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Designing Work Integrated Learning to optimise student employment readiness

Sonia Ferns  
Curtin University, Perth, GPO Box U1987  
S.Ferns@curtin.edu.au

Leoni Russell  
RMIT University, Melbourne, 124 Little La Trobe St  
Leoni.russell@rmit.edu.au

Calvin Smith  
Griffith University, Brisbane, PO Box 3370  
Calvin.smith@griffith.edu.au

The need for graduates to be prepared for an unpredictable and complex workplace is challenging the traditional content-driven paradigm of a university education. Work integrated learning (WIL) is internationally recognised as a strategy for nurturing employability capabilities in students. Curriculum design where skill development is scaffolded vertically and horizontally is essential for experiential learning. This research was an Office of Learning and Teaching funded project: Assessing the impact of work integrated learning on student work-readiness. The research highlights the components of a quality WIL curriculum for optimal employability outcomes. Five studies were conducted to capture both qualitative and quantitative data from key stakeholders including employers, graduates and current students which together provided a rigorous evidence-base for identifying the components of a quality WIL curriculum. The findings from this research identified the key curriculum dimensions that contribute to quality learning outcomes for students thereby enhancing the acquisition of employability capabilities. A focus on integration of theory and practice in learning outcomes and assessment, student preparation and debriefing activities, active supervision with constructive feedback, the authenticity of the learning experience, and robust partnerships with host organisations have emerged as essential elements of an experiential curriculum. This research informs curriculum design, assessment methodologies and partnership models.

Keywords: Employability, integration, curriculum

Background

The need for graduates to be prepared for an unpredictable and complex workplace is challenging the traditional content-driven paradigm of a university education. Work integrated learning (WIL) is internationally recognised as a strategy for nurturing employability capabilities and ensuring students gain proficiencies that equip them with professional skills necessary for a rewarding and challenging career. WIL embedded in the curriculum is perceived as a key strategy for ensuring work-ready graduates with the capability to contribute to the long term economic well-being of Australia (Commonwealth of Australia, 2007; OECD Centre for Educational Research and Innovation, 1996). Government agencies, industry and community representatives, and students are adamant that the student experience should encompass authentic learning where the integration of theory and practice forms the basis of curriculum development (Hager & Holland, 2006). This research emerged from the Office of Learning and Teaching funded project: Assessing the impact of work integrated learning on student work-readiness. The research highlights the components of a
quality WIL curriculum for optimal employability outcomes and provides evidence of the impact of WIL on student work-readiness.

WIL curriculum
Curriculum design informed by industry practitioners where skill development is scaffolded vertically and horizontally to enable a personalised approach in variable contexts is essential for experiential learning. Affording student experiences that develop conceptual and analytical abilities and facilitate the application of discipline knowledge in complex, multifarious situations reflective of the workplace requires a sophisticated curriculum design (Cooper, Orrell & Bowden, 2010).

WIL requires a curriculum design which allows for both intended and unintended outcomes. A WIL learning experience is inherently dependent on others as rarely does a truly authentic experience occur in isolation; inevitably the student’s learning is impacted by the collaboration and input from others. Traditional curricula and assessment practices do not allow for the unique outcomes emanating from a WIL experience where professional skills are applied and practiced (Taras, 2002). A specific curriculum design which validates process in preference to product is required (Knight & York, 2004). A well designed WIL curriculum enables the application of discipline specific skills in a practice-based setting (Campbell, Russell & Higgs, 2014). Multiple approaches which incorporate flexibility are essential for the provision of experiences that reflect workplace activity.

Planning for a WIL curriculum
WIL curriculum facilitates the transition of identity from that of student to professional and as a consequence requires extending the universities boundaries to encompass input from those external to the institution (Ferns, Campbell & Zegwaard, 2014). Curriculum approaches are required where early experiences involve the student in observational activities as a novice with gradual increase in complexity across the continuum of practice-based learning culminating in work-based activities (Martin, Rees, Edwards & Paku, 2012). This model enables the student to familiarise with professional practices and protocols and higher-order intellectual activities which facilitates transition from study to work (Campbell, Russell, Higgs, 2014). These authors attest that planning for a work integrated learning curriculum must account for the developmental needs of students across the continuum of skill development.

Assessment in a WIL context
WIL is a strategy for evidencing and assuring standards of employment-related generic outcomes (Oliver, 2011). While the recognition of student-centred learning and an emphasis on life-long learning to prepare students for a volatile and constantly changing work environment has increased, curriculum and assessment practices have remained dormant (Hodges, Eames & Coll, 2014). Taras (2014) doubts a university education produces independent-thinking and autonomous graduates, and questions the value of assessment in measuring such outcomes. Traditional practices are content-driven where subjects are compartmentalised and disconnected (Yorke, 2006). Authentic assessment profiles aligned to WIL outcomes are essential for realising the benefits of WIL and assuring graduate work-readiness. For universities to embrace WIL pedagogy and enable students to engage in authentic developmental activities where feedback is constructive, regular and informs subsequent assessments, assessment practices need to be reconceptualised (Ferns & Zegwaard, 2014). In particular assessment in WIL should be designed to be well-aligned with the learning objectives specific to each WIL curriculum (Smith 2014b).
External partners should contribute to the assessment design, assessment process, and provide feedback on students’ performance in the workplace to ensure the development of workplace skills (Hodges, 2009; Zegwaard, Coll, & Hodges, 2003, Peach, Ruinard, Webb, 2014). The contribution of external partners is advantageous for staff, students, and institutions but potentially adds complexity to the assessment process.

Despite assessment being the driver of student learning and engagement (Race & Pickford, 2007) it continues to attract the greatest level of dissatisfaction among university students. Students have expressed a desire for greater flexibility in the assessment process and a personalisation rather than a massification approach (Dean, Sykes, Agostinho & Clements, 2012). Pegg, Waldock, Hendy-Isaac & Lawton (2012) posit that traditional curriculum and assessment methods need to be challenged and innovative approaches explored to engage students and address the employability agenda.

**Evaluating curriculum**

Constant review and reflection on the success of a WIL program is paramount to quality student experiences and outcomes (Campbell, Russell & Higgs, 2014; Smith 2012). These authors argue that review and evaluation should take place before, during and after the experience of curriculum, and must incorporate input from stakeholders. Teachers need to monitor how the evolving learning reflects intended standards and processes from the WIL experience (Bates, 2008). Consistent evaluation of WIL curriculum should shape future iterations of the curriculum and student learning.

**Student engagement and satisfaction**

Preparing students for the ever-changing workplace and to contribute effectively to a global economy requires them to engage in the application of skills and knowledge in authentic contexts (Smith & Worsfold, 2013). Traditional knowledge-based pedagogy, while still an important element of intellectual growth, is insufficient for nurturing competent and work ready graduates. Student feedback states that the main reason for attending university is to improve potential employment outcomes and heighten the likelihood of a challenging and rewarding career. Despite their acknowledgement that a university qualification boosts employment prospects, students are increasingly questioning the value of return on their investment in higher education (Barber, Donnelly & Rizvi, 2013).

**Value of partnerships**

Mutually beneficial partnerships with industry and community bodies are integral to implementing quality WIL and should form the basis of curriculum development. The Statement of Intent, an agreement signed by Universities Australia, peak industry bodies and the Australian Collaborative Education Network (ACEN) (Feb 2014) highlights the significance of partnerships between universities and external stakeholders to inform the experiences provided for students thereby enriching their employability outcomes.

**Quality standards and assurance in a WIL context**

In the regulatory, standards-based environment in which higher education currently operates, a quality assurance mechanism for WIL programs is essential (Smith, Ferns, Russell, 2014). These authors attest that the focus has shifted from inputs (delivery and content) to outputs (student performance) in recent years which align with WIL philosophy. Monitoring and benchmarking of WIL activities against national standards ensures continual improvement in WIL approaches and student outcomes and provides a rigorous accountability process. Despite the aspiration that quality policies will improve employability outcomes, national standards are customarily narrowly defined and fail to account for the nuances of WIL.
(Yorke & Vidovich, 2014). The development of appropriate standards and benchmarks are reliant on ascertaining what constitutes a quality WIL curriculum.

**Overview of research**

Five studies were conducted to capture both qualitative and quantitative data from key stakeholders including employers, graduates and current students which together provided a rigorous evidence-base for identifying the components of a quality WIL curriculum that optimises graduate capabilities. The design of the methodology and research instruments was based on themes emerging from a comprehensive review of contemporary literature and extensive consultation with partner institutions. The findings from this recent national research identified the key curriculum dimensions that contribute to quality learning outcomes for students thereby enhancing the acquisition of employability capabilities. A focus on integration of theory and practice in learning outcomes and assessment, student preparation and debriefing activities, active supervision with constructive feedback, the authenticity of the learning experience, and robust partnerships with host organisations have emerged as essential elements of an experiential curriculum that not only produces employability capabilities but also promotes adaptable, innovative and entrepreneurial graduates.

**Research methodology**

The variable and context-dependent nature of WIL required a complex research design as a means to substantiate the impact of WIL on student work-readiness (Ferns, Smith & Russell, 2014). Through collaboration with project partners and an extensive review of contemporary literature, a carefully sequenced and composite research design was developed. While the five studies incorporated in the methodology were each separately undertaken, there are clear synergies between each of the studies with outcomes from earlier studies informing the later studies. Ethics approval was granted in February 2012.

The work was conducted in four phases:

1. The conceptualisation of WIL was determined and work-readiness measures identified concurrently by drawing on existing literature, conducting focus groups, and piloting and validating measures and instrumentation;
2. Survey instruments were developed and administered to students at each of the partner universities across a range of disciplines. The survey was designed to compare the impact of WIL on work-readiness across diverse categories of WIL including (a) intensive placement-based WIL, and (b) alternative learning activities characterise WIL such as simulations, university-based projects, and role-plays;
3. Telephone interviews were conducted with graduates to establish perceptions on the value of their programs of study in preparing them for the workplace; and
4. A series of interviews with employers were conducted to capture qualitative data. On the basis of feedback emerging from the interviews, a survey was designed and administered which enabled the collection of quantitative data to complement the qualitative data and enable the exploration of key themes identified through interview transcripts.

**Research questions**

The research questions addressed in the research project 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, whether placement-
based or not?

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?

**Data collection and analysis**

The research design comprised five discrete studies, each undertaken progressively and providing data that informed the curriculum dimensions that emerged. Details of each study are outlined below.

1. **Cross-sectional study (institutional study)**
   
   This study collected student responses which enabled identification of their curriculum experiences and validation measures of work-integrated learning and employability. This established baseline data for the development of employability over the degree across different year levels. The 45 item online survey used a Likert 5-point scale to collect responses on the quality of the WIL experience and employability outcomes. A multi-dimensional framework for measuring employment-readiness was developed based on the results which enabled the approximation on the variation of the impact of WIL on a range of attributes. The student cohort to whom the survey was administered included students from partner institutions across all year levels with 3336 responses collected from the ten participating universities. Exploratory and confirmatory factor analysis were used to validate the measures and a variety of other techniques (ANOVA, regression, SEM) were used to analyse the data.

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

   Students’ perceptions of work-readiness and the impact of WIL activities was the focus in this study. Students from partner universities studying in various degree programs were invited to participate. Drawing on findings in the previous study, an online survey was designed and administered. There were 1499 respondents from nine institutions. Two open-ended questions: *What were the best aspects of your placement?* and *How could your placement experience have been improved?* were included in the survey to supplement the quantitative data and strengthen the findings. 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: start of program of study; start of current semester; and now. The skill and knowledge areas were those ascertained in the conceptual phase of the research project. The measures factored into 2 broad areas: 1. Skills for work and 2. Career-development. Analysis incorporated factor analysis, comparison tests, and some structural equation modelling (Ferns, Smith & Russell, 2014).

3. **Alumni Interview Study**

   Ten recent graduates were interviewed by telephone on the impact of WIL experiences on their employability capabilities. During the fifteen minute interviews, interviewees identified the most significant impacts of WIL placements which they considered had a positive impact on their work-readiness. Audio recordings were transcribed, the data was anonymised and thematic analysis undertaken.

4. **Employer Interview Study**

   To collect the employer’s perspective on the value of WIL, thirteen employers representing seven discipline areas from diverse organisations were interviewed via telephone. The
interviews prompted discussion on reasons employers did or did not accept students on WIL placements. Strategies for improving the experience for both host organisation and students were also explored. Audio recordings were transcribed, the data was anonymised and thematic analysis undertaken.

5. Employer Survey Study
Using feedback gathered from employers in the Employer Interview Study, a survey was designed to administer to a broad spectrum of employers who offer WIL placement to students. The survey built on data gathered in the interviews by collating employers’ views on the impact of WIL placement on students’ employment readiness in greater depth. Employer representatives were sourced from employer databases at the lead institutions. A total of 163 employers from 31 industries responded to the survey. The instrument took the form of a brief on-line survey comprising ten quantitative questions and two open-ended questions. Data was de-identified and analysed descriptively and thematically.

Results

Quantitative data

Method
A cross-sectional, mainly quantitative study was conducted (Study 1 above). A quantitative survey was conducted of currently enrolled students in 10 universities (see Table 1). A total of 3323 students responded providing 2302 cases.

<table>
<thead>
<tr>
<th>University</th>
<th>valid</th>
<th>%</th>
<th>Whether had a placement experience</th>
<th>Sex</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>CQU</td>
<td>350</td>
<td>15</td>
<td>44</td>
<td>49</td>
</tr>
<tr>
<td>Curtin</td>
<td>106</td>
<td>5</td>
<td>9</td>
<td>21</td>
</tr>
<tr>
<td>Griffith</td>
<td>319</td>
<td>14</td>
<td>25</td>
<td>59</td>
</tr>
<tr>
<td>Macquarie</td>
<td>455</td>
<td>20</td>
<td>55</td>
<td>104</td>
</tr>
<tr>
<td>RMIT</td>
<td>130</td>
<td>6</td>
<td>22</td>
<td>30</td>
</tr>
<tr>
<td>University of Canberra</td>
<td>136</td>
<td>6</td>
<td>17</td>
<td>30</td>
</tr>
<tr>
<td>Uni of Western Sydney</td>
<td>570</td>
<td>25</td>
<td>76</td>
<td>115</td>
</tr>
<tr>
<td>Victoria University</td>
<td>62</td>
<td>3</td>
<td>9</td>
<td>13</td>
</tr>
<tr>
<td>ECU</td>
<td>174</td>
<td>8</td>
<td>21</td>
<td>29</td>
</tr>
<tr>
<td>Total</td>
<td>2302</td>
<td>100</td>
<td>278</td>
<td>450</td>
</tr>
</tbody>
</table>

Measures
Employability was operationalised as a multi-dimensional construct measured by 45 items. After exploratory and confirmatory factor analyses, six dimensions of employability emerged as stable reliable sub-constructs. The six dimensions of employability were: informed decision making, commencement readiness, integration of theory and practice, professional practice and standards, collaboration and lifelong learning (for more detail see Smith, Ferns and Russell 2014). Commencement-readiness was one of these sub-dimensions of employability. It consisted of the items listed in
Table 2. Students were asked to self-rate their abilities in achieving the outcomes described by each item.

**Table 2: Commencement-readiness scale items**

<table>
<thead>
<tr>
<th>Item</th>
</tr>
</thead>
<tbody>
<tr>
<td>effectively seek work relevant to my studies</td>
</tr>
<tr>
<td>present myself effectively in selection interviews and processes</td>
</tr>
<tr>
<td>evaluate how well my skills and preferences &quot;fit&quot; different employment opportunities I might consider in the future</td>
</tr>
<tr>
<td>commence a job in my field and be immediately effective as a worker / new professional</td>
</tr>
<tr>
<td>overall work readiness confidence</td>
</tr>
<tr>
<td>able to obtain work relevant to studies</td>
</tr>
</tbody>
</table>

The curriculum factors were measured by items which sought an indication of the extent to which students’ experiences incorporated activities outlined in Table 3.

**Table 3: Typical items for curriculum factor measures**

<table>
<thead>
<tr>
<th>Curriculum factor</th>
<th>Example item</th>
</tr>
</thead>
<tbody>
<tr>
<td>Authenticity</td>
<td>How often did you contribute worthwhile outcomes for the organisation (such as a product, or change in practice or policy)?</td>
</tr>
<tr>
<td>Preparation</td>
<td>I had a preparation program or resources that helped me prepare for the placement to help me maximise my learning whilst on placement</td>
</tr>
<tr>
<td>Supervision</td>
<td>I had regular contact with an academic supervisor from the university in order to discuss my learning whilst on placement</td>
</tr>
<tr>
<td>Debrief</td>
<td>I had time with my academic supervisor after the placement to reflect on my learning from placement</td>
</tr>
<tr>
<td>Activities focused on integration</td>
<td>How often did you reflect on applying your discipline knowledge in the workplace?</td>
</tr>
<tr>
<td>Assessments focused on integration</td>
<td>How often were you assessed on your use of theory to justify practice decisions?</td>
</tr>
</tbody>
</table>

Results
Scale scores were calculated for each student for each curriculum factor and the work-readiness scales and correlations were calculated between these variables. Correlations were calculated within each of five broad discipline groupings to show the consistency of the patterns observed in the aggregate. The results are in Table 4 below. These results show moderate to high, significant, positive correlations between all six curriculum factor variables and the work-readiness variable, the only exception being “debrief” in the natural sciences block, but with a correlation of .217 and a sample of 37 this is a function more of the power of the test than of the general pattern of the result. With a larger sample this result would soon meet conventional standards of significance.

Table 4: Correlations between curriculum factors and overall commencement-readiness by discipline grouping

<table>
<thead>
<tr>
<th>Discipline</th>
<th>N=</th>
<th>Natural &amp; Physical Sciences</th>
<th>Health</th>
<th>Education</th>
<th>Business</th>
<th>Society &amp; Culture</th>
</tr>
</thead>
<tbody>
<tr>
<td>Authenticity</td>
<td>37</td>
<td>.626**</td>
<td>.396**</td>
<td>.440**</td>
<td>.371**</td>
<td>.352**</td>
</tr>
<tr>
<td>Preparation/ induction</td>
<td>266</td>
<td>.455**</td>
<td>.401**</td>
<td>.391**</td>
<td>.235**</td>
<td>.218**</td>
</tr>
<tr>
<td>Debrief post-placement</td>
<td>170</td>
<td>0.217</td>
<td>.287**</td>
<td>.281**</td>
<td>.161*</td>
<td>.233**</td>
</tr>
<tr>
<td>Supervisor contact during placement (academic and workplace)</td>
<td>151</td>
<td>.439**</td>
<td>.337**</td>
<td>.301**</td>
<td>.309**</td>
<td>.246**</td>
</tr>
<tr>
<td>Teaching and learning activities in situ focused on integrative learning</td>
<td>142</td>
<td>.572**</td>
<td>.454**</td>
<td>.432**</td>
<td>.332**</td>
<td>.278**</td>
</tr>
<tr>
<td>Assessments aimed at testing integrative learning</td>
<td></td>
<td>.521**</td>
<td>.347**</td>
<td>.367**</td>
<td>.274**</td>
<td>.272**</td>
</tr>
</tbody>
</table>

** Correlation is significant at the 0.01 level (2-tailed).
* Correlation is significant at the 0.05 level (2-tailed).
Dependent variable is overall work readiness

Scores in each of the six curriculum factors were used to calculate 33rd and 66th percentile values for the six distributions of scores. The 33rd and 66th percentile values for the calculated scale scores for each of the curriculum factor variables were used to create grouping variables. Using these two percentile points three bands of quality in each of the six curriculum factors were created – high quality (scores greater than the 66th percentile value of the scores for that variable); medium quality (scores between the 33rd and 66th percentiles for each curriculum factor); and low quality (scores lower than or equal to the 33rd percentile value for each curriculum factor. This grouping variable was then used for a series of one-ANOVAs with work-readiness as the dependent variable (see Figure 1).
As shown in Figure 1, the mean scores for students on the commencement-readiness variable increased in a linear fashion across the levels of curriculum quality for all six curriculum factors. The differences between the commencement-readiness mean scores at the three levels of quality are significant for all six curriculum factors. Post-hoc tests indicated that each level was significantly different from the other levels for all six factors. The F values and associated probabilities are given in Table 5.

### Table 5: ANOVA F-tests for commencement-readiness means x levels of quality for each of 6 curriculum factors

<table>
<thead>
<tr>
<th></th>
<th>F</th>
<th>df</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Authentic</td>
<td>58.749</td>
<td>2</td>
<td>.000</td>
</tr>
<tr>
<td>Supervision</td>
<td>34.356</td>
<td>2</td>
<td>.000</td>
</tr>
<tr>
<td>Debrief</td>
<td>18.144</td>
<td>2</td>
<td>.000</td>
</tr>
<tr>
<td>Preparation</td>
<td>43.763</td>
<td>2</td>
<td>.000</td>
</tr>
<tr>
<td>TLAs</td>
<td>53.215</td>
<td>2</td>
<td>.000</td>
</tr>
<tr>
<td>Assessment</td>
<td>41.201</td>
<td>2</td>
<td>.000</td>
</tr>
</tbody>
</table>

**Qualitative results**

The student proxy-longitudinal study produced a total of 669 comments relating to the *Best Aspects of WIL placement* and 626 comments for the *Needs Improvement* questions. The top three responses for the best aspects of WIL placement were:

- **Authenticity** – respondents agreed that their WIL programs provided exposure to real world problems and opportunities to gain industry experience
- **Integration** – respondents described the benefits of applying theory and knowledge to real life situations
• Collaboration – respondents described gains of developing peer and professional collegiality with other staff and students and the importance of teamwork

The top three responses for the ‘needs improvement’ were:
• Placements – respondents suggested they would like to have more placements
• Supervision – respondents suggested that clear instructions and better supervision would’ve made their placement more successful
• Authenticity – respondents suggested more practical hands-on experience, more responsibilities in the assigned tasks and more exposure to clients

These responses for ‘best aspects’ and ‘needs improvement’ clearly point to WIL curriculum design considerations. The students’ comments align to feedback from the employer study. The employer interview data point to four distinct domains of WIL 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.

Discussion

The results of the studies show that students’ perceptions of their work-readiness are clearly affected by the quality of the WIL experiences in which they participate. A quality WIL activity is influenced by the authenticity, collaboration and integration embedded in the experience. The curriculum dimensions identified as contributing to a quality WIL experience may vary in their application and significance depending upon the ultimate goal of WIL.

The dimensions of a quality WIL curriculum that clearly emerged from the findings are:
• Authenticity of the WIL placement or activity
• Preparation and induction processes for both host and student
• 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 assessment to WIL-appropriate learning outcomes with scaffolded skill development and robust feedback (Smith, Ferns & Russell, 2014)

Authenticity

Authenticity refers to the relevance and realism of the experience such that it simulates the professional environment and involves more than simply demonstrating knowledge (Wiggins, 2011). There are dimensions to authentic practice being emulated which go way beyond the reality of the workplace situation. These dimensions include appropriate autonomy of practice, appropriate responsibility being taken and assigned, consequentiality of the work done, and the relevance of work tasks to the learning objectives and to the organisation (Smith C., 2012). WIL activities should be designed to be as genuine and realistic in function and purpose as possible. Authenticity of the WIL activity is integral to the acquisition of employability skills and connecting theory and practice in workplace contexts. Highly authentic WIL experiences enhance relevance of the student experience and the application of their studies to employment readiness.
**Preparation and induction**
Preparation for WIL experiences orientates the student to the workplace context, manages expectations and prepares students for learning in an authentic environment. This entails both pedagogical preparation and personal/emotional preparation to optimise learning. Preparation for WIL includes:

- preparing for integrative learning such as being able to reflect on the applicability of discipline knowledge to practice
- learning from others, with others and through interactions with others in professional groups
- managing expectations of authenticity dimensions
- getting ready for the assessments that will be used, for example preparing students to reflect on their experience
- optimising learning from WIL activities by engaging with the feedback provided.

**Debriefing and reflection**
Debrief is the process of reflecting on the experience with the student and industry partner (separately or together) after the WIL activity with a focus on the learning, design and management of the process. Organising sessions for the industry partner and student to confidentially “download” and reflect upon their experiences benefits all stakeholders. Debriefing allows the student to critically reflect on their learning and explore any unexpected feelings that may have arisen throughout the WIL experience. The institute and industry partner can evaluate and reflect on the design and process of the WIL activity with a view to continuously improve future learning activities. A combination of group and individual debrief sessions provides opportunities to reflect on the activity and gather important feedback that can improve relationships.

**Quality supervision**
Supervision involves monitoring student learning, progress and practice during a WIL activity. Industry partners and WIL practitioners from universities collaborate in administering, managing, observing, educating, supporting and supervising the student’s progress throughout the WIL activity. Supervision is a complex interpersonal activity that involves numerous functions. Quality supervision and support is central to a positive WIL experience for students. The purpose of supervision is to guide and manage work, support students to develop their skills and formally recognise professional practice and learning. Ongoing supervision provides opportunities to give constructive and meaningful feedback to students about their performance and to receive feedback from students about their experiences and learning.

**Integration of theory and practice through teaching and learning activities in situ**
The purpose of integration is to make the WIL experience relevant to the theory learned in university with the practical application in a workplace context and vice versa. The focus on the ‘learning-work nexus’ (Smith & Worsfold, 2013) provides opportunities for students to reflect on the application of knowledge in practical, work-based situations aligned to intended outcomes. WIL activities vary in their level of reflection and thinking about how practical applications link to theory. To ensure the WIL activity effectively impacts students’ understanding of how theory relates to practice and how practice can lead to the creation of new knowledge, it is important to guide their reflection throughout the experience. Industry partners also play an important role in designing, supervising and engaging in the WIL activity to support integrative learning.

**Assessment aligned with learning outcomes**
Assessment serves different purposes including providing support for learning through feedback on performance and providing accreditation of achievement through marking against criteria and standards. More broadly, assessment results in the aggregate that can also be used to inform design, re-design and evaluation of WIL activities. Assessment must be valid, reliable, authentic and align to learning outcomes in form, content, and structure (Smith, 2014b).

The reason for building WIL experiences into programs has historically focussed on professional accreditation requirements and the vocational imperative that students can practice and do what they have learned. Student learning outcomes, development of graduate attributes and graduate employability are also key drivers for doing WIL. Clarity of desired learning outcomes is imperative for informing appropriate design of both the the WIL curriculum and the assessment used. Three broad goals outlined below can be described for WIL curricula:

*Experiencing the world of work*: the focus is on what the student experiences, how they feel about what they’ve done and how this impacts their goals and direction. Debriefing and reflection are key components in this WIL approach to ensure the learning goes beyond just the ‘work experience’.

*Developing skills*: the development and acquisition of skills on-the-job and in practice are also a key driver of WIL in curriculum. The intention is that through supervised practice and feedback, the student develops skills in a contextualised situation and is able to demonstrate what they have learned.

*Integrative learning*: WIL activities can be designed for the purpose of integrating theory and practice. This is understood in some disciplines as “applying theory” and in medical and allied health areas it is referred to as “clinical reasoning”. The aim is for students to develop the ability to articulate correctly, the relevance and applicability of theory to practice decisions made (Smith C., 2014b).

**Conclusion**

The results show that it is possible to articulate specific curriculum design factors that can be shown empirically to be associated with students satisfaction, are aligned with student expectation, and have an impact on employability. This paper has focussed on commencement readiness – one of six employability dimensions used in the study, but the same results are demonstrable to greater or lesser extents for the other five sub-dimensions of employability (Smith, Ferns and Russell, 2014). Results indicate the importance to students of paying close attention to these curriculum factors when designing WIL curriculum. The research also indicates that effective WIL curricula are complex pedagogical enterprises that themselves integrate several different parts of a complex puzzle.

A diagrammatal representation of the inter-related parts of the WIL curriculum puzzle is shown in Figure 2.
Figure 2: Representation of curriculum elements and employability outcomes (after Smith, Ferns and Russell 2014).

Figure 2 represents not just the complexity of the enterprise of WIL design, but also highlights that authenticity is the main goal of good WIL design. This is underpinned by arranging assessment and activities that are aligned with integrative learning which is in turn built upon the foundation of good supervision including preparation and debrief. The learning outcomes are in a circle because the degree to which one is more important than any other is a matter for particular curricula. Employment readiness is at the centre in recognition of the centrality of this as the overarching goal of WIL.
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References


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