

Enhancing industry engagement with work-integrated learning: Capacity building for industry partners

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Work-integrated learning (WIL) enables the embedding of relevant real-world learning into curriculum resulting in students that are better prepared to enter the workforce and meet demands of employers seeking work-ready graduates. Research confirms students who undertake WIL as part of their degree consistently achieve better employment outcomes. Industry's role in WIL is critical and, therefore, engagement with industry partners is essential to determine what is required to support their engagement and contribution to WIL. This Office of Learning and Teaching funded research project, aimed to determine the topics, format and mode of resources industry perceives as most useful. The project used a mixed methods approach to gather data from a range of sources with findings confirming industry are seeking resources on assessment, feedback and supervision of students as well as information on clarification of roles and negotiating partnerships. The project outcomes informed the development of user-friendly and accessible resources for industry. (*Asia-Pacific Journal of Cooperative Education, 2016, 17(4), 363-375*)

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Australian employers are placing increased focus on the need for work-ready graduates from Australian Universities to meet the demands of a rapidly changing and increasingly global economy (Australian Industry Group [AiGroup], 2016; Australian Workforce & Productivity Agency [AWPA], 2014). Concern has also been raised around Science Technology Engineering and Mathematics (STEM) disciplines and the numbers of suitably skilled, work-ready STEM graduates (Deloitte Access Economics, 2014; Foundation for Young Australians, 2015). The WIL in STEM in Australian Universities Report highlights the immense importance of the role of universities in "equipping graduates with capabilities that not only meet the expectations of employers, but also facilitate a smooth and effective transition for these people into the workforce" (Edwards, Perkins, Pearce, & Hong, 2015, p. 1).

WIL enables the embedding of relevant real-world learning into the curriculum resulting in students being better prepared to enter the workforce. There is clear evidence that students who undertake WIL as a part of their degree consistently achieve better employment outcomes (Edwards et al., 2015; Smith, Ferns & Russell, 2014). In the context of this paper, WIL encompasses a range of approaches including placements and industry-based projects which may take place on or off campus. While there are a myriad of approaches for implementing WIL, authentic engagement with industry and community partners is fundamental to quality outcomes (Ferns, Campbell, & Zegwaard, 2014).

In response to concerns around enhancing graduate work-readiness and in recognition of the critical role WIL plays, the National WIL Strategy was developed by three national industry groups; AiGroup, Australian Chamber of Commerce and Industry (ACCI), and the Business

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Council of Australia (BCA) together with Universities Australia (UA) and the Australian Collaborative Education Network (ACEN). The National WIL Strategy focuses particularly on enhancing partnerships between universities and industry to inform curriculum and enhance employability outcomes for students, ultimately improving economic productivity and sustainability (ACEN, 2015). Stakeholders in the National WIL Strategy recognize that building collaboration between employers and universities is crucial in growing and enhancing WIL in Australia and ensuring a productive and globally competitive Australian economy (Hodges, 2011; van Rooijen, 2011).

Recent reports (Patrick et al., 2014; PhillipsKPA, 2014; Smith et al., 2014) have identified challenges and barriers that employers face in their involvement in WIL including associated cost, insufficient resources and support, staff capacity to mentor and supervise students, complexity of partnering with universities and limited information about WIL. The WIL Report (Patrick, Peach, & Pocknee, 2009), highlighted key issues for industry and community stakeholders including: managing expectations and demands, improving communication and coordination, and ensuring worthwhile experiences underpinned by adequate resourcing. Seven years on and these key challenges are still having a major impact on partner engagement in WIL. The PhillipsKPA (2014) study of employer engagement with WIL concluded that enabling factors such as “clear and accessible information about WIL” (p. 50), were potentially more effective than the barriers to WIL. It is both these longer term challenges combined with the opportunity to provide enabling resources about WIL that have informed the impetus for this project.

RESEARCH AIM AND INTENT

The project aimed to develop strategies and resources to support industry’s contribution to, and strengthen their engagement with, the WIL experience. The study was funded as an Extension Grant and built on the findings and recommendations cited in the 2014 OLT research project: *Assessing the impact of Work Integrated Learning (WIL) on student work-readiness* (Smith, Ferns, & Russell, 2014). Titled *Developing strategies to maximise industry contribution and engagement with the WIL experience* the overarching intention of the project was to identify resources for industry partners to facilitate effective WIL partnerships and ultimately ensure a quality WIL experience for students. The development of students’ work-ready skills in preparation for transition into the work place was the key focus, with the identification and development of relevant resources for industry perceived as a mechanism for optimizing the student experience.

The recommendations from, *Assessing the impact of WIL on student work-readiness* (Smith, Ferns, & Russell, 2014), that the project aspired to address were:

- Appropriate professional development opportunities should be developed for WIL practitioners and industry/community partners
- Industry and community partners should be more involved in supervising students and providing feedback on student learning and workplace performance
- Industry and community partners and universities should collaborate on curriculum development and design, supervision of students and feedback on assessment
- Relationships between universities and industry/community partners should be structured, intentional and resourced

- The curriculum dimensions of quality WIL should form the basis of curriculum design.

While the data collected throughout the project provided extensive quantifiable evidence to inform a range of strategies, there were four key deliverables on which the project focused:

- 1) Develop resources for industry engagement encompassing partnership arrangements, best-practice supervision and feedback for optimal student outcomes.
- 2) Develop a model for WIL curriculum design and evidencing student outcomes that incorporates best practice WIL informed through consultation with industry and institutional representatives.
- 3) Produce a complementary set of Good Practice Guides that outline the role of stakeholders in quality WIL experiences.
- 4) Create an interactive and user-friendly website which promotes best practice WIL, facilitates dissemination of strategies, and enhances impact of findings.

This paper reports on the outcomes for the first deliverable, resources for industry engagement.

METHODOLOGY

A mixed methods approach was adopted in a three-phase design to ensure findings were based on contemporary literature and data collection strategies. This approach built on existing knowledge to further the quest for quality industry-university partnerships. Drawing inferences from both qualitative and quantitative data strengthened the reliability of the outcomes as the consolidation of the data collection and analysis methods counterbalanced the limitations of both, enabling a balanced perspective (Bryman, 2004; Creswell, 2012). Engagement with industry partners is crucial to the systematic investigation of what it will take to support industry contribution to and engagement with WIL. The project can be seen as a form of 'networked systemic inquiry' (Burns, 2007. p. 19) into university-industry collaboration to support student engagement in work-integrated learning. The project used various methods including roundtable discussions, workshops and a survey to gather data from a range of sources. Triangulation of data was undertaken to validate research findings. This allowed the research design to enhance both engagement and the interrogation of rich case studies, strategies and resources. Ethics approval was granted by Curtin University in July 2015.

Phase One

Phase one involved the analysis of literature (mostly in the form of national reports) published in 2014 and 2015. With the abundance of literature focused on expanding WIL in an Australian context, identifying common themes and priorities was deemed essential for the project to progress WIL initiatives. Rumrill, Fitzgerald, and Merchant (2010), refer to this research methodology as an empirical literature review where characteristically numerical data is "collected, created, codified and analysed reflecting the frequency of themes, topics, authors and other attributes" (p. 400). (Appendix A outlines the publications that were analyzed for this purpose).

The 12 publications listed in Appendix A, highlight the intensive focus on WIL by all stakeholders. This literature is the result of concentrated research and reporting over a two year period. While the plethora of literature affirms the importance of WIL and the need for

industry and universities to work collaboratively, this phase of the research enabled common themes to be identified and positive action on recurring recommendations to be undertaken. Inductive coding was used to identify recurring themes in the literature.

An environmental scan of existing WIL resources was also undertaken in this phase, resulting in the collation and critique of 127 WIL resources. The intention was to assess what was already available and identify where the gaps were in an effort to avoid duplication. Criteria were developed to ensure a systematic and consistent approach to critiquing the resources (Table 1). Resources were collated via an invitation to the WIL community requesting any WIL resources aimed at industry partners. The invitation was inserted into various communication channels such as the ACEN newsletter. In addition, a desktop review of international websites was undertaken where key words were used to source support material related to WIL globally.

TABLE 1: Criteria for critiquing resources

Resource Criteria	Definition
Discipline	Discipline, field of education resource targets (e.g., health)
Mode	Format of resource is available/accessed (e.g., PDF, web-based)
Key element	The component of the WIL process targeted (e.g., preparation)
Resource type	Style of the resource (e.g., case study, report)
Type of WIL	The nature of the WIL activity (e.g., placements, simulations)
Audience	Audience the resource targets (e.g., supervisors)

Each resource was critiqued against the criteria and analyzed using descriptive statistics, thereby providing an overview of the frequency of the foci of resources.

Phase Two

In this phase, qualitative data was collected by way of focus groups and workshops. Table 2 lists the events which provided an ideal opportunity to collaborate with WIL practitioners and gather perspectives on appropriate resources and support for industry partners. The date of the focus group and the number of attendees is also provided.

TABLE 2: Focus group participants

Event	Date	No. of participants
Industry-based study supervision from health disciplines (WA)	April 2015	22
National Association of Field Experience Administration (NAFEA) conference (QLD)	July 2015	75
Criterion conference workshop (NSW)	August 2015	12
Charles Darwin University (NT)	September 2015	20

Attendees at each of these forums were invited to participate voluntarily in the data collection phase with each participant completing a consent form. The approach used was adapted for the particular context as each group differed in purpose and experience. The questions explored the challenges for workplace supervisors in supporting student learning; barriers and enablers for establishing partnerships between industry and universities; and the types of resources that would enhance the capacity of industry to engage in WIL activities (See Appendix B for the focus group questions). The focus group facilitator posed the questions and attendees engaged in an informal conversation on the topic. Responses were recorded in the form of written notes as attendees requested that the focus group not be recorded. In addition, a Health Sciences Fieldwork Summit was attended in December 2015. The summit was attended by 22 teaching staff and 27 industry-based supervisors from health disciplines. While this forum was not a data-collecting activity, the conversations and outcomes resonated strongly with the research findings and was an excellent opportunity to reaffirm preliminary research outcomes. This qualitative data was analyzed using deductive coding based on the themes emerging from the analysis of literature.

Phase Three

Data collated in Phases one and two informed the compilation of a thirty-one item survey aimed to gather employers' perceptions on the types of resources considered useful for supporting their involvement in WIL. Eight of the questions were dedicated to collecting demographic information about respondents which enabled comparison of responses based on a variety of criteria. The survey was created using Survey Monkey and was disseminated using a range of available databases in an effort to maximize the number of respondents. The survey used a five-point Likert scale ranging from *Not useful at all* to *Very useful*. Qualitative data was collected using open-ended questions inviting respondents to suggest other useful resources and describe innovative models of WIL they practiced within their organizations. Information on the preferred mode and type of resources was also gathered.

Databases containing employer contacts included Employer and Career Services, The Western Australian Chamber of Commerce and Industry, central university databases such as Alumni, and WIL partners across teaching areas. The survey link was also inserted into a message and loaded onto LinkedIn. Given the extensive distribution of the survey, it is impossible to calculate a response rate. However, a total of 480 surveys were completed and submitted. The survey was piloted four times prior to administering to employers thus ensuring a clear and concise document which collected rigorous data (validation). The survey questioned respondents on the level of usefulness of resources on five key themes identified through the analysis of literature and the focus groups and workshops. The themes were:

- Preparation of students and host organization staff
- Supervision and providing feedback to students
- Student assessment
- Developing partnerships with educational institutions
- Different types of WIL and their benefits

Quantitative data was analyzed using descriptive statistics to calculate the percentage agreement for each response category (*Not useful at all to Very useful*). Qualitative data was deductively coded using themes emerging from previous phases in the research.

RESULTS

Phase 1: Analysis of Contemporary Literature

Through analysis of the literature (Appendix A), common themes across all publications were identified (see Table 3).

TABLE 3: Common themes identified in literature analysis

Common Themes
<ul style="list-style-type: none"> • Sustainability of the Australian economy and the need for skilled, entrepreneurial, innovative and resilient graduates to sustain global competitiveness • Partnerships between University and industry/community and clarification of roles are pivotal to a sustainable economy and skilled graduates • Communication and collaboration between universities and industry • Need for flexibility in WIL arrangements • Need for shared understanding of WIL and associated benefits • Challenges of providing equitable WIL experiences for a diverse student cohort • Lack of incentives, rewards, time allocation and funding for WIL activities • Industry are seeking resources on similar topics (see below for a list of the topics)

Resources topics deemed useful by industry include:

- Supervision and providing feedback to students
- Student assessment
- Preparing students and staff for a WIL placement
- How to engage with universities and develop partnerships
- Agreement and clarity on the term WIL
- Different models of WIL and their benefits

Phase 1: Critique of Resources

One hundred and twenty seven resources were critiqued in an endeavor to determine what was already available and where gaps existed. Forty four percent of the resources targeted a generic audience and addressed WIL from a very broad perspective. Only 7% were aimed specifically at workplace supervisors, thus highlighting a lack of information for industry-based mentors on supervising and supporting students. The critique of resources against the criteria of key element showed that 48% focused on the preparation of students for a WIL placement. These resources concentrated more on academic rather than workplace preparation. Assessment was the key topic in only 7% of the resources, an area industry partners ascertain they are seeking support. Fifteen percent dealt with supervision but again, most were intended for academic supervisors. A considerable proportion of the resources critiqued were large documents with 33% being classified as guides and 27% as reports. The

predominant mode for resources was a pdf document (78%) many of which are accessible via a website. However, these are accessed from disparate websites with no common portal. Sixty five percent of resources were generic with no particular discipline focus.

While there are a considerable number of resources available, the critique of resources exposed some key issues:

- Locating resources is challenging as they reside in many different locations
- There are gaps in available resources aimed at industry partners on assessment, supervision and partnerships. These are topics which are deemed necessary by industry partners
- The majority of resources are large documents where information is immersed in content and difficult to source
- There is a dearth of case studies and examples of innovative models of WIL

Through the process of critiquing these resources, some solutions emerged which would contribute to capacity building for industry partners. Firstly, resources need to be available from a common online portal for easy access. Secondly, development of resources focused on assessment, supervision and feedback processes and strategies for industry partners should be priorities. Furthermore, exemplars showcasing innovative models of WIL need to be made available to facilitate diverse approaches. Finally, resources should comprise streamlined and coherent information that is concise and readily discernible. These solutions are consistent with recommendations from other studies.

Phase 2: Workshops and Focus Groups

The findings in phase one informed the design of workshop plans and focus group questions and conversations. Qualitative data was analyzed using the themes emerging from the analysis of literature. While the participants reaffirmed the challenges highlighted in contemporary literature, the personal perspectives afforded through these forums enabled the themes to be interrogated in greater depth. Supervision of and feedback to students was highlighted as a key issue by focus group attendees. Inconsistent communication approaches, incomplete and insufficient information, and governance across institutions were also raised as problems as was managing increasingly diverse students. The themes emerging from the focus groups resonated strongly with the common themes identified in the analysis of literature, thereby reaffirming the support required by industry partners.

Phase 3: Survey

Of the 480 respondents to the survey, 48% were from organizations with greater than 200 employees and 21% had less than 20 employees. All major industry sectors were covered with 22% being from the health sector, 16% manufacturing and 14.5% from education and training. Fifty six percent of respondents belonged to private organizations and 26% comprised government corporations. A large proportion of the organizations (54%) had been in operation for over 30 years and 81% had been established for over 10 years. Respondents deemed all topics to be *very useful* or *moderately useful* with percentage agreement with *moderately useful* ranging from 33% to 45% and *very useful* from 27% to 47.5%. The item *General information highlighting benefits and outcomes of WIL* recorded the highest percentage of *not useful at all and of little use* with a result of 8.6%. Resources on the *Definition of WIL and types of WIL* were judged *not useful at all or of little use* by 6.9% of respondents.

While these items received the highest percentage for *not useful* or *of little use*, it must be countered by the relatively high number of employers who rated them as *moderately useful* or *very useful*. This is reflected in Figure 1 below which displays the percentage rating for all items deemed *moderately useful* and *very useful* by respondents.

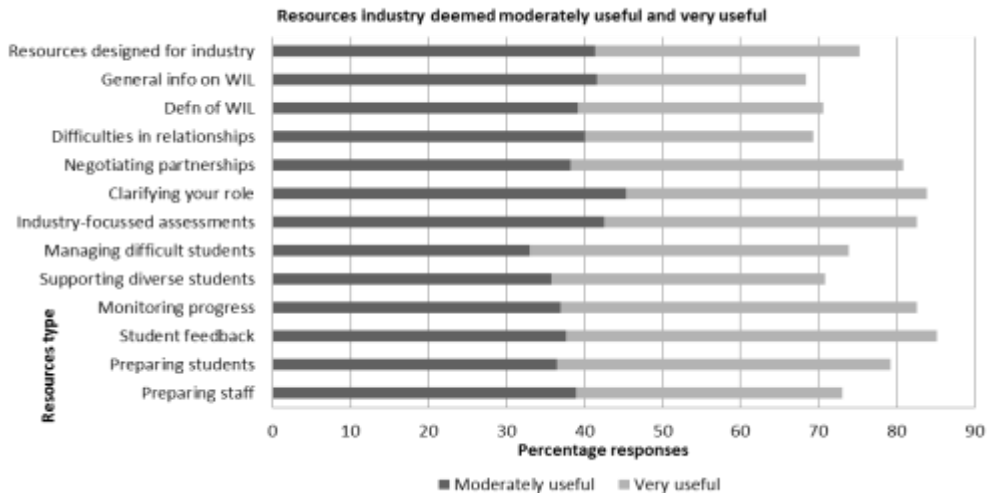


FIGURE 1: Percentage responses for moderately useful plus very useful

Figure 1 demonstrates that host organizations deem all resource types to be useful but the items that recorded the highest level of agreement were student feedback, role clarification, industry-focused assessments, monitoring student progress and negotiating partnerships where percentage responses for considering these resources to be *moderately* or *very useful* exceeded 80%. Sixty one percent of respondents considered discipline specific resources to be *important* or *very important* highlighting the need for the development of resources that are easily adapted for a discipline-specific context.

Qualitative data was coded and categorized according to the themes emerging from the analysis of literature. Using a mixed method approach where the qualitative data was used to probe further from quantitative findings, detailed information and improved communication mechanisms recorded the highest number with 50% of comments relating to this theme. This was followed by the need for more resources on assessment and supervision of students with 25% of the comments pertaining to this topic.

Respondents were invited to rank their preferred mode for resources from one to seven. A website portal was convincingly the most preferred mode with 116 first preferences. A blended mode using a combination of face to face workshops complemented with online materials also rated highly with 78 first votes closely followed by face to face workshops only with 70 first preferences. The least preferred modes were CD/DVD (ranked 7th by 113 respondents), hard copy (ranked 7th by 62 respondents), and video (ranked 7th by 60 respondents).

DISCUSSION

Engagement with the WIL agenda in Australia is widespread spanning government agencies, peak industry bodies, discipline specific organizations (Edwards et al., 2015), Universities and University corporations. The release of the National WIL Strategy and other high profile reports (e.g., Smith et al., 2014) have been catalysts for addressing the key issues associated with enacting WIL curriculum and supporting industry partners to provide WIL opportunities, thereby enhancing student employability. Based on the research findings it is evident that a range of resources need to be developed to support industry engagement with WIL.

A key finding was that industry requires greater clarity around their roles and responsibilities. The resources perceived most useful by industry partners were focused clearly on monitoring student progress through assessment, supervision and feedback which is aligned to their roles and responsibilities, and building and maintaining relationships with universities. Smith (2011) espoused a model of assessment that involves all parties as assessors as an empowering process that facilitated a collaborative approach to learning. Host organizations are eager to engage in the assessment space but require support to enhance their capacity to provide meaningful and constructive feedback to students; collaborate on designing authentic assessment tasks; and implement supervision approaches that reflect their discipline and industry expertise. This is all underpinned by being able to build and maintain relationships with universities.

An extensive review of literature and comprehensive data gathering mechanisms have confirmed the challenges and revealed gaps in available resources and specific topics industry partners consider useful. Industry requires concise, clear and accessible information (PhillipsKPA, 2014) to fully engage with WIL and optimize the benefits for all stakeholders.

In the process of undertaking the environmental scan of available resources, it became apparent to the project team that resources on industry supervision of students were in development. However, without a streamlined process for collating and registering resources, they will continue to remain elusive to the bulk of industry partners.

The concern that currently resources are housed in multiple locations, limiting the potential of users to source them has been highlighted in the National WIL Strategy as is the need for organizations to work collaboratively to overcome this challenge and ensure that WIL information can be accessed from a central portal. To address this, a project currently underway by partners in the National WIL strategy aims to jointly develop a suitable web-based portal for all WIL stakeholders' to act as gateway to access current resources. A communication strategy is also being developed to ensure broad engagement particularly by industry partners nationally.

CONCLUSION

The dynamics of the future world of work is unpredictable as economic, social, technological and environmental forces impact on professions (Probert & Alexander, 2015). Given the uncertainty of attributes required for a productive and globally competitive workforce in the future, determining the nature of educational programs is problematic. Educational learning experiences that cultivate creativity, innovation and problem-solving are imperative and can only be enacted through authentic, experiential learning. An education that promotes skills development and entrepreneurial skills requires engagement of and input from industry into

the curriculum (Foundation for Young Australians, 2015). Partnerships premised on clearly articulated, two-way channels of communication are fundamental to achieving this aspiration (Cooper, Orrell & Bowden, 2010).

The barriers and challenges have been repeatedly evidenced and documented with recurring themes that echo the WIL Report (Patrick et al, 2009). The outcomes of this project have identified clear strategies and deliverables to move the WIL agenda forward through the development of resources focused on identified areas deemed useful by industry partners and in a format that meets their needs. In addition, a key deliverable of the project was the design and development of a website to house WIL resources for both industry and community partners and university practitioners. The website is linked to the ACEN website with plans to promote it as a 'one-stop shop' for resources and information pertaining to quality WIL (see <http://acen.edu.au/wil-impact/>). The outcomes of this project are timely and closely aligned with the National WIL Strategy. Long needed resources for industry were a key deliverable with findings informing future directions in the WIL domain.

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REFERENCES

- Australian Collaborative Education Network. (2015). National strategy on work integrated learning in university education. Retrieved from <http://cdn1.acen.edu.au/wp-content/uploads/2015/03/National-WIL-Strategy-in-university-education-032015.pdf>
- Australian Industry Group. (2016, February 21). *Ai group submission 2016-2017 Federal Budget Submission*. Retrieved from http://cdn.aigroup.com.au/Submissions/Budget/2015/Ai_Group_Budget_Submission_FINAL.pdf
- Australian Workforce and Productivity Agency. (2014). *Work integrated learning AWPA scoping paper*. Retrieved from <http://hdl.voced.edu.au/10707/309570>.
- Bryman, A. (2004). *Social research methods* (2nd ed.). Oxford, UK: Oxford University Press.
- Burns, D. (2007). *Systemic action research: A strategy for whole system change*. Bristol, UK: The Policy Press:
- Cooper, L., Orrell, J., & Bowden, M. (2010). *Work integrated learning: A guide to effective practice*. New York, USA.: Routledge
- Creswell, J. (2012). *Educational research: Planning, conducting, and evaluating quantitative and qualitative research* (4th ed.). Boston, USA: Pearson Education, Inc.
- Deloitte Access Economics. (2014). *Australia's STEM workforce: A survey of employers*. Report commissioned by the Office of the Chief Scientist. Retrieved from http://www.chiefscientist.gov.au/wp-content/uploads/DAE_OCS-Australias-STEM-Workforce_FINAL-REPORT.pdf
- Edwards, D., Perkins, K., Pearce, J., & Hong, J. (2015). *Work integrated learning in STEM in Australian universities*. Report for the Office of the Chief Scientist. Retrieved from http://www.chiefscientist.gov.au/wp-content/uploads/ACER_WIL-in-STEM-in-Australian-Universities_June-2015.pdf
- Ferns, S., Campbell, M., & Zegwaard, K. (2014). *Work integrated learning*. In S.Ferns (Ed.). *HERDSA guide: Work integrated learning in the curriculum* (pp. 1-6). Milperra, NSW: Higher Education and Development Society of Australasia

- Foundations for Young Australians. (2015). *The new work order: Ensuring young Australians have skills and experience for the jobs of the future, not the past*. Retrieved from <http://www.fya.org.au/wp-content/uploads/2015/08/fya-future-of-work-report-final-lr.pdf>
- Hodges, D. (2011). The assessment of learning in cooperative and work-integrated education. In R.K. Coll & K.E. Zegwaard (Eds.), *International handbook for cooperative and work-integrated learning: International perspectives of theory, research and practice* (2nd ed., pp. 53-62). Lowell, MA: World Association for Cooperative Education.
- Patrick, C. J., Peach, D., Pocknee, C. (2009). *The WIL (Work Integrated Learning) Report: A National Scoping study* [Final Report]. Office for Learning and Teaching. Retrieved from <http://eprints.qut.edu.au/44065/1/WIL-Report-grants-project-jan09.pdf>
- Patrick, C. J., Fallon, W., Campbell, M., Devenish, I., Kay, J., Lawson, J., Russell, L., Tayebjee, F., & Cretchley, P. (2014). *Leading WIL: A distributed leadership approach to enhance work integrated learning*. (Final Report). Retrieved from <http://www.olt.gov.au/project-leading-wil-distributed-leadership-approach-enhance-work-integrated-learning-outcomes-2011>
- PhillipsKPA, (2014). *Engaging employers in work integrated learning: Current state and future priorities*. Richmond, Victoria: Department of Industry and Science. Retrieved from <https://docs.education.gov.au/system/files/doc/other/phillipskpa-wil-research-report.pdf>
- Probert, B., & Alexander, S. (2015). *A 21st-Century higher education: training for jobs of the future*. Retrieved from <http://theconversation.com/a-21st-century-higher-education-training-for-jobs-of-the-future-47938>
- Rumrill, P., Fitzgerald, S., & Merchant, W. (2010). Using scoping literature reviews as a means of understanding and interpreting existing literature. *Work-A Journal of Prevention Assessment & Rehabilitation* 35(3), 399-404. doi 10.3233/WOR-2010-0998
- Smith, C., Ferns, S., & Russell, L. (2014). *The impact of work integrated learning on student work-readiness* (Final Report). Retrieved from <http://www.olt.gov.au/resource-impact-work-integrated-learning-student-work-readiness>
- Smith, K. (2011). Empowering school and university-based teacher educators as assessors: A school university cooperation. *Education Research and Evaluation*. 13(3), 279-293.
- van Rooijen, M. (2011). Transforming 21st century engagement: From work-integrated learning (WIL) to learning-integrated work (LIW). *Journal of Cooperative Education and Internships*, 45(1), 5-10.

APPENDIX A: ANALYSIS OF LITERATURE

Title	Author/ Publisher	Year
<i>Australia's future workforce</i>	Committee for economic development of Australia (CEDA)	2015
<i>National Strategy on Work-Integrated Learning In University Education</i>	Universities Australia, Australian Collaborative Education Network, Australian Chamber of Commerce and Industry, Australian Industry Group, and Business Council of Australia	2015
<i>Progressing Stem Skills In Australia</i>	Australian Industry Group	2015
<i>Work-Integrated Learning in STEM in Australian universities: Final Report</i>	Edwards, Perkins, Pearce & Hong, submitted to the Office of the Chief Scientist. Australian Council for Education Research (ACER)	2015
<i>The new work order: Ensuring young Australians have skills and experience for the jobs of the future, not the past</i>	Foundations for Young Australians (FYA)	2015
<i>Industry innovation and competitiveness agenda: An action plan for a stronger Australia</i>	Commonwealth of Australia	2014
<i>Work-Integrated Learning AWPA Scoping Paper</i>	Australian Workforce And Productivity Agency	2014
<i>Engaging Employers in Work-Integrated Learning: Current State and Future Priorities</i>	PhillipsKPA: Report to the Department of Industry	2014
<i>The Impact of Work-Integrated Learning on Student Work-Readiness: Final Report</i>	Smith, Ferns & Russell: Report for the Office of Learning and Teaching	2014
<i>Leading WIL: A Distributed Leadership Approach to Enhance Work-Integrated Learning: Final Report</i>	Patrick, Fallon, Campbell, Devenish, Kay, Lawson, Russell, & Tayebjee: Report for the Office of Learning and Teaching	2014
<i>Employment, Work Placements & Work-Integrated Learning of International Students In Australia</i>	International Education Association Of Australia	2014
<i>WIL in Curriculum HERDSA Guide</i>	Ferns (Editor)	2014

APPENDIX B: SAMPLE QUESTIONS FOR INTERVIEWS AND FOCUS GROUPS:

Please respond to the questions below giving consideration to the type of resources, information and supporting documentation required by industry when supporting students on work-integrated learning placements.

1. Some challenges for organisations to participate in fieldwork include: cost, resourcing, establishing partnerships, aligning stakeholder expectations, lack of awareness of Work-integrated learning (WIL) and preparedness of students. Which of these barriers cause the greatest challenges for you? Are there other challenges for you?
2. With what skills do workplace mentors/supervisors need support?
3. Describe the resources/support that will assist in strengthening internal capacity of your organisation to overcome these challenges.
4. What topics/information need to be included in support material to assist in supporting students on fieldwork? Eg supervision, curriculum, assessment, induction, feedback.
5. What format for resources is preferred? eg pdf, video
6. What is the preferred mode for accessing resources? (technology, web-based, hard copy, face to face sessions)
7. In your view, what are the benefits of fieldwork for all stakeholders?
8. What are the important steps in establishing a partnership between host organisations and universities?

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The Journal's main aim is to allow specialists working in these areas to disseminate their findings and share their knowledge for the benefit of institutions, co-op/WIL practitioners, and researchers. The Journal desires to encourage quality research and explorative critical discussion that will lead to the advancement of effective practices, development of further understanding of co-op/WIL, and promote further research.

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Types of manuscripts the Journal accepts are primarily of two forms; *research reports* describing research into aspects of Cooperative Education and Work Integrated Learning/Education, and *topical discussion* articles that review relevant literature and give critical explorative discussion around a topical issue.

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Research reports should contain; an introduction that describes relevant literature and sets the context of the inquiry, a description and justification for the methodology employed, a description of the research findings-tabulated as appropriate, a discussion of the importance of the findings including their significance for practitioners, and a conclusion preferably incorporating suggestions for further research.

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