Faculty Experiences with and Perceptions of Work-Integrated Learning (WIL) in the Ontario Postsecondary Sector

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for the Higher Education Quality Council of Ontario

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Executive Summary

In the emerging knowledge-based economy, employers are requiring new levels of skill from labour market entrants. As employers' expectations of postsecondary graduates increase, Ontario's publicly funded colleges and universities are working to provide students with much of the knowledge, skills, and training needed for success in the community and in the changing workplace. As a result, there has been a movement within the postsecondary education (PSE) sector to provide a closer integration of learning and work as a strategy for workforce skills development (Fisher, Rubenson, Jones, & Shanahan, 2009). In particular, work-integrated learning (WIL) programs such as co-operative education, internship, and apprenticeship are frequently endorsed as educational modes of delivery to support such integration.

Offering work-integrated learning experiences for students requires a significant investment of human and financial resources to be effective. Faculty in particular play an important role in designing, supporting, and implementing WIL opportunities for students. Despite a growing recognition of the essential role played by faculty, very little is known about their perceptions of and experiences with WIL. To shed light on this issue, this report provides the results of the WIL Faculty Survey conducted by the Higher Education Quality Council of Ontario (HEQCO) in partnership with 13 Ontario postsecondary institutions. The report is part of a broader multi-phase project being undertaken by HEQCO on WIL in Ontario's PSE sector.

The WIL Faculty Survey was designed to better understand faculty experiences with and perceptions of WIL as an element of postsecondary curriculum. Guided by a Working Group comprised of representatives from the 13 participating postsecondary institutions, the study sought to address four primary research questions:

1) How do faculty perceive the value and benefits of WIL to students, faculty members, and postsecondary institutions?

2) Do faculty views about WIL differ by employment status, program, gender, years of teaching, previous employment experience, or their own past WIL experience?

3) How do faculty integrate students' work experiences into the classroom?

4) What concerns do faculty have about introducing or expanding WIL opportunities in postsecondary institutions?

The survey instrument was developed in consultation with the Working Group and was pre-tested with 25 faculty members. The survey was administered online from March to May, 2011, with e-mail invitations to participate sent to 18,232 faculty from the 13 partner institutions (6,257 college faculty and 11,975 university faculty). In total, 1,707 college faculty and 1,917 university faculty completed the survey to an acceptable cut-off point, for an overall response rate of 19.9%.

Close to two-thirds of college faculty and roughly half of university faculty respondents reported having experience teaching in a program in which students participate in a co-op or apprenticeship. Fewer faculty had experience personally teaching a course with a WIL component, with 47.5% of college faculty and 28.9% of university faculty currently or previously having taught a course involving WIL. Among those who had taught a course with a WIL component, field placements were the most common type of WIL among college faculty, followed by mandatory professional practice (student placements required for licensure or professional designation). For university respondents, mandatory professional practice was the most common type of WIL taught, followed by applied research projects.

Appropriate Level of WIL

Faculty were generally supportive of the current level of WIL used in postsecondary institutions, with very few respondents reporting that the use of WIL should be decreased (0.8% of college faculty and 4.3% of university faculty). Among college faculty, over half felt that the use of WIL should be increased (55.1%), and one-quarter felt that it should be kept the same (24.7%). There was slightly less support for increasing the use of WIL among university faculty, with less than half of respondents indicating that the level of WIL should be increased (43.8%), and exactly one-quarter feeling it should stay at the same level. A sizeable proportion of both college (19.4%) and university (26.9%) faculty responded that they were not sure.

Faculty views about the appropriate level of WIL varied significantly based on a number of respondent characteristics. In particular, faculty who personally taught a course that had a WIL component, who had participated in WIL themselves as a student, who had more years of other employment experience outside of postsecondary, and who taught in Business faculties tended to be more likely to report that the level of WIL in postsecondary education should be increased. These differences were most pronounced among university faculty.

Value of WIL

In line with the support found for the current level of WIL in PSE, an overwhelming majority of college and university faculty respondents agreed or strongly agreed that WIL is valuable (95.0% college and 83.5% university). When asked to indicate their level of agreement with various statements about specific potential advantages and disadvantages of WIL for students, faculty and institutions, it was clear that faculty perceive the advantages of WIL to accrue primarily to students. In particular, both college and university faculty tended to have high levels of agreement with statements about the labour market advantages of WIL for students, such as helping students to better understand work realities and developing employment contacts. Among survey respondents, the primary advantages of WIL for faculty and institutions were that it strengthens links between the institution and the business community and connects postsecondary institutions to the broader community. A large proportion of college faculty also agreed or strongly agreed that feedback from students and employers who participate in WIL can improve academic programming.

Using an index measuring perceived value of WIL created from responses to statements about the advantages and disadvantages of WIL for students, faculty, and institutions, a regression model was run to examine the extent to which faculty views about the value of WIL differ by various characteristics and experiences. For college faculty, gender, participation in WIL as a student, level of WIL involvement, and program area were found to be significant predictors of the perceived value of WIL. Female faculty, faculty who participated in WIL when they were a student, faculty who taught in a WIL program or taught a course with a WIL component, and faculty who taught in Social Sciences, Health, or Business programs perceived WIL to be more valuable. Age, years of other employment experience outside of postsecondary, and employment status (full-time/part-time) were not statistically significant predictors.

For university faculty, employment status, gender, participation in WIL as a student, level of WIL involvement, years of other employment experience outside of postsecondary and program area were statistically significant predictors of the perceived value of WIL. Holding part-time status, being female, having participated in WIL as a student, teaching in a WIL program or teaching a course with a WIL component, having more years of other employment experience, and teaching in any program area outside of the Arts and Humanities were all associated with higher scores on the value of WIL index. Age was not found to be a significant predictor.

Challenges

Ensuring quality placements for students was the most frequently selected challenge among both college (79.6%) and university (74.7%) respondents, followed by finding enough placements for students (76.2% and 67.4%, respectively). Concerns about faculty workload also emerged as prominent challenges, with over half of both college and university faculty selecting "managing WIL with large class sizes" and "balancing WIL with academic workloads." Only about one-fifth of college and university faculty respondents selected lack of institutional service recognition for WIL activities or lack of recognition for WIL activities in promotion decisions as key challenges.

Workload Issues

Offering a WIL experience as part of a postsecondary course can add to the workload of faculty. Provided with a list of 17 workload tasks, about half of faculty respondents who taught a course with a WIL component reported performing 11 or more of these tasks in a typical term. For most faculty, the majority of these tasks were completed as part of their regular duties. Classroom-focused workload tasks tended to be the most commonly performed activities, such as preparing WIL-related lectures, tutorials, and workshops; evaluating WIL-related student assignments; and establishing WIL student learning objectives. Tasks completed most often in addition to regular duties tended to be employer and career-related, such as providing career/employment counselling or mentoring for students, recruiting WIL partners/host sites, and managing relationships with host employers and community partners.

Labour Market Connectivity

Formal WIL opportunities are only one way in which postsecondary institutions and faculty connect learning with the world of work and employment. Asked to indicate the extent to which they participated in a range of activities that integrate student learning with real-world work experiences, both college and university faculty reported engaging most often in activities that require minimal direct contact with outside business, government or community members. This included using business examples to illustrate concepts in class, and providing individual career assistance for students. Activities that require higher levels of planning and preparation, such as organizing class visits to local businesses, arranging job shadowing opportunities, and inviting business guest speakers into classes were undertaken relatively infrequently. However, close to 70% of college faculty and roughly half of university faculty stated that they typically invite business, government, or community guest speakers into the classroom at least once during an academic term. Overall, college faculty reported integrating student learning with real-world work experiences to a greater extent than university faculty. When responses were examined by program area, university faculty teaching in Business programs were found to engage in the connectivity activities to a significantly greater extent than faculty in other program areas. University faculty who taught a course with a WIL component were also more likely to engage in the activities than university faculty who taught in a WIL program or had no WIL involvement. While differences by program area and level of WIL involvement were also statistically significant for college faculty, the effect sizes were very small suggesting that the differences were not practically significant.

Discussion

This study offers valuable insight into the perceptions of faculty at Ontario colleges and universities, providing a greater sense of the barriers and challenges to faculty involvement in WIL, as well as the perceived benefits. Based on the survey findings, a number of policy recommendations are suggested. First, postsecondary institutions will need to improve faculty awareness of the purpose and benefits of WIL if they wish to increase their provision of WIL opportunities for students. Institutions will also need to address concerns that WIL privileges the production of "workers," over providing students with a broad-

based and more theoretical education. Further, dedicated financial and administrative resources and institutional recognition for WIL-related work are important to aid faculty in providing WIL opportunities.

Given that one of the primary concerns for faculty is ensuring adequate numbers of quality placements for students, institutions could also play a greater role in working to strengthen and support communication links with employers and community partners. Providing assistance in recruiting and building relationships with host sites, similar to institutional structures that often already support more established co-op programs, could help to alleviate faculty concerns about the significant demands on time involved in WIL.

Future research should explore faculty attitudes in relation to specific types of WIL, examining how the barriers and workload issues may differ. Studies could also move beyond focusing on faculty perceptions of benefits and challenges, to generating a better understanding of whether and how participating in WIL impacts faculty in other ways, such as the influence of WIL on instructional approaches. Effective strategies to enhance faculty involvement in WIL should also be explored, along with institutional best practices in the administration and support of faculty-led WIL initiatives.

1. Introduction

Increasingly, employers in the emerging knowledge-based economy are requiring new levels of skill from labour market entrants. As employers' expectations of postsecondary graduates rise, Ontario's publicly funded colleges and universities are working to provide students with much of the knowledge, skills, and training needed for success in the community and in the changing workplace. As a result, there has been a movement within the postsecondary education (PSE) sector to provide a closer integration of learning and work as a strategy for workforce skills development (Fisher, Rubenson, Jones, & Shanahan, 2009). In particular, work-integrated learning (WIL) programs such as co-operative education, internship, and apprenticeship are frequently endorsed as educational modes of delivery to support such integration.

While the benefit and value of postsecondary WIL experiences to students, institutions, and employers are generally assumed, relatively little empirical evidence exists. In addition, concerns have been raised that closer integration between education and the workplace will privilege workplace learning 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, Harris, Northwood, & Johrendt, 2009). Given the significant investment of private and public resources involved in postsecondary WIL programs, a clear understanding of whether and how WIL programs contribute to the quality of the PSE experience of students and to their post-graduation outcomes is vital. In addition, there are equity and access dimensions to the provision of work experiences through postsecondary WIL – rather than student employment programs or other labour market policy tools – that must be carefully considered in any analysis of WIL policy.

This report provides the results of the WIL Faculty Survey, which was undertaken as part of a broader project of the Higher Education Quality Council of Ontario (HEQCO), called Work-Integrated Learning in Ontario's PSE Sector. The project is a multi-phase study exploring the benefits, challenges, and outcomes of WIL programs, and is designed to provide empirical evidence of how WIL programs contribute to the quality of students' PSE experiences and their post-graduation outcomes. Phase 1 of this project was commissioned in 2009, and was an exploratory study of the range of WIL opportunities available at Ontario postsecondary institutions.[1] A literature review of relevant research was conducted, as well as qualitative interviews with 25 employers and 39 staff and faculty involved in the delivery of WIL programs at nine Ontario colleges and universities. Based on the research findings, a typology was developed to provide a conceptual framework for understanding the complex array of WIL programs available in higher education (Table 1).

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[1] See www.heqco.ca for a copy of the Phase 1 report, entitled Work-Integrated Learning in Ontario's Postsecondary Sector.

Table 1 Abbreviated WIL Typology

	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

Source: Sattler, 2009

During Phase 1, it was also found that there is little consensus around a shared definition of "work-integrated learning," with a wide variety of meanings assigned to the term in the literature. These various definitions were reviewed in detail, and a conceptual understanding best suited to the Ontario context was proposed.[2] This definition, adopted here, describes WIL as:

> *…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 (Billett, 2009a: p. v).*

Building on the findings of the first phase, Phase 2 of this project was designed to explore faculty and student perceptions of the value and benefits of work and voluntary activities undertaken during postsecondary study, and examines the impact of these experiences on learning and labour market outcomes. A Graduating Student Survey will explore postsecondary students' voluntary and employment experiences, including participation in WIL. Sixteen months after the initial survey, in a proposed Phase 3 of this project, a follow-up survey will be conducted to explore students' labour market and further educational outcomes.

The WIL Faculty Survey, which is the focus of this report, was designed to better understand faculty experiences with and perceptions of WIL as an element of postsecondary curriculum and was guided by a Working Group comprised of representatives from the 13 participating postsecondary institutions (see Appendix 1). This research builds on the Phase 1 findings, in which key informants interviewed suggested that staff and faculty believe WIL offers a wide range of benefits, but also perceive challenges associated with the development and delivery of WIL programs. Informed by these findings, this study sought to address four primary research questions:

1) How do faculty perceive the value and benefits of WIL to students, faculty members, and postsecondary institutions?

2) Do faculty views about WIL differ by employment status, program, gender, years of teaching, previous employment experience, or their own past WIL experience?

3) How do faculty integrate students' work experiences into the classroom?

4) What concerns do faculty have about introducing or expanding WIL opportunities in postsecondary institutions?

To address these questions, an online survey of faculty at 13 Ontario postsecondary institutions that partnered with HEQCO in the completion of this study was conducted. The survey results are presented in this report, which is organized into six chapters:

- Chapter 2 situates the study in the scholarly literature, focusing on research studies that examine faculty involvement in and perceptions of WIL.

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[2] See the Phase 1 report, entitled Work-Integrated Learning in Ontario's Postsecondary Sector, for a detailed discussion (available at www.heqco.ca).

- Chapter 3 describes the study methodology, including an overview of the development of the survey instrument, the survey administration, and data analysis procedures.

- Chapter 4 details the profile of survey respondents, summarizing respondent demographic characteristics, postsecondary teaching experience and other employment experience, and involvement with WIL.

- Chapter 5 presents the survey findings, including faculty views about the purpose of PSE, the appropriate level of WIL in postsecondary programs of study; the value of WIL for students, faculty, and postsecondary institutions; and challenges and workload issues associated with administering WIL programs. This chapter also presents findings on the extent to which faculty engage in various activities that connect learning and work that may not be part of formal WIL programs.

- Chapter 6 summarizes the study findings, offering policy recommendations and suggestions for future research.

2. Literature Review

Work-integrated learning is not simply about providing students with work experience; it is an educational process with its own foundational theory and pedagogy (Moreland, 2005). Thus, WIL programs require significant investment of human and financial resources and need to be effectively integrated into the curriculum or risk being unfocused and unproductive (Patrick, Peach, Pocknee, Webb, Fletcher, & Pretto, 2009). Despite a growing recognition that faculty are essential to the successful development and implementation of WIL programs, the literature has focused primarily on student and employer experiences and views (McCurdy & Zeqwaard, 2009; Pribbenow, 2005). Studies that have considered faculty views have tended to be narrow in scope, including only one particular program or type of WIL, and have typically only examined the perceptions of faculty who are directly involved in WIL. Nonetheless, some important insights can be gleaned from the literature.

Studies of faculty perceptions of WIL generally suggest that faculty view these programs favourably, and recognize many benefits and advantages of the use of WIL in PSE (Abes et al., 2002; Hodges, 2008; McCurdy & Zegwaard, 2009). Key benefits acknowledged by faculty that are cited in the literature include helping students focus on their career paths and understand workplace realities, increased understanding of course material, and personal development (Abes et al., 2002; Hodges, 2008; McCurdy & Zegwaard, 2009). In addition to the benefits of WIL programs for students, a number of studies have also reported that faculty are motivated to become involved with WIL because they believe it provides a service to the community, acts as an effective marketing tool for their postsecondary institution or program, and helps to create community partnerships (Abes et al., 2002; Bulot & Johnson, 2006; McCurdy & Zegwaard, 2009). Notably, these perceived benefits relate primarily to students, postsecondary institutions, and the wider community.

While much of the literature suggests that faculty perceive WIL to be of little benefit for faculty themselves (McCurdy & Zegwaard, 2009), findings from a few studies have countered this view. Researching field experience opportunities at Canadian universities, Wimmer (2007) found that some faculty supervisors valued their role because they felt they could gain relevant knowledge and perspectives from the 'real world' through their relationships with field site supervisors. Examining service-learning, Pribbenow (2005) reported that faculty felt service-learning was engaging and rewarding and contributed to a heightened commitment to teaching. Faculty engaged in service-learning also felt that the latter led to deeper relationships with students and a greater understanding of their needs through the heightened interaction that was required to link students' community experiences with their learning. Further, this heightened interaction was said to enhance the ability of faculty to effectively assess and understand student learning.

While these studies have highlighted a number of benefits that faculty associate with WIL, there has been an even greater emphasis on the challenges. One of the primary challenges reported in the literature is that delivering WIL programs requires considerable faculty time and energy (Abes et al., 2002; Bulot & Johnson, 2006; Hodges, 2008; Patrick et al., 2009; Pribbenow, 2005; Sattler, 2011). Integrating WIL into a course is qualitatively different than teaching a conventional course, and necessitates the development of unique knowledge and skills. In particular, building and managing relationships with community partners is beyond the scope of traditional postsecondary teaching and can require a significant investment of faculty time. Supervising and assessing students' work experiences also adds significantly to the workload of faculty. For service-learning faculty, these additional workload commitments have been estimated to require up to 10 extra hours a week, and 4.5 hours/week on average (Bulot & Johnson, 2006).

Due to the additional demands involved with WIL, faculty often find themselves sacrificing research and publication productivity (Abes et al., 2002; Emslie, 2011). This problem is amplified by the fact that descriptions of academic duties have not kept pace with the expansion of WIL in PSE (Emslie, 2011).

That is, while faculty are increasingly expected to deliver WIL programs, accounts of academic work roles often do not include workload allowances for the delivery of WIL. When it comes to promotion and tenure in universities and the workload formula of colleges, faculty find that time spent on WIL is often undervalued compared to other academic pursuits. While these arguments stem from the Australian context, a recent HEQCO study suggested that research continues to be more highly valued and have a bigger payoff in status and reputation than the quality of teaching in Ontario universities in particular, indicating that these claims likely have relevance in Ontario as well (Britnel, Brockerhoff-Macdonald, Carter, Dawson, Doucet, Evers, Hall, Kerr, Liboiron-Grenier, McIntyre, Mighty, Siddall, & Wilson, 2010).

In light of these arguments, it is not surprising that a prominent barrier highlighted in the literature is a lack of institutional support and recognition for faculty involved with WIL. Abes, Jackson and Jones (2002) found that lack of acknowledgement in the institutional reward structure is a key deterrent to faculty participation in service-learning, and a number of studies have reported that despite the time-intensive nature of providing quality WIL experiences, postsecondary institutions typically offer little encouragement or reward for faculty (Brewer & Gray, 1999; Emslie, 2011; McKay & Rozee, 2004). In the Canadian context, Wimmer (2007) found that university faculty in professional programs feel there is a lack of political will among institutional policymakers to modify existing faculty reward structures to recognize efforts to deliver field experiences for students.

The difficulty of finding suitable work placements for students is also noted to be a significant challenge to effective implementation of WIL (Patrick et al., 2009; Sattler, 2011). As the desire to provide WIL opportunities grows, the ability of industry to absorb students through individual placements becomes strained. In Phase 1 of this project, many faculty and university staff reported that placements are hard to obtain. Finding employers or community agencies that are willing to take on students can be difficult, particularly when there are multiple postsecondary institutions in a region competing for a small number of placement opportunities (Sattler, 2011).

Ensuring adequate numbers of placements is only part of the challenge, however, with faculty also concerned about the quality of those placement experiences that already exist. Workplace supervisors often do not receive training, yet for WIL to have the greatest value for students work opportunities need to be relevant and engaging. Establishing the right fit between a student and the placement opportunity is of paramount importance, but can be a difficult undertaking (Patrick et al., 2009; Wimmer, 2007; Sattler, 2010).

A number of additional challenges and barriers to faculty involvement in the development and delivery of WIL programs are also highlighted in the literature. These include maintaining employer relationships (Abes et al., 2002; Hodges, 2008; Pribbenow, 2005), lack of resources and funding (Abes et al., 2002; Hodges, 2008; Patrick et al., 2009), and lack of support from non-WIL faculty (Wimmer, 2007). In one of the few studies that included the perspectives of faculty not involved in WIL, Abes, Jackson and Jones (2002) found that the four top deterrents for faculty not using service-learning in their courses were:

       1) anticipating logistical problems coordinating the community service aspects;

       2) not knowing how to use service-learning effectively;

       3) feeling service learning was not relevant to the course in which they taught; and

       4) not being given or not anticipating being given release time to develop the service-learning component of the course.

It should be emphasized that these findings are only related to service-learning, and cannot be taken as representative of the challenges associated with other types of WIL.

There has also been limited discussion about the ways in which WIL and non-WIL faculty differ. Rothamer (2003) conducted a study that compared business faculty who were and were not involved in co-operative education, and found that those who were involved showed a higher preference for incorporating students in determining the nature and evaluation of course content and material. Likewise, co-operative education faculty more frequently took their students' prior experiences into account when planning learning activities.

While the literature highlights a number of barriers to faculty involvement in WIL, there has been little discussion of strategies that can be used in response. In relation to fieldwork experiences in social work, Savaya, Peleg-Oren, Stange and Geron (2003) suggest that creating a formal framework detailing the purpose of fieldwork, outlining ongoing training and updating for supervisors, and establishing regular meetings between field supervisors and classroom instructors could help to bridge the gap between academic and practical instruction. McCurdy and Zegwaard (2009) suggest that professional development (PD) for faculty focused on delineating the educational aspects of WIL, providing teaching ideas to incorporate WIL within the classroom, and adjusting workload models to recognize faculty participation in WIL, could go a long way towards increasing faculty engagement. Formalizing WIL in academic job descriptions, thus making WIL a visible part of faculty members' role, has also been proposed (Emslie, 2011).

In summary, the literature suggests that faculty are generally supportive of WIL, and see it as beneficial for students, employers, and postsecondary institutions. While there has been limited evidence that faculty reap direct benefits from being involved in WIL, a much greater emphasis has been placed on the challenges to faculty, including time demands, difficulties finding quality placements, and a lack of institutional resources and support. Currently, however, the body of literature on faculty involvement in WIL is quite small, with most studies narrowly focusing on specific program areas and types of WIL and often including only those faculty who have direct involvement. Further, much of the literature is based in the Australian and American contexts. The current research project aims to begin to fill this gap by providing a comprehensive overview of faculty views from a spectrum of academic disciplines at Ontario postsecondary institutions, and includes both faculty who have current or past experience with WIL, as well as faculty with no WIL involvement.

3. Methodology

To examine faculty views of WIL, an online survey was conducted of faculty at six colleges and seven universities in Ontario that have partnered with HEQCO in undertaking this research. The 13 partnering institutions included:

- Algonquin College
- George Brown College
- Georgian College
- La Cité collégiale
- Laurentian University
- Niagara College
- Sheridan College

- University of Ottawa
- University of Waterloo
- University of Western Ontario
- University of Windsor
- Wilfrid Laurier University
- York University

Research ethics approval was received from all 13 participating institutions. A census method was used, with all full-time and part-time faculty involved in teaching academic credit courses leading to a certificate, diploma, or undergraduate degree during the 2010-2011 academic year invited to participate. Faculty who only taught at the post-graduate level were excluded, given the focus of the study on certificate, diploma, and undergraduate degree programs. One college chose to invite full-time faculty only.

Invitations were sent to 6,257 college faculty and 11,975 university faculty, for a total of 18,232 faculty invited to participate. Of these, 1,707 college faculty and 1,917 university faculty completed the survey to an acceptable cut-off point, which translates to an overall response rate of 19.9%. Survey response rates for college and university faculty are provided in Table 2.

To assess the representativeness of the respondent sample, population data regarding gender, age and employment status was obtained from the 13 partner colleges and universities for comparison. The gender and age distribution of survey respondents was found to be roughly similar to the gender and age distribution of the faculty population, while full-time faculty were over-represented among survey respondents compared to the overall population.

Table 2 - Population Size, Sample Size and Response Rates

	Faculty Population	Respondents	Response Rate
College	6,257	1,707	27.3%
University	11,975	1,917	16.0%
Total	18,232	3,624	19.9%

Survey Instrument

The development of the WIL Faculty Survey instrument was informed by the Phase 1 study findings, an extensive review of the academic literature, and input from the Working Group. The instrument was pre-tested online with 25 faculty members known to either Academica Group or HEQCO. This included a mix of both college and university faculty, and pre-testers were from a range of institutions and program areas. For pre-testing, the survey was programmed into Academica Group's Survey Management System, with open-ended comment boxes added to each screen. Extensive written comments were received during this pre-test phase, which helped to identify wording that needed to be clarified or revised, and enabled improvements to the survey response options to better capture the full range of faculty views and experiences. The feedback was incorporated into the instruments for presentation to the Working Group in December, 2010. A final round of input was received from Working Group members in early January, 2011, and the instrument was finalized by Academica Group in mid-January, 2011.

The final survey instrument included structured and open-ended questions intended to collect attitudinal and perceptual data related to WIL, as well as limited demographic information, and was designed to require roughly 15-20 minutes to complete (see Appendix 2 for the survey instrument).

Procedure

Academica Group's proprietary Survey Management System™ (SMS™) software was used to program the survey instrument in both English and French and to collect the data. Invitations to participate in the research were sent by the participating institutions in late March and early April, and the survey remained open until May 31, 2011. Each invitation contained a unique log-in ID and password and an embedded link to the survey page to ensure that only individuals invited to participate could complete the survey, and to enable the tracking of survey completion rates. The e-mail invitation outlined the purpose of the research, and the survey landing page provided a printable letter of information. While the survey was in the field, two targeted reminders were sent to faculty who had not participated in the survey, and four of the partner institutions sent a third reminder.

Analysis

A total of 105 surveys were removed from the analysis because respondents did not complete to an acceptable cut-off point. Of the 3,624 surveys retained in the analysis, 3,531 were fully completed. The data was imported into SPSS for analysis, and open-ended responses were manually coded for emerging themes. Responses to the open-ended questions are included in the report only where significant themes were found.

Throughout this report, differences are tested for statistical significance using the Chi-Square for distributions, and Analysis of Variance (ANOVA) or T-test for mean score differences. Effect sizes are provided in the text of the report where relevant.

Limitations

Given that a convenience sample of 13 postsecondary institutions was used, the survey results are not generalizable to faculty views in Ontario. However, an effort was made to involve institutions from a variety of regions in Ontario and to have Francophone perspectives included to ensure that a wide range of faculty views were represented.

Another limitation of the research is that it cannot shed light on faculty views about specific types of WIL. The survey was designed to capture faculty perceptions of the use of work-integrated learning as a general approach to postsecondary education. Thus, throughout the survey, respondents were asked to

think about WIL generally, rather than to comment on specific types. This necessarily neglected the nuance between the various forms of WIL, and the different ways in which it may be implemented and used by both students and faculty.

Further, all faculty were invited to participate in the survey and offer their perceptions, regardless of whether they had any knowledge or awareness of WIL. The survey responses, therefore, represent a range of views and may include the opinions of faculty with no WIL experience or knowledge. However, the value in capturing these opinions is that it allows for a better understanding of the general climate toward WIL among faculty in postsecondary institutions.

4. Respondent Profile

This chapter summarizes selected characteristics of survey respondents, including breakdowns by institution and employment status, demographic characteristics, postsecondary teaching and other employment experience, and involvement with WIL. Results are reported separately for college and university respondents, with key differences between the two highlighted where applicable.

Institution, Program Area, and Employment Status

Faculty from six colleges and seven universities were invited to participate in the study. As seen in Table 3, over half of the college respondents were from either Sheridan College (29.9%) or Algonquin College (23.1%). University respondents were more evenly distributed among the institutions, though University of Waterloo faculty comprise roughly one-quarter of university respondents.

> **The University of Waterloo Effect**
> Given that the University of Waterloo (UW) operates the largest postsecondary co-op program in the country, an obvious question is the extent to which the overrepresentation of UW faculty impacts the university findings. Analysis showed that, not surprisingly, UW faculty were significantly more likely to report having taught in a program in which students participate in co-op than other university faculty. Excluding UW respondents, 25.1% of university faculty reported having experience teaching in a co-op program compared to a total of 36.0% when UW respondents are included. Faculty perceptions and experiences were also analyzed both including and excluding UW faculty. While there were some differences between UW faculty and other university faculty respondents, the impact on the combined results were minimal. Therefore, all university results presented in the report include UW respondents.

Table 3 – Institutional Breakdown

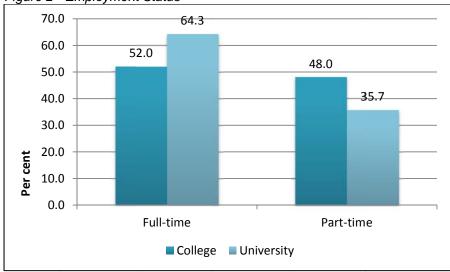|		Count	Percentage
College	**Algonquin College**	395	23.1
	Georgian College	246	14.4
	Niagara College	268	15.7
	George Brown College	192	11.3
	Sheridan College	511	29.9
	La Cité collégiale	95	5.6
College Total		**1707**	100.0
University	**University of Ottawa**	191	10.0
	The University of Western Ontario	368	19.2
	University of Windsor	274	14.3
	University of Waterloo	472	24.6
	Wilfrid Laurier University	155	8.1
	Laurentian University	156	8.1
	York University	301	15.7
University Total		**1,917**	100.0

There was a good distribution of faculty respondents across program areas (Figure 1). About one-quarter of college respondents taught courses in the Social Sciences; 16% taught in each of Business, Arts and Humanities, and Engineering and Technology; and roughly 12% taught in each of Science and Math, and Health. Among university faculty respondents, close to one-third taught in the Social Sciences; just over 20% taught in each of the Arts and Humanities, and Science and Math; and roughly 10% taught courses in Engineering and Technology, Health, and Business.

Figure 1 - Program Area

The faculty appointment status of respondents is summarized in Figure 2. Approximately half of college faculty respondents held a full-time appointment, with the remainder having part-time status (sessional or partial load appointments). Among university faculty respondents, 64.3% held full-time appointments, with the remaining 35.7% having part-time status (contract, sessional, or limited term appointments).
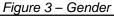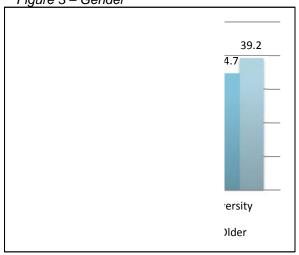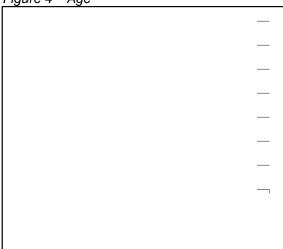
Figure 2 - Employment Status

Demographic Characteristics

As shown in Figure 4.3, the gender split among college faculty respondents was roughly even. Among university respondents, however, there were significantly more males (59.6%) than females (40.4%).

College faculty respondents had a slightly older age structure than university respondents (Figure 4). Among college faculty, 19.2% were under 40 years of age, 40.1% were 40-49 years and 40.8% were 50 years or older. For university faculty respondents, 26.0% were under 40 years of age, 34.7% were 40-49 years and 39.2% were 50 or older.
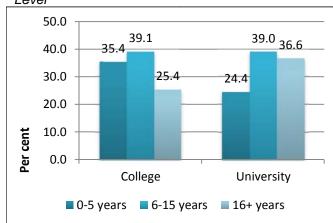
Figure 3 – Gender

Figure 4 – Age

Experience

Figures 5 and 6 show faculty respondents' years of teaching experience at the postsecondary level in general, and specifically at their current institution. Among college faculty, almost half had been teaching at their current institution for five years or less, one-third for 6-15 years, and about one-fifth reported teaching at their current institution for more than 15 years. University faculty respondents had slightly more years' experience teaching at their current institution, with 38.7% of respondents reporting that they had been teaching at their current institution for five years or less, 35.3% for 6-15 years and 26.0% for more than 15 years.

Figure 5 - Years Teaching at the Current Institution

Figure 6 – Years Teaching at the Postsecondary Level

In addition to teaching experience, the majority of college faculty respondents had more than 10 years of other employment experience related to the program in which they taught, while only about one-quarter of university faculty respondents had more than 10 ten years of other employment experience related to their program area (Figure 7). Over one-third of university faculty respondents had no related employment experience outside of their faculty responsibilities.
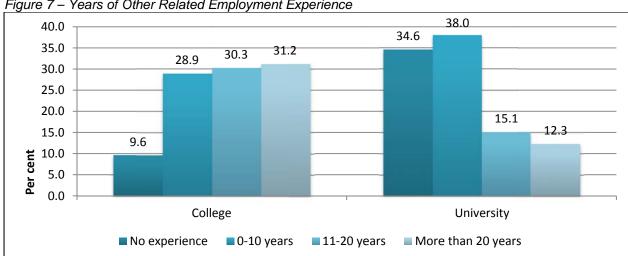
Figure 7 – Years of Other Related Employment Experience

WIL Involvement

Faculty involvement with WIL was captured in relation to current or past WIL teaching experience, as well as participation in WIL as a student. It was theorized that the experiences and perceptions of faculty who had never personally taught a course with a WIL component but taught in a program of study in which students participate in a co-op or apprenticeship may be qualitatively different than faculty who had no exposure to WIL. Therefore, faculty were asked both about their personal experience teaching WIL within a course, as well as experience teaching in a program of study in which students participate in a co-op or apprenticeship. Among college faculty, 43.4% had experience teaching in a program in which students participate in co-op, 7.8% in a program in which students participate in an apprenticeship, and 11.4% had experience teaching in both co-op and apprenticeship programs (Figure 8). University faculty reported slightly lower levels of WIL involvement, with 36.0% having co-op teaching experience, 8.2% having taught in an apprenticeship program, and 6.1% reporting both co-op and apprenticeship teaching experience.
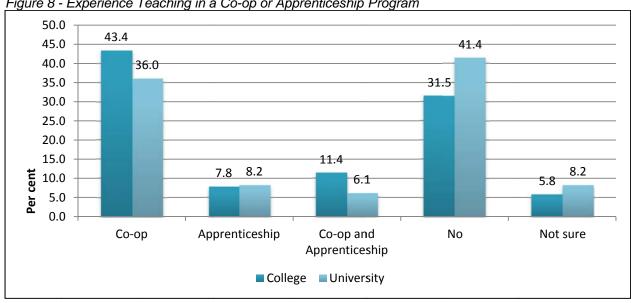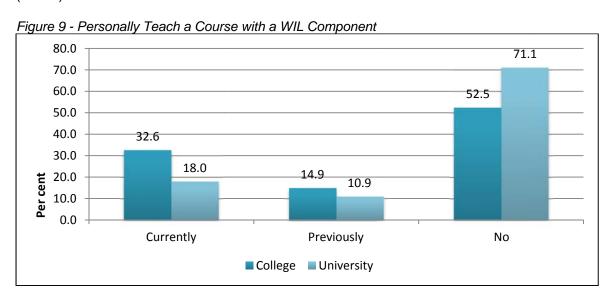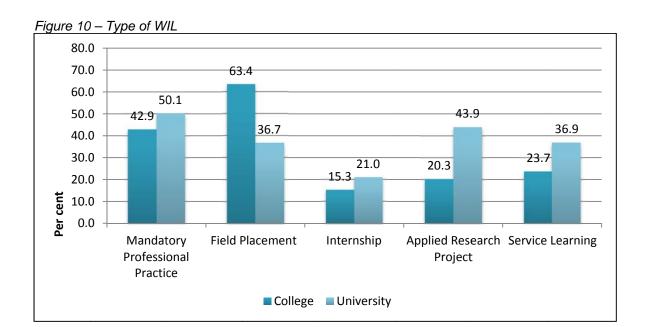
Figure 8 - Experience Teaching in a Co-op or Apprenticeship Program

With regard to personal experience teaching a course with a WIL component, just over half of college faculty respondents and almost three-quarters of university respondents had never taught a course that involved WIL (Figure 9). Faculty who reported currently or previously teaching a course where students participated in WIL were asked about the type of WIL involved, with multiple responses allowed (Figure 10). Of the 48.5% of college faculty who reported currently or previously teaching a WIL course, field placements were the most commonly reported type (63.6%), followed by mandatory professional practice (such as practicums, clinical placements, or internships) (43.1%), service learning (23.8%), applied research projects (20.1%), and internships (15.3%).

The structure of university faculty respondents' experience was slightly different, with roughly half reporting teaching a course with a mandatory professional practice component (50.4%), followed by applied research projects (43.8%), service learning (37.1%), field placements (36.7%), and internships (21.2%).

Figure 9 - Personally Teach a Course with a WIL Component
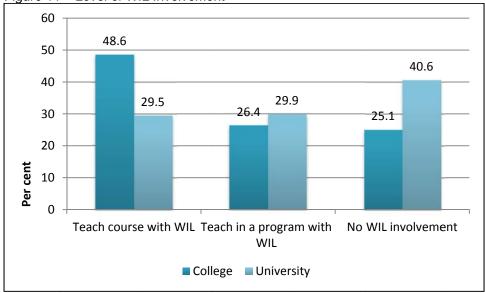
Figure 10 – Type of WIL

To allow for analysis of differences in faculty views by the type of WIL in which faculty are engaged, a variable was created to reflect only unique responses to this question. That is, faculty who responded that they taught or currently taught more than one type of WIL were excluded and faculty who had experience with only one type of WIL were retained. This results in much smaller n sizes for the various types of WIL, particularly for internships and service learning, which limited the analysis that could be conducted using this variable (Table 4).

Table 4- Recoding of Type of WIL Variable

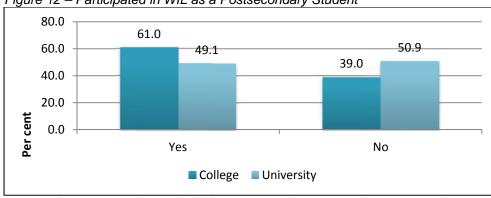|	Mandatory Professional Practice	Field placements	Internships	Applied research projects	Service Learning
Multiple Response (n)	606	695	233	395	384
Unique Responses Only (n)	230	247	49	135	56

In Figure 11, faculty are divided into three mutually exclusive groups based on their WIL involvement. The categories are meant to reflect varying levels of involvement with WIL, and range from having personal experience teaching a course with a WIL component, to teaching in a program that involves co-op or apprenticeship, to having no association with WIL. Among college faculty respondents there were relatively high levels of involvement with WIL, with almost half of faculty stating that they had taught a course with a WIL component and an additional one-quarter of faculty reporting that they had taught in a co-op or apprenticeship program. In contrast, university faculty were less likely to report WIL involvement, with 40.6% having no WIL involvement, followed by 29.9% who reported teaching in a program with WIL and 29.5% teaching a course with a WIL component.

Figure 11 – Level of WIL Involvement

Finally, respondents were also asked whether they had ever personally participated in any WIL programs when they were a postsecondary student (Figure 12). Sixty-one per cent of college faculty respondents and 49.1% of university faculty respondents indicated having participated in WIL during their own postsecondary studies.

Figure 12 – Participated in WIL as a Postsecondary Student

5. Findings

Purpose of PSE

Survey respondents were presented with a list of possible purposes for PSE and were asked to rank the extent to which they believed that their teaching was intended to contribute to their students' knowledge, skills, and personal development in each area. A four point scale was provided, in which 1=Not at all; 2=Very little; 3=Somewhat; and 4=Very much. An open-ended response option was also included to allow respondents to identify additional areas. Table 5 presents the mean score (from 1 to 4) of faculty rankings, as well as the percentage of faculty that considered their teaching to be intended to contribute "very much" to students' development in that area.

Both college and university faculty viewed contributing to students' ability to think critically and analytically as a primary purpose of their teaching. This was especially pronounced among university faculty, for whom 90.9% reported that their teaching was "very much" intended to contribute to this aim, compared to 79.6% of college faculty respondents. Among college respondents, acquiring job or work-related knowledge and skills was rated just as highly as thinking critically and analytically, while significantly fewer university faculty reported that their teaching was intended to contribute "very much" to this area (46.3% vs. 80.1% for college faculty). College faculty generally reported higher levels of agreement than university faculty for the importance of job or work-related areas, including securing relevant work after graduation (58.9% vs. 30.1%) and working effectively with others (71.6% vs. 45.5%).

Of the options provided, the lowest level of agreement was in relation to contributing to students' ability to participate as informed voters in elections, with only 13% of both college and university respondents reporting that their teaching was "very much" intended to contribute to this aim.

Respondents were also provided with a text box to allow for the identification of additional areas in which their teaching was intended to contribute to students' knowledge, skills, and personal development. Roughly 20% of both college (n=312) and university faculty (n=365) wrote an open-ended response. About one-third of university faculty responses involved references to teaching subject-specific knowledge, such as an understanding of social theory or knowledge of client-centred care (n=111). Another third of responses centred on encouraging engaged citizenship and an understanding of social justice and world issues, with a particular focus on promoting cultural and environmental awareness (n=100). Additional themes that emerged in the open ended responses included teaching students how to conduct and critically analyze research (n=42); engage in creative thinking, such as imaginative problem-solving and developing innovative ideas (n=27); improving communication and literacy skills (n=19); and developing good work habits and learning skills (n=18).

Similar to university faculty, the strongest theme that emerged in the open-ended responses of college faculty was the teaching of subject-specific knowledge (n=91), followed by encouraging engaged citizenship and an understanding of social justice and world issues (n=69); helping students with personal development and self-awareness (n=58); improving communication and literacy skills (n=43); and developing good work habits and study skills, in particular being able to work in teams (n=18).

Table 5- Purpose of PSE

	College		University		Total	
	Mean	**% Very Much**	**Mean**	**% Very Much**	**Mean**	**% Very Much**
Thinking critically and analytically	3.77	79.6	3.89	90.9	3.83	85.6
Applying skills and knowledge in different situations	3.75	77.4	3.61	67.5	3.68	72.1
Working independently	3.66	68.9	3.61	66.3	3.64	67.5
Writing clearly and effectively	3.50	60.2	3.60	68.8	3.55	64.7
Becoming lifelong learners	3.57	64.2	3.51	61.7	3.54	62.9
Acquiring job-related or work-related knowledge and skills	3.76	80.1	3.27	46.3	3.50	62.2
Working effectively with others	3.65	71.6	3.27	45.5	3.45	57.8
Speaking clearly and effectively	3.46	59.4	3.38	54.7	3.42	56.9
Solving complex, real-world problems	3.39	53.7	3.40	54.1	3.40	53.9
Using data to analyze problems	3.21	46.4	3.27	51.3	3.25	49.0
Developing a personal code of ethics and values	3.37	53.5	3.14	41.8	3.25	47.3
Securing relevant work after graduation	3.42	58.9	2.94	30.1	3.17	43.7
Acquiring a broad general education	3.04	30.6	3.21	41.5	3.13	36.3
Understanding themselves	3.26	48.3	3.01	40.0	3.13	43.9
Developing leadership skills	3.12	38.5	2.87	27.9	2.99	32.9
Contributing to the welfare of their community	3.00	35.7	2.94	33.9	2.97	34.7
Using computing and information technology	3.20	44.6	2.74	24.3	2.95	33.9
Understanding people of other racial and ethnic backgrounds	3.05	41.1	2.82	35.6	2.93	38.2
Participating as informed voters in local, provincial and federal elections	2.09	13.7	2.12	13.2	2.11	13.4

Appropriate Level of WIL

Among survey respondents, there appears to be relatively strong faculty support for the current level of WIL used in postsecondary institutions, with very few respondents indicating that the level of WIL should be decreased (0.8% of college faculty and 4.3% of university faculty) (Table 6). Among college faculty, over half felt that the use of WIL should be increased (55.1%), and one-quarter felt that it should be kept the same (24.7%). There was slightly less support for increasing the use of WIL among university faculty, with less than half of respondents indicating that the level of WIL should be increased (43.8%), and exactly one-quarter feeling it should stay at the same level. A sizeable proportion of both college (19.4%) and university (26.9%) faculty, however, responded that they were not sure.

When faculty views are examined by various faculty characteristics, some interesting differences emerge (Table 6). Level of WIL involvement was significantly related to perceptions of the appropriate level of WIL for both college faculty ($\chi2$=80.027, d.f.=6, p=.000, Cramer's V=.156) and university faculty ($\chi2$= 143.176, d.f.=6, p=.000, Cramer's V=.198), with higher levels of involvement in WIL being associated with stronger support for increasing or maintaining the amount of WIL in postsecondary.

In addition, significant differences among faculty emerged depending on the program area in which they taught (College: $\chi2$= 73.209, d.f.=15, p=.000, Cramer's V=.122; University: $\chi2$=91.848 , d.f.=15, p=.000, Cramer's V=.129). College faculty who teach in Business or Engineering and Technology, and university faculty who teach in Business or Health, were more likely to feel that the level of WIL should be increased. Finally, employment status was also found to be significantly associated with views of the appropriate level of WIL (College: $\chi2$= 21.515, d.f.=3, p=.000, Cramer's V=.114; University: $\chi2$=23.769 , d.f.=3, p=.000, Cramer's V=.114), with full-time college and university faculty being less likely than part-time faculty to report that WIL should be increased and more likely to report that it should be decreased or kept the same.

While age (college only), gender, participating in WIL as a student, and years of other employment experience were also found to be significantly associated with perceptions of the appropriate level of WIL, the effect sizes were negligible indicating that the relationships are very weak. The one exception that should be noted is that there was a higher effect size found for the relationship with having participated in WIL as a student for university faculty ($\chi2$=53.594, d.f.=6, p=.032, Cramer's V=.171). University faculty who had participated in WIL themselves were more likely to report that the level of WIL in postsecondary should be increased.

Table 6 - Appropriate Level of WIL by Faculty Characteristics

		College				University			
		Appropriate level of WIL				**Appropriate level of WIL**			
		Increased	**Decreased**	**Kept same**	**Not sure**	**Increased**	**Decreased**	**Kept same**	**Not sure**
Total		55.1%	0.8%	24.7%	19.4%	43.8%	4.3%	25.0%	26.9%
Employment Status * ^	**Full-time**	52.0%	1.3%	28.6%	18.1%	40.2%	5.2%	27.6%	27.0%
	Part-time	58.5%	.3%	20.4%	20.9%	50.2%	2.9%	20.2%	26.6%
Gender * ^	**Male**	58.9%	.4%	22.1%	18.6%	43.7%	4.9%	27.0%	24.5%
	Female	52.0%	1.1%	27.2%	19.7%	45.2%	2.9%	22.1%	29.9%
Age ^	**Under 40**	53.7%	1.3%	27.0%	18.1%	39.4%	4.3%	23.9%	32.4%
	40 to 49	54.9%	.6%	24.4%	20.1%	43.6%	4.0%	25.0%	27.3%
	50 and Older	56.1%	.7%	23.8%	19.4%	46.7%	4.6%	25.8%	22.9%
Participated in WIL as a student * ^	**Yes**	56.7%	.6%	26.0%	16.7%	49.9%	2.1%	26.3%	21.7%
	No	52.7%	1.1%	22.1%	24.0%	38.0%	6.5%	23.7%	31.7%
Level of WIL Involvement * ^	**Teach Course with WIL**	56.7%	.6%	30.4%	12.2%	58.5%	1.1%	25.9%	14.5%
	Teach in Program with WIL	56.9%	.9%	21.8%	20.4%	38.4%	5.6%	31.9%	24.1%
	No WIL Involvement	51.0%	.7%	16.7%	31.6%	37.0%	5.6%	19.2%	38.2%
Years teaching at the postsecondary level	**0-5**	55.9%	.3%	23.3%	20.4%	46.0%	3.4%	22.8%	27.8%
	6-15	54.4%	1.1%	25.0%	19.5%	43.6%	4.3%	23.5%	28.6%
	16+	55.0%	1.0%	26.0%	18.0%	42.5%	5.0%	28.1%	24.5%
Other Employment Experience * ^	**No experience**	48.4%	1.3%	22.6%	27.7%	35.6%	4.9%	24.4%	35.1%
	0-10 years	56.4%	1.1%	23.4%	19.1%	44.9%	4.3%	26.0%	24.9%
	11-20 years	50.5%	.4%	29.0%	20.1%	45.6%	4.3%	27.8%	22.4%
	More than 20 years	60.6%	.8%	22.1%	16.5%	60.9%	3.0%	20.4%	15.7%
Program Area * ^	**Social Sciences**	51.1%	.9%	29.9%	18.1%	44.2%	3.7%	24.4%	27.7%
	Business	67.9%	1.5%	14.6%	16.0%	57.0%	5.2%	18.5%	19.3%
	Science and Math	59.8%	.0%	19.1%	21.1%	43.6%	3.9%	28.7%	23.8%
	Engineering and Technology	61.2%	.0%	24.3%	14.5%	46.9%	1.0%	31.1%	20.9%
	Health	48.6%	1.4%	33.8%	16.2%	57.5%	1.7%	23.8%	17.1%
	Arts and Humanities	45.4%	.7%	23.6%	30.3%	31.2%	7.9%	22.4%	38.6%

An * beside the variable label in the column indicates a statistically significant association between the variables (p<.05) for college faculty respondents, an ^ for university faculty respondents.

Among university respondents there is also a clear relationship between faculty's view of whether their teaching is intended to contribute to students' job-related knowledge and skills, and their perception of the appropriate level of WIL in postsecondary education ($\chi 2$=109.546, d.f.=9, p=.000, Cramer's V = .141). Generally, the higher the level of agreement that their teaching was intended to contribute to students' acquiring job-related skills, the more likely respondents were to feel that WIL should be increased, and the less likely they were to feel that WIL should be decreased (Table 7).

Table 7 - University Faculty, Appropriate Levels of WIL by Teaching Intended to Contribute to Students' Job-Related Knowledge and Skills

		Appropriate levels of WIL			
		Increased	Decreased	Kept about the same	Not sure
Acquiring job-related or work-related knowledge and skills	Not at all	26.6%	18.8%	25.0%	29.7%
	Very little	27.9%	7.8%	29.7%	34.7%
	Somewhat	38.8%	4.8%	25.4%	31.1%
	Very much	53.4%	2.0%	23.6%	21.1%

Value of WIL

To assess faculty perceptions of the value of WIL, respondents were asked to indicate their level of agreement with a series of statements regarding potential advantages and disadvantages of WIL specific to students, faculty, and institutions, as well as an overarching statement about the general value of WIL.[3]

Responses to the overarching statement, "I personally think that work-integrated learning is valuable," indicate that there is a relatively high level of support for WIL, with 95.0% of college faculty and 83.5% of university faculty reporting agreement or strong agreement (Table 8). College faculty were significantly more likely to strongly agree with this statement, with 53.2% of college faculty indicating strong agreement compared to 35.1% of university faculty ($\chi 2$=116.206, d.f.=1, p=.000, φ=.182).

Level of involvement with WIL was significantly associated with responses to this statement for both college ($\chi 2$=175.840, d.f.=8, p=.000, Cramer's V = .231) and university faculty ($\chi 2$=265.868, d.f.=8, p=.000, Cramer's V = .269). College faculty who taught a course with WIL agreed or strongly agreed that WIL is valuable (98.1%), compared to 93.3% of those who taught in a WIL program, and 90.8% of those with no WIL involvement. Among university respondents, 95.8% of those who taught a course with a WIL component agreed or strongly agreed, compared to 84.0% of faculty who teach in a program with WIL, and only 74.1% of those with no WIL involvement. For both college and university, faculty with no involvement with WIL were significantly more likely to adopt a neutral position on this statement.

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[3] Respondents were asked to indicate their level of agreement with each statement using a five-point Likert scale, coded such that higher scores indicated higher levels of agreement (1=Strongly disagree; 2=Disagree; 3=Neither agree nor disagree; 4=Agree; 5=Strongly agree).

Table 8 - Value of WIL by Level of WIL Involvement

			I personally think that WIL is valuable				
			Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree
College	Teach Course with WIL	Percentage	.4%	.0%	1.5%	28.9%	69.2%
		Adjusted Residual	1.1	-1.7	-5.7	-10.2	12.5
	Teach in program with WIL	Percentage	.2%	.2%	6.2%	51.2%	42.1%
		Adjusted Residual	-.1	.2	1.9	4.7	-5.5
	No WIL	Percentage	.0%	.5%	8.7%	56.2%	34.6%
		Adjusted Residual	-1.2	1.7	4.6	6.8	-8.7
	Total	Percentage	.2%	.2%	4.6%	41.8%	53.2%
University	Teach Course with WIL	Percentage	.2%	.6%	3.5%	36.2%	59.6%
		Adjusted Residual	-2.6	-2.9	-7.9	-6.8	14.2
	Teach in program with WIL	Percentage	1.8%	1.8%	12.4%	51.2%	32.9%
		Adjusted Residual	1.5	-.6	-.7	1.6	-1.3
	No WIL	Percentage	1.5%	3.4%	21.0%	55.4%	18.8%
		Adjusted Residual	1.0	3.3	8.0	4.9	-12.0
	Total	Percentage	1.2%	2.1%	13.2%	48.4%	35.1%

Value of WIL for Students

The survey instrument included 16 statements regarding potential advantages and disadvantages of WIL specifically for students, and respondents were asked to indicate their level of agreement with each. A five-point scale (from strongly disagree to strongly agree) was used to capture the level of agreement, and responses were coded such that higher mean scores indicate a higher level of agreement. Overall, college and university faculty indicated higher levels of agreement with statements related to advantages of WIL than statements about disadvantages (Table 9). The highest levels of agreement, as indicated by mean scores, are in relation to labour market advantages such as better understanding of work realities (4.47 college and 4.17 university) and developing employment contacts (4.41 college and 4.14 university). The vast majority of both college and university faculty agreed or strongly agreed that WIL helps students better understand work realities and expectations (95.6% college and 87.4% university), and helps them develop contacts and networks for future employment (94.6% college and 81.6% university). In terms of the other potential advantages of WIL, there were lower levels of agreement that WIL makes students more employable, with 77.1% of college faculty and 67.4% of university faculty agreeing or strongly agreeing with this statement.

Generally, college faculty reported higher levels of agreement with this series of positive statements about the value of WIL than did university faculty, with the largest differences being seen in responses to the following statements: "Work-integrated learning engages students in thinking critically about the workplace and the nature of work" (91.0% college vs. 75.6% university; χ2=147.450, d.f.=1, p=.000, φ = .204); "Participation in work-integrated learning increases students' engagement in their academic studies" (81.2% college vs. 66.6% university; χ2=95.582, d.f.=1, p=.000, φ = .164); and "Work-integrated learning is particularly valuable for students considered 'at-risk'" (43.3% college vs. 27.7% university; χ2=93.090, d.f.=1, p=.000, φ = .163).

There appeared to be some scepticism among faculty about employers' motivations for supplying WIL opportunities, with almost one-quarter of both college and university respondents agreeing or strongly agreeing that "Too many employers use work-integrated learning simply to reduce their salary costs," and roughly half of respondents remaining neutral. The majority of college and university faculty were also ambivalent about the existence of evidence on the relationship between student learning and WIL, with 54.8% of college faculty and 59.9% of university faculty neither agreeing nor disagreeing with the statement, "There is a lack of evidence about the impact of WIL on student learning."

The lowest levels of agreement were found for statements about potential disadvantages of WIL. In particular, college and university faculty tended to disagree with the statement that "WIL does little to improve students' understanding of academic course content" (college mean = 1.93, university mean = 2.28).

Provided with the opportunity to identify additional advantages or disadvantages of WIL for students, roughly 20% of both college (n=372) and university faculty (n=388) wrote responses. Over half of college faculty's responses reinforced or expanded on the statements provided. This included reinforcing that WIL helps students better understand work realities (n=52), develop contacts for future employment (n=40), and apply classroom theories and skills (n=29). New themes that emerged in the open-ended responses included the perception that WIL increases students' self-awareness (n=38); students sometimes find the work unsatisfying or have a negative experience with a work supervisor (n=36); WIL helps students improve their work and study skills (n=29); students sometimes have difficulty finding meaningful placements when they are relied upon to find their own site (n=23); and that students can have a difficult time balancing the time required to participate in WIL with class work, particularly for students who already have a job outside of WIL (n=21). Twenty-five respondents emphasized that the advantages and disadvantages of WIL vary depending on the type, the quality of the placement site, and how the program is run.

Among university faculty, about one-third of the open-ended responses reinforced or expanded on the statements given (n=119), with most reinforcing statements about the advantages of WIL such as the fact that it helps students to engage in their academic studies (n=27), understand work realities (n=23), and apply classroom theories and skills (n=20). Other themes that emerged were that WIL sometimes offers financial advantages to students in the form of paid placements (n=33), enhances personal development (n=33), can be disruptive to students' academic progress (n=30), and is disadvantageous to students because it focuses on job training rather than engaging in critical thought (n=30). Forty-eight respondents used the open-ended comment box to emphasize that the advantages and disadvantages of WIL vary greatly depending on the type of WIL, the quality of the placement site, and how the program is run.

Table 9 - Mean Scores and % Agree & Strongly Agree for Value of WIL to Students Statements

	College		University	
	Mean	**Agree or Strongly Agree**	**Mean**	**Agree or Strongly Agree**
WIL helps students better understand work realities and expectations	4.47 (.62)	95.6%	4.17 (.72)	87.4%
WIL helps students develop contacts and networks for future employment	4.41 (.62)	94.6%	4.14 (.72)	84.9%
WIL lets students apply the theory and skills learned in the classroom	4.45 (.64)	94.1%	4.08 (.79)	81.6%
Participating in WIL increases students' self-confidence	4.42 (.62)	94.0%	4.09 (.74)	80.5%
WIL enhances the postsecondary experience for students	4.36 (.65)	92.8%	4.06 (.78)	81.0%
WIL lets students explore their career interests and clarify their career goals	4.27 (.64)	92.4%	4.05 (.73)	82.3%
WIL engages students in thinking critically about the workplace and the nature of work	4.32 (.68)	91.0%	3.93 (.85)	75.6%
Students who participate in WIL are more employable than other students	4.13 (.84)	77.1%	3.85 (.91)	67.4%
Participation in WIL increases students' engagement in their academic studies	4.11 (.79)	81.2%	3.80 (.86)	66.6%
WIL is particularly valuable for students considered "at-risk"	3.40 (.95)	43.3%	3.19 (.81)	27.7%
Too many employers use WIL simply to reduce their salary costs	2.86 (.96)	22.2%	2.93 (.95)	22.2%
There is a lack of evidence about the impact of WIL on student learning	2.73 (.86)	12.0%	2.88 (.82)	15.6%
The costs to students (both financial and time required) outweigh the benefits of WIL	2.46 (1.21)	20.5%	2.51 (1.11)	17.2%
Employers, not students, are the main beneficiaries of WIL programs	2.25 (.85)	6.2%	2.50 (.90)	9.5%
WIL is only useful for students who go directly to the labour market after their postsecondary education	2.29 (.99)	11.4%	2.37 (.98)	12.2%
WIL does little to improve students' understanding of academic course content	1.93 (.96)	8.1%	2.28 (1.02)	12.5%

Value of WIL for Faculty and Institutions

Survey respondents were also asked to reflect on the advantages and disadvantages that WIL offers to faculty and postsecondary institutions. Table 10 lists each of the statements with the mean score, standard deviation and the percentage who agreed or strongly agreed.

Generally, faculty respondents had higher levels of agreement with statements related to advantages than disadvantages, though in comparison to the mean scores for statements in Table 9, it is clear that faculty tend to view WIL as being more beneficial for students than for faculty or institutions. University faculty tend to be less enthusiastic about the benefits of WIL, with many of the mean scores for statements about potential advantages in the 3.0 to 3.5 range, with 3 indicating a neutral response (neither disagree or agree with the statement). The highest level of agreement among both college and university faculty was with the statement, "Work-integrated learning strengthens links between the institution and the business community" (4.28 college, 3.95 university).

Close to half of college faculty and over one-third of university faculty agreed or strongly agreed that WIL perpetuates a business model of education, while only 11.5% of college faculty felt that WIL has a negative overall impact on postsecondary education due to the extension of corporate involvement in

curriculum, compared to nearly one-quarter of university faculty who neither agreed nor disagreed with this statement (22.9%).

The largest differences between college and university faculty were found in relation to statements about the potential advantages of WIL for faculty. College faculty were significantly more likely than university faculty to agree or strongly agree that "involvement with work-integrated learning helps faculty keep their knowledge current" (83.7% college vs. 54.3% university; χ2=348.101, d.f.=1, p=.000, φ= .315), and that "feedback from students and employers who participate in WIL can improve academic programming" (89.5% college vs. 67.6% university; χ2=243.428, d.f.=1, p=.000, φ = .264).

There were very few open-ended responses about additional advantages or disadvantages of WIL for institutions or faculty (college n=107; university n=79). Most of the responses simply reinforced the statements provided, and no new significant themes emerged.

Table 10 - Mean Scores and % Agree & Strongly Agree for Value of WIL to Faculty and Institutions Statements

	College		University	
	Mean	Agree or Strongly Agree	Mean	Agree or Strongly Agree
WIL strengthens links between the institution and the business community	4.28 (.68)	90.3%	3.95 (.74)	76.9%
WIL connects postsecondary institutions to the broader community	4.19 (.67)	88.1%	3.94 (.77)	77.9%
Feedback from students and employers who participate in WIL can improve academic programming	4.29 (.68)	89.5%	3.77 (.88)	67.6%
WIL is an effective postsecondary education recruitment and marketing tool	4.04 (.74)	79.1%	3.83 (.78)	69.1%
WIL can engage postsecondary institutions in responding to identified community needs	4.04 (.73)	80.2%	3.75 (.83)	65.6%
Involvement with WIL helps faculty keep their knowledge current	4.17 (.78)	83.7%	3.53 (1.00)	54.3%
WIL enhances institutional reputation	3.99 (.77)	75.9%	3.64 (.88)	58.9%
WIL can help businesses find solutions to specific business or industry needs	3.74 (.82)	62.9%	3.50 (.83)	49.9%
WIL can involve postsecondary institutions in addressing global issues	3.64 (.86)	53.8%	3.46 (.92)	49.2%
WIL perpetuates a business model for postsecondary education	3.48 (.86)	46.3%	3.23 (.92)	35.3%
My institution provides resources and supports for faculty to participate in WIL activities	3.24 (.89)	35.7%	3.16 (.88)	30.9%
WIL diverts funding away from program areas that may not lend themselves to WIL	2.75 (.85)	12.8%	3.09 (.96)	28.3%
By extending corporate involvement in curriculum, WIL has a negative overall impact on postsecondary education	2.35 (.99)	11.5%	2.81 (1.07)	22.9%
WIL is inconsistent with the values of a liberal education	2.56 (1.12)	19.0%	2.49 (1.04)	16.0%

Given that a lack of institutional resources and supports is identified in the literature as a significant barrier to WIL, responses to the statement "My institution provides resources and supports for faculty to participate in WIL activities" is of particular interest. Responses to this statement were significantly associated with level of WIL involvement for both college (χ2=201.920, d.f.=8, p=.000, Cramer's V = .249)

and university (χ2=177.859, d.f.=8, p=.000,Cramer's V = .221) faculty. Looking specifically at faculty who taught a course with a WIL component, close to half of both college and university respondents agreed or strongly agreed with this statement (approximately 20.0% disagreed or strongly disagreed) (Table 11). Analysis of the adjusted residuals shows that as the level of WIL involvement decreases, faculty tend to adopt a more ambivalent position, neither agreeing nor disagreeing with the statement, suggesting that faculty who are not directly involved with WIL likely do not have a good sense of the resources and supports available and their adequacy.

Table 11 - Institutional Support by Level of WIL Involvement

			My institution provides resources and supports for faculty to participate in WIL activities				
			Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree
College	Teach Course with WIL	Percentage	4.6%	15.4%	32.3%	37.2%	10.5%
		Adjusted Residual	1.4	4.8	-12.9	7.9	4.1
	Teach in program with WIL	Percentage	3.4%	11.8%	55.3%	22.4%	7.0%
		Adjusted Residual	-.7	.3	3.1	-3.1	-.6
	No WIL	Percentage	3.2%	3.4%	73.8%	16.7%	2.9%
		Adjusted Residual	-.9	-5.9	11.6	-5.9	-4.1
University	Teach Course with WIL	Percentage	6.9%	13.6%	33.1%	35.0%	11.4%
		Adjusted Residual	2.8	2.0	-11.1	6.6	6.1
	Teach in program with WIL	Percentage	3.2%	9.9%	53.2%	27.2%	6.5%
		Adjusted Residual	-2.0	-1.3	.1	1.6	.4
	No WIL	Percentage	4.3%	10.8%	67.8%	15.2%	1.9%
		Adjusted Residual	-.7	-.6	10.2	-7.6	-6.1

Value of WIL by Faculty Characteristics

One of the research questions to be addressed by this study was the extent to which faculty views about WIL differ by various characteristics and experiences. To answer this question, multivariate GLM analysis was performed using an index measuring the perceived value of WIL. The index was constructed by combining responses to 24 five-point Likert scale questions (α=.936) that focused on the perceived advantages and disadvantages of WIL for students, faculty, or institutions. Higher scores indicate stronger agreement that WIL is valuable.[4] Missing values were imputed with the mean of the variable. Independent variables explored included gender, past WIL experience as a student, level of WIL involvement, program, employment status, age, and previous employment experience. Separate analyses were run for college and university faculty.

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[4] See Appendix 3 for the items included in the index and their range, mean, and standard deviation.

Table 12 presents the regression results for college faculty. The model was statistically significant (F=17.654, p=.000), predicting 13.5% of the variance in the value of WIL index. Of the seven independent variables included in the model, four were found to be statistically significant after controlling for the other variables. Female faculty members and faculty who participated in WIL when they were students viewed WIL as providing greater value. Level of WIL involvement and program area were also significant predictors of the perceived value of WIL. Compared to faculty who had no involvement with WIL, faculty who taught in a WIL program or taught a course with a WIL component felt WIL was more valuable. Compared to faculty who taught in Arts and Humanities, faculty who taught in Social Science, Health, or Business programs had higher mean scores on the value of WIL index. Age, years of other employment experience, and employment status were not statistically significant predictors.

Table 12 - Coefficients from Linear Regression of Predictor Variables on Value of WIL Index for College Faculty

		B	Std. Error	t	Sig.
	Intercept	91.126	.964	94.500	.000
Employment Status	**Full-time**	.430	.541	.796	.426
	Part-time	0[a]	.	.	.
Gender*	**Male**	-1.831	.562	-3.255	.001
	Female	0[a]	.	.	.
Participated in WIL as a student*	**Yes**	3.722	.556	6.697	.000
	No	0[a]	.	.	.
Level of WIL involvement*	**Teach course with WIL**	6.401	.672	9.525	.000
	Teach in program with WIL	2.708	.725	3.736	.000
	No WIL	0[a]	.	.	.
Years of other employment experience	**No experience**	-1.247	.989	-1.260	.208
	0-10 years	-1.422	.746	-1.906	.057
	11-20 years	-1.252	.684	-1.831	.067
	More than 20 years	0[a]	.	.	.
Age	**Under 40**	-.257	.794	-.323	.747
	40-49	-1.033	.579	-1.784	.075
	50 and older	0[a]	.	.	.
Program Area*	**Social Sciences**	2.678	.825	3.247	.001
	Business	2.257	.913	2.471	.014
	Science and Math	1.859	.989	1.879	.060
	Engineering and Technology	1.061	.934	1.135	.256
	Health	2.681	1.019	2.631	.009
	Arts and Humanities	0[a]	.	.	.

* Indicates a statistically significant finding in the test of between-subjects effects (p<.05).

The second regression model examines the relationship between the same set of predictor variables on the value of WIL index, this time focusing on university faculty (Table 13). The model was statistically significant (f=35.630, p=.000), predicting 22.6% of the variance in the value of WIL index. In this model, of the seven independent variables included, six variables were found to be statistically significant after controlling for the other variables. Females and part-time faculty had more positive attitudes than males and full-time faculty. Faculty who had participated in WIL as a student perceived WIL to be of greater

value. Level of involvement in WIL was again a significant predictor, with faculty who taught a course with a WIL component, and those who taught in a WIL program holding more positive views than those who had no WIL involvement.

Compared to faculty with more than 20 years of other employment experience, those with no other employment experience, 0-10 years or 11-20 years all held less positive views about WIL. Finally, compared to faculty in the Arts and Humanities, faculty who taught in all other program areas (Social Sciences, Business, Science and Math, Engineering and Technology, and Health) held more positive views about WIL. The most positive views were among faculty who taught in Business, Engineering and Technology, or Health programs. Age was not found to be a significant predictor.

Table 13- Coefficients from Linear Regression of Predictor Variables on Value of WIL Index for University Faculty

		B	Std. Error	t	Sig.
	Intercept	88.323	1.106	79.841	.000
Employment Status*	Full-time	-2.507	.627	-3.995	.000
	Part-time	0[a]	.	.	.
Gender*	Male	-3.334	.596	-5.593	.000
	Female	0[a]	.	.	.
Participated in WIL as a student*	Yes	2.853	.602	4.743	.000
	No	0[a]	.	.	.
Level of WIL involvement*	Teach course with WIL	9.519	.735	12.957	.000
	Teach in program with WIL	3.847	.694	5.543	.000
	No WIL	0[a]	.	.	.
Years of other employment experience*	No experience	-4.278	1.049	-4.078	.000
	0-10 years	-2.701	1.011	-2.671	.008
	11-20 years	-2.818	1.093	-2.579	.010
	More than 20 years	0[a]	.	.	.
Age	Under 40	-.825	.774	-1.066	.287
	40-49	-.427	.665	-.642	.521
	50 and older	0[a]	.	.	.
Program Area*	Social Sciences	2.204	.789	2.793	.005
	Business	8.040	1.197	6.720	.000
	Science and Math	3.661	.878	4.169	.000
	Engineering and Technology	5.541	1.120	4.950	.000
	Health	5.146	1.108	4.644	.000
	Arts and Humanities	0[a]	.	.	.

* Indicates a statistically significant finding in the test of between-subjects effects (p<.05).

Challenges

In interviews conducted in 2009, during Phase 1 of the broader WIL project, key informants from Ontario colleges and universities highlighted a number of challenges facing faculty in delivering WIL programs.

The faculty survey provided an opportunity to explore these issues further, examining what faculty perceive to be the primary challenges, and how these might vary by program or type of WIL.

Overall, ensuring quality placements for students was the most frequently selected challenge among both college (76.0%) and university (68.7%) respondents, followed by finding enough placements for students (72.7% college and 61.9% university) (Table 14). Concerns about faculty workload also emerged as prominent challenges, with over half of both college and university faculty selecting "managing WIL with large class sizes" (66.4% college and 55.1% university) and "balancing WIL with academic workloads" (54.6% college and 52.8% university). The largest difference found between college and university faculty was that college faculty were significantly more likely to report a lack of faculty PD on implementing WIL as a key concern (32.8% vs. 19.1%, χ2=87.038, d.f.=1, p=.000, φ= .157).

Although lack of faculty recognition and reward was highlighted as a deterrent to faculty involvement in WIL in the background literature (e.g. Brewer & Gray, 1999; Emslie, 2011; McKay & Rozee, 2004), challenges related to this theme did not emerge prominently in the survey findings. Lack of institutional culture supporting WIL (21.3% college and 23.3% university), lack of recognition for WIL activities in faculty promotion decisions (14.6% college and 20.1% university), and lack of institutional recognition for WIL activities (14.4% college and 20.4% university) were the three least selected challenges for both college and university faculty in this survey. On the other hand, a greater proportion of university faculty than college faculty selected each of these, which may be connected to the "publish or perish" culture of universities that Emslie (2011) describes as a barrier to faculty involvement in WIL. College faculty, however, were more concerned with the lack of salary recognition for faculty who participate in WIL (33.6% of college faculty compared to 25.9% of university faculty).

For faculty who taught a course with a WIL component, differences in faculty views were also examined by the type of WIL (Tables 11 and 12). It is important to note that faculty were not asked to reflect on the specific type of WIL taught when identifying challenges, so these results cannot be interpreted as reflecting differences in the challenges associated with each type of WIL, only differences in views by faculty who teach various forms of WIL. Among college faculty, the only challenges found to be significantly associated with type of WIL were "lack of financial and administrative resources for faculty" (χ2=21.230, d.f.=4, p=.000, Cramer's V= .220), "lack of institutional service recognition for WIL activities" (χ2=13.577, d.f.=4, p=.009, Cramer's V= .176), and "lack of institutional culture supporting WIL" (χ2=11.772, d.f.=4, p=.019, Cramer's V= .164). Analysis of the adjusted residuals showed that in all three cases faculty who taught a course with an applied research project were significantly more likely to select these as key challenges than faculty involved with other types of WIL.

Among university faculty, the only significant association with type of WIL was with "finding enough placements for students" (χ2=10.006, d.f.=4, p=.040, Cramer's V= .195). Analysis of the adjusted residuals showed that university faculty who taught a course with a mandatory professional practice component were significantly more likely, and faculty who taught a course with an applied research project were significantly less likely, to view finding enough placements for students as a challenge (78.8% and 57.9% vs 60.0% and 70.6%).[5]

Table 14 – Challenges Associated with WIL

	College or University		
	College	**University**	**Total**
Ensuring quality placements for students	76.0%	68.7%	72.1%
Finding enough placements for students	72.7%	61.9%	67.0%
Managing WIL with large class sizes	66.4%	55.1%	60.4%
Balancing WIL with academic workloads	54.6%	52.8%	53.7%
Lack of financial and administrative resources for faculty	44.7%	44.3%	44.5%
Developing appropriate WIL curriculum	44.2%	42.9%	43.5%
Managing employer expectations/communication	48.5%	37.7%	42.8%
Managing student expectations/communication	42.5%	34.5%	38.3%
Integrating the work experience with classroom learning	33.2%	37.6%	35.5%
Providing adequate institutional supports for students	34.4%	35.9%	35.2%
Developing valid student assessment and evaluation tools	33.9%	34.1%	34.0%
Making WIL programs accessible to all students	32.0%	27.9%	29.8%
Lack of salary recognition for faculty who participate in WIL	33.6%	25.9%	29.5%
Lack of faculty PD on implementing WIL	32.8%	19.1%	25.6%
Lack of institutional culture supporting WIL	21.3%	23.3%	22.4%
Lack of institutional service recognition for WIL activities	14.4%	20.4%	17.6%
Lack of recognition for WIL activities in promotion decisions	14.6%	20.1%	17.5%

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[5] The lack of significant findings among both college and university faculty is likely due in part to small n sizes across the different types of WIL.

Table 15 - College Faculty: Challenges by Type of WIL Course Taught

	Mandatory Professional Practice	Field placements	Internships	Applied research projects	Service Learning
Ensuring quality placements for students	77.6%	81.2%	81.5%	63.2%	76.2%
Finding enough placements for students	74.4%	70.0%	85.2%	64.9%	57.1%
Managing WIL with large class sizes	60.8%	66.7%	59.3%	71.9%	76.2%
Balancing WIL with academic workloads	52.0%	50.7%	59.3%	70.2%	57.1%
*Lack of financial and administrative resources for faculty *	35.2%	42.5%	33.3%	70.2%	42.9%
Managing employer expectations/communication	45.6%	44.4%	55.6%	59.6%	33.3%
Managing student expectations/communication	42.4%	41.5%	37.0%	47.4%	28.6%
Developing appropriate WIL curriculum	33.6%	39.1%	55.6%	49.1%	33.3%
Providing adequate institutional supports for students	34.4%	30.4%	25.9%	40.4%	47.6%
Integrating the work experience with classroom learning	33.6%	26.1%	40.7%	33.3%	42.9%
Lack of salary recognition for faculty who participate in WIL	29.6%	33.8%	37.0%	50.9%	47.6%
Developing valid student assessment and evaluation tools	32.8%	29.0%	25.9%	43.9%	28.6%
Lack of faculty PD on implementing WIL	25.6%	32.4%	25.9%	40.4%	42.9%
Making WIL programs accessible to all students	19.2%	26.6%	11.1%	35.1%	33.3%
*Lack of institutional culture supporting WIL *	16.0%	17.4%	14.8%	35.1%	28.6%
*Lack of institutional service recognition for WIL activities *	8.0%	14.0%	11.1%	28.1%	19.0%
Lack of recognition for WIL activities in promotion decisions	12.0%	11.6%	11.1%	21.1%	23.8%

* Indicates a statistically significant association (p<.05).

Among both college and university faculty (Tables 17 and 18), perceptions of whether managing WIL with large class sizes was a significant challenge were associated with program area.[6] Analysis of the adjusted residuals showed that this challenge was of particular concern to faculty teaching in Health programs. Generally, college faculty in the Science and Math program tended to perceive there to be fewer challenges to WIL than college faculty in other program areas, but this difference between academic program areas was not as prevalent among university faculty. Among college respondents,

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[6] Chi-square results were as follows: "Managing WIL with large class sizes" university faculty [χ2=21.642, d.f.=5, p=.001, Cramer's V=.108], college faculty: [χ2=26.115, d.f.=5, p=.000, Cramer's V=.125]).

Health faculty were also significantly more likely to select "ensuring quality placements for students" as a challenge (83.9% vs. 69.7% to 78.8%).[7]

Table 16 - University Faculty; Challenges by Type of WIL Course Taught

	Mandatory Professional Practice	Field placements	Internships	Applied research projects	Service Learning
Ensuring quality placements for students	75.8%	85.3%	60.0%	69.7%	65.7%
*Finding enough placements for students ****	78.8%	70.6%	60.0%	57.9%	62.9%
Managing WIL with large class sizes	56.6%	47.1%	55.0%	68.4%	71.4%
Balancing WIL with academic workloads	50.5%	41.2%	30.0%	53.9%	45.7%
Lack of financial and administrative resources for faculty	43.4%	41.2%	45.0%	56.6%	45.7%
Managing employer expectations/communication	41.4%	35.3%	70.0%	34.2%	34.3%
Managing student expectations/communication	39.4%	38.2%	60.0%	26.3%	34.3%
Developing appropriate WIL curriculum	37.4%	23.5%	25.0%	47.4%	45.7%
Providing adequate institutional supports for students	47.5%	47.1%	50.0%	32.9%	40.0%
Integrating the work experience with classroom learning	39.4%	29.4%	30.0%	34.2%	37.1%
Lack of salary recognition for faculty who participate in WIL	26.3%	23.5%	40.0%	25.0%	34.3%
Developing valid student assessment and evaluation tools	32.3%	26.5%	35.0%	28.9%	48.6%
Lack of faculty PD on implementing WIL	18.2%	17.6%	15.0%	19.7%	22.9%
Making WIL programs accessible to all students	28.3%	11.8%	30.0%	22.4%	34.3%
Lack of institutional culture supporting WIL	21.2%	8.8%	15.0%	23.7%	31.4%
Lack of institutional service recognition for WIL activities	26.3%	17.6%	30.0%	26.3%	31.4%
Lack of recognition for WIL activities in promotion decisions	23.2%	8.8%	20.0%	28.9%	20.0%

* Indicates a statistically significant association (p<.05).

For university respondents, faculty from Health and Arts and Humanities were more likely to report that lack of salary recognition for faculty who participate in WIL was a significant challenge (32.4% and 32.2% vs. 19.1% to 27.5% for other program areas). Arts and Humanities faculty were also significantly more likely to view balancing WIL with academic workloads (61.2% vs. 42.8% to 52.1%), and lack of faculty professional development on implementing WIL, as significant challenges. Health faculty were more likely

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[7] Chi-square results: [χ2=17.638, d.f.=5, p=.003, Cramer's V=.103].

to view finding enough placements for students (77.8% vs 55.4% to 64.8%), and lack of institutional service recognition for WIL activities (28.1% vs. 14.0% to 25.4%), as key challenges.[8]

Table 17 - College Faculty: Challenges by Program Area

	Social Sciences	Business	Science and Math	Engineering and Technology	Health	Arts and Humanities
Ensuring quality placements for students *	78.8%	73.1%	69.7%	71.9%	83.9%	77.7%
Finding enough placements for students *	71.7%	72.3%	68.7%	73.8%	82.9%	69.6%
Managing WIL with large class sizes *	68.5%	64.9%	54.0%	65.0%	77.3%	65.6%
Balancing WIL with academic workloads	52.9%	55.4%	50.0%	53.2%	56.9%	59.7%
Managing employer expectations/communication	48.4%	51.7%	41.9%	47.1%	50.2%	49.8%
Lack of financial and administrative resources for faculty	42.0%	52.0%	38.9%	45.6%	44.1%	46.2%
Developing appropriate WIL curriculum	44.0%	42.4%	47.5%	46.4%	35.5%	48.7%
Managing student expectations/communication *	45.8%	47.2%	29.8%	37.6%	41.7%	47.3%
Providing adequate institutional supports for students *	39.5%	33.2%	26.3%	27.0%	38.9%	37.0%
Developing valid student assessment and evaluation tools	37.1%	28.4%	32.3%	31.2%	38.4%	34.8%
Lack of salary recognition for faculty who participate in WIL	31.0%	38.4%	26.3%	33.5%	34.1%	37.7%
Integrating the work experience with classroom learning	31.5%	36.9%	34.8%	30.8%	34.1%	32.6%
Lack of faculty PD on implementing WIL	33.0%	33.2%	27.3%	34.6%	31.8%	35.2%
Making WIL programs accessible to all students	32.6%	34.3%	29.8%	31.6%	26.1%	35.9%
Lack of institutional culture supporting WIL	21.4%	26.2%	15.2%	24.0%	18.0%	20.9%
Lack of recognition for WIL activities in promotion decisions	15.6%	14.0%	9.1%	15.2%	17.5%	14.7%
Lack of institutional service recognition for WIL activities	15.0%	17.0%	10.6%	13.7%	14.2%	14.7%

* Indicates a statistically significant association (p<.05). Only significant findings with an effect size (Cramer's V) greater than 0.10 are discussed in the text.

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[8] Chi-square results were as follows: "Lack of salary recognition for faculty who participate in WIL" ($\chi2$=23.931, d.f.=5, p=.000, Cramer's V=.113); "Balancing WIL with academic workloads" ($\chi2$=19.307, d.f.=5, p=.102, Cramer's V=.102); "Lack of faculty PD on implementing WIL University" ($\chi2$=23.163, d.f.=5, p=.000, Cramer's V=.111). "Finding enough placements for students" [$\chi2$=30.498, d.f.=5, p=.000, Cramer's V=.128)]; "Lack of institutional service recognition for WIL ($\chi2$=20.342, d.f.=5, p=.001, Cramer's V=.104).

Table 18 - University Faculty: Challenges by Program Area

	Social Sciences	Business	Science and Math	Engineering and Technology	Health	Arts and Humanities
*Ensuring quality placements for students *	67.9%	68.8%	66.1%	65.0%	80.0%	69.0%
*Finding enough placements for students *	61.6%	59.4%	64.8%	57.9%	77.8%	55.4%
*Managing WIL with large class sizes *	54.6%	57.2%	50.5%	54.8%	70.3%	52.9%
*Balancing WIL with academic workloads *	52.1%	42.8%	51.8%	48.7%	50.3%	61.2%
Lack of financial and administrative resources for faculty	46.8%	42.8%	40.8%	37.6%	50.3%	45.4%
*Developing appropriate WIL curriculum *	43.7%	36.2%	38.5%	42.6%	42.2%	48.8%
*Managing employer expectations/communication *	36.6%	44.2%	31.9%	41.1%	37.3%	41.2%
*Integrating the work experience with classroom learning *	37.2%	29.7%	32.9%	43.1%	34.6%	43.9%
*Providing adequate institutional supports for students *	39.7%	32.6%	27.3%	32.5%	42.2%	39.0%
Managing student expectations/communication	33.9%	40.6%	29.1%	35.5%	35.7%	37.3%
*Developing valid student assessment and evaluation tools *	33.0%	33.3%	27.3%	33.0%	39.5%	40.5%
*Making WIL programs accessible to all students *	30.6%	26.1%	23.2%	23.4%	28.6%	30.7%
*Lack of salary recognition for faculty who participate in WIL *	24.2%	27.5%	19.1%	22.8%	32.4%	32.2%
Lack of institutional culture supporting WIL	24.2%	23.2%	19.4%	19.3%	29.7%	24.9%
*Lack of institutional service recognition for WIL activities *	20.8%	25.4%	14.0%	17.8%	28.1%	22.2%
Lack of recognition for WIL activities in promotion decisions	20.8%	24.6%	16.3%	21.8%	24.3%	18.5%
*Lack of faculty PD on implementing WIL *	19.5%	25.4%	12.2%	15.7%	21.6%	23.7%

* Indicates a statistically significant association (p<.05). Only significant findings with an effect size (Cramer's V) greater than 0.10 are discussed in the text.

Just over 100 university faculty and 57 college faculty offered open-ended responses about additional challenges to implementing WIL. The most frequently cited challenge in the open-ended responses was ensuring that placements foster critical learning rather than merely job training (n=22), followed by concern over the potential for unethical corporate interference (n=11). Additional challenges, noted by five or less respondents, included dealing with resistance to WIL among colleagues, that many placements do not offer pay for students, and that community groups and other non-profit organizations are often not recognized as valuable partners in providing WIL opportunities for students.

Among college faculty respondents, the open-ended comments tended to reinforce challenges already identified in the survey, particularly around finding enough placements for students, and making WIL accessible for all students regardless of financial or language barriers. New themes that emerged, though each was noted by less than 10 respondents, included the risk of poor-performing students reflecting

badly on the institution, difficulties dealing with Workplace Safety and Insurance Board (WSIB) issues, and ensuring that students get the most out of the placement experience.

Workload Issues

The management of administrative tasks related to the development and delivery of WIL programs can be a significant challenge to providing WIL opportunities for students (Sattler, 2011). To explore this issue, respondents who taught a course in which students participate in WIL were asked about the extent to which they performed 17 different activities that may impact their workload. For each activity performed, respondents were asked to indicate whether they performed the activity in addition to or as part of their regular duties.

As seen in Table 19, there are a large number of workload tasks involved in administering WIL. Roughly half of respondents reported performing 11 or more of the workload activities, while only about 5% of respondents reported that they did not perform any. For most faculty, however, the majority of these tasks were completed as part of their regular duties. Roughly one-fifth of respondents reported that they typically perform 6 or more of the workload activities in addition to their regular duties, and over a third reported performing one to five of these on top of their regular duties.

Table 19- Number of Workload Tasks Typically Completed

		College or University		
		College	**University**	**Total**
Workload Tasks Completed	**None**	5.1%	2.6%	4.1%
	1-5	16.9%	19.2%	17.8%
	6-10	22.7%	31.5%	26.3%
	11 or more	55.3%	46.8%	51.8%
Completed as Part of Regular Duties	**None**	11.7%	13.4%	12.4%
	1-5	29.4%	27.3%	28.5%
	6 or more	58.9%	59.3%	59.1%
Completed in Addition to Regular Duties	**None**	37.5%	43.1%	39.8%
	1-5	40.1%	35.9%	38.4%
	6 or more	22.4%	21.0%	21.8%

While classroom-focused workload tasks tended to be the most commonly performed activities, employer and career-related tasks were the activities performed most often in addition to regular duties (Table 20). This included providing career/employment counselling or mentoring for students (college=42.4%, university=34.4%), recruiting WIL partners/host sites (college=30.4%, university=27.8%), and managing relationships with host employers and community partners (college=26.4%, university=20.9%). Generally, college faculty were more likely than university faculty respondents to report performing WIL related tasks in addition to their regular duties, though there were few statistically significant differences, and the effect size was very small for those that did appear to differ. Only about one-third of college faculty and one-quarter of university faculty reported providing training and support for employers/site supervisors or coordinating risk management and insurance details.

Table 20 - Responses to Individuals Workload Tasks

	College		University		Total	
	Performed Task (%)	Addition to Regular Duties (%)	Performed Task (%)	Addition to Regular Duties (%)	Performed Task (%)	Addition to Regular Duties (%)
Prepared WIL-related lectures, tutorials, workshops	78.8	22.3	74.1	17.6	76.9	20.4
Provided career/employment counseling or mentoring for students	78.2	42.4	71.8	34.4	75.6	39.2
Evaluated students' WIL-related classroom assignments (.005)	72.4	10.0	77.7	13.0	74.6	11.2
Established WIL student learning objectives	71.9	17.2	77.1	19.0	74.0	17.9
Gathered feedback from students on the quality of their WIL experience	70.8	17.7	76.0	16.5	72.9	17.2
Developed WIL-related curriculum or course content	71.0	22.9	74.3	20.2	72.3	21.8
Prepared or oriented students into industry/sector	78.2	17.3	57.7	13.2	70.0	15.6
Assessed students for their workplace activities	62.8	11.0	64.3	13.7	63.4	12.1
Gathered feedback from employers/community partners on their experience with WIL students	62.6	18.8	60.3	16.8	61.6	18.0
Supervised/interacted with WIL administrative staff/coordinators	62.3	15.0	57.3	16.5	60.3	15.6
Managed relationships with host employers and community partners	61.4	26.4	55.3	20.9	58.9	24.2
Recruited WIL partners/host sites	55.2	30.4	51.1	27.8	53.6	29.3
Completed paperwork and documentation specific to WIL contracts	54.4	15.5	49.9	18.2	52.5	16.6
Conducted site visits and monitored students in the workplace	52.5	13.9	45.7	12.8	49.7	13.5
Prepared or oriented host employers and community partners	51.1	23.2	44.7	18.4	48.5	21.2
Provided training and support for employers/site supervisors	32.3	12.3	25.5	9.6	29.6	11.2
Coordinated risk management and insurance details	31.5	8.0	23.3	8.6	28.2	8.3

Labour Market Connectivity

Formal WIL opportunities are only one way in which postsecondary institutions and faculty connect learning with the world of work and employment. Survey participants were asked to what extent they participated in a range of activities that integrate student learning with real-world work experiences. The results are presented in Table 21 for college faculty and Table 22 for university faculty, showing the responses and mean for each of the items in response to the question "On average, during a typical academic term, approximately how many times do you perform the following?" (1=never, 2=1-5 times, 3=6-10 times, 4=11-20 times, 5=more than 20 times).

Table 21 – Responses and Mean Ratings for Connectivity Measures for College Faculty

	College					
	Never	**1-4 times**	**6-10 times**	**11-20 times**	**More than 20 times**	**Mean**
Use business/community/workplace examples to illustrate concepts in class	8.1%	17.1%	17.9%	16.8%	40.2%	**3.64**
Talk to students individually about their career goals/concerns	4.4%	29.8%	21.0%	16.7%	28.1%	**3.34**
Talk to students individually about their work experiences	6.7%	28.8%	23.6%	14.7%	26.2%	**3.25**
Use authentic assessment strategies to assess students' ability to perform real-world tasks	18.5%	25.2%	21.5%	12.6%	22.2%	**2.95**
Invite students to share their work experiences with the class	13.8%	32.5%	21.1%	13.5%	19.2%	**2.92**
Use business/community/workplace case studies for student assignments	21.5%	28.5%	18.7%	12.7%	18.6%	**2.78**
Invite students to share their career goals with the class	24.3%	37.4%	16.8%	10.0%	11.6%	**2.47**
Design academic course content (readings, discussions) to integrate with students' work experiences	27.9%	33.6%	16.7%	9.3%	12.5%	**2.45**
Provide class time for students to reflect on their work experiences	36.2%	29.5%	13.4%	8.1%	12.8%	**2.32**
Assign projects that require students to interact with local business, government or community organizations	37.0%	38.1%	12.2%	5.8%	6.9%	**2.08**
Invite business, government, or community guest speakers into the classroom	30.6%	58.4%	7.9%	2.0%	1.1%	**1.85**
Arrange job shadowing opportunities for students	71.1%	17.7%	4.9%	1.9%	4.4%	**1.51**
Organize class visits to local business, government, or community workplaces	56.7%	38.2%	3.5%	.8%	.8%	**1.51**

Both college and university faculty engaged most often in activities that require minimal direct contact with outside business, government or community members. For example, faculty reported making widespread use of business examples to illustrate concepts in class, and frequently providing individual career assistance for students. This trend is similar to findings reported by Brewer and Gray (1999), in which community college faculty were found to be more likely to build real-world linkages that required relatively low levels of effort. Activities that require higher levels of planning and preparation, such as organizing class visits to local businesses, arranging job shadowing opportunities, and inviting business guest speakers into classes were undertaken relatively infrequently. However, close to 70% of college faculty and roughly half of university faculty reported inviting business, government, or community guest speakers into the classroom at least once during an academic term.

Table 22 – Responses and Mean Ratings for Connectivity Measures for University Faculty

	University					
	Never	**1-4 times**	**6-10 times**	**11-20 times**	**More than 20 times**	**Mean**
Talk to students individually about their career goals/concerns	8.4%	34.9%	24.6%	14.0%	18.1%	**2.98**
Use business/community/workplace examples to illustrate concepts in class	23.5%	21.4%	19.4%	13.8%	21.9%	**2.89**
Talk to students individually about their work experiences	15.7%	40.1%	20.7%	10.5%	13.0%	**2.65**
Invite students to share their work experiences with the class	40.0%	29.6%	14.6%	6.8%	9.0%	**2.15**
Use business/community/workplace case studies for student assignments	43.0%	27.9%	13.1%	6.9%	9.2%	**2.12**
Use authentic assessment strategies to assess students' ability to perform real-world tasks	51.2%	23.6%	11.9%	6.2%	7.2%	**1.95**
Design academic course content (readings, discussions) to integrate with students' work experiences	50.1%	26.8%	10.4%	5.9%	6.8%	**1.92**
Provide class time for students to reflect on their work experiences	60.8%	19.5%	8.0%	4.4%	7.4%	**1.78**
Invite students to share their career goals with the class	54.1%	28.1%	9.6%	3.9%	4.4%	**1.76**
Assign projects that require students to interact with local business, government or community organizations	58.9%	27.2%	6.0%	3.8%	4.1%	**1.67**
Invite business, government, or community guest speakers into the classroom	47.7%	46.9%	4.2%	.7%	.5%	**1.59**
Arrange job shadowing opportunities for students	80.9%	13.1%	3.2%	.9%	2.0%	**1.30**
Organize class visits to local business, government, or community workplaces	77.1%	20.8%	1.3%	.3%	.4%	**1.26**

While the types of connections engaged in by faculty did not differ significantly by college or university, the extent did vary considerably, with college faculty reporting engaging in the connectivity activities more frequently than university faculty.

When broken down by program area, there were statistically significant variations in the means of each of the connectivity measures for college faculty (Table 23), but the partial-eta squared values were miniscule, meaning the size of the effect was very small. Among university faculty, there were some meaningful differences (Table 24). Program area was found to have a significant effect on the use of business/community/workplace examples to illustrate concepts in class ($F_{(5,1826)}=71.036$, p=.000, eta-square=.163), on the use of business/community/workplace case studies for student assignments ($F_{(5,1799)}=87.960$, p=.000, eta-squared=.196), and on inviting students to share their work experiences with the class ($F_{(5,1821)}=62.805$, p=.000, eta-squared=.147). For all three of these measures of connectivity, Business faculty were found to engage in the activity to a greater extent than faculty in other program areas.

Table 23 - Mean Ratings for Connectivity Measures for College Faculty by Program Area

	Social Sciences	Business	Science and Math	Engineering and Technology	Health	Arts and Humanities
Use business/community/workplace examples to illustrate concepts in class *	3.77 (1.36)	3.93 (1.24)	3.46 (1.42)	3.42 (1.31)	3.71 (1.37)	3.41 (1.42)
Talk to students individually about their career goals/concerns *	3.60 (1.27)	3.29 (1.28)	3.09 (1.33)	3.17 (1.24)	3.35 (1.28)	3.31 (1.25)
Talk to students individually about their work experiences *	3.40 (1.33)	3.35 (1.22)	2.98 (1.27)	3.10 (1.26)	3.59 (1.29)	2.95 (1.29)
Invite students to share their work experiences with the class *	3.17 (1.36)	3.04 (1.27)	2.43 (1.29)	2.55 (1.19)	3.45 (1.33)	2.64 (1.24)
Use business/community/workplace case studies for student assignments *	2.91 (1.46)	3.07 (1.35)	2.58 (1.42)	2.47 (1.23)	3.05 (1.40)	2.52 (1.39)
Use authentic assessment strategies to assess students' ability to perform real-world tasks *	3.06 (1.42)	2.93 (1.35)	2.67 (1.40)	2.70 (1.33)	3.36 (1.43)	2.86 (1.46)
Design academic course content (readings, discussions) to integrate with students' work experiences *	2.67 (1.38)	2.45 (1.22)	2.09 (1.23)	2.09 (1.15)	2.85 (1.38)	2.35 (1.32)
Invite students to share their career goals with the class *	2.86 (1.31)	2.40 (1.23)	2.08 (1.23)	2.02 (1.09)	2.63 (1.35)	2.50 (1.21)
Provide class time for students to reflect on their work experiences *	2.71 (1.44)	2.00 (1.17)	1.78 (1.17)	1.76 (1.03)	3.12 (1.42)	2.28 (1.33)
Assign projects that require students to interact with local business, government or community organizations *	2.38 (1.25)	2.19 (1.10)	1.70 (1.07)	1.79 (1.02)	2.09 (1.11)	1.98 (1.13)
Invite business, government, or community guest speakers into the classroom *	1.94 (.75)	1.89 (.75)	1.56 (.64)	1.69 (.59)	1.94 (.67)	1.91 (.83)
Arrange job shadowing opportunities for students *	1.57 (1.07)	1.33 (.77)	1.31 (.71)	1.43 (.89)	2.00 (1.39)	1.41 (.81)
Organize class visits to local business, government, or community workplaces *	1.51 (.67)	1.46 (.67)	1.33 (.62)	1.56 (.59)	1.60 (.80)	1.55 (.68)

* Indicates a statistically significant finding (p<.05).

Table 24 - Mean Ratings for Connectivity Measures for University Faculty by Program Area

	Social Sciences	Business	Science and Math	Engineering and Technology	Health	Arts and Humanities
Use business/community/ workplace examples to illustrate concepts in class *	3.09 (1.48)	4.47 (.86)	2.39 (1.34)	3.07 (1.28)	3.35 (1.44)	2.29 (1.29)
Talk to students individually about their career goals/concerns *	3.11 (1.29)	3.25 (1.26)	2.86 (1.25)	2.82 (1.12)	3.00 (1.25)	2.91 (1.21)
Talk to students individually about their work experiences *	2.81 (1.27)	3.30 (1.30)	2.34 (1.14)	2.70 (1.17)	2.97 (1.28)	2.35 (1.12)
Invite students to share their work experiences with the class *	2.47 (1.33)	3.15 (1.42)	1.54 (.92)	1.80 (1.03)	2.69 (1.36)	1.90 (1.03)
Use business/community/ workplace case studies for student assignments *	2.21 (1.28)	3.65 (1.32)	1.69 (1.01)	2.13 (1.09)	2.80 (1.43)	1.57 (.90)
Use authentic assessment strategies to assess students' ability to perform real-world tasks *	1.95 (1.23)	2.57 (1.36)	1.62 (1.00)	2.07 (1.17)	2.73 (1.46)	1.64 (1.06)
Design academic course content (readings, discussions) to integrate with students' work experiences *	2.14 (1.29)	2.49 (1.40)	1.54 (.97)	1.86 (1.04)	2.52 (1.38)	1.56 (.92)
Invite students to share their career goals with the class *	2.03 (1.18)	2.02 (1.17)	1.33 (.76)	1.46 (.79)	2.10 (1.22)	1.73 (.96)
Provide class time for students to reflect on their work experiences *	2.01 (1.32)	2.19 (1.36)	1.33 (.81)	1.48 (.90)	2.38 (1.52)	1.65 (1.10)
Assign projects that require students to interact with local business, government or community organizations *	1.82 (1.08)	2.18 (1.31)	1.32 (.74)	1.66 (1.00)	2.06 (1.31)	1.46 (.78)
Invite business, government, or community guest speakers into the classroom *	1.67 (.62)	1.89 (.77)	1.41 (.64)	1.61 (.69)	1.77 (.68)	1.48 (.55)
Arrange job shadowing opportunities for students *	1.28 (.70)	1.20 (.67)	1.19 (.58)	1.35 (.73)	1.92 (1.29)	1.16 (.49)
Organize class visits to local business, government, or community workplaces *	1.28 (.55)	1.29 (.57)	1.14 (.41)	1.34 (.61)	1.37 (.70)	1.26 (.49)

* Indicates a statistically significant finding (p<.05).

There are also some significant differences by level of WIL involvement. As seen in Table 25, college faculty who teach in a course with a WIL component generally have higher mean scores on all of the connectivity measures. As with differences by program area, however, we find that while the differences are statistically significant, the effect sizes are very small, suggesting that the differences are not practically meaningful.

Among university faculty, level of WIL involvement was both statistically and practically significant for inviting students to share their work experiences in class ($F(2,1813)=128.788$, $p=.000$, eta squared=.124); providing class time for students to reflect on their work experiences ($F(2,1816)=144.878$, $p=.000$, eta squared=.138); using authentic assessment strategies to assess students' ability to perform real-world tasks ($F(2,1760)=101.922$, $p=.000$, eta squared=.104); assigning projects that require students to interact with local business, government, or community organizations ($F(2,1814)=173.110$, $p=.000$, eta squared=.160); and designing academic course content to integrate with students' work experiences ($F(2,1812)=171.486$, $p=.000$, eta squared=.159). For each of these items, faculty who taught a course

with a WIL component engaged in the activity to a greater extent than faculty who taught in a WIL program or who had no WIL involvement.

Table 25 - Mean Ratings for Connectivity Measures by Level of WIL Involvement

	College			University		
	Teach Course with WIL	**Teach in program with WIL**	**No WIL**	**Teach Course with WIL**	**Teach in program with WIL**	**No WIL**
*Use business/community/ workplace examples to illustrate concepts in class **	3.84 (1.30)	3.67 (1.31)	3.23 (1.46)	3.42 (1.42)	2.93 (1.41)	2.49 (1.42)
*Talk to students individually about their career goals/concerns **	3.60 (1.27)	3.23 (1.21)	2.98 (1.26)	3.26 (1.28)	2.93 (1.21)	2.81 (1.21)
*Talk to students individually about their work experiences **	3.59 (1.29)	3.11 (1.21)	2.76 (1.23)	3.16 (1.26)	2.58 (1.15)	2.33 (1.16)
*Invite students to share their work experiences with the class **	3.31 (1.32)	2.61 (1.25)	2.52 (1.23)	2.84 (1.35)	1.84 (1.08)	1.88 (1.13)
*Use business/community/ workplace case studies for student assignments **	3.06 (1.39)	2.68 (1.38)	2.39 (1.35)	2.66 (1.38)	2.05 (1.19)	1.77 (1.15)
*Use authentic assessment strategies to assess students' ability to perform real-world tasks **	3.21 (1.41)	2.86 (1.37)	2.55 (1.37)	2.54 (1.39)	1.86 (1.13)	1.59 (1.01)
*Design academic course content (readings, discussions) to integrate with students' work experiences **	2.82 (1.35)	2.23 (1.24)	2.01 (1.15)	2.67 (1.36)	1.67 (.99)	1.58 (.97)
*Invite students to share their career goals with the class **	2.75 (1.34)	2.19 (1.14)	2.25 (1.17)	2.14 (1.20)	1.56 (.94)	1.64 (.98)
*Provide class time for students to reflect on their work experiences **	2.74 (1.45)	1.87 (1.15)	2.00 (1.16)	2.47 (1.44)	1.44 (.91)	1.52 (1.01)
*Assign projects that require students to interact with local business, government or community organizations **	2.43 (1.26)	1.85 (1.02)	1.66 (.88)	2.31 (1.25)	1.44 (.80)	1.38 (.77)
*Invite business, government, or community guest speakers into the classroom **	2.05 (.76)	1.71 (.67)	1.62 (.65)	1.89 (.66)	1.50 (.62)	1.45 (.60)
*Arrange job shadowing opportunities for students **	1.76 (1.21)	1.31 (.73)	1.25 (.62)	1.59 (1.03)	1.21 (.58)	1.15 (.53)
*Organize class visits to local business, government, or community workplaces **	1.66 (.76)	1.39 (.57)	1.36 (.58)	1.48 (.66)	1.17 (.44)	1.17 (.44)

* Indicates a statistically significant finding for both college and university (p<.05).

6. Discussion

Despite the important role of faculty in the provision of WIL opportunities for students, there has been little research to understand faculty attitudes about WIL in Ontario's postsecondary sector. This study offers valuable insight into the perceptions of faculty at Ontario colleges and universities, providing a greater sense of the barriers and challenges to faculty involvement in WIL, as well as the perceived benefits.

The survey findings show that the level of support for WIL in Ontario PSE varies considerably across the college and university sectors. College faculty were generally very supportive of WIL, with 95.0% reporting that they personally felt that WIL was valuable, and over half of respondents feeling that the level of WIL activity should be increased. Relatively little variation was seen in college faculty responses, though there were some differences by program and years of non-PSE employment experience. Among university faculty, the vast majority also reported that they personally felt WIL was valuable (83.5%), and close to half felt that the level of WIL activity should be increased. However, there was much greater variation in faculty responses and/or ambivalence, with many faculty reporting neutral positions to both statements.

Given the traditional focus of Ontario colleges on providing vocational education, these higher levels of support for WIL among college faculty are not particularly surprising. WIL fits well with the mandate of colleges to offer students accessible career-oriented education and training, while there is less of a match with the university system's traditional aim to provide a liberal arts education or to create critical- and independent-thinking citizens.

Regardless of the institution and the sector, it is clear that postsecondary faculty perceive the advantages of WIL to accrue primarily to students. WIL is seen as helping students better understand work realities and expectations, develop contacts for future employment, and explore their career interests and goals. At the institutional level, faculty also generally viewed WIL as helping to connect institutions to businesses and the broader community.

The primary challenges faculty face appear to be similar across the university and college sectors, with the greatest challenges related to finding sufficient quantity and quality of WIL placements, and managing the needs to integrate WIL within increasingly large classes. Balancing WIL with academic workloads was also perceived to be a challenge, and faculty who taught a course with a WIL component reported completing a large number of supplementary workload tasks. Classroom-focused workload tasks tended to be the most commonly performed, but employer and career-related tasks were the activities performed most often in addition to regular duties.

Finally, both college and university faculty are integrating work experiences into their classrooms outside of formal WIL activities, though this is much more widespread among college than university faculty. The primary ways in which all faculty reported integrating learning and work was by using business or community workplace examples and speaking with students, both individually and as a class, about their career goals and job experiences. Activities that require higher levels of planning and preparation, and greater interaction with the broader community, are undertaken much less frequently by faculty.

The survey findings suggest a number of policy recommendations. First, if postsecondary institutions wish to increase their provision of WIL opportunities, some work will need to be done to improve faculty awareness of the purpose and benefits of WIL, particularly among university faculty. While there is little outright opposition to WIL, university faculty respondents tended to have lower levels of support and a sizeable proportion were unsure about the appropriate level of WIL in postsecondary education. Institutions will also need to address concerns that WIL privileges the production of "workers," over providing students with a broad-based and more theoretical education.

As the demand for PSE increases and average class sizes grow, the challenges of developing and implementing WIL opportunities for greater numbers of students and in larger classes will be augmented. Institutions wishing to expand WIL programs will need to dedicate financial and administrative resources and supports to aid faculty in meeting these challenges. Implementing WIL within a course adds to faculty workloads, and creates difficulties in balancing WIL with other academic responsibilities. Consideration should be given to providing greater institutional recognition for faculty who engage in WIL activities, as well as offering interested faculty professional development opportunities around developing WIL curriculum and assessment strategies.

Given that one of the primary concerns for faculty is ensuring adequate numbers of quality placements for students, institutions could also play a greater role in working to strengthen and support communication links with employers and community partners. Providing assistance in recruiting and building relationships with host sites, similar to institutional structures that often already support more established co-op programs, could help to alleviate faculty concerns about the significant demands on time involved in WIL.

As a number of survey respondents noted in open-ended comments, WIL takes many forms, and the benefits and challenges will vary depending on the type of WIL and how it is implemented. Future research should examine faculty attitudes in relation to the various types of WIL, and how the barriers and workload issues may differ. Studies could also move beyond focusing on faculty perceptions of benefits and challenges, to generating a better understanding of whether and how participating in WIL impacts faculty in other ways, such as the influence of WIL on instructional approaches. Effective strategies to enhance faculty involvement in WIL should also be explored, along with institutional best practices in the administration and support of faculty-led WIL initiatives.

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Appendix 1: Working Group

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Appendix 2: Survey Instrument

	Target	
Q1. STAT	ALL	What is your status as a faculty member at this institution? If you are not currently teaching in the classroom, please think of your most recent teaching assignment. [1] College full-time [2] College partial load or part-time [3] College sessional [4] University tenured [5] University tenure-track [6] University limited-term appointment [7] University contract or sessional [8] Other, please specify
Q2. PRG	ALL	Which of the following best describes the area in which you teach? (Select all that apply) [1] Agriculture, Natural Resources and Conservation [2] Education [3] Humanities [4] Social Sciences [5] Psychology [6] Family and Consumer Sciences/Human Sciences [7] Communication, Journalism and Related Programs [8] Legal Professions and Studies [9] Business, Management, Marketing and Related Support Services [10] Public Administration and Social Service Professions [11] Physical Sciences [12] Biological and Biomedical Sciences [13] Science Technologies/Technicians [14] Mathematics and Statistics [15] Computer and Information Sciences and Support Services [16] Architecture and Related Services [17] Engineering [18] Engineering Technologies/Technicians [19] Construction Trades [20] Mechanic and Repair Technologies/Technicians

		[21] Precision Production
		[22] Health Professions and Related Clinical Sciences
		[23] Parks, Recreation, Leisure and Fitness Studies
		[24] Personal and Culinary Services
		[25] Security and Protective Services
		[26] Transportation and Materials Moving
		[27] Visual and Performing Arts
		[28] Communications Technologies/Technicians and Support Services
		[29] Other, please specify
Q3. PSEYRS	ALL	In total, how many years have you been teaching at the postsecondary level? [1] Less than one year [2] 1-5 years [3] 6-10 years [4] 11-15 years [5] 16-20 years [6] More than 20 years
Q4. INSTYRS	ALL	How many years have you been teaching at this institution? [1] Less than one year [2] 1-5 years [3] 6-10 years [4] 11-15 years [5] 16-20 years [6] More than 20 years
Q5. SEX	ALL	What is your gender? [1] Male [2] Female [3] Other [4] Prefer not to answer
Q6. AGE	ALL	What is your age range? [1] Younger than 30 [2] 30-39 years old [3] 40-49 years old [4] 50-59 years old [5] 60-69 years old

		[6] 70 or older
		[7] Prefer not to answer
Q7. PSEPUR	ALL	We are interested in your opinions about the purposes of postsecondary education. To what extent is your teaching intended to contribute to your students' knowledge, skills and personal development in the following areas? Not at all, Very little, Somewhat, Very much [1] Using computing and information technology [2] Using data to analyze problems [3] Thinking critically and analytically [4] Speaking clearly and effectively [5] Writing clearly and effectively [6] Working effectively with others [7] Working independently [8] Becoming lifelong learners [9] Applying skills and knowledge in different situations [10] Acquiring job-related or work-related knowledge and skills [11] Securing relevant work after graduation [12] Acquiring a broad general education [13] Solving complex, real-world problems [14] Developing leadership skills [15] Contributing to the welfare of their community [16] Developing a personal code of ethics and values [17] Understanding people of other racial and ethnic backgrounds [18] Understanding themselves [19] Participating as informed voters in local, provincial and federal elections
Q8. PUROTH	ALL	Is your teaching intended to contribute to your students' development in other areas not mentioned above? (Open-ended)
Q9. EMPEXP	ALL	Excluding teaching or research conducted as part of your faculty responsibilities, do you have other employment experience related to the program area in which you teach? [1] Yes [2] No
Q10. EMPYRS	Show if EMPEXP=1	How many years of other employment experience do you have? [1] Less than one year

		[2] 1-5 years
		[3] 6-10 years
		[4] 11-15 years
		[5] 16-20 years
		[6] More than 20 years
Q11. FACSTD	ALL	Did you participate in any work-integrated learning programs when you were a postsecondary student? Work-integrated learning includes co-op, practicums, clinical placements, field placements, internships, applied research projects, community-based learning, service-learning, etc. [1] Yes [2] No
Q12. CPAPP	ALL	Have you ever taught in a program in which students participate in co-op or apprenticeship? (Select one only) [1] Yes, co-op [2] Yes, apprenticeship [3] Yes, both co-op and apprenticeship [4] No [5] Not sure
Q13. FACPRG	ALL	Within your faculty or program, do you personally teach a **course** in which students participate in work-integrated learning (WIL)? [1] Yes, I currently teach a course that involves WIL [2] I previously taught a course that involves WIL, but do not currently [3] No, I have never taught a course that involves WIL
Q14. WILPRG	Skip if FACPRG=3	Please describe the type of work-integrated learning involved in the course. (Select all that apply) [1] Practicums, clinical placements, or internships required for students to obtain a license to practice, register with a regulatory college/professional association, or obtain a professional designation [2] Field placements [3] Internships [4] Applied research projects [5] Community-based learning [6] Service-learning [7] Global service learning [8] Don't know [9] Other, please specify
Q15.	Show if FACPRG=1,	We want to understand faculty workload issues that may be associated with

WRKLD	2	work-integrated learning (WIL).
		On average, for the courses in which your students participated in WIL, please indicate which of the following activities you typically completed. For those activities you select, please indicate whether the activity was part of, or **in addition to**, your regularly assigned duties.
		Did not do this, Completed as part of regular duties, Completed **in addition to** regular duties
		[1] Developed WIL-related curriculum or course content
		[2] Established WIL- student learning objectives
		[3] Prepared WIL-related lectures, tutorials, workshops
		[4] Provided career/employment counseling or mentoring for students
		[5] Recruited WIL partners/host sites
		[6] Completed paperwork and documentation specific to WIL contracts
		[7] Coordinated risk management and insurance details
		[8] Supervised/interacted with WIL administrative staff/coordinators
		[9] Prepared or oriented host employers and community partners
		[10] Managed relationships with host employers and community partners
		[11] Provided training and support for employers/site supervisors
		[12] Prepared or oriented students into industry/sector
		[13] Conducted site visits and monitored students in the workplace
		[14] Assessed students for their workplace activities
		[15] Evaluated students' WIL-related classroom assignments
		[16] Gathered feedback from employers/community partners on their experience with WIL students
		[17] Gathered feedback from students on the quality of their WIL experience
		[18] Other, please specify
Q16. VALSTD	ALL	Work-integrated learning is perceived to offer advantages and disadvantages to students. We recognize that there are differences between types of WIL, and that you may not have had any actual WIL experience. **On average**, however, please indicate how much you agree or disagree with the following statements.
		Strongly disagree, Disagree, Neither agree nor disagree, Agree, Strongly agree
		[1] Participating in work-integrated learning increases students' self-

		confidence.
		[2] Work-integrated learning does little to improve students' understanding of academic course content. [3] . Participation in work-integrated learning increases students' engagement in their academic studies. [4] Work-integrated learning lets students apply the theory and skills learned in the classroom. [5] The costs to students (both financial and time required) outweigh the benefits of work-integrated learning. [6] Too many employers use work-integrated learning simply to reduce their salary costs. [7] Work-integrated learning enhances the postsecondary experience for students. [8] Work-integrated learning is particularly valuable for students considered "at-risk". [9] There is a lack of evidence about the impact of WIL on student learning. [10] Work-integrated learning helps students better understand work realities and expectations. [11] Work-integrated learning engages students in thinking critically about the workplace and the nature of work. [12] Students who participate in work-integrated learning are more employable than other students. [13] Employers, not students, are the main beneficiaries of WIL programs. [14] Work-integrated learning lets students explore their career interests and clarify their career goals. [15] Work-integrated learning helps students develop contacts and networks for future employment. [16] Work-integrated learning is only useful for students who go directly to the labour market after their postsecondary education.
Q17. VALOTH	ALL	Are there other advantages or disadvantages for students? (Open-ended)
Q18. VALINST	ALL	Work-integrated learning is perceived to offer advantages and disadvantages to faculty and postsecondary institutions. We recognize that there are differences between types of WIL, and that you may not have had any actual WIL experience. **On average**, however, please indicate how much you agree or disagree with the following statements. Strongly disagree, Disagree, Neither agree nor disagree, Agree, Strongly agree

		[1] I personally think that work-integrated learning is valuable.
		[2] Involvement with work-integrated learning helps faculty keep their knowledge current.
		[3] Feedback from students and employers who participate in WIL can improve academic programming.
		[4] Work-integrated learning is inconsistent with the values of a liberal education.
		[5] Work-integrated learning is an effective postsecondary education recruitment and marketing tool.
		[6] Work-integrated learning perpetuates a business model for postsecondary education.
		[7] Work-integrated learning enhances institutional reputation.
		[8] Work-integrated learning strengthens links between the institution and the business community.
		[9] Work-integrated learning diverts funding away from program areas that may not lend themselves to WIL.
		[10] Work-integrated learning connects postsecondary institutions to the broader community.
		[11] Work-integrated learning can engage postsecondary institutions in responding to identified community needs.
		[12] Work-integrated learning can involve postsecondary institutions in addressing global issues.
		[13] Work-integrated learning can help businesses find solutions to specific business or industry needs.
		[14] By extending corporate involvement in curriculum, work-integrated learning has a negative overall impact on postsecondary education.
		[15] My institution provides resources and supports for faculty to participate in WIL activities.
Q19. VALOTH	Show if FACPRG=1, 2	Are there other advantages or disadvantages for postsecondary institutions? (Open-ended)

Q20. INTEG	ALL	This section explores faculty involvement in a range of activities that integrate student learning with real-world experiences, but may not be considered work-integrated learning.
		On average, during a typical academic term, approximately how many times do you perform the following?
		Never, 1-4 times, 6-10 times, 11-20 times, More than 20 times
		   [1] Invite business, government, or community guest speakers into the classroom
		
		   [2] Organize class visits to local business, government, or community

		workplaces
		[3] Talk to students individually about their work experiences
		[4] Invite students to share their work experiences with the class
		[5] Talk to students individually about their career goals/concerns
		[6] Invite students to share their career goals with the class
		[7] Provide class time for students to reflect on their work experiences (through journals, assignments, etc.)
		[8] Arrange job shadowing opportunities for students
		[9] Use business/community/workplace examples to illustrate concepts in class
		[10] Use business/community/workplace case studies for student assignments
		[11] Use authentic assessment strategies to assess students' ability to perform real-world tasks
		[12] Assign projects that require students to interact with local business, government or community organizations
		[13] Design academic course content (readings, discussions) to integrate with students' work experiences
Q21. VALOTH	Show if FACPRG=1, 2	Are there other activities you use to integrate student learning with real-world experiences? (Open-ended)
Q22. LVLWIL	ALL	We are interested in your opinion on the appropriate levels of work-integrated learning within Ontario's postsecondary sector. In general, do you believe that postsecondary work-integrated learning should be: [1] Increased [2] Decreased [3] Kept about the same [4] Not sure
Q23. CHALL	ALL	There are many challenges associated with the successful implementation of postsecondary work-integrated learning. In your view, what are the **most significant** challenges? (Select all that apply) [1] Managing WIL with large class sizes [2] Developing appropriate WIL curriculum [3] Integrating the work experience with classroom learning [4] Balancing WIL with academic workloads [5] Finding enough placements for students

		[6] Ensuring quality placements for students
		[7] Making WIL programs accessible to all students
		[8] Providing adequate institutional supports for students
		[9] Managing employer expectations/communication
		[10] Managing student expectations/communication
		[11] Lack of financial and administrative resources for faculty
		[12] Developing valid student assessment and evaluation tools
		[13] Lack of salary recognition for faculty who participate in WIL
		[14] Lack of recognition for WIL activities in promotion decisions
		[15] Lack of institutional service recognition for WIL activities
		[16] Lack of faculty PD on implementing WIL
		[17] Lack of institutional culture supporting WIL
		[18] Other, please specify
Q24. OTH	ALL	Do you have any other comments you would like to make to contribute to this study of work-integrated learning in Ontario's postsecondary sector?

Appendix 3: WIL Index Items

Value of WIL index items range, mean and standard deviation

	Minimum	Maximum	Mean	Std. Deviation
Participating in work-integrated learning increases students' self-confidence	1.00	5.00	4.2438	.70584
Work-integrated learning does little to improve students' understanding of academic course content	1.00	5.00	3.8834	1.00946
Participation in work-integrated learning increases students' engagement in their academic studies	1.00	5.00	3.9475	.84225
Work-integrated learning lets students apply the theory and skills learned in the classroom	1.00	5.00	4.2505	.74612
Too many employers use work-integrated learning simply to reduce their salary costs	1.00	5.00	3.1033	.95041
Work-integrated learning enhances the postsecondary experience for students	1.00	5.00	4.2004	.73553
Work-integrated learning helps students better understand work realities and expectations	1.00	5.00	4.3107	.68402
Work-integrated learning engages students in thinking critically about the workplace and the nature of work	1.00	5.00	4.1092	.79645
Students who participate in work-integrated learning are more employable than other students	1.00	5.00	3.9828	.88730
Employers, not students, are the main beneficiaries of WIL programs	1.00	5.00	3.6211	.88197
Work-integrated learning lets students explore their career interests and clarify their career goals	1.00	5.00	4.1558	.69638
Work-integrated learning helps students develop contacts and networks for future employment	1.00	5.00	4.2656	.68430
Work-integrated learning is only useful for students who go directly to the labour market after their postsecondary education	1.00	5.00	3.6685	.97857
Involvement with work-integrated learning helps faculty keep their knowledge current	1.00	5.00	3.8355	.95351
Feedback from students and employers who participate in WIL can improve academic programming	1.00	5.00	4.0117	.83118
Work-integrated learning is an effective postsecondary education recruitment and marketing tool	1.00	5.00	3.9300	.76672
Work-integrated learning enhances institutional reputation	1.00	5.00	3.8068	.84273
Work-integrated learning strengthens links between the institution and the business community	1.00	5.00	4.1040	.72510
Work-integrated learning diverts funding away from program areas that may not lend themselves to WIL	1.00	5.00	3.0736	.92091
Work-integrated learning connects postsecondary institutions to the broader community	1.00	5.00	4.0574	.73275
Work-integrated learning can engage postsecondary institutions in responding to identified community needs	1.00	5.00	3.8871	.79324
Work-integrated learning can involve postsecondary institutions in addressing global issues	1.00	5.00	3.5449	.88804
Work-integrated learning can help businesses find solutions to specific business or industry needs	1.00	5.00	3.6167	.82778
By extending corporate involvement in curriculum, work-integrated learning has a negative overall impact on postsecondary education	1.00	5.00	3.4073	1.05216