Work-Integrated Learning in Ontario's Postsecondary Sector

Prepared by Academica Group Inc.
for the Higher Education Quality Council of Ontario

Published by:

The Higher Education Quality Council of Ontario

Table of Contents

Appendices

Executive Summary

Demographic change, economic globalization, and the emergence of an increasingly knowledge-based economy have triggered rapid and unprecedented change in the Ontario labour market and in the skills required by employers. Since colleges and universities provide the largest inflow of workers into the labour market – generating four out of five new labour market entrants (Lapointe et al., 2006) – an effective, flexible, and responsive system of postsecondary education and training has been recognized as an essential investment in human capital. In an interconnected global economy, a diverse, well-educated, and highly skilled workforce is critical not only to innovation, productivity, and economic growth, but also to maximizing the human potential of all Ontario citizens.

This report summarizes the findings of an exploratory study commissioned by the Higher Education Quality Council of Ontario (HEQCO) on the impact of work-integrated learning (WIL) on the social and human capital of postsecondary education (PSE) graduates, with particular reference to the quality of student learning and labour market outcomes associated with WIL programs. The project was undertaken by HEQCO in collaboration with a working group of nine Ontario postsecondary institutions: Algonquin College, George Brown College, Georgian College, Laurentian University, Niagara College, University of Ottawa, University of Waterloo, University of Windsor, and Wilfrid Laurier University. The study had three overarching goals:

1. Develop a typology for understanding work-integrated learning in Ontario's postsecondary sector;
2. Identify the learning, labour market and other benefits associated with WIL, as well as challenges and opportunities;
3. Recommend key issues and questions that would provide the focus for a second and larger phase of the project, including research with postsecondary students.

The research involved 39 key informants from Ontario colleges and universities, and 25 representatives of businesses and community organizations that provide WIL opportunities for students. Institutional key informants interviewed for the study expressed strong support for the overall project, including the goal of developing a shared framework and common language for WIL programs in order to minimize the potential for confusion between institutions, students, and employers. A typology of work-integrated learning was viewed as important to facilitating communication about WIL within and between institutions, and among institutions, students, employers, and community partners. Employers and community partners, meanwhile, valued their participation in work-integrated learning programs, and appreciated the opportunity to share their perspectives on how WIL programs could be enhanced.

Definition of WIL

There was considerable discussion and debate among institutional key informants about a common definition for work-integrated learning. Given the input received, the definition offered by Billett (2009b) appears to hold some promise of achieving consensus:

> *Work-integrated learning refers to the process whereby students come to learn from experiences in educational and practice settings and integrate the contributions of those*

experiences in developing the understandings, procedures and dispositions required for effective professional practice, including criticality. Work-integrated learning arrangements include the kinds of curriculum and pedagogic practices that can assist, provide and effectively integrate learning experiences in both educational and practice settings. (p. v)

Based on the literature review, a draft WIL typology was developed to serve as a starting point for a discussion about work-integrated learning with college and university key informants. Many worthwhile suggestions were offered to enhance the typology's meaning and relevance, which led to the development of the WIL typology set out in this report.

The typology proposes seven types of WIL – including Apprenticeships, Field Experience, Mandatory Professional Practice, Co-op, Internships, Applied Research Projects, and Service-learning –distinguished by a wide range of characteristics. The typology does not purport to capture all aspects of each of the seven types, nor does it require that all criteria be met for WIL programs to be categorized within one of the types. Rather, it offers a conceptual framework to stimulate discussion and reflection, and in turn facilitate improved understanding. It is hoped that the typology will offer a useful tool to assist educators, students, employers, and government policy makers to capture the complex array of WIL programs available in higher education.

WIL Typology

Based on the literature review, a draft WIL typology was developed to serve as a starting point for a discussion about work-integrated learning with college and university key informants. Many worthwhile suggestions were offered to enhance the typology's meaning and relevance, which led to the development of the WIL typology set out in this report.

The typology proposes seven types of WIL – including Apprenticeships, Field Experience, Mandatory Professional Practice, Co-op, Internships, Applied Research Projects, and Service-learning –distinguished by a wide range of characteristics. The typology does not purport to capture all aspects of each of the seven types, nor does it require that all criteria be met for WIL programs to be categorized within one of the types. Rather, it offers a conceptual framework to stimulate discussion and reflection, and in turn facilitate improved understanding. It is hoped that the typology will offer a useful tool to assist educators, students, employers, and government policy makers to capture the complex array of WIL programs available in higher education.

Integrating Work & Learning

Data gathered from institutional key informants, together with insights from employer and community partners, provides a snapshot of the "on-the-ground" implementation and delivery of WIL programs at Ontario colleges and universities:

- Generally, employer and community needs are taken into consideration in **curriculum** development through program advisory committees, co-op committees, joint community

boards, or other mechanisms, particularly for co-op, applied research projects, service-learning, and some field experiences;

- Regardless of the type of WIL program, the overwhelming majority of employers and community partners reported working with the student to negotiate **learning objectives** specific to the student's goals and interests;

- Many employer and community partner key informants expressed appreciation for the support they received in managing the **interview and selection** process, particularly when they had established personal connections with the institution, and clear communication processes were in place;

- Employers and community partners emphasized the importance of the interview in screening for the right candidate, with the right mix of **skills and competencies.** While the ability to learn independently and solve problems was first among the attributes sought by employers, almost as important was a basic level of technical competence related to the student's field of study;

- For almost all WIL programs, student **supervision** is the responsibility of the employer or community partner, and some employers are also expected to provide **mentoring** support for students. Aside from the initial agreement, however, most forms of WIL provide little formal support to assist employers and community partners in carrying out their supervision and evaluation responsibilities.

- Most institutions **monitor** the WIL experience through contact ranging from a quick "touching base" via email or telephone to a formal site visit. There is considerable variability in institutional involvement across types of WIL, and even within a single type of WIL;

- With the exception of apprenticeship, all forms of WIL involve some sort of student **reflection and self-assessment.** Other tools used to assess student learning during the WIL program differ by type of WIL, but typically include employer feedback.

Benefits to Students

Work-integrated learning was strongly endorsed by institutional and employer/community partner key informants as an important element of the overall student experience, and was perceived as offering a range of benefits to students. It should be noted that these benefits may not accurately capture the benefits that would be identified by students themselves, underscoring the importance of research to address student issues and perspectives. Benefits to students, as perceived by the institutional and employer/community partner informants interviewed in Phase 1, included:

- Career exploration, career clarity, and improved prospects for employment;
- Opportunity to apply theory to practice in real workplace and community settings;
- Development of marketable, workplace skills;

- Increased self-confidence, personal growth, and civic engagement;
- Financial compensation;
- Quality work experience.

Employer/Community Partner Motivations & Benefits

Many of the key benefits identified by employers and community partners were also their initial motivations for participating in WIL, including:

- Improved productivity and service delivery enhancements;
- Streamlined recruitment and screening processes, and reduced training costs for new hires;
- Better connections and understanding between employers/community partners and PSE institutions;
- Demonstrated commitment by WIL employers to community and profession.

Certain benefits were highly valued by employers following their involvement in WIL programs, but were not identified as initial motivations to participate:

- Highly motivated and creative students;
- Enhanced staff capacity and improved employee morale.

Some gaps were observed between the benefits identified by employers and community partners, and the benefits to employers perceived by faculty and staff at PSE institutions. Faculty and staff believed that employers sought to strengthen institutional relationships in order to access research and other expertise, while employers typically framed their interest in connecting to PSE as a branding and marketing strategy. Although institutional key informants judged WIL to be a highly cost-effective human resource tool for employers, relatively few employers/community partners mentioned cost-savings as either a benefit or motivation for participation.

Benefits of WIL to PSE Institutions

Institutional key informants cited strengthening community partnerships and enhancing institutional and program reputation – and the associated positive impacts on student recruitment, alumni relations, and development – as the most significant benefits of WIL for postsecondary institutions, as well as the opportunity to use employer feedback to make program improvements.

Challenges

Institutional key informants identified a number of challenges facing staff and faculty in delivering WIL programs:

- Volume of administration and paperwork;
- Securing sufficient student placements and meeting employer demands for students;

- Economic situation and financial pressures on employers;
- Managing expectations among faculty, students, and employers/community partners;
- Institutional biases and lack of institutional supports;
- Developing and implementing WIL curriculum;
- Need for faculty buy-in;
- Changing workplace.

Employer and community partner key informants identified some of the same challenges (the economy and financial pressures, managing expectations, and administrative/paperwork demands). They also highlighted other barriers that can limit employer participation in WIL:

- Managing workload and staffing to enable student supervision;
- Working through various PSE institution processes and procedures;
- Matching the availability of WIL students with organizational planning cycles;
- Short WIL placement length;
- Concerns about student quality;
- Physical workplace limitations;
- Managing expectations among students, PSE institutions, employers/community partners, employees, and in some cases, customers/clients;
- Location of the business/organization;
- Administrative and paperwork demands.

Opportunities

Several opportunities for enhancing WIL programs in Ontario's postsecondary sector were identified by college and university key informants, including changes to institutional practices, new program development, and policy changes at both the college/university sector and government levels:

- Better coordination and communication with employers;
- Expansion of PSE programs incorporating WIL components;
- Greater engagement by PSE institutions in applied research;
- Additional availability of graduate-level WIL programs;
- More opportunities for international students to participate in WIL programs;
- Tax credits and other financial incentives for employer participation;
- Inter-professional and inter-disciplinary WIL models;
- Increased university commitment to community service learning;
- Revitalization of the apprenticeship system, with laddering to other PSE.

Employer/Community Partner Satisfaction

Most employers and community partners were involved with multiple institutions and a range of WIL programs. They planned to continue their involvement with WIL because of high levels of satisfaction with the quality of WIL students, and many indicated that they would recommend WIL programs to others.

WIL & Labour Market Entry

When asked if they later hired students who had participated in a WIL program in their workplace, almost all employers and community partners reported making job offers to WIL students, regardless of the type of WIL the students had participated in.

In making hiring decisions, the majority of employers and community partners reported looking for job applicants with WIL experience rather than job experience more generally. WIL was not viewed as conferring an automatic labour market advantage, however. While many employers and community partners said they would be more likely to hire a job candidate with WIL experience over a candidate with other work history, close to half indicated that they would consider other factors as well – particularly the relevance of the work experience.

Conclusions

The research highlights a range of benefits for students, PSE institutions, and employers and community partners. It also identifies challenges associated with the development and delivery of WIL programs from an institutional perspective, and the barriers to participation in WIL from the vantage point of employers and community partners. Above all, work-integrated learning is as much about learning as it is about work, and several areas of divergence point out where efforts could be made to enhance WIL learning outcomes:

- Strengthened communication links between postsecondary institutions and employers/ community partners to ensure more effective, open lines of communication between the partners;
- Better understanding of the benefits sought by both students and employers, and awareness of the distinct needs of different groups of learners, such as international and First Nations students;
- Broader employer awareness of their role and contribution to the learning process, including understanding the learning objectives for the student at the beginning of the program and how the student will be assessed;
- Careful oversight of the nature of the WIL opportunities offered to students to maximize the labour market benefits;
- Increased PSE staffing and financial resources to support the internal structures necessary to operate and administer WIL programs.

1. Introduction

Demographic change, economic globalization, and the emergence of an increasingly knowledge-based economy have triggered rapid and unprecedented change in the Ontario labour market and in the skills required by employers. Since colleges and universities provide the largest inflow of workers into the labour market – generating four out of five new labour market entrants (Lapointe et al., 2006) – an effective, flexible, and responsive system of postsecondary education and training has been recognized as an essential investment in human capital. In an interconnected global economy, a diverse, well-educated, and highly skilled workforce is critical not only to innovation, productivity, and economic growth, but also to maximizing the human potential of all Ontario citizens.

This report presents the results of an exploratory study commissioned by the Higher Education Quality Council of Ontario (HEQCO) on the impact of work-integrated learning (WIL) on the social and human capital of postsecondary education (PSE) graduates, with particular reference to the quality of student learning and labour market outcomes associated with WIL programs. The project was undertaken by HEQCO in collaboration with a working group of nine Ontario postsecondary institutions: Algonquin College, George Brown College, Georgian College, Laurentian University, Niagara College, University of Ottawa, University of Waterloo, University of Windsor, and Wilfrid Laurier University.

The project is important for several reasons. First, public financing of postsecondary education is predicated on the belief that society as a whole benefits when the knowledge and skills gained by students in colleges and universities are transferred to productive activities in the community and the workplace. Establishing the appropriate levels of government expenditures and support for work-integrated learning in the postsecondary sector requires a clear understanding of the beneficiaries of WIL programs – whether PSE institutions, students, employers, or the community as a whole – and the nature of the benefits. Second, postsecondary education quality and accountability are major public policy concerns. Evidence of the contribution of WIL to improving student learning is important in determining the pedagogical rationale for maintaining or expanding WIL in various postsecondary programs of study. Third, economic flux and a rapidly changing labour market are forcing a rethink of postsecondary curricula, including the traditional ways in which work experience has been integrated with postsecondary study.

The overall research questions addressed by this study are as follows:

- What are the impacts of different types of WIL programs?
- How can WIL programs be differentiated from one another?
- Most importantly, what are the benefits of WIL to students, employers, and postsecondary institutions in terms of pedagogical and labour market outcomes?

The related policy question concerns the extent to which work-integrated learning experiences should be incorporated into postsecondary programs of study. From a public policy perspective, these are critical questions. If the learning gained through student work experience with a

business/community organization during an academic program of study is not integrated back into the classroom, then how do WIL experiences differ from part-time or summer employment, or voluntary activity outside of a formal PSE program? Unless students are encouraged to make connections between their theoretical knowledge and practical application, and are supported in transferring their classroom experiences to the workplace (and in some cases back again to the classroom), it might appear to some that their education has not been adequately integrated into the work environment (and vice versa).

This is not to dispute the value of the learning that takes place in and through the workplace. Indeed, some research suggests that work experience – whether or not it is gained in a WIL program – is the crucial factor in better labour market outcomes for postsecondary students (Darch, 1995). Given the significant investment of private and public resources involved in postsecondary WIL programs, there are equity and access dimensions to the provision of work experiences through work-integrated learning – rather than student employment programs or other labour market policy tools – which must also be carefully considered.

To conduct this research study, Academica Group employed a multi-phase iterative research process consisting of the following three phases:

- A literature review to identify the theoretical and conceptual underpinnings of WIL, the range of WIL programs, and the available research associated with various types of WIL. This phase resulted in the development of a draft typology of WIL for Ontario postsecondary institutions;
- Qualitative research with WIL coordinators, faculty, and administrators to gather feedback on the draft typology; and explore their personal observations and experiences with WIL at their institutions and their perceptions of the benefits, challenges, and opportunities;
- Qualitative research with WIL employers and community partners to examine their motivations for participating in WIL, the skills and competencies they seek in WIL students, the nature of their collaboration with educational institutions, and their perceptions of benefits and challenges.

This report presents the findings of the literature review and qualitative research and is organized in seven chapters:

- Chapter 1 describes the methodology and provides the background and context for the study;
- Chapter 2 summarizes the literature available on work-integrated learning in Canada and other jurisdictions, and proposes a typology of work-integrated learning to assist in establishing a common framework and language for understanding WIL programs;
- Chapter 3 offers insights from institutional key informants on pedagogical approaches to work-integrated learning, including learning objectives and assessment, as well as on-the-ground employer and community partner perspectives on the implementation and supervision of WIL programs;

- Chapter 4 provides an overview of the benefits of WIL as perceived by postsecondary representatives, employers, and community partners for students, employers/community partners, and postsecondary institutions;
- Chapter 5 considers current challenges related to the development and delivery of WIL programs;
- Chapter 6 highlights opportunities for adjusting or expanding WIL in the future, and findings related to the labour market impact of WIL programs;
- The final chapter identifies knowledge gaps and offers recommendations for future research.

Background & Context

With the prospect of improved employment outcomes and earnings through higher education, the demand for equitable access to learning opportunities and the overall expansion of colleges and universities have emerged as key trends in Ontario's postsecondary sector. In the face of demographic changes and the shift towards an increasingly globalized economy, a parallel trend has been the movement of the postsecondary sector toward greater vocationalism to meet market demands for highly skilled workers. Indeed, since 1995 there has been a "distinct shift in emphasis in Ontario's PSE system away from liberal education towards a vocational, technical education" (Fisher et al., 2009, p. 560), with a thrust toward employability skills (Gallagher & Kitching, 2003), and targeted funding mechanisms to strengthen links between industry, colleges, and universities (Axelrod et al., 2003).

The closer integration of learning and work as a strategy for workforce skills formation and economic competitiveness has also dominated international policy agendas. The European Union (EU) has called for new learning relationships between education and work in order to support lifelong learning, and a reassessment of the role of work experience in academic and vocational programs (Guile & Griffiths, 2001). There is considerable interest across the EU in experiential-based informal and non-formal learning, including work-based learning, as a means of moving European nations toward a mass education system at all levels of tertiary education (Chishom et al., 2009). The provision of vocational education and training was recently identified as the single most important education policy priority among OECD member nations (Field et al., 2009). And a recent OECD-led review identified work-integrated learning as an important tool in regional economic development; by adding "entrepreneurial value" to skills gained in educational institutions, work-integrated learning was viewed as strengthening linkages between the non-education sector, higher education, regional priorities, and emerging opportunities (Garlick et al., 2006, p.66).

This new focus on postsecondary vocationalism has been accelerated by concerns about the risks of social exclusion for students who leave school without marketable qualifications, and the human costs of graduating students who face uncertain labour market prospects. The value of vocationalism as an economic and social safety net flows from human capital theory, which holds that students make rational choices to invest in the acquisition of skills and knowledge in order to improve economic prospects, increase future earnings, and enhance their productivity on the job. It is founded in the belief that trained workers have greater chances of gaining employment and can earn higher wages than untrained workers, and that more education gives

workers intellectual capital needed for a more productive economy (Brisbois et al., 2008). Human capital can be general and readily transferable across different employers, or specific to industries or firms. While businesses provide firm-specific training to their employees, they have no incentive to provide general training, and are unlikely to finance training of comparable value to other employers (Field et al., 2009). Since the benefits of general human capital accrue to the employee rather than the firm, the state has an interest in supporting the provision of vocational opportunities for its citizens through the education system.

To increase human capital by raising educational attainment, significant changes have been introduced to PSE to widen access, expand program choice, and provide greater flexibility in program delivery. However, traditional approaches to pedagogy in colleges and universities have remained largely unchanged, with most institutions continuing to emphasize conceptual learning through discipline-based classroom instruction (Guile & Griffiths, 2001; Schuetze & Sweet, 2003). Despite the increasing focus on PSE vocationalism, EU and North American policy makers have tended to adopt a narrow, functional view of the relationship between education and work, with limited discussion about how learning and development are affected by the changing context of work (Guile & Griffiths, 2001).

Alongside alarming reports of skills crises and innovation gaps, Canada also faces high rates of youth unemployment and underemployment, with one-third of employed 25 to 29-year-old PSE graduates in low-skill jobs, the highest ratio among OECD countries (Brisbois et al., 2008). This incidence of youth unemployment and underemployment, coupled with labour market shortages, provides a rationale for a fuller exploration of work-integrated learning in the postsecondary system as a public policy response to improving education-to-labour market transitions. New pedagogical approaches that combine workplace-based experiential learning and classroom-based cognitive learning offer promising instructional alternatives to deliver the skills needed in a knowledge-based economy (Schuetze & Sweet, 2003).

Some educators view calls for a closer integration between education and the workplace as problematic because of concerns that workplace learning will be privileged over theoretical learning, or that existing social inequalities based on race, gender, or socio-economic status will be reproduced and reinforced through workplace experiences (Billett, 2009a; Chisholm et al., 2009). Acknowledging these concerns, Billett (2009a) asserts that "all education is broadly vocational" (p.828), and argues that to realize the "educational worth" of learning through practice, students must find personal meaning in the occupation they are learning. This means aligning students' vocational capacities with their own purposes and interests, while providing a foundation for students to think strategically and critically about their selected occupation and its practices. In its ideal form, work-integrated learning encourages students to make linkages between work experience; the knowledge and skills needed in the workplace; and the cultural, social, and technological contexts of work (Guile & Griffiths, 2001).

Methodology

Literature Review

A literature review was undertaken to identify the common characteristics and theoretical constructs associated with programs that integrate academic learning with some form of labour market activity or career-related experience. Research studies were sought to elucidate the theories underlying work-integrated learning; the goals of WIL programs; WIL program descriptions; the impact of WIL on students, faculty/institutions, and employers; and the outcomes of WIL programs in terms of student achievement, PSE persistence, engagement and satisfaction, employability, and workforce development. Although there is a growing body of research on work-integrated learning in secondary schools, the literature review focused on studies specific to postsecondary WIL programs.

Academic research, government studies, and other secondary sources were all targeted through website searches of organizations with a specific work and learning focus, manual and electronic database searches, and Google and Google Scholar searching strategies. A date limit was set from 1995 to the present, and the following initial search terms were employed:

- work integrated/work-integrated learning
- co-op/coop education
- co-op/coop learning
- co-operative/cooperative education
- co-operative/cooperative learning
- work-based learning
- workplace learning
- service learning
- experiential learning
- experiential education
- practicum
- field practicum
- field placement
- internship
- practice-based learning

Relevant studies that met the inclusion criteria were used to develop a draft typology for work-integrated learning (WIL) programs in Ontario's postsecondary sector. An annotated bibliography of the initial sources identified is available as a supplement to this report. Some members of the working group offered written feedback on the draft typology, and their comments have been incorporated into this document.

WIL Faculty & Staff Interviews

A total of 39 participants from the nine working group institutions participated in 27 semi-structured telephone interviews and one focus group to offer suggestions on the proposed

definition of work-integrated learning and the draft typology. (See Appendix A for a list of institutional key informants.) The sample was drawn from a pool of approximately 110 contacts identified by members of the working group. Efforts were made to include institutional representatives from a range of program areas with experiences in different types of work-integrated learning, as well as varying levels of involvement and years of experience.

The interviews were held during April and May, 2010, and each lasted approximately one hour in length. Interviews were not taped, but careful notes were taken and verbatim data were recorded whenever possible. Interview notes were shared with each participant for corroboration and validation, and manually coded to identify key themes. The single focus group involving seven staff from the University of Waterloo was 1.5 hours in length. It was audio-recorded and transcribed, and manually coded to identify key themes.

In both the interviews and focus group, institutional key informants were asked to comment on the proposed definition of WIL and the draft typology, with particular attention to learning objectives, supervision, and assessment. In addition, they were asked to share their perspectives on the benefits of work-integrated learning for students, employers/community partners, and institutions; the challenges associated with the implementation of work-integrated learning programs at their institutions; and potential opportunities for WIL in the future. Finally, they were invited to share examples of innovative or interesting approaches to WIL that could be used as case studies to illustrate and enhance the types of WIL described in the draft typology. (See Appendix B for the interview guide. Additional appendices, outlining WIL offerings at participating institutions and examples of innovative WIL programs, are available upon request.)

The valuable insights provided by the interview participants offered a rich source of data to make the typology more meaningful and relevant. They also provide a foundation for recommendations to improve and reshape postsecondary approaches to WIL.

Employer/Community Partner Interviews

In total, 25 semi-structured telephone interviews were conducted with representatives of businesses and organizations involved with WIL programs at the nine working group institutions. Academica Group selected the sample from a list of approximately 70 potential key informants who were identified by working group members, and contacted in advance by working group members to confirm their willingness to be interviewed. As with institutional key informants, efforts were made to ensure that employers and community partners reflected a diversity of sectors and years of involvement with WIL, and had experiences with different types of WIL offered by both colleges and universities.

The interviews were held during May and June, 2010 and each lasted approximately one-half hour in length. Interviews were not taped, but careful notes were taken and verbatim data were recorded whenever possible. Once again, interview notes were shared with each participant for corroboration and validation, and manually coded to identify key themes.

Employers and community partners were asked about motivations for participating in WIL; the skills and competencies they sought from WIL students; and the nature of their involvement in learning objectives, student supervision, and assessment. Key informants also shared their perspectives on the benefits of work-integrated learning for students and employers/community partners; and the challenges associated with the implementation of work-integrated learning programs in their businesses and organizations. In particular, the impact of WIL programs on hiring practices and experiences was explored. (See Appendix C for the employer/community partner interview guide.)

Respondent Profiles

Staff & Faculty

Key informants from colleges and universities were involved with different types of WIL opportunities at various levels of their institutions, specifically at the institutional and program level, as indicated in the table below.

College and University Key Informant Characteristics

Position		Faculty	
Co-op consultant/coordinator	11	Business	6
Other coordinator	8	Health Sciences	5
Career services	2	Computer Studies/IT	2
Faculty	3	Engineering	2
Dean/Head/Chair	6	Arts	2
Director/Manager/Supervisor	9	Social & Community Services	2
Type of WIL		Social Work	1
Co-op	14	Social Sciences	1
Practicums	4	Education	1
Field placements	5	**Years of Experience**	
Service-learning	6	Less than 5	3
Applied research	2	6-10	9
Internships	8	11-15	1
Apprenticeships	4	More than 15	4
Work simulation	2		

Employers/Community Partners

The majority of employers and community partners were small and medium-sized organizations across a range of sectors, who typically hosted up to 20 student WIL placements annually. Regardless of the PSE institution they worked with most frequently, the majority were located in the central region of Ontario or the Greater Toronto Area (GTA). Collectively, their knowledge of WIL was based on their experience with 12 Ontario colleges, 15 Ontario universities, and three out-of-province universities. Almost all had worked with more than one institution (sometimes hosting both college and university students), and most had provided multiple types of WIL experiences for postsecondary students over a period of many years. The table below describes the characteristics of employer and community partner key informants.

Employer/Community Partner Characteristics

Sector			Region		
Business services	4		North	2	
Tourism & hospitality	4		East	4	
Government	3		Central	16	
Health services	3		Southwest	3	
Utilities	3		**Years involved**		
Non-profit	2		Less than one year	2	
Construction	2		1-5 years	7	
Social services	2		6-10 years	10	
Education	1		11 or more years	6	
Automotive	1		**Students per year**		
Type of WIL			Less than 5	10	
Co-op	17		6-20	10	
Professional practice	5		21-50	3	
Placements	6		51-100	0	
Service-learning	4		More than 100	2	
Applied research projects	4		**Total WIL students**		
Internships	8		Less than 25	9	
Size			26-50	1	
Small	12		51-75	6	
Medium	5		76-100	4	
Large	8		More than 100	5	

Employer/Community Partner Awareness of WIL

Several of the employer/community partner key informants were unaware how their company or organization initially became involved with WIL. About one-quarter reported that their involvement with WIL began when they were approached by the institution and asked if they would be interested in hosting a student. Another one-quarter were contacted directly by students requesting a placement, co-op, or internship opportunity.

Among the remaining key informants, several initiated the contact with postsecondary institutions to find out how to become involved – sometimes as a result of local advertising or a community outreach event – and some had institutional affiliations with the PSE institution as former co-op consultants, members of the program advisory committee, research collaborators, or part-time faculty.

Limitations

While efforts were made to include a diversity of views in institutional and employer/community partner interviews, the research is qualitative and not generalizable, and is not intended to represent the full range of experiences among faculty, staff, employers, and community partners who are involved with WIL in Ontario colleges and universities.

Further, the perspectives of institutional key informants reflect only the opinions of faculty and staff at the nine working group institutions involved in the HEQCO project. Because the pool of employer and community partner key informants was "hand-picked" by institutional representatives, the sample was likely biased toward key informants expected to be generally favourable about their WIL experiences, and it was also somewhat over-representative of co-op employers. The employer pool did not include any employers involved in apprenticeship programs.

Another limitation of the research is the absence of the student perspective. The benefits of WIL to students described in the report are those perceived by institutional and employer/community partner key informants, and may not accurately capture the benefits that would be identified by students. It should be noted, however, that it was intended by HEQCO from the outset that the next phase of the larger WIL study would address student issues and perspectives.

This research project did not seek to engage the broader faculty and staff community across Ontario postsecondary institutions, nor to explore general employer/community views. Hence the study cannot shed light on issues associated with barriers to institutional and employer/community partner participation in WIL programs among those who are not already involved.

Finally, researcher bias is an inevitable element in the gathering and analysis of qualitative research, particularly when notes are taken in written form. Although key informants were asked to corroborate and verify the interview notes, the notes reflect the researcher's interpretation of what was said and may not fully convey the opinions of key informants.

2. Framework for WIL

This chapter uses findings from the literature review to describe the theoretical and conceptual underpinnings of WIL programs and practices. It proposes both a definition and a typology of work-integrated learning in Ontario's postsecondary sector, informed by insights from institutional key informants and evidence from the literature, to contribute to the development of a shared understanding of WIL. It is hoped that the typology will assist in facilitating more effective communication across institutions, students, employers, and government, and enable valid comparative research, meaningful knowledge transmission and exchange, and coordinated policy development and advocacy.

Theories of Work-Integrated Learning

Theories of work-integrated learning have emerged from a number of disciplines, including cultural anthropology, education, adult education, psychology, sociology, human resources development, and organisational development (Keating, 2006). The following section briefly summarizes various theoretical perspectives on how learning takes place in workplace contexts. While each of these theories has contributed to advancing a conceptual framework for work-integrated learning, no one single theory or model can be used to explain WIL (Calway, 2006).

Experiential Learning Theory

Work-integrated learning is fundamentally rooted in the theory of experiential learning, as set out by the American education philosopher John Dewey (Chisholm, 2009; Kolb & Kolb, 2005). Dewey called for a philosophy of learning grounded in experience, and argued that true education results when learners are faced with problem-solving in authentic environments (Dressler & Keeling, 2004; Keating, 2006). Dewey believed that education must provide a continuum of opportunities for practice, intelligently guided by educators, to support students in the kind of thinking and reflection that will permit them to reconstruct their experience. This view of experiential leaning draws from constructivism, which sees meaning actively constructed by learners through personal experience rather than by the one-way transmission of knowledge from teacher to student. The theory of experiential learning is built upon six foundational propositions (Kolb & Kolb, 2005):

1. Learning is best understood as a process, not as outcomes;
2. All learning is relearning;
3. Learning is driven by disagreement and resolution of conflicts;
4. Learning is a holistic process of adaptation to the world;
5. Learning results from transactions between the person and the environment;
6. Learning is the process of creating knowledge.

To understand the processes associated with experiential learning, Kolb developed a four stage experiential learning cycle that moves the learner in a circular and recursive pattern from concrete experience, through reflective observation, to abstract conceptualisation, to active experimentation (Kolb & Kolb, 2005).

Situated Learning Theory

In contrast to cognitive theories focused on the individual as learner, situated learning theory emphasizes the social, collective, and contextual nature of learning (Keating, 2006), and recognizes the limits of the transfer of abstract classroom knowledge when situations differ profoundly from one another. Learning is conceptualized as a relational process situated in a specific context involving the co-participation of newcomers with experienced others (Fuller, 2006). It is not only the acquisition of knowledge, but results from students' participation in a "community of practice" (Lave & Wenger, 1991). Through a process of "legitimate peripheral participation" in relatively stable and defined communities of practice, learners acquire skills and competencies. Contact with experienced practitioners allows them to develop their understanding and mastery, until they eventually become practitioners themselves.

The process of learning in communities of practice – by requesting help, collaborating, and observing – is a very different process from the learning that takes place at school (Guile & Griffiths, 2001). Such situated or contextualized learning responds to different student learning styles, and is regarded by some scholars as a critical factor in promoting student motivation and learning among at-risk students (Gallagher & Kitching, 2003; Schuetze & Sweet, 2003).

Situated learning theory not only requires learners to have access to communities of practice, but also expects host organizations to be actively involved in providing opportunities for learners to observe, discuss, and try out different practices (Guile & Griffiths, 2001). Some have charged that situated learning theory privileges the learning that takes place outside educational institutions, and devalues the contributions of school-based knowledge acquisition (Fuller, 2006; Tanggaard, 2007).

Activity Theory & Boundary Crossing

Guile and Griffiths (2001) emphasize the need to consider both educational settings and the workplace as contexts through which students can learn and develop. They distinguish between traditional "vertical" forms of learning, and "horizontal" or cross-context development, the learning that happens when existing practices are challenged by new situations.

They point out that not all work situations and communities of practice are stable and well-bounded. Instead, workplaces should be viewed as a series of interconnected "activity systems" consisting of multiple communities of practice. Learners must be able to cross boundaries between workplace "activity systems" – that is, each workplace's division of labour, rules, and procedures – to contribute new forms of social practice and produce new forms of knowledge (Guile & Griffiths, 2001). Students not only have to develop the capacity to participate within workplace activities and cultures; they must also learn how to draw upon their formal learning to interrogate workplace practices and develop "polycontextual" skills that can be re-situated, instead of simply transferred, across different workplace contexts.

Reflection plays a central role in fostering the integration of on- and off-campus learning. Schön (1991) distinguishes between reflection-on-action and reflection-in-action, both of which are essential in situated contexts. Reflection-on-action is similar to the concept of reflection in

experiential learning theory, and involves thinking back over one's action. Reflection-in-action involves quick thinking on one's feet in the midst of carrying out professional activities (Keating, 2006). To these, Coll et al. (2009) add a third: reflection-before-action.

Pedagogy of the Workplace

Billett's (2009) pedagogy of the workplace draws from situated learning, and is informed by socio-cultural frameworks that distinguish three levels for understanding practice: socio-historical, occupational, and situational. This theory regards the learning that happens in workplaces as equally valuable – and equally transferable – to the learning that takes place in formal educational institutions. Workplace settings are more than simply settings in which to apply classroom knowledge and experience occupational practices, but provide essential learning experiences in their own right.

Billet (2009) argues that employees learn at work through participation in a range of activities, not just formal training programs. However, opportunities for participation are unevenly distributed across workplaces according to employment status, industrial affiliations, gender and other characteristics. Whether or not people learn in the workplace is determined by access to learning opportunities and individual agency, that is, the decisions of individuals to engage in opportunities afforded to them and the meaning they construct from these experiences. In this view, the process of learning is shaped by interactions between what is available in the workplace, and how individuals choose to engage with the opportunities available. The learning environment is not fixed, but results from the changing relationship between organizational factors, social relations, and individual agency.

Critical Education Theory

Critical education theory focuses on individuals as active agents of change and as active participants in the construction of social reality (Myers-Lipton, 1998). The theory recognizes the interconnections between social and economic structures and the possibilities of human agency. It contributes to a fuller understanding of how interaction between groups creates knowledge and meaning as well as resistance, and emphasizes the potential for action to change the existing social order. In particular, critical education theory views schools as the place where power relations can be resisted and transformed, rather than simply reproduced (Myers-Lipton, 1998). From the critical theory perspective, educational curriculum should engage students in exploring social justice issues, encourage them to actively question the underlying power structures that contribute to economic and social inequality, and involve them in correcting injustices. Critical engagement, reflection, and action leads to students developing a new set of social attitudes and values, and contribute to both individual and social transformation.

Definitions of WIL

There are considerable challenges in achieving definitional consensus around the term "work-integrated learning." Some scholars emphasize the complexity and contestation around the very words "work," "learning," and "workplace" (Chisholm, 2009; Fenwick, 2006). Others

highlight the vagueness of some definitions of work-integrated learning, the similarity between WIL and other terms that sound comparable but have quite different meanings, and the inconsistency across definitions (Connor & MacFarlane, 2007).

In some cases, work-integrated learning is defined through reference to the specific programs that fall under the term. For example, Goenewald (2004) suggests that the term work-integrated learning emerged in order to "give new meaning to the notion of cooperative education" (p.19). For Callanan and Benzing (2004), internships, cooperative education, and apprenticeships construe work-integrated learning as programs that support "anticipatory socialization." That is, they are intended to help students develop an accurate self-concept, gain a realistic understanding of various career fields and organizational environments, and allow a check for fit between individual characteristics and the demands of different jobs.

Calway (2008) argues that work-integrated learning should be the general term for learning that occurs through undertaking industry/professional practical experience while in an accredited program of postsecondary study. He sees WIL as being expressed through six imperatives: work readiness, life-long learning, human and social potential, internationalized thinking, knowledge transfer, and career development. Most importantly, he asserts that WIL must be intentional, organized, real-world, and accredited within an educational structure that considers the student, the teacher/supervisor, curricula, teaching methodologies, and the social function of education.

In general, work-integrated learning (WIL) is an umbrella term used to describe a range of educational activities that integrate learning within an academic institution with practical application in a workplace setting relevant to each student's program of study or career goals. WIL takes many forms, with varying degrees of integration and a multitude of characteristics. There are some common features across the various forms, however, that distinguish WIL from work experience. Cooper et al. (2010) identify seven key dimensions to work-integrated learning: purpose, context, nature of the integration, curriculum issues, the learning, partnerships between the institution and the workplace or community, and the support provided to the student and the workplace.

The Royal Melbourne Institute of Technology (RMIT) broadly defines work-integrated learning as learning by doing in realistic work situations, where the central practices of industry and community professionals are authentically reflected. Assessment is considered to be the most important aspect of the WIL activity:

The key feature of a work integrated learning experienced in our University program is: assessed professional or vocational work in a work context with authentic feedback from clients and others from industry and community (RMIT, 2008, p. 20).

The RMIT policy identifies the following activities as consistent with the definition of work-integrated learning:

- projects in student's workplace;

- work placements of many forms including clinicals, internships, cooperative and field education, vocational and professional practices;
- industry and community projects;
- cross discipline and sector projects involving industry and community;
- design and art studios for and with clients;
- work relevant role plays;
- international projects, role plays and the like using online technologies for interaction;
- art projects with exhibitions;
- industry mentors for students engaged in realistic work tasks;
- offshore supervised working and research;
- product development for clients, users;
- designs for clients, users;
- product, design, project competitions;
- research articles and conference papers.

Definition of WIL in Ontario's Postsecondary Sector

The project began with the definition of WIL developed by Cooper et al. (2010) as "a formal program of learning situated within authentic work experiences and implemented intentionally as part of a higher education curriculum." Key informants from the nine participating working group institutions were asked whether this definition of work-integrated learning aligned with their own experience and involvement with WIL. To some extent at least, all agreed that this definition captured the programs in which they were involved. However, their levels of agreement varied, and concerns were raised about what were perceived to be limitations of the definition.

The use of "formal" and "intentional" was questioned by several key informants from both the college and the university sectors. They pointed out that learning gained through work experience in a postsecondary institution can be both formal and informal, and that intentional implies mandatory, whereas most work-integrated learning opportunities are optional. In addition, some programs (in particular applied research projects and service-learning) may only be developed on an ad hoc basis in response to identified industry problems or emerging community needs.

A fundamental issue was the reference to "authentic work experiences." Given the contestation around the concepts of "authenticity," "work," and "workplace," it was felt that the definition of WIL should encompass student participation in voluntary activities on and off-campus, as well as in other areas of student life and development, in addition to employment experiences. Several key informants pointed out that co-curricular and volunteer experiences often involve reflective practice and contribute to the achievement of students' learning objectives. In light of this, some universities are moving to a more holistic model of postsecondary learning that integrates academic services and student life, recognizing that both are required for optimal student experience and development.

Similar cautions were raised about associating WIL too narrowly with curricula:

Students are involved in a huge number of things at university that are not part of the curriculum but that give them learning in a work experience. (Institution)

Students who work as Research Assistants (RAs) or Teaching Assistants (TAs) gain valuable learning in a work experience, and indeed apply the knowledge they gain to their academic program of study, but their RA and TA positions are not linked to a specific course curriculum. In apprenticeships (in contrast to other postsecondary WIL programs), about 90 per cent of the learning takes place on the job site instead of through the academic curriculum, and the apprenticeship curriculum is developed and owned by the Ministry of Training, Colleges and Universities (MTCU) instead of the higher education institution. It can be understood as more "self-directed" learning, and less a formal curriculum.

An issue of particular importance to faculty and staff involved with service-learning programs was the need to recognize the role of community partners – in addition to employers – in delivering WIL programs, and the contribution of WIL to fostering and strengthening connections between postsecondary institutions and the communities they serve:

In much of the work that we do with community service-learning, we (and the literature) refer to community partners or community partnerships. While this might sound like a moot point, it is highly significant in how we approach our work and the philosophical basis of community service-learning. (Institution)

Suggestions were offered for a broader umbrella term than "work-integrated learning" – such as "community-integrated learning" or "work in community contexts" – that would encompass the full range of WIL experiences, with one key informant referencing the Conference Board of Canada's Global Best Awards program.[1]

The theme of partnerships and mutual learning was echoed in a comment that the definition of WIL should acknowledge the learning gained by community members coming into the classroom, as well as that acquired through student involvement in the community:

A true form of reciprocity should consider a combination of both forms. Guest speakers from the community provide an opportunity for students to understand experiences in practice, for example, seniors who come into the classroom to talk about issues they are facing as seniors in society. (Institution)

Given the nature of the comments from key informants about the proposed definition, there may be greater consensus around the definition of work-related learning and work-related learning arrangements proposed by Billett (2009b, p.v):

---

[1] Global Best Awards celebrate outstanding and effective business, education, and community organization partnerships in the four categories of: Building Learning Communities, Developing Skills for the Future Workforce, Promoting Health and Well-Being of Children and Youth in Education, and the Role of Education in Meeting Global Challenges.

Work-integrated learning refers to the process whereby students come to learn from experiences in educational and practice settings and integrate the contributions of those experiences in developing the understandings, procedures and dispositions required for effective professional practice, including criticality. Work-integrated learning arrangements include the kinds of curriculum and pedagogic practices that can assist, provide and effectively integrate learning experiences in both educational and practice settings.

Toward a WIL Typology

Numerous terms are used separately and interchangeably to describe types of WIL, including workplace learning, work-related learning, work-based learning, vocational learning, experiential education, cooperative education, clinical education, practicum, fieldwork, internship, work experience, and more. This means that the same term can refer to quite different programs across postsecondary institutions in Ontario, and different terms can refer to the same programs. Scoping studies of work-integrated learning conducted in Australia and Scotland have underscored the potential funding and administrative implications of inconsistency around WIL terminology (Connor & MacFarlane, 2007, Patrick et al., 2009). These studies have highlighted the importance of ensuring that the objectives and expectations of WIL programs are clear to employers, and particularly to students.

To address these concerns, several attempts have been made to develop frameworks for understanding work-integrated learning programs, and various models and typologies were found in the literature. Aspects of each of the models described below were incorporated into a draft WIL typology for Ontario's postsecondary sector.

One of the most influential typologies was developed by Guile and Griffiths (2001), who draw upon socio-cultural learning theories to identify five models of learning through work experience: traditional, experiential, generic, work-process, and connective. These models consist of six defining elements: purpose, assumptions about learning and development, practice, management, outcome, and role of the institution.

- The **traditional** model is designed to quickly launch students into the workplace and includes programs focused on skill acquisition and work readiness. Learning is expected to occur automatically, without the need for special guidance or mentorship. Students manage tasks and instructions to prepare for a career in their chosen field and are closely monitored in their work. The role of the institution is to deliver program content and there is only minimal interaction between the institution and the workplace. There is a sharp division between formal and informal learning. This model is traditionally associated with apprenticeship programs;

- The **experiential** model focuses on the "co-development" between education and work and emphasizes the interpersonal and social development of students. Students are encouraged to diversify their experiences, with planned periods of internship that allow students to delve deeply into the different components of their occupation. Supervision is more arms-length, with greater dialogue and co-operation between institutions and

workplaces. Students are de-briefed about their experiences to foster a greater understanding of the sectors in which they will be employed and their education;

- The **generic** model emphasizes learning outcomes and provides opportunities for students to develop the generic skills needed in working life. In a process facilitated by the institution, students build a personal portfolio to show their development in skill acquisition and also participate in assessing their skills;

- In the **work-process** model, students develop a holistic understanding of work processes and context through participation in different communities of practice. The aim is to support students in adjusting to the changing context of work by transferring knowledge and skills from one work context to another. This model entails close collaboration between institutions and the workplace and is focused on coaching and reflection;

- Guile and Griffiths (2001) regard the **connective** model as the ideal form of work experience, but argue that this kind of opportunity is rarely available to students. This model makes reflexive connections between formal and informal learning, and between "vertical" (conceptual) and "horizontal" (across contexts) learning. Through close co-operation between the institution and the workplace, students develop the capacity to cross boundaries by connecting formal and conceptual learning with new and changing work contexts. The central role of the institution is to develop partnerships with workplaces to create environments for learning.

While useful from a theoretical perspective, Guile and Griffiths' classification has been viewed as too abstract to be able to neatly incorporate specific WIL programs, since many WIL programs include elements of several of these models (Tyndälä, 2009).

Schuetze and Sweet (2003) propose three types of educational programs that alternate academic and workplace training: remedial training, work experience as familiarization with the world of work, and the workplace as a central place of learning. These models are defined by four main characteristics: purpose, target population, learning objectives, and learning methods. They are described as follows:

- **Remedial training** is aimed at facilitating school to work pathways among "at-risk" high school students who do not intend to pursue postsecondary education, and includes high school work experience programs;

- **Work experience as familiarization with the world of work** is intended to contextualize knowledge learned in the classroom and introduce students to the culture of the workplace. This model also develops students' "working knowledge," by creating an awareness of the opportunities for personal growth and social mobility through work, as well as the constraints imposed by power relationships in the workplace. It includes postsecondary co-operative education and internships;

- The **workplace as a central place of learning** is focused on the acquisition of occupational knowledge. In addition to apprenticeship, this model also includes the

alternation learning offered in some professional programs, such as education, nursing, and law, where competencies are acquired through hands-on exposure to practice and knowledge is gained through work with experienced practitioners.

Since the first model applies to high school and not to postsecondary education, it was not considered relevant for the purposes of this study. The concepts advanced in the second and third models, however, were considered promising as two basic assumptions underlying the range of postsecondary WIL programs available in Ontario.

Calway's (2006) philosophy of work-integrated learning is based on a grounded study of 900 journal articles and reports. His study identifies eight generic models, and uses 16 criteria to distinguish between them: length of work placement, payment, academic credit, focused industry, industry commonly used for, compulsory/optional, level of student knowledge required, level of workplace supervision, level of academic supervision, knowledge/skill transfer (classroom-work), knowledge/skill transfer (work-classroom), age range, student responsibility, active participant in workplace, role of student, and work experience placement in relation to academic studies. The eight models are described as follows:

- **Pre-course experience** refers to prerequisites for course entry, rather than a work-based experience during an academic program;

- **Project-based** models include practicum, independent studies, and work-based projects. This model provides students with opportunities to apply theory to practice through career-related research projects, generally undertaken at a work site;

- **Vocational** models include vocational education, technical preparation, and apprenticeship. These models are trade-focused and intended to develop skills on the job, with little application of classroom theory;

- **Contextual learning** includes experiential education, contextual learning, praxis and service learning, and is designed to bring real life experiences into academic settings;

- **Work experience** includes short-term models that expose high school students to workplace settings through work experience and job shadowing;

- **Supervised experience** includes externships, field studies, internships, cognitive apprenticeships, professional practice, and preceptorships. These models are generally mandatory rather than optional, and are focused on skill acquisition in a professional field of study;

- **Work-based learning** includes work-based learning, cooperative education, organizational learning, industry-based learning, sandwich courses, and practice-oriented education. These models integrate periods of academic study with periods of related work experience, with academic credit offered for the placements. These models are generally optional, and begin with academic study followed by the application of knowledge in the workplace;

- **Joint industry/university courses** include cooperative partnerships between industry and university that bring the industry into the classroom to provide students with the specific employability skills required by the industry.

Five of Calway's (2006) models – project-based, vocational, contextual learning, supervised experience, and work-based learning – were considered to align well with the Schuetze and Sweet (2003) models, with vocational and supervised experience falling under the workplace as a central place of learning, and the other three models relevant to familiarization with the world of work. In addition, Calway's criteria offered a useful set of characteristics by which to distinguish between types of WIL.

Furco (2006) develops a typology of five types of service programs by locating each program along two main continuums: the main beneficiary of the program (community or student), and the focus of the program (service or learning). His five types of service programs are defined as follows:

- **Volunteerism** engages students in activities that emphasize the service being provided and primarily benefit the community;

- **Internships** give students hands-on learning experiences to enhance their understanding of issues relevant to a particular area of study;

- **Community service** activities focus on the service and the benefits to the community, while allowing students to learn more about how their service makes a difference in the lives of the service recipients;

- **Field education** programs are co-curricular service opportunities related to, but not fully integrated with, formal academic studies. The programs are designed to enhance students' understanding of a field of study, but also emphasize the service being provided;

- **Service-learning** programs provide equal benefits to both students and the community, and place equal focus on the service provided and the learning that occurs.

Furco's typology conceptually clarifies service-learning as an equal partnership between education and the community, purposefully designed to address community needs and also to enhance student learning.

Keating (2006) reviews the seven models outlined in Victoria University's (VU) "learning in the workplace" typology. The models fall into two broad categories based on the nature of the learner: preparation for work in a field of practice and improvement of work in a field of practice. The seven models are characterized by type of participation, duration, timing, relationship to other course content, assessment, remuneration, and teaching/supervision practices, and the two broad categories within which they fit are described as follows:

- In **preparation for work in a field of practice**, learners are students. Programs that fall into this category include workplace projects undertaken by students, practicum/placements (practical workplace experience to enter a specific practice area), apprenticeship/traineeship (work combined with structured classroom training), and cooperative education/internship (experience as employees within an area of practice);

- In **improvement of work in a field of practice**, learners are already workers. This category includes projects in the learner's workplace, workplace/enterprise learning, and work-based learning;

Keating argues that the VU typology underutilizes "new approaches to learning in the workplace" (p.24), including work-based learning and service-learning, that depend on strong partnerships with employers and community agencies. While many of the programs that fall under the category of "preparation for work in a field of practice" can also be categorized as being service-learning programs, the notion of reciprocity sets service-learning apart from these programs: its purpose is to achieve mutually beneficial outcomes based on ethical, civic, cross-cultural, or social justice goals. Keating thus builds on Furco (2006) to position service-learning within an overall WIL framework.

Cooper et al. (2010) describe three models of work-integrated learning, clearly differentiated from each other by the context in which the learning takes place. The three models are characterized by seven key dimensions: purpose, context, nature of the integration, curriculum issues, the learning, partnerships, and supports. They are described as follows:

- The **professional** model operates in specialized, professional workplace settings. It is associated with strict regulatory requirements, and aims to provide students with clearly defined professional skills and competencies through guided learning and mentoring by an experienced practitioner;

- **Service learning** operates in the context of the community, and engages students in addressing community needs. Its focus is civic participation and civic engagement through partnerships with the not-for-profit sector. This model has the potential to be transformative for students, through deep reflection and true reciprocity between the university and the community;

- **Co-operative learning** is a structured program that alternates paid work experience with classroom study, and typically operates in industrial settings. Its focus is on skill acquisition and workplace literacy in a field related to the student's career goals, and provides students with opportunities to integrate theory with practice. It requires strong and effective partnerships with employers, and learning outcomes vary depending on the workplace.

This approach sharpens the focus on service learning as an integral part of a work-integrated learning typology, but is oriented exclusively toward university settings and does not address the place of apprenticeship.

Draft Typology

Based on the literature review, a draft typology of work-integrated learning was developed. The draft typology identified three main categories of work-integrated learning based on three underlying philosophies. Within each category, two types of programs were identified:

- Systematic training (workplace as a central place of learning)
    - Vocational education
    - Supervised experience

- Work experience (familiarization with the work of work)
    - Structured work experience
    - Project-based learning

- Employer/community/institutional partnerships
    - Service-learning
    - Work-based learning

A range of characteristics were used to distinguish between the types of WIL, including:
- Common terminology
- Educational purpose
- Duration
- Timing
- Payment
- Academic credit
- Program/Sector
- Compulsory/Optional
- Level of student knowledge required
- Curriculum
- Level of workplace supervision
- Level of academic supervision
- Assessment and evaluation
- Role of student in workforce
- Benefits to students
- Benefits to employers
-

The draft typology served as a useful starting point for the discussion about work-integrated learning with college and university key informants, who offered many worthwhile suggestions to enhance the typology's meaning and relevance to the Ontario postsecondary sector. Many acknowledged the utility of a typology of learning to assist institutions with curriculum development, and to select the most appropriate type of WIL for specific courses and programs. They recognized the challenges in developing a typology that captures and clarifies WIL programs, and commented on a "blurring of the lines" at their own institutions, with work-integrated programs often reflecting an overlap and cross-over between types rather than neatly fitting into any single type.

Specific recommendations were offered to revise and improve the draft typology, as summarized below.

At the college level, where "all programs are ultimately vocational", a "vocational" category was viewed as confusing, and several key informants recommended that this category be renamed clearly as "apprenticeships." The uniqueness of apprenticeships among WIL programs was also emphasized. Unlike other postsecondary programs where the student enrols first and then connects with an employer or community partner for their WIL experience, in almost all cases apprentices are employees first and already engaged in a job-site before they begin their in-school study. The institution has no involvement in the selection of the workplace or the assessment of the skills gained in the workplace.

A concern was raised about placing supervised experience under "workplace as a central place of learning," which may imply that "postsecondary-based learning is tangential to real learning. Learning may thus be conflated into a technical enterprise, with a defined number of skill sets." This was viewed as diminishing the importance of academic learning in developing students' capacity to critically reflect on the workplace and to challenge the socially reproductive forces of the work environment.

A category for simulated work experience was urged by both college and university key informants. Clinical and lab simulations give students – particularly those in health care programs – valuable work experience in a simulated setting through the use of 3D simulators, SIM mannequins, and human patient actors. On-site campus services, such as restaurants or hotels managed by hospitality students, studio facilities for broadcast and music students, and on-campus health and dental clinics provide opportunities for real-life work experiences in simulated but authentic environments.

Two specific gaps were identified with regard to the role of research in the integration of work and learning. First, the position of the researcher can itself be work experience for students seeking employment in a research field; hence it was argued that the typology should include RA, TA, and lab assistant positions. Second, there is increased interest at the college level in particular, to participate in applied research projects with industry and community partners. Many of these projects involve students, and indeed, may be required to include opportunities for student participation in order to be approved. One college key informant noted:

> We've introduced new courses in research that have grown out of this. There is a new college requirement that all programs integrate research skills into curriculum. This is a new trend ... it's based on the belief that research skills are necessary for all grads, not just the 'best'. (Institution)

Co-op was viewed as crossing almost all categories in the draft typology. Co-op programs can be closely supervised, applied toward professional designation, conducted on a project basis, or undertaken to address a community need. College apprenticeships can also be delivered using a co-op model. For this reason, some key informants suggested that co-op could be considered

a delivery model for work-integrated learning experiences rather than as a stand-alone type of WIL.

A suggestion was made to combine supervised experience and structured experience into a single category, and to further distinguish between experiences that are mandated and required for professional certification and those that are not. A second distinction – between opportunities into which students are placed by the institution, and positions secured by students as part of a competitive process – was encouraged.

Introducing clarity into the distinction between internships and co-op programs was considered particularly important in order to address imprecision in the usage of each term at the institutional level. A university key informant remarked that "we use co-op and internship interchangeably … it really depends on what the employer wants to call it." Similarly, at the college level, "employers call thinking they want a co-op and it can be confusing because [our program] is an internship." Both college and university respondents recommended that internships be recognized in a separate category, as a hybrid of supervised and structured work experiences with some elements of service-learning, or as a longer structured experience involving detailed competencies that students are expected to achieve, usually at the end of their program.

The need for greater clarity around project-based learning and work-based learning was emphasized by key informants, and questions were raised whether work-based learning – defined as educational programs delivered by postsecondary institutions to employees – should be part of the typology.

Service-learning was welcomed as a form of WIL that connects postsecondary institutions to community partners, and there was strong support for ensuring that service-learning be reflected in the typology. Research projects undertaken for industries were viewed as a means of strengthening institutional-community relationships with a focus on specific industry needs. While service-learning also contributes to stronger community relationships, this takes place through a process of collaboration with community groups on "innovative and emergent" approaches to community problems. "Learning in an industry environment is much more focused, while in service-learning you gain broader knowledge."

Some of the proposed characteristics in the draft typology were difficult for key informants to generalize, including level of student knowledge, level of workplace supervision, and level of academic supervision, which made them less helpful in advancing a shared understanding of WIL programs. Key informants pointed out that within a single type of WIL, there can be considerable variation across these characteristics depending on such factors as the nature of the work and the student's year of study.

Revised Typology

The input received from key informants was used to develop a revised typology of work-integrated learning in Ontario's postsecondary sector, as set out in the table below.

The typology proposes seven types of WIL, distinguished by a wide range of characteristics. The typology does not purport to capture all aspects of each of the seven types, nor does it require that all criteria be met for WIL programs to be categorized within one of the types. Rather, it offers a conceptual framework to stimulate discussion and reflection, and in turn facilitate improved understanding. The typology reinforces that there is no single "ideal" form of work experience, with different forms offering different benefits. Neither the experience of work in general, nor any particular form of work experience, are in themselves intrinsically beneficial; it is the way in which the workplace learning is related to and integrated into the program of study that adds value (Blackwell et al., 2001). It is hoped that the typology will offer a useful tool to assist educators, students, employers, and government policy makers to capture the complex array of WIL programs available in higher education.

Following the typology, the seven types of WIL are described in more detail, with reference to research studies specific to each type.

Typology of Work-Integrated Learning in Ontario's Postsecondary Sector

	Systematic Training (workplace as the central place of learning)	Structured Work Experience (familiarization with the world of work within a PSE program)				Institutional Partnerships (PSE activities/programs to achieve industry or community goals)	
	Apprenticeships	*Field Experience*	*Mandatory Professional Practice*	*Co-op*	*Internships*	*Applied Research Projects*	*Service-learning*
Main educational purposes	• Workforce training • Skill acquisition • Skill mastery • Workplace literacy	• Application of theory to practice • Attainment of professional or work-related competencies • Workplace literacy	• Integration of theory and practice • Attainment of professional competencies • Professional socialization • Mandatory for professional certification/ licensure • Mandatory for institutional program accreditation	• Integration of theory and practice • Career exploration and development • Progressive skill acquisition • Professional socialization • Workplace literacy • Workforce readiness	• Integration of theory to practice • Personal development • Career exploration and development • Skill development • Professional socialization	• Application of theory to practice • Address specific industry needs • Skill development (problem-solving, critical thinking)	• Integration of theory and practice • Address specific community needs • Community building • Civic engagement • Global citizenship • Career exploration and development • Skill development • Personal development
Modes of delivery	Work-site • FT employment In-school • Block release (alternating with employment) • Day release (concurrent)	• Block placement (alternating with academic program) • Defined number of hours per term (concurrent) • Simulated work activities (concurrent) • Virtual work activities (concurrent)	• Block placement (alternating with academic program) • Defined number of hours per term (concurrent) • Single block placement, often at end of program (capstone) • Simulated work activities (concurrent)	• Block placement (alternating with academic program) • Structured work-study sequence must end with academic semester	• Single block placement at end of program (capstone) • Single block placement (alternating with academic program) • Defined number of hours per term (concurrent)	• Course-based projects (concurrent) • Institutional research projects (concurrent)	• Can be delivered as field experience, co-ops, internships or applied research projects

	Systematic Training (workplace as the central place of learning)	Structured Work Experience (familiarization with the world of work within a PSE program)				Institutional Partnerships (PSE activities/programs to achieve industry or community goals)	
	Apprenticeships	*Field Experience*	*Mandatory Professional Practice*	*Co-op*	*Internships*	*Applied Research Projects*	*Service-learning*
Common programs/ sector	• Services • Motive power • Industrial • Construction	• Business/marketing • Tourism/hospitality • Community services • Health sciences • Communications/ journalism	• Education • Health sciences (nursing, medicine, dentistry, pharmacy, optometry) • Social work • Accounting • Engineering • Veterinary • Law • Kinesiology	• Business • IT • Engineering • Computer science • Health sciences • Hospitality/tourism • Applied/physical sciences • Math • Arts • Social sciences	• Business • Marketing • Social sciences • Engineering	• Sciences • Environmental studies • Technology • Business/marketing • Communications	• Arts • Business • Health • Social services • Education • Environmental studies • Social sciences • Global studies • Women's studies • Communications • Engineering
Location	In-school • On-campus • Online	• Business/ community sites • On-campus (clinics, simulation labs) • On-campus (restaurants, hotels, research labs) • Online	• Professional/ business/ community sites • On-campus (clinics, simulation labs)	• Business/ community sites	• Business/ community sites	• Usually on-campus • Project work may be performed at business/ community sites	• Community sites (usually non-profits, voluntary sector)
Host/worksite selection	• Apprentice finds employer and registers with ministry • Ministry directs student to college	• Sites are identified by students or institution	• Sites are identified by institution	• Employers contact institution, or are recruited by co-op staff • May be recruited by students	• Employers are recruited by students • May be recruited by institution	• Businesses contact institution, or are recruited by faculty	• Sites are identified by institution, faculty or student • Sites may contact institution
Duration	• In-school portion typically makes up 10% of	• Typically short (4-6 weeks)	• Variable	• Work-terms are typically one semester (4 months) but may be	• Typically long (12-16 months) but may be shorter in	• Course-based projects are 3 months or less	• Variable, depends on delivery mode

	Systematic Training (workplace as the central place of learning)	Structured Work Experience (familiarization with the world of work within a PSE program)				Institutional Partnerships (PSE activities/programs to achieve industry or community goals)	
	Apprenticeships	*Field Experience*	*Mandatory Professional Practice*	*Co-op*	*Internships*	*Applied Research Projects*	*Service-learning*
	program			- consecutive - Minimum 3-6 work-terms required for co-op designation - Work-terms must make up at least 30% of program	length	Institutional projects may be longer	
Timing in program	Variable	Variable	Usually toward end of program	After completion of at least one academic semester	Usually toward end of program	Variable	Variable
Payment/ costs to student	- Employee receives regular employment wages - In-school portion is unpaid - In-school fees may be paid by employer, or supported (EI, WSIB)	- Paid or unpaid (unpaid if part of course) - Usually no fees for students - Transportation costs	- Unpaid - Usually no fees for students - Transportation costs	- Paid - Higher tuition fees for co-op programs - May be relocation, transportation costs to students	- Paid or unpaid - Higher tuition fees for some internship programs - May be relocation, transportation costs to students	- Unpaid if part of course - Paid if institutional - Usually no fees for students - May be transportation costs	- Unpaid - Usually no fees for students - Transportation costs
Academic credit	Some courses can receive credit for transfer to PSE program	Overall course credit, not field experience credit	Yes, required for graduation/ certification	Yes	Yes	- Overall course credit, not project credit - No credit for institutional projects	May be credit or transcript recognition
Compulsory/ optional	May be required for certification	Compulsory if part of course/program	Compulsory, required for professional certification/ licensure	- Usually optional to select co-op stream - Compulsory once in co-op stream	- Optional - Compulsory if part of course/program	Compulsory if course-based	Optional

	Systematic Training (workplace as the central place of learning)	Structured Work Experience (familiarization with the world of work within a PSE program)				Institutional Partnerships (PSE activities/programs to achieve industry or community goals)	
	Apprenticeships	*Field Experience*	*Mandatory Professional Practice*	*Co-op*	*Internships*	*Applied Research Projects*	*Service-learning*
Job description & expectations	• Industry committee oversees training standards	• Placements are directly related to program of study • Job descriptions set by employer	• Expectations are career-specific to meet professional, regulatory or government standards • Students may be placed or competitively selected	• Work-terms are directly related to program of study • Job descriptions set by employer • Competitive application and selection process • Students consult with employer to set own learning outcomes	• Job descriptions set by employer • Positions are directly related to program of study • Competitive application and selection process • Students consult with employer to set own learning outcomes	• Industry identifies problem and research goal • Students work in teams or with faculty to address problem	• Job descriptions set by employer • Tasks directly related to program of study
Role of student	• Self-directed learner	• Part-time employee engaged in supervised work	• Begins as observer/ job shadower, becomes practitioner	• Full-time employee engaged in productive work	• Full-time or part-time employee engaged in productive work • May be observer/ job shadower	• External consultant	• Analytic learner engaged in meaningful work
Role of employer/host	• Worksite mentoring, supervision, evaluation (journeyperson)	• Supervision, evaluation	• Mentoring, supervision, evaluation	• Supervision, evaluation	• Mentoring, supervision, evaluation	• Customer	• Client
Role of institution	• Academic instruction (faculty)	• Assessment (faculty)	• Guided reflection, monitoring, assessment (faculty) • May provide direct supervision (faculty)	• Set learning objectives and approve host sites (co-op staff) • Assist with student selection (co-op staff) • Monitoring and assessment (co-op staff)	• Assessment (faculty)	• Assessment (faculty)	• Structured reflection, monitoring, assessment (faculty)

	Systematic Training (workplace as the central place of learning)	Structured Work Experience (familiarization with the world of work within a PSE program)				Institutional Partnerships (PSE activities/programs to achieve industry or community goals)	
	Apprenticeships	*Field Experience*	*Mandatory Professional Practice*	*Co-op*	*Internships*	*Applied Research Projects*	*Service-learning*
Supervision	Work-site • Supervised by journeyperson In-school • Supervised by faculty	• Supervised by industry/business	• Mentored by on-site professional with detailed supervisory responsibilities • Supervision training, compensation may be provided for mentor • Staff or faculty visits to site	• Supervised by industry/business • Co-op coordinator site visits • Communication with student, employer through email, telephone	• Mentored by industry/business supervisor	• Supervised by faculty	• Supervised by community partner
Evaluation & assessment	• Work-site evaluations can be time-based or competency-based • Employer evaluates, reports to ministry not to college	• Student is evaluated by employer • Faculty assesses student reports, structured reflections, class presentations	• Formative and summative • Faculty assesses student's reflective journals, field notes, presentations • Student is evaluated by host, must demonstrate professional competencies • Student self-evaluation	• Formative and summative • Faculty/co-op staff assess student portfolio, written work-term report, structured reflections, class presentations • Student is evaluated by employer • Employer reviews student work-term report	• Student is evaluated by employer • Faculty assesses student's structured reflections, final report	• Faculty assesses student reports, presentations • Informal industry evaluation of student through feedback	• Faculty assesses student through structured reflection (journals, discussions), class presentations
Benefits to students	• Breadth of knowledge • More relevant training • Independence, entrepreneurship	• Greater school satisfaction • Marketable skills • Practical skill development • Career clarity	• Better employment outcomes • Obligatory for entry to practice and employment • Greater school	• Higher wages • Better employment outcomes (especially for university co-op grads) • Greater school	• Better employment outcomes • Higher wages • Greater school satisfaction • Higher job	• Skill development (problem definition, problem solving, critical thinking, analytical, presentation, documentation)	• Greater civic engagement • Experience in leadership • Increased civic responsibility • Enhanced critical thinking

	Systematic Training (workplace as the central place of learning)	Structured Work Experience (familiarization with the world of work within a PSE program)				Institutional Partnerships (PSE activities/programs to achieve industry or community goals)	
	Apprenticeships	Field Experience	Mandatory Professional Practice	Co-op	Internships	Applied Research Projects	Service-learning
	• Access to latest technology • Financial incentives (government incentive grants, travel, accommodation, childcare)	• Employment opportunities	satisfaction • Professional competencies • Ability to relate to diverse people in diverse settings • Career clarity	satisfaction • Higher job satisfaction • Ability to relate to diverse people in diverse settings • Practical skill development • Career clarity • Financial benefits	satisfaction • Marketable skills • Practical skill development • Career clarity	• Greater community engagement • Employment opportunities	skills
Benefits to institutions	• Better connections to labour market	• Better connections to business/ community	• Creation of communities of practice • Enhanced institutional reputation • Program improvements	• Better connections to business • Enhanced institutional reputation • Program improvements	• Better connections to business • Enhanced institutional reputation	• Better connections to business	• Better connections to community • Enhanced institutional reputation
Benefits to employers/hosts	• Reliable, highly skilled labour supply • Responsive to local labour market • Financial incentives (tax credits) • Lower starting salaries for apprentices • Higher employee retention	• Creation of hiring pool • Pre-screening potential hires • Cost savings • Better connections to institution	• Creation of hiring pool • Pre-screening potential hires • Motivated employees • Improve services • Better connections to institution • Enhance staff practices	• Creation of hiring pool • Pre-screening potential hires • Motivated employees • Improved corporate image • Cost savings • Reduced need for on-the-job training • Better connections to institution	• Creation of hiring pool • Pre-screening potential hires • Motivated employees • Improved corporate image • Cost savings • Better connections to institution • Reduced need for on-the-job training	• Increased capacity to undertake projects • Access to institutional expertise and equipment • Better connections to institution	• Improved delivery of community services • Better connections to institution

	Systematic Training (workplace as the central place of learning)	Structured Work Experience (familiarization with the world of work within a PSE program)				Institutional Partnerships (PSE activities/programs to achieve industry or community goals)	
	Apprenticeships	*Field Experience*	*Mandatory Professional Practice*	*Co-op*	*Internships*	*Applied Research Projects*	*Service-learning*
Key strength	• Close journeyperson-apprentice relationship	• Accessible to many students	• Develops a community of practice	• Labour market responsiveness	• Development of professional competencies	• Meets identified business needs	• Develops students' civic engagement while meeting identified community needs
Main challenges	• Costs to employers • Negative perceptions of skilled trades • Can be difficult to find sponsors	• Inconsistent quality of field experiences	• Can be difficult to find host sites, especially in health care	• Highly competitive, less accessible to students	• Highly competitive, less accessible to students	• "One-offs" are difficult to replicate • More focused on work, less learning	• Institutional resistance
Other terminology	• VET • Vocational education	• Experiential learning • Placement • Internship • Externship • Fieldwork • Volunteer internship • Simulated work environments • Simulated production labs	• Practicum • Field education • Fieldwork • Field placement • Clinical placement • Preceptor ship • Simulated clinical experience	• Experiential learning	• Practicum	• Industry-led research project	• International service learning • Community-based learning • Field education

Types of WIL

Apprenticeship

Definition

Registered apprenticeship training has been a feature of Canada's system of education and training for many years. Apprenticeship combines in-school training for employment in a skilled trade or skilled occupation with on-the-job workplace training over the designated length of the apprenticeship program. Workplace training makes up about 90 per cent of the apprenticeship program, and is delivered under the guidance and instruction of qualified or certified journeypersons. The remaining in-school training provides both theoretical and practical instruction, and is typically offered by community colleges. The length of apprenticeship in each trade varies, with most programs two to five years (or levels) in length.

Normally, entry into an apprenticeship program in Ontario requires that students be at least 16 years of age and have successfully completed grade 12. Prior to the age of 16, students can participate in the Ontario Youth Apprenticeship Program (OYAP), a school-to-work program recently expanded by the Ontario government that allows secondary school students to earn credits toward an Ontario Secondary School Diploma while also registering as an apprentice in a skilled trade.

Prospective apprentices must find an employer willing to provide the required training who employs a qualified journeyperson to train and mentor the apprentice. The apprentice and the employer sign an agreement that outlines the terms of the apprenticeship, and the apprentice is then registered with the apprenticeship branch of the Ministry. Once registered with MTCU, apprentices are directed to a training delivery agent to confirm a seat in the class. Apprentices pay a classroom fee to offset the cost of in-school training, but may quality for Employment Insurance while in school. After the completion of an apprenticeship training program, apprentices can become certified "journeypersons" by writing a trade exam to obtain a Certificate of Qualification. The apprentice must demonstrate to the ministry that they have achieved all of the requirements to learn their trade through completion of a specified number of hours of work, or by proving their competence in mandatory trade skills.[2]

To address concerns about challenges finding employers, many colleges offer co-op diploma apprenticeship programs to enable students interested in apprenticeship to participate through co-op rather than through agreement with an employer. Students earn a diploma and can work toward their apprenticeship qualification. Pre-apprenticeship programs are also available, consisting of short-term unpaid placements prior to apprenticeship registration.

---

[2] In September 2008, Ontario announced the creation of a new Ontario College of Trades, which will be responsible for carrying out many of the regulatory and enforcement functions currently delivered by the Ministry.

Most apprentices associated with college and university credentials (Gallagher & Kitching, 2003; Schuetze, 2003). While sometimes dismissed as "short-term dead-end training" for low achievers and marginalized students (Andres, 2003, p. 132), in reality admission to an apprenticeship program can be difficult and time-consuming, with pre-apprenticeship training offering no guarantee of acceptance (Gallagher & Kitching, 2003).

Although increasing numbers of students are entering apprenticeships, retention remains an ongoing issue. Completion significantly increases the likelihood of employment, especially in Ontario (Ménard et al., 2008). A number of reasons contribute to decisions not to finish an apprenticeship program, including lack of work, better job offers, dislike for the work, and a desire to change jobs (Ménard et al., 2008).

Employers have been unwilling or unable to take on apprentices, especially in tough economic times, because of the time involved for apprentices to participate in the in-school portion of their training (Gallagher & Kitching, 2003), and due to concerns about apprentices being "poached" by other employers once they have completed the program (Brisbois et al., 2008). Although some employers have expressed reluctance to participate in apprenticeship programs because of concerns about costs, a report by the Canadian Apprenticeship Forum indicates that for every dollar spent on apprentices, the company receives a $1.38 return on investment (Brisbois et al., 2008).

Andres (2003) emphasizes the importance of positioning apprenticeship as one of a wide range of postsecondary options available to students, and developing innovative laddering arrangements with community colleges and universities. Similarly, Fuller (2006) upholds apprenticeship programs as a model of integrated work and study that can foster progression and lifelong learning, including to higher education, but emphasizes the need to ensure that apprentices can gain prerequisites for entry to other types of higher education.

Field Experience

Definition

This type of WIL includes placements and other work-related experiences that prepare students for professional or occupational fields but are not required for professional licensure. It encompasses both "field placements/work placements" and "fieldwork" as defined by the Ministry of Training, Colleges and Universities. Field placements/work placements are "scheduled hours of activities intended to give student hands-on experience in the workplace and for which the students do not typically receive a regular salary or wage from the employer," that are core to the program curriculum and necessary for the completion of the program. These programs do not involve direct supervision of students by institutional staff, but may involve periodic site visits, and student performance is evaluated by the institution. "Fieldwork" includes "scheduled hours of activities intended to give students hands-on experience," with

direct instruction and direct supervision by staff in settings either inside or outside campus facilities in which individual students are required to use instructional equipment and/or supplies.

Field experiences are focused on the integration of theory and practice and are often selected by students themselves (Bates, 2003). The intended learning outcomes may be highly specific, related to professional or occupational skill development, or more general, such as enhanced understanding of the cultural or employment context of an academic field of study (Lucas & Tan, 2007).

This type of WIL also includes simulated work experiences that provide innovative opportunities for students to apply acquired knowledge and skills as well as actualize or test concepts and theories. Gaba (2004) defines simulation as "a technique, not a technology, to replace or amplify real experiences with guided experiences, often immersive in nature, that evoke or replicate substantial aspects of the real world in a fully interactive fashion." (p. i2). Simulated work activities include computer simulations, workplace practice role-plays, and business practice firms, as well as some team-based projects (RMIT, 2008). Simulations should incorporate at least four of the following features: interaction with other students, application of key skills core to the program of study, extended involvement to allow for action on feedback, replication of the activities and attitudes of the industry or sector, and participation of industry or practitioners in the simulation or assessment (RMIT, 2008). Simulations are frequently used in high risk areas of practice, such as health and community services, to provide students with opportunities to practice skills in settings of low risk to both students and their clients (Gaba, 2004; Jones et al., 2008; RMIT, 2008).

Research Findings

Research suggests that work-based placement learning contributes to improved academic performance in students by developing interpersonal and intrapersonal, rather than cognitive skills (Lucas & Tan, 2007). Industry placements are most effective in improving student self-efficacy when the placement is authentically related to the students' area of interest, and when the students receive feedback on their performance (Lucas et al., 2009).
Some researchers emphasize the importance of reflective journaling during field experiences – not only to the assessment of student learning, but to the learning itself – with students reporting that reflection enhances their learning (Bates, 2003).

Simulations address challenges in the ability of industry to provide WIL opportunities for all the students who desire them, particularly international students who are less able to locate placements on their own (Jones et al., 2008).

Mandatory Professional Practice

Definition

This type of WIL includes any professional practice-based arrangements that are necessary for professional licensure or designation. The work may be paid or unpaid, and is typically drawn from the range of work contexts graduates may be expected to encounter. It includes "clinical

placements" defined by the Ministry of Training, Colleges and Universities as "scheduled hours of activities intended to give students hands-on experience in a hospital or health care setting," and characterized by activities that are core to the program curriculum and necessary for the successful completion of the program, in which students are closely supervised by institutional staff or individuals working on behalf of the institution.

In some professional occupations, such as teaching and nursing, students participate in highly ordered and regulated practice experiences. In others, such as medicine and law, there are different kinds of long-standing practice-based arrangements. Medical and health professions refer to practica, clinical education or field placement. Like field experience, this type of WIL can also include simulated work experiences that provide opportunities for students to apply acquired knowledge and skills, as well as to actualize or test concepts and theories.

Research Findings

Professional practice relies on the community to support opportunities for learning, which means (in most cases) that the costs of teaching professional practice are shared with practitioner agencies and organizations. This may create a perception that professional practice diverts staff resources – both human and financial – that could otherwise be applied to patient care, leading in turn to resistance to participate (Barrie, 2006).

Ryan et al. (1996) cite numerous research studies on practica that show mixed results. While there are considerable benefits to students in terms of awareness of career prospects, the development of job skills, enhanced interpersonal and social skills, and enhanced employment prospects there are also some negatives, including lack of success integrating theory and practice, narrow focus on technical skills, and poor supervision.

Co-op

Definition

The definition of the Canadian Association for Co-Operative Education, which has been endorsed by the Ministry of Training, Colleges and Universities, establishes the following criteria for co-op:

> *A Co-operative Education Program is one that formally integrates a student's academic studies with work experience. The usual plan is for the student to alternate periods of experience in career-related fields according to the following criteria:*
>
> - *Each work situation is approved by the co-operative education institution as a suitable learning situation;*
> - *The co-operative education student is engaged in productive work rather than merely observing;*
> - *The co-operative education student receives remuneration for the work performed;*

- *The co-operative education student's progress on the job is monitored by the co-operative education institution;*
- *The co-operative education student's performance on the job is supervised and evaluated by the student's employer;*
- *The time spent in periods of work experience must be at least 30 per cent of the time spent in academic study.*

Co-op programs enable students to gain relevant work experience while applying and refining the knowledge and skills acquired in the classroom. Groenewald (2004) defines co-op as a structured educational strategy that progressively integrates academic study with learning through productive work experiences in a field related to a student's academic or career goals. He concludes that co-operative education can be reduced to four core dimensions: developing an integrated curriculum specific to the occupational field; designing work components to support experiential learning; cultivating supportive employers to offer placements and provide advisory input; and creating a structure to administer, monitor, and evaluate the learning experience.

Because co-op programs take longer to complete, and may require travel or accommodation expenses for work-terms, they often cost more for students to complete than non co-op programs. Many co-op programs operate year-round, allowing better space utilization at postsecondary institutions, but they also entail significant institutional investments in the administration of job placements, operational costs, and the hiring of additional faculty (Downey et al., 2002).

In Canada, co-op programs are focused at the college and university undergraduate level, and are particularly popular among college students, who are twice as likely as university students to participate (Ipsos Reid, 2010; Walters & Zarifa, 2008). Co-op is also regionally concentrated in Ontario, possibly due to the recent expansion of technical universities and the introduction of applied degrees at Ontario colleges (Ipsos Reid, 2010; Walters & Zarifa, 2008). While co-op is increasingly being offered in a wide range of disciplines, including social sciences, health sciences, and education, it still tends to be concentrated in technical fields such as commerce, engineering, and mathematics, and to attract male students (Walters & Zarifa, 2008). Although there is particular interest in graduate-level co-op programs among international students, graduate co-op programs have proven to be less popular than undergraduate programs (University of Waterloo (UW), 2005). Co-op hours in some programs, such as engineering and accounting, may apply toward professional certification, and many institutions allow co-op credits to be earned in service learning experiences (UW, 2005).

Research Findings

The labour market benefits of co-op are greatest at the university level, which could be attributed to the greater differentiation between co-op and non co-op university program streams compared to college, where all programs are vocationally focused.

Bayard & Greenlee (2009) found no difference between co-op college graduates and non co-op college graduates in earnings or employment, but reported higher earnings, higher employment

rates, and lower rates of unemployment among university co-op graduates compared to university non co-op graduates. The earnings advantage may be limited to certain programs, however (Darch, 1005; Haddara & Skanes, 2007), and may dissipate after four or five years (Haddara & Skanes, 2007). Co-op university graduates were also more likely to have paid off their PSE debts after graduation (Bayard & Greenlee, 2009; Downey et al., 2002; Haddara & Skanes, 2007), less likely to be over-qualified for the jobs within which they are employed (Downey et al., 2002; Frenette, 2004), and more likely to be working full-time (Darch, 1995; Downey, 2002) than non co-op university graduates.

Other studies show some labour market benefits at the college level. Walters and Zarifa (2008) found that both college and university co-op graduates are more likely than their non co-op counterparts to secure full-time employment, particularly female university graduates and male college graduates. While the same study showed a small earnings premium for college co-op graduates, the earnings premium was much larger for university co-op graduates, and males in particular.

Dressler and Keeling (2004) conducted an exhaustive search of the literature and summarized numerous benefits to co-op students in the areas of academic benefits, personal benefits, career benefits, and work skill development benefits. They suggest, however, that benefits have to be considered in the context of student learning objectives. Indeed, a US study found increased career satisfaction among students whose work experience was connected to their career goals, regardless of whether the experience was gained in a co-op program or not (DeLorenzo, 2000). Haddara and Skanes (2007) also cite research suggesting that the benefits of co-op are similar to those for other types of experiential learning.

Perceived benefits of co-op for students include realistic job previews prior to entry, systematic orientation, work that matches the abilities of the student, supportive mentoring, formal and informal training, and better understanding and identification of suitable student characteristics (Garavan & Murphy, 2001). For the majority of Canadian co-op graduates, the key benefits of co-op work-terms are enhanced career decision-making, improving integration into the workplace, assisting with academic learning, and helping students land their first job (Ipsos Redi, 2010).

Several studies have found that employers view co-op as improving their ability to hire motivated new employees and screen students for permanent employment (Center for Labor Market Studies, 2002; Braunstein & Stull, 2001), improve employee retention (CLMS, 2002), and create positive interactions with schools (Braunstein & Stull, 2001). While employers view co-op students as having better technology skills and technical knowledge than non co-op students, they do not rate soft skills higher (Braunstein & Stull, 2001).

There is mixed evidence about rates of internal advancement among co-op hires, with some studies reporting greater upward mobility (Braunstein & Stull, 2001; CLMS, 2002) and others not (Haddara & Skanes, 2007). Although a US study found that co-op hires were more likely to be members of a racial-ethnic minority group (CLMS, 2002), the recruitment of under-represented students was the lowest-ranked reason for employer participation in co-op programs (Braunstein & Stull, 2001).

Internutions

Definition

Internships are work experiences, often a year or more in duration, planned to occur at or near the end of a program of study. They are offered in professional fields, with supervisors encouraged to provide mentoring support as well as supervision. They engage students in meaningful work, but can also include job shadowing.

Internships are similar to co-operative education, but tend to be less structured (Weible, 2010). They are optional but receive academic credit (Gault et al., 2000). They involve students in paid or unpaid work, usually part-time and often over a specified number of hours (Callanan & Benzing, 2004). In the UK, such programs are known as "placements," and have long been a feature of business, management, and accounting education, usually as a compulsory requirement (Lucas & Tan, 2007). Although internships are available in a variety of academic disciplines (Gault et al., 2010), much of the literature on internships is specific to business and marketing programs at the university level, with little data on college-level programs, other subject areas, or the Canadian context. Groenewald (2004) observes that internships are experiences of a predetermined duration, and tend to occur toward the end, almost like a "capstone experience of the entire program." Similarly, Coco (2000) describes internship activities as a planned transition from the classroom to the world of work, bridging college and employment.

Research Findings

Although a UK study of business undergraduates found that placements did not impact students' academic performance (Duignan, 2003), subsequent UK studies positively related students' participation in placement to a significant improvement in their academic performance in the final year. These studies were undertaken with bioscience students (Gomez et al., 2004), economics students (Mandilaras, 2004), information systems students (Rawlings et al., 2005), and accounting students (Surridge, 2009). An earlier US study also found significantly higher grade point averages, and a higher likelihood of employment, among graduates of business internship programs than non-interns (Knouse et al., 1999). The same study noted that African American students were much less likely to participate in internship programs, which the authors attributed to lack of information about internships, and a lack of encouragement about the process (Knouse et al., 1999).

A US study of internships and career success found that business interns reported receiving job offers about ten weeks sooner than non-interns, with starting salaries that were 10 per cent higher on graduation and 17 per cent higher two to three years after graduation (Gault et al., 2000). Intern alumni also reported higher levels of job satisfaction and faster promotions than their non-intern counterparts. A subsequent study of employers corroborated these findings: employers provided significantly more full-time opportunities for business undergraduates with internship experience – even those considered to be "average-performing" – than those without (Gault et al., 2010). High-performing interns were more likely to receive higher starting salaries,

and employers who employed these interns ascribed greater value to the internship program (Gault et al., 2010).

Knouse et al. (1999) suggest that internships may offer a particularly effective form of realistic job preview, and help improve job retention and satisfaction. However, Callanan and Benzing (2004) found that graduates of business internship programs were no more likely than non-interns to perceive a personal fit with their career, although they viewed their internship as helping them secure career-oriented employment. Similarly, a study of hospitality management students found that internship experiences did not improve job satisfaction and retention, but did provide a realistic preview of the overall hospitality industry (Dickerson, 2009). Dickerson speculates that the internships may be too focused on the work, and not sufficiently focused on engaging students in synthesizing their experience.

A UK study of placement students across six subject areas identified personal development – including increased confidence and motivation, and improved interpersonal and organizational skills – as the major benefit of internships, with less emphasis on intellectual and academic skill development (Little & Harvey, 2006). This reinforces findings of a 10-year longitudinal study of US interns who viewed their internships as highly valuable, particularly in enhancing their ability to get along with others, and contributing to their own social maturity (Cook et al., 2004). Internships were also perceived as allowing students to relate their learning to the work environment and increasing their confidence in finding a job upon graduation, but there was no evidence of an increase in grade point average, and little agreement among students that the internship had influenced their career choice (Cook et al., 2004). The authors recommend that colleges and universities promote internships as offering personal development and meaningful work experiences rather than improving employability. By contrast, a study of science and engineering students found that students who participated in placements viewed the placements as enhancing their career progression and employability prospects (Hejmadi et al., 2008). Students reported that they developed transferable skills and increased their confidence and maturity, and also showed better improvement and higher marks than non-placement students.

In a survey of university business school administrators, there was strong agreement that internships benefit institutions by strengthening connections between the school and the community, supporting student recruitment efforts, and enhancing institutional reputations (Weible, 2010).

Applied Research Projects

Definition

Project-based learning is used extensively in the humanities, social sciences, and sciences, and is based on research suggesting that real-world projects can pedagogically assist in enhancing student experience. Work-based projects are theoretically underpinned by situated learning theory, which recognizes projects as learning environments in which students can participate in authentic practices, and apply skills needed in real life (Helle et al., 2006). The two key features of project-based learning are the presence of a problem that drives activities and the inclusion of the results in a final product (Helle et al., 2006). There are four main motivations for project-

based work: professional (related to practice orientation and work-based learning), democratic or humanitarian (related to service learning), the desire to foster critical thinking (related to science orientation), and pedagogic motives (to deepen subject matter understanding) (Helle et al., 2006).

Applied research is undertaken within work-integrated learning projects by students of both universities and colleges. Since 2003 however, with the extension of college mandates to include applied research, there has been a dramatic growth in the applied research capacity of Ontario colleges (Fisher, 2009). Not only is applied research regularly incorporated into college mandates, mission statements, and strategic directions, but college research offices have been established and funded and formal policies on research ethics have been developed (Fisher, 2009). All 24 Ontario colleges are represented on the Colleges Ontario Heads of Applied Research Committee, which is mandated to promote applied research and assist Ontario colleges in developing or expanding applied research activities. One of the goals of the Colleges Ontario Network for Industry Innovation, which focuses on research projects to meet the R&D needs of small- and medium-sized enterprises (SMEs), is to provide college students with real-world learning opportunities that enhance their skills and marketability (Fisher, 2009). Recently, Polytechnics Canada proposed an applied research activity metric to measure learner benefits, including the involvement of students in applied research activity, the integration of applied research into curriculum, and the contribution of the institution to providing graduates with applied research skills (Fisher, 2009).

Research Findings

Despite the commitment across the college sector to participate in applied research, and although many college faculty have an interest in research, faculty release time is not supported for participation in research activities (Fisher, 2009). This creates similar pressures as are found in the university sector in terms of demands on faculty time.

A study of project-based learning found that the project approach was unsuccessful in creating communities of practice between the university and industry (Schilling & Klamma, 2010). The project was focused on the company as the customer and the students as the service providers, working on their own. The researchers recommended that connection and authenticity would be enhanced if the project work took place in the facilities of participating companies, and if the longer-term learning objectives were made clear to the companies.

There are additional challenges in assessment related to project-based work, related to the comfort level of the workplace instructor in assessing students, and how to assess the contributions of team members (Helle et al., 2006).

Service-Learning

Definition

As Furco (1996) explains, service-learning programs are intended to provide equal benefits to both the provider of the service (the student) and the recipient of the service (the community),

while ensuring equal focus on both the service being provided and the learning that is occurring. The primary goals of service-learning are positive civic and academic outcomes (Parker-Gwin & Mabry, 1998). Service-learning programs are not add-ons to a student's course of study, but are integrated into the program (Furco, 1996). They must include high-quality services intended to meet the goals defined by the community in which they are provided.

There are five dimensions by which the institutionalization of service-learning can be measured: philosophy and mission, faculty support and involvement, student support and involvement, community participation and partnerships, and institutional support (Butin, 2006). Perhaps more than any other type of WIL, it is an ongoing structured reflection that distinguishes service-learning (Mooney & Edwards, 2001; Myers-Lipton, 1998; Parker-Gwin & Mabry, 1998).

Research Findings

Although service-learning is more widespread in universities, Gallagher and Kitching (2003) note its emergence in the community college system, and highlight its potential to improve citizenship education for college students.

Several studies have associated participation in service-learning with increased civic participation and responsibility (Myers-Lipton, 1998; Parker-Gwin & Mabry, 1998). Parker-Gwin and Mabry (1998) suggest that service-learning may be more effective if undertaken on a voluntary basis, since the program provides little benefit to students if they resent having to fulfill mandatory course obligations. Myers-Lipton (1998) found that service-learning increased students' sense of their ability to affect change, and their participation in civic activities, but reported less pronounced changes related to students' feelings of social responsibility.

3. Integrating Work and Learning

Curriculum & Learning Objectives

Curriculum

Although few institutions directly involve employers in the development of WIL program curriculum, employer and community needs are often taken into consideration through program advisory committees, co-op committees, joint community boards, or other mechanisms. This is particularly the case for co-op, applied research projects, service-learning, and some field experiences:

> *The college uses feedback from program advisory committees and faculty experts to develop and revise curriculum. Curriculum is designed to respond to sector needs - expectations are jointly developed and jointly discussed to meet needs of labour market, with outcomes that vary by program. (Institution)*

Sometimes curriculum is adjusted once students have participated in the program, based on input received from employers:

> *We've tried to back-migrate some things into the curriculum. These are very relevant skills to have, they need to be reflected in the curriculum. (Institution)*
> *It's very important in our field for students to understand the importance of communication, problem-solving. We gave feedback to the program about this. (Employer/community partner)*

Institutional key informants, however, described limited success in efforts to gather employer feedback:

> *There is an optional form for co-op employers to complete at the end of the placement that asks about student's academic preparation, etc. and is forwarded to faculty. But employers almost never fill it out … some employers see co-op as a form of inexpensive, short-term labour, they don't look at it as a partnership between teaching and learning. Feedback is usually only provided when a student is very, very good or when there is a problem. (Institution)*

In mandatory professional practice WIL programs, curriculum is developed to reflect the requirements of the profession and ensure that students achieve professional competencies or standards set by the governing regulatory body or, in the case of teacher education, the provincial Ministry of Education.

Apprenticeship curriculum is also established to align with industry training standards to include the specific skills identified by each trade. Curriculum can be developed by the industry, by the colleges through application to the Apprenticeship Innovation Fund, or by (MTCU. Although apprenticeship curriculum must currently be approved by MTCU, authority for curriculum is

being transferred to the Ontario College of Trades, bringing apprenticeship more in line with professional practice WIL programs.

Some institutional key informants indicated that WIL curriculum is developed by individual professors or by the institution, sometimes to facilitate articulation agreements with other postsecondary institutions.

Learning Objectives

About one-third of institutional key informants reported that students are responsible for determining the specific learning objectives for their WIL experience, usually in consultation with their host employer or community partner:

> *The learning outcomes are prescribed by the program, but the student and employer decide on individual learning outcomes. (Institution)*

> *The student writes his or her work-term objectives at the beginning of the placement. These must be confirmed by the employer. (Institution)*

> *The learning objectives are developed in partnership. They have to meet the employer needs as well as the institution's approval as an acceptable learning environment. (Institution)*

When asked about their involvement in developing learning objectives, the overwhelming majority of employers and community partners – regardless of the type of WIL program – reported working with the student to negotiate learning objectives specific to the student's goals and interests. In addition, many expressed a commitment to providing "worthwhile," "beneficial," and "positive" experiences for students, with "interesting" variety and exposure to different aspects of the workplace.

> *Managers want to draw upon the skills the students have. We talk to the students at the beginning, they can direct their own work terms with us and apply themselves in the areas they are interested in. (Employer/community partner)*

> *It gives the student and our clients a better experience if the student is doing something that meets their own learning objectives. (Employer/community partner)*

> *We ask them what their learning objectives are, what do they want to gain from the experience? We want to make sure we can offer them the experience they are looking for - can we meet their objectives? (Employer/community partner)*

For some employer key informants – particularly those involved in field experience – negotiation with the students was a response to a lack of institutional direction:

> *[Institution's] placements are not defined at all. We base the placement on the goals of the students in coming in, what do they want to achieve? (Employer/community partner)*

[Institution's] expectations are very vague, very loose, which means the intern is not held accountable for what they've accomplished. We have to ask students what they want to get out of it. (Employer/community partner)

While several employers/community partners indicated only limited (or no) interaction with institutional staff or faculty on the learning objectives for the placement, this was not viewed as a concern:

The students come in with their own learning objectives, which are in line with our agency. All the objectives are suitable for us. (Employer/community partner)

We see what the learning objectives were at the end of term when material comes to us. (Employer/community partner)

A few key informants appreciated receiving information from the institution about the expectations for the WIL placement, because it enabled them to support the student more effectively:

[Institution's] program has specific objectives, projects along the way. We can help students meet these requirements – we can give resources, and coaching, mentoring as they work through their program. (Employer/community partner)

[Institution] provides an extensive package, with expectations clearly laid out. This is valuable, it helps us to hold the intern accountable. (Employer/community partner)

Job Description, Screening & Selection

Job Description

In almost all cases, the job description for the WIL opportunity is developed by the employer or community partner, with occasional modifications suggested by the institution before the job is posted:

The college gets the information from the employer about the type of opportunity and the employer provides the job description. It may be adjusted in response to input from the college, but not usually. (Institution)

Most of the prep work is done before the job is even posted – employers might ask for a co-op student for a job that's not really appropriate. We work with the employer to adjust the job description. (Institution)

The institution sets the parameters – is it a junior/intermediate/senior position? Which programs are we looking for? (Employer/community partner)

> *We've used the same job description for a while. We wrote it and the co-op office reviewed it but we never got any feedback so I guess it was OK. (Employer/community partner)*

There was no consistency in the nature of the job description across the types of WIL. Some employers develop quite general job descriptions, while others include detailed tasks and expectations:

> *There was no job description per se, it was more a framework about what we wanted the student to be involved with. (Employer/community partner)*

> *It was important for me to be directly involved in the job descriptions, our needs were very specific. (Employer/community partner)*

> *We prepare a job description – anyone who works here gets a copy of the job description to take with them. It lets students know what's expected of them right from the beginning. (Employer/community partner)*

Screening & Selection

WIL students are usually selected by employers and community partners through a competitive interview process, with some competitions much more intense than others. Student resumes are typically collected by the institution, and are either screened and short-listed, or forwarded directly to employers. At several institutions, the screening process is managed online, which was appreciated by employers and community partners.

Interviews with WIL students candidates may be scheduled on-campus or at the place of business. Some commented on the ease of having everything set up for them, especially in the case of highly competitive co-op positions:

> *We have found that if you want students to be interested in your job, you better go [to the institution]. (Employer/community partner)*

However, a key informant involved in field experience emphasized the importance of bringing the students onsite for the interview:

> *They need to know if they are able to get here, if we're the right fit for them. (Employer/community partner)*

Whatever the type of WIL, many employer and community partner key informants emphasized the importance of the interview to screen for the right candidate, with the right mix of skills and competencies.

Competencies

For the great majority of employers and community partners, the key competency sought from students is the ability to learn independently and solve problems, regardless of the type of WIL program:

> *They should be able to work without a whole lot of direction. We want them to be problem-solvers, team players, adaptable. (Employer/community partner)*

> *The nature of our work is such that most students aren't learning to do the things we do at school – we expect them to be able to learn on the job. (Employer/community partner)*

> *I was hoping they would be willing to learn, and it was important that we learned together. There are challenges in collaborating -I needed them to take initiative, step up to the plate, be self-directed. (Employer/community partner)*

> *Students need to be able to work independently. We look for self-starters, self-directed learners. (Employer/community partner)*

Almost as important is a "basic" level of technical competence related to their field of study. Although a few key informants expected higher levels of technical proficiency, most looked for "minimum" levels of know-how, appropriate to entry level positions.

> *We want them to have a basic background in things like documentation, but we recognize that we are here to teach, and we will be teaching them. (Employer/community partner)*

> *Normally I get them early so they don't have a lot of professional experience, I just expect basic mechanical aptitude. (Employer/community partner)*

A strong work ethic, good attitude, and professionalism was also expected:

> *The number one skill is work ethic. We're looking for hard workers, we want students who appreciate the responsibility involved. That's huge, they need to understand the importance of responding on time to a request, to have a sense of professional responsibility. (Employer/community partner)*

> *We want students with the right attitude, who are adaptable, team players. We can't afford to have people who can't interact with others, who can't work collegially. (Employer/community partner)*

Communication skills were the next most frequently sought-after skill set by employers, particularly when students were involved in applied research projects:

> *We look for communication skills, technical writing. This is a big asset, verbal communication skills. There is a ton of verbal interaction with the client. The client may*

undervalue the work, and we need to be tactful in the way we engage them. (Employer/community partner)

Finally, several employers and community partners mentioned 'people' skills, and the ability to develop positive client and customer relationships.

A few employers pointed out that the skills sought depend on the position available. Several expressed a preference for students who were further along in their program of study, or had previous job experience, on the grounds that younger students "may have a harder time applying their knowledge."

Older students seem able to apply what they learn and know how this relates to their education, younger students always need to ask 'how does this relate?' (Employer/community partner)

Process

Several employer/community partner key informants expressed appreciation for the support they had received from the institutions in managing the interview and selection process. This was particularly the case when long-standing relationships and personal connections had been established:

Because we're so used to [institution] we have a really high standard. They have done an amazing job, with great customer service. The co-op coordinator does all the legwork – really understands our workplace, what the students do and the level of professionalism we expect from the students. (Employer/community partner)

The [institutions] have really good processes – they know their students, they know the programs, and they have a really good idea of what we're looking for. The most successful schools know their students … it works best when the trust relationship is there, when schools are accountable and take responsibility for students. (Employer/community partner)

The relationships with the schools have been fabulous. Each program is a bit different, but most are very well-organized. We are given contacts at the schools so we can develop a relationship. (Employer/community partner)

[Institution] has been a huge help, they are an important partner for us. They post our positions, help us with application forms, they are very hands-on, flexible. It's easy for us to keep in touch. We know the staff there, we have a personal relationship. (Employer/community partner)

Concerns are usually related to a lack of communication between the institutional contact and the program involved with the WIL opportunity:

We send ads but the co-op office is not connected to the programs. It ends up being me sending info to the profs who may or may not pass it along to their students. (Employer/community partner)

We had distributed information about the project and what we wanted to the coordinator, but this wasn't passed on to the students. (Employer/community partner)

One key informant encouraged institutions to conduct client surveys to find out how they are doing: "they could ask employers how is our co-op department doing? How do we measure up?"

Supervision

For almost all WIL programs, during the workplace component student supervision is the responsibility of the employer or community partner with varying degrees of institutional involvement. In apprenticeship, there is no formal contact at all between the college and the student when the student is in the workplace, and in co-op, there are only low levels of institutional supervision: "anything else would be reacting to a problem."

Some mandatory professional practice programs, however, may be highly supervised by the institution, with faculty supervisors who oversee the student's clinical training:

We would not send a student to do a placement session without taking full responsibility for supervision. The supervisors are part of our program, they interact with the head of the program, raise concerns, issues. The supervisors take observations during sessions, they observe student interactions with clients. After the first meeting with the client, the student prepares assessment notes, sets out goals of sessions, and the notes are reviewed by the supervisor. (Institution)

In most types of WIL, when institutional supervision is provided, it is usually through staff rather than faculty. In co-op placements, the faculty only visit "if there is a problem, if the employer requests a meeting, or if the faculty member is interested in the employer for research purposes," noted one key informant. However, faculty may play a role in applied research projects and service-learning projects. One institution is developing a manual to outline responsibilities and assist faculty involved in service-learning partnerships.

Monitoring/Site visits

Despite their limited role in supervision, most institutions maintain some kind of contact with both the student and the employer/community partner during the WIL program. This can range from a quick "touching base" via email or telephone to a formal site visit. Site visits are most common during co-op placements, particularly when the employer is new to the co-op program, and may be conducted as part of a mid-term evaluation process involving the student and the supervisor. Even in co-op programs, however, there is considerable variability across institutions. Site visits are less common in other types of WIL:

All the institutions work differently but work well within their role. The co-op advisor calls throughout the term, helps to support us in our role, and also supports the students. (Employer/community partner)

We have some interaction with the co-op office, they may come to do a mid-term meeting. [One institution] usually comes, [another institution] occasionally comes, [the third institution] has never come. (Employer/community partner)

No one from the university visits the placement. We used to do this but stopped in 2005 – the person who did the visits retired and there was no budget to replace him. (Institution)

With [institution], the professors are always calling me, following up on their students, but we don't hear from some of the other schools. (Employer/community partner)

Role of Employer/Community Partner

In most cases, students who participate in WIL programs are expected to perform as full employees, whether they are being paid for their services or not.

The supervisor treats the student the same as any other employee, we want the student to fit into the culture of the workplace. (Employer)

If it's not working out we treat it the same as we do with an employee - we talk about this in the orientation, we use a progressive discipline approach. (Employer)

The supervisor gives the students an orientation as to what's expected of them in the job. I wouldn't want it any other way – students are our employees while they are here, we use standard HR processes. (Employer/community partner)

Whether paid or unpaid, students are expected to do the same work – they can get paid employment depending on performance. (Employer/community partner)

The supervisory role of employers and community partners differs across the types of WIL. Students in apprenticeship programs, mandatory professional practice, and some field experiences are the most closely supervised:

That's the largest advantage in apprenticeship, you get a journeyperson working with you, training you throughout the day for two to five years. (Institution)

Students are highly supervised, they are dealing with vulnerable people. Supervisors do not leave the students alone. (Institution)

With students, everything they do is supervised and monitored. We want to make sure we know what they are doing. It keeps costs down by reducing errors and re-makes. (Employer/community partner)

Just as journeypersons are paid employees responsible for oversight of the apprentice, some professions, such as nursing, employ preceptors to provide supervision:

In the last year of the program, the student works with a preceptor rather than a faculty member. The preceptor is an RN employed by the agency or hospital to work directly with the student. In most organizations, preceptors go through formal training to become preceptors, their training is overseen by the agency or hospital. (Institution)

In co-op, employers are expected "to have a good understanding of what the student is doing," but their level of oversight varies according to the position:

The student is the employer's responsibility during co-op. The level of supervision depends on the employer and the type of job. Some employers assign students to projects only, and might provide very little supervision. (Institution)

They get the same level of supervision as for regular employees, except that students do more learning and exploration while in the position. (Institution)

It depends a lot on the student what kind of supervision they require. We start with low expectations, however as a rule, they learn rapidly, and want to show what they can do. The first couple of weeks there is a fair amount of babysitting, but many of the students learn quickly and become quite independent. (Employer/community partner)

Across all types of WIL, employers may be expected to provide mentoring support for students as well as supervision. Some employer/community partner key informants from larger organizations assigned staff "mentors" to WIL students in addition to supervisors:

Each student is treated like another employee and reports to a manager. They are also assigned to a supervisor for day-to-day tasks [who] provides direction, advice. (Employer/community partner)

In addition to the student's supervisor, another informal mentor may be assigned, usually a senior member of the project team. It depends on the project. (Employer/community partner)

I am the formal supervisor, but the student mostly works on a day to day basis. Each student is assigned to one staff coach who reports to me. (Employer/community partner)

This may be the exception rather than the rule, however, with institutional key informants reporting some challenges with employer/community partner supervision:

[Institution] ensures that students are connected to someone in the workplace who can be a mentor. In some cases employers are looking for a number of students but don't realize they are expected to provide mentors. We want the fieldwork to be a positive experience for the students. We don't want the students to be set up for failure, to be put in charge of a major project on their own. (Institution)

Sometimes there is only low supervision from community partners. We're working to get community partners to understand their role in student supervision. (Institution)

Assessment

Institutions use a variety of formative and summative assessment tools to evaluate student learning during a WIL experience.

Assessment Tools

With the exception of apprenticeship, all forms of WIL involve some sort of student reflection and self-assessment, although there tends to be less emphasis on student reflection in applied research projects. Through reflective journals, observation logs, online dialogues, or group discussions, students may be asked to reflect on their learning objectives, their competencies, the impact of the placement on their career and future success, and how the experience could have been improved.

The important concept is for students to realize how much they're learning, how important the work is. We want students to recognize how much they've learned, how much experience they've gained. They build portfolios of what they're doing – this requires critical reflection vs. tell us what you've done. (Institution)

Reflective practice is essential for learning. It can be written materials, journals, or dialogue, but it should have grades attached. (Institution)

Most co-ops, internships, and applied research projects also include summative assessment tools such as written reports, portfolios, projects, or class presentations, which must frequently be approved by the employer before submission to the instructor.

In mandatory professional practice, assessment is based on the demonstration of professional competencies acquired during the WIL experience, such as case notes and care plans for nurses, and classroom teaching for pre-service teachers. Apprentices are required to show evidence that they have achieved the specific skills required by their trade.

Employer/Community Partner Evaluation

In almost all cases, employer feedback is used to assist in the assessment of student learning during the WIL program. As one institutional key informant explained:

When we talk to employers about co-op we emphasize the benefits to them – the tax credit, the opportunities to liaise with the institution. In return, we ask them to be involved in evaluating the student. (Institution)

Employer evaluations are most formalized in apprenticeship programs, where they are the only source of data used to evaluate apprentices' work, and in co-op programs. Mandatory professional practice and internships also rely on feedback from supervisors to assess students. Applied research projects and some field experiences tend to rely somewhat less on employer evaluations:

The assessment is done by both college and industry. The institution does a formal assessment, but the industry partner assessment is more indirect and informal. They listen to student presentations, give feedback – sometimes they give awards. (Employer/community partner)

Co-op students provide their employer/community partner with an "intuitive" evaluation form for completion and submission to the institution, typically a checklist with some room for comments. In co-op programs that include both midterm and final evaluations, the same criteria is usually used for both.

Employers and community partners described a lack of consistency across schools in their approaches to employer evaluation, with some schools clearly communicating to employers how students are evaluated and the employer role in the process, and others not.

It's better when student knows clearly what to expect, when there are clear evaluation processes in place. [Institution's] is the most organized, they have actual processes in place. (Employer/community partner)

[Institution's] is much looser, a fill in the blanks outcomes form is completed by the student and signed off by theemployer at the end of the co-op term. It generally does not provide much value. [The other Institution] requires a term report, which must have technical content. We help students pick a project to do, then help them complete their reports. (Employer/community partner)

Student Feedback

While some institutions "debrief" co-op students at the end of their experience, the information gathered tends to be high-level, and may or may not be passed along to employers:

Students also evaluate the job, to give to the field coordinator. It's just a conversation and a score basically, it doesn't go back to the employer. Employers might ask for general comments back, but that's all done verbally with the field coordinator. (Institution)

> *There is also a co-op debriefing session – students complete the feedback form, and submit it to the co-op office. It gives us trend info – number of hours, salary, etc. – and also co-op work log. (Institution)*

> *After the work-term presentation, there is a mandatory requirement for students to gather in small group discussions to reflect on their work-terms. It lets us find out how they are learning … assess their career goals, the effectiveness of curriculum. (Institution)*

Several of the employers and community partners who participated in the interviews expressed a strong commitment to ensuring a positive experience for the students, and described the efforts they had made to gather feedback from students:

> *I have developed my own system for a more indepth formal midterm evaluation, where we ask the student a lot of questions and they give us feedback about the job. They suggest improvements, or can tell me if there are things they want to take on. It lets the student put extra energy into their position and the department, they feel they have more ownership - it's more for us than the university. We've only been doing it for a couple of terms, and haven't been sharing it with the university although I guess we could. (Employer/community partner)*

> *We do focus groups to find out how the students' experience went. The experience may depend on who they're working with or for – or it may be because they were asked to do different kinds of work than they expected. (Employer/community partner)*
> *We also get feedback from students. We meet weekly to make sure their goals are being followed through on, talk about how to deal with situations. (Employer/community partner)*

Final Grades

Student grades are determined by the institution, and are usually based on a combination of student reflection, summative work, and the employer evaluation, with different weights applied to each. The WIL program is usually graded pass/fail or satisfactory/unsatisfactory.

> *The co-op consultant assesses the student's placement in light of the goals expected from the placement. They use the job description, observations from site visit, student learning objectives, the student report (with the overview of workplace and learning objectives), and sometimes portfolio items – also proof of hours worked. (Institution)*

> *[Assessment] is based on much more than reflective journals. Clinical practicums include formal evaluations, skill logbooks, competency evaluations, summative and formative evaluations. (Institution)*

Some key informants – particularly those involved with service learning – raised concerns about assigning grades to students based on the supervisor's evaluation.

We know if the student goes to the placement or not, but we can't really know what the student did when they were there – we only get a sense of what they did. Even in a co-op program, which is much more structured, we don't really know what the student is doing. This is the main difficulty with granting credits for co-op – how do we know what they did to earn the credit? (Institution)

Unlike other forms of WIL, in apprenticeship programs, students' performance in the workplace is evaluated entirely by their employer, and submitted directly to the ministry.

> *Workplace assessment is between the apprentice, employer and ministry. It is done by the employer and reported to the ministry office, then signed off by the ministry. The college would not even know the results until the apprentice returns and registers for the next level. (Institution)*

Supports for Employers/Community Partners

Aside from the initial agreement, most forms of WIL provide little formal support to assist employers and community partners in carrying out their supervision and evaluation responsibilities. Some institutions, however, have developed informal guidelines for employers, and others are looking to provide more structured assistance:

> *We provide some guidelines for employers on our website and we're working to make these more formal – right now it's more informal. (Institution)*

> *A community partnership manual is being developed for the fall, to outline agency role and responsibilities. (Institution)*

In mandatory professional practice and some field placements, more extensive supports are often available, such as handbooks, training, and sometimes a small honorarium.

> *In some cases, clinical practicums offer in-service training for preceptors so they know what is expected of them in evaluating students. (Institution)*

> *The supervisor receives an orientation to the process – usually the college goes to the agency to meet with the supervisor. There are very detailed program manuals for hosts, these are revised annually. (Institution)*

Most employers were comfortable with the level of institutional support they received, and did not feel they needed additional materials:

> *I didn't need support from [institution] but I know if it was needed they would have been there for me. (Employer/community partner)*

> *The coordinator was available to give advice, so I didn't feel abandoned….I received some information and tips about dealing with the students but had to learn stuff along the way. (Employer/community partner)*

We spent the first couple of years figuring out our way through it, but really good interns made it easier. We really didn't need a lot of support from the college. (Employer/community partner)

Some indicated that they had developed their own tools.

We prepare our own internal supervision guide. (Employer/community partner)

It's really hard to assess somebody's performance – that was always a struggle for me. We've tried to put systems in place to make it easier for our supervisors to evaluate students, a monthly evaluation similar to [institution]'s evaluation. (Employer/community partner)

One community partner involved in field placements suggested that more support for supervision responsibilities would be helpful, and pointed to the preceptor training modules at www.preceptor.ca. Similarly, some institutional key informants acknowledged that there may be a need to offer more assistance:

Some organizations may not feel comfortable taking students because they're not sure what's involved. Maybe there could be some training on how to be a student supervisor – some staff may be hesitant to take on the role of supervising a student. (Employer/community partner)

There may be a need to do a better job of training employers to do evaluation. We have a form and they are informally trained when they have a visit from the field coordinator. (Institution)

4. Benefits of WIL

Benefits to Students

Work-integrated learning was strongly endorsed as an important element of the student experience, and a long list of perceived benefits to students was identified – with caveats about the need to consult students directly to back up benefit claims. Some key informants emphasized the importance of applying research findings on student benefits:

> *Are students better off? We know this from co-op but what about internship? If we find out it does make a difference in student success rates, should we make it mandatory? (Institution)*

> *We need to measure success rates of students hired through this type of training - does this type of training lead to someone being hired? Does it create retention? Does it lead to more people going into their field of study? (Institution)*

Some employers speculated that support for work-integrated learning will increase among parents as postsecondary education costs continue to rise:

> *Parents are not sending their kids [to postsecondary] just to get an education – they expect a direct connection between what the kids are learning and what they will be doing when they graduate. (Employer/community partner)*

Career Development & Employability

The role of WIL in students' career development and its impact on graduate employability were perceived by institutional and employer/community partner key informants to be the most compelling advantages to student participation in WIL programs.

Staff and faculty identified career exploration, and the development of career clarity, as key benefits. Students can use their WIL experiences to determine their "fit" with a particular career, and make decisions about their academic field of study, and preferred sector or industry. WIL lets students "test the waters to make informed career decisions," and provides them with "a better idea of what they want to be doing, and what they are looking for in a workplace" when they begin their job search. Almost as important was the opportunity for students to enhance their CV by including their WIL position, gain contacts in their field of interest, and develop a network of professionals to provide references for future employment or professional school. For students who secure their own placements, the process of securing WIL positions develops job search, interview, and resumé-writing skills. This point was reinforced by an employer who observed:

> *It's clear the attention that is paid in co-op to career development compared to non-co-op programs. We can see a real difference in the quality of their resumes, and the*

difference in professionalism – in terms of communication skills, presentation skills, and overall polish – that comes with co-op experience. (Employer/community partner)

Employers and community partners viewed CV-building as a particularly valuable aspect of WIL experiences for students:

They get to be associated with a very large company with a good reputation for quality. Whether they stay with us or not they can take practical experience with them as they start their career. (Employer/community partner)

If they've worked for us, other people will look at them better. They'll assume that the student is bright and capable, they have four solid months of experience. (Employer/community partner)

For students participating in short-term placements, WIL offers an opportunity to clarify their career goals, and the path needed to reach them:

It gives them an idea of what the field is about – it's not for everybody. They can get their feet wet then make decisions about which direction they want to go in. (Employer/community partner)

For students who see this as a vocation, this gives them a goal to strive toward. With one student [who worked here] her experience inspired her to learn the basic skills she needed for this industry. (Employer/community partner)

Many key informants identified improved prospects for employment as an important benefit to students. It was felt that once in a workplace environment, students were able to prove their value to employer, a critical component of labour market success: "It's like an audition, students can showcase why they should be the next hire." Some staff and faculty reported that students, particularly those in co-op programs, often receive offers of employment before they graduate, and suggested that students with WIL experience may be able to secure better jobs after graduation, and higher starting salaries.

Application of Theory to Practice

Another common theme among institutional key informants was the opportunity for students to apply theory to practice in real workplace and community settings. By exposing students to real work environments, WIL enhances students' practical knowledge of the workplace, the sector, and the industry, and allows them to "see theory in a lived context." In practicing what they've learned in their academic program, students gain new skills and develop new competencies. When they return to the classroom, they are better prepared for the rest of their courses, and able to get more out of their academic program. There are additional benefits to students who did not participate in WIL programs, when students bring their experiences back to the institution:

Faculty like having students in the class who understand the real world, who can share their experiences of how the workplace operates. (Institution)

Employer and community partner key informants also viewed "real world exposure" as a key benefit of WIL to students:

They gain hands-on practical experience in application of theories, models of what they've learned. It's great when a light goes on, when they see that they're putting into practice what they're learning. (Employer/community partner)

It's a great learning opportunity for students - there is only so much you can learn in the classroom. This is the way of the future, all programs should have these kinds of opportunities. (Employer/community partner)

They were able to self-direct a project of their own vision from start to finish, they were given freedom to work on their own. This kind of collaborating and creative thinking can't be learned in a classroom. (Employer/community partner)

Skill Acquisition & Development

Key informants from both institutions and employers/community partners saw WIL as preparing students to enter the labour market with marketable, relevant, and transferable skills, including an ability to use the most up-to-date technology in workplace settings, and "soft skills" in communication, critical thinking, and collaboration. It was also viewed as providing students with such essential workplace skills as "coming to work on time, being dressed properly, conducting yourself properly, being organized, [and] time management."

Students are going out with little experience in integrating into the workforce, not knowing how to show up for work on time, things they should or shouldn't be doing when they're in the workplace – a bit of that millennial generation. Many students who come to [university] have been so academically focused that they are lacking the soft skills, real world experiences. (Institution)

It gives students an opportunity to see how others perceive them when the evaluation comes back … students are sometimes shocked that there is not a different standard. This reinforces what we tell students. Employers expect our students to be well-trained, so that's not an issue, but employers are looking for other things like attitude, punctuality, willingness to be a part of the team. (Institution)

Several institutional key informants observed that WIL provides students who have little or no job experience, or exposure only to service sector jobs, with "higher end" professional workplace experiences. One employer suggested that WIL might have greater relevance in a tight labour market with high rates of youth unemployment:

We used to have a lot of students with part-time jobs, but we're now finding fewer students with part-time work. (Employer/community partner)

Finally, some employer/community partner key informants emphasized the considerable gains to students from knowledge transfer from experienced industry or sector professionals.

Confidence, Personal Development & Civic Engagement

Participation in WIL was regarded as enhancing student confidence, with apprenticeship programs singled out by institutional key informants as providing students with high levels of independence and entrepreneurship.

The potential of service-learning programs to "open students' eyes to a world they might not otherwise have been exposed to," and provide transformational experiences and "spiritual growth" was cited by institutional key informants. Service-learning and some applied research projects were seen as fostering greater civic engagement and global citizenship, especially in the fields of environment and health, through increased awareness of global issues and a focus on social justice. The assessment and evaluation component of WIL was also viewed as a benefit to students, in developing student capacities for critical self-reflection and self-awareness.

> *Students adopt a reflective lifestyle – they are observed by adults and receive external feedback, which helps them develop higher levels of self-awareness. (Institution)*

Employers and community partners pointed out that WIL gives students real responsibility and "a chance to be a leader," as well as opportunities to broaden their interests and learn more about their communities.

Financial & Other Benefits

Both institutional and employer/community partner key informants mentioned the financial benefits of WIL participation when students receive compensation for their work experience. Institutional representatives tied this to postsecondary education funding issues, and potentially reduced reliance on student aid and lower debt-loads on graduation. Some observed that apprentices in particular can benefit from incentive grants and subsidies to assist with accommodation, travel, and child care.

Quality Work Experience

A few employer/community partner key informants considered the "unique" or "fast-paced" nature of the work environment itself to be one of the benefits of WIL for students.

Benefits to Employers/Community Partners

The importance of better understanding and accurately conveying the advantages of WIL to employers and community partners was underscored by one institutional key informant:

> *This is extremely important … it's about getting opportunities for students. We can tell employers all we want about how it improves the workforce but they need to be convinced of the benefits. (Institution)*

Another institutional key informant asserted that once employers are aware of the benefits, they not only want to remain involved, but will participate in other types of WIL: "Interactivity starts to happen, this is true for all types of learning." This point was substantiated in interviews with employers and community partners, more than half of whom were motivated to be involved in WIL by a past positive experience with WIL students. Further, as indicated in the respondent profile, many employer and community partner key informants were involved with multiple institutions and a range of WIL programs.

Improved Productivity & Service Delivery

A reliable supply of qualified, skilled workers – with up-to-date knowledge of the sector and able to function as "productive members of the team" – was viewed by institutional key informants as one of the most important benefits of WIL for employers and community partners. This was reinforced by employer and community partner key informants, the majority of whom cited productivity and service improvements as the prime motivation for their initial involvement in WIL, and the most important benefit.

Regardless of the type of WIL, institutional key informants stressed that "students are there to make the supervisor's job easier," and to provide value to their host organizations. They observed that WIL students offer a "practical solution to short-term resourcing needs," by creating a "flexible workforce" for employers. This enables employers to staff up during peak periods and cover summer vacations without accruing the costs of permanent hires. WIL programs can also allow employers to take on special projects, or complete work that might otherwise not get done because of internal workload pressures.

The ability of apprentices to work independently was considered to be a significant advantage associated with apprenticeship programs. In applied research projects, students bring knowledge that can generate cost-savings for businesses, identify new sources of revenue generation and areas for growth, and support new product development. For health sector organizations, schools, and community agencies that offer supervised placements, WIL students provide an "extra set of hands," enhancing community capacity to deliver and maintain high quality programs. In service-learning programs, students are encouraged to "leave a legacy" with their host organizations, through the development of new tools, materials, or processes.

Employers and community partners attested to the value of WIL in improving productivity and enhancing service delivery.

> *It gives us additional help on projects and frees up more senior people to work on more complex parts of the work. (Employer/community partner)*

Our fiscal year means that the summer months are the busiest time of year – the co-op cycle works out well for us. (Employer/community partner)

It lets us do more one-on-one work with [clients]. (Employer/community partner)
Staff appreciate the help – students can assist staff, help with case management. (Employer/community partner)

We are a charitable, non-profit organization … we need volunteers to run our organization, otherwise we can't do it. Having the students helps our employees get the work done. (Employer/community partner)

There may be particular benefits of WIL for employers and community partners who work with diverse populations. A few employer key informants reflected that they were better able to serve First Nations communities because of the unique perspectives brought to bear by First Nations WIL students.

Recruitment, Screening & Training

Institutional key informants viewed WIL as significantly improving employer hiring and recruitment processes by creating a hiring pool of potential employees with specific skills sought by employers, and providing employers with an opportunity to pre-screen potential job candidates. Co-op work-terms in particular were described as a "probationary period for new employees" and "a four-month interview". In reducing the time and costs involved in recruiting new employees, key informants from both colleges and universities believed that WIL was particularly useful in sectors characterized by high staff turnover, such as the social services.

Interviews with employers and community partners confirmed the value of WIL as a recruitment strategy. Enhancing recruitment efforts was one of the most common reasons for initial involvement with WIL, and was also identified as a key benefit, particularly when entry-level positions were being sought and when the relationship was with a specific program:

We were looking at how to grow the department, and interested in trying to recruit new talent and develop them. There were also structural issues to deal with, such as the loss of older employees. We asked ourselves, how do we get engaged in attracting and retaining talent? We are a median wage employer, located outside the GTA, with lots of turnover competing with other firms with similar jobs but higher pay. Where can we compete effectively? We decided we were most competitive at the entry level. (Employer/community partner)

The program is almost tailor made for our industry. We've totally changed our hiring practices as a result. We used to post widely but now we go straight to the college, to that program. (Employer/community partner)

It makes a difference on the recruitment side – it's much easier to hire someone through a co-op office than not. If someone makes it through who wasn't part of co-op they have

to really competitive … the co-op office makes it really easy for us to recruit. (Employer/community partner)

Student Creativity & Motivation

Institutional key informants described WIL students as bringing " fresh" new perspectives and "outside the box" thinking, and infusing workplaces with an infectious" sense of excitement and energy. This view was strongly reinforced by employer/community partner key informants, who underscored the eagerness of WIL students to learn, and the advantages of their "upbeat" enthusiasm and youthful perspectives to the workplace or organization. However, while a majority of employers and community partners identified student creativity and motivation as compelling benefits of their involvement with WIL, relatively few mentioned this as their initial motivation to participate.

Several key informants remarked that WIL students can assist companies to tap into the youth demographic:

> *If it is a more established company that hasn't had a lot of recent hiring, they can get a different, more youthful opinion on market research and company directions. (Institution) We don't have a lot of staff turn-over and you can start to get stale without new blood. The [students] bring a new world to us - they are fresh, energetic, exciting. (Employer/community partner)*

> *We wanted to have the voice of younger groups, to get a younger perspective… The students were upbeat, lively, energetic and it was refreshing to have new minds around. They were able to contribute in a creative way, they brought a change of pace. We were really impressed with the time they spent and their creativity. (Employer/community partner)*

Students' understanding of technology was recognized as a major asset for both businesses and community partners. Technology-savvy students can suggest the introduction of new technology tools, and generate ideas about using technology to improve workplace processes.

> *Young people's knowledge of social networking is huge for organizations, they can help organizations with skills that are more current, contemporary. (Institution)*

> *Students these days know certain things we don't know, they are very adept at computer applications - we gain from their knowledge. (Employer/community partner)*

Institutional key informants noted the benefit to employers from highly motivated co-op students who have a strong "professional commitment to the job." One stressed the "quality control" measures in place to ensure that students "are committed to the work-term and find it important enough to do a good job," and the "significant sanctions if students do not perform." An employer/community partner observed that the motivation of students may be highest when they are participating on a volunteer basis: "This means that we get students who are

committed, enthusiastic, willing to volunteer versus students required to do a placement because of their program."

Cost-Savings

While key informants from the working group institutions saw WIL students as a highly cost-effective resource for employers, relatively few employers or community partners mentioned cost-savings as either a motivation or a benefit.

College and university key informants observed that co-op and apprenticeship employers realize cost-savings by being able to offset wage costs through government tax credits. Co-op employers benefit from having full-time employees without having to pay full-time salaries and benefits, while employers who take on apprentices have lower payroll costs. Compared to labourers who can earn up to 80 per cent of a journeyperson's salaries, apprentice wages represent only about 40 per cent of the wages paid to journeypersons. Although there are no tax credits to subsidize internships, many interns are unpaid, providing employers with access to what is essentially free labour. In most professional and clinical placements and service-learning programs, students are directly involved in service delivery, reducing staffing costs at the host agencies, and representing a significant investment by the institution in the community.

Human Resource Development

Both institutional representatives and employers/community partners highlighted the contribution of WIL to developing the capacities of existing staff, and improving workplace morale. Institutional key informants reported that professional practices can be enhanced through field supervision and exposure to the new theoretical approaches brought by WIL students. Longer-term employees can be "empowered" by opportunities to act as mentors and supervisors, and to share their expertise with students in their workplaces. The apprenticeship model was viewed as an important tool for employers to upgrade the skills of local employees, and both apprenticeship and co-op were considered potential solutions to address local labour market shortages.

Employers and community partners emphasized the role of WIL in creating a "culture of learning" in the workplace, and the benefits of WIL in building capacity and improving job satisfaction among other employees:

> *This organization has a desire to help other people, to develop people internally. Employees like having students around. They like to be able to share their own knowledge and train the next generation, to establish a personal connection. (Employer/community partner)*

> *It gives other employees a chance to step up – when you teach someone else a skill it reminds you of the skills you have yourself. (Employer/community partner)*

It benefits our staff – if they are mentoring, explaining the student's strengths and weaknesses, it makes sure their own practices are solid – they get better at what they are already doing well. (Employer/community partner)

Staff gain supervision experience – it gives developing supervisors a taste of what it's like to supervise other employees. (Employer/community partner)

Several key informants spoke to the rewards of their own experience working with the students:

I really enjoyed it personally - It was fulfilling to help them see their vision through. (Employer/community partner)

Similar to student creativity and motivation, staff development was much more likely to be cited by employers and community partners as a benefit of WIL than a motivation for participating.

Connections to PSE

By strengthening connections with postsecondary institutions, WIL programs provide opportunities for employers and community partners to provide feedback on postsecondary programs. A key informant involved with university co-op programs explained:

Employers want to link themselves to a university … employers can get involved with the department, participate in career nights, they can get inside access to the most highly skilled students. (Institution)

Institutional key informants pointed out that employers gain access to state-of-the-art technology, facilities, and expertise available at the postsecondary institution when students undertake applied research projects for an industry, or complete the in-school portion of their apprenticeship program. Service-learning programs support knowledge exchange and enable community groups to benefit from the expertise available at the university.

In interviews with employers and community partners, connections with postsecondary institutions were equally likely to be mentioned as a motivation and a benefit. Strengthening the relationship with postsecondary institutions was viewed as an important means of building their brand and enhancing their reputation among students and the community:

Our name is positively associated with a learning institution – we want to be known as a great agency to work for, to do a placement with. (Employer/community partner)

We want to be seen as one of the top employers, to develop a relationship with the student.   This enhances our reputation as a company. (Employer/community partner)

It increases our exposure. We get a lot of exchange students – they take what we do back to their own countries, they share what we do. (Employer/community partner)

It's a great way to brand yourself – if students have a great experience, you are branded as a great place to work. (Employer/community partner)

Rebranding … we need to be very good at attracting and retaining young talent, we need to be actively involved in co-op programs, seen as a good place to work. It must be regularized, not just one-offs – word of mouth among students is very quick, if they don't have a good experience, word gets out. (Employer/community partner)

Commitment to Community & Profession

Institutional key informants conjectured that some employers are motivated by a desire to "give back" to the community, or by "professional altruism" to develop and support their profession. This perception was validated in interviews with employers and community partners, who identified "doing what's good for society," and building connections to the broader industry or field of practice as both a motivation for their involvement and a benefit of participation.

I care about the industry – I want to have good people working in it. (Employer/community partner)

We like to help out students – it can be difficult for students to find placements in this field. It's mutually beneficial. (Employer/community partner)

We have a long-term vested interest in students when we bring them in. This field is very hands-on, it requires exposure to the practice. If they came out without exposure to the field they would be lacking. (Employer/community partner)

Benefits to Institutions

Strengthening community partnerships and enhancing institutional and program reputation – and the associated positive impacts on student recruitment and development and alumni relations – were cited as the most significant benefits of WIL for postsecondary institutions.

Partnerships

In a number of the interviews, key informants spoke to the value of WIL in demonstrating the responsiveness and awareness of postsecondary institutions to community needs, challenges, and issues:

It creates extraordinary links between the institution and the real world. (Institution)

It gets our students and faculty out there, it's a bridge for students to the community. (Institution)

For college key informants WIL reinforces existing relationships, and positions the college as "contemporary, responsive, leading edge":

It's the mandate of the college to be highly connected to the community, responsive to community needs."(Institution)

It's all about connectivity – businesses connect with the college as a resource, and it's helpful for students to be involved. (Institution)

In contrast, university key informants emphasized the opportunities afforded by WIL to create new partnerships by changing community perceptions of the institution. Instead of a distant "ivory tower" institution, the university becomes an active community partner and valuable community resource, particularly in the case of service-learning.

Universities have suffered for years from perception that they are useless, they don't prepare students for the real world. (Institution)

It gives us a wonderful opportunity to go into community, reach out to community … people do not know we're here, or don't realize the range of things we do … [this] lets us tap into different areas, it opens more doors when people see us working in these areas. (Institution)

Strong partnerships between PSE institutions and local employers were viewed as important to increase employer receptiveness to work-integrated learning programs, and to generate new employers through employer word of mouth. In service-learning, partnerships foster the development of students as future community leaders.

Institutional Reputation

Many key informants noted the positive impact of WIL programs on institutional reputation by improving the competence and quality of postsecondary graduates and establishing the value of their postsecondary programs:

The reputation that our students gain in the corporate world helps the university with its reputation and leads to more employers hiring our students. (Institution)

When students go out, the industry is amazed with what they see. The skills that the students bring to the industry reflect back on the college. (Institution)

Increased rates of employment and graduate and employer satisfaction are key indicators for the college sector, and in turn further enhance institutional image. At the university level, WIL was perceived as improving rates of graduate and professional school success, an important aspect of university reputation.

Student Recruitment & Marketing

WIL was perceived as an effective tool for both institutional and program recruitment:

A number of students have indicated this is the reason they decided to attend. (Institution)

It's common knowledge that co-op helps students get better jobs, higher salaries … it's definitely a value-add [for recruitment]. (Institution)

Students recruit more students by working in the workplace. (Institution)

Alumni Relations & Development

Enhanced institutional reputation can generate increased financial support for scholarships, capital funding, endowments, or other institutional projects, mainly through contact with alumni. Key informants described WIL as a valuable channel for institutions to maintain contact with alumni, since "students who see value in the co-op program tend to become engaged alumni."

Key informants from both colleges and universities reported that a majority of their co-op and internship employers are alumni, who "believe in the program and want to give back," or feel a sense of professional responsibility and obligation to the profession.

Alumni feel a responsibility to take on students because they also went through the program – this is part of what they agreed to do when they went into the program. (Institution)

In addition to providing WIL opportunities for students, alumni also become ambassadors of WIL, which is especially critical when programs are first introduced:

Once we start getting alumni in programs that helps, both because alumni hire but also because employers see what a grad from this program can do, so now I understand what a co-op student from this program can do. (Institution)

Supportive alumni make the workplace "a friendly environment … people are familiar with the program and positive about it."

Program Improvements

The involvement and participation of employers and community members with postsecondary programs improves program curriculum and assists institutions to stay current. Employers and host agencies who sit on program advisory committees can provide feedback into curriculum and advise postsecondary institutions on program needs and changes within their sectors. Faculty can adjust and improve their course content based on their experiences with WIL and the input of employers and community partners.

We are able to keep a very strong relationship with stakeholders in the local and extended community because they feel part ownership of the training – they have a sense of responsibility. (Institution)

Service-learning partnerships enhance mutual understanding and respect, and facilitate two-way mutual learning about challenges facing the community.

Institutions are preparing students to work in the community … the community needs to be able to rely on institutions understanding their needs. (Institution)

5. Challenges

Institutional Perspectives

Administration & Paperwork

For institutional key informants, managing the sheer volume of administrative tasks related to the development and delivery of WIL programs presents the most significant challenge to providing WIL opportunities for students. In addition to the major preparatory work required to get the program off the ground, for all types of WIL there is an ongoing time commitment involved in securing WIL opportunities and managing supervision:

> *Most of the time spent by university staff is in leading up to the internship, in paperwork, coordination, and other tasks. (Institution)*

> *There is a tremendous amount of work involved getting placements, keeping them, and scheduling them – faculty and staff have to do the outreach to secure the placements. (Institution)*

> *These programs take an incredible amount of administrative support, and when it comes to developing them, that's the piece that often gets missed. People designing them should not forget what it takes to run these programs, otherwise they fall apart. (Institution)*

> *The day to day operations involved in student supervision is almost a full-time commitment. (Institution)*

> *The main challenge is supervision – that the [supervisor] is supervising appropriately and that there is no abuse taking place, in the sense of the student being taken advantage of. (Institution)*

Applied research projects undertaken for industry or service-learning require particular attention, to ensure specific project deliverables unique to each industry or community partner:

> *This is a core part of our business but it requires a tremendous amount of project management from a lean and small research office. Students require more management than professional staff – project-based learning means that the college MUST support a research office at the institutional level. (Institution)*

> *The one student-one placement model is lower maintenance for the institution – the placements are regular and don't change much from year to year. The team project model lets several students be involved in a single agency working on a project. Agencies and students love these but they require a lot of institutional time. Many are one-offs …they aren't sustainable, and it's difficult to replicate them the following year, since staff are not available in summer to design and plan fall projects. (Institution)*

Risk management and oversight of compliance with changing regulatory requirements, can also be time-consuming. Liability issues can be significant, particularly for service-learning opportunities that require international travel. There are formal, legal contractual agreements that must be in place, setting out student and employer/community partner responsibilities. Some WIL opportunities require student security clearances or criminal reference checks and obtaining the necessary paperwork can be both time-intensive and costly – for both the student and the institution.

Establishing necessary administrative structures to support the coordination and delivery of WIL programs requires major investments of financial resources at the institutional level. This poses a particular challenge in a period of cutbacks, when institutional staffs are being charged to "do more with less":

> *Our difficulty is there are costs related to it financially, recognizing that co-op will increase student interest, and that we must have resources to meet student expectations. This is a struggle in these times when the institution is in financial difficulties. (Institution)*

WIL Supply & Demand

Many key informants spoke to the challenge of balancing enrolment numbers with opportunities for quality WIL experiences, given increasing numbers of students requiring work experiences coupled with limitations on the number of employers and community partners willing to provide WIL opportunities. If the balance cannot be achieved, there are implications for student enrolment, institutional accountability, and for program quality and viability.

> *In the cyclical model of co-op we could lose employers if students are not available [over the summer] when they are most needed by employers. (Institution)*

Employers and community hosts may be limited in their ability to provide WIL experiences by physical space, or union resistance to what may be perceived as filling union positions with temporary workers. With small staffs, frequent staff turnover, and often scarce financial resources, the voluntary sector has limited capacity to involve students in WIL experiences. There may also be perceptions that students will "add extra stress" or become a "hindrance" rather than a benefit.

> *Placements are very hard to come by. Everybody is being squeezed, with less staff it makes it the last thing employers want to do. (Institution)*

This is a particular issue in health care fields where clinical practice hours are required in order to enter the profession, but clinical staff are being "maxed out" by too many demands, or are burning out and leaving the profession.

> *In health care, there are a limited number of field or clinical placements … This limits our enrolment because we can't offer the placements, even though there is a shortage of workers. (Institution)*

In such an environment, local institutions vie with each other to secure placements for "existing programs, growing programs, and new programs," and also face competition from academic institutions located in other regions, who may be forced to look outside their region by high local unemployment rates and a struggling local economy. Requiring students to relocate in order to take a placement imposes financial costs on students, and the lack of local placement options may discourage students from participating in co-op programs at all:

> *Students might ask why choose co-op when they can complete a degree faster without co-op and get out into the workplace faster. (Institution)*

Even when supply meets demand, making the right fit between the employer and the student takes careful planning, with several key informants highlighting difficulties in securing placements for international students and for students who require additional supports:

> *There are cultural challenges sometimes with integrating international students into work – they have very different backgrounds, and it may be subtle things, how different expressions are perceived here. (Institution)*

> *The most talented students are the most likely to be successful in [co-op] but what about students who need it the most? … There may be other [WIL] programs that are needed for students who need more help and may not be as successful in co-op, some international students for example. (Institution)*

Economic & Financial Pressures

An uncertain economy and financial pressures on employers and community partners were other frequently identified challenges to developing and delivering WIL programs. Although cost-savings were identified as a benefit to employers by institutional key informants, it was acknowledged that participation in WIL may not be cost-effective for some employers. Even when employers are able to access tax credits for co-op and apprenticeship, these provide only partial reimbursement, and there are no tax credits for employers to hire interns or other WIL students.

In apprenticeship training, one key informant reported increases of about 6 per cent a year in the financial costs for employers to hire apprentices, compared to annual grant increases of only 1 per cent, widening the funding gap each year. Smaller employers may be reluctant to hire apprentices, because of the possibility that they will leave following certification and go on to higher paid employment elsewhere.

Fiscal pressures have led some co-op employers to reduce or discontinue their co-op hiring, or shift from co-op students to unpaid interns. Because co-op salaries pose special burdens for

underfunded voluntary sector organizations, co-op options in the social sciences are greatly limited. Budget realities also impact the participation of SMEs in applied research projects:

> *Some companies may have very little money to support applied research projects, especially if they require release time for staff, and salaries for students. (Institution)*

Even when there are no salary costs attached, employers may be reluctant to participate in WIL programs because of the indirect costs related to supervision and monitoring:

> *Internships require employer time and investment in training students. By the time the student is trained the internship might be almost over. Employers might prefer to hire co-op students even though they have to pay, since they get a rebate for co-op hiring to help offset their costs. (Institution)*

There are also financial barriers to students to participate in WIL programs, especially if relocation is required, when living expenses and travel costs are factored in.

> *A 15-week internship with no money may actually cost [students] money to do. (Institution)*

Managing Expectations

Several key informants emphasized the need for clarity among all partners – including faculty, employers and host agencies, and students – as to the purposes of the program, in order to manage expectations, avoid "scope creep," and ensure that the goals of each partner are being addressed.

> *It can be a challenge for employers if they haven't been exposed to somebody of the new millennial generation, when the students show up for work and they're a little different from the way they were 20 years ago. It's not a huge problem but it is for some employers …we need to prepare both student and employer. (Institution)*

> *Sometimes there is a disconnect between the faculty and employers, between the faculty's expectations of student learning versus what employers expect in the workplace. Employers want students to have specific skills training but [university] faculty do not see this as their role. (Institution)*

> *There is a huge need to get the correct information out there. (Institution)*

Sometimes students do not take their participation in WIL seriously, and are not prepared to accept their own responsibilities as partners in the process:

> *There is a general trend toward students becoming less engaged in the process over the last three years. Students seem to have less understanding of the consequences of not writing a good cover letter, not sending out multiple resumes. Is this generational?*

Institutional? Students seem to have an attitude of 'I'm paying for this' and 'what are you doing for me?' They expect to have the work done for them. (Institution)

There is a lack of continuous commitment on the part of the students to a co-op placement … they don't understand the value as a training tool, they don't appreciate the opportunity. (Institution)

Similarly, employers may attempt to circumvent their obligations in the partnership:

Students may be abused with too much heavy work, verbal taunting … given too much to do too early and they are not ready for it. (Institution)

It's the amount of control placements want of students … we have curriculum and government standards to follow, but agencies want workers to act in a different way and stop following curriculum. (Institution)

Managing relationships was viewed as especially important when issues arise – which can not only jeopardize opportunities for future placements, but potentially compromise the services offered by the host agency.

It can be challenge when things go wrong, when there is not a good fit or when the student is misbehaving, in how we manage the relationship with the employer … if it's a first-time employer and the experience is negative, it can affect their impression of [the program] and of [the institution], and they might be reluctant to participate again. (Institution)

Placements are hard to come by, we value our placements, we want to follow up quickly if there are problems. (Institution)

The quality of course-based research projects tends to be lower but we've developed strategies to address this, by assigning more than one team to a project for example. (Institution)

Institutional Biases & Lack of Supports

With the exception of placements required for professional licensure, some university respondents noted a bias against work-integrated learning programs, and the perception that such programs are more appropriately offered by colleges rather than universities:

On some university campuses, it doesn't get the attention and funding it may deserve. The focus seems to be on academic research rather than workplace experiences. (Institution)

These are considered to be non-academic, peripheral – there is a perception that they don't belong in a university. (Institution)

Conversely, at the college level, there may be a bias toward vocational forms of work, and a devaluing of service-learning as a legitimate form of work experience.

Within institutions, there are biases that exist between types of WIL programs:

It was a real fight to get the words 'experiential learning' recognized as part of the vocabulary – the perception is that nothing compares to co-op education. (Institution)

Apprenticeship poses its own set of institutional challenges, since in-school apprenticeship training is managed by the Ministry rather than by the postsecondary institution, and is run according to Ministry rules. Ministry apprenticeship offices are responsible for the recruitment of apprentices, the marketing of apprenticeship programs, and the purchase of apprenticeship seats at the college. There are additional pressures resulting from workplace ratios and union provisions that limit the number of apprentices who can be taken on, as well as lower funding for apprenticeship programs than for formal postsecondary programs. This restricts flexibility and complicates the administration of apprenticeship programs, and also creates barriers to participation by limiting choice around availability and location of training. In addition, it makes it more difficult for colleges to identify and deliver effective support mechanisms for apprentices:

Apprenticeship processes are very different as compared to postsecondary processes and therefore lack of understanding creates many unknowns for postsecondary managers. (Institution)

Some apprentices might struggle through many hours of learning without any idea of how to ask for help, what help to ask for or to even address what the issues might be. (Institution)

Finally, one key informant suggested that cumbersome internal processes make it difficult to introduce and implement changes to WIL programs.

WIL Curriculum

With regard to curriculum issues, there are challenges around both the content itself, and also the development of WIL curriculum.

It needs to be really well thought-out in terms of curriculum and sequencing. Curriculum development in applied learning requires thinking about sequencing, which might take away some flexibility in scheduling courses. (Institution)

The challenge is how to design work integrated learning as part of an academic curriculum, how to create formal links between experiential learning and academics. There is a disconnect because in-school experience is not recognized on transcripts. The institution is struggling to define what is the real place of this in an academic curriculum – can we deny a student the right to graduate? The university has been challenged on this with co-op. (Institution)

Other challenges arise from the way that WIL programs are structured and managed within the academic institution.

> *There are challenges in meshing community timelines with the curriculum when the service-learning project doesn't fit within a 12-week term. [The university] is looking at implementing service-learning over the whole program stream in order to address this. (Institution)*

> *Employers themselves are busier, under more stress, they don't have time to drive down and spend the day in interviews if they do not get a student. (Institution)*

For co-op, consistency in terms of defining remuneration can be an issue.

> *Some students get a weekly paycheque at minimum wage rates but some industries don't pay that way, they give the students a stipend at the end of the placement. This is a big challenge … what is remuneration? Is it a weekly paycheque? Payment at the end? (Institution)*

Role of Faculty

Several key informants emphasized the critical importance of faculty engagement in ensuring successful WIL experiences, and the challenges of securing faculty buy-in.

In some cases, optimal work-study sequences do always align with preferred faculty teaching schedules. Offering co-ops each semester ensures that students are available during the summer months – when employer demand is highest – but also requires that faculty be available to teach during the summer, which can be a hard-sell with some faculty.

There is also a perception among some faculty that WIL programs will impose an extra burden on their time, exacerbated by rising student enrolment without commensurate increases in faculty. In some cases, concerns about increased workload are justified:

> *Course-based projects may have more difficulty finding industry partners, and faculty have to do the recruitment themselves. (Institution)*

A concern raised by university key informants is the absence of institutional "carrots" to encourage faculty participation in WIL, and the lack of recognition for university faculty who incorporate WIL into their courses in terms of compensation, promotion, and tenure. This applies particularly to applied research projects, service-learning, internships, and placements.

Changing Workplace

Finally, it was noted that the changing nature of work is also having an impact on the availability of work opportunities for students, as institutions are being challenged to prepare students for jobs that do not yet exist.

More routine-type jobs are becoming automated and harder to come by. We used to have junior accounting students who added up invoices, but this doesn't happen anymore. As technology and automation advances, the work disappears. (Institution)

Employer/Community Partner Perspectives

The challenges experienced by employers and community partners were naturally quite different from those experienced by faculty and staff, although some similar themes emerged.

Economic & Financial Pressures

For many employers and community partners, economic and financial pressures present a common barrier to participation in WIL programs.

Money is always an issue. Budget is the main thing that decides whether we are able to keep a student or not. (Employer/community partner)

Budget restraints mean that we can't pay a salary. We tell students this upfront – some have turned us down to take paid co-ops instead. (Employer/community partner)

Workload & Staffing

A related challenge involves the allocation of staffing resources to supervise WIL students, and the amount of time required for students' "constant supervision." This can compound the economic pressures, and also make it difficult to manage internal workloads.

It can be a burden to get them going, it requires staff to act as mentors. (Employer/community partner)

Sometimes we have to ask supervisors, is this a good time for you to take a student? [Institution] asked if we could take a student, but supervision would have required a lot of adjustment on our end, it wasn't a good time. (Employer/community partner)

Other staffing-related issues are potential internal resistance to participation in WIL programs, and the qualifications needed by staff involved in professional practice supervision:

Some practice area leaders are not as familiar with the program, they may have a harder time recognizing the value. (Employer/community partner)

Host teachers need five years experience to mentor a student teacher. It's important to have the student learn from someone with experience but it can limit the number of staff we have available to be host teachers. (Employer/community partner)

Institutional Processes

Learning how to navigate institutional processes was another frequently mentioned challenge – especially for employers and community partners who work with multiple institutions. Key informants cited "inconsistency" in procedures and timelines at different institutions, the difficulties encountered when WIL programs are managed by time-pressured or less experienced faculty, the limitations of the technology used to facilitate the processes, and lack of institutional follow-up.

> *From an employer perspective there is a huge variation in the quality and organization of co-op programs by different institutions. Some institutions make it much easier for employers to organize interviews with students. (Employer/community partner)*
> *Some schools don't have a placement office and work through professors. It can be a little more difficult for professors to manage off the side of their desks, they may not be as familiar with requirements. (Employer/community partner)*
>
> *The software used by the co-op office is handy but it needs updating, there are functions you can't do – we've missed deadlines for posting because of software issues." (Employer/community partner)*
>
> *There are also little things like thank you cards, putting in the extra effort – some have dropped by. You quickly realize when this is not a focus for institutions. (Employer/community partner)*

A couple of key informants highlighted the value of schools knowing their students, in order to make it easier for employers to participate in WIL programs:

> *Institutions need to be clear about which programs employers can draw from. We've had students come to us be interviewed but they didn't have the background and courses we needed. This means that we have to figure out why we should hire their students. They should make it easy for us to make connections, otherwise we'll default to places we've worked with before. Institutions should be able to tell us why we should hire their students. (Employer/community partner)*

Emphasizing that employers and community partners "need to know who to talk to," several key informants underscored the importance of establishing personal connections between institutions and employers/community partners:

> *The process is a bit more difficult when you don't know the people involved - you're not as familiar with the process, who to speak to. It's easier when you know the process, when you know the people involved. (Employer/community partner)*

WIL Supply & Demand

Like institutional key informants, several employers and community partners acknowledged the influence of supply and demand in determining their involvement in WIL programs.

Our ability to provide placements varies, depends whether departments need staff or not, time of year. During slower times we're not as busy. (Employer/community partner)

Even though we'd like to take them sometimes it's hard because of the timing of the event and when they're available. Program timelines and work schedules don't always fit within our timelines. (Employer/community partner)

A few key informants referenced past experiences of being unable to find WIL students for available positions.

Placement Length

Whether they had participated in day release programs or block placements of seven weeks to four months in length, a number of key informants regarded the length of WIL experiences as a barrier, and expressed a preference to have students in their workplaces for a longer period of time.

We always give priority to students who are doing a placement as part of their program but 1 or 2 days a week for a few weeks is not good for us. It takes time to train them, get them processed, take care of logistical details. Students need to be involved for a longer term so they can experience all stages. (Employer/community partner)

The big danger for an organization like ours that hires large numbers of students is that if we keep losing students we have to go through all of the training, all of the orientation over again. This quickly becomes a negative in terms of full-time staff who are constantly having to do the training - it's just not effective, it takes time away from our staff. An eight month work term with the right student can be beneficial – I think most employers would prefer longer term. (Employer/community partner)

Student Quality

For some key informants, finding students with the "right stuff" was a challenge.

Sometimes we don't get the professionalism the clients expect. We struggle with students appreciating the level of responsibility required - there are fewer good students, more students we struggle with. This is extremely time-consuming for me. (Employer/community partner)

The challenge is quality control, and students lacking basic skills. This is a tough business - I'm not here to keep track of kids' cell phones, their social calendar. … It seemed like the placement officer was more interested in getting the job than the student. (Employer/community partner)

It was a real time-zapper for me – we couldn't use their product, and it was unfulfilling for the students. They didn't seem to understand the importance of keeping appointments, responding to emails. They didn't recognize that they need to approach every connection in a professional way. (Employer/community partner)

One key informant speculated that the age of students may be a contributing factor:

> *The students are too young, too inexperienced. This generation of students has limited life-skills, they may not be ready to be coached when they're 17 years old. (Employer/community partner)*

Another key informant indicated that student quality would be a factor in continued involvement with the WIL program:

> *As long as the quality of students admitted to the program remains high we'll keep hiring. If the [institution] changes the admission standards or the program we may have to rethink that but otherwise we'll remain involved. (Employer/community partner)*

Workplace Limitations

Some key informants were restricted in their ability to participate in WIL programs by physical space limitations and lack of desks and computer equipment.

Managing Expectations

The need expressed by WIL faculty and staff for clarity in roles and expectations was echoed by some employer and community partner key informants. This was recognized as important to all who are involved with WIL students: the students themselves, institutional faculty and staff, employers/community partners, employees, and in some cases, customers/clients.

Location

Location was identified as an issue by a few employers and community partners, because it made their workplace less attractive to some students and also limited their ability to connect with institutions located outside of their region.

> *There are logistical challenges in hooking up with the institutions that are not local – we don't hear from institutions that are external to us. (Employer/community partner)*

Administration & Paperwork

A couple of key informants cited challenges related to visa requirements for international students when the work-term is extended, and processing times for security clearances required by the industry.

6. Opportunities

Institutional key informants described efforts currently underway within their institutions to address the challenges and improve WIL offerings, and identified opportunities to expand and promote WIL programs across the postsecondary sector.

Institutional Practices

- To coordinate the multiple levels of interaction between different departments of the same institutions and external partners, one of the working group institutions has established an internal committee to bring together everyone involved in working with external partners, including placement coordinators, grad consultants, and co-op consultants. Another working group institution created a steering committee of managers and deans involved with WIL, as well as Marketing and Communications staff, to coordinate employer communication.

- Electronic tools were viewed as useful to assist with matching employers and students.

New Program Development

- Many key informants saw opportunities for the inclusion of work experiences in a broader range of program areas, and emphasized the value of offering work-integrated learning opportunities in a variety of sectors, including health sciences, social services, sciences, transportation, aviation, green technology, criminology, recreation, business, and public administration.

- Anticipating the direction of local economic growth and the needs of the local labour market are particularly important at the college level, and could lead to new opportunities to introduce co-op and apprenticeship programs. One key informant involved in co-op indicated that: "when-ever a new program is added, we look to see if we can include a co-op option … at the co-op office we'll do our own market research to see if there is a job market for students … for most programs we like to give a co-op option to students."

- Applied research across all sectors was seen as an "exciting," "cutting-edge" opportunity for students to integrate their learning with work opportunities. Applied research is in the formative stages for the college system, and is undergoing a shift within the university sector as universities reposition themselves to link more closely with the community.

- Opportunities for WIL at the graduate level were identified, with some universities looking at new Master's programs in computer science and engineering.

- An "explosion" of international placements at both colleges and universities was anticipated in the wake of the provincial government's Open Ontario plan for a 50 per cent increase in international enrolments. This will create new opportunities for global

service-learning through international work opportunities, and will also increase the need to develop more opportunities for international students to participate in WIL programs.

Institutional Policy Changes

- To address the shortage of clinical placements, one key informant saw opportunities to bring college and university students together in inter-professional workplace education – for example through work-integrated learning for nurses and personal support workers. In addition, new multidisciplinary and inter-disciplinary models were proposed based on clinical teaching units (pairing first-year medical students with fourth-year nursing students, or social work students and nursing students).

- The explicit commitment among some universities to recognize community service-learning as an institutional priority was viewed by some key informants as requiring a shift within the university to more holistic model and financial resources to deliver community service-learning on a system basis.

Government Policy Changes

- Several key informants recommended that tax credits or other forms of government incentive be available to host agencies and employers to recognize their time in mentoring, coaching, and working with students. These could include government grants for companies to hire co-op students and tax credit for internships.

- Key informants involved in apprenticeship programs urged greater opportunities for students to ladder from one form of WIL to another – from vocational apprenticeships to more structured work experiences – to support personal growth and lifelong learning. One key informant urged the re-examination and modernization of the apprenticeship system, to better align apprenticeship programs with the postsecondary system and facilitate access among apprentices to college student support services. Other recommendations were offered to improve apprenticeship training, including the collection of enrolment, completion, and retention data on a system-wide basis, similar to the data on postsecondary programs; and a greater focus on promoting local apprenticeship opportunities as a means of addressing local labour market shortages and reducing financial barriers to participation among students.

Employer/Community Partner Satisfaction

Although employers and community partners were not specifically asked to rate their satisfaction with WIL programs, they were asked about their plans to take more students in the future and whether they had recommended WIL programs to others.

Not surprisingly, given that most employers and community partners were involved with a number of institutions and had taken many students over the years, the overwhelming majority of key informants planned to continue to support WIL programs.

Our numbers may go up or down, and the mix of students may change, but this is a priority for our business. (Employer/community partner)

We're always open to hiring students - If we didn't have a paid position, we would also be open to non-paid opportunities to give the student experience but have only brought students in as paid placements. (Employer/community partner)

A few employers said they would potentially be discontinuing their involvement for financial reasons, specifically cuts to co-op budgets, and one indicated that future participation could be limited by the requirement to have a social worker supervise. A single employer planned not to return to the program, because of a negative experience with the students.

About half of the employer/community partner key informants indicated that they would definitely recommend to business or sector colleagues that they become involved in WIL programs. Some had already recommended WIL to other units within their organization. Most of the remaining key informants indicated that other employers within their industry or sector were already aware of, and involved with, WIL programs. Their reasons for recommending WIL echoed the benefits that had been identified to participation in WIL:

It's a great resource for us to use. It's been quite successful for us, a great experience. (Employer/community partner)

[I'd recommend it] because of our relationship with [institution], and the support we get. (Employer/community partner)

We're happy with the program and the approach – the model that it offers has a lot of potential, it speaks to the needs of business. (Employer/community partner)

We would always encourage having more students. We want success for all - we learn by modeling. (Employer/community partner)

WIL & Labour Market Entry

To probe the impact of student participation in WIL on labour market entry, employers and community partners were asked whether they had ever later hired students who had participated in a WIL program in their workplace. It appears that participation in WIL programs can indeed give students a "leg up" in the job market, with almost all employers and community partners reporting making job offers to WIL students, regardless of the type of WIL the students had participated in. One key informant indicated that as many as 70 per cent of the interns were later hired, and two key informants had been co-op students themselves:

There are at least four or five of us here who have been bridged because we did co-op work-terms. Other students I went to university with who didn't do co-op have had a harder time getting a job afterwards. (Employer/community partner)

> *The director of our department was a co-op student, I was a co-op student and a couple of others. There are only one or two who weren't co-op. (Employer/community partner)*

A key informant who had not made an offer expressed an unwillingness to hire a student from the program because of the process used to place the students, preferring candidates with other types of work experience:

> *If somebody comes to me of their own volition because they want a part-time job, they are more motivated than somebody who must do co-op as part of their placement. (Employer/community partner)*

To determine whether the labour market impact of WIL was specific to individual students, or conferred overall labour market advantages, key informants were asked if they looked for job applicants with work-integrated learning experiences, rather than job experience more generally. Almost all employers and community partners emphasized the importance of work experience, and the majority indicated they looked for job applicants with some kind of WIL experience. This included some who reported that they only hired applicants who had been involved with WIL programs:

> *We look for on-the-ground experience and skills. Work experience would be an added bonus, it shows that they have thought about their schooling in an applied way. (Employer/community partner)*

> *Students who are most qualified are those who have done a work-term somewhere as part of their academic program – they can combine practical with academic. (Employer/community partner)*

> *I would look for hands-on experiences, any kind of placement experience. Placement gives a different kind of experience than a part-time job. (Employer/community partner) Having co-op does make a difference, co-op students are able to handle certain situations. (Employer/community partner)*

> *Any related experience is always a plus, always a benefit, especially for placements because they are longer-term. (Employer/community partner)*

> *Yes we certainly do. It has given them a chance to develop a work ethic, understand how the workplace works. Interpersonal skills are almost as important as technical know-how. (Employer/community partner)*

> *Students learn more about how to work when it is part of their program. (Employer/community partner)*

The remaining employers/community partners sought work experience, but were not particularly interested where it was acquired:

It's important they have really hands-on understanding of the work. It's not necessary that it be co-op, it can be any work experience. (Employer/community partner)

I would only hire someone with industry experience, but it should be outside of school. They don't gain enough experience with only co-op. (Employer/community partner)

Mostly we're looking for people with experience at our hospital, people who know us, know what we do. (Employer/community partner)

We look for relevant work experience, whether it was part of an academic program or not. (Employer/community partner)

Work experience would definitely be a plus, but it doesn't matter if it's co-op or not. (Employer/community partner)

Finally, employers and community partners were asked if they would be more likely to hire a candidate with WIL employment experience over a candidate with other work history. Although a majority of employers said that WIL would increase their likelihood of hiring, several framed their response in terms of their decision to offer positions to WIL students in their workplaces:

There is a sense that this is more than a four month term – they want to gain the most out of their placement. They are more motivated, they really value the work experience. (Employer/community partner)

Most definitely. They already have experience, a better idea of what they're going to face once they're hired. They are more skilled, they know how to apply their academic learning to the work environment, they can produce results quicker than otherwise. (Employer/community partner)

Yes, they have a head start, they are experienced working in an office environment. (Employer/community partner)

Students are here for 4 months, they're either good or not – if they're good we'll want to bring them on board. (Employer/community partner)

To some extent yes, since they've been exposed to real life. They are able to connect easier, they can fit in to an office environment. (Employer/community partner)

Almost as many key informants said they would take WIL into account, but would not automatically assess the candidate more favourably. Other factors would also be considered, such as the qualities of the candidate, the nature of the work experience, and the location of the WIL placement.

The decision-maker is the individual applicant walking through the door, what they bring to the position. We look for experience for sure. Practical experience is very valuable, it improves their confidence. (Employer/community partner)

It probably would not be a dominant factor, but we would look at it. We're mostly looking for people with work experience. (Employer/community partner)

It would really depend on what their co-op work-terms were. With non-co-op students it would depend on how relevant their work experience was. (Employer/community partner)

Work experience has a significant impact in terms of resumes, but it's seeing what kind of placements they've had. We're a small field, we can tell the kinds of experiences they've had from where they've done their placements. (Employer/community partner)

It would depend on the type of placement. Some work placement students take on more responsibilities, case management for example. Placements can give an added edge – the students know more about what to expect, the kinds of situations that can occur. They know the expectations of the job. (Employer/community partner)

7. Conclusions

This study offers valuable insights into the various types of WIL programs offered within Ontario's postsecondary sector, as well as the benefits of WIL as perceived by faculty and staff, and employers and community partners. The findings identify some of the challenges associated with the development and delivery of WIL programs from an institutional perspective, and the barriers to participation in WIL from the vantage point of employers and community partners.

Above all, work-integrated learning is as much about learning as it is about work. While the research highlights a range of benefits for students, institutions, and employers and community partners, it also reveals several areas of divergence where efforts could be made to enhance the learning outcomes.

First, there is a need to strengthen the communication links between postsecondary institutions and employers/community partners. Institutions perceive the opportunity to obtain feedback from participating employers and community partners to be one of the key benefits of WIL, but point to lack of employer interest in completing follow-up forms. Some employers seek to gather input from students about their WIL experience, but rarely hear back from the institutions once the placement has ended. Efforts need to be made to bridge this gap, and ensure more effective and open lines of communication between the partners.

Second, the marketing and promotion of WIL programs needs to be informed by an accurate understanding of the benefits sought by both students and employers (which may vary by type of WIL) in order to focus the messages on the benefits considered most important. In addition, the development and delivery of WIL programs must be sensitive to the distinct needs of different groups of learners, such as international and First Nations students.

Third, for most employers the decision to participate in WIL programs is based on the bottom line. Employers tend to be unconvinced of the potential for cost-savings to be generated through their participation in WIL. Indeed, they are quite likely to anticipate additional costs related to staff supervision and (in some cases) student salaries. While they are nevertheless willing to bear these costs in order to achieve productivity improvements, they would prefer to have more senior students who can perform at a higher level, and to have them in their workplaces for longer periods of time.

This approach to WIL may serve the needs of employers, but does little to maximize learning opportunities for students. Institutions must ensure that employers understand their role and contribution to the learning process. Employers should be aware of the learning objectives for the student at the beginning of the placement, be informed how the student will be assessed, and be provided with formal supports from the institution to assist them in their supervision and assessment responsibilities. Greater assistance in fulfilling supervisory and assessment roles may help encourage wider participation in WIL programs from community agencies and other potential WIL employers.

Fourth, in and of itself WIL does not ensure better labour market outcomes for students. In reviewing job applications, hiring managers look as much at the company or agency at which the student was employed, and the nature of the position, as for evidence of participation in WIL. To maximize the labour market benefits of WIL participation, institutions must maintain careful oversight of the kind of WIL opportunities offered to students.

Finally, to oversee these tasks, WIL requires a significant investment – both human and financial – on the part of PSE institutions. Quality WIL programs require internal structures to facilitate their smooth operation and administration; they cannot simply be added on to existing faculty responsibilities.

Recommendations for Future Research

As was anticipated when this Phase 1 study was launched, future quantitative and qualitative research is recommended to assess and confirm the findings of this report, particularly as they relate to the benefits of WIL to students and employers, and the overall quality and outcomes of various WIL options. This would allow the development of a more detailed cost/benefit analysis, and enable additional probing into the varying perceptions of students, coordinators, faculty, and employers/community partners. Several additional research options are presented below.

Impact of WIL on Students

Given the absence of the student voice from this current Phase 1 study, we recommend that the first priority for any Phase 2 study should be to gather the perspectives of students on their PSE work experiences – whether or not the experience was gained through participation in a WIL program – followed by research to track their subsequent labour market participation and outcomes. This will provide quantitative, statistically reliable evidence of the impact of different WIL programs on different groups of learners. The study should be designed to explore the experiences of WIL and non-WIL students from various disciplines across both colleges and universities, and to assess awareness of WIL, motivations and barriers to participation, and perceived benefits. A follow-up study could investigate subsequent labour market outcomes for WIL and non-WIL students.

Benefits of WIL for Employers/Community Partners

A second research priority involves gathering general Ontario employer perceptions of the benefits of WIL and the barriers to participation. The research topics to be explored could include employer perspectives on the benefits of WIL, with specific reference to the findings of this study. The project could also assess how employers – both WIL and non-WIL – view student participation in WIL in their hiring practices.

Faculty Perceptions of WIL

Current research suggests that faculty buy-in is essential to the development and delivery of effective WIL programs. At the same time, faculty who are involved with WIL programs report significant increases in workload with no corresponding reduction in other responsibilities, and

institutional biases against certain types of WIL programs. A quantitative online survey of college and university faculty from the working group institutions could assist in clarifying staff attitudes toward WIL, and create a better understanding of faculty perceptions of the benefits of WIL, and perceived barriers to participation.

Qualitative Study of Apprenticeship

Apprenticeship is unique within the WIL typology, and the research questions associated with apprenticeship are also unique. Since quantitative data is available through the National Apprenticeship Survey on the labour market impacts of apprenticeship completion and discontinuation, what is important for follow-up study is qualitative research on the barriers to participation, the factors associated with leaving and completion, and how apprentices see themselves in relation to the postsecondary system. We recommend focus groups with prospective apprentices (high school students and mature learners), current apprentices, and employers. The research topics to be explored include motivations and barriers to pursuing apprenticeship, and in particular, how apprentices view their connection to the postsecondary institution. A better understanding of how apprentices perceive the integration of their work and their learning would contribute to the available body of research on apprenticeship retention.

References

Andres, L. (2003). More than Sorcery Required: The Challenge of Matching Education and Skills for Life and Work. In Schuetze, H. and Sweet, R. (Eds.) *Integrating school and Workplace Learning in Canada: Principles and Practices of Alternation Education and Training*. Montreal & Kingston: McGill Queen's University Press.

Axelrod, P., Anisef, P., and Lin, Z. (2003). Bridging the Gap between Liberal and Applied Education. In Schuetze, H. and Sweet, R. (Eds.) *Integrating school and Workplace Learning in Canada: Principles and Practices of Alternation Education and Training*. Montreal & Kingston: McGill Queen's University Press.

Barrie, S. (2006). Assessment: Defining the worth of professional practice. *Institute for Teaching and Learning*. Retrieved February 8, 2010 from www.aare.edu.au/99pap/bar99509.htm.

Bates, M. (2003). The Assessment of Work Integrated Learning: Symptoms of Personal Change. *Journal of Criminal Justice Education, 14* (2), 303-326.

Bayard, J. and Greenlee. E. (2009) *Graduating in Canada: Profile, Labour Market Outcomes and Student Debt of the Class of 2005*. Ottawa: Statistics Canada.

Bender, C., Daniels, P., Lazarus, J., Naude, L., and Sattar, K. (2006). *Service-Learning in the Curriculum: A Resource for Higher Education Institutions*. Retrieved June 13, 2010 from www.che.ac.za/documents/d000121/.

Billet, S. (2009a). *Developing agentic professionals through practice-based pedagogies*. Australia: Australian Learning and Teaching Council.

Billet, S. (2009b). Realising the educational worth of integrating work experience in higher education. *Studies of Higher Education, 34* (7), 827-843.

Blackwell, A., Bowes, L,. Harvey, L., Hesketh, A., and Knight, P. (2001). Transforming Work Experience in Higher Education. *British Educational Research Journal, 27* (3), 269 – 285.

Boud, D., and Solomon, N., Eds. (2001). *Work-based learning: a new higher education*. Phildelphia, PA: Society for Research into Higher Education & Open University Press.

Braunstein, L.A. and Stull, W.A. (2001). Employer benefits of, and attitudes toward postsecondary cooperative education. *Journal of Cooperative Education, 36* (1), 7-22.

Brisbois, R., Orton, L. and Saunders, R. (2008). *Connecting Supply and Demand in Canada's Youth Labour Market*. Ottawa: CPRN.

Butin, D. (2006). The Limits of Service-Learning in Higher Education. *The Review of Higher Education, 29* (4), 473-498.

Callanan, G. and Benzing, C. (2004). Assessing the role of internships in the career-oriented employment of graduating college students. *Education + Training, 46* (2), 82-89.

Calway, B. (2006). What has Work-Integrated Learning Learned? – A WIL Philosophy. *Industry and Higher Education*. United Kingdom: IP Publishing. Retrieved January 19, 2010, from http://centreforefs.com/resources/b_calway_2006.pdf.

Canadian Council on Learning. (2008). *Lessons in learning: The benefits of experiential learning*. Ottawa: Canadian Council on Learning. Retrieved February 12, 2010, from www.ccl-cca.ca/pdfs/LessonsInLearning/Feb-21-08-Benefit-of-exper.pdf

Canadian Council on Learning. (2007). *An Exploration of Work and Learning Opportunities in New Brunswick*. Retrieved January 4, 2010 from www.ccl-cca.ca/NR/rdonlyres/1FA592B2-9F50-49A7-870A-971A1A108511/0/NBProjectWLProjectReport_EN.pdf.

Cannon, J. (2010). VET and practice based learning: Current models of integration. *International Conference on Work Integrated Learning (WACE)*, Hong Kong, February 3-5, 2010. Retrieved February 8, 2010 from www.waceinc.org/hongkong/linkdocs/papers/New%20Zealand/Refereed%20Paper%206%20(revised).pdf

Center for Labor Market Studies (2002). *Cooperative Education as a Source of Labor Supply to Firms in the College Labor Market: Analysis of Data from Four Case Study Firms, Report #1*. Unpublished Report, Northeastern University, Boston, MA.

Chisholm, C., Harris, M., Northwood, D. and Johrendt, J. (2009). The Characterisation of Work-Based Learning by Consideration of the Theories of Experiential Learning. *European Journal of Education, 44* (3), 319-337.

Coco, M. (2000). Internships: a try before you buy arrangement. *Advanced Management Journal, 65* (2), 41-43, 47.

Coll, R. and Eames, C. (2004). *International Handbook for Cooperative Education: An International Perspective of the Theory, Research and Practice of Work-integrated Learning*. Boston, MA: The World Association for Cooperative Education.

Coll, R., Eames, C., Paku, L., Lay, M., Ayling, D., Hodges, D., Ram, S., Bhat, R., Fleming, J., Ferkins, L., Wiersma, C., and Martin, A. (2009). *An exploration of the pedagogies employed to integrate knowledge in work-integrated learning in New Zealand higher education institutions*. Wellington, New Zealand: Teaching & Learning Research Institute. Retrieved March 1, 2010 from www.tlri.org.nz/assets/A_Project-PDFs/9263-Finalreport.pdf

Connor, H. and MacFarlane, K. (2007). *Work Related Learning (WRL) in HE – a scoping study*. Glasgow: Glasgow Caledonian University.

Cook, S., Parker, R., and Pettijohn, C. (2004). The perception of interns: A longitudinal case study. *Journal of Education for Business, 79* (3), 179-185.

Cooper, L., Orrell, J. and Bowden, M. (2010). *Work Integrated Learning: A Guide to Effective Practice.* London and New York: Routledge.

Crebert, G., Bates, M., Bell, B., Patrick, C-J., and Cragnolini, V. (2004). Ivory tower to concrete jungle revisited. *Journal of Education and Work, 17* (1), 47-70.

Darch, J. (1995). Labour market outcomes for university co-op graduates. *Perspectives.* Ottawa: Statistics Canada. Catalogue No. 75-001E, Ottawa, Retrieved August 12, 2009 from www.statcan.gc.ca/studies-etudes/75-001/archive/e-pdf/1638-eng.pdf.

DeLorenzo, D.R. (2000). The relationship of cooperative education exposure to career decision-making self-efficacy and career of locus of control. *Journal of Cooperative Education, 35* (1), 15-24.

Dickerson, J. (2009). The realistic preview may not yield career satisfaction. *International Journal of Hospitality Management, 28*, 297-299.

Downey, J., Kalbfleisch, J., Truman, R. (2002). *Co-operative Education: Greater Benefits, Greater Costs.* Ministry of Training Colleges and Universities, Toronto, Retrieved August 12, 2009 from http://www.watcace.uwaterloo.ca/CostBenefitCo-opStudyFinal.pdf.

Dressler, S. and Keeling, A. (2004). Student benefits of co-operative education. In R. Coll & C. Eames (Eds.), *International handbook for co-operative education: An international perspective of the theory, research and practice of work-integrated-learning.* Boston: World Association for Co-operative Education.

Drysdale, M., Goyder, J., and Cardy, A. (2009). *The Transition from University to the Labour Market: The Role of Cooperative Education – Phase 3.* Powerpoint presentation to Cooperative Education and Internship Association Annual Conference, April 2009, Portland.

Drysdale, M., Goyder, J., Nosko, A., Easton, M., Frank, K., and Rowe, P. (2007). The Role of Co-op in the Transition from High School to Post-Secondary Education. *Journal of Cooperative Education and Internships, 41* (1), 48-55.

Duignan, J. (2003). Placement and adding value to the academic performance of undergraduates: reconfiguring the architecture - an empirical investigation. *Journal of Vocational Education & Training, 55* (3), 335 – 350.

Ehiyazaryan, E. and Barraclough, N. (2009). Enhancing employability: Integrating real world experience in the curriculum. *Education and Training, 51* (4), 292-308.

Engeström, Y., Engeström, R., and Karkkainen, M. (1995). Polycontextuality and Boundary Crossing in Expert Cognition. *Learning and Instruction, 5*, 319-336.

Fenwick, T. (2006). Tidying the territory: questioning terms and purposes in work-learning research. *Journal of Workplace Learning, 18* (5), 265-278.

Field, S., Hoeckel, K., Kis, V., and Kuczera, M. (2009). *Learning for Jobs: OECD Policy Review of Vocational Education and Training.* Paris: OECD.

Fisher, D., Rubenson, K., Jones, G., and Shanahan, T. (2009). The political economy of post-secondary education: A comparison of British Columbia, Ontario and Quebec. *Higher Education, 57* (5), 549–566.

Fisher, R. (2009). A Framework for Research at Canadian Colleges. *College Quarterly, 12* (4).

Frenette, M. (2004). The overqualified Canadian graduate: the role of the academic program in the incidence, persistence, and economic returns to overqualification. *Economics of Education Review, 23*, 29-45.

Fuller, A. (2006). Participative learning through the work-based route: from apprenticeship to part-time higher education. *European Journal of Vocational Education, 37*, 68-81.

Furco, A. (1996). Service-Learning: A balanced approach to experiential education. In B. Taylor (Ed.), *Expanding Boundaries: Service and Learning* (pp. 2-6). Washington, DC: Corporation for National Service. Retrieved March 2, 2010 from www.urmia.org/library/docs/regional/2008_northeast/Service_Learning_Balanced_Approach .pdf

Gaba, D. (2004). The Future Vision of Simulation in Health Care. Quality and Safety in Health Care, *13* (Supplement 1), i2-i10.

Gallagher, P. and Kitching, A. (2003). Canada's Community Colleges and Alternation. In Schuetze, H. and Sweet, R. (Eds.) *Integrating school and Workplace Learning in Canada: Principles and Practices of Alternation Education and Training.* Montreal & Kingston: McGill Queen's University Press.

Garavan, T. and Murphy, C. (2001). The co-operative education process and organisational socialisation: a qualitative study of student perceptions of its effectiveness. *Education + Training, 43* (6), 281-302.

Garlick, S., Davies, G., Polèse, M. and Kitagawa, F. (2006). *Supporting the Contribution of Higher Education Institutions to Regional Development: Peer Review Report.* Paris: OECD.

Gault, J., Leach, E., and Duey, M. (2010). Effects of business internships on job marketability: the employers' perspective. *Education + Training, 52* (1), 76-88.

Gault, J., Redington, J. and Schlager, T. (2000). Undergraduate business internships and career success: are they related? *Journal of Marketing Education, 22*, 45-53.

Göhringer, A. (2002). University of Cooperative Education – Karlsruhe: The dual system of higher education in Germany. *Asia-Pacific Journal of Cooperative Education, 3* (2), 53-58.

Gomez, S., Lush, D. & Clements, M. (2004). Work Placements Enhance the Academic Performance of Bioscience Undergraduates. *Journal of Vocational Education & Training, 56* (3), 373-85.

Groenewald, T. (2004). Towards a definition of cooperative education. In R. Coll & C. Eames (Eds.), *International handbook for co-operative education: An international perspective of the theory, research and practice of work-integrated-learning.* Boston: World Association for Co-operative Education.

Grosjean, G. (2003). Alternating Education and Training: Students' Conceptions of Learning in Co-op. In Schuetze, H. and Sweet, R. (Eds.), *Integrating school and Workplace Learning in Canada: Principles and Practices of Alternation Education and Training.* Montreal & Kingston: McGill Queen's University Press.

Guile, D. and Griffith, T. (2001). Learning Through Work Experience. *Journal of Education and Work, 14* (1), 113-131.

Haddara, M. and Skanes, H. (2008). A Reflection on Cooperative Education: From Experience to Experiential Learning. *Asia-Pacific Journal of Cooperative Education, 8* (1), 67-76.

Hartmann, E., Knust, M, Loroff, C. and Stamm-Riemer, I. (2009). Towards Permeability between Vocational and Academic Education. Experiences and Analyses from Current Initiatives in Germanyejed. *European Journal of Education, 44* (3), 351-368.

Harvey, L., Geall, V. and Moon, S. (1998) *Work Experience: Expanding opportunities for undergraduates.* Birmingham, UK: UCE Birmingham. Retrieved June 10, 2010 from http://www0.bcu.ac.uk/crq/publications/we/wecon.html.

Helle, L., Tynjälä, P., and Olkinuora, E. (2006). Project-based learning in post-secondary education: theory, practice and rubber sling shots. *Higher Education, 51*, 287–314.

Hejmadi, M., Lock, G., and Bullock, K. (2008). *Do placements enhance undergraduate learning and employability? An evaluation in science and engineering.* Bath: University of Bath.

Hutchison, P. (1999). *Educating a Globally Productive Citizenry: The Role of Higher Education in the Integration of Learning and Work, A Monograph for College Leaders.* Boston, MA: National Commission for Cooperative Education. Retrieved March 3, 2010 from http://www.eric.ed.gov/PDFS/ED428609.pdf.

Ipsos Reid. (2010). *Canadian Post-Secondary Education: Impact of Co-op Education Programs.* Retrieved February 16, 2010 from http://ss.ucalgary.ca/co-op/sites/ss.ucalgary.ca.co-op/files/ams__Ipsos_Special_Mini-Report__20_Jan_2010_.pdf.

Jones, M, Crist, G, Engels, B, Montague, A and De Silva, S. (2008). *Evaluating a multi-disciplinary virtual WIL project*. In WACE ACEN Asia Pacific Conference 2008 E-Proceedings, Sydney, Australia, 30 September-3 October 2008.

Jones, J. (2007). Connected learning in co-operative education. *International Journal of Teaching and Learning in Higher Education, 19* (3), 263-273.

Keating, S. (2006). *Learning in the workplace: A literature review*. Victoria University, Postcompulsory Education Centre. Retrieved February 8, 2010 from http://tls.vu.edu.au/PEC/PEC_docs/PEC%20LIW%20literature%20review%20final.pdf.

Knouse, S., Tanner, J., and Harries, E. (1999). The relation of college internships, college performance, and subsequent job opportunity. *Journal of Employment Counseling, 36* (1). 35-43.

Kolb, A. and Kolb, D. (2005). Learning Styles and Learning Spaces: Enhancing Experiential Learning in Higher Education. *Academy of Management Learning & Education, 4* (2), 193-212.

Lapointe, M., Dunn, K., Tremblay-Cote, N., Bergeron, L., and Ignaczak, L. (2006). *Looking Ahead: A 10-Year Outlook for the Canadian Labour Market (2006-2015)*. Ottawa: HRSDC.

Lave, J. and Wenger, E. (1991). *Situated Learning: Legitimate Peripheral Participation*. New York: Cambridge University Press.

Lehmann, W. (2007). *Choosing to Labour? School-Work Transitions and Social Class*. Montreal & Kingston: McGill-Queen's University Press.

Linn, P. (2004). Theories About Learning and Development in Cooperative Education and Internships. Linn, P. Howard, A. and Miller, E. (Eds.) *Handbook for Research in Cooperative Education and Internships*.   Mahwah, New Jersey: Lawrence Erlbaum Associates.

Little, B. and Harvey, L. (2006). *Learning through work placements and beyond*.   Accessed June 17, 2010 from www.prospects.ac.uk/downloads/documents/HECSU/Reports/workplacement_Little_Harvey.pdf

Lucas, U. and Tan, P. (2007). *Developing a reflective capacity within undergraduate education: the role of work-based placement learning*. Retrieved June 14, 2010 from www.heacademy.ac.uk/assets/York/documents/resources/publications/LucasLengTan.pdf.

Lucas, W., Cooper, S., Ward, T., and Cave, F. (2009). Industry placement, authentic experience and the development of venturing and technology self-efficacy. *Technovation, 29*, 738-752.

Mandilaras, A. (2004). Industrial Placement and Degree Performance: evidence from a British Higher Institution. *International Review of Economics Education, 3* (1), 39-51.

Martin, A. and Hughes, H. (2009). *How to Make the Most of Work Integrated Learning: A Guide for Students, Lecturers & Supervisors*. New Zealand: Massey University Press. Retrieved March 2, 2010 from www.waceinc.org/papers/How%20To%20Make%20The%20Most%20of%20Work%20Integrated%20Learning.pdf.

McLennan, B. (2008). *Work-integrated learning (WIL) in Australian universities: The challenges of mainstreaming WIL. Paper presented at the Career Development Learning — Maximising the Contribution of Work Integrated Learning to the Student Experience*. NAGCAS Symposium, Melbourne. Retrieved February 23, 2010 from www.usq.edu.au/resources/nagcasaltcsymposiumprereading120608.pdf.

Ménard, M., Chan, C. and Walker, M. (2008). *National Apprenticeship Survey: Ontario Overview Report 2007*. Ottawa: Minister of Industry.

Mills, A., McLaughlin, P, and Robson, K. (2008). *Employers' perspectives on work-integrated learning* in project based workplaces. Paper presented to World Association for Cooperative Education Asia Pacific Conference. Retrieved February 27, 2010 from www.acen.edu.au/images/resources/conferences/wace_conference_08/e-proceedings.pdf.

Moely, B.E., McFarland, M., Miron, D., Mercer, S., and Illustre, V. (2002). Changes in college students' attitudes and intentions for civic involvement as a function of service learning experiences. *Michigan Journal of Community Service Learning*, 18-26.

Mooney, L. and Edwards, B. (2001). Experiential Learning in Sociology: Service Learning and Other Community-Based Learning Initiatives. *Teaching Sociology, 29*, 181-194.

Myers-Lipton, S.J. (1998). Effect of a comprehensive service-learning program on college students' civic responsibility. *Teaching Sociology, 26* (4), 243-258.

Nixon, I., Smith, K., Stafford, R. and Camm, S. (2006). Work-based learning: Illuminating the higher education landscape. *The Higher Education Academy*. Retrieved February 4, 2010 from www.heacademy.ac.uk/assets/York/documents/ourwork/research/wbl_illuminating.pdf.

Parker-Gwin, R. and Mabry, J.B. (1998). Service learning as pedagogy and civic education: Comparing outcomes for three models. *Teaching Sociology, 26* (4), 276-291.

Patrick, C-j., Peach, D., Pocknee, C., Webb, F., Fletcher, M., Pretto, G. (2008). *The WIL [Work Integrated Learning] report: A national scoping study [Australian Learning and Teaching Council (ALTC) Final report]*. Brisbane: Queensland University of Technology. Retrieved November 14, 2010 from www.acen.edu.au/images/project/wil_report_web_22jan09.pdf.

Peters, T., McHugh, M.A., and Sendall, P. (2006). The benefits of service learning in a down-turn economy. *International Journal of Teaching and Learning in Higher Education, 18* (2), 131-141.

Rawlings, P., White, P. & Stephens, R. (2005). Practice-Based Learning in Information Systems: the Advantages for Students. *Journal of Information Systems Education, 16* (4), 455-463.

RMIT University. (2008). *Work Integrated Learning at RMIT: Current Practices and Recommendations for the Future.* Melbourne, Australia: RMIT.

Roberts, J. (2008). From Experience to Neo-Experiential Education: Variations on a Theme. *Journal of Experiential Education, 31* (1), 19-35.

Ryan, G., Toohey, S., and Hughes, C. (1996). The purpose, value and structure of the practicum in higher education: a literature review*. Higher Education, 31* (3), 355-377.

Schilling, J. and Klamma, R. (2010). The difficult bridge between university and industry: a case study in computer science teaching. *Assessment & Evaluation in Higher Education, 35* (4), 367-380.

Schön, D. (1991). *The Reflective Turn: Case Studies in and on Educational Practice.* New York: Teachers College Press.

Schuetze, H. (2003). Alternation Education and Training in Canada. In Schuetze, H. and Sweet, R. (Eds.) *Integrating school and Workplace Learning in Canada: Principles and Practices of Alternation Education and Training.* Montreal & Kingston: McGill Queen's University Press.

Schuetze, H. and Sweet, R. (2003). Integrating School and Workplace Learning in Canada: An Introduction to Alternation Education Concepts. In Schuetze, H. and Sweet, R. (Eds.) *Integrating school and Workplace Learning in Canada: Principles and Practices of Alternation Education and Training.* Montreal & Kingston: McGill Queen's University Press.

Scoullar, R., & CIRM Working Group. (2008). *Guidelines for good practice in work integrated learning for the integrated resource sciences.* Retrieved January 28, 2010 from www.cirm.org.au/pdf/CIRM_Improving_employability.pdf.

Siebert, S., Mills, V., and Tuff, C. (2009). Pedagogy of work-based learning: The role of the learning group. *Journal of Workplace Learning, 21* (6), 443-454.

Smith, M., Brooks, S. Lichtenberg, A., McIlveen, P. Torjul, P., and Tyler, J. (2009). *Career Development Learning: Maximising the contribution of work-integrated learning to the student experience. Final Project Report.* New Zealand: University of Wollongong. Retrieved February 27, 2010 from www.nagcas.org.au/uploads/file/ALTC%20Report%20July.pdf.

Surridge, I. (2009). Accounting and Finance Degrees: Is the Academic Performance of Placement Students Better? *Accounting Education, 18* (4&5), 471 – 485.

Swail, S. and Kampits, E. (2004). *Work-Based Learning and Higher Education.* Virginia Beach, VA: Educational Policy Institute. Retrieved February 24, 2010 from www.educationalpolicy.org/pdf/WBL.pdf.

Tanggaard, L. (2007). Learning at trade vocational school and learning at work: boundary crossing in apprentices' everyday life. *Journal of Education and Work, 20* (5), 453-466.

Tyndälä, P. (2009). Connectivity and Transformation in Work-Related Learning – Theoretical Foundations. In Stenström, M., and Tyndälä, P. (Eds.), *Towards Integration of Work and Learning.* The Netherlands: Springer.

University of Waterloo. (2005). *Learning from Experience: Enhancing Co-operative Education and Career Services at the University of Waterloo.* Waterloo: University of Waterloo.

Walters, D. and Zarifa, D. (2008). The earnings and employment outcomes for male and female postsecondary graduates of coop and non-coop programs. *Journal of Vocational Education and Training, 60* (4), 377-399.

Weible, R. (2010). Are Universities Reaping the Available Benefits Internship Programs Offer? *Journal of Education for Business, 85*, 59-63.

Weisz, M. and Smith, S. (2005). Critical changes for successful cooperative education. In *Higher education in a changing world*, Proceedings of the 28th HERDSA Annual Conference, Sydney, 3-6 July 2005: pp 602.

Whitaker, K. (2009). *College of Trades: Report of the Advisor to the Minister of Training, Colleges and Universities,* May 1, 2009. Retrieved February 23, 2010 from www.edu.gov.on.ca/eng/tcu/collegeoftrades/CollegeofTradesFinalReport_EN.pdf.

Appendices

Appendix A – Institutional Key Informants

Algonquin College
> Jo-Ann Aubut, Chair, Academic Development
> Stephen Finnagan, Head of Apprenticeship
> Rodney Walsh, Developmental Services Worker Program
> Larry Weatherdon, Coordinator, Events Management, Faculty of Business

George Brown College
> Rolf Priesnitz, Director, Apprenticeship Programs
> Susan Rudin, Dental Hygiene and Dental Assisting Programs

Georgian College
> Rita Pittman, Co-op Consultant, Computer Studies
> Gabrielle Koopmans, Associate Dean, School of Engineering Technology
> and Apprenticeship
> Pat Roberts, Career Consultant and Research Analyst Program

Niagara College
> Fiona Allan, Director, Workforce and Business Development
> Cheryl Evans, Co-op Consultant, Business & Tourism
> Holly Catalfamo, Chair, Community Services Division
> Marti Jurmain, Academic Director, Niagara Research Office

Laurentian University
> Patricia Danyluk, Practicum Supervisor, School of Education
> Reuben Roth, Professor, Labour Studies and Sociology
> Vincent Salyers, Director, School of Nursing

Wilfrid Laurier University
> Kate Connolly, Director Laurier Centre for Community Service-Learning
> Debra Martz Melanson, Music Therapy Program
> Chris Maziarz, Special Projects and Research Coordinator, Faculty of Business
> Darren Thomas, Community Service-Learning Program Coordinator
> Karen McCargar, Associate Director Co-operative Education

University of Ottawa
> Stacy Keehn, Manager of Career and Professional Development
> Jeff Keshen, Experiential Learning
> Amanda Richardson, Connexions Program Coordinator, Telfer School of Management
> Danielle Delorme, Co-op Program Coordinator

University of Waterloo
Diane Bader, Director, Operations
Peggy Eichinger, Field Coordinator
Adrienne Gilbert, Associate Chair, Department of Recreation and Leisure Studies
Ross Johnston, Director, Employer Relations
Sharon Kimberley, Team Leader, Field Services, Central Ontario Team
Marilyn Malton, Director, Renison University College
François Paré, Chair, French Studies
Sandy Pauly, Student & Faculty Relations Support Supervisor
Susan Stewart, Process Management Leader
Cathy Taylor, Manager, Employer Services

University of Windsor
Romina Oulevey, Program Coordinator, Business & Kinesiology
Sue Ross, Employer Relations Co-op Coordinator
Chad Sutherland, Department of Kinesiology, University of Windsor
Kerri Zold, Applied Learning Coordinator

Appendix B - Institutional Key Informant Interview Guide

1. Can you tell me a little about your role at [institution], and how that role relates to work-integrated learning? What specific WIL programs are you involved with? Can you briefly describe the program(s) for me?

2. In developing our draft typology, we defined WIL as "a formal program of learning situated within authentic work experiences and implemented intentionally as part of a higher education curriculum." How does this definition align with your own experience?

3. Now I want to turn to the details of the typology. The typology identifies six types of work-integrated learning: vocational education, supervised experience, structured work experience, project-based learning, service learning and work-based learning. Does this typology make sense from your perspective as someone involved with WIL? Why or why not? Are additional categories of WIL needed?

4. Looking at the characteristics for each of these six types, is there one type that best describes the program(s) you are involved with? Which type?

5. We'd like to use your experience with _____ (type of WIL) to flesh out the main characteristics captured in the typology.
   a. Let's start with the first characteristic, common terminology … are there other terms you think should be added?
   b. Next, educational purpose … is this an appropriate description of the purpose?
   c. Duration …
   d. Timing …
   e. Payment …
   f. Academic credit …
   g. Program/sector …
   h. Compulsory/optional …
   i. Level of student knowledge required …
   j. Curriculum development …
   k. Level of workplace supervision …
   l. Level of academic supervision …
   m. Assessment and evaluation …
   n. Role of student in workforce …
   o. Benefits to students …
   p. Benefits to employers …

6. Are there any other key characteristics that you believe should be included in the typology?

7. Thinking about your own perspective and the job you do everyday, what are the challenges you face in developing and delivering WIL?

8. What are the challenges from an institutional perspective?

9. Based on your own experiences, what do you see as the benefits of WIL to your institution? To the post-secondary education sector?

10. Do you see opportunities for your institution to promote or expand WIL in the future? (Probe: particular fields of study, industry sectors)

11. Are there other issues related to WIL that you believe need further exploration or research?

12. We would like to develop a series of case studies highlighting WIL programs that are particularly interesting or unique or effective. Can you tell me about an exemplary WIL program at [institution]? Thinking about the draft typology, which type of WIL would it fall under? Would you be willing to provide some written details about the program that could be used as the basis for a case study?

13. (If yes) Great, I'll email you the case study questionnaire separately for you to complete and send back at your convenience.

14. Before we close, do you have any other thoughts or comments you would like to share that could assist us with this research?

Thank you very much for your time!

Appendix C – Employer/Community Partner Interview Guide

1. Your name was suggested to us by [*institution*]. What kind of programs have you been involved with there? (ie. co-op, internships, apprenticeship, practicum, etc.) What other institutions have you been involved with?
   a. Can you tell me a bit about the types of work opportunities you have provided for students?
   b. How many students have been through your workplace/organization since you first became involved?

2. How did you first become aware of the opportunity to "host" a student in your workplace/organization, or provide a work experience?

3. What made you initially decide to become involve
   a. What is keeping you involved?
   b. Do you think you will be able to provide additional opportunities in the future? Why or why not?

4. Thinking in terms of student skills and competencies, what expectations do you have of the students who have been involved in work experiences with your business/organization?
   a. Are your expectations generally met?

5. What involvement (if any) do you have in developing the curriculum/learning objectives for the work experience?
   a. What involvement do you have in developing the student job description?
   b. Does this involvement work well from your perspective?

6. What role do you play in supervising and assessing the students who come into your workplace/agency? How did the institution prepare you for your supervision and assessment responsibilities?

7. What would you say are the benefits to the students who have participated in your workplace?

8. What would you say are the benefits to you as the employer? To your employees?

9. Have you encountered any <u>internal</u> issues or barriers within your business/organization that have affected your participation in providing work opportunities for students? (*Probe: staffing/human resources, financial considerations, etc.*)

10. Have you encountered any issues or barriers *<u>external</u>* to your business/organization that have affected your participation? (*Probe: economic conditions, programs offered by institution, other institutional issues, past experiences with WIL students, availability of students, etc.*)

11. When you are making hiring decisions, do you look for job applicants who have had post-secondary work experiences? Why or why not?
    a. Would you be more likely to hire a student who has had post-secondary work experience than a student who has not had work experience as part of their post-secondary program? Why or why not?

12. Do new hires with post-secondary work experiences bring different skills and competencies to the job than other new employees? Why or why not?

13. Have you recommended to other businesses/organizations that they become involved in providing work experiences for students? Why or why not?

14. Before we close, do you have any other thoughts or comments you would like to share that could assist us with this research?

Thank you very much for your time!