br>• Recognise the politics of workplaces<br>• Communication and Team-work | **Life-Long Learning (LLL)**<br>• Reflective practice<br>• Willingness to learn<br>• Identification of deficits and strengths<br>• Dunning-Kruger effects<br>• Understanding of the theories and/or practices of the discipline |

A small collection of comments did not lie within these rubrics but were related to students' personal developmental changes (attitudinal change, resilience, motivation).

The coding scheme exemplifies some of the categories with examples from the data. In reporting these data, one quote to represent each theme has been selected. See Appendix E for more quotes relating to each theme.

**Professional Practice and Standards (PPS)**

- Workplace protocols

  "… we also tried to communicate a lot of the basics about a workplace. Often if it's a person's first workplace they're unsure of processes and things like that, so just the basics of everyday work you know. This is what you wear. This is what time you come in. This is when you have breaks. You know if you need anything just let me know. If you need time off just let me know. You know sort of communicating that to people." [INT 6]

- Responsibility, autonomy, agency

  INTERVIEWER: "Do you see an observable change in their confidence, their skills? RESPONDENT: "Yes I do. Because … you [can] go out and you have them … help with things in the pharmacy part of it. But you can also have them out on the wards and they're exposed to talking to the doctors about patients and being able to interact with the patient and interact with the doctors and nurses. And to do it in a way where they can provide some information and they'd be seeking other information back. It helps with rounding them out as practitioners." [INT 11]

- Ethical practice

  "They definitely do [address ethical developments]. Yeah they're part of everybody's practice, I suppose it should be part of everybody's practice. That's part of the learning. Learning to reflect on it and to, I'm not sure how to word this "keep it all within the code of conduct if you like." [INT 1]

- Independent practice

  "and I'm also trying to fit in the word independent practice, so as their independence as practitioners grows, that's the indication that they are more comfortable with what they're doing, how they work, but also that they're more confident in what they do and yeah. So that would be translating at some point into employability if you like, [because] they would be able to actually demonstrate that in their job interview…" [INT 1]

**Informed Decision-Making (IDM)**

- Information use for work

  "So that could be anything from, like at the moment we're using a student to do some work on them doing a snapshot evaluation of a project that we've got underway… So they then are able to review all the information that's been provided, use some of it to come up with a methodology to actually how they're going to evaluate the project and then provide us with a report." [INT 12]

- Problem-solving

  "And the thing I tried to do was I guess … sort of instil that and say look the information and knowledge you've gained at University now needs to be I guess applied in sort of a workplace situation or for a specific problem within an industry. You know what I mean? I guess from my perspective it was all about flipping over from learning about the problem to coming up I guess with solutions or putting forward solutions to the problem." [INT 6]

- Evaluation of alternatives

  - "And the thing I tried to do was I guess … sort of instill that and say look the information and knowledge you've gained at University now needs to be I guess applied in sort of a workplace situation or for a specific problem within an industry. You know what I mean? I guess from my perspective it was all about flipping over from learning about the problem to coming up I guess with solutions or putting forward solutions to the problem." [INT 11]

- **Commencement-Readiness (CR)**
  - Confidence

    "INTERVIEWER: Do you see a change in that over the time that they're with you? RESPONDENT: Absolutely, absolutely… they relax into it, they learn to deal with the kids, they learn the protocols of being in the school, how do deal with administration, how to deal with our principal and deputies, what is and isn't acceptable behaviour, and they're very well trained, they're very well-schooled before they come, but you've actually got to be in a place before you know what's going on. And you can see them relax over the time. We've just had a group of … them, but they were very nervous when they first came. But by the end of their two days a week for five weeks they were much more relaxed and very much a part of the staff, …." [INT 7]

  - Obtaining work

    "And that really truly does help, we have a large percentage of occupational therapy students who come back as occupational therapists when they've graduated because they're known to the department." [INT 8]

  - Using placement supervisors for referees' reports

    "You know, at the end of the year, all the fourth year graduates, you get hundreds of applications come through because everyone graduates at the same time. But the students that put in applications and have referenced prac or field work at the hospital have usually, and we usually ask them to use [us] as [a] reference because we are able to speak for how well they've done during their field work." [INT 8]

**Collaboration and communication (COLLAB)**

- Recognise the politics of workplaces

  "But they come in astoundingly unprepared for work with kind of not a clue. And I say that because they – if I could make my comparison to the Dutch girl, she came in and understood the point about being in the work place was to make sure everybody knew who you were, what you were doing, and what you were capable of doing. And by the time she left – and she was here much longer than these guys are – by the time she left at the end of six months, everybody knew who she was and what she did. She really understood that non-described dynamic of a workplace." [INT 4]

- Communication and team-work

  "The other thing I think is that they actually, that they get an insight into how complicated something like health is. So they get to see that you actually need to, it's all about having, it's more than just what you write. You've actually got to have relationships, see how teams, how meetings work. They get to see how, the importance of minutes. And they get to see how the workplace works in a dynamic of its own." [INT 12]

**Application of theory / integration of theory and practice (INTEG)**

- Application of theory and integration of theory and practice

  "So by the time students get to us in fourth year, the expectation that we have of them is that they've developed and have appropriate communication skills and understanding of occupational therapy theory and the framework behind our profession. So that they can then in any clinical area be able to translate that into clinical decision making and clinical reasoning." [INT 8]

- **Life-Long Learning (LLL)**
  - Reflective practice

    "In a way [reflective practice is] what's expected of them to learn out of this experience. Because I think they come thinking that they are going to learn something technical." [INT 4]

  - Willingness to learn

    "I think they go from being given things, like information and readings and direction to giving responsibility and then giving some of that back if you know what I mean? So I think they negotiate their way through that and by the end of the semester most of them are pretty good at coming to you with things, as opposed to be waiting for things to be given to them, yeah. INTERVIEWER: Yep. So in a sense they're finding out what their own responsibilities are and what the boundaries of their knowledge are? RESPONDENT: Yeah, and change from initiative, and yeah that's the main stuff I guess. "[INT 6]

  - Identification of deficits and strengths

    "I think student placements are very demanding and they are testing times for students because that's the time when they are rediscovering themselves. Not rediscovering, I guess unwrapping you know their personal and professional self and making that connection, and yeah it's the time when a lot of them experience lots of personal reflections." [INT 1]

  - Dunning-Kruger effects

    "… it's quite interesting because I think younger people are more confident in terms of you know their [abilities], they think that they can do a lot more than they can actually do. And after progressing through their training and studies, they are more reflective and prepared to step back and think you know is this the way to do it." [INT 1]

  - Understanding of the theories and/or practices of the discipline–

    "So by the time students get to us in fourth year, the expectation that we have of them is that they've developed and have appropriate communication skills and understanding of occupational therapy theory and the framework behind our profession. So that they can then in any clinical area be able to translate that into clinical decision making and clinical reasoning." [INT 8]

Some themes emerged which highlighted the development of resilience and motivation as a result of WIL experiences. Employers believed that these attributes were strengthened during WIL placement activities.

**Other student developments**

- Self-awareness

  "I think there is a process that happens and you can basically monitor how these practice change towards the end of the placement. So if the goal is basically to increase the sense of competence, to increase the independence practice, to increase the self-esteem around professional self and understanding of that theoretical framework, understanding why am I like this, why do I work in this way, what my triggers are, what works, what doesn't work. You know all these things. So that definitely happens, otherwise I wouldn't be doing it because you know." [INT 1]

- Resilience

  INTERVIEWER: "Can you pinpoint whether it's an attitudinal thing or whether it's a skills thing that actually improves over that time?" … RESPONDENT: "I think it's an attitude and a confidence and an inner strength, that's my belief." [INT 2]

- Motivation

  "coming out of work experience … it's been three weeks now since they've had their work experience placements and they did that for a week and now we're starting to get the results of that, we're starting to get businesses ringing up saying, "Hey, this little Jimmy he did fantastic, I'd like to actually offer him one day a week doing a school based traineeship" and of course then the pride and the commitment by these students then to come to school and … So you see them, you know, actually walking with a bit of a spring in their step so to speak because they're actually now engaging within work and they can actually see it as a light at the end of the tunnel, there's a reason for all of this school business. … and, you know, a reason so at the end of the day this is what education and school is all about, it's actually, you know, moving into something that you'd love to do." [INT 3]

The following quotes relate to the quality of the placement.

**Quality curriculum and improvement suggestions**

- Learning goals or assessment

  "… obviously they've got outcomes they've got to achieve, there's a particular project that they work on, but at the same time we try to expose them to as many different elements as we can, but depending on the student, and what their project is, they may not have the time to get exposed to too many elements, sometimes they will, sometimes they won't. That's why I think if they were able to make their initial assessment a little bit smaller, and then have, you know still have a secondary assessment area on something that's more general of a broader learning curve, it might allow more people to get exposed to more things and still be able to be assessed on it." [INT 5]

- Relationship with industry partners

  "…I think there needs to be more discussion between the university and the work environments who are taking on these students. I don't think there is always enough discussion between the two of us." [INT 13]

- Quality assurance and variation

  "Because I don't think you can assure that, them of that. Somebody might go into this amazing workplace and have this fantastic experience and write this incredible report; somebody else might go into an amazing workplace and have a fantastic experience but not be given a proper project." [INT 4]

- Assessment and standards

  "you may have a student who's not an awfully good student but gets all that other stuff, and walks into a workplace and blitzes it. But the academic could never know that. There's no way of the academic knowing that that person is the ultimate in employability, and they've just got the most enormous amount out of this, and they are often the students who aren't the best marks. But they don't lock themselves away. …And there's no way of the academic knowing that because they are still reviewing them based on a report which is still an academic interpretation of what is good and bad." [INT 4]

- Supervision improvements

  "they've had no real supervision, I mean they've had supervision but it's nowhere near adequate enough, but there is no mandate that I'm aware of that dictates how many hours of direct supervision they require." [INT 8]

- Match of placement to learning goals / pedagogical preparation

  "Oh [the lack of appropriate placements for the discipline is] huge … there are so many … opportunities and we

actually would say too many that they're doing in non-direct OT supervised areas. Like where you go into primary schools and nursing homes where the occupational therapist comes in for ten hours a week and the rest of the time you know, running routine self-directive. And the supervisor barely supervises them and then they get all five, so out of the scoring scale, one to five they get full marks for all of them and they come to us and they say well I've done exceptionally well in my last two pracs I've got all five" [INT 8]

- Induction / psychological preparation

  "what constantly comes to me is because I'm not sure is it because of the huge demand that students are experiencing because if they have family and work. I just feel that they're not prepared for the placement and as much as I wish to normalise that understanding is part of the process, I still think that there are things that could be done to actually prepare them. And even their emotional response to perhaps clients or perhaps being in the field for the first time, and just to be aware. I know that they have one-day workshop or something like that to talk about things, but I don't think that's enough. So people really really need to understand that when they go to do their placement that they will go through some sort of different crises. And I have seen it with every one of my clients, and whether or not that's related to them or to the demographics of the population that we work with, or something else has been happening, yeah. It's just a stressful time." [INT 1]

- Authenticity and learning-focused activity *in situ*

  "…they have this three months of working in a real situation. I mean, I don't think anyone in school can teach them that." [INT 2]

## 6.4 Conclusion

Employers' perceptions of the aspects of WIL that matter vary between disciplines. Those that have professional accreditation requirements focus more heavily on the quality, fidelity and appropriateness of the assessments and on the potential of placements to assure a standard of experience quality and variety that will deliver on these learning outcomes. These disciplines also stress the importance of the role of supervisors. In other disciplines, there is a greater emphasis on the development of workplace mores (punctuality, dress code, respect) and exposure to the rawness of unpredictable and chaotic work environs. Paralleling these concerns are the different types of learning goals and outcomes and associated assessment regimes. This is not a study of discipline differences but it remains an important caveat to bear in mind when discussing findings of research that is designed to be generalised across disciplines.

These data show the consistency with which the dimensions of employability are evident across different stakeholder groups and research methodologies.

**Recommendation**

8. Resilience, motivation and attitudinal change emerged as important individual outcomes from WIL experiences and should be the subject of future research.

# Chapter 7 Employer survey study

## 7.1 Introduction

Following the employer interviews, a survey instrument was devised to capture the essential variables of interest that had emerged throughout the quantitative and qualitative studies. The purpose of this study was to seek employer views on student performances and the value of placement for preparing students for work.

## 7.2 Method

Instrumentation for the employer survey was developed taking into account the findings of the studies that preceded it including:

- factor analysis of the employability items in the Cross-sectional Study, from which dimensions of employability emerged (dependent variables). The five employability dimensions that employers could comment on were selected (excluding lifelong learning) and their comments sought under the five rubrics of professional practice and standards, informed decision making, collaboration, commencement readiness, and integration of theory and practice
- themes of confidence and career commitment from the alumni interviews
- employer interviews which drew out resilience, motivation and self-awareness.

### 7.2.1 Instrument Development

The employer survey sought employer opinion on the performance of students. The survey comprised 16 items (with Likert-type ratings from 1=not at all through to 5 = to a very large extent) against each of which the respondents indicated the extent to which degree students developed each of the skills during placements. Table 16 shows the items and the stem.

**Table 16 Items in employer survey**

| To what degree do students develop an ability to do each of the following as a result of work placement? |
|---|
| Enact current professional practice effectively |
| Adhere to workplace expectations including protocols, processes, standards of conduct and dress etc in the workplace |
| Do the work accountably, autonomously, and ethically |
| Demonstrate a commitment to continuing professional development, further learning |
| Exhibit effective professional or workplace communication |
| Apply the practices, methods, theories and principles of the field in the workplace |
| Interact appropriately with people from different cultures to achieve workplace goals |
| Interact appropriately with people from different levels in the workplace to achieve workplace goals |
| Exhibit confidence to manage workplace challenges and skill in the face of real pressures and difficulties |
| Exhibit a capacity to identify employer expectations |
| Exhibit readiness for the workplace in their field or discipline |
| Apply information effectively to inform workplace or professional decisions |
| Display commitment to and interest in the job |
| Show self-awareness of their developing capabilities |
| Show resilience / inner strength |
| Refine or clarify career aspirations |

Drawing on the results of the quantitative study, respondents were asked to comment on developments observed in five key employability dimensions (Table 17). This enabled triangulation of the data and served as a validation exercise.

**Table 17 Qualitative triggers for employers**

| Please comment on the development you observe in students' abilities to do any of the following: |
|---|
| Show high professional standards and ethical practice (PROFESSIONAL PRACTICE AND STANDARDS) |
| Integrate knowledge and practice / apply knowledge to practice (INTEGRATION) |
| Use information to make decisions about their work (INFORMED DECISION-MAKING) |
| Collaborate and interact with other employee (COLLABORATION) |
| Commence work in this field and be effective immediately (COMMENCEMENT READY) |

### 7.2.2 Sample

Employers who provide placement opportunities for students were recruited by university contacts. A total of 163 respondents provided data. Employers had variable involvement with students during placement in relation to supervising or giving feedback on either their work or their learning (see Table 18).

**Table 18 Supervision and feedback for students**

| | | Yes | No |
|---|---|---|---|
| 3.1 | Do you supervise students' *work practices* during their work placement / industry project / relevant work experience? | 153 | 10 |
| 3.2 | Do you provide feedback to students on their *workplace performance* during placement / industry project / relevant work experience? | 155 | 8 |
| 4.1 | Do you supervise students' *learning* during their placement / industry project / relevant work experience? | 135 | 24 |
| 4.2 | Do you give feedback to students on the *learning* during their placement / industry project / relevant work experience? | 140 | 20 |

Diverse industries are represented in the sample. Table 19 shows the distribution across fields of enterprise.

**Table 19 Employer sample field of enterprise (N=163)**

| Field | N | Field | N | Field | N | Field | N |
|---|---|---|---|---|---|---|---|
| Missing | 7 | Engineering | 13 | Journalism | 1 | Real Estate | 2 |
| Agriculture | 1 | Environment | 1 | Law | 1 | Retail | 1 |
| Arch | 1 | Government | 5 | Leisure | 4 | Social work | 1 |
| Arts | 6 | Health | 23 | Logistics | 1 | Social Work | 31 |
| Business | 4 | Hospitality | 1 | Marketing | 9 | Speech pathology | 1 |
| Criminology | 1 | HRM | 5 | Nursing | 3 | Transport | 1 |
| Dietetics | 2 | Intelligence | 1 | Pharmacy | 1 | Urban Planning | 5 |
| Education | 11 | IT | 15 | Psychology | 3 | Utilities | 1 |

## 7.3 Data analysis and results

Single sample t-tests allowed comparison of a means score against a single test value. The means of all 16 items were compared with the overall mean for all items collectively, which was 3.7. Single sample t-tests revealed that three items were rated on average higher than the overall mean and three were rated below that (Figure 14). A more stringent test was a single sample t-test using 4.0 as the test value (4= considerably in the response categories). When this was done, 11 of the 16 items *failed* the test; that is, they were significantly lower than the value 4.0.

The areas of *strength* (i.e. those abilities with average scores *not* significantly lower than 4.0) are listed in Table 20.

Table 20 Areas of strength in student performance during placement

| |
|---|
| Show self-awareness of their developing capabilities |
| Apply the practices, methods, theories and principles of the field in the workplace |
| Exhibit effective professional or workplace communication |
| Display commitment to and interest in the job |
| Adhere to workplace expectations including protocols, processes, standards of conduct and dress etc., in the workplace |

All the item means are significantly higher than a test value of 3 (3=moderately in the response categories; t values ranging from 5.2 through to 14.2; all ps < .001) thereby substantiating that employers consistently hold the view that students perform at a level better-than moderately for all employability items. Figure 16 shows graphically the means of all 16 items.

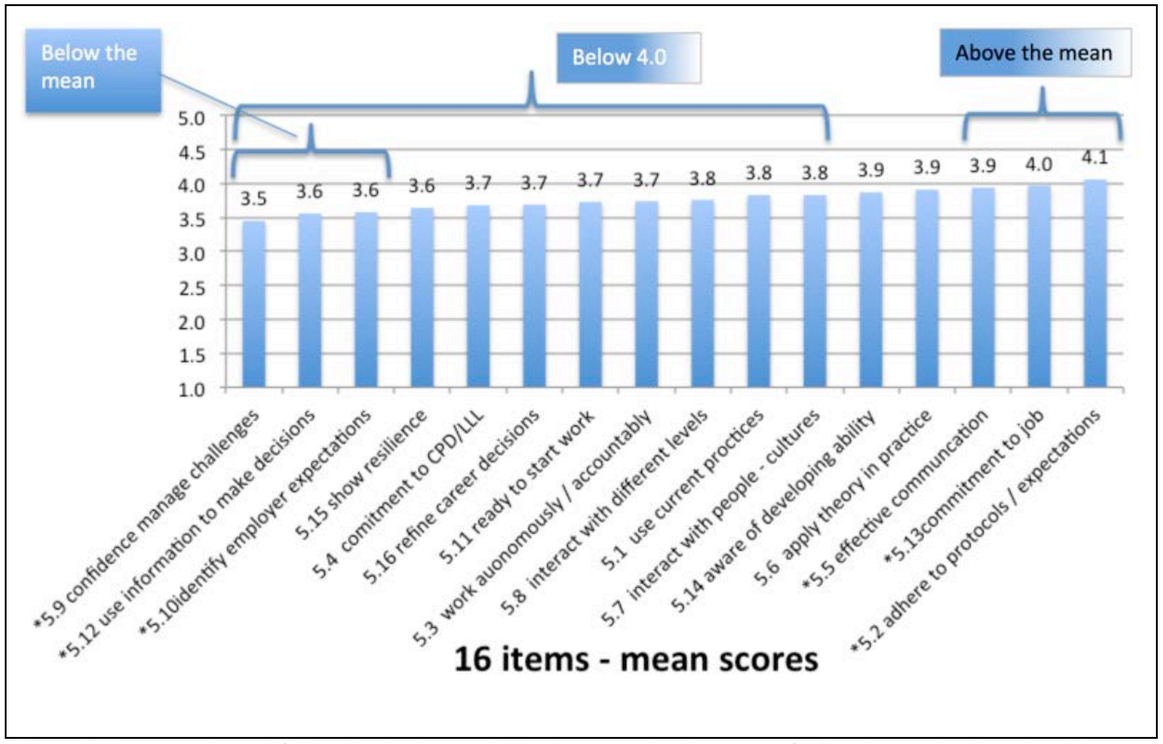


Figure 16 Items passing and failing the single sample t-tests – one using the mean of 3.7 and one using the value 4.0.

Four questions queried the nature of employers' involvement in placement students' educational and workplace development. The questions related to supervision and feedback on performance at work or on supervision and feedback on learning at work. The division of the sample in this way revealed the important distinction whereby the more closely involved the employer, the higher they rated the student.

Grouping employers' responses on their supervisory roles and calculating the mean scores for each of the 16 ability items produced the results shown in Figures 17, 18, 19 and 20.

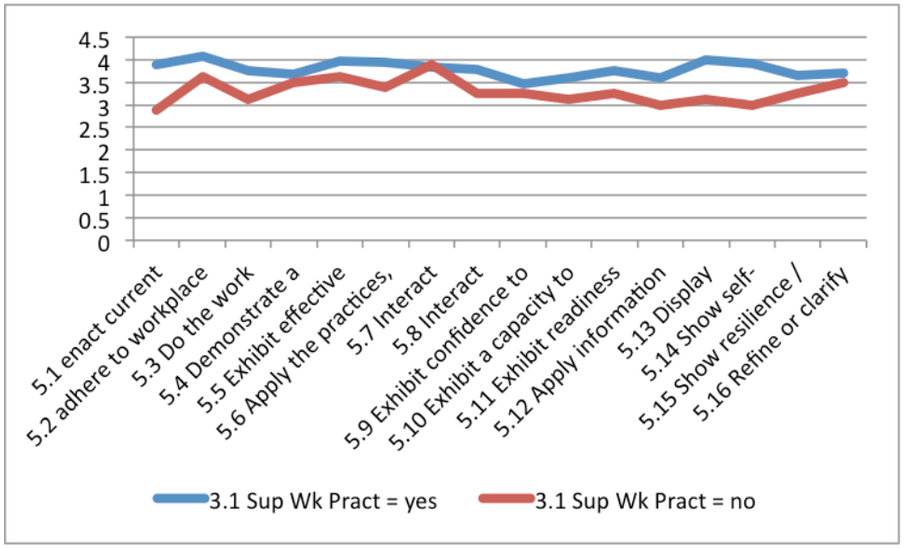


**Figure 17 Means of groups of employers who do and do not supervise students' work practices**

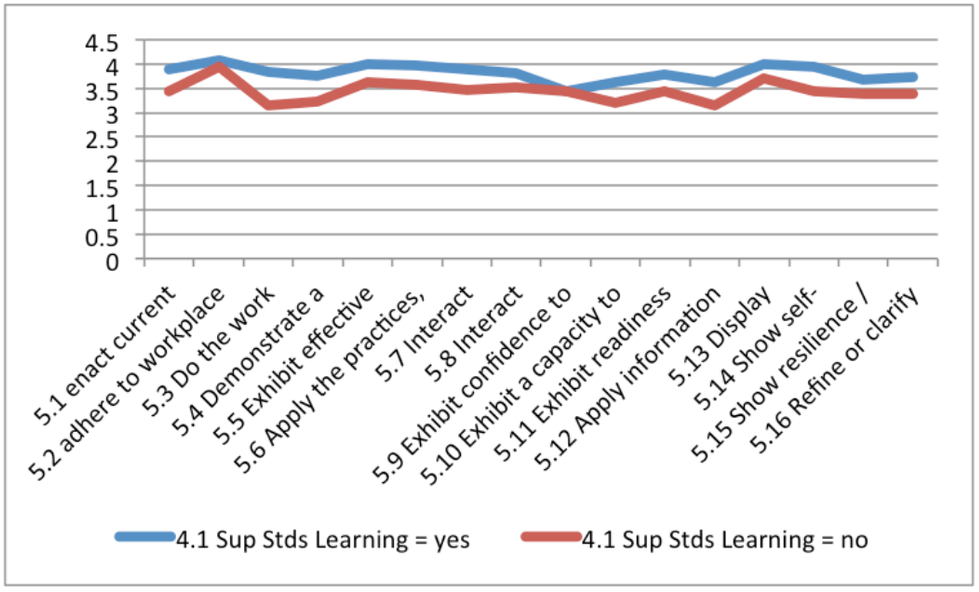


**Figure 18 Means of groups of employers who do and do not supervise students' learning**

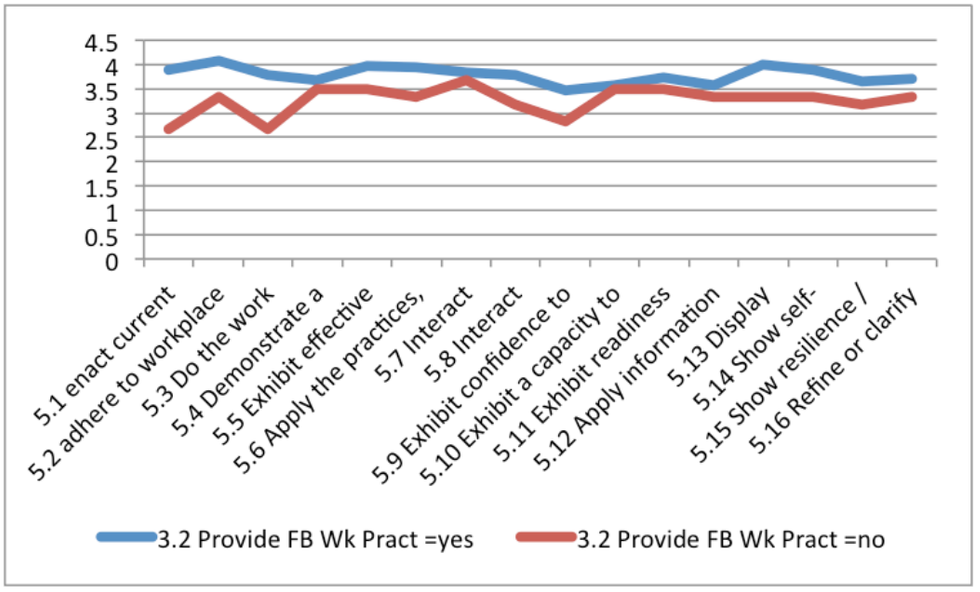


**Figure 19 Means of groups of employers who do and do not give students feedback on work-based performance**

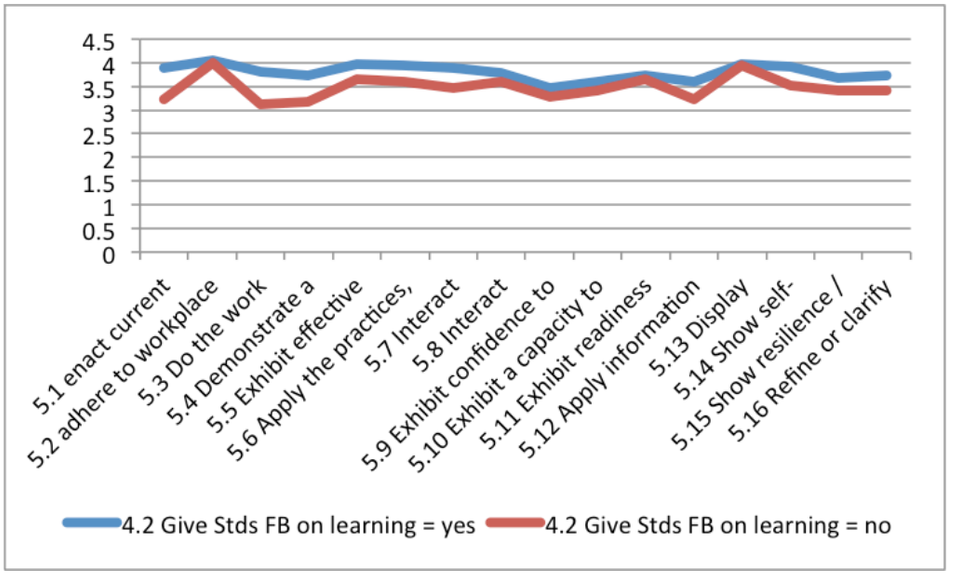


**Figure 20 Means of groups of employers who do and do not give students feedback on learning**

The results clearly show that the more involved the employer is in any of these four activities (supervision of work performances, supervision of learning, giving feedback on performance and giving feedback on learning) the higher is their appraisal of the students' abilities. Some of these differences are statistically significant.

The qualitative data show variation in the degree to which students are thought or observed to have developed

each of the key skill areas. In the following sections, Tables 21, 22 and 23 list comments coded according to agreement by employers that students develop in these areas (p=positive), disagreement (b=negative), or neutral (n=neutral). The comments are listed for illustrative purposes and no inference should be made about the relative frequency of categories of comments in the data set from their relative frequency in the tables.

**Professional practice and standards**

Comments about students' achievements in the professional practice and standards were made by 66% of respondents. Of these comments 12% were negative, 18% were neutral/ambiguous, and 70% were positive. Some examples are provided in Table 21.

The stimulus given in the survey to elicit responses was:

*6.1 Please comment on the development you observe in students' abilities to do any of the following: Show high professional standards and ethical practice (PROFESSIONAL PRACTICE AND STANDARDS)*

**Table 21 Professional practice and standards**

| | |
|---|---|
| Positive | • interns are exposed to a real world work environment and are able to see first-hand how important professional standards are integral to their overall performance level |
| | • modelling of this behaviour by seasoned professionals is of great benefit |
| | • develops well through placement |
| | • expected to develop and maintain the ethical practice standards of the profession of clinical psychology |
| | • This is ongoing and continues to be enhanced throughout the placement |
| Negative | • …they are just learning, can't show "high" standards |
| | • This doesn't happen. They also need professional development. |
| | • Not sure of where they are meant to sit in the office and their duties. |
| | • Not always to the highest standard. |

**Integration**

Comments about students' achievements in the integration domain were made by 64% of respondents. Of these comments 7% were negative, 12% neutral/ambiguous, and 81% were positive. Some examples are provided in Table 22.

The stimulus given was:

*6.2 Please comment on the development you observe in students' abilities to do any of the following: Integrate knowledge and practice / apply knowledge to practice (INTEGRATION)*

Table 22 Integration comments

| | |
|---|---|
| Positive | • Our work placements offer students a lot of opportunities to apply the knowledge they learn in the classroom to their placement. We find that the placement helps to give students the real-life experience to support their academic learning ….<br>• Interns are expected to use their training in their day to day work. The expectations are relative to their capability but we try to ensure that they are given guidance on how to apply what they have learnt in their University course to what we do in the Design studio.<br>• They are placed within a team, or rotate throughout teams and apply their learnings [*sic*] in a real environment with their work having impact on client outcomes |
| Negative | • [students] struggle to associate classroom learning to practice<br>• [students] struggle to relate theory to practice in some methodologies<br>• Typically they find it extremely hard to 'connect the dots' |

**Informed decision-making in context**

One-hundred-and-one employers (62%) made comments about students' achievements in the informed decision-making domain. Of these comments 12% were negative, 13% neutral/ambiguous, and 75% were positive. Some examples are in Table 23. The stimulus given was:

*6.3 Please comment on the development you observe in students' abilities to do any of the following: Use information to make decisions about their work (INFORMED DECISION-MAKING)*

Table 23 Informed decision making comments

| | |
|---|---|
| Positive | • The triangulation of information from different sources, different context and at different times<br>• This area often develops rapidly on placement. Of importance it is also the area that field practice highlights to student as the most lacking i.e., they become consciously unskilled as opposed to unconsciously unskilled. This cuts down the likelihood of naïve error.<br>• If this is related to their direct work, then information and knowledge within the context they work i.e. acute, palliative care etc., should assist guide the decisions they make about their work. If this question relates to direct practice, their framework and theoretical approach should be guiding their intervention following psychosocial assessments |
| Negative | • Not always able to make decisions on their own but with assistance<br>• [Students are] slow to realise that information is key to decision making<br>• [T]hey don't tend to make many decisions themselves - but they do ask questions<br>• They struggle with any form of decision making |

### Collaboration

One-hundred-and-seven employers (66%) made comments about students' achievements in the collaboration domain. Of these comments 6% were negative, 16% neutral/ambiguous, and 78% were positive. Some examples are in Table 24. The stimulus given was:

> *6.4 Please comment on the development you observe in students' abilities to do any of the following: Collaborate and interact with other employee (COLLABORATION)*

**Table 24 Collaboration comments**

| | |
|---|---|
| Positive | • Interns in our design studio interact with all of the team and marketing team to collaborate on projects and will develop a greater understanding of who to be a valuable member of a team in a professional environment<br>• Practicum is a hot house for developing these skills quickly and highlighting gaps.<br>• Communication, interpersonal skills, professional practice, use of self and work etiquette are just some examples of what is observed |
| Negative | • Rarely if ever happens<br>• We have a one to one arrangement in our office<br>• Collaborative practices are not strongly recognised in student placements. This is an important element of practice when working with the people in my industry who have complex needs across various disciplines. Students are often so focused on their discipline-specific learning that this is not a priority and I am not sure that it is necessarily a focus of development from universities. |

### General commencement-readiness

One-hundred-and-six employers (65%) made comments about students' achievements in the commencement-readiness domain. Of these comments 21% were negative, 28% neutral/ambiguous, and 51% were positive. Some examples are in Table 25. The stimulus given was:

> *6.5 Please comment on the development you observe in students' abilities to do any of the following: Commence work in this field and be effective immediately (COMMENCEMENT READY)*

**Table 25 General commencement-readiness comments**

| | |
|---|---|
| Positive | • Yes effective at an entry level. A work placement certainly makes them more work ready |
| | • I think the intern process directly impacts their ability to be immediately effective. |
| | • We have often employed as professionals people we had as students |
| | • We have in the past offered graduate roles to placement students and use it as a recruitment tool. |
| Negative | • To be independently useful takes 12 -24 months learning and training on the job. |
| | • This is very rare - most students are beginning practitioners and have a level of effectiveness, but are not yet fully competent. |
| | • Not possible, far more experience is required to reach this level of competence but they certainly get a good start down this road |
| | • Not always the case, training is generally required |

The relative proportions of coded comments (in the positive, neutral and negative categories) per domain are shown in Table 26 and graphically in Figure 21.

**Table 26 Relative frequency in categories (negative, neutral, positive) of comments for each domain**

| | Negative (b) | Neutral (n) | Positive (p) |
|---|---|---|---|
| Prof Practice & Standards | 12.1 | 17.8 | 70.1 |
| Integration | 6.7 | 12.5 | 80.8 |
| Informed Decision Making | 11.9 | 12.9 | 75.2 |
| Collaboration | 5.6 | 15.9 | 78.5 |
| Commencement Readiness | 20.8 | 28.3 | 50.9 |

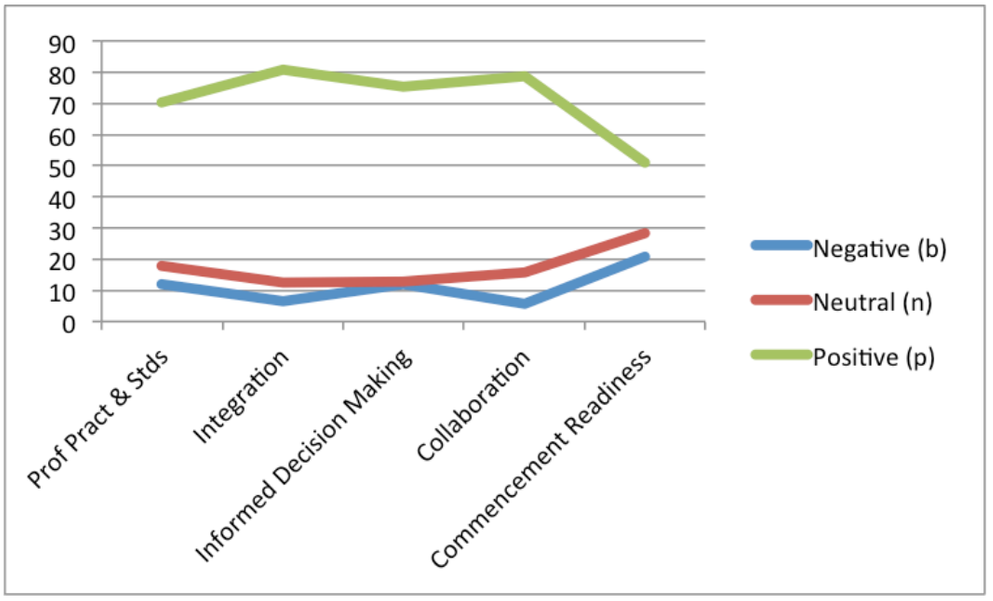


**Figure 21 Relative frequency in categories (negative, neutral, positive) of comments for each domain**

It is clear that the employers' comments in these five key domains of employability are far more likely to be positive than either negative or neutral/ambiguous.

## 7.4 Results

The employers' feedback about the students development as a consequence of their involvement in placement was generally positive, with means on all 16 questions 3.5 (on a 5-point scale) or above. Employer data indicates that there is a general agreement that students develop key employability skills from WIL placements. This development is sometimes seen as being subject to individual student commitment and prior abilities and therefore somewhat unpredictable. For some employers the standards implied in the questions were too high to expect of entry-level graduates. In spite of these two caveats, the general trend is positive with placement perceived as making a positive difference to the employment readiness of students. Employers' role in the creation of high quality placement experiences for students is a relatively under-studied phenomenon.

Roles will vary from discipline to discipline, but the study has revealed some likely dimensions of the contributions of employers / industry hosts to the placement experience. In this study four such dimensions were investigated. These dimensions were supervision of work practices, feedback on work performance, supervision of learning, and feedback on learning. Employers will necessarily be expected to play a role in the preparation of students for the workplace to minimise risks and occupational health and safety concerns, and ideally, they should be part of the preparation for the pedagogical and psychological experiences that students can expect.

The three-way expectations and contributions of students, university staff and industry partners need to be negotiated and continuously appraised. The notion of triciprocity (three-way reciprocity) has been coined as a reminder of the three-way negotiations that should occur between stakeholders. These negotiations are integral to establishing constructive engagement culminating in high-quality placements, that is, collaborative design, mutual responsibility-taking for the quality and the outcomes, and mutuality of contribution to the process.

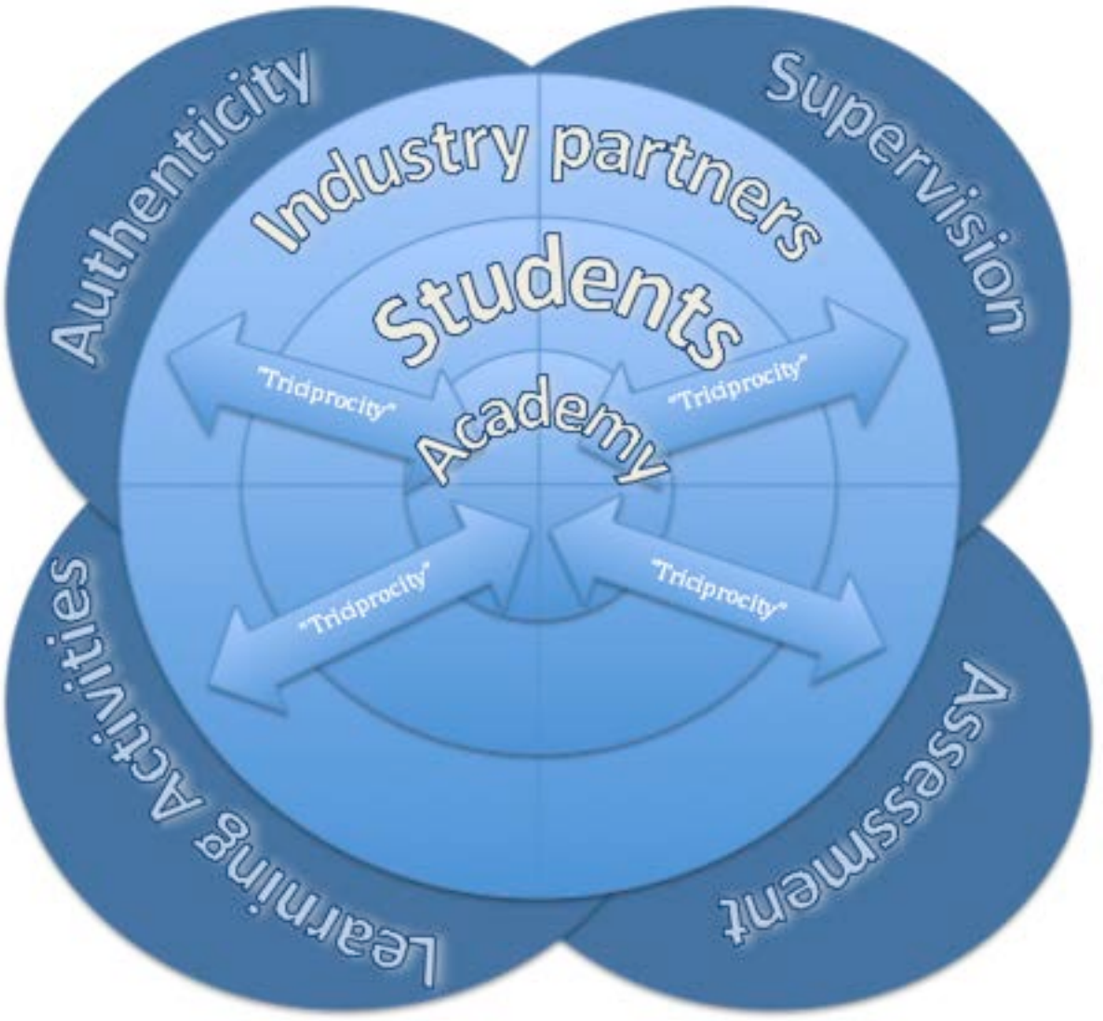


**Figure 22 A representation of the "triciprocity" agenda suggesting the three-way collaboration aimed at improving the quality of WIL**

**Recommendations:**

9. Industry and Community partners should be more involved in supervising students and providing feedback on student learning and workplace performance.
10. Industry and community partners and universities should collaborate on curriculum development and design, supervision of students and feedback on assessment.
11. Relationships between universities and industry/community partners should be structured, intentional and resourced.

# Chapter 8 Conclusions and recommendations

The suite of studies conducted for this project have explored and tested the question: to what extent, and in which sub-domains does WIL have an impact on students' readiness for employability. The rigour and multidimensional nature of this research has ensured substantial evidence on which to base the findings.

While the studies have exposed a great deal of information to inform curriculum design, employer engagement strategies and organisation of work-placements, several over-arching statements clearly emerge.

- placement WIL has an impact on employability outcomes larger than, and independent of the impact of simulation, career-development learning, age, work experience, and point-of-progression through degree
- the Student experience is enhanced when WIL is embedded and scaffolded vertically and horizontally across the curriculum
- In some instances simulation activities impact positively on outcomes, typically to a lesser extent than high-quality placement, and this leads to the conclusion that simulation should be the focus of further research in order to more fully understand the characteristics that constitute high-quality, high-impact simulation
- the magnitude of the impact is dependent upon the quality of the WIL activity
- structured and collaborative partnerships between stakeholders is essential for quality WIL outcomes.

Six key dimensions of employment-readiness were derived for the purposes of this project.

- Professional practice and standards
- Integration of theory and practice
- Commencement-readiness
- Informed decision making
- Lifelong learning
- Collaboration

Placement was measured by reference to the following curriculum dimensions:

Authenticity

- Learning activities  (aligned with integrative learning)
- Assessment (aligned with integrative learning)
- Supervision, preparation and debrief.

Figure 23 encapsulates the interrelationships among these dimensions. The diagram graphically portrays that the placement-quality curriculum dimensions create a context around the students that supports the development of the six employability dimensions.


**Figure 23 Schematic representation of relationships among curriculum and employability dimensions**

The following eleven recommendations are based on the findings of this rigorous and complex research project. The recommendations are framed in the context of contemporary literature around WIL and employability and the emerging debate about the role of collaboration and cooperation between industry partners and universities in the creation of high-quality WIL opportunities. These recommendations can be seen as constituting a framework for university leaders considering future commitments to WIL where employment readiness is a target outcome; for industry and community partners where work-ready graduates are pivotal to organisational success; and for government for whom human capital is fundamental to a sustainable and robust economy. A set of concise Good Practice Guides that summarise each of the curriculum dimensions and proposed role-based contributions from each of the stakeholder groups (students, universities and industry/community partners) has been developed. These are presented in Appendix G.

| Recommendations | |
|---|---|
| 1. | WIL opportunities should be built into curricula to enhance students' employability. |
| 2. | An evaluation framework outlining quality assurance standards for high quality WIL should be developed. |
| 3. | Simulated work experience should be the subject of future research to determine the characteristics of a quality simulated WIL experience that impacts on the work-readiness of students. |
| 4. | The curriculum dimensions of quality WIL such as authenticity, preparation, supervision, integration of theory and practice aligned to learning outcomes and assessment should form the basis of curriculum design. |
| 5. | WIL practitioners should be appropriately skilled, experienced and supported, to ensure quality WIL experiences and outcomes for students. |
| 6. | Appropriate professional development opportunities should be developed for WIL practitioners and industry/community partners. |
| 7. | The employability dimensions that emerged from this project should be used for national benchmarking across disciplines and institutions. |
| 8. | Resilience, motivation and attitudinal change emerged as important individual outcomes from WIL experiences and should be the subject of future research. |
| 9. | Industry and community partners should be more involved in supervising students and providing feedback on student learning and workplace performance. |
| 10. | Industry and community partners and universities should collaborate on curriculum development and design, supervision of students and feedback on assessment. |
| 11. | Relationships between universities and industry/community partners should be structured, intentional and resourced. |

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## Appendix A: Mapping of survey items with Jackson, Dacre Pool and Oliver

| No. | Item text | Jackson (2010) | Dacre-Pool (2007) | Oliver (2011) |
|---|---|---|---|---|
| 1 | effectively seek work relevant to my studies. | Self-efficacy | Career-dev't learning | Overall work-readiness |
| 2 | present myself effectively in selection interviews and processes. | Self-efficacy<br>Emotional Intelligence<br>Interpersonal skills | Career-dev't learning | Overall work-readiness |
| 3 | evaluate how well my skills and preferences "fit" different employment opportunities I might consider in the future | Metacognition<br>Lifelong learning | Career-dev't learning | Overall work-readiness |
| 4 | identify the expectations employers have of new graduates | Political skills<br>Critical thinking<br>Metacognition | Career-dev't learning | Think critically and analytically<br>Understand different social contexts<br>Overall work-readiness |
| 5 | appraise the quality of information I obtain e.g. from the web, from books or from other people. | Metacognition<br>Information management | | Using computers and IT |
| 6 | use information and my professional or workplace knowledge to come to reasonable decisions and then act on these. | Information management | | |
| 7 | weigh up risks, evaluate alternatives, make predictions from data and apply evaluation criteria to options. | Information management<br>Decision management<br>Problem-solving | | Solving complex real-world problems |
| 8 | collect, analyse and organise information. | Information management<br>Problem-solving | | |
| 9 | work towards a compromise between opposing views when is it the best thing for the enterprise / organisation. | Political skills<br>Adaptability<br>Leadership<br>Interpersonal skills<br>Team-work skills<br>Problem-solving | Adaptability<br>Working in teams | Working with others<br>Understand different social contexts |
| 10 | make sure everyone feels heard in group discussions. | Political skills<br>Emotional Intelligence<br>Leadership<br>Interpersonal skills<br>Team-work skills<br>Oral communication | Working in teams<br>Oral communication | Speaking clearly and effectively<br>Working with others<br>Understand different social contexts |
| 11 | interact appropriately with people from different levels of management / leadership / seniority in a workplace. | Political skills<br>Emotional Intelligence<br>Interpersonal skills<br>Team-work skills<br>Oral communication<br>Professionalism/work ethic | Working in teams<br>Oral communication | Speaking clearly and effectively<br>Working with others<br>Understand different social contexts |
| 12 | recognise the "politics" of a workplace environment. | Political skills<br>Diversity competent<br>Organisational skills<br>Operate in org environment | | Understanding people of other racial and ethnic backgrounds<br>Understand different social contexts |
| 13 | interact effectively and respectfully with people from other cultures. | Political skills<br>Emotional Intelligence<br>Diversity competent<br>Interpersonal skills<br>Team-work skills<br>Oral communication<br>Operating globally<br>Ethics and responsibility | Working in teams<br>Oral communication | Speaking clearly and effectively<br>Working with others<br>Understanding people of other racial and ethnic backgrounds<br>Understand different social contexts |

| | | | | |
|---|---|---|---|---|
| 14 | learn from and collaborate with people representing diverse backgrounds or viewpoints. | Political skills<br>Emotional Intelligence<br>Leadership<br>Diversity competent<br>Continuous improvement<br>Interpersonal skills<br>Team-work skills<br>Oral communication<br>Operating globally<br>Operate in org environment | Working in teams<br>Oral communication | Speaking clearly and effectively<br>Working with others<br>Understanding people of other racial and ethnic backgrounds<br>Understand different social contexts |
| 15 | continue to develop my work-related skills and knowledge independently. | Self-efficacy<br>Autonomy<br>Metacognition<br>Continuous improvement<br>Professionalism/work ethic<br>Lifelong learning<br>Information management<br>Problem-solving | Willingness to learning<br>Autonomy | Learning on your own |
| 16 | bring about a change in practices that will benefit the organisation or enterprise that employs me | Creativity<br>Entrepreneurship<br>Political skills<br>Adaptability<br>Initiative<br>Leadership<br>Critical thinking<br>Metacognition<br>Continuous improvement<br>Organisational skills<br>Team-work skills<br>Business acumen<br>Lifelong learning<br>Coaching<br>Project management<br>Operate in org environment<br>Problem-solving | Adaptability<br>Working in teams | Think critically and analytically<br>Working with others<br>Solving complex real-world problems |
| 17 | take responsibility and act alone with autonomy appropriate to my role and level of training. | Self-efficacy<br>Initiative<br>Autonomy<br>Professionalism/work ethic<br>Disciplinary expertise<br>Problem-solving | Subject knowledge understanding and skills<br>Autonomy | |
| 18 | seek out opportunities for further learning to develop my workplace or professional skills and/or knowledge. | Adaptability<br>Initiative<br>Autonomy<br>Metacognition<br>Continuous improvement<br>Professionalism/work ethic<br>Disciplinary expertise<br>Lifelong learning<br>Problem-solving | Adaptability<br>Willingness to learn<br>Autonomy | Work related knowledge and skills<br>Learning on your own |
| 19 | recognise ethical practice in the workplace. | Critical thinking<br>Accountability<br>Professionalism/work ethic<br>Ethics and responsibility | | Think critically and analytically |
| 20 | identify the standards of performance or practice expected in the workplace / my profession. | Attention to detail<br>Metacognition<br>Continuous improvement<br>Accountability<br>Professionalism/work ethic<br>Ethics and responsibility | Attention to detail | |

| | | | | |
|---|---|---|---|---|
| 21 | develop a personal code of values and ethics. | Attention to detail<br>Political skills<br>Critical thinking<br>Autonomy<br>Metacognition<br>Accountability<br>Professionalism/work ethic<br>Ethics and responsibility | Autonomy<br>Attention to detail | Think critically and analytically<br>Develop a personal code of values and ethics.<br>Understand different social contexts |
| 22 | interpret and follow workplace procedures. | Attention to detail<br>Team-work skills<br>Accountability<br>Professionalism/work ethic<br>Ethics and responsibility<br>Operate in org environment | Working in teams<br>Attention to detail | Working with others<br>Understand different social contexts |
| 23 | demonstrate an awareness of the legislative and regulatory context in which the enterprise / profession operates. | Reliability<br>Critical thinking<br>Continuous improvement<br>Organisational skills<br>Accountability<br>Professionalism/work ethic<br>Information management<br>Ethics and responsibility<br>Operate in org environment<br>Decision management<br>Problem-solving | Attention to detail | Think critically and analytically<br>Understand different social contexts |
| 24 | understand the key drivers for success in this enterprise / profession. | Entrepreneurship<br>Business acumen | | Understand different social contexts |
| 25 | judge the applicability of the knowledge gained in my studies to the workplace | Critical thinking<br>Metacognition<br>Lifelong learning<br>Operate in org environment<br>Decision management<br>Problem-solving | Reflection and evaluation<br>Career-dev't learning | Think critically and analytically<br>Solving complex real-world problems |
| 26 | apply knowledge and skills gained in my studies to the workplace. | Accountability<br>Professionalism/work ethic<br>Disciplinary expertise<br>Use of IT | Subject knowledge understanding and skills | Work related knowledge and skills<br>Using computers and IT<br>Solving complex real-world problems |
| 27 | link together different theoretical perspectives when working on a workplace or professional task or problem | Metacognition<br>Professionalism/work ethic<br>Disciplinary expertise<br>Intellectual ability | Subject knowledge understanding and skills | Work related knowledge and skills<br>Solving complex real-world problems |
| 28 | give clear instructions or advice to colleagues to achieve an outcome. | Leadership<br>Team-work skills<br>Oral communication<br>Coaching | Working in teams<br>Oral communication | Speaking clearly and effectively<br>Working with others |
| 29 | seek clarification when I do not understand an instruction. | Attention to detail<br>Metacognition<br>Team-work skills<br>Oral communication<br>Professionalism/work ethic<br>Ethics and responsibility<br>Operate in org environment<br>Problem-solving | Working in teams<br>Oral communication | Speaking clearly and effectively<br>Working with others |
| 30 | write clearly using an appropriate style depending on the workplace and target audience. | Written communication | Written communication | Writing clearly and effectively |

| | | | | |
|---|---|---|---|---|
| 31 | listen empathetically, sympathetically and with compassion to colleagues in the workplace. | Emotional Intelligence<br>Leadership<br>Diversity competent<br>Interpersonal skills<br>Team-work skills<br>Oral communication | Working in teams<br>Oral communication | Speaking clearly and effectively<br>Working with others<br>Understanding people of other racial and ethnic backgrounds |
| 32 | effectively manage multiple and different priorities to achieve a range of workplace or professional goals | Attention to detail<br>Reliability<br>Autonomy<br>Metacognition<br>Organisational skills<br>Multi-tasking<br>Operate in org environment | Autonomy<br>Work under pressure | |
| 33 | manage my emotions when in workplace or professional settings. | Emotional Intelligence<br>Accountability<br>Professionalism/work ethic<br>Operate in org environment | Emotional intelligence | |
| 34 | take responsibility and be accountable for my workplace or professional practice, actions and decisions. | Stress tolerance<br>Reliability<br>Autonomy<br>Organisational skills<br>Team-work skills<br>Accountability<br>Professionalism/work ethic<br>Ethics and responsibility | Autonomy<br>Responsibility | Working with others |
| 35 | use numbers and apply calculation formulas to solve numerical problems to an appropriate level of accuracy for work | Numeracy<br>Information management<br>Problem-solving | Numeracy | Analysing quantitative problems<br>Solving complex real-world problems |
| 36 | identify the usefulness and value of continuing to learn in order to improve work or professional practice. | Metacognition<br>Lifelong learning | Willingness to learn | Learning on your own |
| 37 | identify the knowledge I lack / need to improve to be effective in the workplace. | Initiative<br>Metacognition<br>Continuous improvement<br>Accountability<br>Professionalism/work ethic<br>Lifelong learning | Career-dev't learning | Learning on your own |
| 38 | identify the skills I lack / need to improve to be effective in the workplace. | Initiative<br>Metacognition<br>Continuous improvement<br>Accountability<br>Professionalism/work ethic<br>Lifelong learning | Career-dev't learning | Learning on your own |
| 39 | recognise and value the role of theoretical ideas in work or professional contexts. | Metacognition<br>Continuous improvement<br>Professionalism/work ethic<br>Disciplinary expertise<br>Lifelong learning | Subject knowledge understanding and skills<br>Willingness to learn | Work related knowledge and skills<br>Learning on your own |
| 40 | be prepared to invest time and effort in learning new skills. | Metacognition<br>Continuous improvement<br>Accountability<br>Professionalism/work ethic<br>Lifelong learning | Willingness to learn | Learning on your own |
| 41 | understand the theories and principles in my discipline | Disciplinary expertise | Subject knowledge understanding and skills | Work related knowledge and skills |
| 42 | understand the practices and methods used in my discipline | Disciplinary expertise | Subject knowledge understanding and skills | Work related knowledge and skills |
| 43 | commence a job in my field and be immediately effective as a worker / new professional. | Self-efficacy<br>Disciplinary expertise | Subject knowledge understanding and skills | Overall work-readiness |
| 44 | overall work readiness confidence | Self-efficacy | Self-efficacy | Overall work-readiness |

| | | | | |
|---|---|---|---|---|
| 45 | able to obtain work relevant to studies | Self-efficacy | Self-efficacy | Overall work-readiness |

# Employability Impact Survey

## Welcome to the Impact of WIL on Employability Study!

This survey is about the way that university studies help you become prepared to start a job or career. One of the ways this is achieved is by building
into your studies the opportunity to practice applying your knowledge and skills in either real workplaces (e.g. placements) or through simulations,
role plays and so on. We are trying to understand the ways these curriculum factors affect your readiness to start work.

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Charles Sturt University

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MACQUARIE UNIVERSITY SYDNEY~AUSTRALIA

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SWINBURNE UNIVERSITY OF TECHNOLOGY

THE UNIVERSITY OF NEWCASTLE AUSTRALIA

UNIVERSITY OF CANBERRA

University of Western Sydney

VICTORIA UNIVERSITY MELBOURNE AUSTRALIA

# Employability Impact Survey

This voluntary survey invites your views on the impact of Work Integrated Learning on your work-readiness. WIL is the integration of theory and practice to ensure the relevance and currency of the student experience. WIL activities include work placement, simulation, role play, case study, problem-based learning, project work, reflective journals and capstone subjects.

Your contribution is highly valued, and will be used to increase understandings of the impact of work-placements and university WIL practices on your learning outcomes. This research is being conducted across fourteen Australian universities as part of an Office of Learning and Teaching funded project. The findings will be disseminated to university education planners and partners.

Through participating in this survey you may win one of 10 Amazon gift vouchers worth $100US each.

Your involvement in the research is entirely voluntary. You have the right to withdraw at any stage. You will not be identified in any way in publications or data arising from this survey. Your participation in the survey indicates your consent for your anonymous feedback to be used for a range of scholarly purposes including publications in scholarly journals and conferences.

All information will be confidential to the research team. For further information consult Griffith University's Privacy Plan at http://www.griffith.edu.au/about-griffith/plans-publications/griffith-university-privacy-plan or telephone (07) 3735 5585. Ethical approval has been gained through Griffith University's Ethics Committee and the Ethics reference number is GIH/01/12/HREC. Griffith University conducts research in accordance with the National Statement on Ethical Conduct in Human Research. If you have any concerns or complaints concerning the ethical conduct of the research project contact the Senior Manager, Research Ethics and Integrity on 07 3735 5585 or research-ethics@griffith.edu.au. For any further questions in relation to the research, you are invited to visit this website http://www.griffith.edu.au/gihe/research/assessing-wil-impact or contact Dr Calvin Smith, email calvin.smith@griffith.edu.au or phone: 07 3385 6816.

Thank you for participating in this research!

## Section 1: About your employment-readiness...

# Employability Impact Survey

## Please rate your ability to do each of the following:

| | very poor | poor | don't know | good | very good |
|---|---|---|---|---|---|
| 1.1. effectively seek work relevant to my studies. | | | | | |
| 1.2. present myself effectively in selection interviews and processes. | | | | | |
| 1.3. evaluate how well my skills and preferences "fit" different employment opportunities I might consider in the future | | | | | |
| 1.4. identify the expectations employers have of new graduates | | | | | |
| 1.5. appraise the quality of information I obtain e.g. from the web, from books or from other people. | | | | | |
| 1.6. use information and my professional or workplace knowledge to come to reasonable decisions and then act on these. | | | | | |
| 1.7. weigh up risks, evaluate alternatives, make predictions from data and apply evaluation criteria to options. | | | | | |
| 1.8. collect, analyse and organise information. | | | | | |
| 1.9. work towards a compromise between opposing views when is it the best thing for the enterprise / organisation. | | | | | |
| 1.10. make sure everyone feels heard in group discussions. | | | | | |
| 1.11. interact appropriately with people from different levels of management / leadership / seniority in a workplace. | | | | | |
| 1.12. recognise the "politics" of a workplace environment. | | | | | |
| 1.13. interact effectively and respectfully with people from other cultures. | | | | | |
| 1.14. learn from and collaborate with people representing diverse backgrounds or viewpoints. | | | | | |
| 1.15. continue to develop my work-related skills and knowledge independently. | | | | | |

## 1. Employability skills (continued)

# Employability Impact Survey

Please rate your ability to do each of the following:

| | very poor | poor | don't know | good | very good |
|---|---|---|---|---|---|
| 1.16. bring about a change in practices that will benefit the organisation or enterprise that employs me | | | | | |
| 1.17. take responsibility and act alone with autonomy appropriate to my role and level of training. | | | | | |
| 1.18. seek out opportunities for further learning to develop my workplace or professional skills and/or knowledge. | | | | | |
| 1.19. recognise ethical practice in the workplace. | | | | | |
| 1.20. identify the standards of performance or practice expected in the workplace / my profession. | | | | | |
| 1.21. develop a personal code of values and ethics. | | | | | |
| 1.22. interpret and follow workplace procedures. | | | | | |
| 1.23. demonstrate an awareness of the legislative and regulatory context in which the enterprise / profession operates. | | | | | |
| 1.24. understand the key drivers for success in this enterprise / profession. | | | | | |
| 1.25. judge the applicability of the knowledge gained in my studies to the workplace | | | | | |
| 1.26. apply knowledge and skills gained in my studies to the workplace. | | | | | |
| 1.27. link together different theoretical perspectives when working on a workplace or professional task or problem | | | | | |
| 1.28. give clear instructions or advice to colleagues to achieve an outcome. | | | | | |
| 1.29. seek clarification when I do not understand an instruction. | | | | | |
| 1.30. write clearly using an appropriate style depending on the workplace and target audience. | | | | | |

## 1. Employability skills (continued)

# Employability Impact Survey

## Please rate your ability to do each of the following:

| | very poor | poor | don't know | good | very good |
|---|---|---|---|---|---|
| 1.31. listen empathetically, sympathetically and with compassion to colleagues in the workplace. | | | | | |
| 1.32. effectively manage multiple and different priorities to achieve a range of workplace or professional goals (multi-tasking) to agreed timeframes | | | | | |
| 1.33. manage my emotions when in workplace or professional settings. | | | | | |
| 1.34. take responsibility and be accountable for my workplace or professional practice, actions and decisions. | | | | | |
| 1.35. use numbers and apply calculation formulas to solve numerical problems to an appropriate level of accuracy for work or professional practice. | | | | | |
| 1.36. identify the usefulness and value of continuing to learn in order to improve work or professional practice. | | | | | |
| 1.37. identify the knowledge I lack / need to improve to be effective in the workplace. | | | | | |
| 1.38. identify the skills I lack / need to improve to be effective in the workplace. | | | | | |
| 1.39. recognise and value the role of theoretical ideas in work or professional contexts. | | | | | |
| 1.40. be prepared to invest time and effort in learning new skills. | | | | | |
| 1.41. understand the theories and principles in my discipline | | | | | |
| 1.42. understand the practices and methods used in my discipline | | | | | |
| 1.43. commence a job in my field and be immediately effective as a worker / new professional. | | | | | |

## Confidence in future work prospects

### 1. How confident are you that you are:

| | not at all confident | slightly confident | somewhat confident | quite confident | very confident |
|---|---|---|---|---|---|
| 1.44. ready to commence work in your field or discipline. | | | | | |
| 1.45. able to obtain work relevant to your studies. | | | | | |

## Year of study

### 1.46 In what year did you start your current program of study?

6

## Section 2: About your studies

# Employability Impact Survey

This set of questions is about the kinds of class-room and placement experiences you have had in your studies.

"Placement" means a real workplace experience that forms a part of your studies, for example: a practicum, work-placement, clinic (e.g. dental, veterinary, podiatry, physio with real clients whether the clinic is on or off campus), internship, fieldwork, etc.

2.1 How many work placements have you completed throughout your studies?

6

## About placements

"Placement" means a real workplace experience that forms a part of your studies, for example: a practicum, work-placement, clinic (e.g. dental, veterinary, podiatry, physio with real clients whether the clinic is on or off campus), internship, fieldwork, etc.

2.2 Approximately how many weeks of full-time (37.5hours/week or more) placement have you completed overall in your studies thus far?

Please enter zero (0) if you've done no full-time placements.

2.2. Full-time (in weeks) (use numbers only)

2.3 Approximately how many weeks of part-time (less than 37.5hours/week) placement have you completed overall in your studies thus far?

Please enter zero (0) if you have done no part-time placements.

2.2 Part-time (in weeks) (use numbers only)

# Employability Impact Survey

## 2.4 In your mostrecent placement, how often did you:

| | never | sometimes | regularly | frequently |
|---|---|---|---|---|
| 2.4.1 undertake work relevant to the learning outcomes? | | | | |
| 2.4.2 undertake work relevant to the goals of the organisation you were placed in? | | | | |
| 2.4.3 contribute worthwhile outcomes for the organisation (such as a product, or change in practice or policy)? | | | | |
| 2.4.4 apply theories you had learned in class? | | | | |
| 2.4.5 apply or develop skills you had learned in class? | | | | |
| 2.4.6 critically evaluate theories you had learned in class? | | | | |
| 2.4.7 critically evaluate workplace practices you observed or engaged in? | | | | |
| 2.4.8 reflect on applying your discipline knowledge in the workplace? | | | | |
| 2.4.9 work with responsibility or autonomy? | | | | |

## 2.5.1 Across allyourplacements, on average, how often were these skills assessed:

| | never | sometimes | regularly | frequently |
|---|---|---|---|---|
| 2.5.1 Your use of theory to justify practice decisions | | | | |
| 2.5.2 Your professional practice competencies / skills | | | | |
| 2.5.3 Your reflections on the experience | | | | |
| 2.5.4 Your reflections on the practices you witnessed in the workplace | | | | |
| 2.5.5 Your reflections on the applicability of discipline knowledge to practice | | | | |

## Placements (cont)

# Employability Impact Survey

Please indicate your level of agreement with the following statements:

During my placement/s...

| | Strongly Disagree | Disagree | Neither | Agree | Strongly Agree |
|---|---|---|---|---|---|
| 2.5.6 I had regular contact with an academic supervisor from the university in order to discuss my learning whilst on placement | | | | | |
| 2.5.7 I had regular contact with a workplace supervisor from the placement organisation in order to discuss my learning whilst on placement | | | | | |
| 2.5.8 I had a preparation program or resources that helped me prepare for the placement psychologically / emotionally | | | | | |
| 2.5.9 I had a preparation program or resources that helped me prepare for the placement to help me maiximise my learning whilst on placement | | | | | |
| 2.5.10 I had time with my academic supervisor after the placement to reflect on my learning from placement | | | | | |
| 2.5.11 I had time with my academic supervisor after the placement to discuss my experiences on placement | | | | | |

## Simulations

Simulations and other "high-authenticity" activities mimic real-world / real-work experience, without actually being in real-world work settings.

They occur at university, in class, in special "mock" situations or in simulated work environments.

Depending on the discipline these could include things like: moot court, standardised patients, mock hospital bedside, flight simulation, architecture critiques, over-the-counter simulated pharmacy interactions, role-plays, cadastral / mapping surveys around campus, business investment / share market simulations in spreadsheets, practice social survey data analysis, wet and dry labs in biology or chemistry.

2.6.1 In your program so far...

| | never | occasionally | regularly | frequently |
|---|---|---|---|---|
| 2.6.1 how often you have done simulations to help you learn your discipline | | | | |

2.6.2 Across all the simulations you've done...

| | Very low | Low | Moderate | High | Very high |
|---|---|---|---|---|---|
| 2.6.2 How would you rate their "authenticity" (Remember - authenticity is how closely the activity "matches" the reality of the world of work). | | | | | |

## **Career** development

# Employability Impact Survey

## 2.7 Activitiestohelpwithcareerdevelopmentandplanning

In your program so far how often have you experienced the following:

| | never | sometimes | regularly | frequently |
|---|---|---|---|---|
| 2.7.1 Activities to give you information about the industry, standards and expectations employers have of new graduates., etc (e.g.talks by industry visitors in class time, field trips to relevant workplaces, and so on.) | | | | |
| 2.7.2 Activities to help you apply for jobs (e.g. job application writing information or practice sessions; talks by experts in careers guidance; job interview practice sessions, and so on). | | | | |
| 2.7.3 Services to help you plan your career or apply for jobs (e.g. individual consultations with student advisors, resume writing advice or resume writing assistance through resources such as documents, or videos on the web, etc.). | | | | |

## Section 3 - And now, some questions about you...

3.0 At what university are you studying?

3.1 Are you male or female?

- Male
- Female

3.2 To which age group do you belong?

3.3 What is your main mode of study?

- On-campus
- Distance mode
- A mix of on-campus and distance mode

3.4 How do you mainly undertake your studies?

- Part-time
- Full-time

3.5 What is the name of the qualification/degree/program you are studying? e.g. Bachelor of Nursing, Bachelor of Arts (Law).

# Employability Impact Survey

3.6 At what level is the qualification you are currently studying?

- Undergraduate
- Postgraduate

3.7 Ignoring any "placements" in a workplace done as part of your studies, how much general work experience do you have (including part-time, full-time,volunteering and paid work)?

"Placement" means a real workplace experience that forms a part of your studies, for example: a practicum, work-placement, clinic (e.g. dental, veterinary, podiatry, physio with real clients whether the clinic is on or off campus), internship, fieldwork, etc.

- Less than 2 years
- 2-5 years
- 6-10 years
- 11-20 years
- more than 20 years

3.8 Are you currently working as well as studying?

- No
- Yes (but less than 20 hours a week)
- Yes (20 or more hours a week)

## Is this your final year?

3.9 Is this your final year of study?

## I am a final-year student

2.9 If yes, then would you agree to being contacted again for follow-up survey towards the end of this year?

- No
- Yes

If "yes", what is the best email address to use to contact you?

## Thank you! You are done....

...but wait!

Don't forget to go into the draw for 1 of 10 Amazon gift vouchers each worth $100US: If you wish to go in the draw you can enter your details by clicking HERE

## Impact of Work-Integrated Learning on Student Work Readiness

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THE UNIVERSITY OF NEWCASTLE AUSTRALIA

UNIVERSITY OF CANBERRA

VICTORIA UNIVERSITY MELBOURNE AUSTRALIA

# _Impact of Work-Integrated Learning on Student Work Readiness

This voluntary survey invites your views on the impact of Work Integrated Learning on your work-readiness. WIL is the integration of theory and practice to ensure the relevance and currency of the student experience. WIL activities include work placement, simulation, role play, case study, problem-based learning, project work, reflective journals and capstone subjects.

Your contribution is highly valued, and will be used to increase understandings of the impact of work-placements and university WIL practices on your learning outcomes. This research is being conducted across fourteen Australian universities as part of an Office of Learning and Teaching funded project. The findings will be disseminated to university education planners and partners. Through participating
in this survey you may win an Amazon gift voucher worth $100.

Your involvement in the research is entirely voluntary. You have the right to withdraw at any stage. You will not be identified in any way in publications or data arising from this survey. Your participation in the survey indicates your consent for your anonymous feedback to be used for a range of scholarly purposes including publications in scholarly journals and conferences.

All information will be confidential to the research team. For further information consult Griffith University's Privacy Plan at http://www.griffith.edu.au/about-griffith/plans-publications/griffith-university-privacy-plan or telephone (07) 3735 5585. Ethical approval has been gained through Griffith University's Ethics Committee and the Ethics reference number is GIH/01/12/HREC. Griffith University conducts research in accordance with the National Statement on Ethical Conduct in Human Research. If you have any concerns or complaints concerning the ethical conduct of the research project contact the Senior Manager, Research Ethics and Integrity on 07 3735 5585 or research-ethics@griffith.edu.au. For any further questions in relation to the research, you are invited to visit this website http://www.griffith.edu.au/gihe/research/assessing-wil-impact or contact Dr Calvin Smith, email calvin.smith@griffith.edu.au or phone: 07 3385 6816.

Thank you for participating in this research!

# _Impact of Work-Integrated Learning on Student Work Readiness

## Section 1. Demographics

### 1.1 Are you male or female?

- Male
- Female

### 1.2 To which age group do you belong?

### 1.3 What is your main mode of study?

- On-campus
- Distance learning
- A mix of on-campus and distance learning

### 1.4 What is the main language you speak at home?

- English
- Other (please specify)

### 1.5 What is your country of permanent residence?

### 1.6 What is your Australian home post-code?

## 1. Demographics (cont.)

### 1.7 What is the highest level of education completed by your father, mother or primary carer/custodian (please indicate this for the person with the highest level of education)

- No school
- Primary school
- Some or all of secondary school
- Vocational certificate or diploma
- Bachelor degree
- Graduate diploma / graduate certificate
- Master Degree
- PhD or equivalent
- Not sure

### 1.8 How do you mainly undertake your studies?

- Part-time
- Full-time

### 1.9 In what year did you start your current program of study?

- Before 2008
- 2008
- 2009
- 2010
- 2011
- 2012

### 1.10 What is the duration of your degree program when studied full-time?

- 1 year
- 2 years
- 3 years
- 4 years
- 5 years
- 6 years or more

1.11 What number of full-time equivalent semesters of this program have you successfully completed?

- None (I have not completed my first semester yet)
- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11 or more

1.12 Give the code and/or name of the unit/subject whose teacher has directed you to this survey (e.g. MAN503)

# _Impact of Work-Integrated Learning on Student Work Readiness

## 1. Demographics (cont.)

1.13 What is the name of the qualification/degree/program you are studying? e.g. Bachelor of Nursing, Bachelor of Arts (Law).

1.14 At what level is the qualification you are currently studying?

- Under-graduate
- Post-graduate

1.15 Approximately how many weeks of full-time (37.5hours/week or more) and/or part-time (less than 37.5hours/week) placement have you completed overall in your studies thus far? Please enter zero (0) for categories which do not apply.

("Placement" means a real workplace experience that forms a part of your studies, for example: a practicum, work-placement, clinic (e.g. dental, veterinary, podiatry, physio with real clients whether the clinic is on or off campus), internship, fieldwork, etc.)

Part-time (in weeks)

Full-time (in weeks)

1.16 How much general work experience do you have (including part-time, full-time, volunteering and paid work), excludingplacements for studies?

6

1.17 Are you currently working as well as studying?

- Yes
- No

1.18 If you have answered "Yes" to Q1.17 above, state your current work commitments below and enter zero (0) for categories which do not apply. (If you answered "No" to Q1.17, just fill in zeros.)

Paid full time (hours per week)

Paid part time (hours per week)

Paid casual (hours per week)

Volunteering full time (hours per week)

Volunteering part time (hours per week)

Volunteering casual (hours per week)

1.19 In how many different TYPES of employment industries/sectors/fields have you worked? (e.g. you may have had three different jobs waiting tables, but these would count as just one type of industry/sector/field - food and beverage)

- 1
- 2
- 3
- 4
- 5 or more

Draw notification

# _Impact of Work-Integrated Learning on Student Work Readiness

## 2. About your skills

Rate your ability to...

.

| | very poor | considerably below average | slightly below average | average | slightly above average | considerably above average | very good |
|---|---|---|---|---|---|---|---|
| 2.1 solve problems. | | | | | | | |
| 2.2 think critically and analytically. | | | | | | | |
| 2.3 tackle unfamiliar problems. | | | | | | | |
| 2.4 analyse quantitive information and/or data. | | | | | | | |
| 2.5 communicate in writing. | | | | | | | |
| 2.6 communicate verbally. | | | | | | | |
| 2.7 use computing and information technologies. | | | | | | | |
| 2.8 work independently. | | | | | | | |
| 2.9 learn independently. | | | | | | | |
| 2.10 work effectively in a team. | | | | | | | |
| 2.11 work effectively with people from different cultures and backgrounds. | | | | | | | |
| 2.12 lead and/or influence others | | | | | | | |

## Q 3. Work "placement".

In this study "placement" means a realworkplaceexperiencethatformsapartofyourstudies, for example: a practicum, work-placement, internship, fieldwork, clinic (e.g. dental, veterinary, podiatry, physio with real clients whether the clinic is on or off campus), etc.

3.0 Are you presently doing (or have you just completed in the current semester) a "placement" or other form of workplace activity as part of your studies?

- Yes
- No

## Q 3. (cont.) ...about your placement

Thinking only about your placement undertaken for this subject, how often during the placement did you...

| | never | rarely | about half of the time | usually | always |
|---|---|---|---|---|---|
| 3.1 undertake work relevant to the learning outcomes of the subject? | | | | | |
| 3.2 undertake work relevant to the goals of the organistion you were placed in? | | | | | |
| 3.3 contribute worthwhile outcomes for the organisation (such as a product, or change in practice or policy)? | | | | | |
| 3.4 apply theories you had learned in class? | | | | | |
| 3.5 apply or develop skills you had learned in class? | | | | | |
| 3.6 critically evaluate theories you had learned in class? | | | | | |
| 3.7 critically evaluate workplace practices you observed or engaged in? | | | | | |
| 3.8 reflect on applying your discipline knowledge in the workplace? | | | | | |
| 3.9 work with an appropriate level of responsibility or autonomy? | | | | | |

3.10 what were the best aspects of your placement?

3.11 how could your placement experience have been improved?

Thinking about all the units/subjects you've studied so far in your degree (except your current placement if you are doing one*), to what extent have the following applied?

*If you are currently doing or just finished a PLACEMENT or other form of workplace activity as part of your degree, do NOT include the placement in your assessment here...just answer about therestofyourstudies.

Remember: "placement" means a real workplace experience that forms a part of your studies, for example: a practicum, work-placement, clinic (e.g. dental, veterinary, podiatry, physio with real clients whether the clinic is on or off campus), internship, fieldwork, etc.

## 4. How often has this happened in your studies generally?

| | never | rarely | about half of the time | usually | always |
|---|---|---|---|---|---|
| 4.1 I have had practical experience dealing with actual work or real world situations. | | | | | |
| 4.2 I have worked on assignments or projects that deal with real world information or client. | | | | | |
| 4.3 I have experienced a role play, case study or simulation as part of a class activity. | | | | | |
| 4.4 I have practised the skills I am learning at university in real life or simulated settings. | | | | | |
| 4.5 My lecturers have linked theorectical ideas to the "real world" of work. | | | | | |
| 4.6 I have explored how to apply my learning to the workplace or other real world settings. | | | | | |

## Time travel...

We are going back in time now...

We will ask you to rateyourselfon18coreemployment-relatedskills - at THREE different times

1. NOW
2. at the START of THIS SEMESTER, and
3. at the START OF YOUR STUDIES in this degree/qualification.

## Q 5. Your employment-related abilities NOW

5. Rate your skill level for each of the following skills atthemoment-i.e.yourskilllevel NOW

| | very poor | considerably below average | slightly below average | average | slightly above average | considerably above average | very good |
|---|---|---|---|---|---|---|---|
| 5.1.3 seek work relevant to your studies. | | | | | | | |
| 5.2.3 identify the expectations employers have of new graduates. | | | | | | | |
| 5.3.3 identify your workplace/professional skills. | | | | | | | |
| 5.4.3 identify the skills you lack / need to improve to be effective in the workplace. | | | | | | | |
| 5.5.3 identify the knowledge you lack / need to improve to be effective in the workplace. | | | | | | | |
| 5.6.3 evaluate how well your skills and preferences "fit" different employment opportunities you might consider in the future. | | | | | | | |
| 5.7.3 present yourself effectively in selection interviews and processes. | | | | | | | |
| 5.8.3 recognise ethical practice *in the workplace*. | | | | | | | |
| 5.9.3 recognise general ethical and social issues *beyond your discipline*. | | | | | | | |
| 5.10.3 apply knowledge and skills gained in your studies to the workplace. | | | | | | | |
| 5.11.3 judge the applicability of the knowledge gained in your studies to the workplace. | | | | | | | |
| 5.12.3 interpret and follow workplace | | | | | | | |

procedures.

| |
|---|
| 5.13.3 recognise the "politics" of a workplace environment. |
| 5.14.3 develop your work-related skills and knowledge. |
| 5.15.3 interact *appropriately* with people from *different* levels of management / leadership / seniority in a workplace. |
| 5.16.3 understand the theories and principles in your discipline. |
| 5.17.3 understand the practices and methods used in your discipline. |
| 5.18.3 Rate your overall feeling of readiness for the workplace. |

# _Impact of Work-Integrated Learning on Student Work Readiness

## Q5 (cont') Your employment-related abilities AT THE START OF THIS SEMESTER....

Rate your skill level for each of the following skills atthestartofTHISSEMESTER

| | very poor | considerably below average | slightly below average | average | slightly above average | considerably above average | very good |
|---|---|---|---|---|---|---|---|
| 5.1.2 seek work relevant to your studies. | | | | | | | |
| 5.2.2 identify the expectations employers have of new graduates. | | | | | | | |
| 5.3.2 identify your workplace/professional skills. | | | | | | | |
| 5.4.2 identify the skills you lack / need to improve to be effective in the workplace. | | | | | | | |
| 5.5.2 identify the knowledge you lack / need to improve to be effective in the workplace. | | | | | | | |
| 5.6.2 evaluate how well your skills and preferences "fit" different employment opportunities you might consider in the future. | | | | | | | |
| 5.7.2 present yourself effectively in selection interviews and processes. | | | | | | | |
| 5.8.2 recognise ethical practice *in the workplace*. | | | | | | | |
| 5.9.2 recognise general ethical and social issues *beyond your discipline*. | | | | | | | |
| 5.10.2 apply knowledge and skills gained in your studies to the workplace. | | | | | | | |
| 5.11.2 judge the applicability of the knowledge gained in your studies to the workplace. | | | | | | | |
| 5.12.2 interpret and follow workplace | | | | | | | |

procedures.

| |
|---|
| 5.13.2 recognise the "politics" of a workplace environment. |
| 5.14.2 develop your work-related skills and knowledge. |
| 5.15.2 interact *appropriately* with people from *different* levels of management / leadership / seniority in a workplace. |
| 5.16.2 understand the theories and principles in your discipline. |
| 5.17.2 understand the practices and methods used in your discipline. |
| 5.18.2 Rate your overall feeling of readiness for the workplace. |

## Q5 (cont') Your employment-related abilities at the start of your studies i...

Rate your skill level for each of the following skills attheCOMMENCEMENTOFYOUR STUDIESinthisdegree/program/qualification

| | very poor | considerably below average | slightly below average | average | slightly above average | considerably above average | very good |
|---|---|---|---|---|---|---|---|
| 5.1.1 seek work relevant to your studies. | | | | | | | |
| 5.2.1 identify the expectations employers have of new graduates. | | | | | | | |
| 5.3.1 identify your workplace/professional skills. | | | | | | | |
| 5.4.1 identify the skills you lack / need to improve to be effective in the workplace. | | | | | | | |
| 5.5.1 identify the knowledge you lack / need to improve to be effective in the workplace. | | | | | | | |
| 5.6.1 evaluate how well your skills and preferences "fit" different employment opportunities you might consider in the future. | | | | | | | |
| 5.7.1 present yourself effectively in selection interviews and processes. | | | | | | | |
| 5.8.1 recognise ethical practice *in the workplace*. | | | | | | | |
| 5.9.1 recognise general ethical and social issues *beyond your discipline*. | | | | | | | |
| 5.10.1 apply knowledge and skills gained in your studies to the workplace. | | | | | | | |
| 5.11.1 judge the applicability of the knowledge gained in your studies to the workplace. | | | | | | | |
| 5.12.1 interpret and follow workplace | | | | | | | |

procedures.

| | |
|---|---|
| 5.13.1 recognise the "politics" of a workplace environment. | |
| 5.14.1 develop your work-related skills and knowledge. | |
| 5.15.1 interact *appropriately* with people from *different* levels of management / leadership / seniority in a workplace. | |
| 5.16.1 understand the theories and principles in your discipline. | |
| 5.17.1 understand the practices and methods used in your discipline. | |
| 5.18.1 Rate your overall feeling of readiness for the workplace. | |

## Q5 (cont). Changes in your abilities in the last semester...

We are interested in to what extent you think the changes (if any) in your abilities in the last semester are theresultofyouruniwork either in a placement, or, more generally (if you did not do a placement this semester).

Now think about any changeinyourskilllevels that has occurred DURING THIS SEMESTER.

IfyouDIDaplacement this semester:
Indicate how much of the change is ARESULTOFYOUDOINGTHEPLACEMENTor workplaceactivityyoudidthissemester

IfyouDIDNOTDOaplacement this semester:
Indicate how much of the change is ARESULTOFYOURCLASSROOMACTIVITIES DURINGTHISSEMESTER

| | none (or no change has occurred) | less than half | about half | more than half | all |
|---|---|---|---|---|---|
| 5.1.4 seek work relevant to your studies. | | | | | |
| 5.2.4 identify the expectations employers have of new graduates. | | | | | |
| 5.3.4 identify your workplace/professional skills. | | | | | |
| 5.4.4 identify the skills you lack / need to improve to be effective in the workplace. | | | | | |
| 5.5.4 identify the knowledge you lack / need to improve to be effective in the workplace. | | | | | |
| 5.6.4 evaluate how well your skills and preferences "fit" different employment opportunities you might consider in the future. | | | | | |
| 5.7.4 present yourself effectively in selection interviews and processes. | | | | | |
| 5.8.4 recognise ethical practice *in the* | | | | | |

*workplace*.

| |
|---|
| 5.9.4 recognise general ethical and social issues *beyond your discipline*. |
| 5.10.4 apply knowledge and skills gained in your studies to the workplace. |
| 5.11.4 judge the applicability of the knowledge gained in your studies to the workplace. |
| 5.12.4 interpret and follow workplace procedures. |
| 5.13.4 recognise the "politics" of a workplace environment. |
| 5.14.4 develop your work-related skills and knowledge. |
| 5.15.4 interact *appropriately* with people from *different* levels of management / leadership / seniority in a workplace. |
| 5.16.4 understand the theories and principles in your discipline. |
| 5.17.4 understand the practices and methods used in your discipline. |
| 5.18.4 Rate your overall feeling of readiness for the workplace. |

_Impact of Work-Integrated Learning on Student Work Readiness

THANK YOU FOR TAKING THE TIME TO DO THIS SURVEY! DON'T FORGET TO ENTER THE ...

If you wish to go in the draw you can enter your details by clicking HERE

## Graduate Employability - Employer Survey

Welcome to the *Employer Survey - Impact of work placement on Employability*!

This survey is about the way that university studies help students prepare to start a job or career. One approach for achieving this is to build into university studies the opportunity for students to practice applying their knowledge and skills in real workplaces (e.g. by giving them "placements").

We hope this survey will help us to understand employers' perspectives on the benefits of placements and their effect on students' readiness to start work.

**Fourteen universities were involved in this study.**


17%

## Graduate Employability - Employer Survey

This voluntary survey seek your views on the impact of work-experience placements on the work-readiness of university graduates.

Your contribution is highly valued, and will be used to increase understandings of the impact of work-placements and university curriculum practices on student work-readiness. This research is being conducted as part of an Office of Learning and Teaching funded project. The findings will be disseminated to university education planners and partners and published in journals.

Your involvement in the research is entirely voluntary. You have the right to withdraw at any stage. You will not be identified in any way in publications or data arising from this survey.

Your completion and submission of the in the survey form is deemed to indicate your consent to participate. A decision not to participate will not affect your relationship with the university in any way.

All information will be confidential to the research team. For further information consult Griffith University's Privacy Plan at http://www.griffith.edu.au/about-griffith/plans-publications/griffith-university-privacy-plan or telephone (07) 3735 5585.

Ethical approval has been gained through Griffith University's Ethics Committee and the Ethics reference number is GIH/01/12/HREC. Griffith University conducts research in accordance with the National Statement on Ethical Conduct in Human Research. If you have any concerns or complaints concerning the ethical conduct of the research project contact the Senior Manager, Research Ethics and Integrity on 07 3735 5585 or research-ethics@griffith.edu.au. For any further questions in relation to the research, you are invited to visit this website http://www.griffith.edu.au/gihe/research/assessing-wil-impact or contact Dr Calvin Smith, email calvin.smith@griffith.edu.au or phone: 07 3385 6816.

**Thank you for participating in this research!**

33%

Prev Next

## Graduate Employability - Employer Survey

Please answer the following questions

In this survey 'work placement' means work placements within organisations or discipline-relevant, work-experience opportunities, either on- or off-campus.

Placement includes a real workplace experience that forms a part of a student's university studies, for example: a practicum, clinics (e.g. dental, veterinary, podiatry, physio with real clients whether the clinic is on or off campus), internship, fieldwork, projects etc.

**What is the field or industry sector in which you operate (not the business or organisation name)?**

Test

**2. Is a work placement a professional requirement for students in this industry?**

Yes

No

Don't know

**3.1 Do you supervise students' *work practices* during their work placement / industry project / relevant work experience?**

Yes

No

**3.2 Do you provide feedback to students on their *workplace performance* during placement / industry project / relevant work experience?**

Yes

No

**4.1 Do you supervise students' *learning* during their placement / industry project / relevant work experience?**

Yes

No

**4.2 Do you give feedback to students on the *learning* during their placement / industry project / relevant work experience?**

Yes

No

## Development of abilities during placements

**5. To what degree do students develop an ability to do each of the following as a result of work placement?**

| | not at all | a little | moderately | considerably | to a very large extent |
|---|---|---|---|---|---|
| 5.1. enact current professional practice effectively | | | | | |
| 5.2. adhere to workplace expectations including protocols, processes, standards of conduct and dress etc in the workplace | | | | | |
| 5.3. Do the work accountably, autonomously, and ethically | | | | | |
| 5.4. Demonstrate a commitment to continuing professional development, further learning etc. | | | | | |
| 5.5. Exhibit effective professional or workplace communication | | | | | |
| 5.6. Apply the practices, methods, theories and principles of the field in the workplace | | | | | |
| 5.7. Interact appropriately with people from different cultures to achieve workplace goals | | | | | |
| 5.8. Interact appropriately with people from different levels in the workplace to achieve workplace goals | | | | | |
| 5.9. Exhibit confidence to manage workplace challenges and skill in the face of real pressures and difficulties | | | | | |

| | | | | |
|---|---|---|---|---|
| 5.10. Exhibit a capacity to identify employer expectations | | | | |
| 5.11. Exhibit readiness for the workplace in their field or discipline | | | | |
| 5.12. Apply information effectively to inform workplace or professional decisions | | | | |
| 5.13. Display commitment to and interest in the job | | | | |
| 5.14. Show self-awareness of their developing capabilities | | | | |
| 5.15. Show resilience / inner strength | | | | |
| 5.16. Refine or clarify career aspirations | | | | |

## Graduate Employability - Employer Survey

Impact of placements in key skill areas

**Please comment on the development you observe in students' abilities to do any of the following:**

| | |
|---|---|
| 6.1 Show high professional standards and ethical practice | y |
| 6.2 Integrate knowledge and practice / apply knoweldge to practice | y |
| 6.3 Use information to make decisions about their work | y |
| 6.4 Collaborate and interact with other employees | y |
| 6.5 Commence work in this field and be effective immediately | y |

83%

Prev Next

## Graduate Employability - Employer Survey

Thank you! You are done....

# Thank you for participating in this survey

100%

- Professional practice and standards (PPS)
  - Workplace protocols –
    - "… we also tried to communicate a lot of the basics about a workplace. Often if it's a person's first workplace they're unsure of processes and things like that, so just the basics of everyday work you know. This is what you wear. This is what time you come in. This is when you have breaks. You know if you need anything just let me know. If you need time off just let me know. You know sort of communicating that to people." [INT 6]
    - "INTERVIEWER: Do you see a change in that over the time that they're with you? PARTICIPANT: Absolutely, absolutely… they relax into it, they learn to deal with the kids, they learn the protocols of being in the school, how do deal with administration, how to deal with our principal and deputies, what is and isn't acceptable behaviour, and they're very well trained, they're very well-schooled before they come, but you've actually got to be in a place before you know what's going on. And you can see them relax over the time. We've just had a group of second years out from [UNIVERSITY], six of them, but they were very nervous when they first came. But by the end of their two days a week for five weeks they were much more relaxed and very much a part of the staff, and I'd really like it to go back to first semester, first year." [INT 7]
  - Responsibility, autonomy, agency –
    - "… they obviously come in very nervous. And depending on the student of course as well. And sometimes not quite as practically focused, because they're in a different, they're in a learning environment. So I think they go from being given things, like information and readings and direction to [being] giving responsibility …they negotiate their way through that and by the end of the semester most of them are pretty good at coming to you with things, as opposed to be waiting for things to be given to them, yeah." [int 6]
    - " INTERVIEWER: Do you see an observable change in their confidence, their skills? PARTICIPANT: Yes I do. Because … you [can] go out and you have them … help with things in the pharmacy part of it. But you can also have them out on the wards and they're exposed to talking to the doctors about patients and being able to interact with the patient and interact with the doctors and nurses. And to do it in a way where they can provide some information and they'd be seeking other information back. It helps with rounding them out as practitioners." [INT 11]
    - "[it] absolutely [enhances their employability]. Because it gives them hands-on experience in a number of areas, and with our interns we will make sure that they have learned all the basic skills to allow them to leave us or carry on with us, once they are qualified, and don't have to then start all over and teach those particular skills because they will have them. And I think that's really important. And I think it's also important that they've learned those skills in a safe learning environment before they have to go out into the world and they may not have the support that the teaching hospital would get them." [INT 13]
  - Ethical practice –
    - "… there are many different things that we are looking at when we are actually employing someone, you know. So there is personal motivation and the person's values and all sorts of other things, their ethics and yeah…" [INT 1]
    - "They definitely do [address ethical developments]. Yeah they're part of everybody's practice, I suppose it should be part of everybody's practice. That's part of the learning. Learning to reflect on it and to, I'm not sure how to word this "keep it all within the code of conduct if you like."" [INT 1]
  - Independent practice –
    - "and I'm also trying to fit in the word independent practice, so as their independence as practitioners grows, that's the indication that they are more comfortable with what they're doing, how they work, but also that they're more confident in what they do and yeah. So that would be translating at some point into employability if you like, [because] they would be able to actually demonstrate that in their job interview…" [INT 1]
    - "It very much governs around self management skills, communication, interaction with clients, service evaluation, and they're the areas that we're truly looking at so it's not a clinical area as such. So when we have students that do well, it's fantastic because they're embodying all those parts of the [practice] that we can truly see, yes this person is going to have the skills required to graduate, as a new graduate occupational therapist and work in different areas because the core, and the fundamental skill set that they have is appropriate, it's

what we deem to be appropriate. They're not, they're showing empathy with clients, they're showing that they can interact with different people from different levels, clients, families, stakeholders in the organisation, colleagues. They're able to relay and give information appropriately, they're also able to evaluate their service and service provisions so that they're able to reflect on their own practice." [INT 8]

- "… they actually, that they get an insight into how complicated something like health is. So they get to see that you actually need to, it's all about having, it's more than just what you write. You've actually got to have relationships, see how teams, how meetings work. They get to see how, the importance of minutes. And they get to see how the workplace works in a dynamic of its own. And I don't think necessarily people get taught that or they don't see how they can [??] as, that's the difference between [??] health. It becomes more professional, future employees, I suppose. That's what I've seen. I've seen people improve from the beginning when they were not really not knowing what was going on to towards the end where they're actually able to come to work and actually work in a normal sort of work environment." [INT 12]
- "So does it enhance their employability? Absolutely. Because it gives them hands-on experience in a number of areas, and with our interns we will make sure that they have learned all the basic skills to allow them to leave us or carry on with us, once they are qualified, and don't have to then start all over and teach those particular skills because they will have them." [INT 13]

- Informed decision-making (IDM)
  - Information use for work
    - "So I think they negotiate their way through that and by the end of the semester most of them are pretty good at coming to you with things, as opposed to be waiting for things to be given to them, yeah. [INT 6]"
    - "And the thing I tried to do was I guess re, sort of instil that and say look the information and knowledge you've gained at University now needs to be I guess applied in sort of a workplace situation or for a specific problem within an industry." [INT 6]
    - "…basically to think outside of the box. To be able to use sometimes just logic. Sometimes it's just, you know, logic. Sometimes doctors, doctors don't write scripts the way, you know, you expect them to and people don't present the way you learn in university, like a textbook all the time… It's just, they learn things that they can't possibly learn in university… It's just the way it is, you know. It's a true experience."" [INT 9]
    - "So that could be anything from, like at the moment we're using a student to do some work on them doing a snapshot evaluation of a project that we've got underway… So they then are able to review all the information that's been provided, use some of it to come up with a methodology to actually how they're going to evaluate the project and then provide us with a report." [INT 12]
  - Problem-solving
    - "And the thing I tried to do was I guess … sort of instil that and say look the information and knowledge you've gained at University now needs to be I guess applied in sort of a workplace situation or for a specific problem within an industry. You know what I mean? I guess from my perspective it was all about flipping over from learning about the problem to coming up I guess with solutions or putting forward solutions to the problem." [INT 6]
    - "...skills that we, as a department and I truly believe that we're looking for, are the students that are actually adaptable and demonstrate appropriate communication, problem solving skills…" [INT 8]
  - Evaluation of alternatives
    - "And the thing I tried to do was I guess … sort of instill that and say look the information and knowledge you've gained at University now needs to be I guess applied in sort of a workplace situation or for a specific problem within an industry. You know what I mean? I guess from my perspective it was all about flipping over from learning about the problem to coming up I guess with solutions or putting forward solutions to the problem." [INT 11]
- Commencement-readiness (CR)
  - Confidence
    - "Yes I do [see an observable change in their confidence, their skills?]. Because if you … have them out on the wards and they're exposed to talking to the doctors about patients and being able to interact with the patient

and interact with the doctors and nurses. And to do it in a way where they can provide some information and they'd be seeking other information back. It helps with rounding them out as practitioners." [INT 11]

- INTERVIEWER: Do you see a change in their skills and their confidence?... PARTICIPANT:...Yes…. Definitely, especially for our interns, definitely do get more confident and more, you know, knowledge and skill set, definitely" [INT 9]
- Absolutely, absolutely [I see change in the students] and you know, working in a tertiary hospital is petrifying for most, you know new graduates, let alone students, it's that, it's an environment that, it's very scary, there's 101 therapist patients, other students, you know a tertiary hospital, there's students of every single discipline flying around. And so the level of what's expected of the students in our department, or any hospital department that offers what we do, is really quite high." [INT 8]
- "INTERVIEWER: Do you see a change in that over the time that they're with you? PARTICIPANT: Absolutely, absolutely… they relax into it, they learn to deal with the kids, they learn the protocols of being in the school, how do deal with administration, how to deal with our principal and deputies, what is and isn't acceptable behaviour, and they're very well trained, they're very well-schooled before they come, but you've actually got to be in a place before you know what's going on. And you can see them relax over the time. We've just had a group of second years out from [UNIVERSITY], six of them, but they were very nervous when they first came. But by the end of their two days a week for five weeks they were much more relaxed and very much a part of the staff, and I'd really like it to go back to first semester, first year." [INT 7]
- "…the big thing is that after they've done it they, and they're actually achieving things, they actually want to achieve. So they feel better in themselves. They're more confident…" [INT 2]

- Obtaining work
  - "We've had three or four interns here at the end of the year and we're very good here with our interns, and our interns always get jobs, so we're very lucky" [INT 7]
  - "But you know I found that Uni myself, me and others who did work experience in our holidays and things, tended to get work a lot quicker afterwards." [INT 6]
  - "And that really truly does help, we have a large percentage of occupational therapy students who come back as occupational therapists when they've graduated because they're known to the department." [INT 8]
- Using placement supervisors for referees' reports
  - "You know, at the end of the year, all the fourth year graduates, you get hundreds of applications come through because everyone graduates at the same time. But the students that put in applications and have referenced prac or field work at the hospital have usually, and we usually ask them to use [us] as [a] reference because we are able to speak for how well they've done during their field work." [INT 8]
  - "Because I'm able to vouch for them and feel that they demonstrated to me really at what a level I would think a graduate should be." [INT 8]

- Collaboration and communication (COLLAB)
  - Recognise the politics of workplaces
    - "But they come in astoundingly unprepared for work with kind of not a clue. And I say that because they – if I could make my comparison to the Dutch girl, she came in and understood the point about being in the work place was to make sure everybody knew who you were, what you were doing, and what you were capable of doing. And by the time she left – and she was here much longer than these guys are – by the time she left at the end of six months, everybody knew who she was and what she did. She really understood that non-described dynamic of a workplace." [INT 4]
    - "So I that's, I guess what we did from our end. And we also tried to communicate a lot of the basics about a workplace. Often if it's a person's first workplace they're unsure of processes and things like that, so just the basics of everyday work you know. This is what you wear. This is what time you come in. This is when you have breaks. You know if you need anything just let me know. If you need time off just let me know. You know sort of communicating that to people." [INT 6]
    - "A lot of doctors can be very threatening. It's also, some of the older style doctors, if you suggest something in a way that it makes it sound as if it's their idea you can get a whole lot further than coming at a direct approach

that you think this is better. If you know what I mean?" [INT 11]

- Communication and team-work
  - "The other thing I think is that they actually, that they get an insight into how complicated something like health is. So they get to see that you actually need to, it's all about having, it's more than just what you write. You've actually got to have relationships, see how teams, how meetings work. They get to see how, the importance of minutes. And they get to see how the workplace works in a dynamic of its own." [INT 12]
  - "…Well I guess I probably mentioned it in a round about way as you said, but I think it all comes down to that communication, interpersonal relationships… In terms of getting on in the workplace and getting things done, especially when you're dealing with outside clients, those things are the sort of key to everything." [INT 6]
  - "So I think by placing a student in the workplace, one, they, it's the exposure to the dynamics of the workplace, generally just getting, accepting going to work nine to five every day, and also coordinating with a lot of different people. So for me personally, I've had to work with designers, constructors, asset owners, and public, and so you learn how to get views across, or how to take on concepts and modify while you're not losing the scope of the work at the same time. You get that, placement builds up your communications skills and general working with others while you're also getting the practical of physically building something." [INT 5]
  - "… there is a lot of communication. We tend to make sure, because it's, sometimes I supervise and other times it's members of my team supervise them. So we have a regular meeting and then we have a sort of open door policy. If they've got any questions to come and see sooner rather than later I guess." [INT 6]

- Application of theory / integration of theory and practice (INTEG)
  - Application of theory and integration of theory and practice.
    - "For proper placements like a social work placement or human services or community services placements, they are very substantial and they are very extensive, so it's a learning process in the field and it's basically grounding the theoretical knowledge and skills that students are practising." [INT 1]
    - "So by the time students get to us in fourth year, the expectation that we have of them is that they've developed and have appropriate communication skills and understanding of occupational therapy theory and the framework behind our profession. So that they can then in any clinical area be able to translate that into clinical decision making and clinical reasoning." [INT 8]
    - "… obviously, three year course, all the theory that you've learnt, you kind of, you learn the basics, it's a starting tool, because you get retaught in your placement, in your job anyway, but … there's a lack of maybe construction technique that's not taught in University. … you might have someone coming through and does all the correct principles in design, but they're not really thinking about how that design will be constructed, or ease of construction, it may be able to be constructed, but there might be a better method that's slightly less in design but saves a lot money in time and construction, there's an acceptable reduction in your design parameters. Being able to see what happens out in the field is a major benefit, so both myself and the students … you learn the theory, but unless you actually diving into it, and construct it, you don't learn it as much" [INT 5]
    - "I think in terms of once a student comes to a placement they already have learnt, have or have not learnt certain things and what we're trying to do is pretty much compliment their learning and feeding as much as possible into the gaps that haven't developed yet." [INT 1]

- Life-long learning (LLL)
  - Reflective practice
    - "I think confidence is the word rather than employability, because confidence in yourself and reflective practice is what would I be looking for rather than employability." [INT 1]
    - "the requirement for us to fill in the steps … around self management skills, communication, interaction with clients, service evaluation, and they're the areas that we're truly looking at so it's not a clinical area as such. So when we have students that do well, it's fantastic because they're embodying all those parts of the [inaudible] that we can truly [say], yes this person is going to have the skills required to graduate, as a new graduate occupational therapist and work in different areas because the core, and the fundamental skill set that they have is appropriate, it's what we deem to be appropriate. … [T]hey're showing empathy with clients, they're showing that they can interact with different people from different levels, clients, families, stakeholders in the organisation, colleagues. They're able to relay and give information appropriately, they're also able to evaluate

their service and service provisions so that they're able to reflect on their own practice." [INT 8]

- "And there's always lots of interaction in the work environment so they then pick up on that. And I think that's so important. INTERVIEWER: … Because that way they will be able to raise their experiences and discuss them. And so the reflection kicks in. PARTICIPANT: Yes, exactly." [INT 13]
- "I think student placements are very demanding and they are testing times for students because that's the time when they are rediscovering themselves. Not rediscovering, I guess unwrapping you know their personal and professional self and making that connection, and yeah it's the time when a lot of them experience lots of personal reflections." [INT 1]
- "…there's a lot of that work readiness you can pick up from a fourth year student. You know, are they motivated, do they show initiative, how reflective are they, you know all the skills that we hope that they've got and which they're expected to have, if they shine through, they're the ones that get remembered." [INT 8]
- "In a way [reflective practice is] what's expected of them to learn out of this experience. Because I think they come thinking that they are going to learn something technical." [INT 4]

- Willingness to learn
  - "I think they go from being given things, like information and readings and direction to giving responsibility and then giving some of that back if you know what I mean? So I think they negotiate their way through that and by the end of the semester most of them are pretty good at coming to you with things, as opposed to be waiting for things to be given to them, yeah. INTERVIEWER: Yep. So in a sense they're finding out what their own responsibilities are and what the boundaries of their knowledge are? PARTICIPANT: Yeah, and change from initiative, and yeah that's the main stuff I guess. "[INT 6]

- Identification of deficits and strengths –
  - "In terms of thinking and [the practice] framework and even their awareness of their skills and what they can do." [INT1]
  - "… understanding 'why am I like this', 'why do I work in this way', 'what my triggers are', what works, what doesn't work. You know all these things. So that definitely happens, otherwise I wouldn't be doing it …[INT 1]"
  - "rather than employability. What are the students actually getting out of it? Are they better off? do they understand themselves better? [INT 1]"
  - "I think student placements are very demanding and they are testing times for students because that's the time when they are rediscovering themselves. Not rediscovering, I guess unwrapping you know their personal and professional self and making that connection, and yeah it's the time when a lot of them experience lots of personal reflections." [INT 1]
  - "So they are quite unfit. And I have to say, I was exactly the same. And I don't know whether it's resolvable, or that the point about working is that it is a steep learning curve. I don't know whether it is something to be resolved, or whether it's just life. Because I also want them to be very, very competent technically. Because what they learn at uni is mostly all they are going to know at the end of their working life, technically, in some ways. And so if they haven't learned enough technical work, they are going to be relatively useful for a couple of years, but then they are going to be completely useless if they are not at the cutting edge when we get them, so to speak." [INT 1]
- Dunning-Kruger effects –
  - "… it's quite interesting because I think younger people are more confident in terms of you know their [abilities], they think that they can do a lot more than they can actually do. And after progressing through their training and studies, they are more reflective and prepared to step back and think you know is this the way to do it." [INT 1]
  - "Those that are super-confident and come in assuming they know everything [laughs] which can be a problem" [INT 7]
- Understanding of the theories and/or practices of the discipline –
  - "… I think they are a bit overwhelmed sometimes in the time period they are with us … But in a sense that's not

a bad thing, especially if they've got a semester break to go away and have a think and something happens at the next workplace – when they get a job somewhere and they go, “Ah, that's happened to me before, I know that I should be going and telling somebody about something.” [INT 4]

- “So by the time students get to us in fourth year, the expectation that we have of them is that they've developed and have appropriate communication skills and understanding of occupational therapy theory and the framework behind our profession. So that they can then in any clinical area be able to translate that into clinical decision making and clinical reasoning.” [INT 8]

- Other student developments
  - Self-awareness
    - “I think confidence is the word rather than employability, because confidence in yourself and reflective practice is what would I be looking for rather than employability. What are the students actually getting out of it? Are they better off, do they understand themselves better? We work with people, how is that translating into their work? So I think their self-awareness and reflective practice is basically what makes them employable you know. ” [INT 1]
    - “I think student placements are very demanding and they are testing times for students because that's the time when they are rediscovering themselves. Not rediscovering, I guess unwrapping you know their personal and professional self and making that connection, and yeah it's the time when a lot of them experience lots of personal reflections. Could be a time when personal issues are raised, and you know, unfinished business and all sorts of other things, so yeah.” [INT 1]
    - “I think there is a process that happens and you can basically monitor how these practice change towards the end of the placement. So if the goal is basically to increase the sense of competence, to increase the independence practice, to increase the self-esteem around professional self and understanding of that theoretical framework, understanding why am I like this, why do I work in this way, what my triggers are, what works, what doesn't work. You know all these things. So that definitely happens, otherwise I wouldn't be doing it because you know.” [INT 1]
  - Resilience
    - “INTERVIEWER: Can you pinpoint whether it's an attitudinal thing or whether it's a skills thing that actually improves over that time? … PARTICIPANT: I think it's an attitude and a confidence and an inner strength, that's my belief.” [INT 2]
    - “INTERVIEWER: …you did say some [students] are anxious. Do you see a change in that over the time that they're with you? PARTICIPANT: Absolutely, absolutely. … they relax into it, they learn to deal with the kids, they learn the protocols of being in the school, how do deal with administration, how to deal with our principal and deputies, what is and isn't acceptable behaviour, and they're very well trained, they're very well-schooled before they come, but you've actually got to be in a place before you know what's going on. And you can see them relax over the time. We've just had a group of second years out from [NAMED UNIVERSITY], six of them, but they were very nervous when they first came. But by the end of their two days a week for five weeks they were much more relaxed and very much a part of the staff...” [INT 7]
    - “once they've finished here go down to [NAMED SCHOOL], go down to Maryfields, go down to [NAMED SCHOOL], go down to [NAMED SCHOOL] and see what it's like down there where the kids are, and they'll tell you to f-off if they don't like you. … Which they do, in … and it's really important for these kids to learn how to deal with them.” [INT 7]
    - “working in a tertiary hospital is petrifying for most, you know new graduates, let alone students, it's that, it's an environment that, it's very scary, there's 101 therapist patients, other students, you know a tertiary hospital, there's students of every single discipline flying around. And so the level of what's expected of the students in our department or any hospital department that offers what we do, is really quite high. And you know, we maintain that every unit, every student is supervised by the one core occupational therapy supervisor. But within that unit, there could be up to five occupational therapists so we definitely expect growth and development in their clinical skills and their self management skills because they're exposed to so many different therapist's working styles and so many different therapists full stop, that if you don't see growth, then we know that there's a problem” [INT 8]
    - “because it's quite wide ranging. They've got the ability to see a bit of a large number of things. It also helps; it sort of broadens their experience and makes them perhaps better able to cope with things in a busy regional environment for example. We've got people coming in who've got this problem and this problem and this problem but it's giving them a chance to see a range of things.” [INT 11]
  - Motivation
    - “coming out of work experience … it's been three weeks now since they've had their work experience placements and they did that for a week and now we're starting to get the results of that, we're starting to get businesses ringing up saying, “Hey, this little Jimmy he did fantastic, I'd like to actually offer him one day a week

doing a school based traineeship" and of course then the pride and the commitment by these students then to come to school and … So you see them, you know, actually walking with a bit of a spring in their step so to speak because they're actually now engaging within work and they can actually see it as a light at the end of the tunnel, there's a reason for all of this school business. … and, you know, a reason so at the end of the day this is what education and school is all about, it's actually, you know, moving into something that you'd love to do." [INT 3]

- "…are they motivated, do they show initiative, how reflective are they, you know all the skills that we hope that they've got and which they're expected to have, if they shine through, they're the ones that get remembered. So when they apply for jobs within our department or they, you know apply for references, we're happy to do it. I mean I personally have had students that I've had five, four years ago, four or five years ago who are now over in the UK and I'm still providing references for them as they move around job to job." [INT 8]

- Quality curriculum and improvement suggestions
  - Learning goals or assessment
    - "… obviously they've got outcomes they've got to achieve, there's a particular project that they work on, but at the same time we try to expose them to as many different elements as we can, but depending on the student, and what their project is, they may not have the time to get exposed to too many elements, sometimes they will, sometimes they won't. That's why I think if they were able to make their initial assessment a little bit smaller, and then have, you know still have a secondary assessment area on something that's more general of a broader learning curve, it might allow more people to get exposed to more things and still be able to be assessed on it." [INT 5]
    - "I offered some feedback after, because I've had [NAME OF PROGRAM] students for about five semesters in a row, and after the first one or two I offered some advice, well sort of feedback I guess. I found they were very focused on the process of doing the work and not the work so much. So, they often drafted their material I guess in a way that the University was asking for but not necessarily the way our clients are asking for. I think that's been resolved fairly well though. I think they've changed the way they do that now. So it's not so much about the process of their work placement, it's about their report at the end now. A separate sort of smaller placement sort of diary type approach, as a different assessment piece. So that was good. And I think that's something that should be encouraged, for them to focus on what the customer wants and whether that's the person who they're doing the placement with or their customer. I think that's an important focus. And the thing I tried to do was I guess … sort of instil that and say look the information and knowledge you've gained at University now needs to be … applied in sort of a workplace situation or for a specific problem within an industry." [INT 6]
    - "[the process is arduous, but] …you would have to think about whether you could modify that, in a sense that you need to be sure the students are going to have a project that's going to give them the potential to get a top mark. Although I don't know whether they are marked on it or whether they just get a Pass or a Fail. But to a certain extent … there seems to be a lot of work in getting involved. But on the other hand, the students – every student has to have the same possibility of getting the top mark for it. So you have to know that they are going to get a project. But if I was going to do it, I would do it as a Pass/Fail only."
  - Relationship with industry partners
    - "…I think there needs to be more discussion between the university and the work environments who are taking on these students. I don't think there is always enough discussion between the two of us." [INT 13]
    - "… my job is to support the supervisors and support the students and to be that middle person between the university and the department, there's two of us, there's one at the [CAMPUS NAME] campus, I'm at the [CAMPUS NAME] campus. So our job is to be that middle person and feed things back to the university when we identify issues." [INT 8]
    - "that student thing [AT NAMED UNIVERSITY] where you can look up a student and what skills they've got, that's very useful. But you need to publicise it a lot more. … That's fantastic, but nobody knows it's there… Because no other university does it. So you don't go looking on the university sites to find it, because I don't know another university that does it… So I would never know to look for it." [INT 4]
  - Quality assurance and variation
    - "And definitely the program at the moment is – I don't think is extending the interns enough. So we [have] to make sure that we do more. Whereas the old program, they had to do more projects through the year, which in our environment with the – well, we've got a very organised program, it's probably not such an issue. But I am always concerned about those kids that are in less academic environment or less structured teaching environments, and concerned that they don't necessarily get to see all the things or do all the things because they don't have to." [INT 13]
    - "Because I don't think you can assure that, them of that. Somebody might go into this amazing workplace and have this fantastic experience and write this incredible report; somebody else might go into an amazing workplace and have a fantastic experience but not be given a proper project." [INT 4]
  - Assessment and standards
    - "The problem is the opportunities within those clinical areas are quite limited so you've only got a few aged care hospitals, you've only got a few mental health hospitals. So unfortunately with the number of graduates,

you have to, well fortunately because there are some really fantastic opportunities in the nursing homes where there's occupational therapists there, there's school, there are some fantastic ones but you end up with students in areas where they're not supervised anywhere near as much as they should be. And not have the scores that they're getting on their fieldwork not truly reflective of their actual skill level. And then you've got all these students coming off on these international placements to you know, Cambodia and Indonesia and all these sorts of places where there's one university lecturer that's gone along with them, they're helping in an orphanage for six weeks or whatever it is, and then they come back and that counts as clinical skills." [INT 8]

  - "you may have a student who's not an awfully good student but gets all that other stuff, and walks into a workplace and blitzes it. But the academic could never know that. There's no way of the academic knowing that that person is the ultimate in employability, and they've just got the most enormous amount out of this, and they are often the students who aren't the best marks. But they don't lock themselves away. …And there's no way of the academic knowing that because they are still reviewing them based on a report which is still an academic interpretation of what is good and bad." [INT 4]

- Supervision improvements
  - "there are … too many that they're doing in non-direct OT supervised areas. Like where you go into primary schools and nursing homes where the occupational therapist comes in for ten hours a week and the rest of the time you know, running routine self directive. And the supervisor barely supervises them" [INT 8]
  - "The cost is having an office space that's free for the computer for setting up their email accounts and giving them access to systems and getting them trained on the systems and supervising them and taking them and taking me offline to supervise them, and have a lot of people they're working with and slowing them down. … I mean, getting government to actually program future money to be able to help the university is your kicking own goal. I know you have to have some money." [INT 2]
  - "they've had no real supervision, I mean they've had supervision but it's nowhere near adequate enough, but there is no mandate that I'm aware of that dictates how many hours of direct supervision they require." [INT 8]
  - "INTERVIEWER: You've mentioned it would help to have more [face-to-face] contact with the supervisors, PARTICIPANT: …more time with the kids in the classroom, more time watching the students, I think so. The arrangements for the teachers here are fine; I take care of that and I have great contact with the universities, but I think for the students it would be lovely for more, and for us, for more lecturers or tutors to be out here with us, I think." [INT 7]
  - "I think it's really just communication, and setting the roles, and being really clear and also providing the feedback and supervision as you go so you don't wait till the end of the placement to tell them they weren't wearing the right clothes." [INT 12]
- Match of placement to learning goals / pedagogical preparation
  - "INTERVIEWER: And that's something that the universities can do to, obviously, to prepare students in advance and get them to perhaps not only be more aware, but perhaps more self-reflective while they are in the placement. PARTICIPANT: In a way that's what's expected of them to learn out of this experience. Because I think they come thinking that they are going to learn something technical. … their expectations do not match what the university is intending them to get out of it… Because I think as a university you are intending them to get this stuff out of it; even though they are writing a report, you are intending them to get this stuff out of it. And you might – I mean, if you really want them to focus on this stuff, you might get them to report against each of those [sorts of] … things and report what they've learned or what experiences they had that made them understand what those things meant." [INT 4]
  - "Oh [the lack of appropriate placements for the discipline is] huge … there are so many … opportunities and we actually would say too many that they're doing in non-direct OT supervised areas. Like where you go into primary schools and nursing homes where the occupational therapist comes in for ten hours a week and the rest of the time you know, running routine self directive. And the supervisor barely supervises them and then they get all five, so out of the scoring scale, one to five they get full marks for all of them and they come to us and they say well I've done exceptionally well in my last two pracs I've got all five" [INT 8]
  - "...from a [students?] perspective, they have an opportunity to be involved. And the sort of things they get involved with would be project work ... at the beginning, the middle and an end. So you don't want to give someone a project that doesn't actually have a real strong, a real clear purpose and have a timeline that they can deliver on." [INT 12]

- Induction / psychological preparation
    - “what constantly comes to me is because I'm not sure is it because of the huge demand that students are experiencing because if they have family and work. I just feel that they're not prepared for the placement and as much as I wish to normalise that understanding is part of the process, I still think that there are things that could be done to actually prepare them. And even their emotional response to perhaps clients or perhaps being in the field for the first time, and just to be aware. I know that they have one-day workshop or something like that to talk about things, but I don't think that's enough. So people really really need to understand that when they go to do their placement that they will go through some sort of different crises. And I have seen it with every one of my clients, and whether or not that's related to them or to the demographics of the population that we work with, or something else has been happening, yeah. It's just a stressful time.” [INT 1]
- Authenticity and learning-focused activity *in situ*
    - “… what I've heard from a couple of students [is] that other placements don't really take the time to really teach them, so I suppose from the university's perspective, can they vet the pharmacies, but then again, as I said, if you're vetting the pharmacies, you may not have enough places to send the students because you've got that many students.” [INT 9]
    - “…they have this three months of working in a real situation. I mean, I don't think anyone in school can teach them that.” [INT 2]
    - “I suppose the university, if we're talking, it's a hard one really because they've got that many students coming out and there's only so many pharmacies that will or that do take on steps, and also pharmacies, I'm not sure that all the pharmacies actually take on students because they really want to teach the students, or whether they take on students because they can take on students and use them to do stocktake, for instance. …So, it's a very hard one, really. Is there a way to limit the number of students that come out every year so that they can pick the pharmacies better? Maybe the university needs to go and check out the pharmacies to make sure that it is really an integrated learning experience. … Rather than a pharmacy that … from what I hear from some of the students, they tell me that … at the other placement they didn't really learn anything or things like that, and I feel sorry for them. … So, if that's the case, that's not really work integrated learning. That's free labour.” [INT 9]
    - “So if you're going to go and try and get work experience you get it in the field, in the work, put on a bit more pressure to go out and do real work.” [INT 2]

**Motivation**

- Professional requirements
- Enhance Practice
- Benefits to organisation
- Build Networks
- Personal reasons
- Benefits to students
- Recruitment advantage
- Educating
- Workforce planning
- Regional development

**Benefits to students**

- Learning
- Employability
- Skill development

**Role of Employer**

- Supervision of learning
- Assessment

**Correlates of employability**

- Age
- Work experience

**Attributes of good placement design**

- Duration
- Learning goals
- Variation
- Relationship with industry
- Preparation
- Support
- Praxis shock
- Disciplines diffs
- Match of student to placement
- Timing in program
- Student motivation
- Authenticity
- Timing that matches the workplace
- Equity access and life balance
- Reflection opportunities

**Supervision**

- Partnership
- Learning outcomes
- Intensity

**Costs to organisation**

- Financial and material
- Supervision costs
- Mismatch between outputs
- No down sides to doing this

**Improvements**

- Learning goals or assessment
- Relationship with industry partners
- Quality assurance and variation
- Assessment and standards
- Supervision improvements
- Match of placement to learning goals
- Authenticity
- University curriculum more practical

**PPS**

- Protocols (workplace)
- Responsibility, autonomy, agency
- Ethical practice
- Independent practice

**Life-long Learning**

- Reflective practice
- Willing to learn
- Identify deficits to make up
- Dunning-Kruger
- Understand knowledge or methods of discipline

**IDM**

- Information use for work
- Problem-solving
- Evaluate alternatives*

**CR**

- Get a job opportunity
- Use placement for referees reports
- Confidence

**Collab**

- Politics of workplaces
- Communication and team work

**Integ**

- Application and integration

**Personal Development**

- Self-awareness
- Resilience
- Attitude change/development
- Motivation of students

Appendix G: Dissemination of Project Outcomes

| Event | Type of Presentation | Venue | Date | Title |
|---|---|---|---|---|
| **Forum with Partners and Leads** | Discussion/ workshop | Sydney | May 2012 | Employability Forum |
| **WACE 2012** | Refereed paper | Bahcesehir University Istanbul | 20-22 June 2012 | Development of employability capability during the degree: a cross-sectional cohort design to establish proxy longitudinal baseline data |
| **ACEN 2012** | Abstract presentation | Deakin University Geelong | Oct 2012 | Developmental phases of employability: Evidence of employability capabilities across the life of a degree |
| **Teaching and Learning Forum WA** | Abstract presentation | Murdoch University Perth | Jan 2013 | Development of employability capability across a degree program: Validating measures of employability and work integrated learning dimensions |
| **ACEN event** | Workshop | University of Western Sydney | 9 May 2013 | How do we find evidence for the outcomes of WIL? |
| **HERDSA 2013** | Showcase presentation | Auckland | 1st to 4th July 2013 | Impact of work integrated learning on student employment-readiness: initial findings from a national study |
| **WAIER 2013** | Abstract presentation | Notre Dame University Perth | 10th Aug 2013 | Integrating theory and practice: skill development in higher education |
| **Learning and Teaching Colloquium** | Presentation | La Trobe University | 5 December 2013 | Assessing the impact of WIL on student work-readiness – early findings |
| **WIL Community of Practice** | Presentation | RMIT University | 6 December 2013 | Assessing the impact of WIL on student work-readiness' – early findings |
| **Teaching and Learning Forum WA** | Abstract presentation | University of Western Australia | Jan 2014 | Assessing the impact of WIL on student work-readiness |
| **WACE 2014** | Refereed paper | University West Trollhattan, Sweden | 2-4 June 2013 | Complex problem complex research design: researching the impact of WIL on employability |
| **WIL Workshop** | Presentation and workshop | Newcastle University NSW | Sept 2013 | OLT Impact of WIL on employability study: Implications for practice |
| **WIL Workshop** | Workshop with WIL staff from Macquarie and Sydney universities | Macquarie University, Sydney | Feb 2014 | OLT Impact of WIL on employability study: Implications for practice |
| **Community of Practice** | Workshop | Melbourne University | July 2014 | (Being negotiated) |
| **ACEN 2014** | Refereed paper | Gold Coast Queensland | 1-3 October | Conceptualising and measuring 'employability' – lessons from a National OLT Project |