

Successful work-integrated learning relationships: A framework for sustainability

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Work-integrated learning (WIL) experiences rely heavily on the development of relationships between the university, industry and often community organizations. As participation in WIL is increasing, the issue of sustainability becomes paramount, requiring processes and practices for effective collaborations and partnerships. This paper reports on an action research project to develop a framework to represent the critical success factors for sustainable WIL relationships. Drawing on reflections from WIL practitioners on what they considered were the critical success factors and a review of literature, a framework was developed, prioritizing three key themes: communication, commitment and compatibility. Within these themes, nine key factors were identified and then evaluated by academic and industry stakeholders in New Zealand, Canada and Australia. Trust, expectations, reciprocity, coordination, vision, learning, resources, reputation, and recognition were confirmed as important factors for sustainable WIL relationships. The framework provides good practice guidelines for all WIL stakeholders.

Keywords: Work-integrated learning, sustainable relationships, partnerships, success factors, university-industry engagement

Work-integrated learning (WIL) experiences rely heavily on the development of sustainable relationships between higher education institutions, industry and often the community. In some instances, this relationship may result in a partnership, but this is not always the case, and is dependent on a complexity of factors that may vary over time. In order for students to gain the full benefits of a WIL experience, institutions and students are reliant on the involvement of workplaces that are prepared to host students. Post-secondary education institutions also require strong partnerships with employers in order to shape curriculum and program implementation (Van Rooijen, 2011). Furthermore, engagement with industries can help institutions and program administrators to identify the skills necessary for the work environment and determine relevant assessment criteria within a particular industry context (Hodges, 2011).

While industry members and program administrators exhibit a strong consensus upon the positive outcomes of WIL, there remains a discrepancy between the expectations of universities, industries, and society regarding the proper implementation of WIL programs (Pilgrim, 2012). It is important to address this disconnection as industry engagement in higher education has been shown to play a role in increasing student employability and in enhancing professional practice (Franz, 2008). The challenge, according to Choy and Delahaye (2011), is the contentious issue of power, inherent in developing partnerships, given the different ideologies and approaches of the entities concerned. While acknowledging partnerships as a potential endgame for WIL, this study has focused on the foundational relationships that are instrumental in delivering a diversity of WIL activities.

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In a study examining the delivery of WIL to large cohorts of students, Dickson and Kaider (2012), determined one of the most difficult demands of implementing WIL programs is creating relationships with industry. While reciprocity, efficiency, and legitimacy are key factors found to motivate industry to be part of WIL, many relationships are built on personal connections (Fleming & Hickey, 2013). WIL relationships dependent on a personal connection within a workplace can create challenges for the long-term sustainability of the partnership with the organization.

As participation in WIL is increasing in many programs and institutions, the issue of sustainability becomes paramount, requiring processes and practices for establishing and maintaining strong relationships. In the context of WIL, sustainable relationships are those that serve a mutually beneficial purpose and have the potential to be ongoing rather than a one-off association. One key barrier arising from the popularity of WIL has been the lack of a shared understanding amongst employers/host organizations as to what WIL involves and how they can be included (Department of Industry, 2014; Fleming & Haigh, 2017). According to Mulvihill, Hart, Northmore, Wolff, and Pratt (2011, p.11), "Each university must negotiate – and re-negotiate - the meaning, value and purpose of engagement with their communities if they are to ensure successful and sustainable partnerships in the long term".

While engagement frameworks are published in the literature, this research focused on the development of a framework for facilitating sustainable relationships in the contemporary context of WIL. The aim was to identify critical success factors for university and industry/community engagement across different WIL sectors. Once identified, these success factors were used to underpin development of a framework for sustainability. As part of the data collection, the following research questions were addressed:

1. What are the critical success factors of industry engagement in WIL across multiple contexts?
2. What are the existing engagement models/frameworks that could be applicable to WIL?
3. What could a model/framework for sustainable relationships look like that represents the complexity of contemporary contexts of WIL?

CONTEXTS

This international collaborative project, conducted in Australia, Canada and New Zealand, explored three different models of WIL. Each of these contexts is briefly outlined below.

Professional and Community Engagement (PACE) – Macquarie University, Australia

The Professional and Community Engagement (PACE) program is a strategic initiative of Macquarie University based on the enduring principles of reciprocity and connectedness. It is integral to its vision of becoming a university of service and engagement. Embedded in the curriculum, PACE aims to provide students the opportunity to engage with the community, in local, regional, and international settings, through diverse work-integrated learning opportunities. Through PACE, students work on projects that meet the partner's organizational goals and "offer experiences, within formal settings and beyond, that change the lives of our students, support them in achieving their aspirations and provide an incubator for the next generation of leaders" (Macquarie University, 2013, p.11). Key to the success of the program is developing an understanding of how models of engagement foster sustainable interaction. In such a context, participation and engagement of key stakeholders (students, partners and university staff) hinges on the importance of collaboration and relational partnering: working

together as a cohesive team based on communication, trust, and confidence (Doloi, 2009; McLachlan & Kolc, 2016).

Cooperative Education at University of Waterloo, Canada

When the University of Waterloo was established in 1957, one of its founding characteristics was the adoption of a model of cooperative education (co-op). Its model was largely based on the co-op program introduced at the University of Cincinnati in 1906. At Waterloo, during the completion of their undergraduate degree, co-op students alternate between academic and work terms, typically four months in length where they are able to integrate knowledge from their classes with their experiences in the workplace. The co-op program is offered in programs across all faculties at the university, mandatory in some programs and optional in others. A centralized unit manages the competitive employment process and supports students and employers during the recruitment phase and during the work term. In 2016, Waterloo students were engaged in over 18,000 full-time paid four-month work terms in more than 4,500 organizations in Canada and around the world.

Cooperative Education in Sport and Recreation, Auckland University of Technology (AUT), New Zealand

Cooperative education, as a model of work-integrated learning, is a compulsory part of the curriculum for all students within the Bachelor of Sport and Recreation (BSR) at AUT. The BSR is a three-year degree programme with majors in Sport and Exercise Science, Coaching, Physical Activity and Nutrition, Sport Management, Health and Physical Education and Outdoor Education. Approximately 150 students a year undertake 350 hours of placement within one sport and recreation organization generally two days per week, during the final year of their three year degree. Students generally negotiate their own industry placements and these can include: national, regional or local sports organizations e.g., New Zealand Football, Auckland Rugby Football (Union); community recreation and fitness centers; outdoor tourism operators; schools (physical education departments or sports coordinators); and regional sports trusts and sport performance centers. The process of finding a placement is facilitated through forums, and advertisements from organizations that are seeking student placement opportunities. A workplace supervisor negotiates appropriate work activities for students and provides guidance, support and feedback in the workplace. Ideally, an environment that supports 'learning' and not just 'working' is created, as most of the student placements are unpaid. Complementing this, the part-time placement structure allows the academic supervisor to play an integral role in the learning process (Fleming, 2015). Students are expected to meet their academic supervisor on a regular basis (ideally every two weeks and generally on the university campus). The academic supervisor has key roles in facilitating the development of reflective practice, helping students identify the learning that is gained from the workplace experience and assisting them to integrate this learning with what they have learnt from university. While the BSR co-op program was the context for this project, co-op or other types of WIL experiences are embedded within most undergraduate qualifications at AUT.

METHODOLOGY

The project adopted an action research approach. While there are a number of different models of action research, a generic definition that appears to capture the diversity is presented by Reason (1993, p. 1268):

All models of action research suggest that inquiry engages in a cyclical process; problems are identified and questions asked, some form of action is designed and carried out, empirical and/or

experiential data are gathered, and then in a reflective mode, the experience is compared with the starting idea and questions.

In particular, the use of developmental action research (Cardno, 2003) was deemed appropriate for this project as it encouraged a participatory approach to problem solving and improving practice consistent with the collaborative philosophy of work-integrated learning.

The project was structured in three phases consistent with developmental action research (see Figure 1). Phase I was to reflect on and review current thoughts and opinions of critical success factors. Phase II (the action) was to consolidate findings and develop a framework to represent sustainable WIL relationships. This involved the researchers engaging in mini-cycles of reflection, feedback and re-design. Phase III was to evaluate the framework from the stakeholders' perspectives. These phases are outlined in more detail below.



FIGURE 1: Phases of action research

Phase I: Reflect and Review

Firstly, a literature review identifying existing good practice models of university-community engagement was conducted. Key search terms included: university-community and university-industry engagement; and work-integrated learning relationships. Studies were critiqued for their relevance to WIL relationships. Document analysis of programs, practices and resources being used in universities was also used to identify success factors and explore their appropriateness for addressing the challenges and complexity of contemporary WIL contexts.

The second stage involved consultation with practitioners from within the WIL community in New Zealand and Australia. Two discussion forums were held where the groups (predominately made up of WIL coordinators and academics associated with WIL from higher education institutions), were asked to reflect on what they considered were the critical success factors for sustainable WIL relationships. The common themes from each forum were summarized. The data from the two forums were then compared and combined into an overall summary of success factors.

Phase II: Development of the Framework

Phase II of the project involved an individual review of the findings by the researchers, followed by a dialogic process of collaborative critical reflection to discuss the relevance of the themes and the development of the draft framework. The process opens ideas and perspectives up to greater critique (Brookfield, 1995) through reflective dialogue (Freed, 2003) drawing on the experience of the researchers. Initially key themes were identified and then a number of factors that related to these themes were proposed. The design for the framework was then created to visually represent the data.

Phase III: Evaluation

Phase III involved gaining feedback from key stakeholders - industry/community partners and university staff, to evaluate the framework. Evaluation was undertaken using multiple methods. Ethical approval was gained from the relevant committees within each university context.

An initial survey of WIL academics on the proposed framework aimed to identify if any key factors had been omitted and whether factors identified were considered to be important for success and/or sustainability. A poster of the framework was displayed and a brief survey was made available for participants at a New Zealand WIL related conference (NZACE 19th Annual Conference, 2016). The survey was structured with Likert scales to indicate whether the factors were perceived as important, along with open-ended questions that allowed participants to provide comments or reasons for their response. Participants were able to suggest any factors that they believed were missing from the framework. Seventeen participants completed the survey from a range of different tertiary organizations and disciplines.

The responses to the first survey informed the development of a second survey designed to gain more in-depth feedback from an industry perspective. Organizations that had hosted a WIL student from the researchers' universities in Australia, Canada and New Zealand were invited to complete an online survey. Questions focused on the importance of each of the nine factors proposed in the original framework. In total, 406 participants responded to the survey (Canada: n=298; Australia: n=68; New Zealand: n=40). Further details of the demographics of the survey participants are reported later.

FINDINGS

The findings are structured based on the three phases of action research identified in the methods section: reflect and review; development of the framework; evaluate.

Findings: Phase I (Reflect and Review)

In this phase, the critical success factors for sustainable relationships were identified and models of engagement from other contexts were critiqued. The findings are presented in two parts – the factors identified from the literature and those that were identified from the discussion forums.

Critical success factors for sustainable relationships identified from the literature

Importantly, the review highlighted the different models of work-integrated learning, which not only have a number of common elements, but also wide variations that may influence the relationships formed. For example, in the Canadian model of cooperative education (co-op), students are hired and paid by employers to work four months full-time for their organization. In other forms of WIL, students are volunteering their time in organizations. The paid/unpaid difference can be significant in terms of

the expectations of the partner organizations. Reinhard, Pogrzeba, Townsend, and Pop (2016) state that the level of commitment of industry to a co-op program can be reflected through its level of remuneration to students participating in the program. The complexity of managing stakeholder expectations is highlighted by Brown (2010), who contends that establishing effective organizational procedures and clear communication can assist in explicating realistic expectations. The variation among models led to an examination of the literature on partnerships from a number of different perspectives including community/university engagement, industry/university partnerships and industry-to-industry partnerships. These are summarized in the following sections.

Community and university engagement

Partnerships created by engagements between communities and universities require a substantial amount of human and social capital investment in order to build trust (Harvey et al., 2017). Importantly, community-university partnerships account for university students and faculty obtaining invaluable professional development, competency building and career networking opportunities, while also helping the community partner with their organizational goals and contributing to their overall development (Hogan, Tynan, Covill, Kilmer, & Cook, 2017). From the review of literature, a number of good practice frameworks were explored that addressed the challenges inherent in the engagement process (see Garlick & Langworthy, 2008; McCabe, Keast, & Brown, 2006; Mulvihill et al., 2011). The findings from the GraniteNet project (Arden, McLachlan, & Cooper, 2009), in particular, draws on this literature and proposes a model, identifying thirteen implicit and explicit key success factors, which are considered particularly relevant to building long-term relationships between universities and their communities (see Table 1).

TABLE 1: Critical success factors for sustainable university-community engagement.

More Tangible Factors (Explicit)	Less Tangible Factors (Implicit)
<ul style="list-style-type: none"> • Written agreement (MOU/Contract) • Clear and agreed purpose to the relationship • Results orientated to meet community defined priorities • Demonstrated commitment of resources and leadership • Interdisciplinary (university) and broad community involvement • Demonstrated mutual benefit (university and community outcomes) • On-going evaluation 	<ul style="list-style-type: none"> • Evidence of trust • A shared vision • Sharing of knowledge, expertise and resources • Commitment to learning • Acknowledgement and respect for 'insider' and 'outsider' roles, knowledge, expertise and perspectives • Effective communication

Note. From Arden et al., 2009, pp.6-7, used with permission.

While frameworks or models such as these are contingency based, comprising a complex set of interconnected variables, they still provide a substantive base for process development and improvement.

Industry and university partnerships

The most traditional partnerships between universities and industry have been focused on research/innovation collaborations and there is considerable literature on this topic. As was the case with university and community partnerships, there is a great deal of overlap in the identification of key themes contributing towards the success of industry-university partnerships. Striukova and Rayna (2015) point out that universities are under increasing pressure to take on joint research collaborations with industry and to tackle real problems faced by industries. Within that context, universities can act as “trusted intermediaries” to allow for successful collaboration with multiple parties, by providing a “trusted environment” (Stiukova & Rayna, 2015). This is supported by Berbegal-Mirabent, Garcia, and Ribeiro-Soriano (2015) who acknowledge as universities develop technologies and give them to the business sector, academic research becomes an integral and central part of the economic cycle of innovation and growth, thus emphasizing the importance of these relationships. According to Barnes, Pashby and Gibbons (2006), there are eight universal success factors in university-industry partnerships including mutual trust, commitment, flexibility, learning and continuity of personnel. Universal success factors include good personal relationships, collaboration champion and leadership. Bstieler, Hemmert, and Barczak (2017) found that mutually persistent and strong efforts are required in order to create trust, especially between dissimilar collaborators. They found an imbalance in levels of trust with the universities reporting somewhat lower ratings of trust in their industry partners.

A recent review of the literature (Ankrah & Omar, 2015) summarized the factors affecting university-industry collaboration. Based on a meta-analysis of the literature they identified factors that contribute positively or negatively to the success of the partnership and have grouped them into seven main categories: capacity and resources; legal issues and contractual mechanisms; management and organization issues; issues relating to technology; political issues; social issues and other issues. Capacity and resource issues included having adequate funding, human resources and facilities. Legal issues related to inflexible university policies and treatment of confidential information. Management issues acknowledged the importance of top level management commitment and support, teamwork, communication and mutual trust. Other organizational factors that were considered important were organizational culture (differences between academia and industry), skill and role of both university and industry as boundary spanners and human capital mobility. The nature of technology/knowledge to be transferred were considered important factors along with policy/legislation and regulations to guide and support university-industry collaborations. Enhancement in reputation/prestige was identified as a key social factor. A range of other factors included cross sector differences or similarities and geographic proximities (for further details of the list of factors see Ankrah and Omar, 2015 p. 397).

Industry-to-industry partnerships

Within industry, companies often form partnerships for mutual strategic advantage. In addition to examining the literature for university/community and university/industry partnerships, we also reviewed research on the factors affecting industry-to-industry collaborations. Empirical studies of the factors affecting success in a vertical partnership, for example, manufacturer and dealer, report that coordination, commitment, trust, communication quality, information sharing, participation, joint problem solving and avoiding the use of smoothing over problems to be significant in predicting the success of the partnership (Mohr & Spekman, 1994; Monczka, Petersen, Handfield, & Ragatz, 1998).

Critical Success Factors Identified from the Discussion Forums

The discussion forums identified common themes, summarized in Table 2, which were consistent across different models of WIL that were represented by the participants.

TABLE 2: Key themes for sustainable work-integrated learning relationships.

Preparation	Providing benefits, requirements, expectations and standards. Procedures handbooks, (e.g., health & safety, what to do if something goes wrong). Informed, prepared and appropriate students (i.e., match industry needs).
Expectations	Informing, understanding and matching expectations.
Commitment	Contracts, develop a sense of belonging, promote three-way partnership.
Communication	Regular dialogue and engagement (face to face if possible). Clear points of contact.
Recognition	Acknowledge and reward industry involvement.
Promotion	Capture and showcase good practice.
Flexibility	Alternative and innovative approaches, timing and requirements, avoid within and between university competition.
Mentoring	Availability of support, professional development.
Relationship Management	Responsive, nurture relationships, networking, manage multiple interfaces, appropriate timing of contact, seek feedback.

Findings Phase II: Development of the Framework

Examining the critical success factors for sustainable relationships identified in the literature, as well as those collected through the consultation forum, revealed a number of common themes. As shown in Figure 2, three main threads were identified that represented the overarching factors for sustainability: compatibility, communication and commitment. In addition, nine factors which significantly impact the success of WIL relationships were identified: learning, trust, recognition, coordination, flexibility, expectations, vision, reciprocity and reputation. Each of these nine critical success factors is connected to one or more of the three main threads and is discussed in the following section.

Compatibility

For WIL relationships to be sustainable there needs to be compatibility between the institution and the partners. One aspect of compatibility is that both partners benefit from the arrangement; that is, there is reciprocity among them. There may be variation in the main purpose for partnering among stakeholders, however, there needs to be a shared *vision* of how each can accomplish his/her goals through the relationship. One of the key elements of compatibility is that all partners recognize the role of *learning* as the core of the experience for students. For universities, this means providing good preparation and support for students. For the partner organizations, it means providing an environment where the students can learn. That said, it is unlikely that organizations will repeatedly partner with academic institutions to provide opportunities for students if they do not perceive benefits

for their organizations. Similarly, if institutions feel that students are not benefiting by working in particular organizations, it is unlikely they will want to continue collaborating with those organizations. One of the factors that may affect perception of reciprocity is the *reputation* of the various partners. For organizations, if the university has a strong reputation in the areas of interest to them, it may increase their view of compatibility. Similarly, organizations with strong reputations for providing good experiences for students will increase the interest of the university in establishing a partnership. To ensure compatibility and success, *expectations* of the various partners need to be compared and considered.

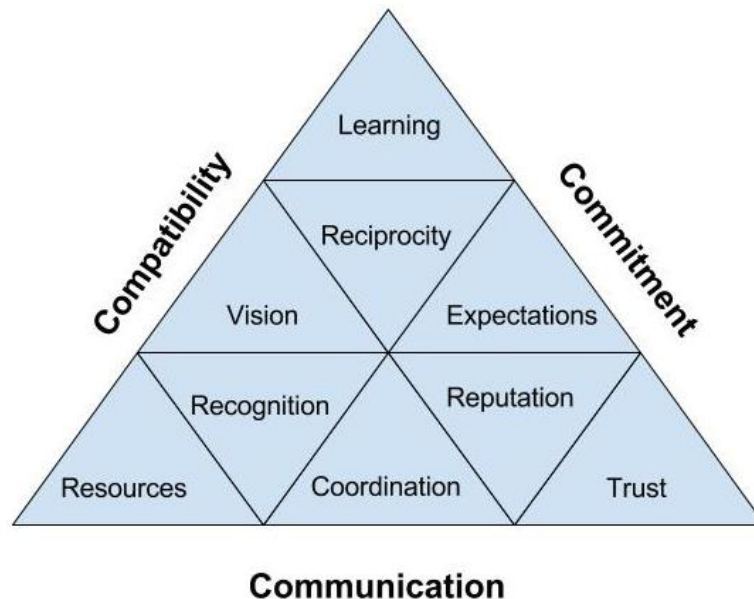


FIGURE 2: Sustainable relationships framework for work-integrated learning.

Commitment

In WIL, commitment is a critical component of creating sustainable relationships. Commitment develops as *trust* is established between partners. Through ongoing participation, partners will establish or build on a *reputation*, thereby increasing their respective commitment to the partnership. An additional factor that may increase the commitment of the partners is *recognition* of the value of the relationship. This might include a formal or informal ‘thank you’ from the university to the partner organizations, or it might be the partner organizations promoting the value of their partnerships with the university to peer organizations. In the WIL context, commitment develops through ongoing *coordination*, which includes a substantial planning process, followed by delivering on what is promised. It is also important that there is attention to, and action on, what is *learned* as part of a continuous improvement process. As partners see how their objectives are met through the relationship, commitment is established. One way of demonstrating commitment is for each of the partners to ensure the appropriate *resources* are allocated. For the universities, this means ensuring that there are human resources and processes that support the WIL relationships with partner organizations. For the organizations, this means ensuring that the WIL student is provided with appropriate mentorship and/or supervision as well as remuneration for programs that require it.

Communication

References to successful partnerships, across all domains, include the importance of communication as a foundation of sustainable relationship. Communication is critical to ensure compatibility among partners within the WIL context and commitment between partners can only occur through many forms of communication. In fact, as we examined the nine success factors identified in this research, it became evident that communication acts as an essential connector, weaving the themes together.

In establishing and *coordinating* the activities and support for WIL, communication is critical. In the initial stages of partner formation, it is important to identify a shared *vision* for the collaboration and commit adequate *resources* to the WIL program. Communication between partners will lead to an understanding of one another's *expectations*. A continuous improvement process can be fostered through communication and from the partners *learning* from one another.

In nurturing an ongoing WIL relationship, communication is important in *recognizing* the contribution of the partners and in furthering the *reputation* of the partners. On-going communication will ensure the *reciprocity* of the partnership and demonstrate the flexibility of programs and organizations to adapt to one another's goals. Through this open and ongoing communication, *trust* among the partners will develop.

Defining the factors

Informed by the literature and the discussion in the section above, the following definitions were proposed for the nine factors:

1. Learning: Learning is seen as the core of the experience where knowledge and information is shared and partners learn from each other at different times and in different ways.
2. Vision: The vision is shared; values are aligned and there is an agreed purpose for the relationship.
3. Reciprocity: There are mutual benefits that create a win-win relationship for each partner.
4. Expectations: Expectations are identified, communicated, and understood.
5. Resources: Appropriate resources (human and facilities) are available, and capacity constraints are considered.
6. Recognition: There is acknowledgement of the value of the partnership and the contributions of each of the partners.
7. Coordination: Effective planning, preparation and evaluation occur, responsive to the needs of each partner.
8. Reputation: The reputation of the institution and the organizations is acknowledged, developed, and protected in the relationship.
9. Trust: Mutual trust among partners is developed and commitment to the relationship is evident.

The definitions were included in the surveys designed to evaluate the framework in the next phase of the project.

*Findings Phase III: Evaluation**Survey to WIL academics*

Seventeen academics responded to the survey from different higher education institutions in New Zealand and Australia. All academics were involved in some aspect of work-integrated learning within their institutions. Key roles of participants were placement set up, coordination and academic supervision.

The survey analysis confirmed that all of the nine factors were considered important for the success and sustainability of WIL relationships with mean scores of at least 4.0 (out of a possible 5). The factor with the lowest mean score for sustainability was *Resources* (4.0) and the highest score was for *Trust* (4.7). The participants did not suggest any additional/different factors to be included in the framework. Overall, the comments were positive and provided good feedback, for example:

I really like the proposed framework as it captures the essence of successful relationships/partnerships. Consideration should be given to the difference between institutional level partnerships and relationships between individual academics and host supervisors (A10).

Survey to industry/ host organizations

In total, 406 completed survey responses were received from host organizations across the three different contexts (NZ =40; Australia =68; Canada =298). Responses came from the public (24%), commercial (39%), not-for profit (17%) and government sectors (20%). The Australian and NZ contexts had higher representation from the not-for profit sector compared to the Canadian sample (higher in the commercial sector) and this is consistent with the context and nature of their respective WIL programs.

The main industry groups represented were Professional, Scientific and Business services (18%); Educational Services (16%); Health Care and Social Assistance (14%); Finance (9%); Manufacturing (8%); and Sport and Recreation (8%). Other industry groups were represented but to a lesser extent. The size of the organizations varied: small (less than 11 staff – 7%), medium (11-100 staff – 22 %) and large (more than 101 staff – 70%). Of the respondents, 36% were an alumnus of the higher education institution from where they took their WIL students.

The majority of respondents (44%), had been involved with WIL for at least one to three years, 14% supervised students for less than one year and 32% supervised students for more than three years. Most respondents were responsible for only one or two students at a time for their WIL placements and were involved in WIL in direct supervision roles.

Importance of the factors

The industry responses, representing diverse disciplines and organizational contexts, showed that all nine factors proposed in the framework were considered important (mean value of >2.75 was considered important). Table 3 indicates that although there were minor variations, the importance (indicated by mean scores) across the nine factors was similar across the three universities where data collection occurred.

TABLE 3: Mean results for the nine factors across the three universities.

Factor	AUT	UW	MQ
1. Importance of learning	4.04	3.76	4.00
2. Importance of having a shared vision	4.12	3.82	4.16
3. Importance of reciprocity	4.19	4.13	4.21
4. Importance of clear expectations	4.31	4.22	4.52
5. Importance of resources	3.88	3.96	3.93
6. Importance of recognition	3.12	2.89	3.17
7. Importance of coordination	4.08	3.97	4.29
8. Importance of reputation	2.88	3.04	3.33
9. Importance of trust	4.54	4.15	4.37
AVERAGE	3.91	3.77	4.00

Note: AUT = Auckland University of Technology; UW = University of Waterloo; MQ = Macquarie University

While there was a dominance of responses from the Canadian context, where students undertaking WIL experiences were paid, there was overall consistency within the findings. The overall results indicate that the highest means scores were for *trust* and *clear expectations*. Recognition and reputation were the lowest mean scores, but the means (>2.75) indicate they were still considered important.

While the participants were not asked to rank the level of importance, by examining the mean scores for each of the three contexts and ranking these from highest to lowest, similar trends of importance were evident (see Table 4). *Clear expectations* and *trust* were the two highest mean scores across the three contexts, and recognition and reputation were the lowest.

TABLE 4: Ranking of mean scores for each context.

Factor	AUT	UW	MQ
1. Importance of learning	6 th	7 th	6 th
2. Importance of having a shared vision	4 th	6 th	5 th
3. Importance of reciprocity	3 rd	3 rd	4 th
4. Importance of clear expectations	2 nd	1 st	1 st
5. Importance of resources	7 th	5 th	7 th
6. Importance of recognition	8 th	9 th	9 th
7. Importance of coordination	5 th	4 th	3 rd
8. Importance of reputation	9 th	8 th	8 th
9. Importance of trust	1 st	2 nd	2 nd

Overall, the findings of the survey provide evidence across the different university contexts (for WIL), and organizational demographics, for the importance of the nine factors proposed in the framework.

SUMMARY

The development of a framework for critical success factors for sustainable WIL relationships is intended to provide evidence-based good practice guidelines to assist coordinators and practitioners, working in diverse contexts, to cope with the issue of sustainability of WIL programs. The evaluation confirmed that *communication, compatibility and commitment* summarize the critical themes essential for sustainable WIL relationships. Of the nine factors proposed in the framework (i.e., trust, expectations, reciprocity, coordination, vision, learning, resources, reputation, and recognition), while all were considered important, the factors *trust, clear expectations and reciprocity* were consistently rated highly across different contexts and organizational demographics.

As trust was evident as one of the most important factors, further research is needed to examine how trust can best be developed within WIL relationships and what factors affect this development. Further research is also needed to identify the 'how' and 'why' of what organizations and institutions are doing in implementing their WIL programs based on these themes.

While WIL relationships were the focus of this project, it must be acknowledged as a limitation that universities may have several points of interaction with any given community partner or host organization.

The framework provides a visual representation of critical success factors for WIL relationships and the intention is for it to be used to provide guidance for the three stakeholder groups. The framework can be used as a tool for training employer support and recruitment staff, and it can be included in resources provided to industry. For students, the framework can be used as part of preparation sessions to foster understanding and awareness of what is important when developing their own WIL relationships. WIL practitioners and coordinators may find the framework a useful way to measure the ongoing health of WIL relationships and for identifying challenges to sustainability. Once the framework is circulated more widely, there are likely to be a number of other suggestions for using it in the practice of WIL. Readers are encouraged to use the framework within their own contexts.

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REFERENCES

- Ankrah, S., & Omar, A. T. (2015). Universities–industry collaboration: A systematic review. *Scandinavian Journal of Management*, 31(3), 387-408. doi.org/10.1016/j.scaman.2015.02.003
- Arden, C. H., McLachlan, K., & Cooper, T. (2009). Building capacity through sustainable engagement: More lessons for the learning community from the GraniteNet project. *Australian Journal of Adult Learning*, 49(1), 74-101. Retrieved from <https://ala.asn.au/wp-content/uploads/ajal/2009/JournalApril2009.pdf>
- Barnes, T. A., Pashby, I. R., & Gibbons, A. M. (2006). Managing collaborative R&D projects development of a practical management tool. *International Journal of Project Management*, 24(5), 395-404. doi.org/10.1016/j.ijproman.2006.03.003
- Berbegal-Mirabent, J., García, J. L. A., & Ribeiro-Soriano, D. E. (2015). University-industry partnerships for the provision of R & D services. *Journal of Business Research*, 68(7), 1407-1413. doi.org/10.1016/j.jbusres.2015.01.023
- Brookfield, S. D. (1995). *Becoming a critically reflective teacher*. San Francisco, CA: Jossey Bass
- Brown, N. (2010). WIL[ing] to share: An institutional conversation to guide policy and practice in work-integrated learning. *Higher Education Research & Development*, 29(5), 507-518. doi: 10.1080/07294360.2010.502219.

- Bstieler, L., Hemmert, M., & Barczak, G. (2017). The changing bases of mutual trust formation in inter-organizational relationships: A dyadic study of university-industry research collaborations. *Journal of Business Research*, 74, 47-54. doi.org/10.1016/j.jbusres.2017.01.006
- Cardno, C. (2003). *Action research: A developmental approach*. Wellington: New Zealand Council for Educational Research.
- Choy, S., & Delahaye, B. (2011) Partnerships between universities and workplaces: Some challenges for work-integrated learning. *Studies in Continuing Education*, 33(2), 157-172. doi.org/10.1080/0158037X.2010.546079
- Department of Industry. (2014). *Engaging employers in work-integrated learning: Current state and future priorities*. Richmond, VA: Phillips KPA.
- Dickson, K., & Kaider, F. (2012). Designing, developing and delivering work integrated learning to large student cohorts. In Campbell, M. (Ed.), *Collaborative Education: Investing in the future 2012* (pp. 61-67). Perth, Australia: Australian Collaborative Education Network. Retrieved from http://acen.edu.au/2012conference/wp-content/uploads/2012/11/46_Designing.pdf.
- Doloi, H. (2009). Relational partnerships: The importance of communication, trust and confidence and joint risk management in achieving project success. *Construction Management and Economics*, 27(11), 1099-1109. doi.org/10.1080/01446190903286564
- Fleming, J. (2015). Exploring stakeholders' perspectives of the influences on student learning in cooperative education. *Asia-Pacific Journal of Cooperative Education*, 16(2), 109-119.
- Fleming, J., & Haigh, N. J. (2017). Examining and challenging the intentions of work-integrated learning. *Higher Education, Skill and Work-Based Learning*, 7(2), 198-210. doi: 10.1108/HESWBL-01-2017-0003
- Fleming, J., & Hickey, C. (2013). Exploring cooperative education partnerships: A case study in sport tertiary education. *Asia-Pacific Journal of Cooperative Education*, 14(3), 209-221.
- Franz, J. M. (2008). A pedagogical model of higher education/industry engagement for enhancing employability and professional practice. In *Work-integrated learning (WIL): Transforming Futures, Practice... Pedagogy... Partnerships*. pp. 164-169. Sydney, Australia. WACE. Retrieved from <http://eprints.qut.edu.au/15541/>.
- Freed, S. (2003). Metaphors and reflective dialogue online. *New Horizons in Adult Education*, 17, (3), 4-19. doi.org/10.1002/nha3.10169
- Garlick, S., & Langworthy, A. (2008). Benchmarking university community engagement: Developing a national approach in Australia. *Higher Education Management and Policy: Higher Education and Regional Development*, 20(2), 153. Retrieved from <http://dx.doi.org/10.1787/hemp-v20-2-en>
- Harvey, M., Baker, M., Semple, A., Lloyd, K., McLachlan, K., Walkerden, G., & Fredericks, V. (2017). Reflection for learning: A holistic approach to disrupting the text. In J. Sachs & L. Clark (Eds.), *Learning through community engagement: Vision and practice in higher education*. (pp. 171-184). Singapore: Springer Nature.
- Hodges, D. (2011). Assessment in cooperative and work-integrated education. In R. K. Coll & K. E. Zegwaard (Eds.), *International handbook for cooperative and work-integrated education: International perspectives of theory, research and practice* (pp. 53-62). Lowell, MA: World Association for Cooperative Education.
- Hogan, K. S., Tynan, J. M., Covill, V. J., Kilmer, R. P., & Cook, J. R. (2017). A capacity building framework for community - university partnerships. *Collaborations: A Journal of Community-Based Research and Practice*, 1(1), 1.
- Macquarie University. (2013). *Our university: A framing of futures*. Retrieved October 2, 2017, from <https://www.mq.edu.au/our-university/f>
- McCabe, A., Keast, R., & Brown, K. (2006, September). *Community engagement: Towards community in governance*. Paper presented at the Governments and Communities in Relationship Conference. Melbourne, Australia:
- McLachlan, K., & Kolc, K. (2016). The Professional and Community Engagement (PACE) Program at Macquarie University: Exploring Critical Success Factors. *The Diversity of University-Community Engagement: An International Perspective*. APUCEN: University of Malaysia.
- Mohr, J., & Spekman, R. (1994). Characteristics of partnership success: partnership attributes, communication behavior, and conflict resolution techniques. *Strategic Management Journal*, 15(2), 135-152. doi.org/10.1002/smj.4250150205
- Monczka, R. M., Petersen, K. J., Handfield, R. B., & Ragatz, G. L. (1998). Success factors in strategic supplier Alliances: The buying company perspective. *Decision Sciences*, 29(3), 553-577. doi.org/10.1111/j.1540-5915.1998.tb01354.x
- Mulvihill, N., Hart, A., Northmore, S., Wolff, D., & Pratt, J. (2011). *Models of relationship working in university - community engagement* (South East Coastal Communities Dissemination Paper 2 Retrieved from the Coastal Communities website http://www.coastalcommunities.org.uk/briefing%20papers/Paper_2_vgreen.pdf
- Pilgrim, C. (2012). Industry and university perspectives of work integrated learning programs in ICT degrees. In: Lamp, J (Ed.), *Location, location, location: Proceedings of the 23rd Australasian Conference on Information Systems* (pp. 1-9). Geelong, Australia: ACIS.
- Reason, P. (1993). Sitting between appreciation and disappointment: A critique of the special edition of human relations on action research. *Human Relations*, 46(10), 1253-1270. doi/10.1177/001872679304601007
- Reinhard, K., Pogrzeba, A., Townsend, P., & Pop, C. A. (2016). A comparative study of cooperative education and work-integrated learning in Germany, South Africa and Namibia. *Asia-Pacific Journal of Cooperative Education*, 17(3), 249-263.

- Striukova, L., & Rayna, T. (2015). University-industry knowledge exchange: An exploratory study of open innovation in UK universities. *European Journal of Innovation Management*, 18(4), 471-492. doi: 10.1108/EJIM-10-2013-0098.
- Van Rooijen, M. (2011). Transforming 21st century corporate-university engagement: From work-integrated learning (WIL) to learning integrated work (LIW). *Journal of Cooperative Education and Internships*, 45(1), 5-10. Retrieved from http://www.ceiainc.org/wp-content/uploads/2017/08/JCEIA_Vol45_Issue01_100311.pdf#page=4