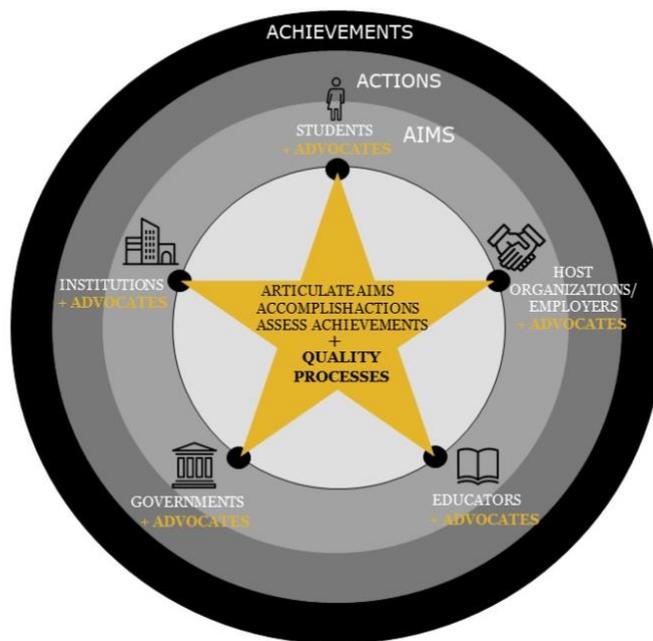


Work-Integrated Learning Quality Framework, AAA★

by Norah McRae, T. Judene Pretti and Dana Church



Abstract

In many parts of the world, including Canada, there are calls for an increase in the number of work-integrated learning opportunities for post-secondary students. As attention is paid to increasing the quantity of WIL programs, it is critically important to ensure that attention is also paid to the quality of WIL experiences for key stakeholders. This paper provides an overview of the quality landscape in higher education and work-integrated learning and presents a work-integrated learning quality framework: AAA★. The AAA★ framework, and the remainder of the paper, is comprised of five sections: (1) concepts and terminology used in the framework; (2) the *aims* of each of the WIL stakeholder groups; (3) the *actions* required by each stakeholder to ensure success; (4) the *achievements* of each of the stakeholder groups; and (5) a continuous improvement process for WIL programs. This work will enable those responsible for WIL programs to identify potential gaps in providing quality WIL as well as providing a list of potential outcomes and measures that can be used to evaluate WIL programs.

Quality: Organizations, Higher Education and Work-Integrated Learning

Quality is a term used and heard frequently. Within organizations, it often describes the desired end-state of products or services. The aspiration to offer quality products and services has led organizations to examine and articulate the processes that contribute to quality outputs. Quality assurance and quality improvement frameworks exist to guide organizations towards a culture of quality in support of meeting

the organization's mission and vision. These frameworks can also support a continuous improvement process, aid with identification of priorities and with resource allocation. ISO 9001 is an example of a well-known set of quality standard principles (International Organization for Standardization, 2018).

Within higher education, post-secondary institutions strive for excellence. They aspire to offer quality learning experiences that will lead to positive outcomes for their graduates. In addition to describing the elements that lead to quality education, quality measures within higher education can also help prospective students choose a course of study; allow faculty and administrators to monitor and improve courses and programs; help institutions benchmark and market their performance; and allow governments and other organizations to make decisions regarding funding, policy development, and accountability regarding post-secondary education (Coates, 2005).

While the benefits of quality assurance frameworks are numerous, there is no international, common framework for quality assurance in higher education, as reviewed by Ryan (2015), and no agreed upon definition of the term. The question, then, is: how is quality measured within the context of post-secondary education? Harvey and Green (1993) examined various perspectives on the notion of quality within higher education and identified five "discrete, but interrelated ways of thinking about quality" (p. 4). Those ways included viewing quality as exceptional, as perfection, as fitness for purpose, as value for money, and as transformative.

Yorke and Vidovich (2014) provide a brief history of higher education quality assurance policy developments across the U.K., Europe, the U.S., and Australia. These authors point out that over time, quality assurance policies are increasingly focused on comparability across disciplines, institutions, regions, and, more recently, across international borders. For example, Vidovich (2002) argues that while governments have been "steering at a distance," the term "quality" has evolved from a management device to a marketing device. Shah, Nair, and Wilson (2011) evaluated a quality assurance framework and found that although it has been instrumental in monitoring the quality of Australian post-secondary institutions, it was focused on the achievement of high results rather than the means needed to produce high outcomes and therefore did not illuminate the processes and efforts involved in achieving those results. Specifically, Shah et al. (2011) highlighted the importance of including the student experience—which the framework currently lacks—since students are the most important "clients" of universities: they can provide feedback on what they perceive as most important, they can report their levels of satisfaction, and this feedback can be instrumental for improving teaching, course design, assessments, and quality processes.

Since higher education in Canada falls under the provincial and territorial jurisdiction, the quality standards or expectations for post-secondary programs vary. In 2007 the provincial and territorial ministers responsible for postsecondary education in Canada adopted the *Canadian Degree Qualifications Framework*, which provides general guidelines on assessing the quality of new degree programs and new degree-granting institutions (The Canadian Information Centre for International Credentials, 2018). This framework first describes the university degree categories of Bachelor's, Master's and Doctoral degrees, and then provides a rubric for assessment that includes the following categories: depth and breadth of knowledge; knowledge of methodologies and research; application of knowledge; communication skills; awareness of limits of knowledge; and professional capacity/autonomy.

While there has been some attention on quality standards and quality assurance processes for post-secondary education, one area within higher education that has not been included in those discussions is

work-integrated learning. Work-integrated learning combines classroom learning with time working in industry, public or community organizations. WIL programs are often seen by governments, academic institutions, students and parents as a way of preparing students with the skills and experience they need to be successful (Sattler & Peters, 2012; Sattler & Peters, 2013; Peters, Sattler, & Kelland, 2014). Industry, public and community organizations see WIL programs as a way to develop the next generation of talent and meet the short-term needs of their organizations (Sattler & Peters, 2012).

With respect to quality in WIL, Yorke and Vidovich (2014) state that the quality standards that have been advanced within higher education often neglect WIL. Indeed, “This is a particularly ironic state of affairs given that quality policies aspire to improve employability and advance economic productivity” (Yorke & Vidovich, 2014, p. 229). Within Canada, there have been a number of reports examining various aspects of WIL. For example, “Taking the Pulse of Work-Integrated Learning in Canada” published by the Business/Higher Education Roundtable (BHER; 2016) and a number of reports by the Higher Education Quality Council of Ontario (HEQCO; e.g., Sattler, 2011; Sattler & Peters, 2012; Sattler & Peters, 2013; Peters, Sattler, & Kelland, 2014). WIL “Good Practice Guides” have also been provided by HEQCO (2016), the Council on Higher Education in South Africa (2011), and Australia’s Department of Education and Training (Sachs, Rowe, & Wilson, 2016). However, despite this work, what has not been available is a means for institutions and WIL stakeholders to directly assess the quality of WIL programming.

Co-operative Education, as one specific type of Work-Integrated Learning, is well-known and established within Canada, in part due to the existence of a national association and accreditation process. Since 1979, Co-operative and Work-Integrated Learning Canada (CEWIL), formerly known as the Canadian Association for Co-operative Education (CAFCE), has administered an accreditation service based on a set of quality standards for co-op programs across the country. This accreditation service played an important role in the evolution of co-operative education in Canada. Not only did it establish a national definition of co-op, it also provided institutions with a set of quality attributes to aspire to even if they were not interested in becoming accredited. Further, the CEWIL accreditation criteria have been used by both provincial and federal governments to determine a program’s eligibility for various funding programs and tax credits such as the Ontario Co-operative Education Tax Credit (Crichton, 2009). By establishing a common definition for co-op education, CEWIL Canada was also able to create a national database that tracks statistical data about student participation in co-op across Canada. In 2017, CEWIL Canada expanded its mandate from co-operative education to include other forms of WIL and established a WIL Quality Improvement Council. As was done with co-op education almost 40 years ago, the new WIL Quality Improvement Council is examining the processes and support that it can provide to promote quality across all forms of WIL.

A framework for the evaluation of WIL curriculum was proposed in 2012 by Smith, an Australian WIL researcher. It proposed and evaluated measures for six specific domains of the WIL curricula for students: authenticity, integrated learning supports, alignment, supervisor access and induction/preparation processes (Smith, 2012). The measurement instrument was found to be valid across multiple types of WIL, but it is limited in that it only examines the WIL curricula from the student stakeholder perspective and it does not link the processes involved in developing and offering WIL programs to the desired student outcomes.

Khampirat and McRae (2016) developed a quality standards framework for Co-operative and Work-Integrated Education (CWIE) which describes purpose, process, outcome and assessment for key

stakeholder groups at three time periods(before, during and after the WIL experience), which led to quality outcomes. This paper will build on the foundation of that framework to describe quality WIL at the program level.

A quality framework for Work-Integrated Learning would be a valuable tool not only for providing snapshots of WIL programs at points in time, but also for establishing and developing processes that lead to quality, sustainable WIL programs. A WIL-specific quality framework could also be used to demonstrate that resources being directed toward WIL programming are being effectively utilized for meeting institutional, employer, and student goals.

Introducing the Framework

There are five main sections to the framework:

- **Section 1** provides the foundation by defining concepts and terminology that will be used in the framework. It also introduces the five primary stakeholder groups: the students, the host organizations/employers, the educators, the academic institutions and governments.
- **Section 2** highlights the literature on the **Aims** of the five stakeholder groups for participating in or supporting WIL programs, answering the question of “What are the WIL goals for each stakeholder group?”
- **Section 3** describes the **Actions** that have been identified in the literature as critical for the quality of WIL programs for the primary stakeholder groups. This section will address the question of “How is success enabled for each of the stakeholder groups?”.
- **Section 4** outlines the expected **Achievements** answering the question, “What are the outcomes, impacts, measures and key performance indicators that capture achievements for each of the stakeholder groups?”.
- **Section 5** synthesizes what has been laid out in Sections 1 to 4 and outlines a continuous improvement process for WIL programs which will “**Articulate Aims**”, “**Accomplish Actions**” and “**Assess Achievements**”.

Section 1: Definition Concepts and Terminology

Before describing the framework, it is important to first define WIL and to introduce definitions for the various forms of curricular WIL that exist in many post-secondary institutions. While it is easy to get caught up in debates on definitions and taxonomies for WIL (Sattler, 2011; McRae & Johnston, 2016), this framework follows the lead of Canada’s national association for Co-operative and Work-Integrated Learning (CEWIL) which has provided a definition of WIL and recognized nine specific forms of WIL as described below.

Co-operative Education and Work-Integrated Learning Canada (CEWIL Canada) defines work-integrated learning (WIL) as follows:

Work-integrated learning is a model and process of curricular experiential education which formally and intentionally integrates a student’s academic studies within a workplace or practice setting. WIL experiences include an engaged partnership of at least: an academic institution, a host organization, and a student. WIL can occur at the course or program level and includes the development of learning outcomes related to employability, personal agency, and life-long learning (CEWIL, 2018).

Models of Work-Integrated Learning

Turning our attention to specific models of WIL, the following types and typical characteristics have been defined (Johnston, McRae, & Maclean, 2016) and adopted by CEWIL Canada (2018):

Apprenticeship: Apprenticeship is an agreement between a person (an apprentice) who wants to learn a skill and an employer who needs a skilled worker and who is willing to sponsor the apprentice and provide paid related practical experience under the direction of a certified journey person in a work environment conducive to learning the tasks, activities and functions of a skilled worker. Apprenticeship combines about 80% at-the-workplace experience with 20% technical classroom training, and depending on the trade, takes about 2-5 years to complete. Both the workplace experience and the technical training are essential components of the learning experience.

Co-operative Education (co-op alternating and co-op internship models): Co-op alternating consists of alternating academic terms and paid work terms. Co-op internship consists of several co-op work terms back-to-back. In both models, work terms provide experience in a workplace setting related to the student's field of study. The number of required work terms varies by program; however, the time spent in work terms must be at least 30% of the time spent in academic study for programs over 2 years in length and 25% of time for programs 2 years and shorter in length.

Internship: Offers usually one discipline specific experience, (typically full-time), supervised, structured, paid or unpaid, for academic credit or practice placement. Internships may occur in the middle of an academic program or after all academic coursework has been completed and prior to graduation. Internships can be of any length but are typically 12 to 16 months long.

Entrepreneurship: Allows a student to leverage resources, space, mentorship and/or funding to engage in the early stage development of business start-ups and/or to advance external ideas that address real-world needs for academic credit.

Service Learning: Community Service Learning (CSL) integrates meaningful community service with classroom instruction and critical reflection to enrich the learning experience and strengthen communities. In practice, students work in partnership with a community based organization to apply their disciplinary knowledge to a challenge identified by the community.

Applied Research Projects: Students are engaged in research that occurs primarily in workplaces, includes: consulting projects, design projects and community-based research projects.

Mandatory Professional Practicum/Clinical Placement: Involves work experience under the supervision of an experienced registered or licensed professional (e.g. preceptor) in any discipline that requires practice-based work experience for professional licensure or certification. Practica are generally unpaid and, as the work is done in a supervised setting, typically students do not have their own workload/caseload.

Field Placement: Provides students with an intensive part-time/short term intensive hands-on practical experience in a setting relevant to their subject of study. Field placements may not require supervision of a registered or licensed professional and the completed work experience hours are not required for professional certification. Field placements account for work-integrated educational experiences not encompassed by other forms, such as co-op, clinic, practicum, and internship.

Work Experience: Intersperses one or two work terms (typically full-time) into an academic program, where work terms provide experience in a workplace setting related to the student's field of study and/or career goals.

WIL Common Characteristics

For a quality framework to be useful across the many different types of WIL that exist, it is important to focus on shared attributes of quality work-integrated learning programs. Those common characteristics are: (1) meaningful experience in a workplace setting; (2) curricular integration of workplace learning and academic learning; (3) student outcomes that lead to employability; and (4) reflection (McRae & Johnston, 2016).

These four characteristics can be reframed using P.E.A.R. which identify the key components for quality WIL as pedagogy, experience, assessment and reflection.

Pedagogy: Work-integrated learning needs to be integrated into the overall curriculum. When it occurs, for how long, and how it will be taught are considerations that need to be factored into any curricular planning. Will there be one or many instances of experiential learning? At what stage in the student's curriculum will the learning occur? How does the experience weave in and through the other courses in the curriculum?

Experience: A number of logistical considerations are necessary for successful experiential learning. These might include how the experiences will be funded, the location of the experiences, any associated risks and the mitigation and management of those risks. Processes around student selection, site selection and supervision need to be factored into plans for the experience.

The experience itself needs to allow for the development of the outcomes and capabilities. This includes not only the object of the experience, but also the environment in which the learning is situated. The environment should be supportive of the student as a learner and forgiving of inexperience, establishing conditions for a positive educational experience (McRae, 2015). The learner needs opportunities to have direct involvement and make important contributions within the host organization in ways that are meaningful to the learner's academic, personal and career goals (McRae & Johnston, 2016).

The host organization must also set the conditions for the learner by providing resources such as equipment, space, supervision, cooperative team members and a role that is suited to the learner's capabilities (McRae, 2015). These are critical components to a successful experience.

Assessment: The assessment of the experiences requires the establishment of learning outcomes. These learning outcomes should align with program and even institution level learning outcomes. In the case of work-integrated learning, these learning outcomes relate to the development of skills and attributes that are relevant to the workplace context, and develop the learner's capacity to contribute as a member of a workplace, as an entrepreneur and as a member of ethical civic society (McRae & Johnston, 2016).

Reflection: A critical component to learning from experiences is reflection. Quality experiential programs support critical self-reflective practices in, on and for each experience (Schön, 1987). The purpose of this reflection is to facilitate the learner's understanding of their skills, knowledge, attributes and capacity to contribute as well as facilitating the integration of learning from the workplace and academic program (McRae & Johnston, 2016). Critical self-reflection on disorienting events that the learner may have experienced can lead to transformative learning as described by Mezirow (1998). Transformative learning

results in a shift in beliefs and worldviews and contributes to the capacity for the learner to contribute further (McRae, 2015).

When all four elements—pedagogy, experience, assessment and reflection—are in place, the groundwork has been set for quality work-integrated learning. Specific actions related to P.E.A.R. for each WIL stakeholder will be described in the Actions section of the framework.

Work-Integrated Learning Stakeholder Groups

While the focus thus far in this paper has centred on the student/learner perspective, WIL is a collaborative endeavour and the perspectives of multiple stakeholders need to be incorporated to ensure the quality of WIL outcomes. This framework will describe the aims, actions and achievements for five primary stakeholder groups: students, host organizations/employers, educators, educational institutions and governments. Students participate in WIL courses and programs; host organizations or employers work with institutions to offer WIL opportunities to students; educators work with students and host organizations to design and support WIL experiences; institutions and governments provide the necessary conditions to support students, host organizations and educators in their WIL participation.

Each of these stakeholders has a connection to quality WIL as described by the key aspects identified by P.E.A.R. For P (pedagogy), educators need to design curriculum to allow students and host organizations to make the most of the experience and students need to engage with the curriculum. For E (experience), educators need to verify that the opportunity aligns with the educational goals of the course/program, host organizations need to provide opportunities for meaningful and substantial contributions, and WIL students need to fully engage with the host organization to make the experience valuable for both themselves and the organization. With respect to A (assessment), it needs to be designed by the educator with input from the student and host organization. And “R” (reflection), prompts need to be provided by the educator to facilitate reflection on the experience for the student and the host organization ensuring maximum learning gains from the experience.

In addition to these five primary stakeholders for WIL, there are a number of stakeholders that fall into an “Advocates” group. The mandates for these groups include supporting one or more of the primary WIL stakeholders. In the Canadian context, there are several active advocates in the WIL space. CEWIL Canada is an advocacy group for WIL educators, institutions and hosts. The Business Higher Education Roundtable (BHER) is an example of an advocacy group acting on behalf of host organizations and institutions. The Canadian Alliance for Student Associations is an advocacy group for students. Universities Canada, CIG and Polytechnics Canada are advocacy groups for post-secondary institutions. The Canadian Chamber of Commerce and the Canadian Federation of Independent Business (CFIB) are advocacy groups for small and medium-sized businesses. The collection of industry associations participating in the federal government’s Student Work Placement program (SWPP) would be examples of advocacy groups for host organizations/employers.

Section 2: Aims - What are the WIL goals of each stakeholder group?

This section introduces the five primary stakeholder groups that are involved in WIL programs and articulates a collection of goals that, depending on the type of WIL, each may have related to their involvement and investment in WIL programs. Separate aims for the advocate stakeholders are not listed, since they are working to support the aims of their relevant primary stakeholder(s).

Students: Students participate in WIL programs for several reasons which may include: to determine their “fit” with a potential career or industry (Patrick et al., 2008; Peters, Sattler, & Kelland, 2014; Sattler & Peters, 2013); to add meaning to their academic program and career goals (McRae & Johnston, 2016; Patrick et al., 2008); to gain skills, attributes, and knowledge that are relevant to the workplace context (Bates, 2005; McRae & Johnston, 2016; Peters et al., 2014; Sattler & Peters, 2013); to enhance their resumés (Patrick et al., 2008; Sattler & Peters, 2013); to apply classroom theory and skills to the workplace (Bates, 2005; Sattler & Peters, 2013); and to develop a network of job search contacts (Patrick et al., 2008; Sattler & Peters, 2013). There may also be financial benefits to participating in WIL (Bates, 2005). In addition, WIL allows students to contribute in productive ways within the host organization and as a member of a responsible, ethical, civic society (McRae & Johnston, 2016).

Host Organizations/Employers: WIL programs are advantageous to host organizations in the following ways: they allow for pre-screening of potential new hires (Bates, 2005; Patrick et al., 2008; Sattler & Peters, 2012); they allow the opportunity for students to motivate employees (Bates, 2005); they help develop the workforce skills needed for their industry or profession (Patrick et al., 2008; Sattler & Peters, 2012); they provide a cost-effective method for new employee training and recruiting (Braunstein, Takei, Wang, & Loken, 2011; Sattler & Peters, 2012); students can bring fresh and innovative ideas to the organization (Fleming, Pretti and Zegwaard, 2016); and students provide access to a short-term, flexible source of labour (Braunstein et al., 2011; Sattler & Peters, 2012). Supervision of a WIL student provides employees the opportunity for staff-development (Bates, 2005). In addition, WIL students can help in creating an organizational brand with the next generation of talent (Braunstein et al., 2011; Sattler & Peters, 2012). Also, as academic institutions enroll more international students, their WIL programs provide host organizations with increased access to a global talent pool and increase the opportunity for increased diversity and inclusion in the workplace (Metzger, 2004). WIL programs are also a mechanism by which host organizations can “give back” to the community (Peters et al., 2014; Sattler & Peters, 2012).

Educators: One aim of educators for designing and offering WIL experiences as part of their programs or courses is to enhance the overall learning experience for their students. This includes enabling students to connect theory to practice and providing opportunities that will increase student engagement and motivation towards their learning (Patrick et al., 2008). WIL programs also provide educators the opportunity to stay current with issues or practices within an industry or profession (Bates, 2005; Crump & Johnsson, 2011; Peters et al., 2014) and strengthen their community engagement (Patrick et al., 2008).

Academic Institutions: For academic institutions there are a variety of aims for offering WIL experiences and programs. Many of these goals correspond to the goals that students and educators have for WIL. For instance, an institution may want to improve the employability outcomes for their graduates or enhance the academic experience of its students by giving them opportunities to connect theory and practice (Patrick et al., 2008). WIL is also a strategy for student engagement and retention (Patrick et al., 2008). Beyond the goals that students and educators have, institutions may want to use WIL to develop an institutional brand and attract students (Bates, 2005). Additionally, an aim for offering WIL programs may be to develop or strengthen relationships with community and industry partners (Patrick et al., 2008; Peters, 2012). WIL can also allow post-secondary institutions to respond to identified business and/or community needs and address global issues (Peters, 2012). WIL placements also provide the opportunity for the institution to receive feedback regarding the quality of their programs and degrees (Bates, 2005).

Governments: Governments are interested in WIL for a number of reasons. With a significant responsibility for post-secondary education, governments want to ensure that financial investments in education are well spent. Government interest in WIL also relates to its oversight of the economy and labour markets. Governments want to support policies and practices that will contribute to a strong economy and ensure that the labour market has access to the talent it needs to be successful. Thus, an aim of governments with respect to WIL is that academic institutions, in partnership with host organizations, are preparing students to be future-ready with the skills they need to be productive and engaged citizens (Patrick et al., 2008). WIL programs provide a strategy for governments to prepare a highly skilled workforce that can drive the economy of the future (Government of Ontario, 2018), thus acting as a mechanism to address economic challenges and skills shortages (Patrick et al., 2008; Standing Committee on Human Resources, Skills and Social Development and the Status of Persons with Disabilities, 2018).

Section 3: Actions - How is success enabled for each of the stakeholder groups?

Following the description of the potential aims of primary stakeholders with respect to WIL, this section describes the actions required by each group to ensure success. A significant piece of work was published in 2016 by Khampirat and McRae that described a quality standards framework for CWIE (Co-op and Work-Integrated Education). The framework describes the processes, procedures, outcomes and assessment (PPOA) activities that should occur for three stakeholder groups: student, employer and institution, at three distinct times within the cycle of a WIL experience: before, during and after. The process aspect of the PPOA (Khampirat & McRae, 2016) will provide the foundation for the description of stakeholder actions for quality WIL.

As was stated earlier, P.E.A.R. serves as reminder of the key components of quality WIL: pedagogy, experience, assessment and reflection. In considering the responsibilities of students, hosts and educators in WIL experiences (shown in Table 1), the importance of P.E.A.R. is clear.

Stakeholder/ Timing	Pre-WIL Experience	During WIL Experience	Post-WIL Experience
Students	Prepares for WIL experience by participating in curricular preparatory content and activities (pedagogy)	Engages effectively with work and people (experience) Engages with curricular expectations of academic program (pedagogy)	Leaves WIL experience having met all expected obligations and with positive working relationships Reflects on experience and learning/growth (pedagogy and reflection)
Hosts	Prepares for student arrival	Provides responsibilities for students that are authentic and meaningful (experience) and connect to	Provides assessment of student learning and performance (assessment)

		students' skill sets/knowledge base (pedagogy) Provides support for students (experience)	Considers what went well and what might be changed for a subsequent student (reflection)
Educators	Supports students and hosts in preparatory activities including designing curricular content and assessments (pedagogy)	Monitors progress and provides supports to students and hosts as needed (experience)	Facilitates student reflection and follows up with host to evaluate experience (pedagogy and reflection)

Table 1: Stakeholder Actions for Quality WIL

Students: There are a number of actions that students need to take to ensure a quality work-integrated learning experience and these actions happen during three main phases. The first phase is preparation in advance of the WIL experience. Depending on the type of WIL, students may be searching for and/or applying to potential WIL experiences. They are responsible for engaging in the curriculum that has been prepared to ensure that they are ready for the WIL experience. This may involve job searching exercises, understanding expectations of the host organization and setting learning outcomes or goals for the WIL experience (Martin, Rees, Edwards, & Paku, 2012).

During the experience, the student needs to contribute to the host organization by successfully completing the assigned responsibilities and engaging with others in the organization in an effective and positive manner. There is evidence that students that engage in proactive behaviours, asking questions and identifying ways to help, have more positive outcomes for the experience than those who meet the base expectations the hosts have for them (Drewery, Nevison, Pretti, & Pennaforte, 2017). The student also needs to meet curricular responsibilities as required by their academic program (Henderson & Trede, 2017).

At the end of a quality WIL experience, students have met the expectations of their host/employer and reflected on their learning and growth during the experience. Reflection helps them unpack what they have learned from the experience (Wingrove & Turner, 2015). They have developed specific skills that, through reflection, they are better able to articulate (Pretti & Fannon, 2018; Wingrove & Turner, 2015). They also have learned about the context they were in: elements of their role, about the team that they worked on, about the organization and the sector/industry itself (BHER, 2016).

Host organizations: There are also a number of actions that host organizations need to take to ensure a quality work-integrated learning experience. These actions also happen during three main phases: before the student arrives, while the student is in the organization and after the student leaves. The preparation phase for host organizations includes identifying the role and responsibilities that the student will have for the WIL experience. Those roles and responsibilities may be communicated to the WIL educator and student through a job or role description and the host may be involved in screening and selecting a WIL student for the experience. A key factor in the success of WIL for the host organization is that expectations

are clearly communicated between the host, the educator and the student (Fleming, MacLachlan, & Pretti, in press; BHER, 2016; Fleming & Haigh, 2017; Henderson & Trede, 2017; Jeffries & Milne, 2014; Rowe, Mackaway, & Winchester-Seeto, 2012).

During the experience, the WIL host needs to provide appropriate work and support for the student. Research shows that students are looking for opportunities to learn, to make a meaningful contribution to the host organization and to find relevance in their work to their academic or future career interests (Drewery, Nevison, Pretti, Cormier, Barclay, & Pennaforte, 2016). Identifying responsibilities and/or projects for the student that are valuable and important to the organization but also give the student an opportunity to learn is the goal for quality WIL. Additionally, it is important that there are people available at the host organization that the student can learn from and reach out to for support during the experience. That support may be the host supervisor, or someone else in the organization (Fleming, 2015; Gillett-Swan, & Grant-Smith, 2018; Nevison & Pretti, 2016; McBeath, Drysdale & Bohn, 2018; Pennaforte, 2016).

As the WIL experience is ending, it is important that the host provide feedback on the WIL experience. This involves both an assessment of student learning and performance, but also the WIL experience as a whole. The assessment of student learning and performance provides important feedback to students on areas of strength and areas for improvement from the perspective of their host (Peach, Ruinard, & Webb, 2014). Students can use this feedback as part of their post-experience self-reflection activities. The feedback on the WIL experience overall enables the host to reflect on what worked well and not-so-well which will foster a culture of continuous improvement around their involvement with WIL (Henderson & Trede, 2017; Fleming, MacLachlan, & Pretti, in press).

Educators: The actions that educators need to take to ensure quality WIL can also be described in the phases of pre, during and post WIL experience. For educators, prior to students going on the WIL experience, there is a great deal of work that needs to be done. Educators need to develop and deliver the curriculum and resources needed to support students in the pre-experience phase (Winchester-Seeto, Rowe, & Mackaway, 2016). They may also have a role to play in finding potential host organizations to take students. Whether or not they are involved in finding and designing the specifics for each host organization, they have a role to play in ensuring that the experience is appropriate for the broader learning outcomes.

The day-to-day actions for the WIL educators during the WIL experience may be substantially less than the actions involved for the student and the host themselves during this phase. However, the educator plays a critical role of supporting both the host and the student in achieving a quality WIL experience (Winchester-Seeto et al., 2016). This may involve periodic check-ins initiated by the educator (in person or online) or it may be providing support to the student and/or host if a workplace issue arises. Additionally, the educator is responsible for designing and delivering any required curricular components that take place during the WIL experience (Winchester-Seeto et al., 2016). Following the WIL experience, the educator supports students and hosts in reflecting on the WIL experience and what they can learn from it. This can be done through conversations and/or providing prompts or surveys that elicit the desired information. The solicitation of this information not only leads to positive outcomes for the students and hosts in considering the impact of the experience but also leads to positive outcomes for the WIL program. Through this information, the educators gain an understanding of the ways the program can be improved as well as the ways in which students are/aren't developing through their WIL experience

and/or meeting the needs of host organizations which could lead to curricular reform within the academic institution (Cedercreutz & Cates, 2011).

Institutions: For institutions, the actions they contribute towards quality WIL are not specific to the same phases as for students, hosts and educators. However, there are important actions that they must take in support of quality WIL to happen. WIL programs are not easy or quick to set up and require an ongoing effort to maintain strong relationships with hosts and relevant curriculum for students (Sovilla & Varty, 2011). Therefore one of the actions institutions must take is ensuring that there are appropriate and sufficient resources allocated to developing and offering quality WIL programs (BHER, 2016). Institutions also contribute to quality WIL through recognition of WIL as a curricular component of students' education (Sovilla & Varty, 2011). Institutions can provide mechanisms to open doors to existing relationships with industry or community that can create additional WIL opportunities for students. Lastly, at the institutional level, embracing the use of data collected through WIL programs about student learning as well as host organizations' reports of student performance enables curricular reform that strengthens the quality of WIL programs across the institution (Sovilla & Varty, 2011).

Governments: As was the case with institutions, the actions needed by governments to support quality WIL are not related to specific phases but are critical for the success of the overall system. WIL courses and programs are resource-intensive and so it is important for governments to recognize that and provide funding for institutions to create and support WIL programs (Sovilla & Varty, 2011). Another action that governments can take is to provide resources in the forms of wage subsidies or tax credits to employers to assist with the overhead costs of hiring WIL students. Further, governments can assist in creating the conditions for quality WIL by developing and revising laws that support students, host organizations and institutions involved in WIL programs (Turcotte, Nichols, & Philipps, 2016).

Section 4: Achievements - What are the outcomes and measures that capture achievements for each of the stakeholder groups?

This section of the quality framework describes the potential achievements of the WIL experience or program from the various stakeholder perspectives. To be successful with WIL, the achievements for the various stakeholder groups should meet or exceed the aims that each had for their participation. For each of the primary stakeholder groups, this section includes the set of possible WIL-related outcomes and the types of measures that can be used to assess the achievement of those outcomes.

Student Outcomes:

The outcomes for students who participate in WIL experiences can be grouped together under three sets of outcomes. The categories for student outcomes are: outcomes that relate to academics, professional outcomes and personal outcomes for WIL students (Cooper, Orrell & Bowden, 2010). Academic outcomes include students' ability to integrate theory with practice (Fleming & Haigh, 2017; Sattler & Peters, 2013; Wingrove & Turner, 2015), clarity about academic goals (Purdie, McAdie, King, & Ward, 2011; Reddan, 2015) and academic motivation (Drysdale & McBeath, 2018). Professional outcomes for students include developing key workplace competencies (Fleming & Haigh, 2017; Jackson, 2013; Jackson, 2015; Jackson & Wilton, 2016; Peters et al., 2014; Sattler & Peters, 2013), understanding workplace culture (Fleming & Haigh, 2017), clarity about career goals (Drewery, Nevison, & Pretti, 2016; Fleming & Haigh, 2017; Jackson & Wilton, 2016; Sattler & Peters, 2013; Wingrove & Turner, 2015), building a professional network

(Fleming & Haigh, 2017; Jackson & Wilton, 2016; Sattler & Peters, 2013), and increasing success with post-graduation employment (Blicblau, Nelson, & Dini, 2016; Sattler & Peters, 2013). Lastly, the set of personal outcomes that students have the opportunity to develop are the ability to determine strengths and weaknesses (Reddan, 2015), increased maturity (Sattler & Peters, 2013), increased confidence (Bates, 2005; Purdie, Ward, McAdie, King, & Drysdale, 2013; Sattler & Peters, 2013), earnings (Peters et al., 2014), productive and responsible citizenship skills (Sattler & Peters, 2013) and lifelong learning skills (Drysdale & McBeath, 2018; Fleming & Haigh, 2017; Peters et al., 2014).

Student Measures:

Once key outcomes that align with the *Aims* have been identified, then appropriate measures need to be selected. There are many ways that outcomes can be measured and it will be important to select measures that capture the appropriate data needed to evaluate the outcomes. There is also an element of practicality in measuring outcomes, what and how much is reasonable to collect (Zegwaard, Coll, & Hodges, 2003). These factors may influence decisions made in selecting measures for the identified WIL outcomes.

For the potential list of student outcomes listed above, there are a few general ways that these can be measured. One way many of these outcomes can be measured is through items or scales on a self-report survey. For example, a survey might ask students questions to examine the extent to which the WIL experience increased their motivation towards their academic program, helped them build a professional network or increased their clarity on what career they wish to pursue (Drewery et al., 2016). Another set of student outcomes, e.g. the development of workplace competencies, might be measured through assessments completed by the host organization or the educator (Henderson & Trede, 2017). Student work or reflections is another source of outcome measurement as a rubric could be used to evaluate students' achievement of specific outcomes. For example, a rubric could be applied to students' work term reflections which assesses students' lifelong learning skills (Drewery, Pretti, & Sproule, 2018). Lastly, there may be specific key performance indicators that can be used to assess the achievement of specific outcomes, for example, the post-graduate employment rate tracked by Statistics Canada, or on provincial and national graduate surveys (Canadian University Survey Consortium, 2018; Finnie & Miyairi, 2017).

Host Organization/Employer Outcomes:

For host organizations or employers there are many potential outcomes for their involvement in WIL programs. Some report that they achieve productivity gains through their access to short-term labour (Braunstein et al., 2011; Sattler & Peters, 2012). They report that WIL students infuse their organization with innovation, suggesting new and better ways to do things (Braunstein et al., 2011; Crump & Johnsson, 2011; Sattler & Peters, 2012). Participating with WIL programs and accessing a wide range of talent from post-secondary institutions can help organizations meet their diversity and inclusion goals (Metzger, 2004). Host organizations report that participating in WIL programs enables them to create awareness about their organization to future recruits (Braunstein et al., 2011; Sattler & Peters, 2012) and also that students who have participated in WIL programs with their organization and are hired after graduation have higher levels of performance and are promoted faster than new recruits who were not WIL students (Braunstein et al., 2011). Host organizations may also develop additional connections to post-secondary institutions, e.g. research partnerships, through their engagement with WIL programs.

Host Measures:

There are a number of measures that can be used to evaluate the outcomes that host organizations have achieved through their participation in WIL. Surveys and/or assessments can be designed for and administered with both host organizations and students to capture the students' contribution during the WIL experience. These questions can include both quantitative and qualitative measures to understand the productivity and innovative impact of the student. With respect to helping organizations meet diversity and inclusion goals, the number of employees, including students, from diversity groups can be calculated. To measure an outcome of increasing awareness of future recruits for their organization, a few different approaches could be taken. One, in the case of WIL programs where students apply for roles, they could monitor the number of applications they receive. They could do the same with post-graduation roles to see if there is an increase in applicants from the post-secondary institution where they are partnering to offer WIL experiences. Another measure of outcomes for hosts is the conversion rate that they have with WIL students. Data can be tracked to see how many students who undertake a WIL opportunity with an organization return to that organization for employment after graduation. Additionally, tracking WIL participation through the host organization's HR systems enable them to measure and monitor the success of WIL grads as compared to non WIL grads they hire post-graduation. Within post-secondary institutions, systems that track all community and industry engagement can demonstrate how WIL experiences may be connected to higher rates of other engagement with the institution.

Educator Outcomes:

Many of the WIL outcomes for educators are described in the sections on student and employer outcomes. That is, for the educators, some of their most significant outcomes for WIL are that students and employers are achieving what they had hoped to achieve through participation in WIL. That said, there are also some outcomes specific to the WIL educator. These outcomes include increased student demand for course or program (Crump & Johnsson, 2011), increased student retention (Jaeger, Eagan Jr., & Wirt, 2008), sustained and increased interest from host organizations (Sattler & Peters, 2012), increased student motivation in course or program (Drysdale, McBeath, Johansson, Dressler, & Zaitseva, 2016), and curricular renewal (Crump & Johnsson, 2011).

Educator Measures:

A number of the outcomes specific to WIL educators can be measured through key performance indicators (KPIs). Institutional data could include the number of enrolments for a course or program, the demand for those courses or programs and the retention rates for students in WIL courses or programs. These rates might be examined in contrast with other comparable courses or programs. One note of caution regarding the retention rate for students in WIL programs: there is evidence to suggest that early exposure to workplace experience can help students realize that they are not in the right program. Switching to another program before too much time and money have been invested should be seen as a successful outcome for that educator and student, not a failure, as might be seen if examined through the attrition rate from the program. One way to address this would be to complement the retention KPI with data collected from students who leave WIL programs which includes their reasons for leaving. Another KPI useful for measuring the outcomes for educators is the retention and increased interest from host organizations to take WIL students.

In addition to KPIs, there are other measures for WIL outcomes for educators. Student motivation for the course could be measured in multiple ways. It could be measured through self-reports of students, or educators' observations of students' motivation. It could also potentially be measured through students' grades as a proxy. The outcome of curricular renewal could be measured by questions administered to students, host organizations or the educators themselves. For students, the questions might be directed to the relevance of what they are learning in their academic course, or the ways that they were able to connect what they experienced in the workplace with what they are learning in the classroom. For host organizations, the questions might centre around how prepared the student was and whether they were able to apply their academic skills in the workplace setting. For the educator, the focus of the questions might be on how the course has changed over time and the ways in which they draw on students' WIL experiences in the classroom.

Institutional Outcomes:

For institutions, there are a number of possible outcomes for offering WIL courses and programs. The outcomes related to students include: increased retention rate (note comment above about students switching programs), increased student engagement (Kuh, 2009), increased graduation rate, increased graduate employability and increased alumni satisfaction. The outcomes that relate to involvement with host organizations include increased community and industry engagement and increased number of research partnerships. Overall, depending on the level of adoption and promotion, WIL programs can contribute to an institutional brand and demonstrate the institution's commitment to breaking down the ivory tower through its direct connections to the needs of the community/society.

Institutional Measures:

Based on the list of potential institutional outcomes, many can be measured through sector wide surveys, as well as key performance indicators collected regularly as institutional data. Sector wide surveys such as the National Survey of Student Engagement, used widely across the United States and Canada, provide measures of student engagement. In the Canadian context, there are graduate and post-graduate surveys such as the Canadian University Survey Consortium which runs a graduate survey every three years, and the National Graduates Survey run by Statistics Canada which surveys graduates 3 years after graduation. In Ontario, the Ontario University Graduate Survey (OUGS) collects employment data and alumni satisfaction data. For example, "How closely was your work related to the skills you developed at university?", and "Would you recommend your program of study to someone else?" Existing institutional data would include KPIs such as retention rates and graduation rates. At an institutional level, there may be measures of community or industry engagement, such as number of students recruited, partnership agreements or MOUs with community or industry. Through institutional research offices, there are likely metrics around research partnerships such as research projects, grants funded and research collaborations. Additionally, there are global rankings, such as the QS Graduate Employability ranking that looks at employers' view of reputation, alumni outcomes and employer partnerships (QS World University Rankings, 2018).

Government Outcomes:

The outcomes for governments that support quality WIL programs within higher education institutions are numerous. Many of the outcomes for governments relate to developing productive, future-ready graduates and citizens able to contribute to the labour market and economy (Peters et al., 2014).

Additionally, research has shown that there are better student debt outcomes, due to students either not incurring as much debt through their post-secondary education, or to them being in a position to pay back their debt because of a smoother transition to the labour market (Downey, Kalbfleisch, & Truman, 2002; Haddara & Skanes, 2007). Graduates as successful and productive citizens leads to a better perception of PSE and the public investment of money in the educational system (OECD, 2017). With the continual connection to current industry and community needs through high quality WIL experiences, there should be an increased confidence within community and industry that PSE is working to meet labour market needs. Given the increasing populations of international students within PSE, high quality WIL experiences will offer organizations and business the opportunity to access global talent to retain after graduation to meet increasing labour market needs. As noted by the Advisory Council on Economic Growth in 2016, “international students meet the general preconditions for proven successful economic integration – youth, language proficiency, and education. After years of studying in Canada, they tend to have strong language skills and be acclimatized to Canadian society” (Advisory Council on Economic Growth, 2016, p.8). In addition, according to the Canadian Bureau of International Education, 51% of international students plan to apply for permanent residence in Canada (Canadian Bureau of International Education, 2016). WIL programs may also help increase diversity and inclusion within the labour market. Lastly, in some cases, there seems to be a connection between WIL programs and entrepreneurship. More research needs to be done on this connection, but it is hypothesized that giving students early access to work experience and/or exposure to multiple workplace contexts over the course of their academic program stimulates innovative thinking that benefits their future workplaces and/or gives them ideas to create their own companies.

Government Measures:

Some of the WIL outcomes for governments are quite easy to measure and others are much more difficult. Metrics that examine post-graduation labour market participation include existing surveys and can even be linked to tax records (Finnie & Miyairi, 2017). There is data to show the debt load and repayment of student loans (Downey, Kalbfleisch, & Truman, 2002; Haddara & Skanes, 2007; Peters et al., 2014). There are also measures that can be examined to monitor trends to evaluate employers’ satisfaction with the preparedness of students (Jiang, Lee, & Golab, 2015). Another interesting data point might be to examine how many VISA students who come to Canada participate in WIL programs and stay in Canada following graduation (Canadian Bureau of International Education, 2016). More research is needed to identify potential measures for the impact of WIL programs on diversity and inclusion goals within organizations. Through tracking alumni, post-secondary institutions could better understand the entrepreneurial paths that graduates take (Andrade, Chopra, Nurlybayev, & Golab, 2018).

Section 5: “★” - What is the process for continuous improvement for WIL?

The fifth and final section of the WIL Quality Framework describes the continuous improvement process for WIL courses and programs as a synthesis of what has been described in the previous sections. The continuous improvement process for WIL involves articulating **Aims**, describing how **Actions** are accomplished and assessing **Achievements** for the five primary stakeholder groups.

Articulating Aims: The first step of a continuous improvement process is being sure to articulate the aims of the primary stakeholders for participating in WIL. In Section 2, a set of potential aims, as described in the literature, was presented and may serve as a useful starting point to engage with stakeholders to

identify their goals with respect to the WIL course/program. To be able to deliver a quality program, it is critical to understand and articulate the aims of stakeholders.

Accomplishing Actions: The next step for a continuous improvement process is to examine the actions of the primary stakeholders with regards to the WIL course/program. Within this step, consider how the actions of primary stakeholders align with best practices as identified in the literature and described in Section 3 of the framework. In addition, it is important to examine how those actions are perceived by the primary stakeholders. For example, do host organizations report that students seem prepared? Do students report that they are being given responsibilities that are meaningful and give them opportunities to learn? As part of a continuous improvement process, it is important to document what is happening, how effective those actions are (as perceived by the relevant stakeholder(s)) and where the gaps might be.

Assessing Achievements: The final step for a continuous improvement process is assessing achievements of the WIL program for each of the primary stakeholders. For the assessment of achievements, it is important to align outcomes measurement with the aims of the various stakeholder groups. Once key outcomes for each of the stakeholder groups are selected, then associated measures should be identified and plans should be put in place to collect that data. For example, if one of the main aims of students for participating in a WIL program is successful employment after graduation, then to assess the achievements of the program, one should incorporate measures of post-graduation employment success. This might be added to an existing graduate or alumni survey, or may be identified as an item already collected through an existing survey. Identifying stakeholders' key outcomes and determining the most appropriate measures will enable the assessment of achievements for WIL programs.

Following the assessment of achievements, the strengths of a WIL course/program, and the areas for improvement will emerge. This exercise will provide a road map for a continuous improvement process which will help identify specific actions to be added or adjusted for each stakeholder group.

Conclusion and Next Steps

With the increase and expansion of WIL programs in higher education, a quality framework for work-integrated learning is a critical. There are many stakeholders who are supporting the expansion of WIL because they believe in the positive outcomes that can be achieved. Each of those stakeholders has a finite set of resources they can direct towards WIL and they need to be intentional in how they allocate those resources. These outcomes are not a guarantee, and for WIL to continue to be seen as an effective pedagogy that connects higher education with industry, public and community organizations, quality must be kept front and center. Through the framework presented in this paper, it is proposed that quality programs are achieved through articulating the aims, accomplishing the actions and assessing the achievements of the primary stakeholders and using that information to set a continuous improvement process in motion.

The hope is to build on this work in a number of ways: to get feedback from various groups interested in work in this area; to support CEWIL Canada with its expanded mandate to complement its co-operative education accreditation process; to develop a repository or toolkit of possible measures for the outcomes associated with the primary stakeholders; and to identify and conduct research where there are gaps in outcomes that are believed to be associated with WIL, but empirical evidence does not exist.

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