



Higher Education
Quality Council
of Ontario

An agency of the Government of Ontario

Work-Integrated Learning in Ontario's Postsecondary Sector: The Experience of Ontario Graduates

Peggy Sattler and Julie Peters,
Academica Group, Inc.



Published by

The Higher Education Quality Council of Ontario

1 Yonge Street, Suite 2402
Toronto, ON Canada, M5E 1E5

Phone: (416) 212-3893
Fax: (416) 212-3899
Web: www.heqco.ca
E-mail: info@heqco.ca

Cite this publication in the following format:

Sattler, P., and Peters, J. (2013). *Work-Integrated Learning in Ontario's Postsecondary Sector: The Experience of Ontario Graduates*. Toronto: Higher Education Quality Council of Ontario.



The opinions expressed in this research document are those of the authors and do not necessarily represent the views or official policies of the Higher Education Quality Council of Ontario or other agencies or organizations that may have provided support, financial or otherwise, for this project. © Queen's Printer for Ontario, 2013

Contents

Index of Figures	4
Index of Tables.....	6
Executive Summary	8
Key Findings	8
Introduction	13
Part 1 – Study Overview	19
1.1 Literature Review	19
1.2 Methodology.....	27
Instrument	27
Procedure.....	27
Analysis.....	29
Limitations	30
1.3 Respondent Profile.....	31
College Respondents.....	31
University Respondents	32
Part 2 – Postsecondary WIL and Labour Market Experiences.....	35
2.1 Participation in WIL	35
College Participation in WIL.....	35
University Participation in WIL	38
Participation in WIL Summary.....	41
2.2 WIL Motivations and Benefits	42
College Motivations.....	42
University Motivations	45
College WIL Benefits.....	47
University WIL Benefits	49
WIL Motivations and Benefits Summary.....	50
2.3 WIL Challenges and Barriers	52
College WIL Challenges.....	52

University WIL Challenges	55
College Barriers	57
University Barriers.....	58
WIL Challenges and Barriers Summary.....	60
2.4 WIL Financial Implications	61
Financial Implications of College WIL	61
Financial Implications of University WIL	62
WIL Financial Implications Summary.....	64
2.5 Labour Market and Volunteer Participation	65
College Labour Market and Volunteer Participation	65
University Labour Market and Volunteer Participation.....	67
Benefits of Labour Market and Volunteer Participation	70
Labour Market and Volunteer Participation Summary	75
2.6 Postsecondary Outcomes and Satisfaction	77
Employability Skill Outcomes.....	77
Personal Growth and Development Outcomes	79
Critical Reflection Outcomes.....	80
Civic Responsibility Outcomes.....	81
Self-efficacy Outcomes	82
Postsecondary Outcomes by WIL Participation, Type of WIL and Program	83
Postsecondary Satisfaction.....	85
Postsecondary Outcomes and Satisfaction Summary.....	87
Part 3 – WIL in Ontario Colleges and Universities.....	89
3.1 Co-operative Education	90
College Co-op	90
University Co-op.....	93
3.2 Practicums and Clinical Placements.....	97
College Practicums and Clinical Placements.....	97
University Practicums and Clinical Placements.....	99
3.3 Field Placements.....	103
College Field Placements	103

University Field Placements.....	105
3.4 Internships.....	109
College Internships	109
University Internships.....	111
3.5 Applied Research Projects.....	115
College Applied Research Projects	115
University Applied Research Projects.....	117
3.6 Service Learning	121
College Service Learning.....	121
University Service Learning	124
Conclusion	127
Policy Recommendations.....	130
Appendices	140
Appendix A – Response Rate	140
Appendix B – Respondent Profiles	141
Appendix C – Participation in WIL	145
Appendix D – WIL Motivations and Benefits.....	147
Appendix E – WIL Challenges and Barriers.....	152
Appendix F – Labour Market and Volunteer Participation	158
Appendix G – Postsecondary Outcomes	163
Appendix H – WIL Profiles	171

Index of Figures

Figure 1 College Participation in WIL.....	35
Figure 2 Type of College WIL	36
Figure 3 University Participation in WIL.....	38
Figure 4 Type of University WIL.....	39
Figure 5 Interest in College WIL Among Non-WIL College Students	42
Figure 6 Motivations for College WIL.....	43
Figure 7 Interest in University WIL Among Non-WIL Students.....	45
Figure 8 Motivations for University WIL	46
Figure 9 Benefits of College WIL	48
Figure 10 Benefits of University WIL.....	49
Figure 11 College WIL Challenges	52
Figure 12 Ranked College WIL Challenges.....	53
Figure 13 University WIL Challenges.....	55
Figure 14 Ranked University WIL Challenges	56
Figure 15 Reasons for not Choosing College WIL	58
Figure 16 Reasons for not Choosing University WIL.....	59
Figure 17 Mean Expected College Debt by WIL and Type of WIL	61
Figure 18 Expected College Debt by WIL and Type of WIL	62
Figure 19 Proportion of University Students Owing Debt by WIL and Type of WIL	62
Figure 20 Mean Expected University Debt by WIL and Type of WIL	63
Figure 21 Expectations of University Debt by WIL and Type of WIL.....	63
Figure 22 College Labour Market and Volunteer Participation	65
Figure 23 Labour Market and Volunteer Participation and College Program.....	65
Figure 24 University Labour Market and Volunteer Participation	68
Figure 25 Labour Market and Volunteer Participation and University Program	68
Figure 26 Overall Satisfaction with PSE by Participation in WIL	85
Figure 27 College Satisfaction by Program	86
Figure 28 University Satisfaction by Program.....	86
Figure 29 College Co-op by Program	90
Figure 30 Completed College Co-op Work Term	91
Figure 31 College Co-op Satisfaction	91
Figure 32 University Co-op by Program.....	93
Figure 33 Completed University Co-op Work Terms	94
Figure 34 University Co-op Satisfaction.....	95
Figure 35 College Practicum and Clinical Placements by Program	97
Figure 36 Completed College Practicums or Clinical Placements	97
Figure 37 Timing of College Practicums or Clinical Placements	98
Figure 38 College Practicum Satisfaction	98
Figure 39 University Practicums and Clinical Placements by Program.....	100
Figure 40 Completed University Practicums or Clinical Placements.....	100
Figure 41 Timing of University Practicums or Clinical Placements	101
Figure 42 University Practicum Satisfaction	101
Figure 43 College Field Placements by Program	103
Figure 44 Completed College Field Placements	103
Figure 45 Timing of College Field Placements	104
Figure 46 College Field Placement Satisfaction	104

Figure 47 University Field Placements by Program.....	106
Figure 48 Completed University Field Placements.....	106
Figure 49 Timing of University Field Placements	107
Figure 50 University Field Placement Satisfaction	107
Figure 51 College Internships by Program	109
Figure 52 Completed College Internships.....	109
Figure 53 Timing of College Internships	110
Figure 54 College Internship Satisfaction	110
Figure 55 University Internships by Program.....	112
Figure 56 Completed University Internships.....	112
Figure 57 Timing of University Internships.....	113
Figure 58 University Internship Satisfaction.....	113
Figure 59 College Applied Research Projects by Program	115
Figure 60 Completed College Applied Research Projects.....	115
Figure 61 Timing of College Applied Research Projects	116
Figure 62 College Applied Research Project Satisfaction	116
Figure 63 University Applied Research Projects by Program.....	118
Figure 64 Completed University Applied Research Projects.....	118
Figure 65 Timing of University Applied Research Projects.....	119
Figure 66 University Applied Research Project Satisfaction.....	119
Figure 67 College Service Learning by Program.....	121
Figure 68 Completed College Service Learning	121
Figure 69 Timing of College Service Learning.....	122
Figure 70 College Service Learning Satisfaction.....	122
Figure 71 University Service Learning by Program	124
Figure 72 Completed University Service Learning	124
Figure 73 Timing of University Service Learning	125
Figure 74 University Service Learning Satisfaction	125

Index of Tables

Table 1 Typology of Work-integrated Learning.....	16
Table 2 Logistic Regression Predicting College Participation in WIL.....	38
Table 3 Logistic Regression Predicting University Participation in WIL.....	40
Table 4 Challenge Factors.....	53
Table 5 College Challenges by type of WIL.....	54
Table 6 College Challenges by Program.....	55
Table 7 University WIL Challenges by Type of WIL.....	56
Table 8 University WIL Challenges by Program.....	57
Table 9 Benefits of College Labour Market Participation.....	70
Table 10 Benefits of College Voluntary Activity.....	71
Table 11 Benefits of College WIL and Labour Market Participation.....	72
Table 12 Benefits of University Labour Market Participation.....	73
Table 13 Benefits of University Voluntary Activity.....	74
Table 14 Benefits of University WIL and Labour Market Participation.....	74
Table 15 College Employability Skills.....	78
Table 16 University Employability Skills.....	78
Table 17 College Personal Growth and Development Outcomes.....	79
Table 18 University Personal Growth and Development Outcomes.....	80
Table 19 College Critical Reflection Outcomes.....	80
Table 20 University Critical Reflection Outcomes.....	81
Table 21 College Civic Responsibility Outcomes.....	81
Table 22 University Civic Responsibility Outcomes.....	82
Table 23 College Self-efficacy Outcomes.....	82
Table 24 University Self-efficacy Outcomes.....	83
Table 25 PSE Outcomes by Participation in WIL.....	84
Table B1 College Demographic Characteristics.....	141
Table B2 College Academic Characteristics.....	142
Table B3 College Financial Characteristics.....	142
Table B4 College Funding Sources.....	142
Table B5 University Demographic Characteristics.....	143
Table B6 University Academic Characteristics.....	144
Table B7 University Financial Characteristics.....	144
Table B8 University Funding Sources.....	144
Table C1 College Participation in WIL by Selected Characteristics.....	145
Table C2 University Participation in WIL by Selected Demographic Characteristics.....	146
Table D1 College WIL Motivations.....	147
Table D2 College WIL Motivations by Type of WIL.....	147
Table D3 College WIL Motivations by Program.....	147
Table D4 University WIL Motivations.....	148
Table D5 University WIL Motivations by Type of WIL.....	148
Table D6 University WIL Motivations by Program.....	148
Table D7 College WIL Benefits.....	149
Table D8 College WIL Benefits by Type of WIL.....	149
Table D9 College WIL Benefits by Program.....	150
Table D10 University WIL Benefits.....	150
Table D11 University WIL Benefits by Type of WIL.....	151

Table D12 University WIL Benefits by Program	151
Table E1 College WIL Challenges	152
Table E2 University WIL Challenges	153
Table E3 College WIL Barriers	154
Table E4 College Barriers by Program	155
Table E5 University WIL Barriers	156
Table E6 University Barriers by Program	157
Table F1 Labour Market Participation	158
Table F2 Voluntary Activity	159
Table F3 Part-time Employment by WIL	159
Table F4 Summer Employment by WIL	160
Table F5 Full-time Employment by WIL	160
Table F6 Volunteer Participation by WIL	161
Table F7 College Labour Market Benefits by Type of Employment	161
Table F8 University Labour Market Benefits by Type of Employment	162
Table G1 College PSE Outcomes by Type of WIL	163
Table G2 College PSE Outcomes by Program	163
Table G3 University PSE Outcomes by Type of WIL	163
Table G4 University PSE Outcomes by Program	164
Table G5 Overall College Satisfaction by Type of WIL	164
Table G6 Overall University Satisfaction by Type of WIL	164
Table G7 Employability Outcomes by Demographic Characteristics	165
Table H1 College Co-op	171
Table H2 University Co-op	172
Table H3 Co-op Motivations	173
Table H4 Co-op Benefits	173
Table H5 Co-op Challenges	174
Table H6 Practicums or Clinical Placements	175
Table H7 Practicum or Clinical Placement Motivations	175
Table H8 Practicum or Clinical Placement Benefits	176
Table H9 Practicum or Clinical Placement Challenges	176
Table H10 Field Placements	177
Table H11 Field Placement Motivations	177
Table H12 Field Placement Benefits	178
Table H13 Field Placement Challenges	178
Table H14 Internships	179
Table H15 Internship Motivations	179
Table H16 Internship Benefits	180
Table H17 Internship Challenges	180
Table H18 Applied Research Projects	181
Table H19 Applied Research Project Motivations	181
Table H20 Applied Research Project Benefits	182
Table H21 Applied Research Project Challenges	182
Table H22 Service Learning	183
Table H23 Service Learning Motivations	183
Table H24 Service Learning Benefits	184
Table H25 Service Learning Challenges	184
Table H26 WIL Satisfaction by Type of WIL	185

Executive Summary

Recognition of the importance of a high-quality system of postsecondary education (PSE) in meeting the demands of Canada's knowledge-based economy has focused recent media and policy attention on the role of Ontario's colleges and universities in facilitating the successful transition of postsecondary graduates to the labour market. In particular, there is growing interest in the expansion of postsecondary work-integrated learning (WIL) programs – which include co-op, clinical placements, internships, and more – as a means of improving students' employment prospects and labour market outcomes. These programs are also believed to benefit students in other ways, for example, by enhancing the quality of the postsecondary experience and improving learning outcomes. Yet despite assumptions about the benefits of postsecondary WIL programs, relatively little empirical research has been conducted to assess students' perspectives on the value of WIL and the learning outcomes associated with WIL participation.

This report presents findings from the Graduating Student Survey on Learning and Work, conducted as part of a multi-phase study launched by the Higher Education Quality Council of Ontario in 2009 to build the knowledge base about postsecondary work-integrated learning in Ontario. In addition to the survey of graduating students, the study also includes surveys of Ontario employers and postsecondary faculty, as well as a follow-up study to assess the post-graduation outcomes of graduating student respondents.

The Graduating Student Survey on Learning and Work was implemented online in spring 2012 with more than 10,300 graduating students from six Ontario colleges and eight Ontario universities. It was designed to measure the impact of postsecondary students' workplace and volunteer experiences – including their participation in WIL – on postsecondary learning outcomes and students' overall satisfaction with their postsecondary education. The findings offer detailed insights into the motivations, barriers, challenges and benefits associated with WIL participation and provide a comprehensive snapshot of the delivery of WIL programs within Ontario colleges and universities.

Key Findings

Participation in WIL

- More than two-thirds (68%) of the Ontario college students who participated in this study and almost half of university students (48%) were graduating with some form of WIL experience.
- About one-quarter of both college and university WIL students reported participating in more than one type of WIL.
- Close to half of non-WIL students said they would select a WIL option if they could do their PSE over again.
- While WIL was very likely to be a required component of college programs (reported as mandatory by 82 per cent of college WIL students), fully half of university WIL students voluntarily chose to participate in WIL.

- Field placements were the most common type of college WIL, while practicums or clinical placements, followed closely by co-operative education and internships, were the most common types of university WIL.
- With the exception of college students who participated in applied research projects, WIL students expressed high levels of satisfaction with their overall WIL experience, regardless of the type of WIL, number of weeks involved, or the total number of WIL experiences. Among college WIL students, satisfaction was highest for field placements and practicums. Among university WIL students, satisfaction was highest for co-op, practicums and internships.
- Logistic regression found that college students who participated in WIL were more likely to be female and older, and to have higher debt loads than non-WIL students. Although the model had less predictive power for university, it found that immigrant university students were more likely than non-immigrants to participate in WIL programs.
- Parental education also had an impact on WIL participation, with first-generation students found to be less likely to participate in WIL at both colleges and universities than students whose parents had attended postsecondary education.

WIL Motivations and Benefits

- Gaining practical work experience, enhancing their résumés, improving employability skills, and determining their fit with a potential career or industry were influential reasons for college and university students to participate in WIL.
- Both college and university WIL students strongly agreed, across all types of WIL and program areas, that their WIL experience had been valuable. They saw clarifying career interests and influencing their career goals as two key benefits of WIL.
- Increased personal maturity was also viewed as an important benefit of WIL participation, particularly for university WIL students.
- Additional motivations for college WIL students included an interest in applying classroom theory and skills to the workplace, exposure to a professional work environment, and developing a network of job search contacts. There was strong alignment between college WIL students' motivations and the benefits they perceived, with opportunities to apply classroom theories to the work environment and increased confidence about career prospects rated highly as benefits of college WIL experiences.
- College and university students who wished they had participated in WIL were motivated by the same reasons as their WIL peers. In addition, they were strongly influenced by increasing their earning potential, getting a job with the WIL employer, and earning money.

WIL Challenges and Barriers

- Not being paid was the top challenge experienced by both college and university WIL students and was much more likely to be described as a major challenge than a minor challenge.
- Almost half of all WIL students reported difficulty managing additional demands on their time.

- Financial challenges and barriers were greater for college students than university students. The two most frequent challenges for college WIL students were lack of payment and unexpected financial costs. Concern about additional costs, lack of payment and insufficient payment were also identified by college non-WIL students as barriers to their participation in college WIL programs.
- University WIL students were more likely than college students to experience challenges related to institutional delivery of the WIL program, specifically insufficient preparation prior to WIL and difficulty relating classroom theories to the workplace.
- The biggest barriers to participation in WIL programs for both college and university students were reluctance to delay program completion and concerns about additional costs or expenses. Other barriers common to both groups were worry about finding a suitable placement, uncertainty about WIL requirements and inflexible academic schedules.

WIL Financial Implications

- The logistic regression finding related to the higher debt loads of college WIL students was supported by further analysis of expected PSE debt. Not only were college WIL students as likely to anticipate debt as non-WIL students, but those who participated in internships, practicums, field placements and co-op reported higher than average debt loads compared to non-WIL students.
- At the university level, students who participated in practicums were more likely to anticipate debt than non-WIL students, reported higher mean debts, and were more likely to carry higher than average debt loads.
- Participation in university co-op programs, however, appeared to offer financial benefits to co-op students. Although equally likely to anticipate having to repay debt upon graduation, university co-op students reported lower mean debt amounts than non-WIL students (\$19,000 compared to \$23,000). They were also significantly less likely to report carrying above-average debt loads.

Labour Market and Volunteer Participation

- Almost all college and university respondents reported some experience with paid employment or volunteer activities. The majority of PSE students held part-time jobs while attending school, and almost as many were employed during the summer.
- Almost half of university students (and more than one-quarter of college students) participated in voluntary activity. Volunteering was viewed as a useful means of gaining program-related experience, with most students engaging in volunteer activities that were related to their program of study.
- PSE students who participated in paid employment perceived their work experience as valuable. While earning money was a strong motivation for their participation, they also perceived benefits from increased personal maturity and improved interpersonal skills.
- PSE student volunteers expressed strong agreement about the value of their volunteer experience, and also reported increased personal maturity and improved ability to get along with people as the main benefits.

- When WIL benefits were compared to the benefits of paid labour market experiences, students ascribed significantly greater value to their WIL participation. Paired t-test results for students who participated in both WIL and the labour market showed that WIL had a greater impact than paid employment on helping students understand their career interests, influencing their career goals, and increasing their confidence about future job prospects. In addition, WIL experiences were also considered to be more relevant to theories learned in the classroom.
- Paired t-test results for college students showed that WIL was also rated higher than paid employment in providing students with job search contacts, which was a key motivation for college WIL participation.
- Financial gain was the only benefit more strongly associated with paid employment than WIL.

PSE Outcomes and Satisfaction Summary

- Of the five outcome scales measured, students gave the highest PSE quality ratings to the impact of their postsecondary education in developing self-efficacy, followed by civic responsibility and employability skills. Lower ratings were ascribed to the development of reflective capacity and personal growth.
- Statistically significant differences were observed between WIL and non-WIL students on the five outcome scales. However, effect sizes were very small, indicating that participation in WIL has only limited impact on the PSE outcomes measured in the survey.
- Participation in WIL had a statistically significant impact on students' overall satisfaction with their postsecondary education, with WIL students reporting higher levels of overall PSE satisfaction. Again, however, extremely small effect sizes limit the conclusiveness of the results.

Policy Recommendations

High levels of student interest and participation in postsecondary WIL programs, the endorsement of both industry associations and career development practitioners for the economic and human capital benefits of WIL, and government policy proposals to expand WIL programs suggest that work-integrated learning is here to stay as a vital component of a postsecondary program of study. The findings from this study provide evidence of the value students place on WIL participation, and offer insights into actions and policy changes that could be considered to strengthen the delivery of WIL within Ontario colleges and universities:

1. Ensure that the value added proposition that students associate with WIL is addressed in the design and delivery of WIL programs.
2. Provide clear information to students about the requirements of WIL participation and the institutional supports available, and consider greater flexibility in academic scheduling to accommodate WIL programming.
3. Conduct further research to understand the barriers to the participation of first-generation students in WIL programs.

4. Ensure greater clarity and consistency in WIL terminology and definitions across institutions.
5. Consider the establishment of scholarships or other forms of financial assistance to support student participation in WIL programs, particularly at the college level, and conduct research on the effectiveness of wage subsidies as a means of enabling more employers to compensate WIL students.
6. Enhance the meaningful integration of work and learning at the institutional level, particularly at Ontario universities, by strengthening institutional services and offering professional development and support to faculty interested in offering WIL programs.

Introduction

Demographic change, economic globalization and the emergence of a knowledge-based economy have triggered rapid change in the Ontario labour market and in the skills required by employers. Since colleges and universities provide the largest inflow of workers into the labour market – generating four out of five new labour market entrants (Lapointe, Dunn, Tremblay-Cote, Bergeron and Ignaczak, 2006) – an effective, flexible and responsive system of postsecondary education (PSE) has been recognized as essential to supply the talent needed for economic competition on a global scale. Indeed, more and more students are looking to postsecondary education to help prepare them for employment and give them a needed leg-up in the labour market. A recent survey of Ontario high school students found that the two top motivations for attending postsecondary education were preparing for a specific job or career and getting a good job (Higher Education Quality Council of Ontario, 2012).

In this context, postsecondary work-integrated learning (WIL) programs – which include co-op, clinical placements, internships and more – have been hailed as significantly improving students' employment prospects and labour market outcomes, as well as offering a range of additional benefits for students and employers. WIL describes educational activities that intentionally integrate learning within an academic institution with practical application in a workplace setting, relevant to a student's program of study or career goals. This structured integration of theory and practice differentiates WIL from other experiential learning activities that provide students with exposure to the workplace, such as job shadowing, industry field trips, career mentoring and work-study. The Canadian Career Development Foundation (CCDF) endorses WIL as providing youth with opportunities to better determine career fit, refine their learning goals, develop specific competencies related to their career objectives and establish a network of post-graduation contacts (Bell and Benes, 2012). Work-integrated learning is also recognized by business and industry partners as “an essential component to building a highly skilled and productive labour force for an innovative, strong and growing economy” (Canadian Chamber of Commerce, 2012: 6), and an important tool in regional economic development (Garlick, Davies, Polèse and Kitagawa, 2006).

With 24 per cent of Ontarians with a postsecondary education reporting participation in co-operative education, Ontario has been described as the “hot-bed” of Canadian co-op programs (Ipsos Reid, 2010), and recent policy attention has focused on increasing the number of postsecondary WIL programs in Ontario colleges and universities. The report of the Commission on the Reform of Ontario's Public Services recommended that postsecondary institutions devote more resources to experiential learning such as internships (Drummond, Giroux, Pigott and Stephenson, 2012), and an Ontario government review of postsecondary education launched in spring 2012 proposed the expansion of work-integrated learning programs “to make future Ontario students more career and job ready than ever before” (Ministry of Training, Colleges and Universities, 2012: 21).

Yet despite assumptions about the benefits of postsecondary WIL programs, relatively little empirical research has been conducted to assess students' perspectives on the

value of WIL and the learning outcomes associated with WIL participation. Given the significant investment of institutional and employer resources involved in the development and delivery of WIL – and the rising public and private costs associated with student participation in PSE – a clear understanding of the contribution of WIL to the quality of the PSE experience is vital to determine the pedagogical rationale for developing or expanding postsecondary WIL programs, and to establish the appropriate levels of government expenditures and support. In addition, there are equity and access dimensions to the provision of work experiences through postsecondary WIL, rather than youth employment programs or other labour market tools, which must be carefully considered in the analysis of WIL policy.

To build the knowledge base about postsecondary work-integrated learning in Ontario, the Higher Education Quality Council of Ontario (HEQCO) launched a multi-phase study in 2009 to gather qualitative and quantitative insights from faculty, employers and students on the perceived value and benefits of work and voluntary activities undertaken during a PSE program of study, and to examine the impact of these experiences on learning and labour market outcomes. Conducted in partnership with 14 Ontario postsecondary institutions, the study consisted of the following three phases:

- Phase 1 explored the range of WIL opportunities available at Ontario postsecondary institutions.¹ The research included a literature review and qualitative interviews with employers, staff and faculty involved in the delivery of WIL programs at nine Ontario colleges and universities. Findings were used to develop a typology of work-integrated learning and provide a conceptual framework for understanding the complex array of WIL programs available in Ontario's higher education system.
- Phase 2 involved quantitative research with faculty, employers and students through an online survey of more than 3600 faculty at 13 Ontario postsecondary institutions in spring 2011, a telephone survey of more than 3300 randomly selected Ontario employers and an online survey of more than 10,300 graduating students at 14 Ontario colleges and universities.²
- Phase 3, which is planned for implementation in fall 2013, will include a follow-up survey with consenting graduating student respondents to probe their actual labour market and further educational outcomes.

Throughout all phases of the study, a working group made up of representatives from the participating institutions was closely involved in the design of the research, the development of the data collection tools, and the analysis of the results. The working group also included representatives from the Ministry of Training, Colleges and Universities (MTCU), as well as three organizations representing Ontario postsecondary

¹ See www.heqco.ca for the Phase 1 report, entitled *Work-Integrated Learning in Ontario's Postsecondary Sector*.

² See www.heqco.ca for the Phase 2 reports, entitled *Faculty Experiences with and Perceptions of Work Integrated Learning (WIL) in the Ontario Postsecondary Sector*, *Work-Integrated Learning and Postsecondary Graduates: The Perspective of Ontario Employers*; and *Work-Integrated Learning in Ontario's Postsecondary Sector: The Experience of Ontario Graduates*.

students: the Canadian Federation of Students (CFS), the College Student Alliance (CSA), and the Ontario Undergraduate Student Alliance (OUSA). The Ministry of Economic Development and Innovation (MEDI) also partnered in the implementation of the employer survey.

This report presents findings from the Graduating Student Survey on Learning and Work, the final survey conducted during Phase 2 of the study. The survey was implemented online in spring 2012 with more than 10,300 graduating students from six Ontario colleges and eight Ontario universities. It was designed to gauge the impact of postsecondary students' workplace and volunteer experiences – including their participation in WIL – on postsecondary learning outcomes, employability skills, perceptions of self-efficacy, civic responsibility and overall PSE satisfaction. The findings offer detailed insights into the characteristics of WIL participants and the delivery of WIL programs within Ontario's postsecondary sector.

Study Findings to Date

The first phase of the study was implemented in collaboration with nine Ontario postsecondary institutions – Algonquin College, George Brown College, Georgian College, Laurentian University, Niagara College, University of Ottawa, University of Waterloo, University of Windsor, and Wilfrid Laurier University – with Academica Group, Inc. commissioned to conduct the research. This initial exploratory study included a literature review and interviews with 25 employers and 39 staff and faculty involved in the delivery of WIL programs, and endorsed the following definition of WIL:

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. (Billett, 2009: v)

The Phase 1 report proposed a typology of work-integrated learning to distinguish WIL from more general work experience and experiential opportunities, and to provide a conceptual framework for understanding the complex array of WIL programs available in Ontario's higher education system. The following table summarizes the seven types of WIL identified in the typology:

- Apprenticeship – Training that combines learning on the job with classroom instruction, leading to a certificate of apprenticeship
- Field placement – Practical experience in a real work setting
- Mandatory professional practice – Work hours needed to obtain a licence to practice or professional designation, or to register with a regulatory college/professional association
- Co-op – Academic study that alternates with paid work experience developed and/or approved by the college/university
- Internship – Program-related experience in a professional work environment
- Applied research projects – Student projects to address specific business or industry problems
- Service learning – Student projects to address identified community needs or global issues

Table 1
Typology of Work-integrated Learning

	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
Definition	Training that combines learning on the job with classroom instruction, leading to a certificate of apprenticeship	Practical experience in a real work setting	Work hours needed to obtain a license to practice or professional designation, or to register with a regulatory college/professional association	Academic study that alternates with paid work experience developed and/or approved by the college/university	Program-related experience in a professional work environment	Student projects to address specific business or industry problems	Student projects to address identified community needs or global issues
Main educational purposes	<ul style="list-style-type: none"> • Workforce training • Skill acquisition • Skill mastery • Workplace literacy 	<ul style="list-style-type: none"> • Application of theory to practice • Attainment of professional or work-related competencies • Workplace literacy 	<ul style="list-style-type: none"> • Integration of theory and practice • Attainment of professional competencies • Professional socialization • Mandatory for professional certification/licensure • Mandatory for institutional program accreditation 	<ul style="list-style-type: none"> • Integration of theory and practice • Career exploration and development • Progressive skill acquisition • Professional socialization • Workplace literacy • Workforce readiness 	<ul style="list-style-type: none"> • Integration of theory and practice • Personal development • Career exploration and development • Skill development • Professional socialization 	<ul style="list-style-type: none"> • Application of theory to practice • Address specific industry needs • Skill development (problem solving, critical thinking) 	<ul style="list-style-type: none"> • 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	<p>Worksite</p> <ul style="list-style-type: none"> • FT employment <p>In-school</p> <ul style="list-style-type: none"> • Block release (alternating with employment) • Day release (concurrent) 	<ul style="list-style-type: none"> • Block placement (alternating with academic program) • Defined number of hours per term (concurrent) • Simulated work activities (concurrent) • Virtual work activities (concurrent) 	<ul style="list-style-type: none"> • 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) 	<ul style="list-style-type: none"> • Block placement (alternating with academic program) • Structured work-study sequence must end with academic semester 	<ul style="list-style-type: none"> • Single block placement at end of program (capstone) • Single block placement (alternating with academic program) • Defined number of hours per term (concurrent) 	<ul style="list-style-type: none"> • Course-based projects (concurrent) • Institutional research projects (concurrent) 	<ul style="list-style-type: none"> • Can be delivered as field experience, co-ops, internships or applied research projects

In 2011, Carleton University, La Cité collégiale, Sheridan College, Western University and York University joined the project for the larger Phase 2 of the study, which consisted of separate faculty, employer and student surveys developed and administered by Academica Group, Inc.

Research activities conducted in the first two phases of the study yielded the following insights into the perceived benefits of WIL for students:

- Key benefits for students identified by Phase 1 faculty and employers included: career exploration and improved prospects for employment; the opportunity to apply theory to practice in real work settings; the development of marketable skills; personal growth and increased civic engagement; financial compensation; and quality work experiences (Sattler, 2011).
- The Phase 2 Faculty Survey found high levels of support among both college and university faculty for the inclusion of work-integrated learning within a postsecondary program of study. Faculty generally agreed that WIL enables students to apply classroom theory and skills to the workplace and perceived WIL as benefitting students by improving their understanding of work realities, helping them to establish employment contacts, increasing their self-confidence, and enhancing their postsecondary experiences (Peters, 2011). There was much less consensus, however, about the impact of WIL on academic engagement and learning outcomes.
- The Phase 2 Employer Survey confirmed that participation in WIL helps students get jobs, but also revealed that employers who hired recent PSE graduates perceived few differences between the skills of WIL and non-WIL graduates, suggesting that the impact of WIL on hard and soft skill development may be limited (Sattler and Peters, 2012).

The Graduating Student Survey on Learning and Work adds significantly to these earlier findings by contributing detailed empirical evidence of the impact of WIL from the perspective of Ontario students. In particular, the survey explores the impact of WIL on postsecondary students during the period in which they were attending postsecondary education. The specific research questions explored in the Graduating Student Survey on Learning and Work are:

1. What are the motivations and barriers to student participation in work-integrated learning?
2. To what extent does participation in WIL affect students' satisfaction with their postsecondary education? Do the effects differ by type of WIL, program or institution?
3. To what extent does participation in WIL affect student learning and academic performance? Do the effects differ by type of WIL, program or institution?
4. To what extent does participation in WIL affect student self-efficacy? Do the effects differ by type of WIL, program or institution?
5. Does participation in WIL have different effects for different groups of learners (gender, ethnicity, disability, income, entry type)?

The survey was designed to capture details on the implementation of WIL in Ontario colleges and universities and to address gaps in the existing research, which focuses narrowly on the benefits of particular types of WIL in specific fields of study. More importantly, by gathering the perspectives of students on their PSE employment and volunteer experiences – whether or not the experience was gained through participation in WIL – the survey contributes valuable new knowledge by comparing outcomes associated with WIL to those associated with other types of labour market activity.

This report presents survey results in three main parts:

- Part 1 provides an overview of the study and situates the research findings within the scholarly and practitioner literature on outcomes associated with student participation in WIL. Part 1 also describes the survey methodology and respondent profile.
- Part 2 presents findings related to student experiences with WIL including overall levels of participation as well as motivations, benefits, challenges and barriers to WIL participation. Part 2 also provides an overview of students' labour market and volunteer experiences, and compares student perceptions of WIL's benefits to the benefits of labour market participation.
- Part 3 offers a snapshot of WIL within Ontario's postsecondary sector, by providing detailed profiles of the six types of WIL offered within the 14 colleges and universities that participated in this study. Readers who are interested in a particular type of WIL at college or university are able to review all relevant survey findings associated with specific types of WIL in one section of the report.

The report concludes with some policy recommendations and suggestions for further research.

Part 1 – Study Overview

1.1 Literature Review

With the recognition of co-operative education as a legitimate field of academic study, the last two decades have seen an emerging body of theoretical and applied research about co-op programs in Canada, the US, the UK, Australia and New Zealand (Haddara and Skanes, 2007). Yet despite growing interest among policy-makers, employers and postsecondary institutions in the potential expansion of work-integrated learning, there is relatively little research on the educational impact of WIL on students (Reeders, 2000), particularly in the Canadian context (Canadian Council on Learning, 2008; Walters and Zarifa, 2008). The few studies that exist tend to focus on the learning and labour market outcomes associated with co-op programs and sometimes internships, usually at the university level and often only in relation to business programs or science, technology, engineering and math (STEM). Scant attention has been paid to student participation in other forms of WIL or other fields of study, and there is limited research on the WIL experiences of college students (Goho and Rew, 2009). Overall, the available literature endorses work-integrated learning as providing a range of benefits to students, but also highlights several issues and concerns that must be considered in policy debates.

This review summarizes the literature related to the following themes: student motivations and barriers to participating in WIL, the accessibility of WIL programs to different types of learners, and the association between participation in WIL and postsecondary satisfaction. The review also considers the impact of different types of WIL on postsecondary students using four outcome categories developed for the assessment of co-operative education: academic achievement, personal development, career-related experience and work skill development (Dressler and Keeling, 2004; Parks, Onwuegbuzie and Cash, 2001). The emphasis placed by Dressler and Keeling (2004) on individualizing outcomes to the specific learning objectives of the WIL program extends the relevance of these four categories to other forms of WIL.

The review concludes with a brief discussion of the research on the participation of postsecondary students in paid employment and volunteer work, and the outcomes associated with these forms of labour market activities. The literature on the post-graduation employment outcomes, earnings and career progression of WIL students is not addressed in this review, but will be considered in the Phase 3 follow-up survey report on the workforce transitions and labour market participation of the graduating student respondents.

WIL Motivations and Benefits

A survey of 646 postsecondary students in New Brunswick (CCL, 2007) and qualitative research with government interns in Nova Scotia (Dodge and McKeough, 2003) found that gaining career-related experience was the primary motivation for students to participate in WIL, followed by helping to make future career choices (CCL, 2007). Similar results were observed among UK interns, who reported that their top three reasons for

participating in internships were to gain insights into a particular industry or type of work, apply theory to the workplace, and to supplement postsecondary learning with practical experience (Little and Harvey, 2006). Additional motivations for these students included the enhancement of employability skills, the potential to improve grades, the opportunity to fill a gap on their résumé or extend learning into a different area, the opportunity to test-drive a particular occupation or industry, and to get a break from academic study (Little and Harvey, 2006). Focus groups with Australian university students revealed that students are motivated to participate in WIL in order to obtain work experience for their résumé, try out potential careers, and deepen their learning through application of the skills learned at school (Patrick, Peach and Pocknee, 2008).

For some students, there is also a financial benefit associated with participation in WIL, since it reduces reliance on student loans and can help to offset the foregone revenue costs of attending school (Goho and Rew, 2009). Given that the Canadian Association for Co-operative Education requires co-op students to be remunerated for the work they perform, it is not surprising that financial benefits are particular motivators for co-op students. Although the least important motivation for all WIL students, the New Brunswick study found that earning money was among the top three motivations for co-op students (CCL, 2007). A 2001 study conducted by the government of Newfoundland and Labrador reported that co-op students were less likely to incur debt than their non-co-op peers and had smaller average loans per student (cited in Haddara and Skanes, 2007). Nevertheless, compensation is not generally considered to be a strong motivator for students to participate in other forms of WIL – a survey of 3800 US interns ranked “making good money” near the bottom of the important qualities of an internship (Trimble and Butler, 2004). A similar finding, based on data gathered from 351 US interns over a ten-year period, was reported by Cook, Parker and Pettijohn (2004).

WIL Barriers and Challenges

By far, the single most frequent reason for New Brunswick students not to participate in WIL was a lack of awareness of WIL opportunities (CCL, 2007). Other barriers to participation identified in the study included the unavailability of WIL within the students' program of study, concerns about delaying program completion, academic calendar scheduling conflicts, lack of financial compensation (or insufficient compensation), and competitive qualification requirements (CCL, 2007). Similar findings were reported across a range of program areas by UK researchers, who identified the following reasons for UK students to opt out of participation in voluntary placements:

- Lack of awareness of WIL (Ball, Collier, Mok and Wilson, 2006; Bullock, Gould, Hejmadi and Lock, 2009)
- Reluctance to delay graduation (Aggett and Busby, 2011; Walker and Ferguson, 2009)
- Concerns about disrupting their academic program (Aggett and Busby, 2011; Bullock et al., 2009; Walker and Ferguson, 2009; Willis, 2008)
- Concerns about the financial and personal costs of participating in WIL (Aggett and Busby, 2011; Morgan, 2006)
- Concerns about meeting qualifications for placement (Aggett and Busby, 2011; Bullock et al., 2009; Morgan, 2006)

Some additional barriers to WIL participation were identified by UK researchers, including:

- Concerns about finding an appropriate placement (Aggett and Busby, 2011; Ball et al., 2006; Bullock et al., 2009; Morgan, 2006; Walker and Ferguson, 2009)
- Students' belief that they already have sufficient work experience (Aggett and Busby, 2011; Bullock, et al., 2009; Walker and Ferguson, 2009)
- Lack of support from the institution (Aggett and Busby, 2011; Ball et al., 2006; Morgan, 2006)
- Uncertainty over career aspirations (Aggett and Busby, 2011; Morgan, 2006)
- Lack of confidence in their ability to undertake a placement (Bullock et al., 2009)

Research with students who have completed WIL reveals several areas that create challenges for students. Although money is not a primary motivator for participation in WIL, almost half of the 3800 US interns involved in the Trimble and Butler (2004) study identified not getting paid at all as the worst part of their internship, and close to one in five said they were not paid enough. Similarly, financial challenges related to the lack of payment or costs of participating were among the most frequent concerns mentioned by WIL students in New Brunswick (CCL, 2007).

Other challenges likely to be experienced by students who participate in WIL relate to the nature of the work performed during the WIL placement and the underutilization of their skills. These include:

- Not enough work (Trimble and Butler, 2004)
- Poorly-defined work (Trimble and Butler, 2004)
- Mundane or boring work (CCL, 2007; Freestone, Thompson and Williams, 2006; Trimble and Butler, 2004)
- Disorganized work environment (Trimble and Butler, 2004)
- Inadequate supervision (Trimble and Butler, 2004)
- Lack of professional status in the organization (Freestone et al., 2006)
- Disillusionment with the realities of the profession (Freestone et al., 2006)
- Lack of interaction with co-workers (Freestone et al., 2006; Trimble and Butler, 2004)
- Insufficient feedback on progress (Freestone et al., 2006).

Taken together, student concerns about inadequate compensation and quality of the work environment underscore one of the most common criticisms leveled against WIL – that it simply provides employers with a cheap labour supply and subordinates the educational needs of students to the economic needs of business and industry (Katula and Threnhauser, 1999).

WIL Participation and Access

A study conducted by London Metropolitan University in the UK sought to understand the particular barriers to participation in WIL faced by inner-city ethnic minority students (Hills, 2004). While these students experienced many of the same barriers as their peers, they faced additional challenges related to financial costs for travel and having to juggle

or give up much-needed part-time employment in order to take on a lower-paying or unpaid placement. Similar findings were reported in a national scoping study in Australia (Patrick et al., 2008).

Other studies highlight equity concerns by providing evidence that some forms of WIL are less accessible to certain groups of students, including visible minorities, international students and lower academic achievers. Research conducted in the US indicated that African American students were much less likely to participate in internship programs than their white peers, which the authors attributed to lack of information about internships and a lack of encouragement about the process (Knouse, Tanner and Harris, 1999). Australian studies have shown that international students are less likely to participate in WIL (Australian Council for Educational Research, 2008; Patrick et al., 2008), limiting their opportunities to gain vital career-related work experience to facilitate their future integration into the domestic labour market. Several researchers also note that internship and co-op programs, particularly when they are optional, tend to attract “more capable” or academically superior students (Bullock et al., 2009; Weisz, 2001). Gender also has an impact on participation in WIL. In their analysis of postsecondary co-op programs in Canada, Walters and Zarifa (2008) report that female students are under-represented in co-op programs – likely related to the heavy concentration of co-op programs in technical STEM fields in Canada. Conversely, women tend to be over-represented in service learning programs (Parker-Gwin and Mabry, 1998). Without efforts to ensure that all learners have opportunities to access WIL programs, there is a risk that the programs will simply reproduce existing inequities and perpetuate labour market disadvantages (Abeysekera, 2006).

Postsecondary Satisfaction

There is some evidence that participation in work-integrated learning promotes student engagement and enhances student satisfaction with their postsecondary experience (Freudenberg, Brimble and Cameron, 2010; Harvey, Moon and Geall, 1997; Patrick et al., 2008). Many published studies of co-op evaluations report high levels of student satisfaction with their co-operative education program, with a strong likelihood that students would recommend the program to others and would select co-op again if given the opportunity (CCL, 2007; Schambach and Kephart, 1997). Most of the US interns involved in Cook et al.'s (2004) longitudinal study also endorsed their internship as a valuable experience. Results from the Australasian Survey of Student Engagement showed a strong positive correlation between student involvement in WIL activities and re-enrolment intentions, indicating that WIL experiences are perceived as enhancing the educational experience for students (ACER, 2008). Scott's (2005) analysis of open-ended comments offered by Australian university graduates about the best aspects of their postsecondary experience reveals that practice-oriented learning methods (including field placements, practicum and clinical placements), as well as interactive, face-to-face learning methods, attracted by far the largest number of “best aspect” comments.

Learning and Academic Achievement

Evidence of the impact of WIL on academic achievement is mixed. Studies conducted in the UK with business undergraduates (Duignan, 2003) and in the US with interns from 12 different colleges and universities (Cook et al., 2004) did not find an association between internship placements and improved academic performance. Similarly, Little and Harvey

(2006) found little indication that the WIL students in their study had developed higher order academic abilities – such as critique, synthesis or analysis – as a result of their placement. In their review of the literature on the practicum, Ryan, Toohey and Hughes (1996) conclude that learning can in fact be undermined during practicum placements as a result of persistent problems with structure and planning.

However, several US studies of business, science and engineering programs found significantly higher grade point averages among internship and co-op graduates compared to non-WIL graduates (Blair and Millea, 2004; Knouse et al., 1999; Hejmadi, Lock and Bullock, 2008), and UK studies across a range of disciplines positively relate students' participation in placement to a significant increase in grade point average in the final year (Gomez, Lush and Clements, 2004; Mandilaras, 2004; Rawlings, White and Stephens, 2005; Surridge, 2009). Interestingly, while Lucas and Tan (2007) also report improved academic performance for WIL students, they attribute this result to increased interpersonal and intrapersonal skills rather than to improved cognitive skills. There is also evidence of the positive impact of service learning on student academic achievement (Eyler, Giles, Stenson, and Gray, 2001; Mpofu, 2007).

Several factors have been identified that mediate the impact of WIL on learning outcomes. In their exploration of service learning, Parker-Gwin and Mabry (1998) report that learning outcomes improved among students whose participation in the program was voluntary, and who were encouraged to critically reflect on their experiences. Other factors that facilitate “deep learning” through WIL include the nature of the learning opportunities provided in the workplace, the students' commitment to and ability to learn, and the support of postsecondary faculty and staff to the learning process (Weisz and Smith, 2005). Particular emphasis is placed on the importance of workplace supervisors understanding the learning objectives and providing meaningful work opportunities with appropriate level of challenges (Weisz and Smith, 2005). Student surveys have consistently shown that close supervision and mentoring from the employer is the number one characteristic of a quality work placement (Cullen, 2008; Morgan, 2006; Ryan et al., 1996).

Given the challenges faced by institutions in securing sufficient employer partners to deliver WIL, recent research has probed the potential learning benefits offered by simulated learning environments. Some of these studies are showing promising results. A study of simulated clinical learning found significant improvement in nursing students' subject matter knowledge as a result of participating in the simulation (Elfrink, Kirkpatrick, Nininger and Schubert, 2010). In a very different kind of simulated setting, business and technology students also demonstrated increased reflective thinking and ability to transfer their skills and knowledge to the work environment following their participation in a business education simulation (Ehiyazaryan and Barraclough, 2009).

Self-Efficacy, Confidence and Personal Growth

Self-efficacy, or the confidence of individuals in their abilities to organize and execute courses of action to attain a desired result, has been identified as a central concept of career choice (Lent, Brown and Hackett, 1994) and is commonly associated with participation in WIL (Freudenberg, Brimble and Cameron, 2010). Drawing from the work of Bandura, Lent et al.'s (1994) review of social cognitive theory explores the relationship

between student self-efficacy and the development of initial career interest, choice of academic and career paths, and educational and career performance and persistence. Confirming this theoretical approach, DeLorenzo (2000) reports significantly higher career decision-making self-efficacy among college students with co-op work experience, compared to those without co-op. Subramaniam and Freudenberg (2007) argue that WIL programs can “facilitate some or all of the categories of experiences that are considered important for the development of self-efficacy” (89), including mastery experiences, modeling, social persuasion and physiological states. Their research shows increased self-efficacy among accounting students in a simulated WIL program. A study involving 400 UK engineering students indicated some increase in self-efficacy among students who participated in placements, but only those who perceived their experience as “authentically” related to their area of interest and who received comments on their performance (Lucas et al., 2009). Ehiyazaryan and Barraclough (2009) also report a strong association between WIL employer feedback and increased confidence and self-efficacy.

Closely related to self-efficacy is the concept of personal development, and the literature points to the contribution of WIL in enabling students to grow and develop. A UK study of placement students across six subject areas identified personal development – including increased confidence and motivation, and improved interpersonal and organizational skills – as the major benefit of internships, with less emphasis placed on intellectual and academic skill development (Little and Harvey, 2006). This reinforces Cook et al.’s (2004) findings that the greatest benefit of internships is improving the interns’ ability to get along with others and enhancing their own social maturity.

While there is a growing body of knowledge assessing the impact of service learning on students’ sense of personal responsibility and civic engagement, results are inconclusive. Eyler et al. (2001) cite studies showing that service learning has a positive effect on students’ social responsibility and personal development (sense of personal efficacy, personal identity, spiritual growth, and moral development). While Myers-Lipton (1998) found that service learning enhanced students’ sense of their ability to affect change and increased their participation in civic activities, it had only a modest impact on students’ feelings of social responsibility. Parker-Gwin and Mabry (1998) did not find any improvement in students’ civic attitudes following their participation in service learning.

Career Exploration and Development

By enabling students to experience the workplace and determine their “fit” with a potential career, WIL can offer students realistic job previews prior to entering a career, contributing to later career satisfaction and success (Callanan and Benzing, 2004; Dickerson, 2009). Again, however, results are mixed about the effectiveness of WIL in providing students with realistic job previews (Garavan and Murphy, 2001). Ryan et al. (1996) cite evidence on the effectiveness of practicums in giving students insights into the world of work, enhancing career prospects, and preparing them to integrate into the work environment. Also on the positive side, a study of US hospitality students showed that experiential learning significantly improved students’ ability to view career expectations realistically (Lee, 2008), and Eyler et al. (2001) highlight research showing that service learning contributes to career development.

However, Dickerson (2009) suggests that field experiences may be more effective in offering a realistic preview of an industry or sector rather than a specific occupation, based on discrepancies reported by hospitality management graduates between their levels of job preparedness and their satisfaction with their first career. Callanan and Benzing (2004) found that business interns were no more likely than non-interns to perceive a personal fit with their career following their internship. Although the interns who participated in Cooke et al.'s (2004) longitudinal study felt more confident about their ability to get a job following graduation, there was little agreement among them that the internship had influenced their career choice.

Employability and Work Skill Development

There is general consensus that WIL can equip graduates with generic employability skills that can be transferred across workplaces (Crebert, Bates, Bell, Patrick and Cragnolini, 2004; Freudenberg et al., 2010; Lucas and Tan, 2007). WIL helps students to develop skills and attributes that will enable them to be successful at work (Harvey et al., 1997) and enhances career progression and employability prospects (Hejmadi et al., 2008). Several studies show that WIL graduates consider themselves to be better prepared on many employability skills than non-WIL graduates (Gault, Redington and Schlager, 2000; Lee, 2008). On the negative side, some research studies reviewed by Ryan et al. (1996) raise questions about whether practicums as currently structured can contribute to effective skill development, given persistent problems identified with poorly structured and poorly supervised placements that may actually undermine learning. Crebert et al. (2004) argue that effective skill development is closely associated with the degree of responsibility given to students by their supervisors and employers, as well as the extent of collaborative learning experienced by students.

Student Labour Market and Volunteer Participation

This final section of the literature review explores research on the outcomes associated with workplace and voluntary experiences that are acquired outside of a formal program of study. With rising postsecondary tuition fees, paid employment during the school year and in the summer months represents a key source of income to help students fund their postsecondary studies (Usalca and Bowlby, 2006). Although there has been little change in the rate of summer employment among youth aged 20 to 24 over the last two decades (generally hovering around 70 per cent), more Canadian students are working while attending school than ever before (Marshall, 2010). Almost half of all full-time postsecondary students in Canada now combine work with study during the school year, typically working about 16 hours per week (Marshall, 2010). A noticeable gender gap has emerged, with 52 per cent of full-time female students engaged in paid employment during the school year compared to only 41 per cent of full-time male students.

While most studies on student employment conclude that long hours can have a detrimental effect on student outcomes (Marshall, 2010; Motte and Schwartz, 2009), the research is not conclusive. In their review of the literature on student employment, Riggert, Boyle, Petrosko, Ash and Rude-Parkins (2006) cite evidence on both sides. Some researchers argue that even high levels of employment do not compromise student cognitive development, while others suggest that any amount of work has a negative impact on student satisfaction and academic achievement. Riggert et al. (2006) note that

negative effects of employment may be mediated by location of employment, since many studies have found more benign impacts from on-campus work than off-campus jobs.

Several scholars have emphasized the critical distinction between work experience and work-integrated learning (Dressler and Keeling, 2004; Haddara and Skanes, 2007). While work-integrated learning “is structured and guided with the goal of applying discipline-related information and to develop specific competencies,” work experience is “unstructured exposure to the workplace, without any expectation of particular learning outcomes occurring” (Dressler and Keeling, 2004: 218). Myers-Lipton (1998) proposes a similar dichotomy between service learning and voluntary service. While both are focused on meeting human needs, only service learning has an explicit educational goal.

Even without formalized learning outcomes, however, Harvey et al. (1998) argue that learning does take place during students' paid employment and volunteer activities, and highlight research studies showing that students perceive their work and voluntary service as developing skills for future employment and contributing to career development. In a UK study by Curtis and Lucas (2001), students benefited from exposure to a variety of work experiences through the development of transferable skills. Myers-Lipton (1998) also notes the strong positive relationship between any voluntary service and increased social responsibility, and DeLorenzo (2000) reports that any work experience connected to career goals improved student satisfaction regardless of whether the experience was gained in a co-op program.

Research Gaps

While the published literature generally endorses WIL as a valuable component of a postsecondary program of study, this review of the literature highlights several limitations and gaps where additional research would be beneficial:

- Much of the research is qualitative, limiting its generalizability.
- The empirical studies that exist are typically conducted with small samples and do not report effect sizes, which is important to understanding the substantive (as opposed to statistical) significance of the findings.
- Much of the available literature is from the US, UK and Australia, with few studies conducted with Canadian students.
- While there is a growing body of knowledge about co-operative education in the US and Canada (and internships in the US and UK), there is much less research interest in other types of WIL, particularly applied research projects and short-term field placements.
- College students are almost non-existent in the WIL literature, with most studies focused on the experiences of university students.
- Little research has been conducted with students from arts and humanities programs, who are less likely to participate in WIL programs than students from business, engineering, health sciences or other technical fields.
- There are very few studies that consider WIL from a social justice and equity perspective, to explore participation and outcomes by gender, disability, ethnicity, socio-economic status or Aboriginal status.

1.2 Methodology

The Graduating Student Survey on Learning and Work was conducted online in March and April of 2012 with graduating students at 14 partner institutions. Graduating students were defined as full- or part-time postsecondary students in their final year of undergraduate study at an Ontario university, or final year of a program of study leading to an Ontario college certificate, diploma, or degree, who were expected to graduate in 2012. University graduate students and students attending post-graduate college programs were excluded from the study. Prior to the full implementation, the survey was piloted at three postsecondary institutions (Georgian College, Laurentian University and Niagara College). Approval from the research ethics board (REB) at each participating institution was secured for both the pilot survey and the full Graduating Student Survey on Learning and Work.³

Instrument

The development of the survey instrument was informed by findings from the Phase 1 research, an extensive literature review, and input from HEQCO and working group members. Once drafted and approved by the working group, the instrument was programmed into Academica Group's secure Survey Management System (SMS). It was pretested through email invitations to 800 randomly selected students from Academica Group's future research pool, and telephone interviews with ten students to discuss question wording and response choices.

The instrument was revised to incorporate pretest feedback and to respond to any changes required by the research ethics boards of the three pilot institutions. It was finalized for pilot implementation in March 2011. Once the pilot was completed and the results were analyzed, further revisions were made to the instrument to clarify and improve question wording. The instrument, email invitation, landing page and all other supporting communication materials were translated into French to provide respondents with the option of participating in either official language.

Procedure

Pilot Implementation

The Graduating Student Survey on Learning and Work was piloted at Laurentian University, Georgian College and Niagara College in March and April 2011. Each institution selected its own launch date and close date, and the survey remained in the field for a period of four weeks.

³ Two partner institutions were not required to obtain research ethics approval in order to participate in the study.

To administer the survey, the three pilot institutions were responsible for creating a master Excel file of names, student numbers, institutional email addresses and programs for sample participants from their own institutions. Academica Group then provided each institution with unique IDs and passwords for each record in the sample, for merging by the institution into their master file. REB-approved recruitment emails were the same for the three participating institutions, with customized contact information for institutional ethics offices and the institutional study representative. Each institution was responsible for determining the appropriate senior official to sign the invitation. The survey invitations with the merged log-ins and passwords were sent by the institution to all student names in the master file. The invitations included an embedded survey link directing respondents to the survey landing page, where they were presented with the study Letter of Information. To access the survey and indicate their consent to participate, respondents were able to enter the unique log-in and password provided in their email invitation, which took them to a secure website hosted on the Academica Group server. As an incentive for survey participation, respondents were entered into a draw to win an i-Pad or cash equivalent (approximately \$750), with one prize winner for each of the three pilot institutions. Following the initial invitation to participate, two reminders were sent by the participating institutions to non-respondents, identified through tracking of completed log-ins and passwords.

To assist in promoting the pilot survey, bookmarks were printed by HEQCO that directed students to a survey webpage hosted on the HEQCO website, with information about the survey drawn from the REB-approved content. In addition, 12 student ambassadors were enlisted at the three pilot institutions and provided with training and support to help raise awareness of the survey among their peers. The student ambassadors distributed the bookmarks on campus and engaged in a variety of peer-to-peer communication activities using REB-approved key communication messages. To monitor the effectiveness of various communication strategies, the pilot instrument included a question asking respondents how they heard about the survey.

A total of 1281 respondents from the three pilot institutions participated in the pilot survey, for an overall response rate of 20.4 per cent.

Full Implementation

The Graduating Student Survey on Learning and Work was administered at 14 participating institutions (Algonquin College, Carleton University, George Brown College, Georgian College, La Cité collégiale, Laurentian University, Niagara College, Sheridan College, University of Ottawa, University of Waterloo, University of Windsor, Western University, Wilfrid Laurier University and York University) in March and April 2012. The survey launched on March 5, 2012, at 12 of the participating institutions and closed on April 1, 2012. The survey launched one week later at the two remaining institutions and closed on April 8, 2012.

Prior to implementation, Academica Group maintained regular contact with technical administrators at each partner institution to assist with the process of drawing the sample, merging the log-ins/passwords into the master file, and sending out survey invitations. Survey incentives included entry into a draw to win one of five \$500 early bird cash prizes, with the institutions of the winning students identified in the final reminder. In

addition, all participating students from the 14 partner institutions were entered into a draw to win one of five i-Pads or cash equivalent (approximately \$750).

Since the pilot survey did not show increased response rates among programs targeted by the student ambassadors, the recruitment strategy for full implementation enlisted active support from the student associations at the participating institutions rather than designated student ambassadors. Using contacts provided by the working group institutions and provincial student associations (CSA, OUSA, CFS), HEQCO held teleconference meetings with interested student representatives to discuss possible promotional strategies. As a result of this consultation process, several promotional items were developed and submitted for REB approval, including a poster, print advertisement and web banner (all available in both English and French). The survey webpage hosted on the HEQCO website was also updated with the new communications messages. Each student association was offered an honorarium in recognition of its efforts and assistance with survey promotion, and a total of nine student associations from four colleges and five universities agreed to assist with on-campus survey promotion. The most frequently used promotional strategies were poster displays on campus and the use of social media (Facebook pages and tweets using REB-approved messages), along with posts on the student association website. A number of campuses also posted advertisements in the school newspaper and some student associations set up tables in high-traffic student areas to promote the survey. One institution offered students the chance to spin for a prize on a prize wheel if the survey was completed on the spot. Where permitted by the institutional REB, the survey was mentioned in class by students and/or faculty. At three of the four institutions where student associations were not involved in raising awareness of the survey, the survey was promoted through advertisements placed by HEQCO in the student newspapers.

Analysis

This report analyzes data collected from 11,661 students who participated in the survey at 13 participating institutions.⁴ After data cleaning, which included the removal of ineligible students as well as qualified break-offs, 10,327 cases were retained for analysis.⁵ Following Marketing Research and Intelligence Association (MRIA) standards for the calculation of response rates for web-based surveys, the success rate was 22.6 per cent and the contact rate was 24.5 per cent.⁶ Full response rate calculations are provided in Appendix A.

Prior to analysis, the data was compared to the population distribution of the participating institutions and then weighted to restore representativeness by age and gender.

⁴ The results for La Cité collégiale were excluded from the analysis.

⁵ Qualified break-offs are respondents who qualified for the survey but did not complete to an acceptable cut-off point.

⁶ The MRIA standards have been recommended by the federal government's Advisory Panel on Online Public Opinion Survey Quality (2008).

To ensure accurate academic data, the survey asked respondents for consent to link their responses to three pieces of institutional administrative data: cumulative grade point average, program and credential earned. The participating institutions then provided these three pieces of information for consenting respondents. The data linking process ensured that the university did not have access to any of the respondent data collected in the survey. Respondents who did not consent to the data-linking were asked to self-report these pieces of academic information.

Data was analyzed using IBM SPSS Statistics 20. All results are presented separately for college and university respondents. Subgroup analysis by program area and type of WIL are conducted where applicable. To examine differences by program area, program of study was manually coded into four categories for college respondents and five categories for university respondents. The coding of Ontario college programs used the four program clusters developed for the Key Performance Indicator (KPI) initiative of the Ministry of Training, Colleges and Universities. Statistics Canada's Classification of Instructional Programs (CIP) was used to assist in coding university programs.

Throughout this report, differences between groups were tested for statistical significance using the Chi-Square for distributions, and Analysis of Variance (ANOVA) or t-test for mean score differences. In addition, binomial logistic regression was used to examine factors impacting participation in WIL, and paired t-tests were used to assess differences in the benefits associated with WIL and labour market experiences.

Percentages reported throughout this document are based on weighted data. However, sample ("n") sizes are unweighted figures, indicating the actual number of respondents.

Limitations

Given that a convenience sample of postsecondary institutions was used, the survey results are not generalizable to all graduating students in Ontario. However, an effort was made to involve institutions from a variety of regions in Ontario and to include Francophone perspectives, ensuring that a wide range of student experiences and perceptions are represented.

1.3 Respondent Profile

College Respondents

The demographic, academic and financial characteristics of the respondents to the Graduating Student Survey from the five Ontario colleges included in the analysis are presented in Appendix B (Tables B1 to B4).

Demographic Characteristics

Population data on gender and age showed that the majority of 2012 graduates from the five participating colleges were female (58%) and in the 20 to 24 age group (56%). Another 30 per cent of the college graduates were 25 or older. The data has been weighted to reflect these demographics.

College respondents were very likely to be single (83%) and without child dependents (88%). Reflecting their somewhat older age demographic, 14 per cent were in committed relationships and 12 per cent had dependent children.

About one-third of the college respondents were members of visible minority groups (31%), typically Black (7%) or South Asian (7%), followed by Chinese (5%), Latin American (4%) and Filipino (3%). One-quarter of respondents were born outside of Canada, including 15 per cent who immigrated to Canada prior to 2007 and 4 per cent who were more recent newcomers. Another 5 per cent were international students. Only 3 per cent of college respondents were Aboriginal, and one in ten reported having a disability (either visible or invisible). One-third of all respondents were the first in their family to attend postsecondary education.

To create the regional variable, respondents were asked if they had moved from another location specifically to attend postsecondary education. More than one-third of college respondents (36%) had relocated to attend college and were asked to provide the name or postal code of their previous place of residence. The remaining college respondents were assigned the region of the institution they attended. The resulting regional distribution of respondents closely reflects the locations of the participating institutions, with two-thirds of respondents from Central Ontario (42%) or the GTA (24%), two out of five from Eastern Ontario (19%), only 4 per cent from Southwestern Ontario and 1 per cent from Northern Ontario. About one in ten respondents had moved from outside Ontario to attend college, including 2 per cent who moved to Ontario from another Canadian province and 7 per cent who moved from out of country.

Academic Characteristics

Respondents were fairly evenly distributed across three main program areas, with 33 per cent graduating from programs in health, social and community services, 29 per cent from business programs, and 25 per cent from applied arts. Only 13 per cent of respondents were technology graduates.

Administrative records showed that fully half of the graduates achieved cumulative grade point averages (CGPA) between 70 and 79 per cent, with one-third attaining CGPAs of 80 per cent or higher. The majority of respondents received two-year college diplomas

(59%), with the remaining respondents equally divided between one-year credentials (20%) and three-year advanced diplomas (19%).

Only 30 per cent of the college respondents had applied to college directly from high school. Of the remaining respondents, 29 per cent entered their program with previous postsecondary experience, one-quarter had delayed their entry to college one or more years after high school, and 16 per cent were in the workforce prior to entering college. Almost all survey respondents (95%) were attending college as full-time students.

Financial Characteristics

As a proxy for income, the survey asked students whether they expected to owe debt that must be repaid and the amount of their anticipated debt load. Respondents were also asked about the sources of funding they accessed to cover the costs of postsecondary education (including tuition, books, travel, living expenses, etc.). Almost two-thirds of college respondents (63%) expected to owe debt, reporting an average debt load of approximately \$15,000. Almost one-quarter of all respondents (23%) expected to owe debts greater than \$15,000.

Respondents were asked to identify six potential PSE funding sources as either a major source of financing (covering 50% or more of their costs), a minor source of financing (covering less than 50% of their costs), or not a source of financing. Three-quarters of all college students (76%) funded their education through personal savings or employment earnings, and 59 per cent relied on financial support from parents or family. These two categories were equally likely to be identified as major sources of funding by about one-third of college respondents. Although only half of respondents received government student loans to attend college, government loans were the most frequently mentioned major source of PSE funding, by 39 per cent of respondents. Close to one-quarter of college students (23%) accessed private loans to cover their PSE costs, with 11 per cent identifying private loans as a major source of PSE funding.

University Respondents

The demographic, academic and financial characteristics of the Graduating Student Survey respondents from the eight Ontario universities included in the study are presented in Appendix B (Tables B5 to B8).

Demographic Characteristics

Similar to college population data, the majority of 2012 graduates from the eight participating universities were female (59%), and fully three-quarters were between 20 and 24 years of age. The remaining university graduates were 25 or older. The data has been weighted to reflect these gender and age characteristics.

Given their younger age distribution, university respondents were overwhelmingly single (87%) and without child dependents (94%). While 12 per cent of university respondents were in committed relationships, only 6 per cent had dependent children.

About one-third of the university respondents were members of visible minority groups (32%), typically Chinese (10%) followed by South Asian (7%) and Black (6%). One-quarter of respondents were born outside of Canada, including 19 per cent who immigrated prior to 2007 and 2 per cent who were more recent newcomers. Another 4 per cent were international students. Only 2 per cent of respondents were Aboriginal, and 6 per cent reported a disability (either visible or invisible). More than one out of five university respondents (22%) were the first in their family to attend postsecondary education.

The majority of university respondents had relocated to attend postsecondary (52%) and were asked to provide the postal code or name of their previous place of residence. The remaining respondents were assigned the region of the institution they were attending. Compared to college respondents, the higher incidence of relocation among university respondents means that their regional distribution more closely approximates the provincial population, with two out of five university respondents from the Greater Toronto Area (32%) or Central Ontario (8%), 19 per cent from Eastern Ontario, 24 per cent from Southwestern Ontario, and 6 per cent from Northern Ontario. More than one in ten respondents had moved from outside Ontario to attend university, including 5 per cent who moved from another Canadian province and 7 per cent who moved from out of country.

Academic Characteristics

About two out of five respondents (39%) were graduating from programs in the social sciences. The remaining respondents were graduates of STEM programs (19%), health sciences or social services (16%), arts and humanities (15%) and business (11%). Similar to college respondents, administrative records showed that just more than half of university graduates had CGPAs between 70 and 79 per cent, with one-third attaining CGPAs of 80 per cent or higher.

Fully two-thirds of the university respondents had applied to university directly from high school. About one in five (19%) entered their program with previous postsecondary experience, 9 per cent were delayed entry and 7 per cent entered university from the workforce. While the great majority of survey respondents (86%) were attending university as full-time students, 11 per cent reported moving between full-time and part-time status.

Financial Characteristics

The majority of university respondents (57%) expected to owe debt, reporting average debt loads of approximately \$25,000. Almost one-quarter of all respondents (22%) expected to owe debts greater than \$25,000.

More than four out of five university respondents (82%) contributed personal savings or employment earnings to fund their postsecondary education. Close to three-quarters (72%) were supported financially by parents or family, about two-thirds received scholarships, grants or bursaries (63%), and half received government student loans. The most frequently mentioned major source of university financing, by 44 per cent of respondents, was family contributions. Another one-third of respondents identified government loans (34%) or personal savings (32%) as major sources of PSE funding.

About one in five graduates (21%) turned to private lenders to fund their university education, with 9 per cent identifying private loans as a major source of financing.

Part 2 – Postsecondary WIL and Labour Market Experiences

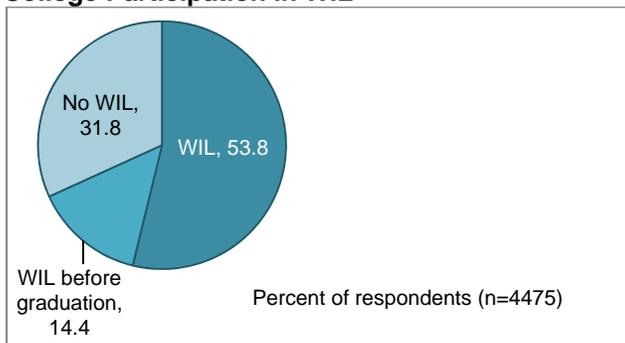
This section presents descriptive statistics, as well as findings from bivariate and regression analyses, related to college and university graduate participation in work-integrated learning, the labour market and voluntary activities.

2.1 Participation in WIL

College Participation in WIL

In total, more than two-thirds of the college respondents were graduates of WIL programs, with 54 per cent reporting that they had already participated in WIL and 14 per cent reporting that they would be participating in WIL prior to graduation. Most college WIL students described their participation in WIL as mandatory (82%) rather than optional (13%),

Figure 1
College Participation in WIL



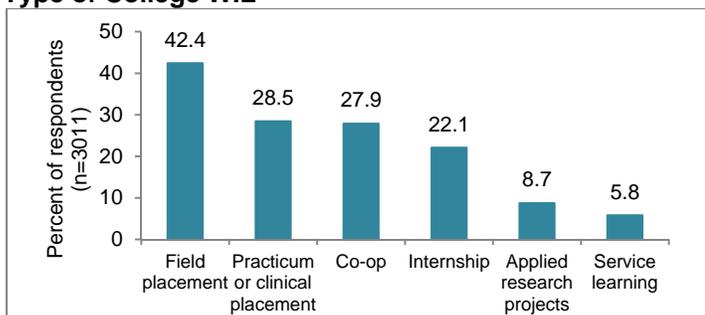
Students who had already participated in WIL (or would be participating before graduation) were presented with six WIL program options and asked to indicate all the types of WIL in which they were involved:

- Co-operative education, defined as a formal program that alternates periods of academic study with periods of paid work experience, which are developed and/or approved by the institution
- Practicums or clinical placements, defined as supervised work experience required to become a practising professional
- Field experience, defined as practical experience in an authentic or simulated work setting
- Internship, defined as program-related experience in a professional work environment

- Applied research projects, defined as projects to address business or industry needs
- Service learning, defined as working with non-profit organizations to address identified community needs or global issues

More than one-quarter of college WIL students reported involvement with multiple types of WIL (27%). The most frequently identified types of college WIL were field placements (42%), practicums or clinical placements (29%), co-op (28%) and internships (22%). Relatively few college WIL students had experiences with applied research projects (9%) or service learning (6%).

Figure 2
Type of College WIL



Only one-quarter of college WIL students (25%) indicated that they could obtain a licence to practice or register in their profession following program completion. For most college students, participation in WIL may have been necessary for course or program completion but was not undertaken in order to meet professional practice requirements.

When the characteristics of WIL participants at the five Ontario colleges were compared to non-WIL participants, some significant differences were noted (see Table C1 in Appendix C). College students from the following groups were statistically less likely to be involved in WIL:

- Males
- Aged 17 to 19
- Single
- No child dependents
- Below average debt
- Enrolled in applied arts or technology programs
- Direct entry or delayed entry

Conversely, college students from the following groups were statistically more likely to be WIL participants:

- Females
- Aged 25 or older
- Immigrants

- International students
- Married or divorced
- With child dependents
- Visible minority
- Above average debt
- Enrolled in business or health, social and community services
- Entering college with previous PSE or from the workforce

Binomial logistic regression was used to further examine the factors that affect student participation in WIL while controlling for other independent variables.⁷ The results, shown in the table below, provide additional insights into the characteristics that differentiate WIL college students from those who do not participate in WIL. The reference category is “no WIL.” A test of the full model against a constant only model was statistically significant (*chi square* = 508.184, *p* < .000 with *df* = 12). Although the overall classification accuracy was 70 per cent, there was 86 per cent accuracy in predicting WIL participation.

Confirming the bivariate results, the regression analysis showed that college students who participated in WIL were more likely to be female and older, and to have higher debt loads (which may reflect the additional costs of pursuing this form of education). With regard to program area, which was included primarily as a control variable, college students in health, social or community services programs were more likely to participate in WIL than students in other program areas. No differences were found by ethnicity, disability, immigrant status, marital status and dependent children.

The bivariate analysis did not indicate a significant relationship between WIL participation and parental education. However, the regression found that first-generation college students were less likely to participate in WIL. In additional analysis not shown here, first-generation PSE status only became significant in the logistic regression model once program area was controlled, suggesting that part of the relationship between first-generation PSE status and WIL participation is mediated through program choice. Nonetheless, the impact of first-generation PSE status on WIL participation was relatively small.

⁷ Small n sizes meant that some variables, such as recent immigrant, international student and Aboriginal identity could not be included in the model. Aboriginal identity was combined with visible minority, and post-2007 immigrant was combined with pre-2007 immigrant to create a single immigrant variable.

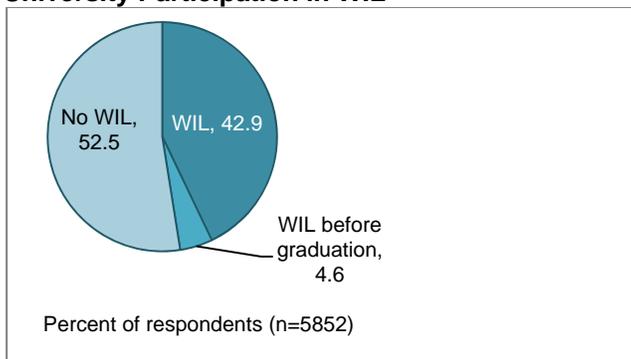
Table 2
Logistic Regression Predicting College Participation in WIL

		Coefficient	S.E.	Wald	p-value	Odds Ratio
First generation	Yes	-0.173	0.084	4.232	0.040	0.841
Gender	Female	0.471	0.083	32.020	0.000	1.602
Age		0.237	0.057	17.236	0.000	1.268
Ethnicity	Visible minority or Aboriginal	0.052	0.094	0.303	0.582	1.053
Disability	Yes	-0.210	0.130	2.593	0.107	0.811
Immigrant	Yes	0.024	0.122	0.039	0.844	1.024
Marital status	Married	0.088	0.146	0.361	0.548	1.091
Dependent children	Yes	-0.296	0.171	2.988	0.084	0.744
Debt load		0.145	0.052	7.629	0.006	1.156
Program area	Health, social and community services			316.824	0.000	
	Applied arts	-1.927	0.112	296.827	0.000	0.146
	Business	-0.886	0.112	62.280	0.000	0.412
	Technology	-1.422	0.136	108.655	0.000	0.241
Constant		0.788	0.178	19.630	0.000	2.200

University Participation in WIL

The majority of the university survey respondents were non-WIL students (53%). About two out of five respondents said they had already participated in WIL (43%) and another 5 per cent said they would be participating before they graduated. Approximately half of university WIL students participated in WIL on a voluntary basis (49%).

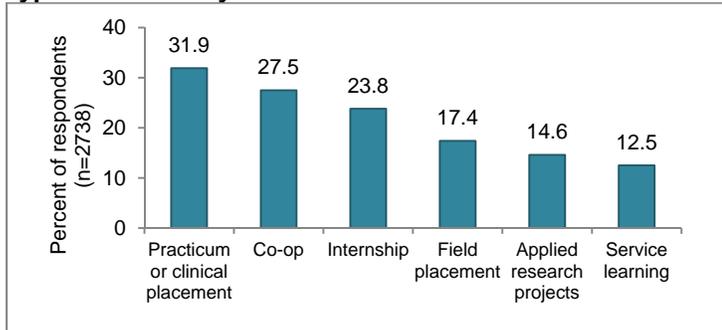
Figure 3
University Participation in WIL



When asked to indicate the types of WIL in which they had participated (or would be participating), about one out of five university WIL students reported multiple types of WIL experiences (21%). The most frequently identified types of WIL were practicums or clinical placements (32%), co-op (28%) and internships (24%), with levels of participation similar to college students. University students were much less likely than college

students, however, to participate in field placements (only 17% compared to 42%). They also reported higher levels of participation in applied research projects (15%) and service learning (13%), compared to college participation rates of 9 per cent and 6 per cent respectively in these programs.

Figure 4
Type of University WIL



Close to half of university WIL students considered their WIL participation to be mandatory (46%), and one-third (34%) indicated that they could obtain a licence to practice or register in their profession following program completion, suggesting that many university WIL programs were undertaken to gain practice or clinical hours required for professional designation.

When the characteristics of WIL participants at the eight Ontario universities were compared to non-WIL participants, some significant differences were noted (see Table C2 in Appendix C). University students from the following groups were statistically less likely to be involved in WIL:

- First generation PSE
- Single
- No child dependents
- No debt
- Enrolled in arts and humanities, or social sciences
- Direct entry

Conversely, university students from the following groups were statistically more likely to be WIL participants:

- Aged 30 or older
- Immigrants to Canada
- With child dependents
- Visible minority
- Above average debt
- Enrolled in STEM or health science programs
- Entering university with previous PSE or from the workforce

When these factors were examined using logistic regression, the model had less predictive power for university students than for college students. While a test of the full model against a constant only model was statistically significant (*chi square* = 307.865, *p* < .000 with *df* = 13), the overall classification accuracy was only 61 per cent. Furthermore, few of the variables were found to significantly differentiate between students who participated in WIL and those who did not (the reference category).

Similar to college students, university students who participated in WIL were less likely to be first-generation PSE. However, they were also found more likely to be immigrants. No differences were found by gender, age, disability, marital status, dependent children or debt load. Participation in WIL also differed significantly by program area, which was included primarily as a control variable. Students in STEM programs as well as health science programs were more likely to participate in WIL than students in the social sciences, while arts and humanities students were less likely than social science students to participate in WIL.

Table 3
Logistic Regression Predicting University Participation in WIL

		Coefficient	S.E.	Wald	p-value	Odds Ratio
First generation	Yes	-0.228	0.073	9.715	0.002	0.796
Gender	Female	0.050	0.062	0.650	0.420	1.051
Age		0.010	0.063	0.027	0.870	1.010
Ethnicity	Visible minority or Aboriginal	0.105	0.071	2.189	0.139	1.111
Disability	Yes	0.064	0.132	0.237	0.626	1.066
Immigrant	Yes	0.185	0.084	4.897	0.027	1.203
Marital status	Married	0.100	0.117	0.727	0.394	1.105
Dependent children	Yes	0.123	0.159	0.596	0.440	1.131
Debt load		0.066	0.040	2.758	0.097	1.068
Program area	Social science			245.586	0.000	
	Arts and humanities	-0.402	0.092	19.048	0.000	0.669
	Business	0.118	0.100	1.380	0.240	1.125
	STEM	0.557	0.083	44.749	0.000	1.746
	Health sciences and social services	1.131	0.091	153.961	0.000	3.099
Constant		-0.377	-0.531	0.160	11.007	0.001

Participation in WIL Summary

Key findings related to the WIL participation of college and university students are described below:

- More than two-thirds of college students (68%) and almost half of university students (48%) were involved with WIL programs. College WIL students were more likely than university WIL students to report that they had not yet participated but would be participating before graduation (14% vs. 5%).
- The majority of college WIL students were required to participate in WIL (82%), compared to less than half of university WIL students (46%).
- Close to one-quarter of all PSE students reported multiple WIL experiences.
- The most common type of college WIL was field placements. Practicums or clinical placements were the most common type of university WIL, followed by co-operative education and internships.
- University students were much less likely to participate in field placements than college students. However, rates of participation were similar in practicums, co-op and internships. Applied research projects and service learning were more common for university WIL students than college WIL students.
- Logistic regression showed that first-generation PSE students were under-represented in both college and university WIL programs.
- The regression model also showed that college WIL students were more likely than non-WIL students to be female and older, and to have higher debt loads.
- University WIL students were more likely to be immigrants.

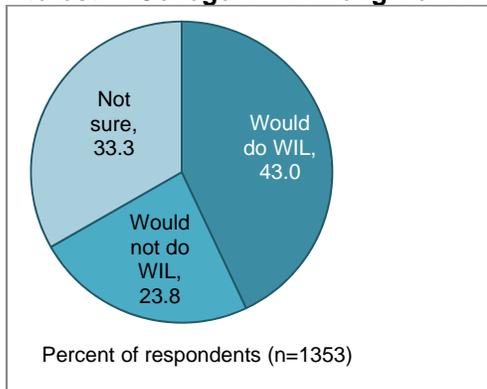
2.2 WIL Motivations and Benefits

The survey explored motivations for participating in WIL among both current and future WIL participants, as well as non-WIL students who would participate in WIL if they could do their postsecondary education over again.

College Motivations

More than two out of five non-WIL college students (43%) said they would select a program with WIL if they were beginning PSE over again. Only one-quarter (24%) said they would not choose a WIL option.

Figure 5
Interest in College WIL Among Non-WIL College Students

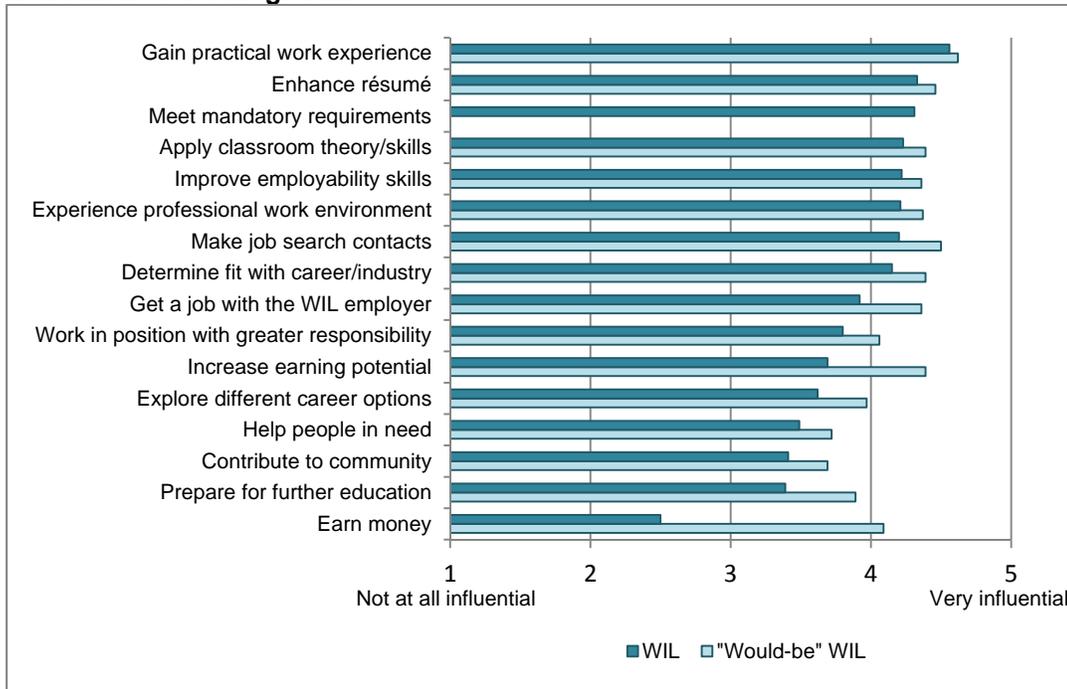


Both college WIL participants and college students who would choose WIL if they could start again (“would-be” WIL students) were presented with a list of motivations for choosing a WIL option. “Meeting mandatory requirements” was not provided as a response option for “would-be” WIL participants, since they had already indicated that WIL was optional. Respondents were asked to rate the extent to which each motivation influenced them to choose WIL, using a five-point scale where 1=not at all influential, 2=a little influential, 3=somewhat influential, 4=quite influential and 5=very influential.

As shown in the figure below, “would-be” WIL participants were significantly more influenced than college students who actually participated in WIL by all but one motivation (gaining practical work experience) (see Table D1 in Appendix D for details). “Would-be” WIL students ascribed mean scores of quite or very influential to 11 of the 15 items. By comparison, college students who participated in WIL rated only half of the motivations as quite or very influential. For both groups of students, gaining practical work experience and résumé enhancement were among the top three motivating factors. However, college WIL students rated meeting mandatory requirements as one of the three most influential factors, while “would-be” WIL students were more influenced by making job search contacts.

The biggest difference between the two groups was with regard to financial motivations. Earning money had the least influence on college WIL students (mean rating of 2.50), but was quite influential for “would-be” WIL students (mean rating of 4.09). Increasing earning potential, getting a job with the WIL employer, and working in a position with greater responsibility were also stronger motivations for “would-be” WIL students (mean influence of 4 or higher) than WIL students (mean influence of less than 4).

Figure 6
Motivations for College WIL



Factor analysis of the 16 motivations for WIL students, confirmed by Cronbach's alpha reliability analysis, was used to assist in analyzing motivations by type of WIL and program. The following factor groupings were identified:

- Employment-related motivations included the following seven items: gain practical work experience, enhance my résumé, improve employability skills, make job search contacts, apply theory/skills learned in the classroom, experience a professional work environment and get a job with the WIL employer.
- Community service motivations included the following two items: help people in need and contribute to my community.
- Future exploration motivations included the following three items: explore different career options, determine fit with the career/industry and prepare for further education.
- Career progression motivations included the following two items: work in a position with greater responsibility and increase earning potential.

Two motivations did not group with any other factors: meeting mandatory requirements and earning money. While earning money is included as a single-item factor in the analysis that follows, meeting mandatory requirements is excluded, since it reflects a compulsory obligation rather than a motivation to participate.

College Motivations by Type of WIL

To analyze motivations by type of WIL, new sub-groups were created for unique respondents only, that is, students who only participated in a single type of WIL.⁸ A comparison of mean scores across the motivation factors revealed the following significant differences (see Table D2 in Appendix D):

- Employment-related motivations were rated highest by almost all WIL students, with the exception of those who participated in service learning.
- Compared to other WIL students, students in applied research projects and service learning ascribed lower mean influence to employment-related motivations.
- None of the factors were particularly influential for students involved with applied research projects. Mean influence ratings for this group were less than 4 for all five factors.
- Both practicum and service learning students were highly motivated by service to the community. In particular, service learning students were the only group to rate these motivations ahead of employment-related factors, in the quite or very influential range (mean score of 4.10). Service to the community was much less influential for students in internships and applied research projects.
- Career progression motivations were stronger for co-op students than for practicum and field placement students.
- Earning money was also a stronger motivator for college co-op students than other WIL students and was least influential for practicum students.

College Motivations by Program

A comparison of mean score differences across motivation factors by program area revealed the following significant differences (see Table D3 in Appendix D):

- Employment-related motivations were highly influential for students across all four program areas. These motivations had greatest mean influence on health, social and community services students, but were slightly less influential for technology students.
- Students from health, social and community services were more influenced than other students by community service motivations, rating these second after employment factors. They were much less influenced by earning money.

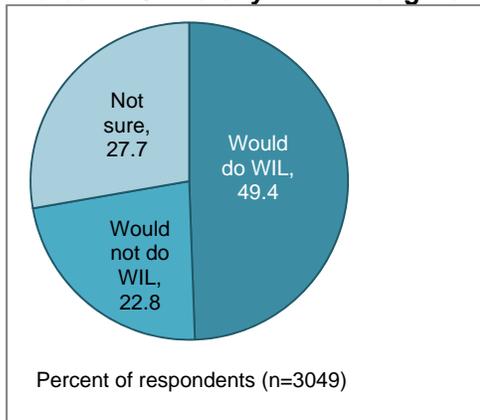
⁸ Since respondents were asked about their overall motivations to participate in WIL (rather than motivations by specific WIL program), respondents who participated in more than one WIL program were excluded from the analysis by type of WIL.

- Community service motivations were less influential for students from applied arts and technology.
- Students from business programs and health programs ascribed higher influence scores to future exploration motivations.
- Business students were more motivated by career progression than applied arts or health students.
- Earning money was a stronger motivator for technology students than students in other programs.

University Motivations

Fully half of the non-WIL university students (49%) reported that they would choose WIL if they could do their PSE program over again (identified as “would-be” WIL students in the analysis that follows). About one-quarter (23%) said they would not choose a WIL option.

Figure 7
Interest in University WIL Among Non-WIL Students

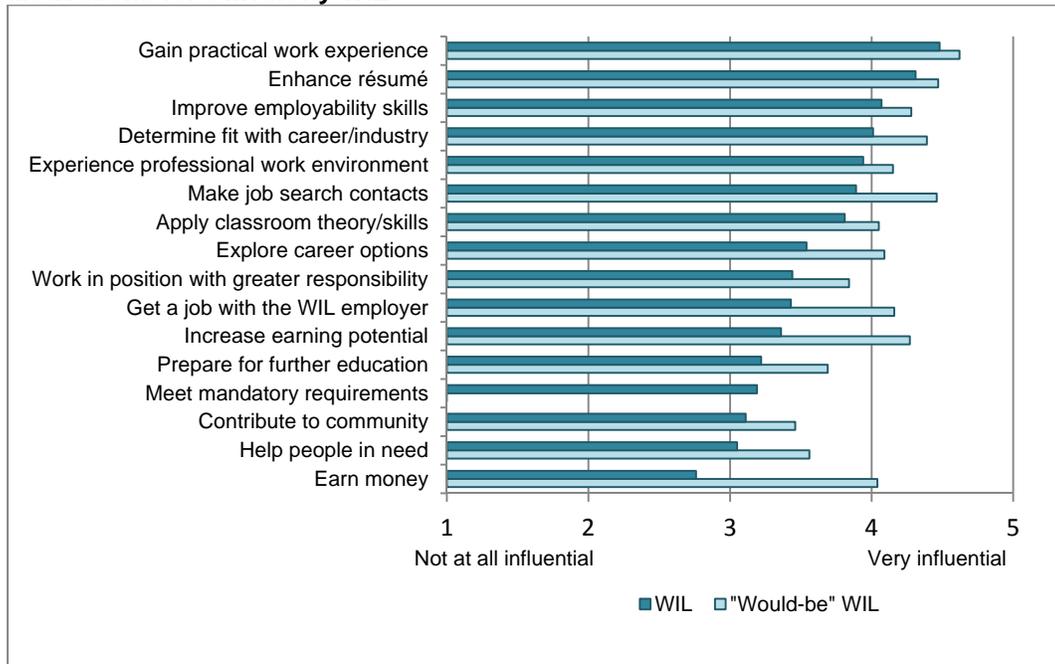


The figure below shows that “would-be” WIL university respondents rated all of the motivations significantly higher than university students who actually participated in WIL. They ascribed mean score ratings of quite or very influential to 11 of the 15 motivations (see Table D4 in Appendix D for details). By comparison, university WIL participants ascribed mean influence scores of 4 or greater to only four motivations. For both groups of students, gaining practical work experience and résumé enhancement were the top two motivations. While WIL university students viewed improving employability skills as the third most influential reason to choose WIL, “would-be” WIL students gave the next highest rating to making job search contacts.

Again, the biggest difference was with regard to financial motivations. Earning money had the lowest influence on university WIL students (mean rating of 2.76) but was quite influential for “would-be” WIL students (mean rating of 4.04). Other motivations with much stronger influence on “would-be” WIL students included increasing earning potential,

getting a job with the WIL employer, experiencing a professional work environment, career exploration and applying classroom theory and skills.

Figure 8
Motivations for University WIL



University Motivations by Type of WIL

When motivations of WIL university students were analyzed by type of WIL for unique respondents only, some significant differences were noted (see Table D5 in Appendix D):

- Employment-related motivations were rated ahead of all other factors by practicum, field placement and internship students, and were significantly more influential for co-op and practicum students.
- Service to the community was the top-rated factor for service learning students, who were the only group to rate this factor higher than 4 in mean influence. Community service motivators were also more influential for practicum students than for students in other WIL programs.
- Career progression motivations were more influential for university interns and for co-op students in particular.
- Earning money was the top-rated motivation for university co-op students and was least influential for practicum students.
- University students involved with field placements, internships and applied research projects did not consider any of the factors to be particularly influential, ascribing mean influence scores of less than 4 to all factors.

University Motivations by Program

When motivations of WIL university students were analyzed by program area, only a few statistically significant differences were apparent (see Table D6 in Appendix D):

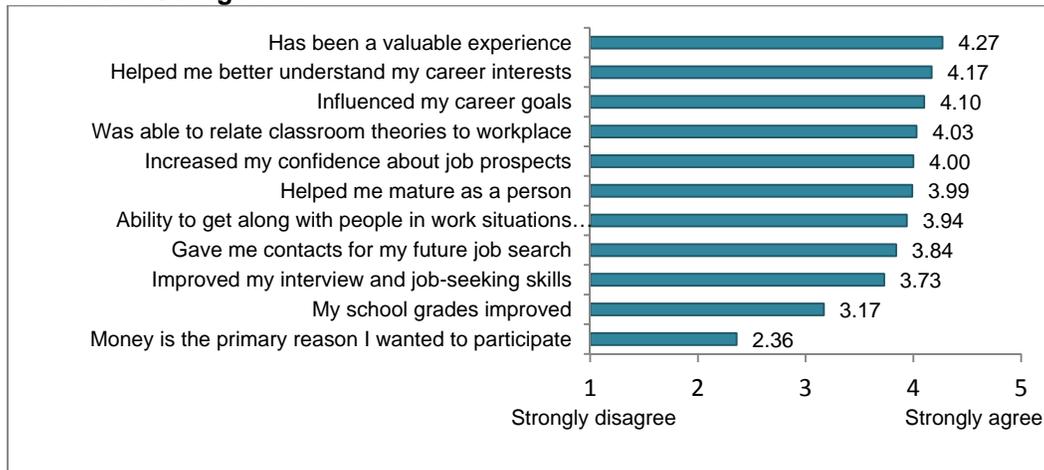
- Employment-related factors were the top motivations for students across all five program areas, and for health students in particular.
- Students from health sciences were more motivated than other students by community service factors and much less motivated by earning money.
- Career progression was a stronger motivator for business students than students in arts, health sciences and social science.
- Future exploration factors were more influential for STEM students than for students in arts and social science.
- Students from both business and STEM programs ascribed greater influence than other students to earning money and were the least influenced by community service motivations.

College WIL Benefits

To assess student perceptions of the benefits of participating in WIL, respondents were presented with 11 benefit statements. They were asked to think about their overall participation in postsecondary work-integrated learning and to rate their agreement with each statement using a five-point Likert scale where 1=strongly disagree and 5=strongly agree.

As shown in the figure below, college students who participated in WIL strongly agreed that their experience had been valuable (see Table D7 in Appendix D). They viewed WIL as helping to clarify their career interests, influencing their career goals, allowing them to apply classroom theories to the work environment, and increasing their confidence about career prospects. They were least likely to agree that they participated in WIL for monetary reasons.

Figure 9
Benefits of College WIL



College Benefits by Type of WIL

Benefits were analyzed by type of WIL for respondents who had participated in a single WIL program only. The analysis showed several significant differences (see Table D8 in Appendix D):

- Practicum students expressed stronger agreement than co-op, internship and applied research students that their WIL experience had been valuable.
- Co-op, practicum and field placement students were more likely than students in applied research to agree that WIL helped them understand their career interests and influenced their career goals.
- Practicum and field placement students agreed more strongly than college interns that WIL enabled them to relate classroom theory to the real world.
- Applied research students were less likely than co-op, practicum, field placement and internship students to agree that WIL gave them job search contacts.
- Service learning students were more likely than co-op, practicum, field placement and internship students to agree that their school grades improved as a result of WIL.
- Although college students were quite unlikely to agree that they participated in WIL for financial reasons, there was less disagreement among co-op students than other WIL students.

College Benefits by Program

When results were analyzed by program, the most striking difference concerned students from health, social and community services (see Table D9 in Appendix D):

- Students in health, social and community services agreed more strongly than other students that WIL influenced career goals, enabled the application of theory to practice, developed personal maturity and improved their ability to get along

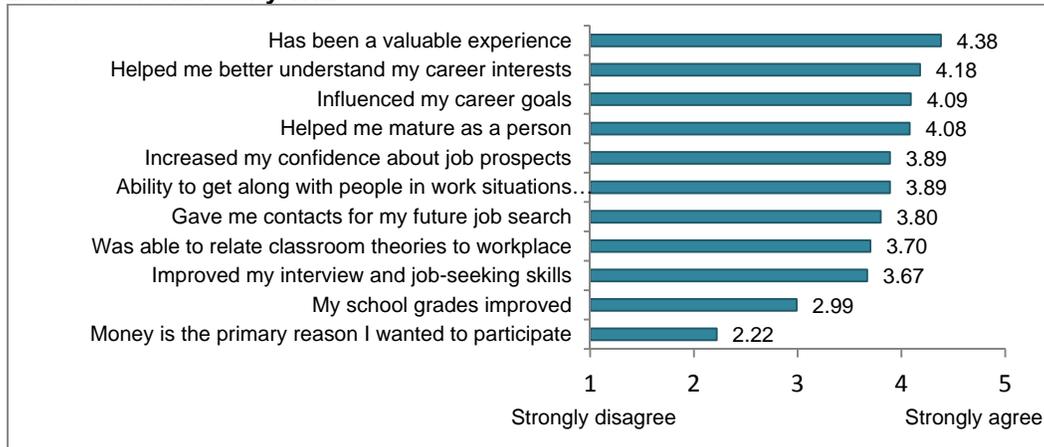
with others. They were the least likely to agree that they participated for monetary benefits.

- Applied arts students were less likely than students in health programs and business programs to agree that WIL increased their confidence about job prospects.

University WIL Benefits

Similar to college students, university WIL participants strongly agreed that their experience in WIL had been valuable and also viewed WIL as helping to clarify their career interests and influencing career goals (see Table D10 in Appendix D). In addition, they considered increased personal maturity to be an important benefit of WIL.

Figure 10
Benefits of University WIL



University Benefits by Type of WIL

Benefits were analyzed by type of WIL for respondents who had participated in a single type of WIL only. The analysis showed several significant differences (see Table D11 in Appendix D):

- Co-op students and practicum students rated almost all statements higher than students in applied research projects.
- Internship, practicum, and especially co-op students expressed high levels of agreement about the value of WIL in developing their personal maturity.
- Compared to students in most other WIL programs, co-op students particularly valued WIL for improving their interview and job-seeking skills, increasing their confidence about job prospects, improving their ability to get along with others and giving them job search contacts. University interns were also more likely than other students to agree that WIL provided contacts for future employment, and service learning students also reported improved interpersonal skills.

- Although university students were quite unlikely to agree that they participated in WIL for monetary advantages, there was less disagreement among co-op students than other WIL students.
- The only benefit that was rated significantly higher by practicum students than co-op students was the application of classroom theories to the work environment.

University Benefits by Program

Several significant differences were observed in perceptions of benefits by program (see Table D12 in Appendix D):

- Students in health sciences agreed more strongly than social science students about most WIL benefits.
- Social science students were less likely than students in business, STEM and health to agree that WIL developed their personal maturity and increased their confidence about job prospects.
- Improved interview and job-seeking skills, and monetary benefits were rated highest by students in business and STEM programs.

WIL Motivations and Benefits Summary

Similar findings about motivations to participate in WIL and perceived benefits were observed at both the college and university levels:

- For both college and university WIL participants, gaining practical work experience, résumé enhancement, improving employability skills and determining their fit with a potential career or industry were influential reasons for their decision to participate in WIL.
- Both college and university WIL participants strongly agreed that their WIL experience had been valuable, across all types of WIL and all program areas. In particular, they viewed WIL as helping to clarify their career interests and influencing their career goals.
- College and university students who wished they had participated in WIL were motivated by the same reasons as their WIL peers. However, they also considered increasing earning potential, getting a job with the WIL employer and earning money to be particularly strong motivations.

There were also some noteworthy differences between college and university respondents:

- Given that four out of five college WIL students said they were required to participate in WIL (compared to only half of university WIL students), meeting mandatory requirements was much more influential for college WIL respondents than university WIL respondents.
- In addition to the motivations described above, college WIL students were also motivated by an interest in applying their classroom theory and skills to the workplace, experiencing a professional work environment and making job search

contacts. They perceived opportunities to apply classroom theories to the work environment and increased confidence about career prospects as key benefits of WIL participation.

- University WIL students considered increased personal maturity to be a particular benefit of their WIL experience, ascribing higher value to this benefit statement than college students.
- Among “would-be” college WIL students, working in a position of greater responsibility was an additional motivation.
- University “would-be” WIL participants were strongly motivated by making job search contacts, experiencing a professional work environment, career exploration and applying classroom theory and skills.

Motivations and Benefits by Type of WIL and Program

Several common themes were noted by type of WIL and field of study:

- Employment-related factors were rated ahead of all other motivations by students in practicums, field placements and internships. Employment-related motivations were also highly influential for health students.
- Community service motivations had the greatest influence on service learning students, and were second to employment-related factors for practicum students. Community service motivations were also rated higher by WIL students in health programs, particularly at the college level.
- Career progression motivations were stronger for co-op students and for WIL students in business programs.
- WIL students in PSE health programs rated most WIL benefits higher than students in other programs.
- Co-op and practicum students were more likely than students in applied research projects to agree that WIL helped them understand their career interests and influenced their career goals. At the college level, the same was true for field placement students.
- Compared to other WIL students, those involved with applied research projects were less influenced by all motivation factors and also expressed lower levels of agreement with most benefit statements.
- Earning money was a much stronger motivator for co-op students, as well as for students in college technology and university STEM programs. University co-op students in particular rated earning money ahead of all other motivations. Although their overall level of agreement was low, co-op students were more likely than all other WIL students to agree that their primary reasons for WIL participation were financial.

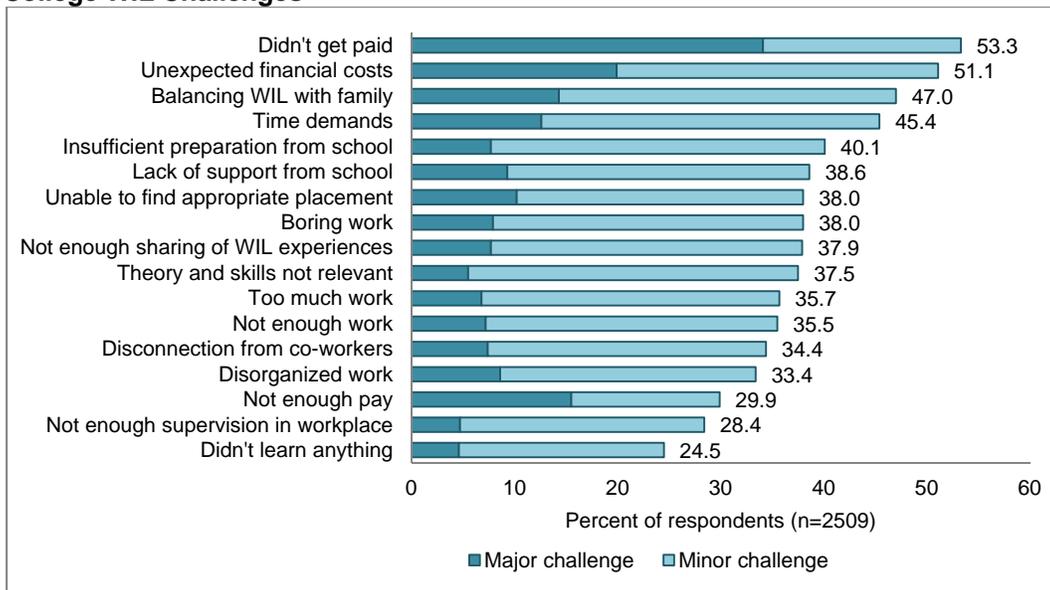
2.3 WIL Challenges and Barriers

To assist in identifying the issues or concerns encountered by WIL students, survey respondents who had participated in work-integrated learning were presented with a list of 17 potential challenges that might be experienced during WIL programs. Respondents were asked whether any of the challenges applied to them, and to indicate the degree of challenge they experienced, using a three-point scale where 1=did not apply, 2=minor challenge and 3=major challenge.

College WIL Challenges

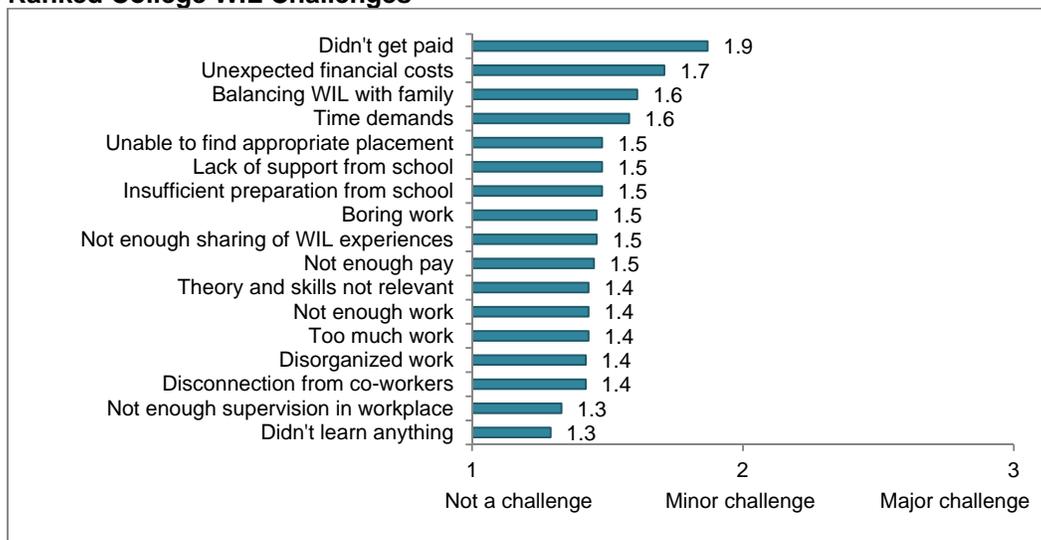
As shown in the figure below, the majority of college WIL students did not experience any of the challenges presented (see Table E1 in Appendix E for details). Only two challenges were identified by more than half of respondents, and both related to financial issues. Lack of payment was the top-rated challenge, mentioned by 53 per cent of respondents, who were much more likely to describe this as a major challenge (34%) than a minor challenge (19%). Unexpected financial costs was the next most frequent challenge – experienced by 51 per cent of respondents – but was more often identified as a minor challenge (31%) than a major challenge (20%). Time management pressures were also relatively frequent concerns for WIL college students, with almost half of college WIL students reporting challenges related to balancing WIL with family commitments (47%) and handling additional time demands (45%). It is noteworthy that only 30 per cent of respondents reported not being paid enough. More than half of these students described insufficient pay as a major challenge.

Figure 11
College WIL Challenges



In the figure below, comparison by mean scores shows that lack of payment was the most significant college WIL challenge, followed by unexpected financial costs. Time demands were the next highest rated challenges, with similar scores ascribed to balancing WIL with family commitments and managing time pressures. These were followed by a cluster of challenges associated with the college's role in delivering WIL programs, specifically finding appropriate student placements, supporting students during their placement, and preparing students in advance of their placement.

Figure 12
Ranked College WIL Challenges



To assist in comparing challenges by type of WIL and program, factor analysis of the 17 WIL challenges generated three factor groupings, which were confirmed through Cronbach's alpha reliability analysis. The factor groupings are shown in the table below:

Table 4
Challenge Factors

Factor	Items
Workplace factors	Work assigned was boring
	Disorganized work environment
	Not enough supervision in the workplace
	Not enough work assigned in the workplace
	Feeling of disconnection from co-workers
	Didn't learn anything during the work placement
School-related factors	Not enough preparation from my school before the work-integrated learning
	Not enough support from my school during the work-integrated learning
	The theory and skills I learned at school were not relevant to the workplace
	Not enough opportunities to share what I learned when I went back to the classroom
	Couldn't find an appropriate placement for my field of study

Factor	Items
Time and cost pressures	Too many additional demands on my time
	Hard to balance work-integrated learning with my family commitments
	Too much work assigned in the workplace
	Didn't get paid at all
	Didn't get paid enough
	Unexpected financial costs

College Challenges by Type of WIL

Analysis of challenges by type of WIL revealed the following significant differences:

- Time and cost pressures were felt more acutely by practicum students than co-op or field placement students.
- Workplace challenges were statistically greater for co-op students than for field placement students.
- School-related challenges were greater for service learning than for other types of WIL, with service learning students rating these challenges ahead of time and cost pressures.
- For college co-op students, school-related issues and time and cost pressures presented similar levels of challenge.

Table 5
College Challenges by Type of WIL

	Co-op (n=493)	Practicum (n=550)	Field Placement (n=418)	Intern- ship (n=228)	Applied Research Project (n=75)	Service Learning (n=24)
	Mean					
Time and cost pressures	1.53	1.66	1.54	1.61	1.50	1.64
Workplace-related	1.43	1.36	1.33	1.44	1.30	1.45
School-related	1.55	1.39	1.38	1.50	1.34	1.81

College Challenges by Program

Several significant differences were also noted by program area:

- Time and cost pressures were rated higher by health students, but were less likely to be challenges for technology students.
- Workplace challenges were greater for students in arts and business programs than for those in health programs.
- Health and technology students were less likely to experience school-related challenges.

Table 6
College Challenges by Program

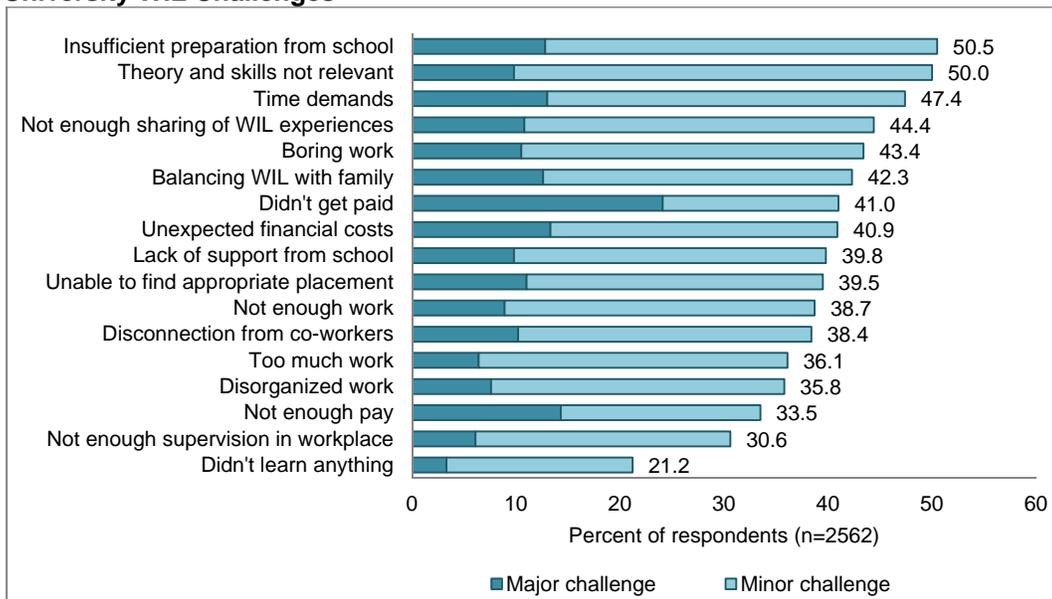
	Applied Arts (n=473)	Business (n=939)	Technology (n=264)	Health, Social & Community Services (n=1334)
	Mean			
Time and cost pressures	1.61	1.57	1.42	1.67
Workplace-related	1.42	1.45	1.37	1.35
School-related	1.49	1.55	1.51	1.39

University WIL Challenges

Similar to college students, the figure below shows that the majority of university WIL students did not experience any of the challenges presented, with only two challenges reported by half or more of respondents (see Table E2 in Appendix E for details). Unlike college students, both challenges concerned the role of the university in delivering WIL, specifically the preparation provided to students prior to their WIL placement (51%) and the relevance of classroom theory and skills to the work environment (50%).

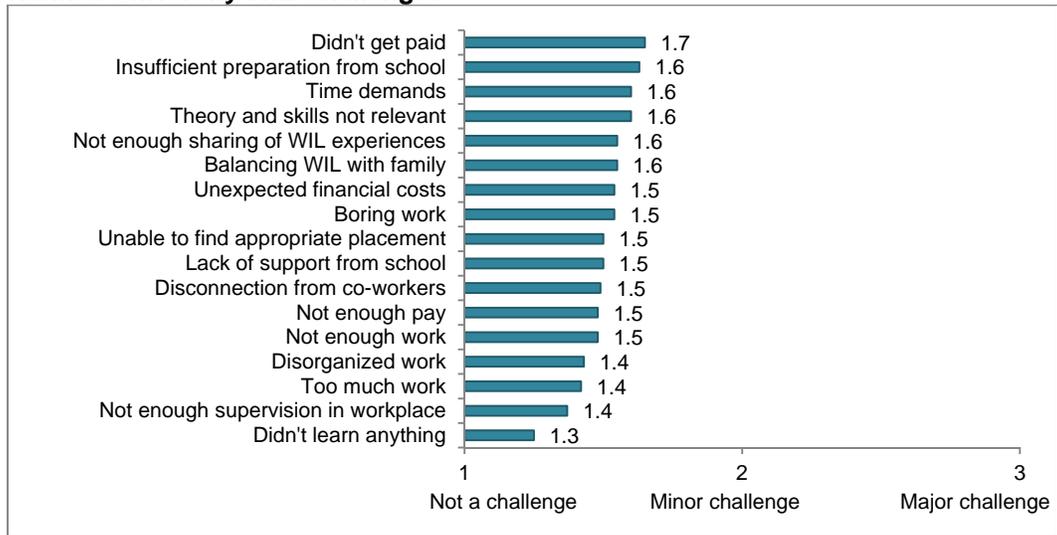
Nevertheless, relatively small proportions of university WIL students perceived these to be major concerns (13% and 10% respectively). Time demands were also relatively frequent challenges for university WIL students, experienced by close to half of respondents (47%). Although fewer university respondents reported financial challenges, financial concerns were the most often mentioned major challenges. Not being paid at all was identified as a major challenge by 24 per cent of university WIL students, followed by insufficient pay and unexpected financial costs (major challenges for 14% and 13% of respondents respectively).

Figure 13
University WIL Challenges



Comparison of mean scores shows that university WIL students perceived less differentiation between challenges than college students, and that concerns about institutional delivery of the WIL program were particularly salient. Similar to college students, lack of payment was the top-rated challenge for university WIL students. However, this was followed closely by insufficient preparation in advance of the WIL placement, time demands and concerns about the relevance of classroom theory and skills to the WIL placement.

Figure 14
Ranked University WIL Challenges



University Challenges by Type of WIL

Analysis of challenges by type of WIL revealed the following significant differences:

- School-related challenges were greater for co-op students than other students, and were also rated higher by university interns.
- Time and cost pressures were particularly challenging for practicum students.
- Workplace challenges were greatest for co-op students but were rated lower by practicum students.

Table 7
University WIL Challenges by Type of WIL

	Co-op (n=477)	Practicum (n=640)	Field Placement (n=194)	Intern- ship (n=344)	Applied Research Project (n=203)	Service Learning (n=162)
	Mean					
School-related	1.68	1.45	1.46	1.60	1.50	1.54
Time and cost pressures	1.39	1.73	1.47	1.46	1.49	1.48
Workplace-related	1.56	1.30	1.41	1.43	1.41	1.47

University Challenges by Program

Analysis by program area revealed the following significant differences:

- School-related challenges were greatest for business and STEM students, but were rated lower by students in arts and health sciences.
- Students in health sciences and social services were more challenged by time and cost pressures than other students, but viewed workplace factors as less challenging.

Table 8
University WIL Challenges by Program

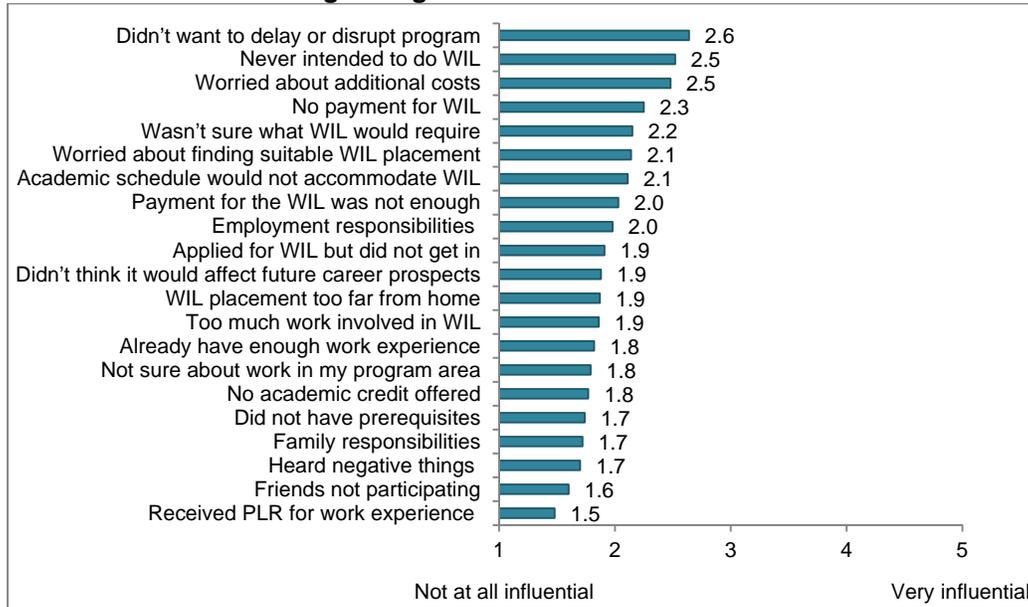
	Arts & Humanities (n=243)	Business (n=263)	STEM (n=535)	Health & Social Services (n=591)	Social Science (n=865)
	Mean				
School-related	1.48	1.64	1.63	1.47	1.56
Time and cost pressures	1.50	1.42	1.42	1.72	1.55
Workplace-related	1.38	1.48	1.45	1.35	1.45

College Barriers

More than one-quarter of the non-WIL college students indicated that their program offered a WIL option (27%). These students were presented with a list of 21 possible reasons for not participating in WIL and asked to rate the influence of each reason on their decision not to choose WIL, using a five-point scale where 1=not at all influential, 2=a little influential, 3=somewhat influential, 4=quite influential and 5=very influential.

None of the barriers was particularly influential for college non-WIL students, with mean influence scores of less than 3 (see Table E3 in Appendix E). The biggest barrier, which was quite or very influential for one-third of respondents, was concern about delaying program completion. Other common barriers were financial – related to additional costs, lack of payment and insufficient payment – as well as uncertainty about WIL requirements, concern about finding a suitable placement and inflexible academic schedules.

Figure 15
Reasons for not Choosing College WIL



College Barriers by Program

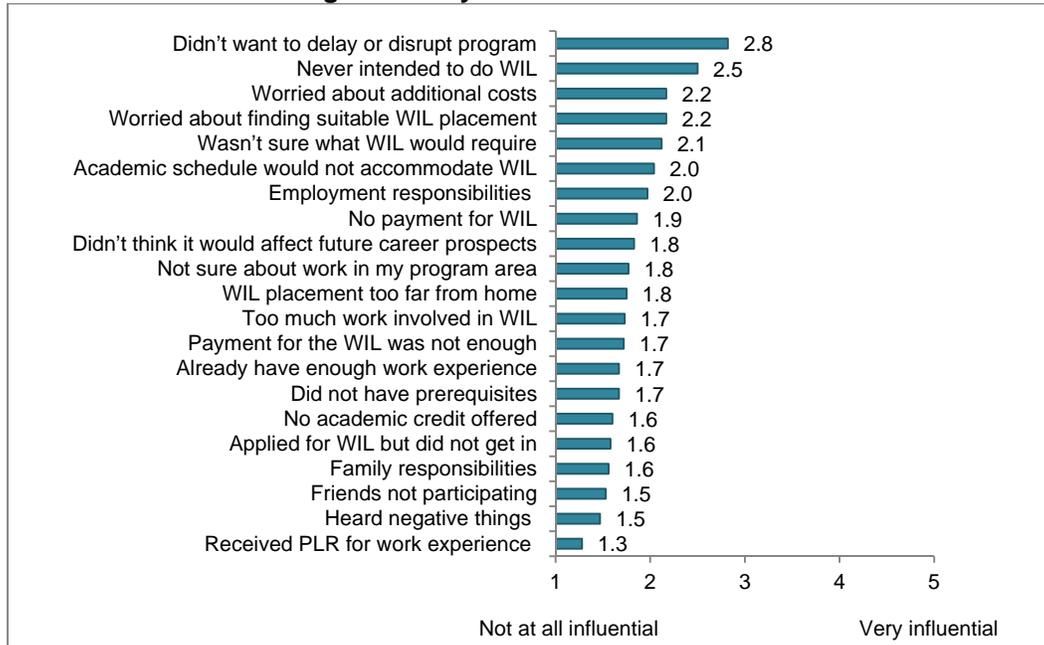
Only two statistically significant differences were observed when barriers were compared by program (see Table E4 in Appendix E):

- Business students ascribed higher mean influence scores to concerns about finding a suitable WIL placement than students in health and community services.
- Business students were more influenced by negative word of mouth, while students in applied arts and technology were less influenced.

University Barriers

Close to half of the non-WIL university students indicated that their program offered a WIL option (44%). Similar to college students, analysis by mean scores shows that university students did not consider any of the barriers to be more than somewhat influential (see Table E5 in Appendix E). Again, concern about delaying program completion was the biggest barrier to WIL participation, rated as quite or very influential by more than one-third of respondents. The other most frequently mentioned barriers were the financial costs of WIL, concern about finding a suitable placement, uncertainty about WIL requirements and academic scheduling difficulties.

Figure 16
Reasons for not Choosing University WIL



University Barriers by Program

University students differed significantly in their perceptions of barriers to WIL participation based on program of study (see Table E6 in Appendix E):

- Students in health and social service programs expressed greater uncertainty than STEM students about the requirements of the WIL option.
- Compared to STEM students, students in both arts and the social sciences were less able to participate in WIL because of employment responsibilities.
- Concern about additional costs was a greater barrier for arts students than business or STEM students.
- Academic scheduling was more of a challenge for health students than for those in business, STEM or social science.
- STEM students were less concerned than arts, health and social science students about lack of payment.
- Compared to students in the social sciences, health students expressed greater scepticism about the impact of WIL on career prospects.
- Insufficient payment was a greater concern for students in arts programs and the social sciences than for STEM students.
- Business students were more likely than social science students to have applied for WIL but were not accepted.

WIL Challenges and Barriers Summary

Similar findings were observed about the challenges experienced by WIL students and the barriers to WIL participation at both the college and university levels:

- The majority of students in PSE WIL programs did not experience any challenges, with only two challenges reported by more than half of PSE students.
- Not being paid was the most frequently mentioned major challenge for both groups of students, and was also the top-rated challenge when mean scores were ranked.
- Almost half of all WIL students experienced some difficulty managing additional time demands from their WIL program.
- None of the 21 barriers probed in the survey had particular influence on either group of non-WIL students. The biggest barrier at both the college and university levels was concern about delaying program completion.
- Other common barriers for both groups were concerns about additional costs or expenses, worry about finding a suitable placement, uncertainty about WIL requirements and academic scheduling difficulties.

Evident differences between the two groups in perceptions of challenges included:

- At the college level, the two most frequent challenges were lack of payment and unexpected financial costs. Lack of payment and insufficient payment were also more likely to be barriers for college students than university students.
- At the university level, the most frequent challenges concerned institutional delivery of the WIL program, specifically insufficient preparation prior to WIL and difficulty relating classroom theories to the workplace.
- Challenges balancing WIL with family commitments were more often experienced by college students than university students. WIL college students rated time demands next after financial concerns as the most significant challenges.
- Consistent with the voluntary nature of university WIL programs, non-WIL university students were more likely than non-WIL college students to report that they had an option to do WIL (44% vs. 27%).

Challenges and Barriers by Type of WIL and Program

Noteworthy findings by type of WIL and field of study included:

- Time and cost pressures were particularly challenging for practicum students and for students in health programs.
- Workplace challenges tended to be greater for co-op students.
- Workplace and school-related challenges were less significant for health students than students in other programs.
- School-related challenges were more salient for college co-op and service learning students, and for university co-op and internship students.
- University STEM and business students experienced school-related challenges to a greater degree than their college peers.

2.4 WIL Financial Implications

Given the low priority ascribed to earning money as a motivation for WIL participation among both college and university WIL students, and the identification of not being paid as the top challenge experienced by all WIL students, additional analysis was conducted to assist in understanding the financial implications of participating in WIL programs.

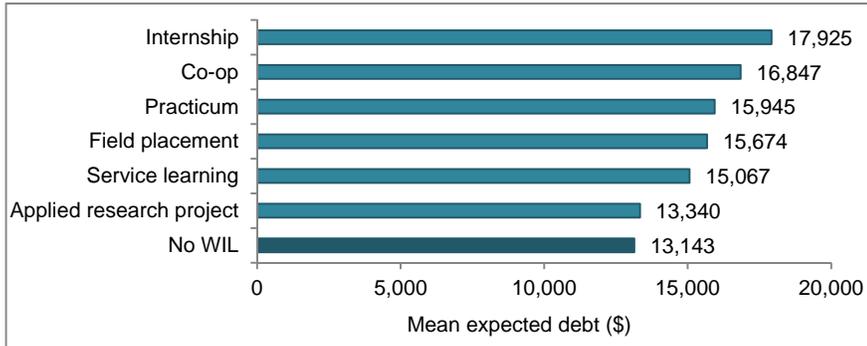
Since co-op programs require employers to provide remuneration for co-op students, and co-op participation has been identified in the literature as contributing to lower incidence of student debt and smaller student debt loads (Haddara and Skanes, 2007), this analysis explored the anticipated debt of graduating students by type of WIL, using respondents who had participated in a single type of WIL only. While these results offer some insights into the association between PSE debt and participation in WIL, they do not provide evidence of a causal relationship, since many other factors can impact the amount of debt incurred by postsecondary students. These factors include the tuition fees and program-related costs required for particular fields of study, the amount of income earned by PSE students through part-time or other employment, and students' personal financial circumstances. Nevertheless, the results presented in this section add depth to the other findings reported in this study related to the financial benefits and challenges of WIL participation.

Financial Implications of College WIL

As indicated in the respondent profile, approximately 63 per cent of all college students expected to repay debt upon graduation. Comparison by participation in WIL showed that this proportion was the same for both WIL and non-WIL college students and did not vary by type of WIL, indicating that college WIL students were as likely to expect to incur debt as non-WIL students regardless of WIL program.

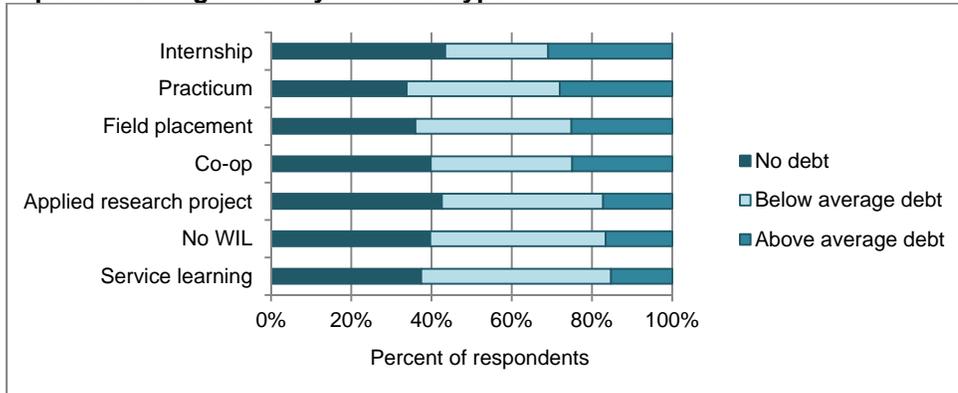
When the average amount of debt was examined, significant differences were found between WIL and non-WIL students. College interns, co-op students and practicum students expected to carry significantly higher debt loads than non-WIL students. Although the average amount of debt varied for the other types of WIL, the differences were not statistically significant.

Figure 17
Mean Expected College Debt by WIL and Type of WIL



Further analysis considered the proportion of respondents who expected to owe above and below the average college student debt (\$15,000) and produced similar results. College students who participated in internships, practicums, field placements and co-op were all significantly more likely than non-WIL students to carry debts greater than \$15,000. This is consistent with the logistic regression finding reported earlier that college WIL students were more likely to have higher debt loads than non-WIL college students.

Figure 18
Expected College Debt by WIL and Type of WIL

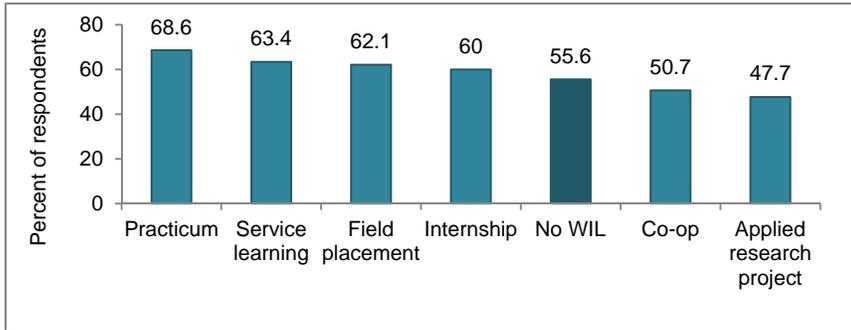


Financial Implications of University WIL

When the same analysis was conducted with unique university WIL respondents only, significant differences were found in both the proportion of students anticipating debt and in the amount of debt they expected to repay.

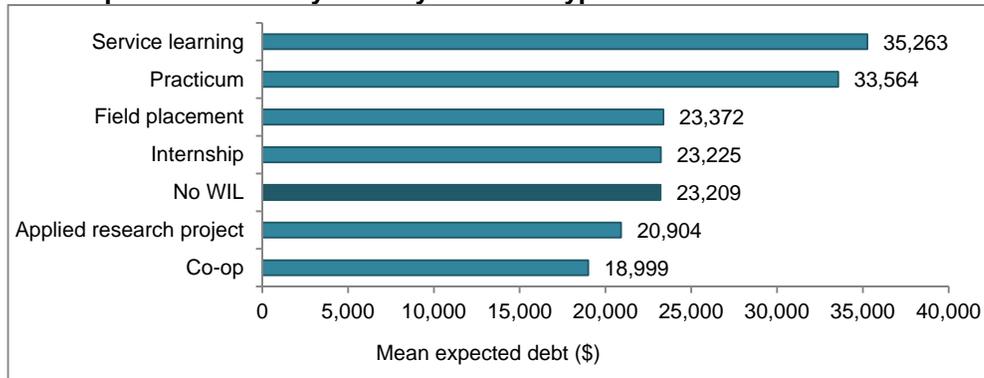
As indicated in the respondent profile, 57 per cent of all university students anticipated repaying debt upon graduation. Comparison by type of WIL showed that practicum students were much more likely to anticipate debt than co-op, applied research and non-WIL students. The differences for other types of WIL were not statistically significant.

Figure 19
Proportion of University Students Owning Debt by WIL and Type of WIL



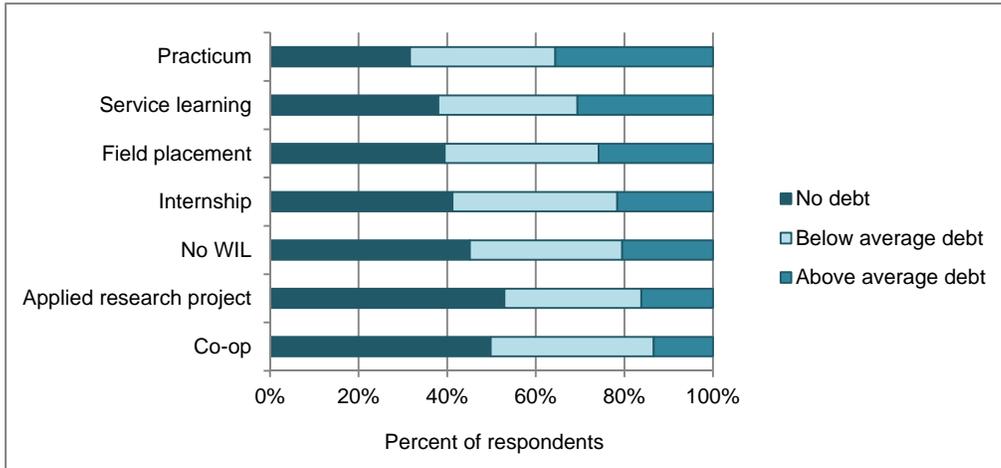
When the mean amounts of university debt were examined, both practicum and service learning students reported significantly higher debt loads than all other students. While university co-op students reported the lowest mean debt, this finding was not statistically different from the debt loads expected by students in field placements, internships and applied research projects, as well as those who did not participate in WIL.

Figure 20
Mean Expected University Debt by WIL and Type of WIL



Further exploration revealed that co-op students are significantly less likely than their non-WIL peers to expect to graduate with debts in excess of \$25,000, which is the average debt reported by all university students. Conversely, university students who participated in practicums were significantly more likely than non-WIL students to carry debts greater than \$25,000, and were also less likely to report no debt.

Figure 21
Expectations of University Debt by WIL and Type of WIL



WIL Financial Implications Summary

The financial advantages of WIL participation accrue more to university students than college students. Not only were college WIL students as likely to anticipate debt as non-WIL students, but those participating in internships, practicums, field placements and co-op reported higher than average debt loads compared to non-WIL students.

At the university level, students who participated in practicums were more likely to anticipate debt than non-WIL students, reported higher mean debts, and were more likely to carry higher than average debt loads. Participation in university co-op programs, however, appeared to offer financial benefits for co-op students. Although equally likely to anticipate having to repay debt upon graduation, university co-op students reported lower mean debt amounts than non-WIL students (\$19,000 compared to \$23,000). They were also significantly less likely to report carrying higher than average debt loads.

As noted in the literature, participation in WIL may reduce students' ability to earn other employment income and may impose additional financial hardships related to relocation costs and living expenses. This is the case even when compensation is offered by the WIL employer, such as for co-op programs. The present analysis suggests that the financial burden of WIL may be greatest for practicum students at both the college and university levels.

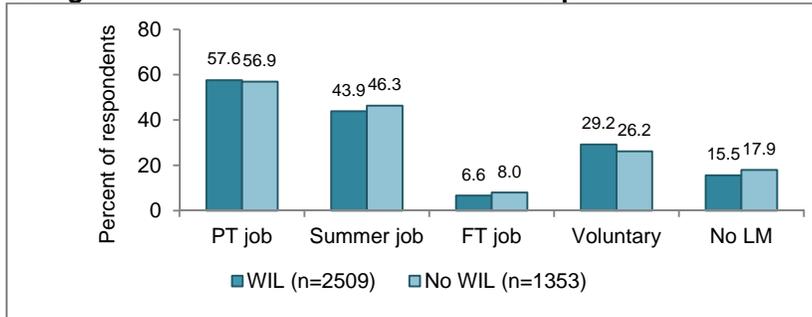
2.5 Labour Market and Volunteer Participation

To gain insights into the impact of WIL on postsecondary outcomes compared to other forms of labour market activity, students were asked about their participation in full- or part-time employment while attending school, as well as their most recent summer job or volunteer activity since they began PSE. Those who had participated in paid employment or volunteer work were asked if their position was generally related to their program of study, unrelated but relevant in terms of skill development, or not at all related.

College Labour Market and Volunteer Participation

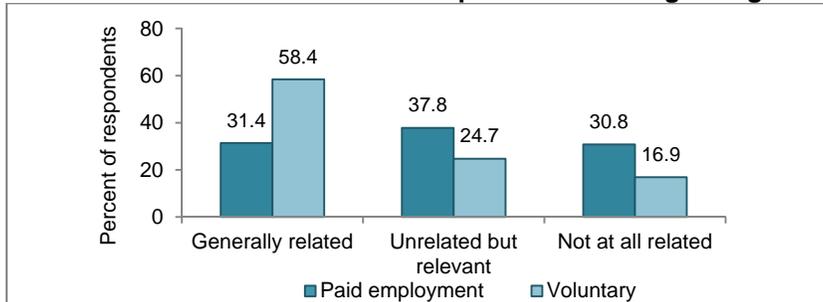
At the college level, similar levels of labour market participation were reported by both WIL and non-WIL students.

Figure 22
College Labour Market and Volunteer Participation



While college students in paid employment were most likely to describe their work as unrelated to their program but helping to develop relevant skills (38%), almost one-third (31%) considered their employment experiences to be entirely unrelated to their program. Volunteering was clearly viewed as a useful means of gaining program-related experience, since the majority of college volunteers (58%) described their volunteer positions as generally related to their program of study.

Figure 23
Labour Market and Volunteer Participation and College Program



Students with labour market or volunteer experience were asked to provide details on specific aspects of their most recent paid employment or voluntary work, including number of weeks worked, hours per week and the work setting. To assist respondents in interpreting the response options, the following definitions were provided:

- On-campus settings were defined as clinics, student residences, restaurants, hotels, research labs, etc.
- Private sector business or industry was defined as retail, food service, manufacturing, technology, etc.
- Health care sector was defined as hospitals, clinics, etc.
- Community or non-profit sector was defined as schools, child care, arts centres, etc.
- Government sector was defined as ministry or municipality

The characteristics of the labour market and volunteer experiences of Ontario college respondents are summarized below (see Tables F1 and F2 in Appendix F for details).

College Part-time Employment

- College students in part-time employment were fairly evenly distributed between those who had worked part-time for six months or less (39%), those who worked between seven months and one year (33%) and those who worked one year or more (28%).
- The majority of students (53%) were working 11 to 20 hours each week, but one-quarter worked more than 20 hours a week (26%).
- Close to three-quarters were working in the private sector (71%), 12 per cent worked part-time on campus, and 8 per cent worked in the community or non-profit sector. Another 5 per cent worked in health care settings and 4 per cent worked in a government office.

When part-time employment results were compared for WIL and non-WIL students, no noteworthy differences were found (Table F3 in Appendix F).

College Summer Employment

- For the majority of college respondents, their most recent summer jobs were three to four months in duration (60%). One-quarter of respondents worked longer than four months (26%) and 14 per cent worked two months or less.
- Summer employment hours typically involved 36 hours or more each week (55%). Almost one-third (30%) of respondents worked between 21 and 35 hours per week.
- By far, the majority of recent summer jobs for college students were in the private sector (70%). The community sector offered summer employment to 12 per cent of college students, and government offered 9 per cent. Five per cent of summer employment was on campus and 4 per cent was in health care.

When summer employment results were compared for WIL and non-WIL students, no noteworthy differences were found (Table F4 in Appendix F).

College Full-time Employment

- College students who worked full-time while attending school were almost evenly distributed between those who had worked for six months or less (35%), those who worked between seven months and one year (35%), and those who worked one year or more (30%).
- The majority of college students in full-time employment worked 36 hours or more each week (56%).
- More than three-quarters of full-time jobs were in the private sector (77%). Close to one in ten college students worked full-time on-campus (8%), 7 per cent worked in the community sector, 6 per cent worked in government offices, and 3 per cent worked in health care settings.

When full-time employment results were compared for WIL and non-WIL students, no noteworthy differences were found (Table F5 in Appendix F).

College Voluntary Activity

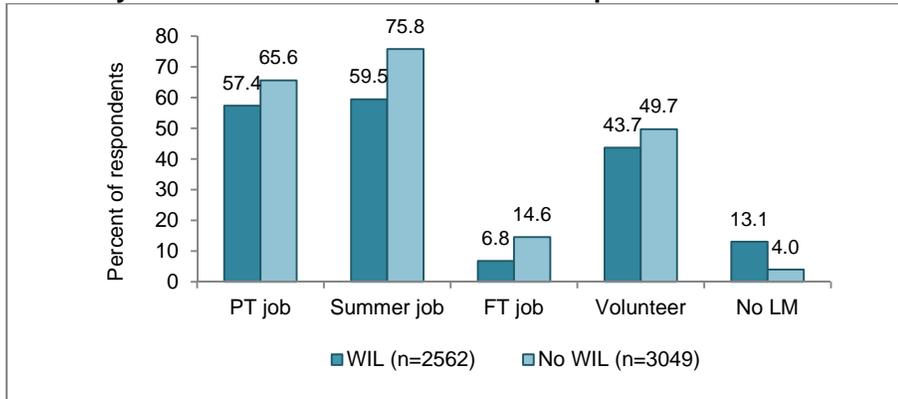
- Most college students reported that their most recent voluntary activity lasted six months or less (71%). About one in five had been in volunteer positions for seven months to one year (19%), and 11 per cent had volunteered for one year or more.
- The majority of college volunteers contributed five hours or less per week (55%), but one-quarter (27%) volunteered between six and ten hours, and 18 per cent volunteered more than ten hours.
- The majority of volunteer positions were in the community or non-profit sector (62%). Similar proportions of students volunteered in the private sector (13%) and on-campus (12%). About one in ten students volunteered in health care settings (9%), and 4 per cent volunteered for government organizations.

When results for voluntary activities were compared for WIL and non-WIL students, no noteworthy differences were found (Table F6 in Appendix F).

University Labour Market and Volunteer Participation

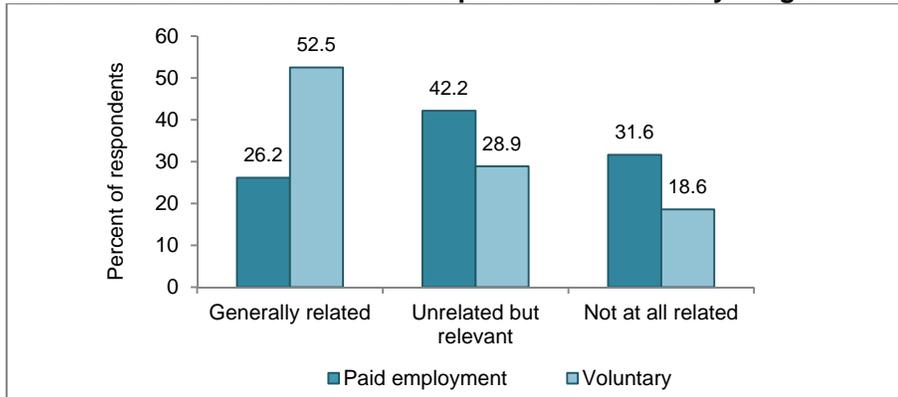
As shown in the figure below, university WIL students were less likely than non-WIL students to engage in labour market or voluntary activities while attending school.

Figure 24
University Labour Market and Volunteer Participation



University students in paid employment were most likely to describe their work as unrelated to their program but helping to develop relevant skills (42%). Another one-third (32%) were employed in jobs that were not at all related to their program. Similar to college students, the majority of university students involved in voluntary activity (53%) volunteered in positions that were related to their program of study.

Figure 25
Labour Market and Volunteer Participation and University Program



The characteristics of the labour market and volunteer experiences of Ontario university respondents are summarized below (see Tables F1 and F2 in Appendix F):

University Part-time Employment

- University students in part-time employment were fairly evenly distributed between those who had worked part-time for one year or more (36%), those who worked six months or less (33%), and those who worked between seven months and one year (31%).
- About half of students (49%) were working 11 to 20 hours each week, but almost one-quarter worked more than 20 hours a week (22%).

- About half were working part-time in the private sector (51%), and one-quarter worked on campus (25%). About one in ten students worked in the community or non-profit sector (11%), 8 per cent worked in government offices, and 6 per cent worked in the health sector.

When part-time employment results were compared for WIL and non-WIL students, the following noteworthy differences were observed (see Table F3 in Appendix F):

- Non-WIL students were more likely than WIL students to have worked part-time for more than one year (38% vs. 33%), and less likely to have worked for six months or less (30% vs. 36%).
- WIL students worked fewer part-time hours, with 33 per cent working ten hours or less, compared to 28 per cent of non-WIL students. About one-quarter of non-WIL students (24%), but only 18 per cent of WIL students, were employed more than 20 hours a week.

University Summer Employment

- Two-thirds of university students reported summer jobs of three to four months in duration (66%). About one-quarter of respondents worked longer than four months (23%) and one in ten worked two months or less (11%).
- Summer employment hours typically involved 36 hours or more each week (59%). Another 29 per cent of respondents worked between 21 and 35 hours per week.
- The majority of recent summer jobs for university students were in the private sector (57%). The community and government sectors each offered summer employment to 14 per cent of university students. About one in ten university students (9%) worked on campus over the summer, and 6 per cent worked in health care.

When results were compared for WIL and non-WIL students, no significant differences were found (Table F4 in Appendix F).

University Full-time Employment

- University students who worked full-time while attending school were almost evenly distributed between those who had worked one year or more (34%), those who worked for six months or less (33%), and those who worked between seven months and one year (32%).
- Two-thirds of university students in full-time employment worked 36 hours or more each week (69%).
- The majority of full-time jobs held by university students were in the private sector (58%), and 14 per cent were in the government sector. Similar proportions of students worked full-time in the community sector (10%), on campus (9%), or in health care settings (9%).

When results were compared for WIL and non-WIL students, the following noteworthy differences in full-time employment were observed (see Table F5 in Appendix F):

- Non-WIL students were more likely than WIL students to hold full-time jobs that involved more than 35 hours per week (73% vs. 58%).
- Non-WIL students were more likely to work full-time in the private sector (63% vs. 46%) and in government (17% vs. 10%).

University Voluntary Activity

- The majority of university students reported that their most recent voluntary activity lasted six months or less (57%). About one-quarter had been in volunteer positions of seven months to one year in duration (24%), and one in five (20%) had volunteered for one year or more.
- Most university volunteers contributed five hours or less per week (59%), but one-quarter (27%) volunteered between six and ten hours and 14 per cent volunteered more than ten hours.
- About half of volunteer positions were in the community or non-profit sector (52%), and more than one-quarter were on campus (27%). Another 13 per cent of university students volunteered in health care settings but few volunteered in the private sector (4%) or government (3%).

When results were compared for WIL and non-WIL students, no noteworthy differences were found (Table F6 in Appendix F).

Benefits of Labour Market and Volunteer Participation

Students who participated in paid employment or voluntary activity were presented with the same 11 benefit statements that were used to assess the benefits of WIL. They were asked to think about their overall participation in paid employment or voluntary activity since they started their postsecondary education and to rate their agreement with each statement using a five-point Likert scale where 1=strongly disagree and 5=strongly agree.

College Labour Market Benefits

As shown in the table below, college students who participated in paid employment ascribed mean agreement scores of 4 or greater to four of the benefit statements. The main benefits were improved interpersonal skills and increased personal maturity. Respondents also agreed or strongly agreed that financial gain had motivated their participation, and that the experience had been valuable.

Table 9
Benefits of College Labour Market Participation

	Mean	Agree or Strongly Agree (%)
	n=3365	
Ability to get along with people in work situations improved	4.10	81.2
Helped me mature as a person	4.10	81.1
Money is the primary reason I wanted to participate	4.07	76.5
Has been a valuable experience	4.03	79.6
Helped me better understand my career interests	3.70	65.0
Improved my interview and job-seeking skills	3.63	60.3
Influenced my career goals	3.62	61.1

Increased my confidence about job prospects	3.55	58.2
Gave me contacts for my future job search	3.30	48.7
Was able to relate theories learned in the classroom to the work environment	3.28	49.1
My school grades improved	2.95	23.2

Analysis of perceived benefits according to whether respondents had participated in part-time, full-time or summer employment revealed few significant differences (see Table F7 in Appendix F):

- College students employed full time agreed more strongly than other students that their labour market experience helped them understand their career interests and had influenced career goals.
- Students in full-time employment were more likely than those with summer jobs to feel their employment experience increased their confidence about future job prospects, and more likely than those with part-time jobs to report developing job search contacts.

With the exception of financial gain, college students who participated in voluntary activity derived similar benefits from their participation as those in paid employment. In particular, nine out of ten college volunteers agreed or strongly agreed that their participation had been valuable. They also felt they benefitted from improvements in their ability to get along with people and increased personal maturity.

Table 10
Benefits of College Voluntary Activity

	Mean	Agree or Strongly Agree (%)
		n=1254
Has been a valuable experience	4.30	88.6
Helped me mature as a person	4.13	81.5
Ability to get along with people in work situations improved	4.11	81.4
Helped me better understand my career interests	3.86	68.8
Influenced my career goals	3.83	66.8
Increased my confidence about job prospects	3.78	65.7
Was able to relate theories learned in the classroom to the work environment	3.65	63.1
Gave me contacts for my future job search	3.63	61.8
Improved my interview and job-seeking skills	3.53	52.7
My school grades improved	3.17	30.0
Money is the primary reason I wanted to participate	1.99	16.0

A paired t-test was conducted to examine differences in college students' perceptions of the benefits of WIL and labour market experiences. The paired t-test analysis compared the responses of students who had participated in both WIL and the labour market to the

11 benefit statements.⁹ Although statistically significant differences were found for each of the paired statements, caution must be exercised when dealing with large samples as even small relationships can be found to be statistically significant. Therefore Cohen's *d*, a measure of effect size, is included in the table below. Only differences for which at least a moderate effect size was found (Cohen's *d* of 0.30 or higher) are discussed.

College students who participated in both WIL and the labour market reported that their WIL experience had a greater impact on helping them understand their career interests, influencing their career goals, and increasing their confidence about future job prospects than their paid employment. They felt much more able to relate their academic learning to the work environment during their participation in WIL and were more likely to agree that they gained job search contacts. Not surprisingly, the statement "money is the primary reason I wanted to participate" was rated much higher in relation to the labour market than postsecondary WIL.

Table 11
Benefits of College WIL and Labour Market Participation

	Statistics		Paired Differences			t	df	Sig. (2-tailed)	Cohen's d
	WIL	LM	Mean	SD	Std. error mean				
	Mean								
Has been a valuable experience	4.28	4.02	0.253	1.039	0.024	10.384	1811	0.00	0.244
Helped me better understand my career interests	4.17	3.76	0.408	1.103	0.026	15.759	1811	0.00	0.370
Influenced my career goals	4.11	3.71	0.399	1.197	0.028	14.172	1811	0.00	0.333
Was able to relate theories learned in the classroom to the work environment	4.03	3.32	0.705	1.299	0.031	23.101	1811	0.00	0.543
Increased my confidence about job prospects	4.00	3.58	0.416	1.188	0.028	14.919	1811	0.00	0.350
Helped me mature as a person	3.99	4.04	-0.043	0.874	0.021	-2.117	1811	0.03	-0.050
Ability to get along with people in work situations improved	3.94	4.06	-0.124	0.804	0.019	-6.554	1811	0.00	-0.154
Gave me contacts for my future job search	3.86	3.46	0.399	1.268	0.030	13.399	1811	0.00	0.315
Improved my interview and job-seeking skills	3.75	3.67	0.075	1.063	0.025	3.004	1811	0.00	0.071
My school grades improved	3.17	2.99	0.187	0.969	0.023	8.234	1811	0.00	0.193
Money is the primary reason I wanted to	2.36	4.07	-1.711	1.552	0.036	-46.930	1811	0.00	-1.102

⁹ The analysis only included respondents who had participated in both WIL and part-time, full-time or summer employment. WIL respondents with volunteer experience but no other labour market participation were excluded.

	Statistics		Paired Differences			t	df	Sig. (2-tailed)	Cohen's d
	WIL	LM	Mean	SD	Std. error mean				
	Mean								
participate									

University Labour Market Benefits

University students who participated in paid employment viewed increased personal maturity as the top benefit of their labour market experience, followed by improved ability to get along with people. These respondents also agreed or strongly agreed that their experience had been valuable, and that financial gain was a strong motivation to participate.

Table 12
Benefits of University Labour Market Participation

	Mean	Agree or Strongly Agree (%)
n=5172		
Helped me mature as a person	4.14	83.9
Ability to get along with people in work situations improved	4.10	82.2
Has been a valuable experience	4.03	79.9
Money is the primary reason I wanted to participate	4.01	74.5
Helped me better understand my career interests	3.61	62.6
Improved my interview and job-seeking skills	3.56	59.1
Influenced my career goals	3.51	57.2
Increased my confidence about job prospects	3.27	47.5
Gave me contacts for my future job search	3.20	46.7
Was able to relate theories learned in the classroom to the work environment	2.86	35.8
My school grades improved	2.79	17.5

Analysis of perceived benefits according to whether respondents had participated in part-time, full-time or summer employment revealed several significant differences (see Table F8 in Appendix F):

- University students who were employed part time expressed lower levels of agreement with almost all benefit statements. There was no difference between these students and other students on improved ability to get along and improved school grades.
- While university students with summer jobs were also less likely to agree with many of the benefit statements, they expressed similar levels of agreement with the top three statements.
- Students in full-time employment expressed higher levels of agreement with almost all benefit statements.

As shown in the table below, university students who participated in voluntary activity derived similar benefits from their experience as those in paid employment, with the exception of financial gain. In particular, nine out of ten university volunteers agreed or strongly agreed that their participation had been valuable. They also felt they benefitted from increased personal maturity and improved ability to get along with people.

Table 13
Benefits of University Voluntary Activity

	Mean	Agree or Strongly Agree (%)
	n=2944	
Has been a valuable experience	4.33	90.7
Helped me mature as a person	4.17	84.5
Ability to get along with people in work situations improved	4.11	81.5
Helped me better understand my career interests	3.76	65.3
Influenced my career goals	3.74	64.6
Increased my confidence about job prospects	3.53	56.3
Improved my interview and job-seeking skills	3.38	48.2
Gave me contacts for my future job search	3.38	51.0
Was able to relate theories learned in the classroom to the work environment	3.29	47.9
My school grades improved	2.96	20.6
Money is the primary reason I wanted to participate	1.69	9.5

To examine differences in university students' perceptions of the benefits of WIL compared to labour market participation, a paired t-test was conducted. The paired t-test analysis compared the responses of students who had participated in both WIL and the labour market to the 11 benefit statements.¹⁰ As noted previously, only differences for which at least a moderate effect size was found (Cohen's d of 0.30 or higher) are discussed.

The analysis reveals that participation in university WIL programs was perceived by students as contributing more than paid employment to improving their understanding of career interests and influencing their career goals. WIL programs also had a greater impact than paid employment on increasing students' confidence about their future job prospects and were viewed as more relevant to theories learned in the classroom. Again, the largest difference was found with regard to the statement "money is the primary reason I wanted to participate," with students indicating much higher levels of agreement about the financial benefits of labour market participation than WIL.

Table 14
Benefits of University WIL and Labour Market Participation

	Statistics		Paired Differences			t	df	Sig. (2-tailed)	Cohen's d
	WIL	LM	Mean	SD	Std. Error Mean				
	Mean								
Has been a valuable experience	4.36	4.05	0.310	1.053	0.024	13.120	1992	0.00	0.294
Helped me better understand my career interests	4.16	3.66	0.502	1.239	0.028	18.100	1992	0.00	0.405

¹⁰ The analysis only included respondents who had participated in both WIL and part-time, full-time or summer employment. WIL respondents with volunteer experience but no other labour market participation were excluded.

	Statistics		Paired Differences			t	df	Sig. (2-tailed)	Cohen's d
	WIL	LM	Mean	SD	Std. Error Mean				
	Mean								
Influenced my career goals	4.07	3.57	0.502	1.327	0.030	16.881	1992	0.00	0.378
Helped me mature as a person	4.06	4.09	-0.029	0.932	0.021	-1.413	1992	0.16	-0.032
Increased my confidence about job prospects	3.85	3.39	0.466	1.344	0.030	15.480	1992	0.00	0.347
Ability to get along with people in work situations improved	3.84	4.07	-0.228	0.894	0.020	-11.371	1992	0.00	-0.255
Gave me contacts for my future job search	3.78	3.40	0.381	1.378	0.031	12.345	1992	0.00	0.277
Was able to relate theories learned in the classroom to the work environment	3.72	2.94	0.776	1.317	0.030	26.288	1992	0.00	0.589
Improved my interview and job-seeking skills	3.61	3.60	0.009	1.266	0.028	0.329	1992	0.74	0.007
My school grades improved	3.00	2.85	0.154	1.050	0.024	6.531	1992	0.00	0.146
Money is the primary reason I wanted to participate	2.11	4.05	-1.946	1.573	0.035	-55.209	1992	0.00	-1.237

Labour Market and Volunteer Participation Summary

Some common themes that emerged from the analysis presented in this section include:

- Most college and university respondents had some experience with the labour market, through paid employment or volunteer activities.
- Both college and university students viewed volunteering as a useful means of gaining program-related experience, since the majority of voluntary activities were generally related to their program of study.
- PSE students who participated in paid employment generally agreed that their experience was valuable and that financial gain was an important motivation. They perceived increased personal maturity and improved interpersonal skills as the main benefits of their participation.
- PSE students who volunteered strongly agreed about the value of their experience and also reported increased personal maturity and improved ability to get along with people as key benefits of their voluntary activity.
- Paired t-test results for students who participated in both WIL and the labour market showed that WIL had a greater impact than paid employment on helping students understand their career interests, influencing their career goals and increasing their confidence about future job prospects. WIL experiences were also considered to be more relevant to theories learned in the classroom. Financial gain was the only benefit more strongly associated with paid employment than WIL.

The analysis also revealed a few key differences:

- Although WIL participation had very little impact on college students' labour market and volunteer participation, university students who participated in WIL were less likely than their non-WIL peers to report paid employment or voluntary activities.
- Paired t-test results for college students showed that WIL was also rated higher than paid employment in providing students with job search contacts. This finding was not observed among university students.

2.6 Postsecondary Outcomes and Satisfaction

To enable an analysis of the impact of WIL participation on postsecondary outcomes, five scales were utilized in the survey to measure employability skills, personal growth and development, critical reflection, civic responsibility and self-efficacy. The scales were informed by previous research showing improved outcomes in these five areas for students who had participated in WIL:

- The employability skills scale was based on the Conference Board of Canada's Employability Skills 2000+.
- The personal growth and development scale was derived from items included in the Canadian University Survey Consortium (CUSC) Graduating Student Survey and the Cooperative Institutional Research Program (CIRP) College Senior Survey.
- The critical reflection scale was adapted from Lucas and Tan (2007), who found satisfactory internal consistency for the instrument.
- The civic responsibility scale was adapted from research conducted with service learning students by Myers-Lipton (1998) and Parker-Gwin and Mabry (1998).
- The self-efficacy scale was adapted from Bullock et al. (2009) and Subramaniam and Freudenberg (2007).

In order to associate outcomes with actual participation in WIL, "WIL students" were defined as those who had already participated in a WIL program. Students who had not yet participated in WIL, but would be before they graduated, were excluded from the analysis that follows.

Employability Skill Outcomes

Students were asked to describe the quality of their postsecondary education in developing their knowledge and skills in 13 specific areas, using a five-point scale where 1=poor, 2=fair, 3=average, 4=good and 5=excellent. Eleven of the items represent the foundational, personal management and teamwork skills identified by the Conference Board of Canada as essential to enter, stay in or progress in the world of work. Two additional items represent skills typically associated with acquiring a postsecondary education (knowledge of a particular field of study, and critical thinking and self-reflection).

College

As shown below, college students generally gave high ratings to the quality of their postsecondary education in developing employability skills, ascribing mean scores in the good to excellent range to seven of the 13 items. Subject matter knowledge and ability to work with others were rated highest, followed by task management skills and adaptability. The lowest ratings were ascribed to information management, and numeracy and data skills. Comparison by participation in WIL shows that WIL students consistently gave higher ratings than non-WIL students to the quality of their postsecondary education in developing employability skills, with statistically significant differences observed for all but the lowest-rated item (numeracy and data skills).

Table 15
College Employability Skills

	WIL (n=2509)	No WIL (n=1353)	All College (n=3862)
	Mean		
Knowledge of your particular field of study	4.32	4.10	4.24
Ability to work with others	4.27	4.15	4.23
Participating in and managing tasks and projects	4.22	4.13	4.19
Ability to adapt to different situations	4.23	4.06	4.16
Personal and social responsibility	4.15	3.96	4.08
Becoming a lifelong learner	4.11	3.96	4.06
Thinking and problem solving skills	4.09	3.98	4.05
Self-confidence and positive attitude	4.11	3.95	4.05
Critical thinking and self-reflection	4.08	3.89	4.00
Communication and presentation skills	4.02	3.88	3.97
Knowledge of workplace safety	3.95	3.64	3.84
Information management and computer literacy skills	3.84	3.71	3.79
Numeracy and data skills	3.33	3.32	3.33

University

University students also gave high ratings to the quality of their postsecondary education in employability skills development, ascribing ratings of 4 or greater to six of the 13 items. Subject matter knowledge was rated highest, followed by thinking and problem solving, and critical thinking and self-reflection. Similar to college respondents, university students also rated information management and numeracy skills low, but gave the lowest rating to knowledge of workplace safety. Comparison by participation in WIL shows that students who participated in WIL gave significantly higher quality ratings to all 13 skills than non-WIL students.

Table 16
University Employability Skills

	WIL (n=2562)	No WIL (n=3049)	All University (n=5611)
	Mean		
Knowledge of your particular field of study	4.23	4.06	4.14
Thinking and problem solving skills	4.18	4.04	4.10
Critical thinking and self-reflection	4.15	4.06	4.10
Becoming a lifelong learner	4.15	4.00	4.07
Ability to adapt to different situations	4.15	3.98	4.06
Participating in and managing tasks and projects	4.13	3.98	4.05
Ability to work with others	4.10	3.87	3.97
Personal and social responsibility	3.99	3.92	3.95
Self-confidence and positive attitude	3.93	3.77	3.84
Communication and presentation skills	3.93	3.73	3.82
Information management and computer literacy skills	3.69	3.46	3.57
Numeracy and data skills	3.46	3.15	3.29
Knowledge of workplace safety	3.30	2.85	3.05

Personal Growth and Development Outcomes

To measure the impact of WIL on personal growth and development, students were asked to describe the quality of their postsecondary education in developing their knowledge and skills in eight specific areas, using a five-point scale where 1=poor, 2=fair, 3=average, 4=good and 5=excellent. The areas captured broad learning outcomes that contribute to personal growth and development and are traditionally associated with postsecondary education.

College

The table below shows that college students gave lower ratings to the quality of their postsecondary education in facilitating personal growth than in developing employability skills. No personal growth and development item was ascribed a mean score higher than 4 (in the good to excellent range). The development of intercultural understanding was the highest rated item, followed by moral and ethical development and insights into local or community issues. Comparison by participation in WIL shows that WIL college students gave significantly higher quality ratings to all but one item (appreciation of arts and culture).

Table 17
College Personal Growth and Development Outcomes

	WIL (n=2509)	No WIL (n=1353)	All College (n=3862)
	Mean		
Understanding of people from different races and cultures	3.92	3.62	3.81
Moral and ethical development	3.85	3.56	3.74
Understanding of local issues or community problems	3.76	3.38	3.62
Appreciation of arts and culture	3.52	3.46	3.49
Understanding of national issues	3.45	3.25	3.38
Understanding of global issues	3.40	3.24	3.34

University

University students also gave lower ratings to the quality of their postsecondary education in facilitating personal growth than developing employability skills, with no personal growth and development item ascribed a mean score higher than 4. Developing intercultural understanding was the highest rated item, followed by moral and ethical development. While comparison between WIL students and non-WIL students showed statistically significant differences on three items, the differences were quite small. University WIL students gave statistically higher quality ratings to understanding local issues or community problems, but rated two items lower than their non-WIL peers (understanding global issues and appreciation of arts and culture).

Table 18
University Personal Growth and Development Outcomes

	WIL (n=2562)	No WIL (n=3049)	All University (n=5611)
	Mean		
Understanding of people from different races and cultures	3.82	3.81	3.81
Moral and ethical development	3.70	3.66	3.68
Understanding of global issues	3.42	3.48	3.46
Understanding of local issues or community problems	3.47	3.37	3.42
Understanding of national issues	3.37	3.41	3.39
Appreciation of arts and culture	3.12	3.30	3.22

Critical Reflection Outcomes

Students were asked to indicate their level of agreement with four statements about the impact of their postsecondary education in developing their reflective capacity, using a five-point Likert scale where 1=strongly disagree and 5=strongly agree.

College

The table below shows that none of the critical reflection items received mean agreement scores greater than 4. Increased self-reflection was the highest rated item, followed by changes to patterns of behavior. Comparison by participation in WIL shows that college WIL students gave significantly higher quality ratings to two of the four items (increased self-reflection and challenges to established beliefs). However, these differences were relatively small.

Table 19
College Critical Reflection Outcomes

	WIL (n=2509)	No WIL (n=1353)	All College (n=3862)
	Mean		
As a result of my postsecondary education, I have changed the way I look at myself.	3.86	3.77	3.83
As a result of my postsecondary education, I have changed the way I used to do things.	3.76	3.75	3.75
During my postsecondary education, I discovered faults in what I had previously believed to be right.	3.55	3.49	3.53
My postsecondary education has challenged some of my firmly held beliefs.	3.31	3.17	3.26

University

Similar to college students, increased self-reflection was the highest rated item, followed by changes to patterns of behavior. Comparison between WIL and non-WIL students found that university WIL students ascribed significantly higher quality to the top two items. However, the differences were not noteworthy.

Table 20
University Critical Reflection Outcomes

	WIL (n=2562)	No WIL (n=3049)	All University (n=5611)
	Mean		
As a result of my postsecondary education, I have changed the way I look at myself.	3.94	3.89	3.91
As a result of my postsecondary education, I have changed the way I used to do things.	3.85	3.79	3.82
During my postsecondary education, I discovered faults in what I had previously believed to be right.	3.62	3.62	3.62
My postsecondary education has challenged some of my firmly held beliefs.	3.46	3.41	3.43

Civic Responsibility Outcomes

Students were asked to indicate their level of agreement with four statements about the responsibility of citizens to take action in their communities, using a five-point Likert scale where 1=strongly disagree and 5=strongly agree.

College

The table below shows strong mean agreement with the statement about the importance of helping others and about the capacity to make a difference. Comparison by participation in WIL shows that college WIL students gave significantly higher quality ratings to all four of the statements. Again, however, differences were quite small.

Table 21
College Civic Responsibility Outcomes

	WIL (n=2509)	No WIL (n=1353)	All College (n=3862)
	Mean		
It is important to help others even if you do not get paid for it.	4.26	4.21	4.24
I feel that I can make a difference in the world.	4.15	4.01	4.10
It is the responsibility of the whole community to take care of people who need help.	4.01	3.88	3.96
Individuals have a responsibility to help solve our social problems.	3.96	3.85	3.92

University

The table below shows strong mean agreement with all four statements, and particularly the statement about the importance of helping others. Comparison between WIL students and non-WIL students shows that students who participated in WIL gave significantly higher quality ratings all four items, though these differences are small.

Table 22
University Civic Responsibility Outcomes

	WIL (n=2562)	No WIL (n=3049)	All University (n=5611)
	Mean		
It is important to help others even if you do not get paid for it.	4.27	4.23	4.25
Individuals have a responsibility to help solve our social problems.	4.06	4.00	4.03
I feel that I can make a difference in the world.	4.10	3.94	4.02
It is the responsibility of the whole community to take care of people who need help.	4.07	3.96	4.01

Self-efficacy Outcomes

To measure self-efficacy, students were asked to indicate their level of agreement with 12 statements about their ability to complete tasks and reach goals, using a five-point Likert scale where 1=strongly disagree and 5=strongly agree.

College

College students agreed or strongly agreed with all 12 statements, ascribing mean agreement scores of 4 or higher. They expressed particular confidence in their ability to perform job-related tasks. Comparison between WIL students and non-WIL students shows that college students who participated in WIL gave significantly higher quality ratings to all but one statement (obtaining desired outcomes). The largest difference was found in responses to the statement about ability to achieve career goals.

Table 23
College Self-efficacy Outcomes

	WIL (n=2509)	No WIL (n=1353)	All College (n=3862)
	Mean		
I have confidence that I will be able to perform job-related tasks assigned to me.	4.40	4.33	4.37
I believe that I can obtain outcomes that are important to me.	4.31	4.27	4.30
I believe that I can succeed at almost anything to which I set my mind.	4.30	4.24	4.28
I am confident that I can perform many different tasks effectively.	4.32	4.21	4.28
I am able to successfully overcome many challenges.	4.30	4.21	4.27
I feel certain that I will accomplish difficult tasks when faced with them.	4.27	4.19	4.24
I have confidence in my ability to communicate in an effective manner.	4.27	4.17	4.23
I am able to perform quite well even when things are tough.	4.20	4.11	4.17
I believe that I will achieve most of the career goals that I have set for myself.	4.20	4.08	4.16
I am confident about finding a job that interests me.	4.13	4.04	4.10
I am confident that I will be able to progress through the ranks in my place of employment.	4.13	4.05	4.10
I am able to do most tasks very well compared to other people.	4.09	4.02	4.07

University

University students agreed or strongly agreed with ten of the 12 statements. Comparison between WIL students and non-WIL students shows that university students who participated in WIL gave significantly higher quality ratings to all 12 statements. The largest difference was found in relation to the statement about confidence progressing through employment ranks.

Table 24
University Self-efficacy Outcomes

	WIL (n=2562)	No WIL (n=3049)	All University (n=5611)
	Mean		
I have confidence that I will be able to perform job-related tasks assigned to me.	4.37	4.25	4.30
I am confident that I can perform many different tasks effectively.	4.33	4.21	4.26
I believe that I can obtain outcomes that are important to me.	4.30	4.18	4.24
I am able to successfully overcome many challenges.	4.30	4.17	4.23
I feel certain that I will accomplish difficult tasks when faced with them.	4.28	4.16	4.22
I have confidence in my ability to communicate in an effective manner.	4.23	4.13	4.17
I believe that I can succeed at almost anything to which I set my mind.	4.22	4.09	4.15
I am able to perform quite well even when things are tough.	4.20	4.07	4.13
I am able to do most tasks very well compared to other people.	4.11	3.99	4.04
I believe that I will achieve most of the career goals that I have set for myself.	4.14	3.91	4.01
I am confident that I will be able to progress through the ranks in my place of employment.	4.05	3.90	3.97
I am confident about finding a job that interests me.	3.96	3.73	3.83

Postsecondary Outcomes by WIL Participation, Type of WIL and Program

The items from each of the five scales were grouped to create a single mean score for each outcome area. The table below shows that students perceived their postsecondary education to be most effective in enhancing their self-efficacy and sense of civic responsibility, followed by developing employability skills.

College WIL students rated the quality of their PSE significantly higher than non-WIL college students on all five scales. University WIL students gave significantly higher quality ratings on the self-efficacy, civic responsibility and employability skills scales, but were similar to non-WIL students on perceived personal growth and critical reflection outcomes. Despite the statistical significance of these findings, effect sizes were very small, indicating that the impact of WIL on postsecondary outcomes is limited.

Table 25
PSE Outcomes by Participation in WIL

	College			University		
	WIL (n=2509)	No WIL (n=1353)	Effect Size	WIL (n=2562)	No WIL (n=3049)	Effect Size
	Mean		Eta Squared	Mean		Eta Squared
Self-efficacy	4.24	4.16	0.005	4.21	4.07	0.016
Civic responsibility	4.10	3.99	0.007	4.12	4.03	0.005
Employability skills	4.05	3.90	0.012	3.95	3.76	0.021
Personal growth and development	3.65	3.42	0.015	3.48	3.51	-
Critical reflection	3.62	3.54	0.002	3.72	3.68	-

The scales were also used to compare outcomes across types of WIL and program area (see Tables G1 to G4 in Appendix G). Analysis by type of WIL considered only unique respondents who had already participated in a single type of WIL.

College Outcomes by Type of WIL

Comparison of outcomes for college students by type of WIL revealed the following significant differences:

- Students who participated in applied research projects gave higher ratings than internship or practicum students to the quality of their PSE in developing employability skills.
- Students in practicums and field placements rated personal growth and development higher than college interns.
- Practicum students also rated civic responsibility higher than college interns.

College Outcomes by Program

The following differences were observed when outcomes were compared by program:

- Compared to non-WIL students, WIL students in applied arts gave higher ratings to the impact of PSE on employability skills but lower ratings to the impact on civic responsibility.
- WIL students in both business and technology programs gave higher ratings to the impact of PSE on their employability skills, personal growth and development, and self-efficacy than their non-WIL peers.
- Students in health and community services rated their employability skills and civic responsibility higher than their non-WIL peers.

University Outcomes by Type of WIL

Some statistically significant differences were apparent when outcomes for WIL and non-WIL university students were analyzed by type of WIL:

- Co-op students gave lower ratings than most other WIL students to the impact of their PSE on personal growth and development, critical reflection and civic responsibility.

- Service learning students ascribed higher quality to the impact of their PSE on facilitating personal growth and development and critical reflection.
- Practicum students viewed their PSE as having greater impact on their capacity for critical reflection than other WIL students.

University Outcomes by Program

Comparison of outcomes for WIL and non-WIL university students by program revealed the following differences:

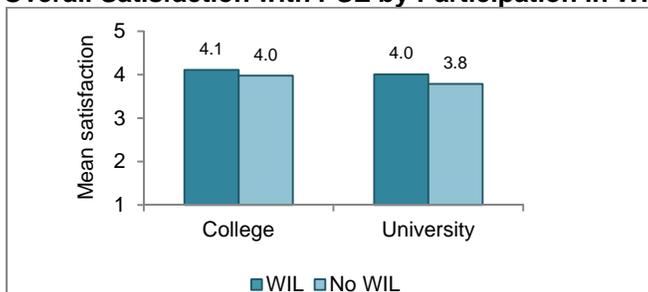
- WIL students in arts and humanities were similar to non-WIL students in their views on the quality of their postsecondary education in facilitating personal growth and development, but rated the other four scales significantly higher.
- There were no differences between WIL students and non-WIL students in both business and STEM programs on the personal growth and development scale and on civic responsibility. However, business and STEM students who participated in WIL gave higher ratings to the impact of PSE on their employability skills, critical reflection and self-efficacy.
- WIL students in health sciences were similar to their non-WIL peers in their views on the impact of their PSE on critical reflection, but rated the other four scales significantly higher.
- WIL students in the social sciences gave higher ratings to employability skills, civic responsibility, and self-efficacy.

Postsecondary Satisfaction

In addition to exploring the learning outcomes associated with WIL participation, the survey also considered the impact of WIL on students' overall satisfaction with their postsecondary experience. All respondents were asked to rate their overall satisfaction using a five-point scale where 1=very dissatisfied and 5=very satisfied.

As shown in the figure below, students who participated in WIL at both college and university expressed significantly higher overall satisfaction with their postsecondary experience than students who did not participate in WIL, although the effect size was quite small (eta squared of 0.005 for college and 0.015 for university).

Figure 26
Overall Satisfaction with PSE by Participation in WIL

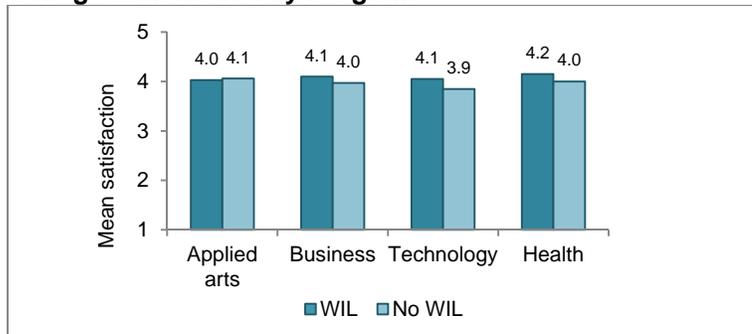


College Satisfaction by Type of WIL and Program

When results were analyzed by type of WIL, students who had participated in field placements were significantly more satisfied with their overall PSE experience than those who participated in internships, with a mean satisfaction score of 4.3 compared to 3.9. Again, however, the effect size was small (eta squared of 0.01). There were no statistically significant differences in PSE satisfaction between students who had participated in the other four types of WIL (see Table G5 in Appendix G).

As shown in the figure below, there was significantly higher satisfaction among WIL students in business, technology and health programs compared to non-WIL students, though the differences were very small. There was no difference in overall PSE satisfaction between WIL and non-WIL students in applied arts programs.

Figure 27
College Satisfaction by Program

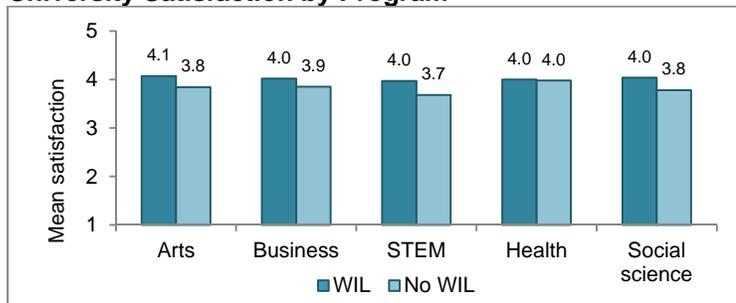


University Satisfaction by Type of WIL and Program

There were no statistically significant differences in overall satisfaction by type of WIL among university WIL respondents (see Table G6 in Appendix G).

While WIL students from university programs in arts, business, STEM and the social sciences all expressed significantly greater satisfaction with their PSE experience than their non-WIL peers, the differences were relatively minor. There were no differences between students in health and social services based on participation in WIL.

Figure 28
University Satisfaction by Program



Postsecondary Outcomes and Satisfaction by Demographic Characteristics

Additional analysis was conducted to explore postsecondary outcomes and overall PSE satisfaction by various demographic factors (gender, age, visible minority, Aboriginal identity, status in Canada, disability, entry type, expected debt, first generation PSE and grade average). Regardless of demographic characteristics, similar trends were observed across all subgroups. With a single exception, wherever statistically significant differences were noted, WIL students ascribed higher mean values than non-WIL students to the quality of their postsecondary education on all five outcome scales and their overall PSE satisfaction.¹¹ Generally, however, the magnitude of the differences was similar – and relatively small – for each subgroup. This finding suggests that the outcomes associated with WIL participation do not vary by demographic characteristics, with positive, but limited, impacts for all postsecondary students.

Postsecondary Outcomes and Satisfaction Summary

Key findings from the analysis presented in this section are highlighted below:

- Survey respondents ascribed the highest PSE quality ratings to the development of self-efficacy. WIL students rated all but one of the 12 self-efficacy items statistically higher than their non-WIL peers. The only exception was the rating for belief in ability to obtain desired outcomes, which did not differ for WIL and non-WIL college students.
- WIL had a significant impact on all four civic responsibility outcomes for both college and university students.
- PSE graduates, and college graduates in particular, gave high ratings to the quality of their PSE in developing their employability skills. WIL students rated all but one of the 13 employability skills statistically higher than their non-WIL peers. The exception was the rating for numeracy and data skills, which did not differ for WIL and non-WIL college students.
- The impact of WIL on personal growth and development was more pronounced among college students than university students. College WIL students rated all but one personal growth outcome higher than their non-WIL peers. By comparison, only a single personal growth outcome was rated higher by university WIL students, and two outcomes were given higher ratings by university students who did not participate in WIL.
- There were mixed results about the impact of WIL in developing students' reflective capacity. Both college and university WIL students gave higher scores to the quality of their PSE in increasing their capacity for self-reflection. While college WIL students also ascribed higher scores than non-WIL students to challenging established beliefs, there was no difference on this item among university students. Conversely, university WIL students ascribed higher quality to the impact of their PSE in changing patterns of behaviour.

¹¹ The only exception was the critical reflection scale, which was rated lower by university WIL students than non-WIL students in the 25 to 29 age category.

- Despite the statistically significant differences between WIL and non-WIL students on the five outcome scales, effect sizes were very small (eta squared ranged from 0.002 to 0.012 for college and 0.005 to 0.021 for university), indicating that participation in WIL has only limited impact on the PSE outcomes measured in the survey.
- Participation in WIL also had a statistically significant impact on students' overall satisfaction with their postsecondary education, with WIL students reporting higher levels of overall PSE satisfaction. Again, however, small effect sizes limit the conclusiveness of this result.

Part 3 – WIL in Ontario Colleges and Universities

Part 3 of this report provides profiles of WIL across the five colleges and eight universities that partnered in this study. As described earlier, students were asked whether they had participated in one or more of six types of WIL:

- Co-operative education, defined as a formal program that alternates periods of academic study with periods of paid work experience, which are developed and/or approved by the institution
- Practicums or clinical placements, defined as supervised work experience required to become a practising professional
- Field experience, defined as practical experience in an authentic or simulated work setting
- Internship, defined as program-related experience in a professional work environment
- Applied research projects, defined as projects to address business or industry needs
- Service learning, defined as working with non-profit organizations to address identified community needs or global issues

Students who participated in WIL programs were asked about the sequencing of their WIL placement(s) within their postsecondary program of study. They were also asked to reflect on their overall WIL experience and to rate their satisfaction with the program in which they participated using a five-point scale where 1=very dissatisfied and 5=very satisfied.

To gain insights into how WIL programs are delivered in Ontario postsecondary institutions, the survey asked students to provide details on specific aspects of their most recent WIL experience, including total number of weeks involved, hours worked per week, the setting of their WIL program, payment, evaluation and academic recognition. Given the participation of two French-language universities in the study, details on language of WIL were captured for university WIL programs. To assist respondents in interpreting the response options, the following definitions were provided:

- On-campus settings were defined as clinics, student residences, restaurants, hotels, research labs, etc.
- Simulated work environments were defined as lab simulations, virtual learning environments, etc.
- Private sector business or industry was defined as retail, food service, manufacturing, technology, etc.
- Health care sector was defined as hospitals, clinics, etc.
- Community or non-profit sector was defined as schools, child care, arts centres, etc.
- Government sector was defined as ministry or municipality
- Honorarium or stipend was defined as payment not related to work hours

3.1 Co-operative Education

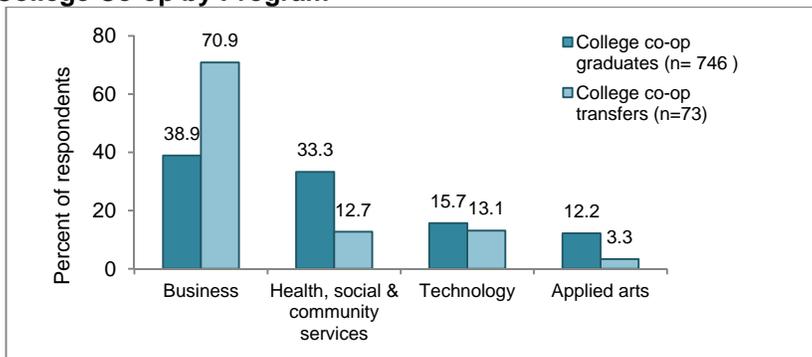
College Co-op

About one out of five college survey respondents (18.2%) were involved in co-operative education.

College students who indicated participation in co-op were asked if they were graduating from the co-op program or if they had later transferred to a non-co-op program. Of the 849 college students who started in co-op, 9 per cent (n=75) later transferred to a non-co-op program.

Administrative records were used to identify the program areas of all respondents who had participated in co-op. College co-op graduates were fairly evenly divided between programs in business (39%) and programs in health, social and community services (33%). The remaining co-op graduates were in technology (16%) or applied arts (12%). By far, the majority of college students who transferred out of co-op were enrolled in business programs (71%).¹²

Figure 29
College Co-op by Program

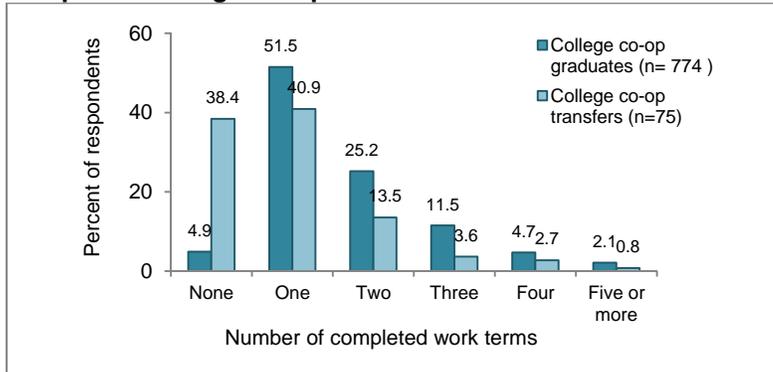


As shown below, 5 per cent of students who planned to graduate from a co-op program had not completed any co-op work terms at the time that the Graduating Student Survey was conducted. Just more than half (52%) had completed one work term, one-quarter had completed two work terms, and 18 per cent had completed three or more work terms. Students who transferred out of co-op most frequently transferred after their first work term (41%), but were almost as likely to transfer before their first co-op placement

¹² Administrative records indicate the programs in which students were enrolled at time of graduation. While it is likely that co-op transfer students transferred to non-co-op programs within the same program area, the administrative data may not necessarily indicate the program area in which the students were registered at the time they transferred.

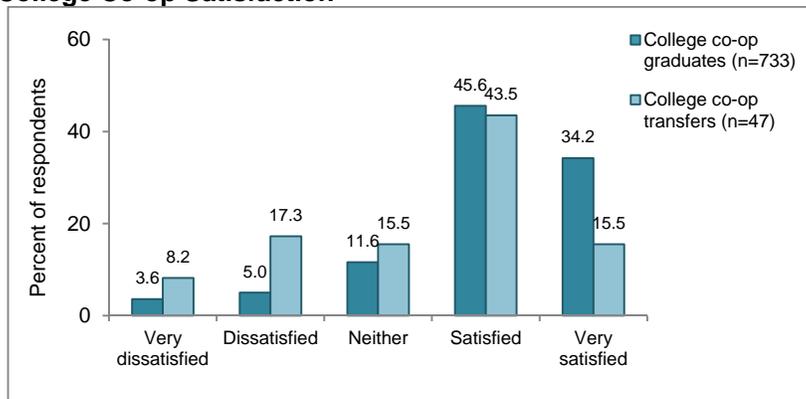
(38%). Another 14 per cent of students transferred after two work terms and 7 per cent transferred after three or more work terms.

Figure 30
Completed College Co-op Work Term



All respondents who had completed at least one co-op work term were asked to rate their overall satisfaction with their co-op experience, whether or not they were graduating from the co-op program. Four out of five co-op graduates (80%) and three out of five (59%) co-op transfers indicated that they were satisfied or very satisfied with their overall experience in the co-op program. Not surprisingly, college students who planned to graduate from the co-op program expressed significantly higher levels of satisfaction than those who transferred out, with mean satisfaction scores of 4.02 compared to 3.41 for co-op transfers (see Table H26 in Appendix H). In particular, co-op graduates were more likely than those who transferred out to be very satisfied with their experience (34% vs. 16%) and were much less likely to report dissatisfaction (9% vs. 26% for co-op transfers).

Figure 31
College Co-op Satisfaction



Analysis of mean satisfaction scores by number of co-op work-terms showed no significant differences between students in their overall co-op satisfaction – regardless of the number of co-op work-terms they completed. Similarly, no differences were observed when satisfaction scores were compared by the number of weeks involved in

respondents' most recent co-op work-terms. These findings were consistent for both co-op completers and co-op transfers.

To create a snapshot of the most recent work terms completed by graduating college students, respondents who had completed at least one co-op work term were asked to provide details of their most recent work term experience (see Table H1 in Appendix H). Co-op work terms for college co-op students generally included the following characteristics:

- Work terms were typically about 14 weeks in length and averaged about 32 hours of work each week.
- Close to half of the college co-op work terms were in business or the private sector (46%), 21 per cent were in the community or non-profit sector, and 12 per cent were in a health care setting. The remaining students did their work terms in the government sector (10%) or in an on-campus facility (9%). Only 2 per cent were in simulated environments.
- Somewhat surprisingly, the majority of college co-op students said they were not compensated for their work term (54%). Of the students who received compensation, 40 per cent were paid a regular salary and 6 per cent received an honorarium or stipend.
- Four out of five students (81%) indicated that their employer or site supervisor participated in their evaluation and three out of five (61%) were evaluated by faculty and/or staff. About one-third of college co-op students (35%) were encouraged to do a self-evaluation of their work term experience, and 2 per cent said they were not evaluated.
- The majority of college co-op students were assessed on the quality of their work term performance, with 55 per cent receiving grades of pass/fail or satisfactory/unsatisfactory and another 20 per cent receiving letter or number grades. About one in five students (21%) had to demonstrate completion only, and 4 per cent did not receive any credit recognition for their work term.

When results for students who transferred out of co-op were compared to results for co-op students who completed their co-op program, only one statistically significant difference was noted:

- Co-op transfer students were more likely to report that their work term was not recognized for academic credit (11% vs. 4%).

College Co-op Motivations, Benefits and Challenges

Analysis of unique respondents – that is, students who only participated in a single type of WIL – reveals some additional insights. Of the 493 respondents who only participated in college co-op, 91 per cent identified their co-op as mandatory but only 17 per cent indicated that they could apply for professional accreditation following program completion.

Six of the eight motivations that were viewed as quite or very influential by these respondents were employment-related: gaining practical work experience, résumé enhancement, making job search contacts, improving employability skills, experiencing a

professional work environment, and applying classroom theory/skills (see Tables H3 to H5 in Appendix H). The other top motivations were meeting mandatory requirements and determining fit with career or industry.

College co-op students viewed their co-op experience as valuable and considered the main benefits to be improved understanding of career interests and new insights into career goals.

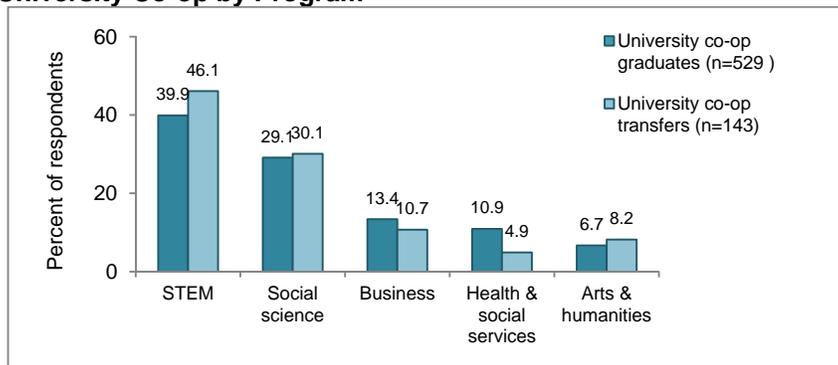
The top challenges for college co-op students were time and cost pressures (unexpected costs, no payment, and insufficient payment, balancing co-op with family commitments), as well as school-related (lack of appropriate placement, insufficient support from the school, not able to integrate learning from work back into the classroom, and insufficient preparation).

University Co-op

More than one out of ten university respondents (12.7%) were involved in co-operative education.

Compared to college co-op students, a larger proportion of students who started a co-op program at university subsequently transferred out. Of the 689 university respondents who started a co-op program, 21 per cent (n=150) reported later transferring to a non-co-op program. University students who were graduating from co-op were most likely to be enrolled in science and engineering programs (40%), followed by social sciences (29%). Only 13 per cent were in business, 11 per cent were in health, and 7 per cent were in arts and humanities. The distribution of programs was similar among university students who transferred out of co-op, although slightly more were in business programs (46%).¹³

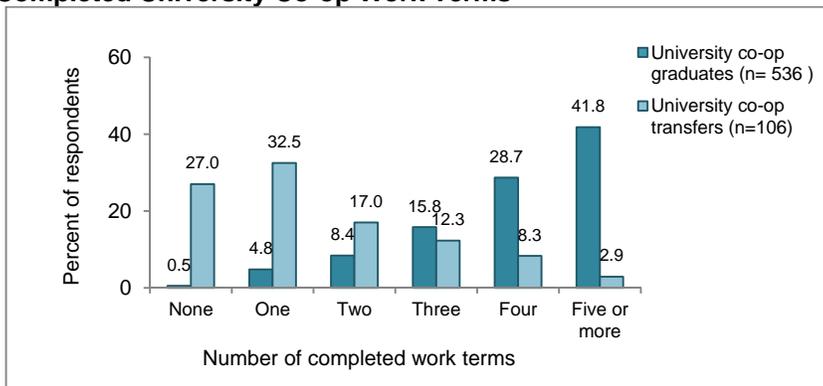
Figure 32
University Co-op by Program



¹³ Administrative records indicate the programs in which students were enrolled at time of graduation. While it is likely that co-op transfer students transferred to non-co-op programs within the same program area, the administrative data may not necessarily indicate the program area in which the students were registered at the time they transferred.

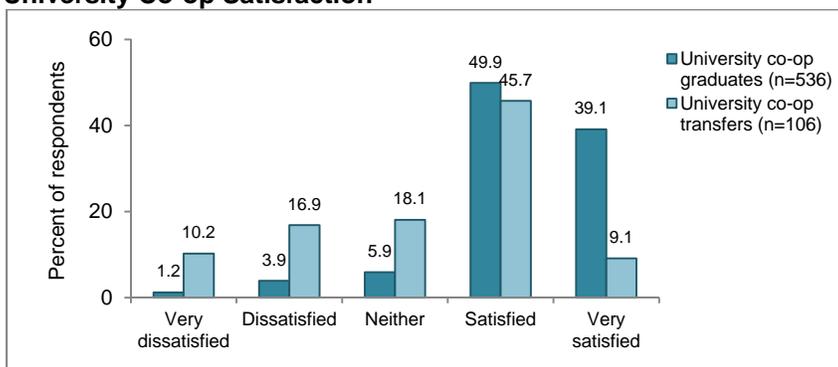
As shown in the figure below, virtually all students who planned to graduate from a university co-op program had completed at least one co-op work term at the time of the survey, including 29 per cent who had completed four work terms and 42 per cent who had completed five or more. About 13 per cent of students had completed only one (5%) or two (8%) work terms, and another 16 per cent had completed three work terms. More than one-quarter of co-op students made the decision to transfer prior to their first work term (27%) and 33 per cent decided after their first work term. Another 17 per cent completed two work terms before transferring, 12 per cent completed three work terms, and 11 per cent completed four or more.

Figure 33
Completed University Co-op Work Terms



The majority of university students who had completed at least one co-op work term were satisfied with their overall co-op experience, whether or not they were graduating from the co-op program. Compared to college co-op students, however, university co-op graduates reported higher levels of satisfaction, while those who transferred out of university co-op reported lower levels of satisfaction. Fully nine out of ten university co-op graduates (90%), but just more than half (55%) of co-op transfers, indicated that they were satisfied or very satisfied. Mean satisfaction scores differed significantly between university students who planned to graduate from the co-op program (mean satisfaction of 4.22) compared to those who transferred out (mean satisfaction of 3.27) (see Table H26 in Appendix H). In particular, very few co-op transfers expressed high levels of satisfaction (only 9% compared to 39% of co-op graduates). University co-op transfers were also much more likely than co-op graduates to be dissatisfied or very dissatisfied with their work term experience (27% vs. 5%).

Figure 34
University Co-op Satisfaction



Analysis of mean satisfaction scores by number of co-op work terms revealed that university students who had completed five or more work terms were significantly more satisfied with their overall co-op experience than those who completed one or two work terms (see Table H3 in Appendix H). This finding was consistent among both those who completed their university co-op program and those who transferred out. Analysis by work-term length did not reveal any significant differences in overall co-op satisfaction based on the number of weeks of the most recent work term, for both co-op transfers and co-op graduates.

All respondents who had completed at least one co-op work term were asked to provide details of their most recent work term experience. Table H2 in Appendix H provides a snapshot of the most recent work terms completed by graduating university students. University co-op work terms generally included the following characteristics:

- Work terms were typically about 16 weeks in length and involved just less than 40 hours of work each week.
- The majority of university co-op work terms were in business or the private sector (55%), 23 per cent were in government, and 9 per cent were on-campus. Only 8 per cent were in the community or non-profit sector and 6 per cent were in the health sector. Almost no university students did their work term in a simulated setting.
- Most university co-op students received a regular employment salary (84%) and another 7 per cent received an honorarium. Only 9 per cent of respondents said they were not compensated for their work term.
- Employers or site supervisors were involved in almost all university co-op evaluations (92%), but only 44 per cent of students reported being evaluated by university faculty or a staff employer. About 30 per cent of students engaged in self-evaluation and just 1 per cent of respondents said they were not evaluated.
- The majority of university co-op students were assessed on the quality of their work term performance, with 60 per cent receiving grades of pass/fail or satisfactory/unsatisfactory and another 13 per cent receiving letter or number grades. About one-quarter of respondents (24%) only had to demonstrate

completion and 3 per cent did not receive academic recognition for their work term.

- Four per cent of university students reported doing a French language placement.

When results were compared between university co-op students who completed their program and those who transferred out of co-op, some statistically significant differences were noted:

- Co-op transfer students worked fewer hours per week (approximately 35 compared to 39 for co-op graduates).
- Co-op transfer students were less likely to work in business or the private sector (46% compared to 56%).
- Students who transferred out of co-op were less likely to report employer involvement in work term evaluation (81% vs. 94%) and more likely to report the involvement of university faculty and/or staff (52% vs. 43%). Co-op transfer students were also more likely not to be evaluated (6% vs. 1%).
- Co-op transfer students were more likely to report that they did not receive credit recognition for their work term (8% vs. 2%).
- Co-op transfer students were more likely to have participated in a French language work term (7% vs. 3%).

University Co-op Motivations, Benefits and Challenges

Of the 477 respondents who only participated in university co-op, half (49%) identified their co-op as mandatory and 26 per cent indicated that they could apply for professional accreditation following program completion.

As shown in Tables H3 to H5 in Appendix H, five of the eight motivations considered to be quite or very influential were employment-related: gaining practical work experience, résumé enhancement, improving employability skills, making job search contacts, and experiencing a professional work environment. The other top motivations were earning money, as well as one future exploration item (determining fit with career or industry) and one career progression item (increase earning potential).

University co-op students strongly agreed with the statement that the co-op experience had been valuable. They also expressed strong agreement with the benefit statements related to better understanding of career interests, improved insights into career goals, improved interview and job-seeking skills, enhanced personal maturity, increased confidence about job prospects, improved ability to get along with people, and future job search contacts.

The top challenges for university co-op students were workplace-related (boring work, not enough work, disconnection from co-workers) and school-related (theory and skills not relevant, lack of appropriate placement, not able to integrate learning from work back into the classroom, insufficient preparation support from the school). Insufficient pay was also identified as a challenge.

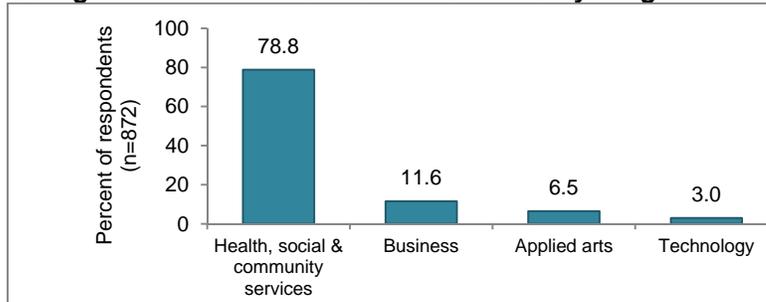
3.2 Practicums and Clinical Placements

College Practicums and Clinical Placements

Close to one out of five college survey respondents (18.6%) had experience with practicums or clinical placements.

Administrative records were used to identify the program areas of respondents who had already completed a practicum or clinical placement or who indicated that they would be completing a practicum before they graduated. More than three-quarters of college practicum students (79%) were enrolled in health, social and community services. Another 12 per cent were in business and 7 per cent were in applied arts. Only 3 per cent were in technology programs.

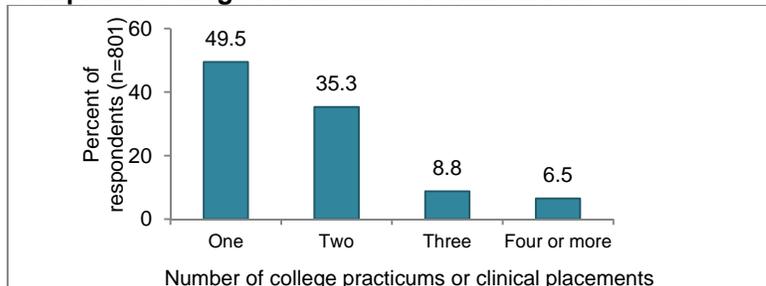
Figure 35
College Practicum and Clinical Placements by Program



One out of ten college practicum students (9.8%) said they had not yet participated in a practicum but would be participating before they graduated.

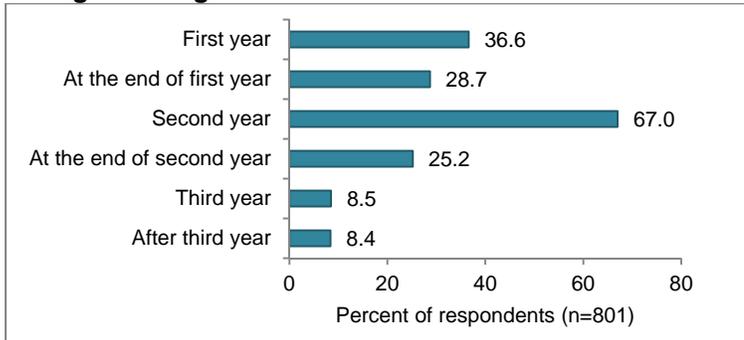
College students who had already participated in practicums or clinical placements were asked to indicate the timing of all completed and future placement(s) in relation to their program. As shown below, half of all college practicum students did a single placement, and more than one-third (35%) completed two practicums.

Figure 36
Completed College Practicums or Clinical Placements



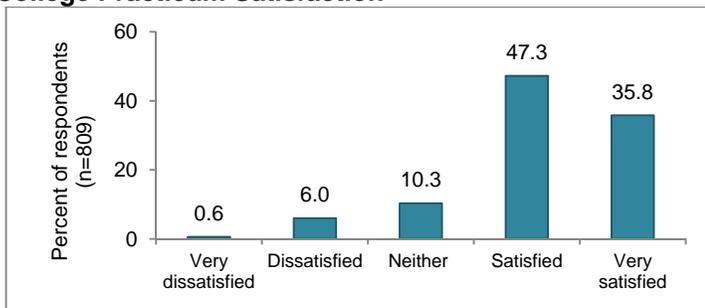
Two-thirds of college practicums (67%) were completed during the second year of the program. However, more than one-third of respondents (37%) were introduced to the practicum during their first year of study. Similar proportions of college students did practicums as capstone experiences at the end of their first (29%) or second years of study (25%).

Figure 37
Timing of College Practicums or Clinical Placements



College students expressed high levels of satisfaction with their overall practicum or clinical experiences, ascribing a mean satisfaction score of 4.12 (see Table H26 in Appendix H). Almost half of respondents were satisfied (47%) and another 36 per cent were very satisfied. Only 7 per cent of respondents expressed any degree of dissatisfaction.

Figure 38
College Practicum Satisfaction



Analysis of mean satisfaction scores by the number of completed practicums or clinical placements, as well as the length of respondents' most recent practicum, showed no significant differences between college students in their overall WIL satisfaction – regardless of the number and duration of their placement experiences.

College practicums or clinical placements generally included the following characteristics (see Table H6 in Appendix H):

- Placements were typically about 12 weeks in length and averaged about 24.5 hours of work each week.
- Three-quarters of the college placements were in the community (41%) or health care sectors (35%). Similar proportions were on-campus (9%) and in the private sector (9%). Only 4 per cent were in a government setting and 2 per cent were in a simulated environment.
- The overwhelming majority of college students did not receive compensation for their placement (96%). Of those who received compensation, 3 per cent received a regular employment salary and 1 per cent received an honorarium or stipend.
- About three-quarters of college students (73%) indicated that their employer or site supervisor was involved in evaluating their practicum, and almost as many (71%) were evaluated by college faculty and/or staff. About two out of five students (38%) were encouraged to self-reflect on their experience and only 2 per cent said they were not evaluated.
- The majority of college practicum students were assessed on the quality of their performance, with 60 per cent receiving grades of pass/fail or satisfactory/unsatisfactory and another 25 per cent receiving letter or number grades. Twelve per cent of students were required only to complete a practicum and 3 per cent did not receive any credit recognition.

College Practicum Motivations, Benefits and Challenges

Of the 592 respondents who only participated in college practicums or clinical placements, 95 per cent identified their practicum as mandatory and 55 per cent indicated that they could apply for professional accreditation following program completion.

Seven of the ten motivations viewed as quite or very influential by these respondents were employment-related: gaining practical work experience, applying classroom theory/skills, résumé enhancement, experiencing a professional work environment, improving employability skills, making job search contacts, and getting a job with the WIL employer. The other top motivations were meeting mandatory requirements, determining fit with career or industry, and helping people in need (see Tables H7 to H9 in Appendix H).

College practicum students viewed their practicum experience as valuable and considered the main benefits to be improved understanding of career interests, new insights into career goals, opportunities to apply classroom theories to the work environment, and increased confidence about job prospects.

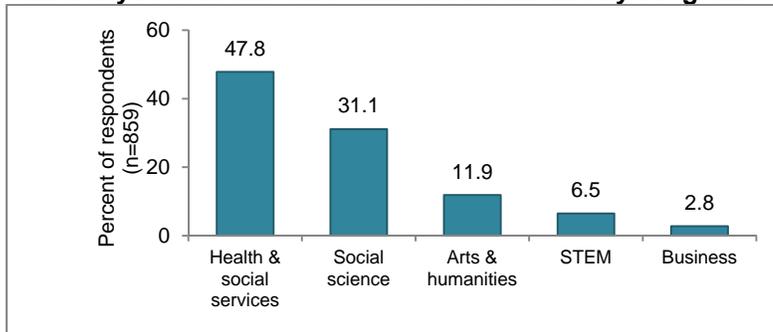
The top challenges for college practicum students were all related to time and cost pressures (no payment, unexpected financial costs, balancing the practicum with family commitments, and additional time demands).

University Practicums and Clinical Placements

Among all university respondents, 14.7 per cent indicated that they had or would be participating in practicums or clinical placements.

Administrative records were used to identify the program areas of respondents who had already completed a practicum or clinical placement or who indicated that they would be completing a practicum before they graduated. Close to half of university practicum students (48%) were enrolled in health sciences and social service programs, and almost one-third were in the social sciences. Another 12 per cent were in arts and humanities and 7 per cent were in STEM programs. Only 3 per cent were in business.

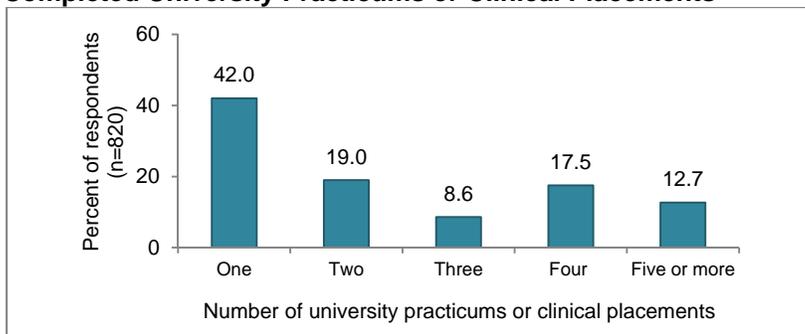
Figure 39
University Practicums and Clinical Placements by Program



Just 5 per cent of university practicum students indicated that they had not yet participated in a practicum but would be participating before they graduated.

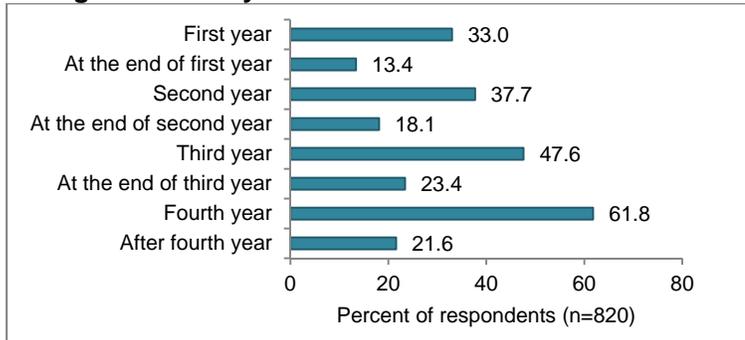
University students who had already participated in practicums or clinical placements were asked to indicate the timing of all completed and future placement(s) in relation to their program. As shown below, about two out of five university practicum students did a single placement (42%) and one in five (19%) did two practicums. Almost one-third of students (30%) did four or more placements.

Figure 40
Completed University Practicums or Clinical Placements



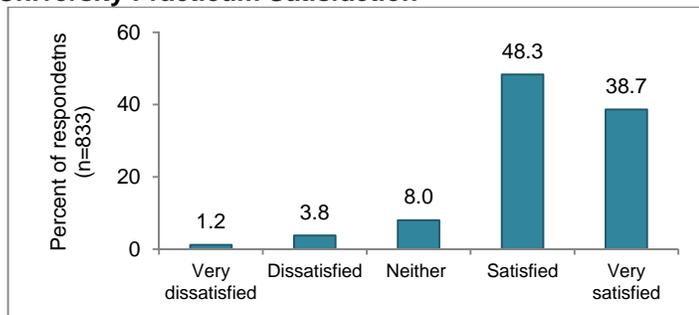
University students were most likely to participate in practicums during their final year of study (62%), and close to half of respondents completed a practicum during their third year (48%). Similar proportions were introduced to practicums during the first and second years of their programs (33% and 38% respectively).

Figure 41
Timing of University Practicums or Clinical Placements



Students who participated in university practicums or clinical placements were highly satisfied with their experience, ascribing a mean satisfaction score of 4.19 (see Table H26 in Appendix H). Almost half of respondents reported being satisfied (48%), and another 39 per cent were very satisfied. Only 5 per cent of respondents expressed any degree of dissatisfaction.

Figure 42
University Practicum Satisfaction



Analysis of mean satisfaction scores by the number of completed practicums or clinical placements, as well as the length of respondents' most recent practicum, showed no significant differences between university students in their overall WIL satisfaction – regardless of the number and duration of their placement experiences.

University practicums or clinical placements generally included the following characteristics (see Table H6 in Appendix H):

- Placements were typically about 12 weeks in length and involved about 27 hours of work each week.
- More than three-quarters of the university placements were in the community (40%) or health care sectors (37%). Similar proportions were on-campus (9%) or in government settings (8%). Only 4 per cent were in the private sector and 1 per cent were in a simulated environment.

- Nine out of ten university students (91%) did not receive compensation for their placement. Of those who were paid, 6 per cent received a regular employment salary and 3 per cent received an honorarium or stipend.
- More than three-quarters of university students (77%) indicated that faculty and/or staff conducted an evaluation of their practicum and 70 per cent were evaluated by their employer or site supervisor. Thirty-nine per cent of students were encouraged to participate in self-evaluation of their practicum and only 4 per cent said they were not evaluated.
- The majority of university practicum students were assessed on the quality of their performance, with 64 per cent receiving grades of pass/fail or satisfactory/unsatisfactory and another 23 per cent receiving letter or number grades. For 6 per cent of university students, completion was the only requirement, and 7 per cent did not receive any academic recognition for their practicum or clinical.
- Six per cent of students completed their practicum or clinical in French.

University Practicum Motivations, Benefits and Challenges

Of the 665 respondents who only participated in university practicums or clinical placements, 81 per cent identified their practicum as mandatory and 71 per cent indicated that they could apply for professional accreditation following program completion.

Five of the seven motivations viewed as quite or very influential by these respondents were employment-related: gaining practical work experience, résumé enhancement, applying classroom theory/skills, improving employability skills, and experiencing a professional work environment. The other top motivations were meeting mandatory requirements and determining fit with career or industry (see Tables H7 to H9 in Appendix H).

University practicum students strongly valued their practicum experience and considered the main benefits to be improved understanding of career interests, new insights into career goals, and development of personal maturity.

The top challenges for university practicum students were all related to time and cost pressures (no payment, unexpected financial costs, additional time demands, and balancing the practicum with family commitments). Lack of preparation from the university was also identified as a challenge.

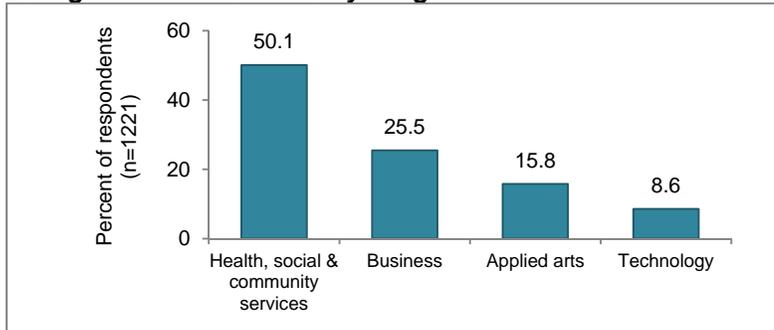
3.3 Field Placements

College Field Placements

More than one-quarter of college survey respondents (27.7%) indicated that they had or would be participating in field placements.

Administrative records were used to identify the program areas of respondents who had already completed a field placement or indicated that they would be completing a placement before they graduated. Exactly half of college students (50%) who participated or would be participating in field placements were enrolled in health, social and community services. About one-quarter were in business programs (26%) and 15 per cent were in applied arts. Only 9 per cent were in technology programs.

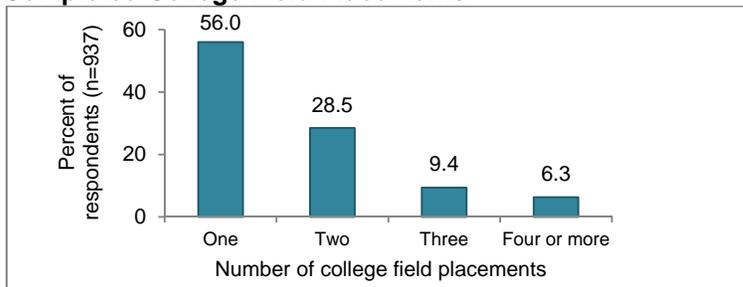
Figure 43
College Field Placements by Program



About one-quarter of college field placement students (25.5%) said they had not yet participated in a field placement but would be participating before they graduated.

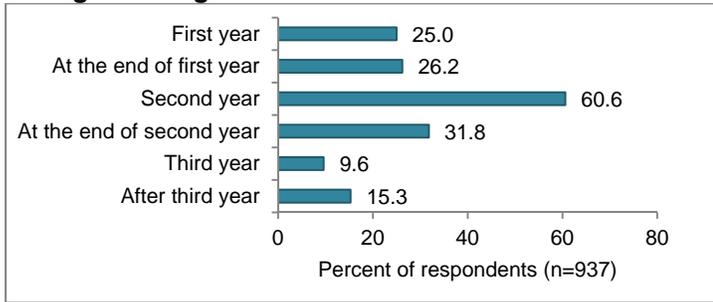
College students who had already participated in field placements were asked to indicate the timing of all completed and future placement(s) in relation to their program. As shown in the figure below, the majority of college students did a single field placement (56%), but another 29 per cent did two placements.

Figure 44
Completed College Field Placements



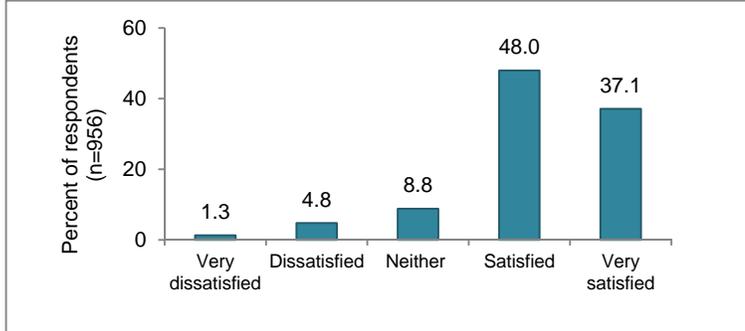
College field placements were typically completed during the second year of the program (61%). Similar proportions of college students did a placement during first year (25%) or at the end of first year (26%). About one-third of students (32%) completed a placement at the end of their second year.

Figure 45
Timing of College Field Placements



College WIL students were highly satisfied with their field placement experiences, ascribing a mean satisfaction score of 4.15 (see Table H26 in Appendix H). Almost half of respondents were satisfied (48%) and another 37 per cent were very satisfied. Only 6 per cent of respondents expressed any degree of dissatisfaction.

Figure 46
College Field Placement Satisfaction



Analysis of mean satisfaction scores by the number of completed field placements, as well as the length of respondents' most recent placement, showed no significant differences between college students in their overall satisfaction – regardless of the number and duration of their field placement experiences.

College field placements generally included the following characteristics (see Table H10 in Appendix H):

- Placements were typically about ten weeks in length and averaged about 25.5 hours of work each week.

- The majority of college field placements were in the community (41%) or health care sector (14%). However, one-quarter were in private businesses or industry (25%). About one in ten college students was placed on-campus (9%) and 7 per cent were placed in government offices. Three per cent of college students did their field experience in a simulated work setting.
- Only 14 per cent of college students received compensation for their field experience, usually in the form of a salary (11%). Another 3 per cent of students received an honorarium or stipend.
- Close to three-quarters of college students (73%) indicated that their employer or site supervisor was involved in the evaluation of their field placement, and two-thirds (65%) were evaluated by college faculty or staff. More than one-third of respondents (36%) were encouraged to evaluate their own experience and 5 per cent said they were not evaluated.
- The majority of college field placement students were assessed on the quality of their performance, with 45 per cent receiving grades of pass/fail or satisfactory/unsatisfactory and another 30 per cent receiving letter or number grades. Completion of a field placement was the only requirement for 17 per cent of students and 8 per cent of students did not receive any academic recognition for their participation.

College Field Placement Motivations, Benefits and Challenges

Of the 638 respondents who only participated in college field placements, 85 per cent identified their placement as mandatory, but only one-quarter (27%) indicated that they could apply for professional accreditation following program completion.

Six of the eight motivations viewed as quite or very influential by these respondents were employment-related: gaining practical work experience, résumé enhancement, applying classroom theory/skills, experiencing a professional work environment, improving employability skills, and making job search contacts. The other top motivations were meeting mandatory requirements, and determining fit with career or industry (see Tables H11 to H13 in Appendix H).

College field placement students viewed their placement as a valuable experience and considered the main benefits to be improved understanding of career interests, new insights into career goals, and opportunities to apply classroom theories to the work environment.

The top challenges for college field placement students were all related to time and cost pressures (no payment, unexpected financial costs, additional time demands, and balancing the field placement with family commitments).

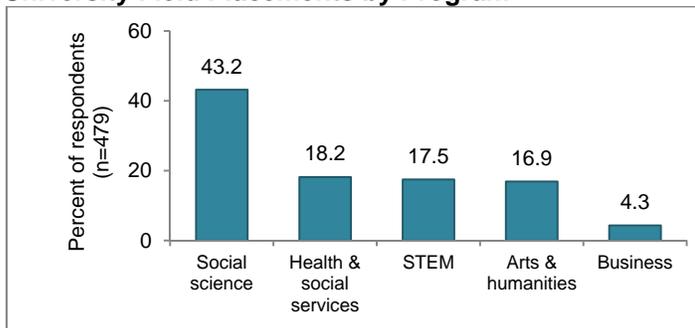
University Field Placements

Eight per cent of university survey respondents said they had, or would be, participating in field placements.

Administrative records were used to identify the program areas of respondents who had already completed a field placement or indicated that they would be completing a

placement before they graduated. The university programs most likely to include field placements were in the social sciences (43%). Similar proportions of university field placements were in health and social services (18%), STEM (18%) and arts and humanities (17%). Only 4 per cent of business students did field placements as part of their program.

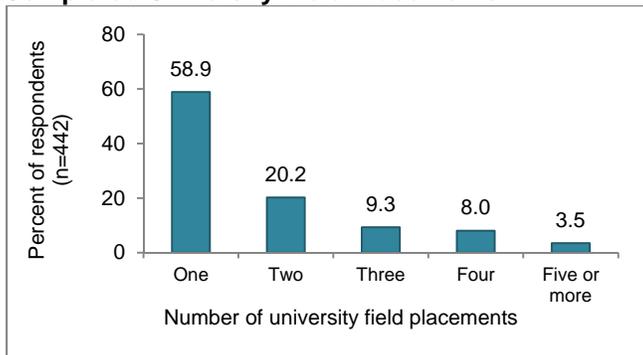
Figure 47
University Field Placements by Program



About one in ten university students (9.9%) indicated that they had not yet participated in a field placement but would be participating before they graduated.

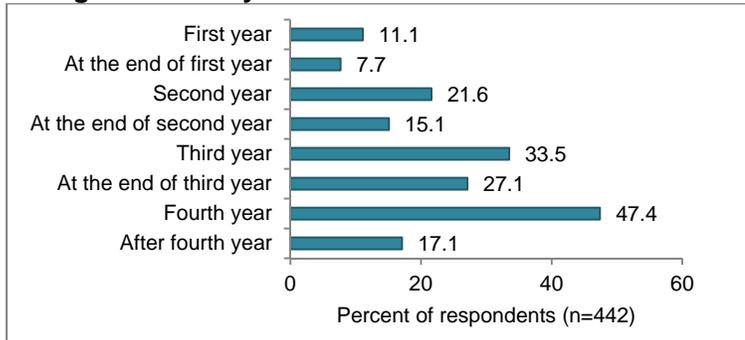
University students who had already completed one or more field placements were asked to indicate the timing of all completed and future placement(s) in relation to their program. As shown in the figure below, the majority of university students did only a single field placement (56%) and another 20 per cent did two placements.

Figure 48
Completed University Field Placements



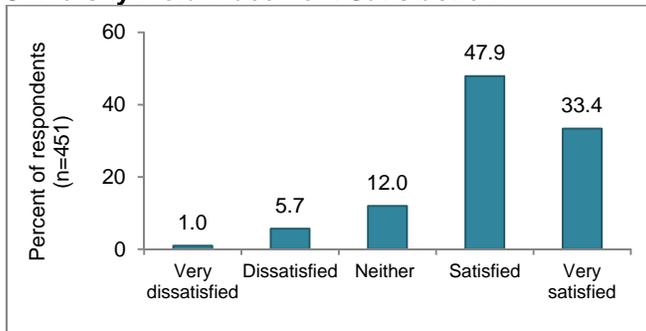
Close to half of university respondents did a field placement during their final year of study (47%), and one-third did a field placement in their third year (34%). Only one in ten was exposed to the field during their first year, but 22 per cent did a field placement in the second year of their program.

Figure 49
Timing of University Field Placements



University students expressed high levels of satisfaction with their overall field placement experiences, ascribing a mean satisfaction score of 4.07 (see Table H26 in Appendix H). Almost half of respondents were satisfied (48%) and another 33 per cent were very satisfied. Only 7 per cent of respondents expressed any degree of dissatisfaction.

Figure 50
University Field Placement Satisfaction



Analysis of mean satisfaction scores by the number of completed field placements, as well as the length of respondents' most recent placement, showed no significant differences between university students in their overall WIL satisfaction – regardless of the number and duration of their field placement experiences.

University field placements generally included the following characteristics (see Table H10 in Appendix H):

- Placements were typically about 12 weeks in length and averaged about 22 hours of work each week.
- One in five university students were placed on-campus for their field experience (19%). External placements were most likely to involve community or non-profit organizations (38%), followed by the private sector (17%), health care (11%) and government (10%). Five per cent of university students gained field experience in a simulated work environment.

- About one-third of university students were compensated for their field placement, including 26 per cent who received a salary and 6 per cent who received an honorarium or stipend.
- Similar proportions of respondents indicated that university faculty or staff (50%) and employers or site supervisors (49%) were involved in the evaluation of their field placement. Only one-quarter (24%) did a self-evaluation and fully 20 per cent said they were not evaluated.
- Just more than half of university field placement students were assessed on the quality of their performance, with 32 per cent receiving letter or number grades and 22 per cent receiving grades of pass/fail. One in ten students were required only to complete a placement. More than one-third of university students (36%) did not receive any academic recognition for their field placement.
- Seven per cent of respondents completed French language field placements.

University Field Placement Motivations, Benefits and Challenges

Of the 213 respondents who only participated in university field placements, 35 per cent identified their placement as mandatory and 18 per cent indicated that they could apply for professional accreditation following program completion.

Only two motivations were viewed by these students as quite or very influential and both were employment-related: gaining practical work experience and résumé enhancement (see Tables H11 to H13 in Appendix H).

University field placement students viewed their placement as a valuable experience and considered the main benefits to be improved understanding of career interests.

The top challenges for university field placement students were time and cost pressures (no payment, additional time demands) and school-related (insufficient advance preparation from the university, and not enough opportunities to integrate workplace learning back into the classroom).

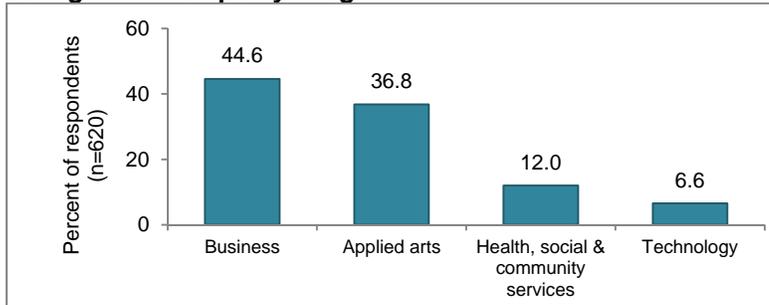
3.4 Internships

College Internships

Of all college survey respondents, 14.5 per cent indicated that they had or would be participating in internships.

Administrative records were used to identify the program areas of respondents who had already completed an internship or indicated that they would be completing an internship before they graduated. College internships were most likely to be offered in business programs (45%), but were almost as common in applied arts (37%). Just more than one in ten college interns was enrolled in health, social and community services (12%) and 7 per cent were in technology programs.

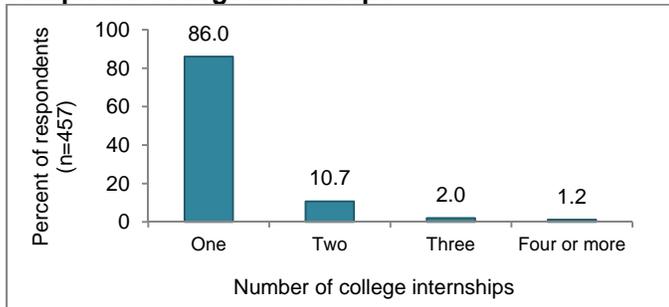
Figure 51
College Internships by Program



More than one-quarter of college interns (27.5%) said they had not yet participated in an internship but would be participating before they graduated.

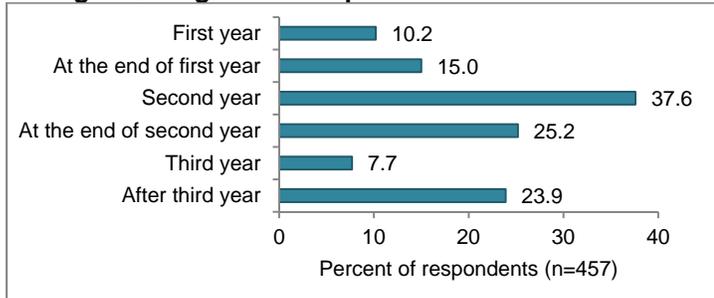
College students who had already completed an internship were asked to indicate the timing of their internship(s) in relation to their program. The figure below shows that the overwhelming majority of college students did only a single internship (86%). About one in ten college students (11%) had two internship experiences.

Figure 52
Completed College Internships



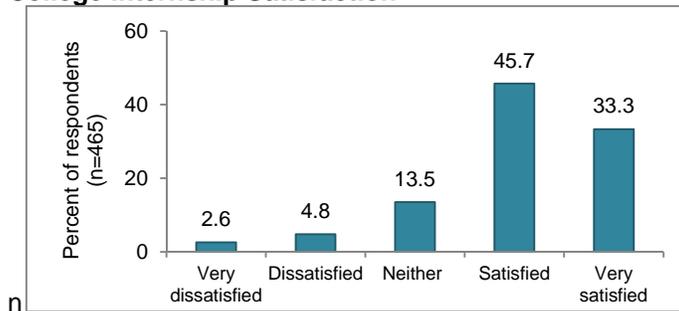
More than one-third of college students (38%) completed their internship during the second year of their program. Similar proportions of students did internships as capstone experiences after the second (25%) or third years (24%) of their program.

Figure 53
Timing of College Internships



College interns were generally quite satisfied with their overall internship experience, ascribing a mean satisfaction score of 4.02 (see Table H26 in Appendix H). Close to half of respondents were satisfied (46%) and another 33 per cent were very satisfied. Only 7 per cent of respondents expressed any degree of dissatisfaction.

Figure 54
College Internship Satisfaction



Analysis of mean satisfaction scores by the number of completed internships, as well as the length of respondents' most recent internship, showed no significant differences between college students in their overall WIL satisfaction – regardless of the number and duration of their internship experiences.

College internships generally included the following characteristics (see Table H14 in Appendix H):

- Internships were typically about ten weeks in length and averaged about 29 hours of work each week.
- The majority of college internships were in the private sector (59%). College students also completed internships on campus (14%) or in the community or non-profit sector (12%). College internships were less frequent in government

- (6%) or health care settings (5%). About 4 per cent of college students completed internships in simulated work environments.
- About one-quarter of college students were compensated for their internship, including 17 per cent who received a salary and 9 per cent who received an honorarium or stipend.
 - College interns were most likely to be evaluated by their employer or site supervisor (71%). Two out of five college interns were evaluated by college faculty or staff (42%). More than one-quarter of college interns (27%) participated in a self-evaluation and 12 per cent said they were not evaluated.
 - The majority of college interns were assessed on the quality of their performance, with 38 per cent receiving grades of pass/fail or satisfactory/unsatisfactory and another 22 per cent receiving letter or number grades. Internship completion was the only requirement for 23 per cent of college interns and 17 per cent did not receive any academic recognition for their internship.

College Internship Motivations, Benefits and Challenges

Of the 346 respondents who only participated in college internships, 73 per cent identified their internship as mandatory, but only 7 per cent indicated that they could apply for professional accreditation following program completion.

Six of the eight motivations viewed as quite or very influential by these respondents were employment-related: gaining practical work experience, résumé enhancement, making job search contacts, improving employability skills, experiencing a professional work environment, and applying classroom theory/skills. The other top motivations were determining fit with career or industry and meeting mandatory requirements (see Tables H15 to H17 in Appendix H).

College interns viewed their internship as a valuable experience and considered the main benefits to be improved understanding of career interests and new insights into career goals.

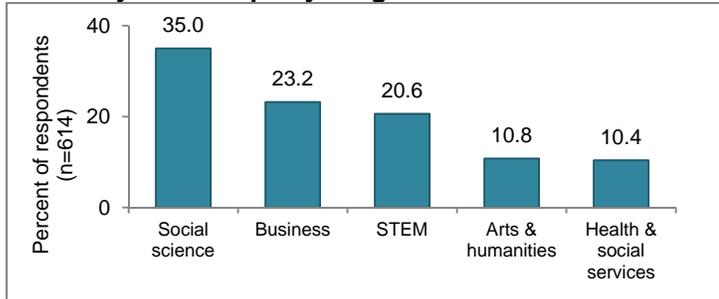
The top challenges for college interns were related to time and cost pressures (no payment, unexpected financial costs, and insufficient payment). Other challenges were school-related (lack of appropriate placement and not enough opportunities to integrate workplace learning back into the classroom) and workplace-related (boring work).

University Internships

About one in ten university survey respondents (11.0%) indicated that they had currently completed an internship or were planning to do an internship before graduation.

Administrative records were used to identify the program areas of respondents who had already completed an internship or indicated that they would be completing an internship before they graduated. More than one-third of university interns were enrolled in the social sciences (35%), followed by business (23%) and STEM (21%) programs. The remaining university interns were equally divided between arts and humanities (11%) and health sciences (10%).

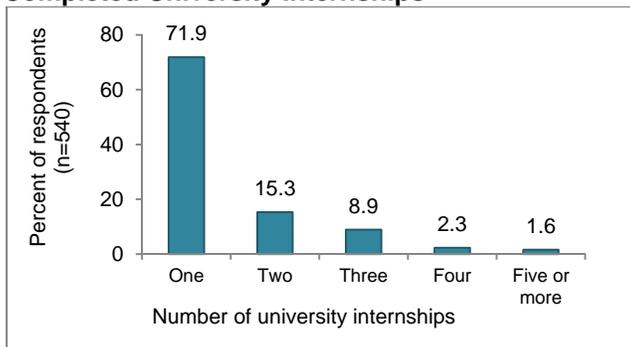
Figure 55
University Internships by Program



University interns included 15.5 per cent of students who had not yet participated in an internship, but would be participating before they graduated.

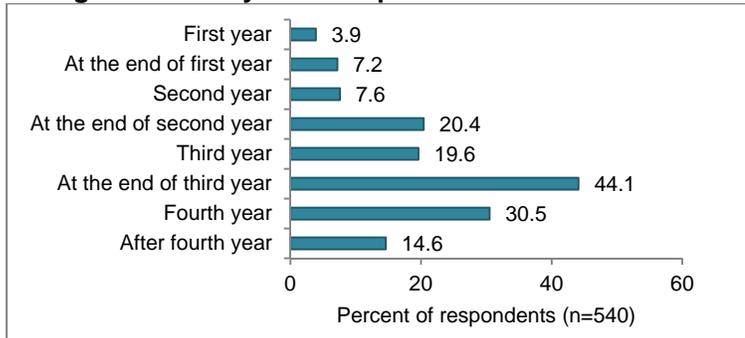
University students who had already completed an internship were asked to indicate the timing of their internship(s) in relation to their program. As shown in the figure below, close to three-quarters of university interns completed a single internship (72%), and another 15 per cent had two internship experiences.

Figure 56
Completed University Internships



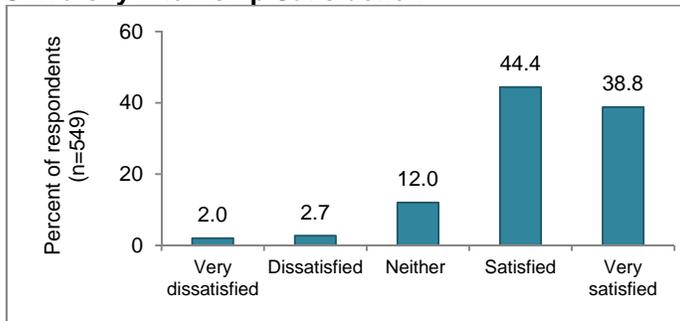
University students were most likely to complete an internship following their third year of study (44%). However, one in five did an internship after only two years (20%) or during their third year (20%). About half of university internships were completed during (31%) or after (15%) the fourth year of study.

Figure 57
Timing of University Internships



University interns expressed high levels of satisfaction with their overall internship experience, ascribing a mean satisfaction score of 4.15 (see Table H26 in Appendix H). Almost two out of five interns said they were very satisfied (39%) and another 44 per cent were satisfied. Only 5 per cent of respondents expressed any degree of dissatisfaction.

Figure 58
University Internship Satisfaction



Analysis of mean satisfaction scores by the number of completed internships, as well as the length of respondents' most recent internship, showed no significant differences between university students in their overall WIL satisfaction – regardless of the number and duration of their internship experiences.

University internships generally included the following characteristics (see Table H14 in Appendix H):

- Internships were typically about 16 weeks in length and averaged just more than 29 hours each week.
- About half of university internships were in the private sector (49%). One out of five university interns completed an internship in the community or non-profit sector (20%), 11 per cent did a government internship, and 6 per cent interned with a health sector employer. About 13 per cent did internships on campus and only 1 per cent did a simulated internship.

- The majority of university interns received some form of compensation for their work, including 44 per cent who were paid a regular salary and 11 per cent who received an honorarium or stipend.
- More than two-thirds of university interns (68%) reported that their employer or site supervisor participated in their evaluation and 39 per cent were evaluated by university faculty or staff. About one in five interns (21%) participated in a self-evaluation. Fully 19 per cent said they were not evaluated.
- Close to half of university interns did not receive any academic recognition for their internship (47%). The remaining interns were assessed on the basis of pass/fail (23%), letter or number grade (22%), or completion only (8%).
- Four per cent of respondents completed French language internships. A similar proportion of respondents (3%) completed their internship in a language other than English or French.

University Internship Motivations, Benefits and Challenges

Of the 409 respondents who only participated in university internships, only 15 per cent identified their internship as mandatory, and 13 per cent indicated that they could apply for professional accreditation following program completion.

Four of the five motivations viewed as quite or very influential by these respondents were employment-related: résumé enhancement, gaining practical work experience, improving employability skills, and making job search contacts. The other top motivation was determining fit with career or industry and meeting mandatory requirements (see Tables H15 to H17 in Appendix H).

University interns viewed their internship as a valuable experience and considered the main benefits to be improved understanding of career interests, development of personal maturity, and new insights into career goals.

The top challenges for university interns were all school-related (insufficient preparation from the university, not enough opportunities to integrate workplace learning back into the classroom, lack of relevant classroom theory/skills, lack of appropriate placement, insufficient support during the internship). Other challenges were workplace-related (boring work) and lack of pay.

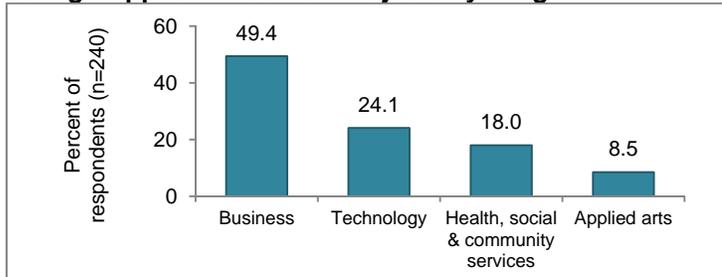
3.5 Applied Research Projects

College Applied Research Projects

Only 5.7 per cent of college survey respondents reported participating or planning to participate in applied research projects.

Administrative records were used to identify the program areas of respondents who had already completed applied research projects or who indicated that they would be completing a project prior to graduation. Half of all college students (49%) involved with applied research were enrolled in business programs. Another one-quarter were in technology programs (24%) and 18 per cent were in health, social and community services. Only 9 per cent were in applied arts.

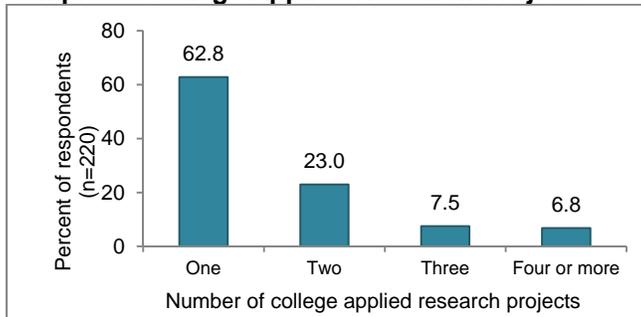
Figure 59
College Applied Research Projects by Program



Just 8.1 per cent of college applied research students indicated that they had not yet completed their project but would be doing an applied research project prior to graduation.

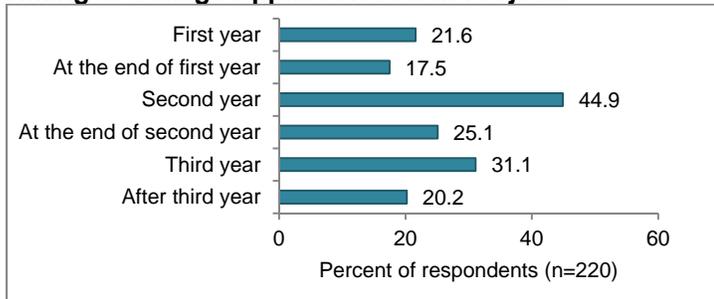
College students who had already completed applied research projects were asked to indicate the timing of their projects in relation to their program. Close to two-thirds of college students (63%) had participated in a single applied research project during their college program, and 23 per cent had completed two projects.

Figure 60
Completed College Applied Research Projects



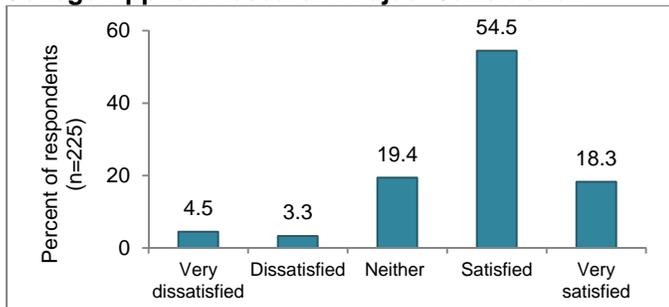
Close to half of college applied research projects (45%) were completed during the second year of the program. Similar proportions of college students participated in applied research during (22%) or after (18%) their first year of study. About one-quarter of college students (25%) did a project following the second year of their program, one-third did a project during their third year (31%), and one in five completed a project following their third year (20%).

Figure 61
Timing of College Applied Research Projects



Overall, college students were less satisfied with their overall applied research experience than with other forms of WIL, ascribing a mean satisfaction score of 3.79 (see Table H26 in Appendix H). The majority of college students rated their experience as satisfactory (55%). While close to one in five said they were very satisfied (18%), a similar proportion was neutral about their experience (19%). Nevertheless, only 9 per cent of respondents expressed any degree of dissatisfaction.

Figure 62
College Applied Research Project Satisfaction



Analysis of mean satisfaction scores by the number of completed applied research projects, as well as the length of respondents' most recent applied research project, showed no significant differences between college students in their overall WIL satisfaction – regardless of the number and duration of their applied research project experience.

College applied research projects generally included the following characteristics (see Table H18 in Appendix H):

- The projects were typically about 12 weeks in length and averaged about 13.5 hours each week.
- More than half of college applied research projects were completed on-campus (52%), and about one-quarter were completed in a private business or industry setting (26%). Applied research projects were less likely to involve employers from the community or non-profit sector (10%) or health care sector (4%), and had virtually no government involvement. About 7 per cent of college applied research projects were carried out in simulated work settings.
- College students were very unlikely to be paid for applied research projects. However, 13 per cent received a salary and 1 per cent received an honorarium or stipend.
- College applied research projects were most often evaluated by college faculty or staff (84%). About one-third of college students (32%) indicated that their employer participated in the evaluation and 27 per cent were encouraged to self-evaluate their project. Only 6 per cent said their projects were not evaluated.
- Letter or number grades were typically assigned to college applied research projects (70%), and another 12 per cent of projects were graded pass/fail or satisfactory/unsatisfactory. Project completion was required for 6 per cent of college research projects. For 13 per cent of college projects, no academic recognition was given.

College Applied Research Project Motivations, Benefits and Challenges

Of the 91 respondents who only participated in college applied research projects, 72 per cent identified their experience as mandatory and 16 per cent indicated that they could apply for professional accreditation following program completion.

Only two motivations were viewed as quite or very influential by these respondents. One was employment-related (gaining practical work experience) and the other was to meet mandatory requirements (see Tables H19 to H21 in Appendix H).

College participants in applied research projects viewed the experience as allowing them to relate classroom theories to the work environment. They also agreed that participating in a project was a valuable experience.

The top challenges for college students who participated in applied research projects were related to time and cost pressures, in particular additional time demands, and balancing the project with family commitments.

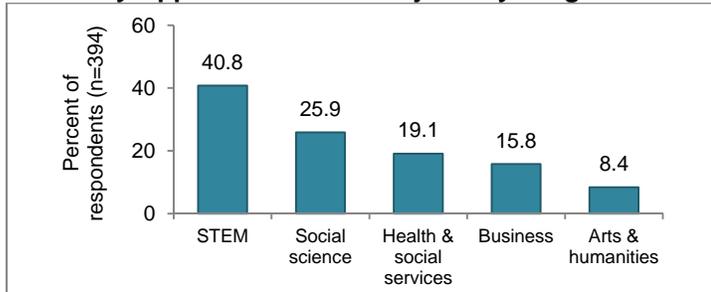
University Applied Research Projects

Only 6.8 per cent of university survey respondents reported participating or planning to participate in applied research projects.

Administrative records were used to identify the program areas of respondents who had already completed applied research projects or indicated that they would be completing a project prior to graduation. About two out of five university students involved with applied research were enrolled in STEM programs (41%), and one-quarter were in social

sciences (26%). Another 19 per cent were in health, 16 per cent were in business, and 8 per cent were in arts and humanities.

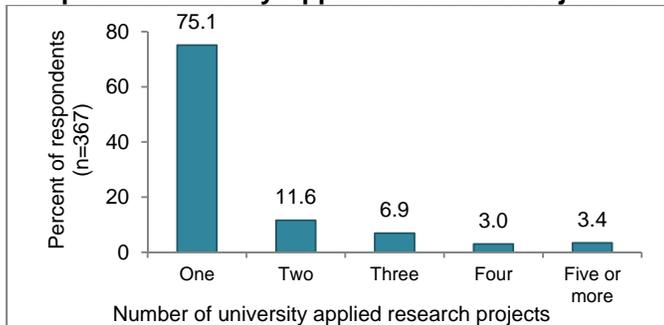
Figure 63
University Applied Research Projects by Program



Only 7.2 per cent of university applied research students indicated that they had not yet completed a project but would be participating in an applied research project prior to graduation.

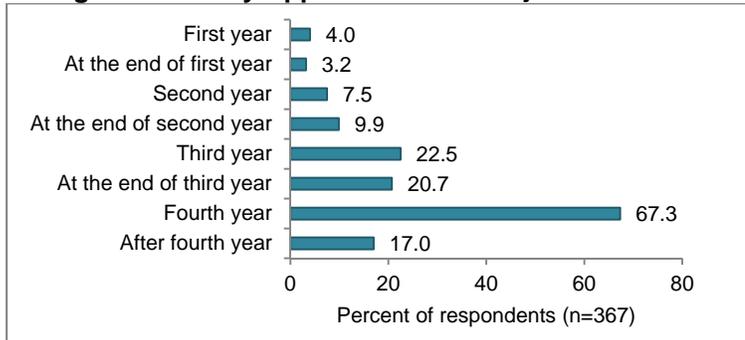
University students who had already participated in applied research projects were asked to indicate the timing of all completed and future projects in relation to their program. As shown in the figure below, about three-quarters of university students completed a single applied research project (75%) and another 12 per cent completed two projects.

Figure 64
Completed University Applied Research Projects



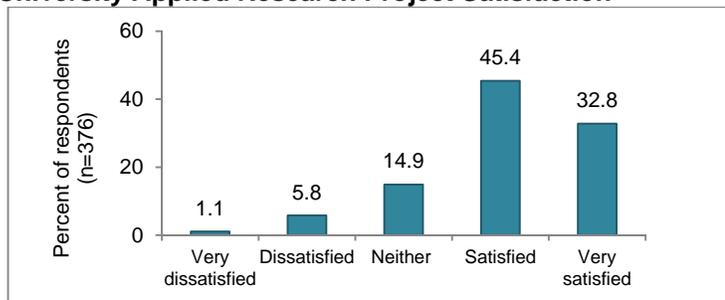
University students were quite unlikely to be involved in applied research in the first two years of their program. Close to one-quarter of respondents completed an applied research project during their third year (23%) and a similar proportion did a project between third and fourth year (21%). However, fully two-thirds of respondents participated in applied research during the final year of their program (67%).

Figure 65
Timing of University Applied Research Projects



University respondents expressed fairly high levels of satisfaction with their overall applied research experience, ascribing a mean satisfaction score of 4.03 (see Table H26 in Appendix H). One-third of university respondents said they were very satisfied (33%), and another 45 per cent were satisfied. Only 7 per cent of respondents expressed any degree of dissatisfaction.

Figure 66
University Applied Research Project Satisfaction



Analysis of mean satisfaction scores by the number of completed applied research projects, as well as the length of respondents' most recent applied research project, showed no differences in overall WIL satisfaction based on the number of weeks involved in their most recent project experience. There was one statistical difference based on number of completed projects, though the difference is so minor that it does not have practical significance and is not noted in this report.

University applied research projects generally included the following characteristics (see Table H18 in Appendix H):

- The projects were typically about 16 weeks in length and averaged about 15 hours per week.
- About two-thirds of university applied research projects were completed on-campus (66%). The remaining projects were completed for community or non-profit organizations (11%), health sector employers (7%), private sector employers (6%), and government sector employers (5%). About 5 per cent of

university applied research projects were carried out in a simulated work environment.

- University students were unlikely to be paid for applied research projects. However, 21 per cent received a salary and 10 per cent received an honorarium or stipend.
- University applied research projects were most often evaluated by university faculty or staff (77%). Employers were involved in 29 per cent of university research project evaluations. Just 9 per cent of students engaged in self-evaluation and 12 per cent said their projects were not evaluated.
- Two-thirds of university applied research projects received letter or number grades (65%), and another 5 per cent of university research projects were graded pass/fail or satisfactory/unsatisfactory. Project completion was required for 3 per cent of university research projects. More than one-quarter of respondents (27%) did not receive any academic recognition for their project.
- 4 per cent of university applied research projects were completed in French.

University Applied Research Project Motivations, Benefits and Challenges

Of the 217 respondents who only participated in university applied research projects, 36 per cent identified their experience as mandatory and 12 per cent indicated that they could apply for professional accreditation following program completion.

Only two motivations were viewed as quite or very influential by these respondents and both were employment-related: gaining practical work experience and résumé enhancement. (See Tables H19 to H21 in Appendix H).

While university participants in applied research projects viewed the experience as valuable, they did not express strong agreement with any of the WIL benefit statements.

The top challenges for university students who participated in applied research projects were related to time and cost pressures, in particular additional time demands, lack of payment, and balancing the project with family commitments. These students also identified the school-related challenges of insufficient preparation from the university, and lack of relevant theory/skills.

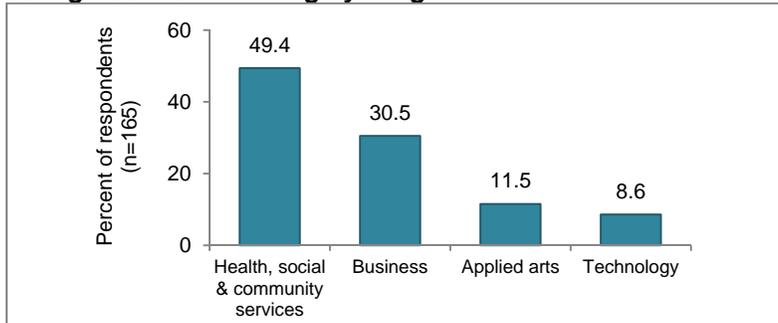
3.6 Service Learning

College Service Learning

Service learning was the least common type of college WIL, identified by 3.8 per cent of all college survey respondents.

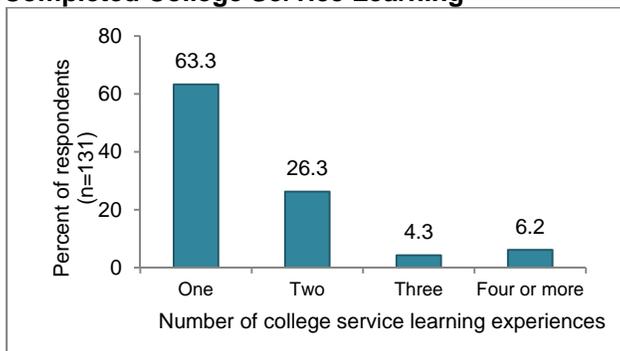
Administrative records were used to identify the program areas of respondents who had already participated in service learning or indicated that they would be participating in service learning prior to graduation. Half of all college students involved with service learning were enrolled in health, social and community services (49%), and close to one-third were in business programs (31%). About one in ten were enrolled in applied arts (12%) and 9 per cent were in technology programs.

Figure 67
College Service Learning by Program



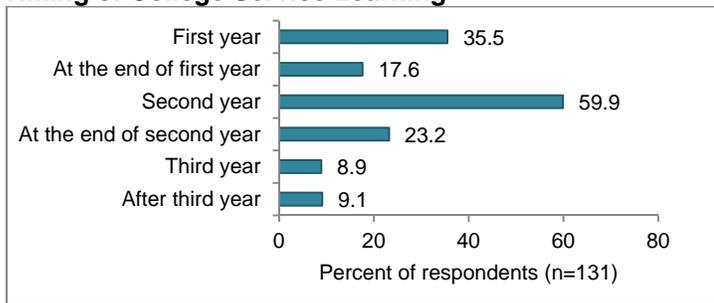
College service learning students included 15.9 per cent who had not yet participated in service learning, but would be before they graduated. Students who had already participated in service learning were asked to indicate the timing of their experience in relation to their program. Close to two-thirds of college students (63%) participated in a single service learning experience, and 26 per cent participated twice.

Figure 68
Completed College Service Learning



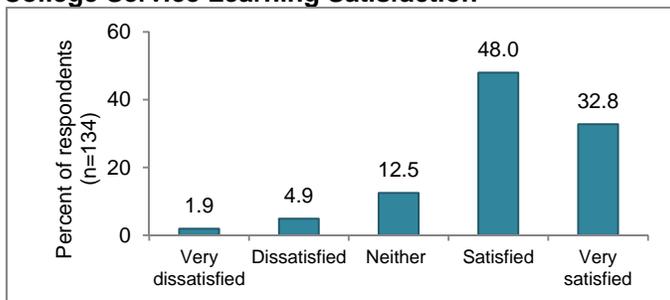
College students were most likely to participate in service learning during their second year of study (59%), although more than one-third of college students did service learning during their first year (36%). About one out of five college students had a service learning experience between first and second year (18%) and almost one-quarter did service learning after the second year of their program (23%).

Figure 69
Timing of College Service Learning



College students who participated in service learning were generally quite satisfied with their experience, ascribing a mean satisfaction score of 4.05 (see Table H26 in Appendix H). Almost half of college students rated their overall service learning experience as satisfactory (48%), and another one-third rated it as very satisfactory (33%). Only 7 per cent of respondents expressed any degree of dissatisfaction with college service learning.

Figure 70
College Service Learning Satisfaction



Analysis of mean satisfaction scores by the number of completed service learning experiences, as well as the length of respondents' most recent service learning experience, showed no significant differences between college students in their overall WIL satisfaction – regardless of service learning number and duration.

College service learning experiences generally included the following characteristics (see Table H22 in Appendix H):

- The experiences were typically about 12 weeks in length and averaged about 15 hours per week.
- The majority of college service learning was delivered in partnership with community or non-profit sector employers (54%), and another one-quarter of college students (23%) participated in service learning on campus. Service learning was much less frequent in private sector settings (9%), health care settings (9%), or the government sector (4%). Two per cent of college students experienced service learning in a simulated environment.
- About nine out of ten college students were not compensated for service learning (88%). Another 7 per cent received a salary and 5 per cent received an honorarium or stipend.
- College service learning often involved college faculty or staff in the evaluation (54%), but was almost as likely to involve the host employers (47%). About one-third of college students (31%) engaged in self-reflection on their experience. One out of five college service learning students did not receive any evaluation.
- For almost half of college service learning students, participation was recognized by a letter or number grade (45%), and another 17 per cent received grades of pass/fail or satisfactory/unsatisfactory. Completion was the only requirement for 16 per cent of college service learning experiences and for 22 per cent of students, no academic recognition was given.

College Service Learning Motivations, Benefits and Challenges

Only 35 respondents identified service learning as the only type of WIL in which they participated. Of these, 33 per cent reported that the service learning experience was mandatory and 15 per cent said they could apply for professional accreditation following program completion.

Two of the top five motivations considered to be quite or very influential by these respondents were related to community service (contribute to my community and help people in need). Other motivations were employment-related (making job search contacts and résumé enhancement) and determining career/industry fit (see Tables H23 to H25 in Appendix H).

College participants in service learning saw the experience as helping them mature as a person, improve their ability to get along with people, clarify career goals, improve their interview and job-seeking skills, and enabled them to apply classroom theories and skills to the real world. They viewed their service learning experience as valuable and felt more confident about job prospects.

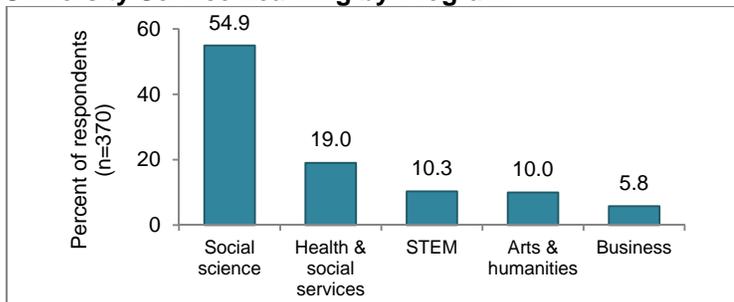
The top challenges for college students who participated in service learning were primarily school-related (lack of appropriate placement, lack of relevant theory/skills, insufficient preparation, insufficient support from the college, and lack of opportunities to integrate service learning back into the classroom), as well as time and cost pressures (unexpected financial costs, lack of payment, additional time demands, inadequate payment, and balancing service learning with family commitments). These respondents also mentioned the workplace-related challenges of boring work and disorganized work environment.

University Service Learning

Service learning was also the least common type of university WIL, identified by 5.8 per cent of all university survey respondents.

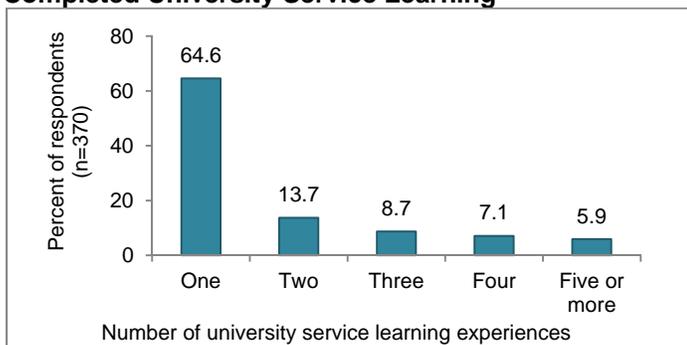
Administrative records were used to identify the program areas of respondents who had already participated in service learning or indicated that they would be participating in service learning prior to graduation. The majority of university students involved with service learning were enrolled in the social sciences (55%). About one out of five was in health sciences or social services (19%). Similar proportions were in STEM programs (10%) or arts and humanities (10%), and 6 per cent were in business programs.

Figure 71
University Service Learning by Program



About one in ten university service learning students (9.1%) indicated that they had not yet participated in service learning but would be before graduation. Students who had already participated in service learning were asked to indicate the timing of their experience in relation to their program. As shown in the figure below, about two-thirds of university students had participated in a single service learning experience (65%), and another 14 per cent participated twice.

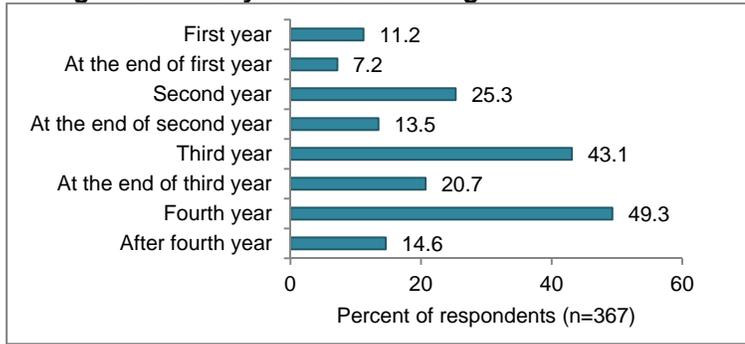
Figure 72
Completed University Service Learning



About half of university service learning students experienced service learning during the fourth year of their program (49%), but almost as many did service learning during third

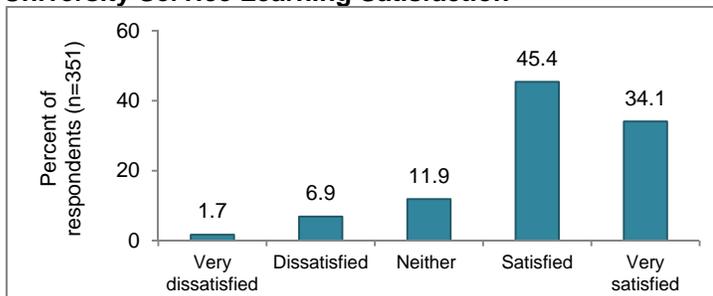
year (43%). About one-quarter of respondents did service learning during their second year of study (25%), and one in ten experienced service learning as a first-year student (11%).

Figure 73
Timing of University Service Learning



University respondents expressed fairly high levels of satisfaction with their overall service learning experience, ascribing a mean satisfaction score of 4.03 (see Table H26 in Appendix H). More than one-third of university respondents said they were very satisfied (34%), and another 45 per cent were satisfied. Only 9 per cent of respondents expressed any degree of dissatisfaction.

Figure 74
University Service Learning Satisfaction



Analysis of mean satisfaction scores by the number of completed service learning experiences, as well as the length of respondents' most recent service learning experience, showed no significant differences between university students in their overall WIL satisfaction – regardless of service learning number and duration.

University service learning experiences generally included the following characteristics (see Table H22 in Appendix H):

- The experiences were typically about 12 weeks in length and averaged just less than 14 hours per week.
- Two-thirds of university service learning was delivered in partnership with community or non-profit sector employers (65%). Another 15 per cent of

university students participated in service learning in an on-campus setting. Though less frequent, service learning programs were also provided in health care settings (9%), government settings (5%), and private sector settings (3%). Two per cent of university students experienced service learning in a simulated environment.

- About nine out of ten university students were not compensated for service learning (89%). Another 8 per cent received a salary and 3 per cent received an honorarium or stipend.
- University faculty or staff were often involved in the evaluation of service learning (47%), as were the host employers (43%). About one-quarter of university students (25%) engaged in self-reflection on what they had learned, and almost as many students were not evaluated (23%).
- Almost two out of five university students (38%) did not receive academic recognition for their service learning experiences. One-third of university service learning students received a letter or number grade for their participation (32%) and 14 per cent were graded as pass/fail or satisfactory/unsatisfactory. Completion was the only requirement for 16 per cent of university service learning experiences.
- Six per cent of service learning programs were completed in French. Notably, 4 per cent were completed in languages other than English or French.

University Service Learning Motivations, Benefits and Challenges

Of the 174 respondents who indicated that they only participated in university service learning, 26 per cent identified the service learning experience as mandatory, and 10 per cent said they could apply for professional accreditation following program completion.

Only two motivations were considered by these respondents to be quite or very influential: résumé enhancement and helping people in need (see Tables H23 to H25 in Appendix H).

While university participants in service learning strongly agreed about that the experience was valuable, they did not associate service learning with any particular benefits.

The top challenges for university service learning students were time and cost pressures (additional time demands and lack of payment) and school-related (lack of opportunities to integrate service learning back into the classroom, lack of relevant theory/skills, and insufficient preparation from the university). These respondents also mentioned the workplace-related challenges of not enough work, disorganized work environment, and lack of connection with co-workers.

Conclusion

Conducted as part of a multi-phase study on work-integrated learning, the results of the Graduating Student Survey on Learning and Work provide the first comprehensive picture of Ontario students' experiences with, and perceptions of, postsecondary WIL programs, and add depth to the research conducted during previous phases of this study. That research identified a range of potential benefits to Ontario college and university students through participation in work-integrated learning programs (Sattler, 2010; Peters, 2011), including:

- Career exploration
- Establishment of employment contacts and improved prospects for employment
- Opportunities to apply theory to practice in real work settings
- Opportunities to experience a professional work environment and gain a better understanding of work realities
- Development of marketable skills
- Personal growth
- Increased civic engagement
- Financial compensation
- Increased self-confidence
- Enhanced postsecondary experiences

At the same time, the research revealed some ambivalence among postsecondary faculty about the impact of WIL on academic engagement and learning outcomes (Peters, 2011). And despite the willingness of Ontario employers to offer higher starting salaries to WIL graduates, the research also suggested that Ontario employers did not perceive WIL as contributing significantly to students' skill development (Sattler and Peters, 2012).

The results of the Graduating Student Survey on Learning and Work reinforce these earlier findings, and echo many of the conclusions reported in the academic literature about motivations and barriers to WIL involvement, and outcomes associated with postsecondary WIL participation. At the same time, this study offers new evidence-based insights about the impact of WIL on students and the delivery of postsecondary WIL programs. It also addresses gaps in the published research that draw conclusions based on qualitative studies or empirical research conducted with small samples and without reporting effect sizes.

Overall, the survey shows that WIL programs are popular options for the students attending the 13 institutions included in the analysis. Close to 70 per cent of college students and almost half of university students reported participating in at least one type of WIL, with about one-quarter of students reporting multiple WIL experiences. Levels of participation varied across WIL programs, with field placements the most common type of WIL among college respondents, and practicums or clinical placements, followed by co-operative education and internships, the most common types of university WIL. While four out of five college WIL students described their WIL participation as mandatory, half of the university students who participated in WIL did so voluntarily. All WIL students ascribed high value to their experience, regardless of WIL type or program area. Almost

all students expressed high levels of satisfaction with their specific WIL program, regardless of the number of weeks involved and the number of WIL experiences. The single exception was college applied research projects, which were rated somewhat lower in satisfaction.

More than 40 per cent of college students and half of university students who did not participate in WIL indicated that they would do so if they could start their PSE over again, providing a further demonstration of the popularity of postsecondary WIL programs. These “would-be” WIL students were particularly enthusiastic about the potential value-added of WIL participation, especially increased earning potential, getting a job with the WIL employer, and earning money. Working in a position of greater responsibility was another strong motivation for college “would-be” WIL students, while university “would-be” WIL students viewed WIL as offering opportunities to make job search contacts, experience a professional work environment, explore career options, and apply classroom theory and skills.

Although the literature suggests that WIL is less accessible to certain groups of students – such as visible minorities, international students, and women – this finding was not supported in the results of this study. Logistic regression found that visible minority students were equally likely to participate in WIL when controlling for other variables. At the university level, immigrant students were more likely to participate in WIL programs. Among college students, mature learners and women were also more likely to participate in WIL, as well as students with above-average debt loads. While not noted in the literature, parental education appeared to have an impact on WIL participation, with first-generation students at both college and university found to be less likely to participate in WIL than students whose parents had attended postsecondary education.

Numerous studies have reported gaining career-related experience, improving career decision-making, and trying out potential careers as primary motivations for students to participate in WIL, as well as applying classroom theory and skills to the workplace. Reinforcing these findings, the survey results show that gaining practical work experience, résumé enhancement, improving employability skills, and determining their fit with a potential career or industry were influential reasons for college and university students to participate in WIL. Both college and university WIL students saw clarifying career interests and influencing their career goals as the top benefits of WIL participation. More than college students, university WIL students also viewed increased personal maturity as a key benefit of WIL participation. Additional motivations for college WIL students included an interest in applying classroom theory and skills to the workplace, exposure to a professional work environment, and developing a network of job search contacts. Additional benefits gained by college WIL students included opportunities to apply classroom theories to the work environment, and increased confidence about career prospects.

Survey results confirmed financial benefits as particularly influential for co-op programs. Earning money was a much stronger motivator for WIL participation among co-op students, especially at the university level. Co-op students were more likely than all other WIL students to agree that their primary reasons for WIL participation were financial (although their overall agreement with this statement was low). While co-op participation appeared to offer financial advantages to university co-op students – as suggested by

their lower mean expected debt loads and reduced likelihood of carrying above-average amounts of debt – the results were quite different for college co-op students, who reported higher than average debt loads compared to non-WIL students. The analysis presented in this report suggests that other WIL programs may in fact increase financial pressures for both college and university students, especially those participating in practicums or clinical placements.

Most college and university respondents reported some involvement in the labour market, through paid employment or volunteer activities. Volunteering was viewed as more useful than paid employment as a means of gaining program-related experience, with the majority of voluntary activities related to students' program of study. Reinforcing other academic studies reviewed in the literature, the survey found that PSE students who participated in paid employment viewed their experience as valuable. While financial gain was an important motivation, these students also perceived increased personal maturity and improved interpersonal skills as key benefits of labour market participation. PSE students who volunteered expressed strong agreement about the value of their experience, and also reported increased personal maturity and improved ability to get along with people.

When WIL benefits were compared to the benefits of labour market experiences, students ascribed significantly greater value to their WIL participation. Paired t-test results for students who participated in both WIL and the labour market showed that WIL had a greater impact than paid employment on helping students understand their career interests, influencing their career goals, and increasing their confidence about future job prospects. In addition, WIL experiences were also considered to be more relevant to theories learned in the classroom. Paired t-test results for college students also showed that WIL was rated higher than paid employment in providing students with job search contacts, which was a key motivation for college students' participation in WIL. Financial gain was the only benefit more strongly associated with paid employment than WIL.

While the planned follow-up study to the Graduating Student Survey on Learning and Work will evaluate the effectiveness of WIL in helping students transition to the labour market and its impact on employment, the present survey aimed to assess the impact of WIL on postsecondary outcomes, as well as student satisfaction with the quality of their postsecondary education. Five specific outcome areas were explored: employability skills, personal growth and development, critical reflection, civic responsibility and self-efficacy. College WIL students rated the quality of their PSE significantly higher than non-WIL college students on all five scales. University WIL students gave significantly higher quality ratings on the self-efficacy, civic responsibility and employability skills scales, but were similar to non-WIL university students on perceived personal growth and critical reflection outcomes. Despite the statistical significance of these findings, effect sizes were very small, indicating that WIL has only limited impact on postsecondary outcomes. While participation in WIL was also associated with significantly higher overall PSE satisfaction, the conclusiveness of this result is again limited by small effect sizes.

Policy Recommendations

High levels of student interest and participation in postsecondary WIL programs, the endorsement of both industry associations and career development practitioners for the economic and human capital benefits of WIL, and government policy proposals to expand WIL programs suggest that work-integrated learning is here to stay as a vital component of a postsecondary program of study. The findings from this study provide evidence of the value students place on WIL participation, and offer insights into actions and policy changes that could be considered to strengthen the delivery of WIL within Ontario colleges and universities.

1. Ensure that the value proposition that students associate with WIL is addressed in the design and delivery of WIL programs.

Whether a “would-be” WIL student or an actual WIL participant, the motivations and perceived benefits presented in this survey provide insights into student expectations for WIL programs and the goals they hope to achieve by participating in WIL. Student interests in WIL are driven by a desire to gain practical work experience and improve the transition from PSE to the labour market. Students who participate in both WIL and the labour market see WIL as more effective than paid employment in facilitating career exploration, increasing their confidence about future job prospects, and enabling the application of classroom theories to the work environment. Leveraging these perceived value propositions in promotional materials and providing evidence of how WIL programs can help students achieve their goals should be important considerations in institutional WIL marketing, with specific reference to the differences in motivations, benefits and challenges across types of WIL and program areas.

2. Provide clear information to students about the requirements of WIL participation and the institutional supports available, and consider greater flexibility in academic schedules to accommodate WIL programming.

One-third of college students who did not participate in WIL and more than one-quarter of non-WIL university students were unsure whether they would do WIL if they could start PSE over again. In addition, uncertainty about WIL requirements was cited as one of the most frequent barriers to WIL participation among non-WIL students. Other barriers identified by both college and university non-WIL students were reluctance to delay program completion, worry about finding a suitable placement, and inflexible academic schedules. These findings underscore the importance of ensuring clear communication to students about what is involved in WIL participation, as well as information about the institutional supports and processes in place to help students identify suitable WIL placements. Consideration should also be given to reviewing academic program calendars to address student concerns about accommodating WIL within academic schedules, and clarify the academic implications of participation in WIL.

3. Conduct further research to understand the barriers to the participation of first-generation students in WIL programs.

Given the under-representation of first-generation students in postsecondary programs and the poorer labour market outcomes for students without postsecondary education, the finding that first-generation PSE students are less likely to participate in WIL should be a priority for further research. A clear understanding of the nature of these barriers is necessary in order to develop strategies to increase the WIL participation of first-generation PSE students.

4. Ensure greater clarity and consistency in WIL terminology and definitions across institutions.

Although the Canadian Association for Co-operative Education requires co-op students to be remunerated for the work they perform, a surprising finding from this survey was that the majority of college co-op students, and about one in ten university co-op students, received no compensation for their work term. The earlier employer survey conducted for this study also found some inconsistencies in employer understandings of co-op programs (Sattler and Peters, 2011). While using the familiar term “co-op” to describe a postsecondary WIL program can assist with marketing efforts and employer recruitment, it creates confusion for both students and employers if the program is actually a field placement or another type of WIL. Ministry involvement in negotiating agreement across the postsecondary sector to standardize WIL terminology and clarify the definitions for each type of WIL would improve student, employer and faculty understanding of the terms, expectations, responsibilities and procedures associated with specific WIL programs. Efforts undertaken at the institutional level to provide WIL orientation sessions for students, faculty and staff would also help to enhance internal consistency in how WIL programs are presented and delivered within individual colleges and universities.

5. Consider the establishment of scholarships or other forms of financial assistance to support student participation in WIL programs, particularly at the college level, and conduct research on the effectiveness of wage subsidies as a means of enabling more employers to compensate WIL students.

The literature identified inadequate compensation as one of the most frequent challenges experienced by WIL students. Consistent with this finding, not getting paid was reported by both college and university survey respondents as the most significant challenge they faced, and concerns about costs or expenses associated with WIL participation were identified as barriers by non-WIL survey respondents at both the college and university levels. Given that participation in most college WIL programs is mandatory, it is not surprising that financial challenges and barriers tended to be greater for college students than university students. Unexpected financial costs were identified as one of the top WIL challenges by college students, and concern about the costs involved, lack of payment and insufficient payment were also identified as key barriers to college WIL participation. This greater financial sensitivity among college students is consistent with other findings reported in this study about the higher debt loads of college WIL students compared to non-WIL students, and the increased incidence of debt among college internship, field

placement, practicum and co-op students. However, further research is needed to more thoroughly investigate the relationship between WIL participation and college debt. Employer respondents to the WIL Employer Survey recommended financial assistance – which could include wage subsidies for WIL students – as a key strategy to increase employer participation in WIL programs (Sattler and Peters, 2012). Research into the effectiveness of wage subsidies should be conducted to assess the impact of this type of assistance in enabling more WIL employers to compensate WIL students, as a means of addressing the financial challenges experienced by WIL students as well as engaging more employers in WIL.

6. Enhance the meaningful integration of work and learning at the institutional level, particularly at Ontario universities, by strengthening institutional services and offering professional development and support to faculty interested in offering WIL programs.

In addition to the lack of payment, two of the top three challenges experienced by university WIL students were associated with institutional delivery of the WIL program: insufficient preparation prior to their WIL experience, and difficulty relating classroom theories to the workplace. For college WIL students, school-related challenges were identified next after time and cost pressures as the most frequent concerns about their WIL experiences. This finding departs from the literature, which placed greater emphasis on challenges related to the work assigned during the WIL experience. Given the strong interest expressed by postsecondary faculty in maintaining or expanding WIL programs (Peters, 2011), and the importance of supportive postsecondary faculty and staff to the WIL learning process (Weisz and Smith, 2005), efforts should be made to maximize the learning benefits of WIL programs by providing professional development and support for faculty interested in offering WIL. This includes developing relevant classroom curricula that engage WIL students in thinking critically about the work environment, adequate preparation for WIL students before they begin their experience, appropriate support for WIL students throughout their program, and the provision of meaningful opportunities for students to share what they learned when they return to the classroom. School-related issues were more salient for both college and university co-op students, college service learning students, and university interns. Finally, more attention must be paid to engaging students in critical reflection on their WIL experience. A noteworthy finding from the WIL profiles is that relatively few students were encouraged to reflect on their WIL participation and conduct a self-evaluation of their experience, with self-reflection highest among practicum students, at about 40 per cent, and lowest among university applied research participants, at only 9 per cent.

References

- Abeysekera, I. (2006). Issues relating to designing a Work-Integrated Learning (WIL) program in an undergraduate accounting degree program and its implications for the curriculum. *Asia-Pacific Journal of Cooperative Education*, 7(1), 7-15.
- Advisory Panel on Online Public Opinion Survey Quality. 2008. *The Advisory Panel on Online Public Opinion Survey Quality: Final Report*. Ottawa: Public Works and Government Services Canada.
- Australian Council for Educational Research (ACER). (2008). *Attracting, Engaging and Retaining: New Conversations About Learning*. Australasian Student Engagement Report. Victoria: ACER.
- Aggett, M., and Busby, G. (2011). Opting out of internship: Perceptions of hospitality, tourism and events management undergraduates at a British University. *Journal of Hospitality, Leisure, Sport and Tourism Education*, 10(1), 106-113.
- Ball, C., Collier, H., Mok, P., and Wilson, J. (2006). *Research into barriers to work placements in the retail sector in the South East*. Retrieved from www.work-experience.org/assets/assets/documents/Barriers_Final_Report.pdf
- Bell, D., and Benes, K. (2012). *Transitioning graduates to work: Improving the labour market success of poorly integrated new entrants (PINEs) in Canada*. Ottawa: Canadian Career Development Foundation.
- Billet, S. (2009). *Developing agentic professionals through practice-based pedagogies*. New South Wales, Australia: Australian Learning and Teaching Council.
- Blair, B., and Millea, M. (2004). Student academic performance and compensation: The impact of cooperative education. *College Student Journal*, 38, 643-652.
- Bullock, K., Gould, V. Hejmadi, M., and Lock, G. (2009). Work placement experience: Should I stay or should I go? *Higher Education Research & Development*, 28(5), 481-494.
- Callanan, G., and Benzing, C. (2004). Assessing the role of internships in the career-oriented employment of graduating college students. *Education + Training*, 46(2), 82-89.
- Canadian Chamber of Commerce. (2012). *Skills development discussion paper*. Ottawa: Canadian Chamber of Commerce.
- Canadian Council on Learning (CCL). (2007). *An Exploration of Work and Learning Opportunities in New Brunswick*. Retrieved from www.ccl-cca.ca/NR/rdonlyres/1FA592B2-9F50-49A7-870A-971A1A108511/0/NBProjectWLPProjectReport_EN.pdf

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

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

Cook, S., Parker, R., and Pettijohn, C. (2004). The Perceptions of Interns: A Longitudinal Case Study. *Journal of Education for Business*, 79(3), 179-185.

Crebert, G., Bates, M., Bell, B., Patrick, C., and Cragnolini, V. (2004). Developing generic skills at university, during work placement and in employment: graduates' perceptions. *Higher Education Research & Development*, 23(2), 147-165.

Cullen, M. (2008). Factors associated with learning outcomes from cooperative education in environmental science. WACE/ACEN Asia Pacific Conference 2008 E-Proceedings, pp. 126-132. Retrieved from http://surreyprofessionaltraining.pbworks.com/f/WACE_ACEN_Asia_Pacific_Conference_2008_E-Proceedings-1.pdf

Curtis, S., and Lucas, R. (2001). A coincidence of needs? Employers and full-time students. *Employee Relations*, 23(1), 38-54.

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

Dodge, R., and McKeough, M. (2003). Internship and the Nova Scotia experience. *Education & Training*, 45(1), 45-55.

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

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

Drummond, D., Giroux, D., Pigott, S., and Stephenson, C. (2012). *Commission on the Reform of Ontario's Public Services*. Toronto: Queen's Printer for Ontario. Retrieved from www.fin.gov.on.ca/en/reformcommission/

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

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

Elfrink, V., Kirkpatrick, B., Nininger, J., and Schubert, C. (2010). Using Learning Outcomes to Inform Teaching Practices in Human Patient Simulation. *Nursing Education Perspectives*, 31(2), 97-100.

Eyler, J., Giles, D., Stenson, C., and Gray, C. (2001). *At A Glance: What We Know about the Effects of Service-Learning on College Students, Faculty, Institutions and Communities, 1993-2000, 3rd Ed.* Nashville, TN: Vanderbilt University.

Freestone, R., Thompson, S., and Williams, P. (2006). Student Experiences of Work-Based Learning in Planning Education. *Journal of Planning Education and Research*, 26, 237-249.

Freudenberg, B., Brimble, M., and Cameron, C. (2010). Where there is a WIL there is a way. *Higher Education Research & Development*, 29(5), 575-588.

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

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

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

Goho, J., and Rew, D. (2009). Effects of Cooperative Education on Community College Employment Outcomes at the School to Work Transition. *Journal of Applied Research in the Community College*, 16(2), 83-91.

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

Haddara, M., and Skanes, H. (2007). A Reflection on Cooperative Education: From Experience to Experiential Learning. *Asia-Pacific Journal of Cooperative Education*, 8(1), 67-76.

Harvey, L., Geall, V., and Moon, S. (1998). *Work experience: Expanding opportunities for undergraduates.* Birmingham, UK: Centre for Research into Quality. Retrieved from www0.bcu.ac.uk/crq/publications/we/wecon.html

Harvey, L., Moon, S., and Geall, V. (1997). *Graduates' Work: Organisational change and students' attributes.* Birmingham, UK: Centre for Research into Quality. Retrieved from www0.bcu.ac.uk/crq/publications/gw/index.html

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

Higher Education Quality Council of Ontario (HEQCO). (2012). *For today's high school students, higher education is all about the job* [Press release]. Retrieved from www.heqco.ca.

Hills, J. (2004). *The barriers to the take-up of sandwich and other work placements by inner city multi-ethnic students*. London: London Metropolitan University. Retrieved from www.londonmet.ac.uk/library/u77014_3.pdf

Ipsos Reid. (2010). *Canadian Post-Secondary Education: Impact of Co-op Education Programs*. Retrieved from www.cafce.ca/files/ResearchIpsos2010.pdf

Katula, R., and Threnhauser, E. (1999). Experiential education in the undergraduate curriculum. *Communication Education*, 48(3), 238-255.

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

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

Lee, S. (2008). Increasing Student Learning: A Comparison of Students' Perceptions of Learning in the Classroom Environment and their Industry-Based Experiential Learning Assignments. *Journal of Teaching in Travel & Tourism*, 7(4), 37-54.

Lent, R., Brown, S., and Hackett, G. (1994). Toward a Unifying Social Cognitive Theory of Career and Academic Interest, Choice, and Performance. *Journal of Vocational Behavior*, 45, 79-122.

Little, B., and Harvey, L. (2006). *Learning through work placements and beyond. A report for the Higher Education Careers Service Unit and the Higher Education Academy's Work Placements Organisation Forum*. England: Centre for Research and Evaluation, Sheffield Hallam University.

Lucas, W., Cooper, S., Ward, T., and Cave, F. (2009). Industry placement, authentic experience and the development of venturing and technology self-efficacy. *Technovation*, 29(11), 738-752.

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

- Mandilaras, A. (2004). Industrial Placement and Degree Performance: evidence from a British Higher Institution. *International Review of Economics Education*, 3(1), 39-51.
- Marshall, K. (2010). Employment patterns of postsecondary students. *Perspectives*. Ottawa: Statistics Canada.
- Ministry of Training, Colleges and Universities (MTCU). (2012). *Strengthening Ontario's Centres of Creativity, Innovation and Knowledge*. Toronto: Queen's Printer for Ontario. Retrieved from www.tcu.gov.on.ca/pepg/publications/DiscussionStrengtheningOntarioPSE.pdf
- Motte, A., and Schwartz, S. (2009). *Are Student Employment and Academic Success Linked?* Millennium Research Note No. 9. Millennium Scholarship Foundation. Retrieved from http://qspace.library.queensu.ca/bitstream/1974/5817/1/090415_Student_Employment_RN9.pdf
- Morgan, H. (2006). Why students avoid sandwich placements. *Education in a Changing Environment, Conference Proceedings*, University of Salford, England. Retrieved from www.ece.salford.ac.uk/proceedings/papers/hm_06.rtf
- Mpofu, E. (2007). Service-Learning Effects on the Academic Learning of Rehabilitation Services Students. *Michigan Journal of Community Service Learning*, 14(1), 46-52.
- Myers-Lipton, S. J. (1998). Effect of a comprehensive service-learning program on college students' civic responsibility. *Teaching Sociology*, 26(4), 243-258.
- Parker-Gwin, R., and Mabry, J. B. (1998). Service learning as pedagogy and civic education: Comparing outcomes for three models. *Teaching Sociology*, 26(4), 276-291.
- Parks, D., Onwuegbuzie, A., and Cash, S. (2001). Development of a measure for Predicting Learning Advancement through Cooperative Education: Reliability and Validity of the PLACE Scale. *Journal of Cooperative Education*, 36(1), 23-31.
- Patrick, C., Peach, D., and Pocknee, C. (2008). *The WIL [Work Integrated Learning] report: A national scoping study [Australian Learning and Teaching Council (ALTC) Final report]*. Brisbane: Queensland University of Technology. Retrieved from www.acen.edu.au/images/project/wil_report_web_22jan09.pdf
- Peters, J. (2011). *Faculty Experiences with and Perceptions of Work-Integrated Learning (WIL) in the Ontario Postsecondary Sector*. Toronto: Higher Education Quality Council of Ontario.
- Rawlings, P., White, P., and Stephens, R. (2005). Practice-Based Learning in Information Systems: the Advantages for Students. *Journal of Information Systems Education*, 16(4), 455-463.
- Reeders, E. (2000). Scholarly practice in work-based learning: Fitting the glass slipper. *Higher Education Research and Development*, 19(2), 205-220.

Riggert, S., Boyle, M., Petrosko, J., Ash, D., and Rude-Parkins, C. (2006). Student Employment and Higher Education: Empiricism and Contradiction. *Review of Educational Research*, 76(1), 63-92.

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

Sattler, P. (2011). *Work-Integrated Learning in Ontario's Postsecondary Sector*. Toronto: Higher Education Quality Council of Ontario.

Schambach, T., and Kephart, D. (1997). Do I/S Students Value Internship Experiences? *Proceedings of the 12th Annual Conference of the International Academy for Information Management*, Atlanta, GA, December 12-14.

Scott, G. (2005). *Accessing the Student Voice: Using CEQuery to identify what retains students and promotes engagement in productive learning in Australian higher education*. Retrieved from www.uws.edu.au/__data/assets/pdf_file/0010/63955/HEIPCEQueryFinal_v2_1st_Feb_06.pdf

Subramaniam, N., and Freudenberg, B. (2007). Preparing accounting students for success in the professional environment: enhancing self-efficacy through a work integrated learning program. *Asia-Pacific Journal of Cooperative Education*, 8(1), 87-102.

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

Trimble, K., and Butler, K. (2004). *Regional Internship Center: Student Internship Survey*. Pennsylvania: Coro Center for Civic Leadership.

UsalCAS, J., and Bowlby, G. (2006). Students in the labour market. *Education Matters*, 3(1). Ottawa: Statistics Canada.

Walker, F., and Ferguson, M. (2009). *Approaching placement extinction? Exploring the reasons why placement students are becoming a rare breed at the University of Central Lancashire: Work in progress*. Preston, UK: University of Central Lancashire.

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

Weisz, M. (2001). *The added value of a cooperative education program*. (Doctoral dissertation, School of Management, RMIT Business). Retrieved from researchbank.rmit.edu.au/eserv/rmit:9557/Weisz.pdf

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

Willis, J. (2008). Why do some students opt out of professional training? WACE/ACEN Asia Pacific Conference 2008 E-Proceedings, pp. 642-648. Retrieved from http://surreyprofessionaltraining.pbworks.com/f/WACE_ACEN_Asia_Pacific_Conference_2008_E-Proceedings-1.pdf

Appendices

Appendix A – Response Rate

MRIA has proposed the following calculations for response rates for online surveys:

- Contact Rate = $(d + e + f + h) / c$
- Success Rate = $(d + f + h) / c$

Where:

- a = Total invitations (broadcast or pop-ups)
- b = Undeliverables (nil in pop-ups)
- c = Net usable invitations ($c = a - b$)
- d = Total completes
- e = Qualified break-offs
- f = Disqualified
- g = Not responded
- h = Quota filled

The table below provides the survey contact summary, as well as the response rate calculations. Results are presented separately for college and university, as well as overall.

Contact Summary and Response Rate Calculations

	College	University	Total
Total invitations	23,892	24,154	48,046
Undeliverables	272	227	499
Net usable invitations	23,620	23,927	47,547
Total completes	4475	5852	10,327
Qualified break-offs	451	484	935
Disqualified	294	105	399
Not responded	18,400	17,486	35,886
Quota filled	NA	NA	NA
Contact rate	22.1%	26.9%	24.5%
Success rate	20.2%	24.9%	22.6%

Appendix B – Respondent Profiles

Table B1
College Demographic Characteristics

		%
Gender (n=4419)	Male	42.4
	Female	57.6
Age (n=4338)	17-19	14.0
	20-24	56.1
	25-29	15.7
	30+	14.2
Marital status (n=4301)	Single	83.4
	Married/common-law	14.1
	Divorced/separated/widowed	2.5
Dependent children (n=4446)	No children	88.2
	Have dependent children	11.8
Visible minority (n=4296)	Not Aboriginal or visible minority	65.8
	Visible minority	31.3
	First Nations, Métis or Inuit	2.9
Ethnicity (n=4292) (Multiple response)	Caucasian/White	68.8
	Black (for example African, Haitian, Jamaican, Somali, etc.)	7.0
	South Asian (for example, East Indian, Pakistani, Punjabi, Sri Lankan, etc.)	6.9
	Chinese	5.1
	Latin American	3.8
	Filipino	2.9
	First Nations, Métis or Inuit	2.9
	Arab (for example, Egyptian, Lebanese, Moroccan, etc.)	2.0
	Southeast Asian (for example, Vietnamese, Cambodian, Indonesian, Laotian, etc.)	2.0
	West Asian (for example, Afghan, Iranian, Turk, etc.)	1.4
	Korean	1.2
Japanese	0.4	
Status in Canada (n=4421)	Born in Canada	76.0
	Immigrant (moved to Canada in 2006 or earlier)	14.8
	Recent immigrant (moved to Canada in 2007 or later)	3.9
	International student	5.3
Disabilities (n=4354)	No	89.5
	Yes	10.5
First generation (n=4213)	No	66.1
	Yes	33.9
Moved to attend postsecondary (n=4437)	No	64.0
	Yes	36.0
Region (n=3834)	Central Ontario	42.0
	Greater Toronto Area (GTA)	23.5
	Eastern Ontario	19.2
	Southwestern Ontario	4.4
	Northern Ontario	1.4
	Out of province	2.5
	International	7.1

Table B2
College Academic Characteristics

		%
Program area (n=4328)	Health, social and community services	32.8
	Business	29.2
	Applied arts	25.3
	Technology	12.7
CGPA (n=4359)	80% or above (mainly A's)	31.6
	70-79% (mainly B's)	51.7
	60-69% (mainly C's)	14.7
	50-59% (mainly D's)	2.1
Credential (n=4416)	Trade, vocational or apprenticeship certificate/diploma	0.1
	One-year college certificate	19.5
	Two-year college diploma	58.9
	Three-year advanced college diploma	18.6
	College degree	3.0
Entry status (n=4475)	Applying directly from high school	30.0
	Applying one or more years after leaving or completing high school	25.3
	Applying after having attended or completed another PSE program	28.6
	Applying from the workforce and planning for a new career	16.1
Enrolment status during PSE (n=4450)	Full-time student	94.7
	Part-time student	2.3
	A combination of full-time and part-time	2.9

Table B3
College Financial Characteristics

		%
Expect to owe any debt that must be repaid (n=4245)	Yes	62.5
	No	37.5
Amount of debt owed (n=2556)	Mean	\$15,178.13
Debt owed compared to mean debt (n=4139)	No debt	38.4
	Below average debt (\$15,000 or less)	38.9
	Above average debt (more than \$15,000)	22.6

Table B4
College Funding Sources

Funding Sources (n=4434)	Major Source	Minor Source	Not a Source
	%		
Personal savings, employment earnings	33.7	42.2	24.2
Parent/family loans or contributions	32.8	26.2	41.0
Government student loans (Canada Student Loans, OSAP, etc.)	39.4	10.6	50.1
Scholarships, grants or bursaries (other than Second Career)	6.1	32.5	61.3
Private loans (bank loans, credit card advances, student line of credit, etc.)	10.9	12.0	77.0
Second Career grant	4.5	3.3	92.2
Other	2.8	4.9	95.1

Table B5
University Demographic Characteristics

		%
Gender (n=5774)	Male	40.9
	Female	59.1
Age (n=5744)	20-24	75.3
	25-29	15.7
	30+	9.1
Marital status (n=5691)	Single	87.1
	Married/common-law	11.7
	Divorced/separated/widowed	1.2
Dependent children (n=5833)	No	93.6
	Yes	6.4
Visible minority (n=5649)	Not Aboriginal or visible minority	65.7
	Visible minority	32.4
	First Nations, Métis or Inuit	1.8
Ethnicity (n=5643) (Multiple responses)	Caucasian/White	68.6
	Chinese	10.0
	South Asian (for example, East Indian, Pakistani, Punjabi, Sri Lankan, etc.)	7.4
	Black (for example African, Haitian, Jamaican, Somali, etc.)	5.7
	Arab (for example, Egyptian, Lebanese, Moroccan, etc.)	2.6
	Latin American	2.1
	First Nations, Métis or Inuit	1.8
	West Asian (for example, Afghan, Iranian, Turk, etc.)	1.7
	Southeast Asian (for example, Vietnamese, Cambodian, Indonesian, Laotian, etc.)	1.7
	Filipino	1.2
Status in Canada (n=5790)	Korean	1.2
	Japanese	0.3
	Born in Canada	75.1
	Immigrant (moved to Canada in 2006 or earlier)	18.8
Disabilities (n=5701)	Recent immigrant (moved to Canada in 2007 or later)	2.3
	International student	3.8
	No	94.3
First generation (n=5692)	Yes	5.7
	No	77.7
Moved to attend postsecondary (n=5823)	Yes	22.3
	No	48.3
Region (n=4662)	Yes	51.7
	Central Ontario	7.8
	Greater Toronto Area (GTA)	32.0
	Eastern Ontario	18.7
	Southwestern Ontario	23.9
	Northern Ontario	6.1
	Out of province	4.8
International	6.7	

Table B6
University Academic Characteristics

		%
Program area (n=5607)	Social sciences	38.9
	Science, technology, engineering and math (STEM)	18.9
	Health sciences and social services	15.7
	Arts and humanities	15.4
	Business	11.1
CGPA (n=5667)	90% or above (mainly A+'s)	2.6
	80-89% (mainly A's and A-'s)	29.6
	70-79% (mainly B's)	52.6
	60-69% (mainly C's)	14.9
	50-59% (mainly D's)	0.3
Entry type (n=5852)	Applying directly from high school	65.3
	Applying one or more years after leaving or completing high school	9.3
	Applying after having attended or completed another PSE program	18.7
	Applying from the workforce and planning for a new career	6.6
Enrolment status during PSE (n=5828)	Full-time student	86.2
	Part-time student	3.0
	A combination of full-time and part-time	10.8

Table B7
University Financial Characteristics

		%
Expect to owe any debt that must be repaid (n=5678)	Yes	57.3
	No	42.7
Amount of debt owed (n=3071)	Mean	\$24,729.21
Debt owed compared to mean debt (n=5576)	No debt	43.5
	Below average debt (\$25,000 or less)	34.4
	Above average debt (more than \$25,000)	22.1

Table B8
University Funding Sources

Funding Sources (n=5818)	Major Source	Minor Source	Not a Source
	%		
Personal savings, employment earnings	32.3	49.9	17.9
Parent/family loans or contributions	43.9	27.5	28.5
Scholarships, grants or bursaries (other than Second Career)	9.7	53.0	37.2
Government student loans (Canada Student Loans, OSAP, etc.)	34.3	16.6	49.2
Private loans (bank loans, credit card advances, student line of credit, etc.)	9.0	12.1	78.9
Other	2.3	4.9	92.8
Second Career grant	0.6	2.3	97.1

Appendix C – Participation in WIL

Table C1
College Participation in WIL by Selected Characteristics

		WIL	No WIL	Total
		%		
Gender (n=4419)	Male	37.8	52.2	42.4
	Female	62.2	47.8	57.6
Age (n=4338)	17-19	10.9	20.6	14.0
	20-24	56.2	55.7	56.1
	25-29	16.8	13.4	15.7
	30+	16.0	10.2	14.2
First generation PSE (n=4213)	No	66.1	66.0	66.1
	Yes	33.9	34.0	33.9
Status in Canada (n=4421)	Born in Canada	74.0	80.4	76.0
	Immigrant (moved to Canada in 2006 or earlier)	15.7	12.8	14.8
	Recent immigrant (moved to Canada in 2007 or later)	6.0	3.8	5.3
	International student	4.3	3.0	3.9
Disabilities (n=4354)	No	89.8	88.8	89.5
	Yes	10.2	11.2	10.5
Marital status (n=4301)	Single	81.7	87.1	83.4
	Married/common-law	15.4	11.2	14.1
	Divorced/separated/widowed	2.9	1.7	2.5
Dependent children (n=4446)	No	86.6	91.6	88.2
	Yes	13.4	8.4	11.8
Visible minority (n=4296)	First Nations, Métis or Inuit	2.7	3.2	2.9
	Visible minority	32.7	28.2	31.3
	Not Aboriginal or visible minority	64.5	68.6	65.8
Debt (n=4139)	No debt	37.8	39.7	38.4
	Below average debt (\$15,000 or less)	36.7	43.7	38.9
	Above average debt (more than \$15,000)	25.5	16.6	22.6
Program area (n=4328)	Applied arts	17.1	42.7	25.3
	Business	30.3	26.9	29.2
	Technology	10.7	17.0	12.7
	Health, social and community services	41.9	13.4	32.8
Entry type (n=4475)	Applying directly from high school	28.3	33.7	30.0
	Applying one or more years after leaving or completing high school	24.1	27.9	25.3
	Applying after having attended or completed another PSE program	30.6	24.4	28.6
	Applying from the workforce and planning for a new career	17.1	14.0	16.1

Table C2
University Participation in WIL by Selected Demographic Characteristics

		WIL	No WIL	Total
		%		
Gender (n=5774)	Male	40.7	41.1	40.9
	Female	59.3	58.9	59.1
Age (n=5744)	Under 25	74.3	76.2	75.3
	25-29	15.5	15.8	15.7
	30+	10.2	8.0	9.1
First generation PSE (n=5692)	No	79.4	76.2	77.7
	Yes	20.6	23.8	22.3
Status in Canada (n=5790)	Canadian-born	72.2	77.7	75.1
	Immigrant (moved to Canada in 2006 or earlier)	21.1	16.7	18.8
	Recent immigrant (moved to Canada in 2007 or later)	2.8	1.8	2.3
	International student	3.9	3.7	3.8
Disabilities (n=5701)	No	94.6	94.0	94.3
	Yes	5.4	6.0	5.7
Marital status (n=5691)	Single	86.1	88.0	87.1
	Married/common-law	12.3	11.2	11.7
	Divorced/separated/widowed	1.6	0.9	1.2
Dependent children (n=5833)	No	92.8	94.4	93.6
	Yes	7.2	5.6	6.4
Visible minority (n=5649)	First Nations, Métis or Inuit	1.8	1.9	1.8
	Visible minority	35.2	29.9	32.4
	Not Aboriginal or visible minority	63.1	68.1	65.7
Debt (n=5576)	No debt	41.8	45.1	43.5
	Below average debt (\$25,000 or less)	34.4	34.4	34.4
	Above average debt (more than \$25,000)	23.8	20.5	22.1
Program area (n=5607)	Arts and humanities	10.4	20.2	15.4
	Business	10.3	11.8	11.1
	STEM	22.0	15.9	18.9
	Health sciences and social services	22.8	9.2	15.7
	Social science	34.5	42.9	38.9
Entry type (n=5852)	Applying directly from high school	63.9	66.6	65.3
	Applying one or more years after leaving or completing high school	8.7	9.8	9.3
	Applying after having attended or completed another PSE program	20.0	17.6	18.7
	Applying from the workforce and planning for a new career	7.4	5.9	6.6

Appendix D – WIL Motivations and Benefits

Table D1
College WIL Motivations

	College WIL (n=3122)		College "Would-be" WIL (n=583)	
	Mean	Quite or Very Much (%)	Mean	Quite or Very Much (%)
Gain practical work experience	4.56	91.2	4.62	94.0
Enhance my résumé	4.33	84.6	4.46	88.8
Meet mandatory requirements	4.31	81.5	-	-
Apply theory/skills learned in the classroom	4.23	82.0	4.39	90.4
Improve employability skills	4.22	81.7	4.36	87.4
Experience a professional work environment	4.21	81.8	4.37	85.8
Make job search contacts	4.20	80.1	4.50	89.3
Determine fit with the career/industry	4.15	79.2	4.39	87.0
Get a job with the WIL employer	3.92	69.6	4.36	84.6
Work in a position with greater responsibility	3.80	67.2	4.06	75.7
Increase earning potential	3.69	63.7	4.39	85.9
Explore different career options	3.62	61.4	3.97	71.6
Help people in need	3.49	57.3	3.72	60.7
Contribute to my community	3.41	52.9	3.69	59.6
Prepare for further education	3.39	53.6	3.89	67.3
Earn money	2.50	33.4	4.09	72.3

Table D2
College WIL Motivations by Type of WIL

	Co-op (n=493)	Practicum (n=592)	Field Placement (n=638)	Internship (n=346)	Applied Research Project (n=91)	Service Learning (n=35)
	Mean					
Employment-related	4.23	4.32	4.24	4.21	3.75	3.91
Community service	3.15	3.93	3.41	2.81	2.93	4.10
Future exploration	3.73	3.77	3.66	3.58	3.43	3.88
Career progression	3.87	3.59	3.64	3.78	3.55	3.85
Earning money	3.20	1.94	2.24	2.51	2.10	2.94

Table D3
College WIL Motivations by Program

	Applied Arts (n=473)	Business (n=939)	Technology (n=264)	Health, Social & Community Services (n=1334)
	Mean			
Employment-related	4.21	4.19	4.06	4.34
Community service	2.82	3.15	3.02	4.01
Future exploration	3.56	3.74	3.52	3.81
Career progression	3.70	3.90	3.75	3.62
Earning money	2.63	2.90	3.28	1.92

Table D4
University WIL Motivations

	University WIL (n=2803)		University "Would-be" WIL (n=1480)	
	Mean	Quite or Very Much (%)	Mean	Quite or Very Much (%)
Gain practical work experience	4.48	88.1	4.62	93.7
Enhance my résumé	4.31	83.3	4.47	89.5
Improve employability skills	4.07	76.5	4.28	82.5
Determine fit with the career/industry	4.01	75.1	4.39	87.2
Experience a professional work environment	3.94	72.6	4.15	79.8
Make job search contacts	3.89	69.4	4.46	89.0
Apply theory/skills learned in the classroom	3.81	64.8	4.05	72.1
Explore different career options	3.54	59.2	4.09	74.1
Work in a position with greater responsibility	3.44	54.4	3.84	64.8
Get a job with the WIL employer	3.43	53.4	4.16	77.4
Increase earning potential	3.36	53.4	4.27	81.0
Prepare for further education	3.22	48.0	3.69	60.4
Meet mandatory requirements	3.19	50.3	-	-
Contribute to my community	3.11	42.6	3.46	50.6
Help people in need	3.05	43.6	3.56	55.8
Earn money	2.76	41.4	4.04	71.7

Table D5
University WIL Motivations by Type of WIL

	Co-op (n=477)	Practicum (n=665)	Field Placement (n=213)	Internship (n=409)	Applied Research Project (n=217)	Service Learning (n=174)
	Mean					
Employment-related	4.17	4.12	3.81	3.98	3.56	3.62
Community service	2.44	3.56	2.95	2.69	2.53	4.00
Future exploration	3.72	3.46	3.51	3.61	3.57	3.44
Career progression	3.82	3.14	3.12	3.57	3.00	3.08
Earning money	4.28	1.62	2.34	2.99	2.26	2.16

Table D6
University WIL Motivations by Program

	Arts & Humanities (n=267)	Business (n=296)	STEM (n=567)	Health & Social Services (n=622)	Social Science (n=969)
	Mean				
Employment-related	3.88	4.07	3.98	4.11	3.95
Community service	2.98	2.51	2.58	3.61	3.27
Future exploration	3.45	3.58	3.69	3.71	3.50
Career progression	3.38	3.70	3.51	3.35	3.29
Earning money	2.59	3.70	3.60	2.05	2.45

Table D7
College WIL Benefits

	Mean	Agree or Strongly Agree (%)
	n=2509	
Has been a valuable experience	4.27	87.6
Helped me better understand my career interests	4.17	84.4
Influenced my career goals	4.10	81.3
Was able to relate theories learned in the classroom to the work environment	4.03	81.0
Increased my confidence about job prospects	4.00	77.4
Helped me mature as a person	3.99	76.8
Ability to get along with people in work situations improved	3.94	74.2
Gave me contacts for my future job search	3.84	71.6
Improved my interview and job-seeking skills	3.73	63.6
My school grades improved	3.17	32.3
Money is the primary reason I wanted to participate	2.36	19.5

Table D8
College WIL Benefits by Type of WIL

	Co-op (n=493)	Practicum (n=550)	Field Placement (n=418)	Internship (n=228)	Applied Research Project (n=75)	Service Learning (n=24)
	Mean					
Has been a valuable experience	4.19	4.38	4.27	4.15	4.03	4.17
Helped me better understand my career interests	4.16	4.23	4.17	4.04	3.78	3.98
Influenced my career goals	4.07	4.21	4.06	4.00	3.71	4.04
Was able to relate theories learned in the classroom to the work environment	3.82	4.15	4.04	3.78	4.12	4.00
Increased my confidence about job prospects	3.95	4.04	3.98	3.80	3.71	4.04
Helped me mature as a person	3.92	3.99	3.92	3.84	3.83	4.33
Ability to get along with people in work situations improved	3.89	3.96	3.90	3.71	3.70	4.29
Gave me contacts for my future job search	3.82	3.83	3.83	3.80	3.28	3.60
Improved my interview and job-seeking skills	3.69	3.64	3.67	3.64	3.54	4.01
My school grades improved	3.13	3.08	3.08	2.94	3.26	3.79
Money is the primary reason I wanted to participate	2.73	2.09	2.09	2.22	2.24	2.42

Table D9
College WIL Benefits by Program

	Applied Arts (n=289)	Business (n=735)	Technology (n=201)	Health & Community Services (n=1206)
	Mean			
Has been a valuable experience	4.19	4.17	4.23	4.37
Helped me better understand my career interests	4.13	4.07	4.08	4.26
Influenced my career goals	4.00	4.01	3.97	4.21
Was able to relate theories learned in the classroom to the work environment	3.85	3.87	3.98	4.18
Increased my confidence about job prospects	3.78	3.96	3.97	4.08
Helped me mature as a person	3.91	3.92	3.87	4.07
Ability to get along with people in work situations improved	3.81	3.85	3.85	4.03
Gave me contacts for my future job search	3.89	3.80	3.76	3.88
Improved my interview and job-seeking skills	3.66	3.76	3.59	3.74
My school grades improved	3.02	3.14	3.24	3.20
Money is the primary reason I wanted to participate	2.29	2.59	2.79	2.11

Table D10
University WIL Benefits

	Mean	Agree or Strongly Agree (%)
	n=2562	
Has been a valuable experience	4.38	90.3
Helped me better understand my career interests	4.18	85.3
Influenced my career goals	4.09	79.5
Helped me mature as a person	4.08	82.8
Ability to get along with people in work situations improved	3.89	72.7
Increased my confidence about job prospects	3.89	73.0
Gave me contacts for my future job search	3.80	70.2
Was able to relate theories learned in the classroom to the work environment	3.70	68.3
Improved my interview and job-seeking skills	3.67	60.4
My school grades improved	2.99	25.1
Money is the primary reason I wanted to participate	2.22	19.2

Table D11
University WIL Benefits by Type of WIL

	Co-op (n=477)	Practicum (n=640)	Field Place- ment (n=194)	Intern- ship (n=344)	Applied Research Project (n=203)	Service Learning (n=162)
	Mean					
Has been a valuable experience	4.46	4.43	4.28	4.33	4.16	4.23
Helped me better understand my career interests	4.28	4.18	4.16	4.12	3.97	3.90
Influenced my career goals	4.22	4.10	3.97	4.04	3.85	3.69
Helped me mature as a person	4.20	4.06	3.98	4.07	3.80	3.91
Ability to get along with people in work situations improved	4.06	3.87	3.67	3.86	3.51	3.84
Increased my confidence about job prospects	4.12	3.91	3.74	3.87	3.52	3.51
Gave me contacts for my future job search	4.01	3.82	3.42	3.95	3.35	3.23
Was able to relate theories learned in the classroom to the work environment	3.39	3.95	3.70	3.52	3.78	3.65
Improved my interview and job-seeking skills	4.21	3.38	3.42	3.75	3.19	3.28
My school grades improved	2.90	2.96	3.02	3.03	2.96	3.00
Money is the primary reason I wanted to participate	2.96	1.67	1.87	2.41	2.06	1.75

Table D12
University WIL Benefits by Program

	Arts & Humanities (n=243)	Business (n=263)	STEM (n=535)	Health & Social Services (n=591)	Social Science (n=865)
	Mean				
Has been a valuable experience	4.46	4.40	4.39	4.46	4.31
Helped me better understand my career interests	4.16	4.11	4.23	4.28	4.12
Influenced my career goals	4.05	4.06	4.14	4.20	4.01
Helped me mature as a person	4.09	4.17	4.12	4.18	3.99
Ability to get along with people in work situations improved	3.83	3.93	3.89	3.98	3.84
Increased my confidence about job prospects	3.89	4.01	3.94	4.04	3.75
Gave me contacts for my future job search	3.79	3.90	3.87	3.84	3.69
Was able to relate theories learned in the classroom to the work environment	3.75	3.55	3.64	3.92	3.63
Improved my interview and job-seeking skills	3.55	3.93	3.85	3.49	3.66
My school grades improved	2.96	3.03	3.06	2.98	2.96
Money is the primary reason I wanted to participate	2.15	2.65	2.57	1.91	2.06

Appendix E – WIL Challenges and Barriers

Table E1
College WIL Challenges

	Mean	Minor Challenge (%)	Major Challenge (%)
n=2509			
Didn't get paid at all	1.87	19.2	34.1
Unexpected financial costs	1.71	31.2	19.9
Hard to balance work-integrated learning with my family commitments	1.61	32.7	14.3
Too many additional demands on my time	1.58	32.8	12.6
Couldn't find an appropriate placement for my field of study	1.48	27.8	10.2
Not enough preparation from my school before the work-integrated learning	1.48	32.4	7.7
Not enough support from my school during the work-integrated learning	1.48	29.3	9.3
Not enough opportunities to share what I learned when I went back to the classroom	1.46	30.2	7.7
Work assigned was boring	1.46	30.1	7.9
Didn't get paid enough	1.45	14.4	15.5
Theory and skills I learned at school were not relevant to the workplace	1.43	32.0	5.5
Too much work assigned in the workplace	1.43	28.9	6.8
Not enough work assigned in the workplace	1.43	28.3	7.2
Disorganized work environment	1.42	24.8	8.6
Feeling of disconnection from co-workers	1.42	27.0	7.4
Not enough supervision in the workplace	1.33	23.7	4.7
Didn't learn anything during the work placement	1.29	19.9	4.6

Table E2
University WIL Challenges

	Mean	Minor Challenge (%)	Major Challenge (%)
	n=2562		
Didn't get paid at all	1.65	16.9	24.1
Not enough preparation from my school before the work-integrated learning	1.63	37.7	12.8
Theory and skills I learned at school were not relevant to the workplace	1.60	40.2	9.8
Too many additional demands on my time	1.60	34.4	13.0
Not enough opportunities to share what I learned when I went back to the classroom	1.55	33.6	10.8
Hard to balance work-integrated learning with my family commitments	1.55	29.7	12.6
Work assigned was boring	1.54	32.9	10.5
Unexpected financial costs	1.54	27.6	13.3
Not enough support from my school during the work-integrated learning	1.50	30.0	9.8
Couldn't find an appropriate placement for my field of study	1.50	28.5	11.0
Feeling of disconnection from co-workers	1.49	28.2	10.2
Not enough work assigned in the workplace	1.48	29.8	8.9
Didn't get paid enough	1.48	19.2	14.3
Disorganized work environment	1.43	28.2	7.6
Too much work assigned in the workplace	1.42	29.7	6.4
Not enough supervision in the workplace	1.37	24.5	6.1
Didn't learn anything during the work placement	1.25	17.9	3.3

Table E3
College WIL Barriers

	Mean	Quite or Very Much (%)
	n=359	
Didn't want to delay or disrupt the completion of my program	2.64	33.6
Never intended to do WIL	2.52	24.9
Was worried about additional costs or expenses	2.48	28.0
There was no payment for doing the WIL	2.25	21.9
Wasn't sure what the WIL option would require	2.15	19.1
Worried about my ability to find a suitable WIL placement	2.14	16.9
My academic course schedule would not accommodate WIL	2.11	20.3
The payment for the WIL was not enough	2.03	17.5
My employment responsibilities did not allow me to participate	1.98	17.1
Applied for WIL but did not get in	1.91	18.2
I didn't think it would make any difference to my future career prospects	1.88	10.1
The WIL placement was too far from where I live	1.87	13.9
Too much work involved in the WIL option	1.86	12.8
I already have enough work experience	1.82	11.7
I'm not sure if I'm going to work in my program area when I graduate	1.79	9.9
There was no academic credit offered	1.77	10.7
Did not have the prerequisites necessary to apply	1.74	0.1
My family responsibilities did not allow me to participate	1.72	10.2
Heard negative things about the WIL option	1.70	8.6
My friends were not participating in WIL	1.60	0.1
I received Prior Learning Recognition for the work experience I already had	1.48	5.6

Table E4
College Barriers by Program

	Applied Arts (n=62)	Business (n=215)	Technology (n=28)	Health & Community Services (n=47)
	Mean			
Didn't want to delay or disrupt the completion of my program	2.39	2.75	2.61	2.58
Never intended to do WIL	2.48	2.51	2.27	2.79
Was worried about additional costs or expenses	2.25	2.56	2.83	2.11
There was no payment for doing the WIL	2.03	2.37	2.09	2.05
Wasn't sure what the WIL option would require	2.12	2.20	1.90	2.15
Worried about my ability to find a suitable WIL placement	2.24	2.29	1.66	1.77
My academic course schedule would not accommodate WIL	2.08	2.14	2.05	2.07
The payment for the WIL was not enough	1.82	2.15	1.98	1.83
My employment responsibilities did not allow me to participate	1.82	2.01	1.54	2.21
Applied for WIL but did not get in	1.74	1.91	1.63	2.16
I didn't think it would make any difference to my future career prospects	1.72	1.98	1.76	1.81
The WIL placement was too far from where I live	1.90	1.95	1.56	1.67
Too much work involved in the WIL option	1.86	1.95	1.44	1.73
I already have enough work experience	1.83	1.88	1.88	1.56
I'm not sure if I'm going to work in my program area when I graduate	1.82	1.78	1.63	1.87
There was no academic credit offered	1.63	1.74	1.94	1.92
Did not have the prerequisites necessary to apply	1.50	1.86	1.33	1.77
My family responsibilities did not allow me to participate	1.77	1.68	1.69	1.62
Heard negative things about the WIL option	1.36	1.86	1.33	1.51
My friends were not participating in WIL	1.59	1.63	1.37	1.56
I received Prior Learning Recognition for the work experience I already had	1.37	1.52	1.58	1.40

Table E5
University WIL Barriers

	Mean	Quite or Very Much (%)
	n=1407	
Didn't want to delay or disrupt the completion of my program	2.82	38.2
Never intended to do WIL	2.50	27.7
Was worried about additional costs or expenses	2.17	20.7
Worried about my ability to find a suitable WIL placement	2.17	19.9
Wasn't sure what the WIL option would require	2.12	15.8
My academic course schedule would not accommodate WIL	2.04	17.6
My employment responsibilities did not allow me to participate	1.97	18.6
There was no payment for doing the WIL	1.86	13.3
I didn't think it would make any difference to my future career prospects	1.83	12.3
I'm not sure if I'm going to work in my program area when I graduate	1.77	13.0
The WIL placement was too far from where I live	1.75	11.2
Too much work involved in the WIL option	1.73	8.6
The payment for the WIL was not enough	1.72	9.9
Did not have the prerequisites necessary to apply	1.67	0.1
I already have enough work experience	1.67	10.4
There was no academic credit offered	1.60	7.4
Applied for WIL but did not get in	1.58	11.3
My family responsibilities did not allow me to participate	1.56	9.3
My friends were not participating in WIL	1.53	0.1
Heard negative things about the WIL option	1.47	6.3
Received Prior Learning Recognition for work experience I already had	1.28	3.0

Table E6
University Barriers by Program

	Arts & Humanities (n=144)	Business (n=244)	STEM (n=290)	Health & Social Services (n=176)	Social Science (n=470)
	Mean				
Didn't want to delay or disrupt the completion of my program	2.72	3.05	2.90	2.74	2.72
Never intended to do WIL	2.61	2.42	2.49	2.78	2.46
Wasn't sure what the WIL option would require	2.10	2.01	1.90	2.36	2.20
My employment responsibilities did not allow me to participate	2.17	1.82	1.72	1.82	2.18
Was worried about additional costs or expenses	2.53	2.04	2.06	2.19	2.16
Worried about my ability to find a suitable WIL placement	2.12	2.34	2.16	2.26	2.07
My academic course schedule would not accommodate WIL	2.36	1.98	1.73	2.39	2.01
There was no payment for doing the WIL	2.07	1.75	1.47	2.01	1.98
I'm not sure if I'm going to work in my program area when I graduate,	1.73	1.69	1.76	1.79	1.82
I didn't think it would make any difference to my future career prospects	1.93	1.77	1.84	2.11	1.75
The payment for the WIL was not enough	1.88	1.70	1.50	1.68	1.74
The WIL placement was too far from where I live	1.82	1.80	1.63	1.77	1.73
Too much work involved in the WIL option	1.78	1.76	1.67	1.91	1.65
My family responsibilities did not allow me to participate	1.51	1.51	1.51	1.38	1.64
Did not have the prerequisites necessary to apply	1.53	1.86	1.63	1.62	1.63
I already have enough work experience	1.82	1.85	1.62	1.52	1.61
There was no academic credit offered	1.69	1.61	1.57	1.68	1.53
Applied for WIL but did not get in	1.58	1.81	1.56	1.60	1.47
My friends were not participating in WIL	1.38	1.62	1.52	1.74	1.47
Heard negative things about the WIL option	1.37	1.48	1.56	1.44	1.43
I received Prior Learning Recognition for the work experience I already had	1.24	1.45	1.20	1.28	1.23

Appendix F – Labour Market and Volunteer Participation

Table F1
Labour Market Participation

		College	University
		%	
		n=2573	n=3662
Part-time			
Duration of part-time employment	6 months or less	39.2	32.8
	7 months to 1 year	32.6	31.0
	More than 1 year	28.2	36.3
Part-time hours per week	10 or less	21.5	29.4
	11-20	52.7	48.9
	More than 20	25.8	21.7
Setting for part-time employment	On campus	11.9	24.8
	Private sector business or industry	71.4	51.3
	Health care sector	4.8	5.6
	Community or non-profit sector	8.2	10.7
	Government sector	3.6	7.7
Summer employment		n=1934	n=4252
Duration of summer employment	2 months or less	13.8	10.6
	3 to 4 months	59.9	66.2
	More than 4 months	26.3	23.2
Summer job hours per week	20 or less	15.3	12.1
	21-35	30.0	28.6
	36 or more	54.7	59.3
Setting for summer employment	On campus	5.3	9.2
	Private sector business or industry	70.2	56.9
	Health care sector	3.9	5.8
	Community or non-profit sector	11.9	14.0
	Government sector	8.8	14.1
Full-time employment		n=320	n=532
Duration of full-time employment	6 months or less	34.9	33.3
	7 months to 1 year	34.7	32.4
	More than 1 year	30.3	34.3
Full-time hours per week	35 or less	44.2	31.3
	36 or more	55.8	68.7
Setting for full-time employment	On campus	8.2	9.3
	Private sector business or industry	76.6	58.1
	Health care sector	3.1	8.5
	Community or non-profit sector	6.7	9.8
	Government sector	5.5	14.3

Table F2
Voluntary Activity

		College	University
		%	
		n=1255	n=2948
Duration of voluntary activity	6 months or less	70.8	56.7
	7 months to 1 year	18.7	23.8
	More than 1 year	10.6	19.5
Volunteer hours per week	2 or less	15.1	15.5
	3-5	40.3	43.6
	6-10	27.0	26.8
	More than 10	17.6	14.1
Setting for voluntary activity	On campus	12.1	27.5
	Private sector business or industry	13.2	4.0
	Health care sector	8.7	12.8
	Community or non-profit sector	62.3	52.8
	Government sector	3.7	2.9

Table F3
Part-time Employment by WIL

		College		University	
		WIL (n=1441)	No WIL (n=780)	WIL (n=1518)	No WIL (n=1992)
		%			
Duration of part-time employment	6 months or less	37.9	41.2	36.2	30.3
	7 months to 1 year	33.4	31.3	30.4	31.4
	More than 1 year	28.7	27.5	33.4	38.3
Part-time hours per week	10 or less	21.3	22.4	32.7	28.0
	11-20	53.6	50.9	49.1	48.3
	More than 20	25.1	26.7	18.2	23.7
Setting for part-time employment	On campus	12.1	11.3	28.2	22.2
	Private sector business or industry	66.8	77.3	44.5	56.2
	Health care sector	6.2	2.7	7.7	4.0
	Community or non-profit sector	11.0	5.2	11.9	9.7
	Government sector	3.9	3.5	7.8	7.8

Table F4
Summer Employment by WIL

		College		University	
		WIL (n=1067)	No WIL (n=614)	WIL (n=1681)	No WIL (n=2428)
		%			
Duration of summer employment	2 months or less	13.0	15.2	10.2	10.8
	3 to 4 months	62.3	56.1	66.8	65.9
	More than 4 months	24.7	28.7	23.0	23.3
Summer job hours per week	20 or less	13.8	14.7	12.5	11.6
	21-35	31.3	28.7	26.9	29.3
	36 or more	54.9	56.6	60.6	59.1
Setting for summer employment	On campus	5.4	5.3	9.9	8.5
	Private sector business or industry	64.9	76.5	51.7	60.2
	Health care sector	5.5	2.4	8.2	4.3
	Community or non-profit sector	14.6	8.1	17.0	12.0
	Government sector	9.6	7.8	13.1	14.8

Table F5
Full-time Employment by WIL

		College		University	
		WIL (n=172)	No WIL (n=102)	WIL (n=153)	No WIL (n=357)
		%			
Duration of full-time employment	6 months or less	40.0	28.2	31.0	34.2
	7 months to 1 year	34.2	35.5	38.3	30.2
	More than 1 year	25.9	36.3	30.7	35.6
Full-time hours per week	35 or less	47.8	38.4	42.1	27.4
	More than 35	52.2	61.6	57.9	72.6
Setting for full-time employment	On campus	11.5	1.7	12.8	8.1
	Private sector business or industry	70.0	83.2	46.2	63.1
	Health care sector	5.0	0.7	14.0	5.2
	Community or non-profit sector	10.4	4.7	17.3	6.8
	Government sector	3.0	9.8	9.8	16.9

Table F6
Volunteer Participation by WIL

		College		University	
		WIL (n=752)	No WIL (n=349)	WIL (n=1212)	No WIL (n=1619)
		%			
Duration of voluntary activity	6 months or less	70.5	71.3	54.0	58.8
	7 months to 1 year	19.3	17.5	23.9	23.7
	More than 1 year	10.2	11.2	22.2	17.6
Volunteer hours per week	2 or less	13.7	17.3	17.0	15.2
	3-5	40.5	40.5	45.2	42.6
	6-10	28.3	26.1	24.5	27.7
	More than 10	17.5	16.1	13.3	14.6
Setting for voluntary activity	On campus	10.5	14.5	29.4	26.7
	Private sector business or industry	14.0	11.2	2.6	4.6
	Health care sector	8.9	7.8	13.0	12.7
	Community or non-profit sector	63.6	61.1	53.2	52.3
	Government sector	2.7	5.4	1.8	3.7

Table F7
College Labour Market Benefits by Type of Employment

	Part time (n=1222)	Summer (n=594)	Full time (n=169)	Multiple (n=1380)
	Mean			
Ability to get along with people in work situations improved	4.07	4.07	4.17	4.14
Helped me mature as a person	4.07	4.10	4.22	4.12
Money is the primary reason I wanted to participate	4.03	4.03	4.04	4.12
Has been a valuable experience	3.99	4.03	4.11	4.06
Helped me better understand my career interests	3.65	3.64	3.95	3.74
Improved my interview and job-seeking skills	3.65	3.55	3.79	3.62
Influenced my career goals	3.58	3.57	3.94	3.65
Increased my confidence about job prospects	3.57	3.48	3.76	3.53
Gave me contacts for my future job search	3.20	3.33	3.55	3.33
Was able to relate theories learned in the classroom to the work environment	3.27	3.25	3.50	3.26
My school grades improved	2.99	3.03	3.12	2.87

Table F8
University Labour Market Benefits by Type of Employment

	Part time (n=706)	Summer (n=1274)	Full time (n=184)	Multiple (n=3008)
	Mean			
Helped me mature as a person	3.97	4.09	4.15	4.20
Ability to get along with people in work situations improved	4.01	4.05	4.06	4.15
Has been a valuable experience	3.91	4.00	4.23	4.06
Money is the primary reason I wanted to participate	3.88	3.87	4.15	4.08
Helped me better understand my career interests	3.47	3.53	3.83	3.65
Improved my interview and job-seeking skills	3.41	3.42	3.72	3.64
Influenced my career goals	3.39	3.43	3.80	3.55
Increased my confidence about job prospects	3.24	3.20	3.57	3.28
Gave me contacts for my future job search	3.15	3.12	3.52	3.22
Was able to relate theories learned in the classroom to the work environment	2.91	2.79	3.38	2.82
My school grades improved	2.83	2.86	2.86	2.74

Appendix G – Postsecondary Outcomes

Table G1
College PSE Outcomes by Type of WIL

	Co-op (n=493)	Practicum (n=550)	Field Place- ment (n=418)	Intern- ship (n=228)	Applied Research Project (n=75)	Service Learning (n=24)
	Mean					
Employability skills	4.02	4.00	4.05	3.92	4.22	4.18
Personal growth & development	3.58	3.64	3.69	3.42	3.54	3.97
Civic responsibility	4.03	4.17	4.11	3.89	3.90	4.23
Self-efficacy	4.26	4.21	4.19	4.19	4.22	4.23
Critical reflection	3.58	3.55	3.60	3.54	3.54	3.54

Table G2
College PSE Outcomes by Program

	Applied Arts		Business		Technology		Health, Social & Community Services	
	WIL (n=289)	No WIL (n=578)	WIL (n=735)	No WIL (n=369)	WIL (n=201)	No WIL (n=210)	WIL (n=1206)	No WIL (n=161)
	Mean							
Employability skills	3.98	3.87	4.07	3.99	3.99	3.85	4.08	3.98
Personal growth & development	3.52	3.39	3.64	3.52	3.27	3.08	3.76	3.77
Critical reflection	3.63	3.59	3.59	3.55	3.48	3.43	3.66	3.62
Civic responsibility	3.92	4.05	4.02	3.95	3.97	3.87	4.22	4.08
Self-efficacy	4.19	4.20	4.26	4.13	4.25	4.14	4.25	4.21

Table G3
University PSE Outcomes by Type of WIL

	Co-op (n=477)	Practicum (n=640)	Field Place- ment (n=194)	Internship (n=344)	Applied Research Project (n=203)	Service Learning (n=162)
	Mean					
Employability skills	3.88	3.98	3.91	3.92	3.89	3.95
Personal growth & development	3.13	3.63	3.49	3.45	3.33	3.81
Critical reflection	3.93	4.24	4.12	4.00	4.13	4.38
Civic responsibility	4.13	4.23	4.20	4.20	4.24	4.21
Self-efficacy	3.64	3.65	3.76	3.68	3.77	3.84

Table G4
University PSE Outcomes by Program

	Arts & Humanities		Business		STEM		Health & Social Services		Social Science	
	WIL (n=243)	No WIL (n=579)	WIL (n=263)	No WIL (n=354)	WIL (n=535)	No WIL (n=452)	WIL (n=591)	No WIL (n=317)	WIL (n=865)	No WIL (n=1184)
	Mean									
Employability skills	3.91	3.72	4.04	3.88	3.91	3.73	4.01	3.84	3.95	3.75
Personal growth & development	3.66	3.65	3.42	3.37	3.07	3.10	3.56	3.37	3.67	3.67
Critical reflection	3.92	3.74	3.70	3.55	3.63	3.45	3.69	3.71	3.75	3.76
Civic responsibility	4.19	4.04	3.91	3.89	3.96	3.94	4.25	4.10	4.20	4.09
Self-efficacy	4.22	4.08	4.26	4.11	4.15	3.96	4.26	4.10	4.21	4.09

Table G5
Overall College Satisfaction by Type of WIL

	Co-op (n=493)	Practicum (n=5500)	Field Placement (n=418)	Internship (n=228)	Applied Research Project (n=75)	Service Learning (n=24)
College mean satisfaction	4.06	4.11	4.20	3.93	4.13	4.31

Table G6
Overall University Satisfaction by Type of WIL

	Co-op (n=477)	Practicum (n=640)	Field Placement (n=194)	Internship (n=344)	Applied Research Project (n=203)	Service Learning (n=162)
University mean satisfaction	3.98	3.95	3.96	4.00	4.06	4.02

Table G7
Employability Outcomes by Demographic Characteristics

		College		University	
		WIL (n=2509)	No WIL (n=1353)	WIL (n=2562)	No WIL (n=3049)
		Mean			
	All	4.05	3.90	3.95	3.76
Gender	Male	4.04	3.87	3.95	3.75
	Female	4.06	3.95	3.97	3.77
Age	17-19	4.14	3.84	-	-
	20-24	4.04	3.94	3.96	3.75
	25-29	4.05	3.96	3.85	3.76
	30+	4.07	3.83	4.10	3.88
Visible minority	Visible minority	4.14	3.89	3.98	3.79
	Not visible minority	4.02	3.94	3.95	3.75
Aboriginal identity	First Nations, Métis or Inuit	4.09	3.89	4.09	3.89
	Non-Aboriginal	4.06	3.91	3.96	3.77
Status in Canada	Immigrant (2007 or later)	4.10	3.96	4.11	3.94
	Immigrant (2006 or earlier)	4.15	3.88	3.99	3.78
	Born in Canada	4.03	3.91	3.94	3.75
	International student	4.18	3.98	4.14	3.80
Disability	Disability	4.02	3.74	3.92	3.62
	No disability	4.07	3.93	3.96	3.77
Entry type	Direct	4.13	3.92	3.95	3.76
	Delayed	4.03	3.90	3.91	3.76
	Previous PSE	4.02	3.93	3.98	3.72
	From workforce	4.03	3.80	3.95	3.85
Expect to owe debt	No debt	4.03	3.88	3.95	3.76
	Above average debt	4.05	3.97	3.96	3.76
	Below average debt	4.09	3.92	3.95	3.75
Grade average	A+	-	-	3.85	3.83
	A	4.03	3.92	3.97	3.79
	B	4.08	3.94	3.96	3.77
	C	4.04	3.84	3.92	3.72
	D	3.95	3.82	3.80	3.39
First generation PSE	First generation PSE	4.08	3.97	3.98	3.76
	Not first generation PSE	4.04	3.87	3.95	3.76

Table G8
Personal Growth and Development Outcomes by Demographic Characteristics

		College		University	
		WIL (n=2509)	No WIL (n=1353)	WIL (n=2562)	No WIL (n=3049)
		Mean			
	All	3.65	3.42	3.48	3.51
Gender	Male	3.61	3.39	3.36	3.43
	Female	3.67	3.47	3.56	3.56
Age	17-19	3.76	3.36	-	-
	20-24	3.63	3.46	3.44	3.48
	25-29	3.58	3.44	3.52	3.58
	30+	3.71	3.36	3.78	3.62
Visible minority	Visible minority	3.83	3.65	3.52	3.57
	Not visible minority	3.57	3.32	3.48	3.47
Aboriginal identity	First Nations, Métis or Inuit	3.87	3.55	3.90	3.71
	Non-Aboriginal	3.65	3.42	3.48	3.51
Status in Canada	Immigrant (2007 or later)	3.83	3.84	3.61	3.91
	Immigrant (2006 or earlier)	3.84	3.55	3.49	3.57
	Born in Canada	3.59	3.37	3.47	3.48
	International student	3.92	3.67	3.78	3.54
Disability	Disability	3.72	3.40	3.55	3.39
	No disability	3.64	3.43	3.48	3.51
Entry type	Direct	3.72	3.51	3.42	3.47
	Delayed	3.61	3.43	3.51	3.62
	Previous PSE	3.63	3.42	3.63	3.54
	From workforce	3.62	3.16	3.67	3.57
Expect to owe debt	No debt	3.63	3.37	3.46	3.47
	Above average debt	3.63	3.50	3.59	3.55
	Below average debt	3.66	3.44	3.44	3.52
Grade average	A+	-	-	3.16	3.26
	A	3.62	3.34	3.45	3.50
	B	3.66	3.46	3.54	3.52
	C	3.71	3.45	3.46	3.53
	D	3.48	3.50	3.46	3.54
First generation PSE	First generation PSE	3.72	3.48	3.63	3.58
	Not first generation PSE	3.61	3.38	3.44	3.48

Table G9
Civic Responsibility Outcomes by Demographic Characteristics

		College		University	
		WIL (n=2509)	No WIL (n=1353)	WIL (n=2562)	No WIL (n=3049)
		Mean			
	All	4.10	3.99	4.12	4.03
Gender	Male	4.01	3.95	4.01	3.93
	Female	4.14	4.05	4.20	4.10
Age	17-19	4.11	4.00	-	-
	20-24	4.04	3.97	4.08	4.00
	25-29	4.15	4.01	4.21	4.10
	30+	4.23	4.12	4.32	4.18
Visible minority	Visible minority	4.16	4.03	4.15	4.11
	Not visible minority	4.06	3.98	4.13	4.00
Aboriginal identity	First Nations, Métis or Inuit	4.14	4.01	4.18	4.20
	Non-Aboriginal	4.10	3.99	4.13	4.03
Status in Canada	Immigrant (2007 or later)	4.28	4.07	4.38	4.18
	Immigrant (2006 or earlier)	4.23	4.00	4.11	4.10
	Born in Canada	4.06	3.99	4.12	4.01
	International student	4.13	3.99	4.22	4.11
Disability	Disability	4.15	3.97	4.22	4.08
	No disability	4.09	4.00	4.13	4.03
Entry type	Direct	4.08	3.98	4.08	4.01
	Delayed	4.09	3.98	4.15	4.00
	Previous PSE	4.05	4.01	4.21	4.12
	From workforce	4.20	4.00	4.30	4.12
Expect to owe debt	No debt	4.05	3.98	4.09	3.99
	Above average	4.13	4.00	4.18	4.12
	Below average	4.12	4.02	4.15	4.04
Grade average	A+	-	-	3.99	4.17
	A	4.15	4.00	4.15	4.09
	B	4.08	4.02	4.12	4.02
	C	4.03	3.91	4.07	4.01
	D	4.03	3.89	3.92	3.80
First generation PSE	First generation PSE	4.15	4.01	4.17	4.06
	Not first generation PSE	4.07	3.98	4.11	4.02

Table G10
Self-efficacy Outcomes by Demographic Characteristics

		College		University	
		WIL (n=2509)	No WIL (n=1353)	WIL (n=2562)	No WIL (n=3049)
		Mean			
	All	4.24	4.16	4.21	4.07
Gender	Male	4.26	4.16	4.26	4.09
	Female	4.24	4.18	4.18	4.05
Age	17-19	4.27	4.13	-	-
	20-24	4.24	4.19	4.19	4.05
	25-29	4.25	4.21	4.18	4.09
	30+	4.25	4.15	4.38	4.17
Visible minority	Visible minority	4.26	4.12	4.18	4.02
	Not visible minority	4.24	4.19	4.23	4.09
Aboriginal identity	First Nations, Métis or Inuit	4.33	4.10	4.37	4.19
	Non-Aboriginal	4.25	4.17	4.21	4.07
Status in Canada	Immigrant (2007 or later)	4.20	4.08	4.17	4.09
	Immigrant (2006 or earlier)	4.23	4.08	4.20	4.06
	Born in Canada	4.25	4.19	4.21	4.07
	International student	4.27	3.99	4.19	3.98
Disability	Disability	4.13	4.04	4.14	3.94
	No disability	4.26	4.10	4.21	4.08
Entry type	Direct	4.23	4.14	4.19	4.06
	Delayed	4.23	4.14	4.20	4.01
	Previous PSE	4.26	4.22	4.25	4.09
	From workforce	4.26	4.13	4.26	4.19
Expect to owe debt	No debt	4.23	4.14	4.21	4.09
	Above average	4.25	4.22	4.21	4.05
	Below average	4.27	4.18	4.21	4.06
Grade average	A+	-	-	4.20	4.26
	A	4.27	4.21	4.23	4.09
	B	4.24	4.20	4.20	4.06
	C	4.21	4.06	4.18	4.04
	D	4.18	3.86	3.64	3.66
First generation PSE	First generation PSE	4.27	4.18	4.19	4.06
	Not first generation PSE	4.23	4.16	4.21	4.07

Table G11
Critical Reflection Outcomes by Demographic Characteristics

		College		University	
		WIL (n=2509)	No WIL (n=1353)	WIL (n=2562)	No WIL (n=3049)
		Mean			
	All	3.62	3.54	3.72	3.68
Gender	Male	3.66	3.48	3.75	3.73
	Female	3.60	3.64	3.70	3.64
Age	17-19	3.74	3.49	-	-
	20-24	3.64	3.58	3.74	3.67
	25-29	3.57	3.59	3.55	3.69
	30+	3.53	3.45	3.78	3.75
Visible minority	Visible minority	3.75	3.67	3.79	3.72
	Not visible minority	3.56	3.49	3.68	3.67
Aboriginal identity	First Nations, Métis or Inuit	3.74	3.62	3.93	3.93
	Non-Aboriginal	3.62	3.54	3.72	3.68
Status in Canada	Immigrant (2007 or later)	3.72	3.49	3.79	3.74
	Immigrant (2006 or earlier)	3.74	3.63	3.80	3.73
	Born in Canada	3.58	3.52	3.69	3.67
	International student	3.70	3.82	3.86	3.64
Disability	Disability	3.70	3.47	3.71	3.71
	No disability	3.62	3.56	3.72	3.68
Entry type	Direct	3.76	3.63	3.74	3.68
	Delayed	3.63	3.55	3.75	3.77
	Previous PSE	3.54	3.48	3.69	3.61
	From workforce	3.53	3.45	3.60	3.75
Expect to owe debt	No debt	3.58	3.49	3.69	3.66
	Above average	3.63	3.60	3.73	3.72
	Below average	3.64	3.61	3.76	3.68
Grade average	A+	-	-	3.66	3.78
	A3.54	3.54	3.44	3.68	3.73
	B	3.66	3.57	3.75	3.66
	C	3.71	3.69	3.77	3.66
	D	3.46	3.58	3.76	3.01
First generation PSE	First generation PSE	3.67	3.59	3.82	3.69
	Not first generation PSE	3.59	3.53	3.69	3.67

Table G12
Overall PSE Satisfaction by Demographic Characteristics

		College		University	
		WIL (n=2509)	No WIL (n=1353)	WIL (n=2562)	No WIL (n=3049)
		Mean			
	All	4.11	3.98	4.01	3.79
Gender	Male	4.08	3.92	4.01	3.77
	Female	4.13	4.07	4.02	3.81
Age	17-19	4.26	4.00	-	-
	20-24	4.07	4.02	4.02	3.77
	25-29	4.06	3.85	3.86	3.72
	30+	4.20	4.02	4.17	4.11
Visible minority	Visible minority	4.15	3.94	3.98	3.70
	Not visible minority	4.10	4.02	4.04	3.84
Aboriginal identity	First Nations, Métis or Inuit	4.34	3.97	4.04	4.06
	Non-Aboriginal	4.11	3.99	4.02	3.79
Status in Canada	Immigrant (2007 or later)	4.21	3.98	4.07	3.84
	Immigrant (2006 or earlier)	4.22	3.81	4.01	3.69
	Born in Canada	4.08	4.02	4.01	3.82
	International student	4.10	3.90	4.01	3.69
Disability	Disability	4.14	3.90	3.75	3.71
	No disability	4.11	4.00	4.03	3.80
Entry type	Direct	4.13	3.96	4.03	3.77
	Delayed	4.10	3.95	3.99	3.74
	Previous PSE	4.08	4.07	3.95	3.76
	From workforce	4.14	3.95	4.02	4.08
Expect to owe debt	No debt	4.10	4.02	4.06	3.85
	Above average	4.05	3.99	3.95	3.72
	Below average	4.17	3.94	4.00	3.77
Grade average	A+	-	-	3.93	4.15
	A	4.14	4.04	4.08	3.97
	B	4.11	4.03	3.98	3.80
	C	4.07	3.81	3.94	3.56
	D	3.87	3.92	2.85	3.09
First generation PSE	First generation PSE	4.12	3.98	4.02	3.85
	Not first generation PSE	4.10	3.99	4.01	3.78

Appendix H – WIL Profiles

Table H1
College Co-op

		All College Co-op (n=780)	Co-op Graduates (n=733)	Co-op Transfers (n=47)
		Number		
Total weeks	Mean	14.73	14.78	13.88
	Median	14.00	14.00	14.00
Total hours per week	Mean	32.02	31.91	33.67
	Median	35.00	35.00	37.00
		%		
Setting	Private sector business or industry	46.4	45.5	60.5
	Community or non-profit sector	20.9	21.5	12.2
	Health care sector	11.7	12.1	6.0
	Government sector	9.6	9.8	6.8
	On campus	9.1	9.0	10.7
	Simulated work environment	2.2	2.1	3.9
Payment	Regular employment salary	40.4	39.6	52.3
	Honorarium or stipend	5.5	5.5	6.4
	No payment	54.1	54.9	41.3
Involved in evaluation	Employer/site supervisor	81.3	81.6	77.2
	Faculty and/or staff	60.7	61.6	47.6
	Self-evaluation	34.7	34.7	35.1
	Not evaluated	1.8	1.8	2.9
	Not sure	3.3	3.3	2.0
Academic recognition	Pass/fail or satisfactory/unsatisfactory	54.6	54.6	55.4
	Letter or number grade	20.2	20.7	12.4
	Complete/incomplete	20.8	20.8	21.1
	No academic recognition	4.4	3.9	11.1

Table H2
University Co-op

		All University Co-op (n=642)	Co-op Graduates (n=536)	Co-op Transfers (n=106)
		Number		
Total weeks	Mean	18.02	18.26	16.83
	Median	16.00	16.00	16.00
Total hours per week	Mean	38.67	39.35	35.39
	Median	40.00	40.00	38.00
		%		
Setting	Private sector business or industry	54.6	56.4	46.4
	Government sector	23.0	22.1	27.4
	On campus	8.5	7.6	13.0
	Community or non-profit sector	7.9	7.5	9.5
	Health care sector	5.5	6.0	3.0
	Simulated work environment	0.5	0.5	0.8
Payment	Regular employment salary	84.4	85.3	80.1
	Honorarium or stipend	6.5	6.5	6.4
	No payment	9.1	8.2	13.5
Involved in evaluation	Employer/site supervisor	92.1	94.4	80.8
	Faculty and/or staff	44.2	42.5	52.4
	Self-evaluation	30.1	30.0	30.5
	Not evaluated	1.4	1.1	5.7
	Not sure	1.9	0.5	5.7
Academic recognition	Pass/fail or satisfactory/unsatisfactory	60.4	60.0	62.4
	Letter or number grade	12.8	13.2	10.8
	Complete/incomplete	23.6	24.6	18.7
	No academic recognition	3.2	2.2	8.1
Language	English	96.0	96.7	92.8
	French	3.6	2.9	7.2
	Other	0.3	0.4	0.0
		Mean satisfaction		
Number of completed work terms	One	3.34	3.81	3.09
	Two	3.58	3.86	3.09
	Three	3.96	4.06	3.50
	Four	4.15	4.20	3.47
	Five or more	4.41	4.40	4.69

Table H3
Co-op Motivations

	College (n=493)	University (n=477)
	Mean	
Gain practical work experience	4.60	4.70
Enhance my résumé	4.38	4.55
Meet mandatory requirements	4.26	2.74
Make job search contacts	4.22	4.12
Improve employability skills	4.19	4.30
Determine fit with the career/industry	4.17	4.27
Experience a professional work environment	4.16	4.09
Apply theory/skills learned in the classroom	4.08	3.69
Get a job with the WIL employer	3.98	3.73
Increase earning potential	3.92	4.01
Work in a position with greater responsibility	3.81	3.62
Explore different career options	3.65	3.97
Prepare for further education	3.35	2.91
Earn money	3.20	4.28
Contribute to my community	3.15	2.56
Help people in need	3.15	45.8

Table H4
Co-op Benefits

	College (n=493)	University (n=477)
	Mean	
Has been a valuable experience	4.19	4.46
Helped me better understand my career interests	4.16	4.28
Influenced my career goals	4.07	4.22
Increased my confidence about job prospects	3.95	4.12
Helped me mature as a person	3.92	4.20
Ability to get along with people in work situations improved	3.89	4.06
Was able to relate theories learned in the classroom to the work environment	3.82	3.39
Gave me contacts for my future job search	3.82	4.01
Improved my interview and job-seeking skills	3.69	4.21
My school grades improved	3.13	2.90
Money is the primary reason I wanted to participate	2.73	2.96

Table H5
Co-op Challenges

	College (n=493)	University (n=477)
	Mean	
Unexpected financial costs	1.63	1.41
Didn't get paid at all	1.61	1.20
Couldn't find an appropriate placement for my field of study	1.60	1.71
Not enough support from my school during the work-integrated learning	1.58	1.52
Didn't get paid enough	1.57	1.58
Not enough opportunities to share what I learned when I went back to the classroom	1.56	1.70
Not enough preparation from my school before the work-integrated learning	1.54	1.68
Hard to balance work-integrated learning with my family commitments	1.53	1.36
Work assigned was boring	1.51	1.83
The theory and skills I learned at school were not relevant to the workplace	1.50	1.81
Not enough work assigned in the workplace	1.49	1.81
Disorganized work environment	1.47	1.45
Too many additional demands on my time	1.47	1.38
Feeling of disconnection from co-workers	1.41	1.54
Too much work assigned in the workplace	1.38	1.41
Not enough supervision in the workplace	1.37	1.41
Didn't learn anything during the work placement	1.34	1.30

Table H6
Practicums or Clinical Placements

		College (n=809)	University (n=833)
		Number	
Total weeks	Mean	13.28	14.83
	Median	12.00	12.00
Total hours per week	Mean	24.45	27.32
	Median	21.00	30.00
		%	
Setting	Community or non-profit sector	41.0	40.4
	Health care sector	35.2	37.3
	On campus	9.1	9.4
	Private sector business or industry	8.6	4.2
	Government sector	4.0	7.6
	Simulated work environment	2.0	1.0
Payment	No payment	95.8	91.3
	Regular employment salary	3.4	6.2
	Honorarium or stipend	0.8	2.5
Involved in evaluation	Employer/site supervisor	73.4	70.1
	Faculty and/or staff	70.5	76.7
	Self-evaluation	38.1	39.4
	Not evaluated	1.9	3.9
	Not sure	2.0	0.3
Academic recognition	Pass/fail or satisfactory/unsatisfactory	60.2	64.4
	Letter or number grade	24.7	22.5
	Complete/incomplete	11.8	6.4
	No academic recognition	3.3	6.7
Language	English	-	93.5
	French	-	5.7
	Other	-	0.8

Table H7
Practicum or Clinical Placement Motivations

	College (n=592)	University (n=665)
	Mean	
Gain practical work experience	4.66	4.65
Meet mandatory requirements	4.60	4.37
Enhance my résumé	4.36	4.27
Apply theory/skills learned in the classroom	4.43	4.20
Improve employability skills	4.31	4.14
Experience a professional work environment	4.34	4.09
Determine fit with the career / industry	4.28	4.01
Make job search contacts	4.16	3.92
Help people in need	4.10	3.66
Get a job with the WIL employer	4.01	3.60
Contribute to my community	3.76	3.46
Work in a position with greater responsibility	3.74	3.36
Explore different career options	3.55	3.22
Prepare for further education	3.48	3.17
Increase earning potential	3.43	2.91
Earn money	1.94	1.62

Table H8
Practicum or Clinical Placement Benefits

	College (n=550)	University (n=640)
	Mean	
Has been a valuable experience	4.38	4.43
Helped me better understand my career interests	4.23	4.18
Influenced my career goals	4.21	4.10
Was able to relate theories learned in the classroom to the work environment	4.15	3.95
Increased my confidence about job prospects	4.04	3.91
Helped me mature as a person	3.99	4.06
Ability to get along with people in work situations improved	3.96	3.87
Gave me contacts for my future job search	3.83	3.82
Improved my interview and job-seeking skills	3.64	3.38
My school grades improved	3.08	2.96
Money is the primary reason I wanted to participate	2.09	1.67

Table H9
Practicum or Clinical Placement Challenges

	College (n=550)	University (n=640)
	Mean	
Didn't get paid at all	2.00	2.10
Unexpected financial costs	1.80	1.79
Hard to balance work-integrated learning with my family commitments	1.73	1.78
Too many additional demands on my time	1.63	1.79
Too much work assigned in the workplace	1.46	1.47
Not enough preparation from my school before the work-integrated learning	1.44	1.66
Feeling of disconnection from co-workers	1.42	1.44
Work assigned was boring	1.42	1.31
Couldn't find an appropriate placement for my field of study	1.39	1.25
Not enough support from my school during the work-integrated learning	1.39	1.45
Disorganized work environment	1.38	1.38
Not enough opportunities to share what I learned when I went back to the classroom	1.37	1.40
Not enough work assigned in the workplace	1.37	1.24
The theory and skills I learned at school were not relevant to the workplace	1.36	1.47
Didn't get paid enough	1.33	1.47
Not enough supervision in the workplace	1.31	1.26
Didn't learn anything during the work placement	1.23	1.16

Table H10
Field Placements

		College (n=950)	University (n=451)
		Number	
Total weeks	Mean	11.76	16.58
	Median	10.00	12.00
Total hours per week	Mean	25.61	22.03
	Median	24.00	16.00
		%	
Setting	Community or non-profit sector	41.2	38.3
	Private sector business or industry	25.3	16.9
	Health care sector	13.8	10.5
	On campus	9.2	19.4
	Government sector	7.2	10.0
	Simulated work environment	3.3	4.8
Payment	No payment	86.2	67.6
	Regular employment salary	10.7	26.3
	Honorarium or stipend	3.1	6.1
Involved in evaluation	Faculty and/or staff	64.8	49.7
	Employer/site supervisor	73.1	49.4
	Self-evaluation	35.8	24.1
	Not evaluated	4.7	19.8
	Not sure	3.3	3.6
Academic recognition	Pass/fail or satisfactory/unsatisfactory	45.2	22.4
	Letter or number grade	29.9	31.8
	Complete/incomplete	17.1	9.7
	No academic recognition	7.8	36.0
Language	English	-	91.6
	French	-	6.9
	Other	-	1.5

Table H11
Field Placement Motivations

	College (n=638)	University (n=213)
	Mean	
Gain practical work experience	4.58	4.50
Meet mandatory requirements	4.40	2.84
Enhance my résumé	4.35	4.19
Apply theory/skills learned in the classroom	4.26	3.75
Experience a professional work environment	4.23	3.69
Improve employability skills	4.20	3.82
Make job search contacts	4.17	3.71
Determine fit with the career / industry	4.15	3.94
Get a job with the WIL employer	3.91	3.00
Work in a position with greater responsibility	3.72	3.29
Explore different career options	3.60	3.22
Increase earning potential	3.56	2.95
Help people in need	3.44	2.88
Contribute to my community	3.38	3.01
Prepare for further education	3.24	3.38
Earn money	2.24	2.34

Table H12
Field Placement Benefits

	College (n=418)	University (n=194)
	Mean	
Has been a valuable experience	4.27	4.28
Helped me better understand my career interests	4.17	4.16
Influenced my career goals	4.06	3.97
Was able to relate theories learned in the classroom to the work environment	4.04	3.70
Increased my confidence about job prospects	3.98	3.74
Helped me mature as a person	3.92	3.98
Ability to get along with people in work situations improved	3.90	3.67
Gave me contacts for my future job search	3.83	3.42
Improved my interview and job-seeking skills	3.67	3.42
My school grades improved	3.08	3.02
Money is the primary reason I wanted to participate	2.09	1.87

Table H13
Field Placement Challenges

	College (n=418)	University (n=194)
	Mean	
Didn't get paid at all	1.87	1.67
Unexpected financial costs	1.61	1.36
Hard to balance work-integrated learning with my family commitments	1.52	1.48
Too many additional demands on my time	1.52	1.56
Couldn't find an appropriate placement for my field of study	1.42	1.40
Not enough preparation from my school before the work-integrated learning	1.41	1.51
Too much work assigned in the workplace	1.39	1.34
Work assigned was boring	1.39	1.48
Feeling of disconnection from co-workers	1.38	1.46
Not enough support from my school during the work-integrated learning	1.37	1.42
The theory and skills I learned at school were not relevant to the workplace	1.37	1.46
Disorganized work environment	1.36	1.45
Not enough work assigned in the workplace	1.36	1.42
Didn't get paid enough	1.34	1.39
Not enough opportunities to share what I learned when I went back to the classroom	1.32	1.51
Not enough supervision in the workplace	1.26	1.41
Didn't learn anything during the work placement	1.25	1.26

Table H14
Internships

		College (n=467)	University (n=550)
		Number	
Total weeks	Mean	11.48	19.44
	Median	10.00	16.00
Total hours per week	Mean	28.80	29.35
	Median	30.00	35.00
		%	
Setting	Private sector business or industry	59.3	49.2
	On campus	13.6	12.9
	Community or non-profit sector	12.3	20.3
	Government sector	6.0	10.8
	Health care sector	4.9	5.8
	Simulated work environment	3.9	1.1
Payment	Regular employment salary	17.4	43.6
	Honorarium or stipend	8.7	11.0
	No payment	73.9	45.3
Involved in evaluation	Employer/site supervisor	71.1	67.6
	Faculty and/or staff	41.7	38.6
	Self-evaluation	26.5	20.8
	Not evaluated	11.6	19.1
	Not sure	5.6	4.1
Academic recognition	Pass/fail or satisfactory/unsatisfactory	37.7	22.8
	Letter or number grade	21.8	22.1
	Complete/incomplete	23.1	8.1
	No academic recognition	17.4	47.1
Language	English	-	93.1
	French	-	3.7
	Other	-	3.2

Table H15
Internship Motivations

	College (n=346)	University (n=409)
	Mean	
Apply theory/skills learned in the classroom	4.07	3.55
Contribute to my community	2.86	2.80
Determine fit with the career / industry	4.16	4.04
Earn money	2.51	2.99
Enhance my résumé	4.39	4.39
Experience a professional work environment	4.09	3.97
Explore different career options	3.53	3.64
Gain practical work experience	4.57	4.38
Get a job with the WIL employer	3.90	3.43
Help people in need	2.75	2.59
Improve employability skills	4.10	4.09
Increase earning potential	3.75	3.60
Make job search contacts	4.37	4.03
Meet mandatory requirements	4.03	2.22
Prepare for further education	3.06	3.15
Work in a position with greater responsibility	3.81	3.54

Table H16
Internship Benefits

	College (n=228)	University (n=344)
	Mean	
Has been a valuable experience	4.15	4.33
Helped me better understand my career interests	4.04	4.12
Influenced my career goals	4.00	4.04
Helped me mature as a person	3.84	4.07
Gave me contacts for my future job search	3.80	3.95
Increased my confidence about job prospects	3.80	3.87
Was able to relate theories learned in the classroom to the work environment	3.78	3.52
Ability to get along with people in work situations improved	3.71	3.86
Improved my interview and job-seeking skills	3.64	3.75
My school grades improved	2.94	3.03
Money is the primary reason I wanted to participate	2.22	2.41

Table H17
Internship Challenges

	College (n=228)	University (n=344)
	Mean	
Didn't get paid at all	2.04	1.53
Unexpected financial costs	1.68	1.45
Didn't get paid enough	1.58	1.49
Couldn't find an appropriate placement for my field of study	1.57	1.57
Work assigned was boring	1.55	1.59
Not enough opportunities to share what I learned when I went back to the classroom	1.54	1.62
Hard to balance work-integrated learning with my family commitments	1.52	1.46
Too many additional demands on my time	1.52	1.47
Not enough work assigned in the workplace	1.50	1.49
The theory and skills I learned at school were not relevant to the workplace	1.49	1.61
Not enough support from my school during the work-integrated learning	1.47	1.56
Feeling of disconnection from co-workers	1.44	1.49
Disorganized work environment	1.43	1.39
Not enough preparation from my school before the work-integrated learning	1.41	1.63
Didn't learn anything during the work placement	1.38	1.25
Not enough supervision in the workplace	1.35	1.36
Too much work assigned in the workplace	1.34	1.38

Table H18
Applied Research Projects

		College (n=225)	University (n=377)
		Number	
Total weeks	Mean	13.49	21.62
	Median	12.00	16.00
Total hours per week	Mean	13.45	15.25
	Median	8.00	10.00
		%	
Setting	On campus	52.4	65.7
	Private sector business or industry	26.1	6.3
	Community or non-profit sector	10.3	11.3
	Simulated work environment	7.0	4.8
	Health care sector	3.9	7.2
	Government sector	0.3	4.7
Payment	No payment	86.4	69.8
	Regular employment salary	12.8	20.6
	Honorarium or stipend	0.8	9.6
Involved in evaluation	Faculty and/or staff	83.5	77.1
	Employer/site supervisor	31.9	29.1
	Self-evaluation	26.9	9.1
	Not evaluated	6.0	12.0
	Not sure	5.5	4.0
Academic recognition	Letter or number grade	69.5	65.0
	Pass/fail or satisfactory/unsatisfactory	11.7	4.9
	Complete/incomplete	6.4	3.3
	No academic recognition	12.5	26.8
Language	English	-	95.8
	French	-	4.0
	Other	-	0.3

Table H19
Applied Research Project Motivations

	College (n=91)	University (n=217)
	Mean	
Meet mandatory requirements	4.34	3.12
Gain practical work experience	4.13	4.10
Apply theory/skills learned in the classroom	3.94	3.55
Improve employability skills	3.90	3.57
Enhance my résumé	3.83	4.16
Make job search contacts	3.79	3.41
Experience a professional work environment	3.74	3.36
Work in a position with greater responsibility	3.58	3.05
Increase earning potential	3.52	2.94
Determine fit with the career/industry	3.49	3.70
Prepare for further education	3.42	3.71
Explore different career options	3.38	3.30
Contribute to my community	2.99	2.68
Get a job with the WIL employer	2.90	2.79
Help people in need	2.86	2.39
Earn money	2.10	2.26

Table H20
Applied Research Project Benefits

	College (n=75)	University (n=203)
	Mean	
Ability to get along with people in work situations improved	3.70	3.51
Gave me contacts for my future job search	3.28	3.35
Has been a valuable experience	4.03	4.16
Helped me better understand my career interests	3.78	3.97
Helped me mature as a person	3.83	3.80
Improved my interview and job-seeking skills	3.54	3.19
Increased my confidence about job prospects	3.71	3.52
Influenced my career goals	3.71	3.85
Money is the primary reason I wanted to participate	2.24	2.06
My school grades improved	3.26	2.96
Was able to relate theories learned in the classroom to the work environment	4.12	3.78

Table H21
Applied Research Project Challenges

	College (n=75)	University (n=203)
	Mean	
Too many additional demands on my time	1.61	1.72
Hard to balance work-integrated learning with my family commitments	1.59	1.55
Didn't get paid at all	1.51	1.55
Too much work assigned in the workplace	1.49	1.51
Unexpected financial costs	1.47	1.29
Disorganized work environment	1.45	1.47
Not enough preparation from my school before the work-integrated learning	1.42	1.55
Couldn't find an appropriate placement for my field of study	1.35	1.50
Didn't get paid enough	1.33	1.35
Feeling of disconnection from co-workers	1.33	1.49
Not enough support from my school during the work-integrated learning	1.33	1.43
Work assigned was boring	1.32	1.46
Not enough opportunities to share what I learned when I went back to the classroom	1.31	1.49
The theory and skills I learned at school were not relevant to the workplace	1.31	1.52
Not enough supervision in the workplace	1.26	1.49
Didn't learn anything during the work placement	1.25	1.27
Not enough work assigned in the workplace	1.21	1.30

Table H22
Service Learning

		College (n=134)	University (n=350)
		Number	
Total weeks	Mean	11.96	14.53
	Median	12.00	12.00
Total hours per weeks	Mean	15.10	13.68
	Median	10.00	5.00
		%	
Setting	Community or non-profit sector	53.9	65.4
	On campus	22.7	14.8
	Private sector business or industry	9.4	2.8
	Health care sector	8.5	9.3
	Government sector	3.9	5.4
	Simulated work environment	1.6	2.2
Payment	No payment	88.4	88.8
	Regular employment salary	6.9	8.1
	Honorarium or stipend	4.7	3.1
Involved in evaluation	Faculty and/or staff	53.8	47.3
	Employer/site supervisor	47.3	43.0
	Self-evaluation	31.4	25.3
	Not evaluated	19.2	22.9
	Not sure	8.3	4.9
Academic recognition	Letter or number grade	45.4	32.3
	Pass/fail or satisfactory/unsatisfactory	16.6	13.9
	Complete/incomplete	16.1	15.5
	No academic recognition	21.9	38.3
Language	English	-	90.0
	French	-	6.0
	Other	-	4.0

Table H23
Service Learning Motivations

	College (n=35)	University (n=174)
	Mean	
Apply theory/skills learned in the classroom	3.98	3.53
Contribute to my community	4.18	3.99
Determine fit with the career/industry	4.03	3.54
Earn money	2.94	2.16
Enhance my résumé	4.07	4.05
Experience a professional work environment	3.86	3.63
Explore different career options	3.71	3.43
Gain practical work experience	3.84	3.94
Get a job with the WIL employer	3.53	2.94
Help people in need	4.02	4.01
Improve employability skills	3.94	3.86
Increase earning potential	3.76	2.99
Make job search contacts	4.17	3.40
Meet mandatory requirements	3.68	3.01
Prepare for further education	3.89	3.34
Work in a position with greater responsibility	3.94	3.17

Table H24
Service Learning Benefits

	College (n=24)	University (n=162)
	Mean	
Was able to relate theories learned in the classroom to the work environment	4.00	3.65
My school grades improved	3.79	3.00
Money is the primary reason I wanted to participate	2.42	1.75
Influenced my career goals	4.04	3.69
Increased my confidence about job prospects	4.04	3.51
Improved my interview and job-seeking skills	4.01	3.28
Helped me mature as a person	4.33	3.91
Helped me better understand my career interests	3.98	3.90
Has been a valuable experience	4.17	4.23
Gave me contacts for my future job search	3.60	3.23
Ability to get along with people in work situations improved	4.29	3.84

Table H25
Service Learning Challenges

	College (n=24)	University (n=162)
	Mean	
Couldn't find an appropriate placement for my field of study	2.09	1.46
Unexpected financial costs	1.89	1.40
The theory and skills I learned at school were not relevant to the workplace	1.85	1.59
Not enough preparation from my school before the work-integrated learning	1.77	1.59
Didn't get paid at all	1.76	1.65
Not enough support from my school during the work-integrated learning	1.69	1.47
Not enough opportunities to share what I learned when I went back to the classroom	1.67	1.61
Too many additional demands on my time	1.61	1.68
Didn't get paid enough	1.57	1.32
Work assigned was boring	1.54	1.49
Hard to balance work-integrated learning with my family commitments	1.53	1.51
Disorganized work environment	1.51	1.52
Not enough work assigned in the workplace	1.48	1.54
Too much work assigned in the workplace	1.46	1.35
Not enough supervision in the workplace	1.41	1.39
Didn't learn anything during the work placement	1.41	1.36
Feeling of disconnection from co-workers	1.35	1.51

Table H26
WIL Satisfaction by Type of WIL

	College (n=2509)	University (n=2562)
	Mean	
Co-op completes	4.02	4.22
Co-op transfers	3.41	3.27
Field placement	4.15	4.07
Practicum or clinical placement	4.12	4.19
Internship	4.02	4.15
Applied research project	3.79	4.03
Service learning	4.05	4.03



Higher Education
Quality Council
of Ontario

An agency of the Government of Ontario

