



Ensuring Equitable Access to Work-Integrated Learning in Ontario


DiVERSITY INSTITUTE

The Diversity Institute undertakes research on diversity in the workplace to improve practices in organizations. We work with organizations to develop customized strategies, programming, and resources to promote new, interdisciplinary knowledge and practice about diversity with respect to gender, race/ethnicity, Aboriginal peoples, abilities and sexual orientation. Using an ecological model of change, our action-oriented, evidence-based approach is driving social innovation across sectors.

 ryerson.ca/diversity

 diversityinstitute@ryerson.ca

 [@RyersonDI](https://twitter.com/RyersonDI)

 416.979.5000 x7268

**TED
ROGERS
SCHOOL
OF MANAGEMENT**

Authors

DR. WENDY CUKIER

Professor, Entrepreneurship and Strategy; Director, Diversity Institute
Ted Rogers School of Management, Ryerson University

DR. MARK CAMPBELL

Adjunct Professor, RTA School of Media; Director, FCAD Forum for Cultural Strategies
Radio and Television Arts, Ryerson University

DR. LAUREN MCNAMARA

Research Associate, The Diversity Institute; Founder, The Recess Project
Ryerson University

Contents

Executive Summary	1
Introduction	3
Literature Review	7
WHAT IS WORK-INTEGRATED LEARNING (WIL)?	7
CHALLENGES ON THE ROAD TO WIL	8
Research Questions	10
Methodology	10
Qualitative Findings	15
SORTING MECHANISMS	15
Perceptions of Students' Experiences of Discrimination and Harassment	20
Equity and Diversity Limitations of Internal WIL Procedures	23
Quantitative Findings	25
Key Findings	28
Policy Recommendations	31
References	32
Appendix: Interview Guide	41



Executive Summary

Work-integrated learning (WIL) programming has gained considerable momentum across the Ontario university sector, fueled by support from numerous stakeholders, including industry, government and students. WIL has been framed as a solution to the present “skills mismatch” in the province, and as a way to smooth university graduates’ transition into the labour market. There are numerous ongoing industry and government efforts to improve access to WIL programming across postsecondary education (PSE) in Ontario, given the many perceived benefits available through it. To date, however, little effort has been made by researchers to explore issues of diversity and inclusion within this space. Through this report, we aim to ameliorate this gap in existing academic and policy research on WIL.

To explore this topic, we employed a mixed-methodological approach. First, we framed our analysis by conducting a comprehensive review of the international, interdisciplinary literature on WIL. We then proceeded to explore co-op participation data contained in the 2013 National Graduate Survey (NGS) Public Use Microdata File (PUMF), obtained through the Ontario Data Documentation, Extraction Service and Infrastructure (ODESI) portal. Using such data, we examined differences in access to co-op programs along the lines of sex, visible minority status, disability, parental education and citizenship status. We complemented this analysis with semi-structured interviews conducted with 25 individuals working in WIL offices within Ontario universities. To examine this interview data, we employed collaborative group coding using the QSR NVivo data analysis software.

Our examination of the NGS PUMF found several limitations within the data which prevent complex multivariate regression modelling. Moreover, the composition of categories, such as visible minorities, prevents more refined analyses of variation in WIL participation across specific high and low-achieving sub-groups. We outline these deficiencies, and outline a plan for accessing the 2013 NGS Master File at the Statistics Canada RDC, with a view towards engaging in a more thorough examination of the data.

The qualitative component of our analysis produced numerous insights relevant to the current state of diversity and inclusion within the WIL sector in Ontario universities. In particular, we find the presence of multiple university- and employer-level “sorting mechanisms” that unintentionally, but systematically, exclude students of certain social groups. Second, through our interviews we observed that staff at WIL offices are generally unaware of any sort of inequities/discrimination faced by traditionally marginalized students in their programs. Finally, through our qualitative analysis we found that WIL offices across many Ontario universities do not have formal procedures

to address diversity and inclusion related complaints raised by WIL participants, relying instead on informal mechanisms to handle these situations.

We emphasize the need for future research to inform effective policy-making within the Ontario university WIL sector. Using the Diversity Institute's Diversity Assessment Tool (DAT), we specify the need to examine the i) leadership and governance, ii) human resources practices, iii) organizational culture, iv) efforts to track the outcomes of diversity programs, vi) integrate diversity across the value chain, and lastly, to develop the pipeline.

Introduction

In recent decades, Canada's economy has been transformed dramatically. Leading-edge technology has spurred widespread automation, eliminating not just low-skilled jobs, but also those once perceived as "immune" to said process (Advisory Council on Economic Growth, 2017; Deloitte & HRP, 2017). Growth across "knowledge-based" industries, like information technology and communications, has also outstripped that in resource extraction and traditional manufacturing (Alasia & Magnusson, 2005; Florida et al., 2016). In response to these overlapping social processes, industry leaders suggest that an "entirely new workforce is taking shape" (Deloitte & HRP, 2017, p. 5). Newly created jobs require elevated and qualitatively distinct skill sets from those of the past, requiring "workers to be innovative while performing non-routine activities" (Florida et al., 2016, p. 3). The Conference Board of Canada estimates that the resulting skills mismatch costs Ontario upwards of \$24.3 billion in foregone GDP, and roughly \$3.7 billion in tax revenue. Such costs are only projected to increase, as roughly 80% of jobs within Canada are projected to require some sort of postsecondary training by 2031 (Miner, 2014).

Employers cite the current skills mismatch as a primary impediment to competing in global markets (Conference Board of Canada, 2013). Finding the right talent and recruiting well-prepared recent graduates is a challenge for

large (30.9%) and small (28.3%) enterprises (Cukier, 2014). Roughly 82% of companies surveyed by the Ontario Chamber of Commerce (OCC) (Sullivan, 2017) indicate they experience difficulty recruiting candidates with requisite skill sets. The blame for this problem has routinely been placed on postsecondary education (PSE) organizations, who struggle to keep up with dynamic skill demands (also see Miner, 2010; 2012) and are often framed as offering students outdated, inadequate programs (Hudak & Leone, 2013). The Information and Communications Technology Council (ICTC) (2015) warned that "by 2019, over 182,000 critical ICT positions will be left unfilled" (p. iii). It projects that the "growth and prosperity of the Canadian economy" is contingent upon appropriately filling these positions (ICTC, 2015, p. xii). A 2013 survey of 1,538 Ontario employers showed that more than 70% believed that there existed a gap in essential skills among their current employees and, consequently that "there is clearly a need for improved essential skills in the workforce" (Conference Board of Canada, 2013, p. 26). CIBC finds that Canada faces a skills mismatch conundrum that is "big enough not only to reduce the effectiveness of monetary policy, but also to limit the growth potential of the labour market and the economy as a whole" (Tal, 2012, p. 1). However, it is difficult to anticipate needed skills given the rapid technological change that suggests that nearly 50% of current jobs will not exist in 2022 (Frey & Osborne, 2017).

At the same time, high levels of underemployment and unemployment persist, particularly among women, racialized minorities (particularly immigrants), people with disabilities, and Indigenous peoples (Reitz et al., 2014; Statistics Canada, 2011; Turcotte, 2014, Uppal, 2014). Research shows that women and people with disabilities experience labour market difficulties, including lower salaries (Walters & Zarifa, 2008; Zarifa, Walters & Seward, 2015). In Canada, bias against job-seekers with “foreign-sounding” names has also been documented through studies of hiring processes (Oreopoulos, 2009; Oreopoulos & Dechief, 2012; Banerjee, Reitz & Oreopoulos, 2018). Decades of initiatives aimed at advancing women in technology have scarcely moved the needle: the proportion of women in engineering and computer science in Canada has changed little in 25 years (Chicha, 2011; Elliott, 2016; Caranci, et al., 2017). Additionally, research on entrepreneurship has shown that women and immigrants (often racialized minorities) face significant barriers in accessing support to start their own businesses even though this is the preferred pathway for many (Orser et al., 2012; Chraibi & Cukier, 2017). University graduates with severe disabilities have the same employment outcomes as those who do not have a high school diploma (Turcotte, 2014). Youth underemployment and unemployment remain a particular challenge. Indigenous youth are one of Canada’s fastest growing population segments (Statistics

Canada, 2011) but are underemployed. According to Statistics Canada’s Perspectives on the Youth Labour Market in Canada, 1976 to 2015, the unemployment rate for youth ages 15-24 was 13.2% in 2015 (compared to 12.4% in 1976). Although prospects for university graduates are better--the Council of Ontario Universities claims that 90% of graduates are employed within two years of graduating--their average annual wage of \$41,000 per year suggests that many are in part-time jobs and precarious employment (COU, 2016).

In light of this, federal and provincial governments, industry associations, along with large employers (e.g., Siemens), and think tanks have championed work-integrated learning (WIL) as a mechanism to produce graduates with enhanced skill sets (Business Council of Canada, 2016; Conference Board of Canada, 2016). The Ontario Premier’s Highly Skilled Workforce Expert Panel has also announced a plan to ensure all local university undergraduates have access to at least one work-integrated learning experience (BEHR, 2016). The federal government announced a \$73-million investment in its Student Work-Integrated Learning Program, to create more than 60,000 placements over the next four years (ESDC, 2017). A unique aspect of this initiative is that it provides elevated subsidies to incentivize the hiring of students underrepresented groups, including Indigenous students, newcomers and women in STEM.

Canadian universities and colleges have responded quickly and positively to this enthusiasm for WIL. The University of Waterloo serves as a world leader and ideal-typical example of the evolving WIL landscape, with two-thirds of undergraduates participating in these programs. The ethos of WIL has also spread across various disciplines, from business (Jackson et al., 2015) to the creative fields (Allen et al., 2013). The ethos of WIL is also reflected in the shifting in focus in career services from one-on-one counseling to a model centered on professional development and mentoring (Andrewartha & Harvey, 2017).

The labour market benefits of WIL have been documented repeatedly (Nunley, Pugh, Romero, Seals, 2015; 2016; Saniter & Siedler, 2013). At Waterloo, WIL participants have been found to enjoy improved employment rates and earnings (Tamburri, 2014). Walters and Zarifa's (2008) broader analysis of the 2000 National Graduates Survey (NGS) found similar trends. Such outcomes are rationalized through the opportunities WIL offers students to develop professional networks (Klein & Weiss, 2011) and build reputations (Guile, 2009), especially in highly competitive cultural industries (Corrigan, 2015; Frenette, 2013) and for international students (Tran & Soejatminah, 2016). WIL is also said to afford students the opportunity to develop industry-specific cultural capital, defined as the "linguistic aptitudes, norms for presentation of self,

and interactional styles that are specific to differing occupational and professional environments" (Smith, 2010, p. 284; Gribble et al., 2014). In providing said benefits, WIL has been viewed favourably by students who are increasingly facing pressures to compliment their PSE credentials with commercializable "soft skills" (Brooks & Everett, 2009; Milley, 2017), and to find work and gain experience before or during their degree in preparation for the job market (Allen et al., 2013). It has also been explored as a conduit to develop entrepreneurship in students, as WIL offers them the potential to develop agency through structured engagement (de Villiers Scheepers, Barnes, Clements & Stubbs, 2017). Further, the interaction with industry offers students the opportunity to connect with a professional community, facilitating the development of bridging social capital. For students from traditionally underrepresented groups, WIL has been framed as a useful mechanism through which identification with a sector can be facilitated, and through which their potential in pursuing a career in such sectors can be activated (Adjapong, Levy & Emdin, 2016; Doherty, 2011). This has led to the creation of numerous targeted internships devised to provide WIL opportunities for students from underrepresented groups (e.g., Bowen, 2004; Canwest, 2008; ESDC, 2017).

Given that WIL provides access to employer experience and professional development, it has the potential to produce social inequality if social groups are systematically excluded from it. Typically, education researchers have thought about inequality as the product of differential access to credential tiers (e.g., BA) (Raftery & Hout, 1993), fields of study (Gerber & Cheung, 2008), or elite institutions (Lucas, 2001). Students with high socioeconomic status (SES) are said to maintain their relative labour market advantage by acquiring more advanced credentials, in more lucrative fields of study, and from more prestigious universities. However, within the context of “mass” PSE systems (Schofer & Meyer, 2005), we posit that WIL can act as another key form of differentiation producing labour market inequities. This is especially true within industrial sectors, such as the creative industries, where the networks and practical work experience available through WIL programs play a greater role than advanced credentials in job acquisition (Allen et al., 2013; Corrigan, 2015; Frenette, 2013). Across these sectors, forms of WIL, like co-ops or internships, may serve as a prominent “signal” to employers (Perlin, 2012). This assumption is backed by audit studies showing that internships produce a sizable (~15%) increase in call-back rates for applicants (Nunley, Pugh, Romero, Seals, 2015; 2017).

Existing research addressing disparities in access to WIL has focused on other nations (Holford, 2017; Leonard, Halford & Bruce, 2016; Mackaway, Winchester-Seeto & Carter, 2014; Main et al., 2015) or exclusively on trends at the national level in Canada (Drysdale et al., 2007). The paucity of diversity- and inclusion-related research on WIL within Ontario persists despite there being evidence that numerous social groups continue to be underrepresented within Canadian universities (Thiessen, 2009; Zarifa, Hango & Pizarro Milian, 2017), especially the most prestigious ones (Davies, Maldonado & Zarifa, 2014; Sweet, Robson & Adamuti-Trache, 2017). Further, disparities remain in access to lucrative and highly competitive fields, including STEM (Davies & Hammack, 2005; Hango, Zarifa, Pizarro Milian & Seward, forthcoming). These trends mirror the broader inequities that certain groups in Canada face within the labour market (Banerjee, Reitz & Oreopolous, 2018; Oreopolous, 2009; Dechief & Oreopolous, 2012; Turcotte, 2014; Walters & Zarifa, 2008; Zarifa, Walters & Seward, 2015).

The combination of the persistent skills shortage, under and unemployment rates for diverse groups in Canada, and increased growth of and enthusiasm for WIL opportunities are key motivators for this project. This project examines whether there exist in WIL issues of representation for certain demographic groups, and whether there are issues of groups who have access to WIL

but still remain underrepresented in employment. We apply a structured lens to the processes to identify where the barriers might be and why we need further research. As WIL is a gateway to employment, equitable access to WIL opportunities is critical. WIL programs need to respond to employer demands but also intentionally address systemic barriers and ensure benefit to students who need support transitioning to employment. This project was motivated by the dearth of existing equity, diversity and inclusion-related research on WIL within the Ontario context. Through a comprehensive review of the recent, international literature on work-integrated learning, data from in-depth interviews with individuals whose work supports the coordination of WIL within the province's universities, and an analysis of Ontario university students sampled through the 2013 National Graduates Survey, this report offers interim findings, which begin to address the complex and multilayered barriers that impede access to WIL by underrepresented groups.

Literature Review

What is Work-Integrated Learning (WIL)?

Work-integrated learning (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” (Peters et al., 2014). WIL connects industry and education by allowing students to apply theoretical knowledge in the employment context. Forms of WIL typically include placement and non-placement opportunities. Placement settings are carried out at the employer site and include co-op, paid internships, apprenticeships, and the articling and residencies required for programs like nursing, medicine, and law. Non-placement WIL is typically not conducted on-site and includes service or project-based learning, simulations, and participation in labs, hackathons, or start-up incubators (BHER, 2016). Both forms of WIL support the development of students’ professional identities and employment-readiness (Pilgrim, 2012). In light of the rapid expansion of WIL across PSE, scholars have suggested that it is important to “examine the experiences of students...as they progress through the hiring processes” (Cormier & Drewery, 2017, p. 214). Although there have been a number of studies of WIL in Ontario (e.g., Drysdale & McBeath, 2012; Peters et al., 2014; Turcotte et al., 2016; Wayland & Goldberg, 2009; Yee, 2003),

and several studies of disparities in WIL, few studies have examined disparities in access, retention, experience, and impacts on future employment outcomes across equity-seeking groups, including female students, visible minority students, students with disabilities, Indigenous students and students who identify with the LGBTQ+ community.

Challenges on the Road to WIL

Drawing on the existing international literature, it is possible to understand the potential barriers which are hampering access to WIL across varied social groups within the Ontario system. Below, we provide a brief overview of this literature, with a specific emphasis on the challenges faced by international students, persons with disabilities, students who are part of the LGBTQ+ community, and female students.

INTERNATIONAL STUDENTS: LANGUAGE AND CULTURAL CHALLENGES

Although WIL has the potential to introduce international students to the local labour market, these students often struggle in securing WIL placements when their English-language skills are still developing and when they lack access to social and professional networks (Gribble et al., 2015). International students are often perceived from a position of deficit, and employers are reluctant to hire them because they feel that international students need to be carried. Many international students are subject to

discrimination and deskilling, and are placed in roles that do not recognize their cultural competencies, underutilize their skills or talents, or are irrelevant for their professional aspirations (Wall, Tran & Soejatminah, 2017). Other challenges arise due to students' English language competency, lack of confidence, and underdeveloped workplace competency, with research suggesting that supervisors deem international students "not suitable" for their organizations (Felton & Harrison, 2017, p. 94; Harrison & Felton, 2013). Challenges with English language competency are compounded by prejudicial attitudes in the workplace (Harrison & Felton, 2013). Because supervisors of international placement students have limited access to resources, they in turn had "minimal understanding of the particular learning needs of international students and limited knowledge and skill in relation to culturally responsive supervision" (Felton & Harrison, 2017, p. 98).

STUDENTS WITH DISABILITIES: PHYSICAL AND ATTITUDINAL BARRIERS

For students with disabilities, current studies find that barriers to participation and successful completion are considerably higher than they are for non-disabled students. Despite the long history of co-operative education and the more recent expansion of WIL, the discussion of access and accommodation for students with disabilities is a nascent one. In a recent study of 28 students with disabilities who leveraged vocational training to transition

to work, Cocks, Thoresen and Lee (2015) found that when adequately supported and resourced, apprenticeships and traineeships are effective pathways into paid employment, enhanced quality of life and social satisfaction. However, in their earlier longitudinal survey of vocational education training among 404 recent graduates in Victoria, Australia, Cocks and Thoresen (2013) found that students with disabilities were twice as likely to report barriers than their non-disabled counterparts and that, in combination with limited resources and support, these barriers impeded their successful completion. They found that 10.4% of all apprenticeship and traineeship graduates with disabilities experienced behaviours indicative of harassment or bullying compared with 5.9% of graduates without disabilities (Cocks & Thoresen, 2013). Other reported barriers included inaccessibility of the built environment, lack of assistive technology, pain, discomfort, and health problems, and sensory and communication barriers (Cocks & Thoresen, 2013).

Other students have examined the extent to which disclosure impacts the experiences of students with disabilities in on-site WIL settings. In her study of how students with disabilities negotiate their identity in the WIL context, Cunnah (2015) found that students with disabilities saw such opportunities as a way to build financial independence and a positive self-identity and as an experience that

manage prior, stigmatizing experiences. Yet, students with disabilities were “often happier to affirm and disclose their disabled identity at university than in work contexts,” which resulted in students having different experiences in different settings. Earlier studies found that students with disabilities demonstrated limited self-advocacy and did not disclose their disabilities generally speaking because they feared discrimination and stereotyping (Scholl & Mooney, 2004). Students who did disclose were able to take advantage of supports that were unavailable to those who did not disclose. The authors stress the importance of building self-advocacy in youth with disabilities and fostering collaboration between stakeholders to ensure that students are comfortable making requests for accommodation (Scholl & Mooney, 2004).

LGBTQ+ AND FEMALE STUDENTS: INHOSPITABLE PLACEMENT ENVIRONMENTS

At present, there exists very limited research on the experiences of LGBTQ+ students in WIL placements, and the research that has been done has focused on social work. For gay and lesbian social work students, homophobia and heterosexism are interwoven in social work placement environments (Messinger, 2004; 2013). LGBTQ+-identified students reported being subject to discriminatory attitudes and behaviours while on placement. The heterosexist climate of placement organizations meant that students felt pressure to hide their sexual orientation.

In organizations in which there was a homophobic climate students generally felt anxious and unsafe, and interpersonal challenges between clients and other staff frequently arose (Messinger, 2004). Messinger (2004; 2013) recommends that placement supervisors receive more education and information about sexual orientation issues in placement, that students be privy to a list of gay-friendly agencies or that coordinators work to build relationships with gay and lesbian agencies.

In the WIL context, female students are typically underrepresented in STEM fields and the trades. Recent research examining perceived risk to students participating in work terms found that, from the perspective of co-ordinators, harassment was a potential risk to students on work terms, including bullying, physical or emotional intimidation, neglect, and sexual harassment (Newhook, 2016). Moylan and Wood (2016) recently surveyed 515 female students of the prevalence of sexual harassment in social work placements, and found that female students were repeatedly told offensive sexual stories or jokes (27.9%), treated differently due to sex (19.6%), stared at (16.4%), whistled or called at in a sexual way (13.6%), and within earshot of offensive sexual remarks (13.6%). In the trades in Canada, Taylor, Hamm and Raykov (2015) found that young women are underrepresented in apprenticeships. Where they do participate, they are

overrepresented in gender segregated trades such as hairstyling where their earnings are considerably less than those of men and of women in other trades.

Research Questions

The research questions that inform this project are as follows:

- > What data are available on the experiences of post-secondary students who are members of equity-seeking or underrepresented groups with work-integrated learning programs? What does the evidence show with respect to participation rates? How might this evidence be linked to discipline and socio-economic factors?
- > How aware are WIL administrators of the potential barriers to participation and challenges faced by students from designated groups?
- > How do programs address issues of diversity and inclusion for work integrated learning? How are commitments operationalized?
- > How can policy and practices be adapted to ensure a level playing field in WIL programs?

Methodology

This project took a mixed-methods approach to the investigation of barriers and enablers to WIL participation in Ontario. We conducted a literature review, an environmental scan of the WIL landscape in Ontario, a series of

interviews with 25 individuals whose work supports WIL programming in universities, and a statistical analysis of the 2013 National Graduates Survey to determine WIL participation across various student groups in Ontario.

First, we reviewed the literature on work-integrated learning in Canada, the US, the UK and Australia and New Zealand to identify the predominant themes around diversity, equity and inclusion that emerge in scholarly and government research. For this literature review, we conducted a series of keyword searches in academic databases, including Education Resources Information Center (ERIC) and Google Scholar to pull literature in English, which included academic research, policy documents and industry reports. Our search terms connected different forms of WIL [“work-integrated learning” OR “work-based learning” OR “experiential education” OR internship OR apprenticeship OR “field placement” OR “co-operative education”] with relevant equity and diversity terminology [diversity OR equity OR inequity OR barrier OR disability OR “visible minority” OR LGBTQ].

We then conducted an environmental scan of WIL programming in Ontario’s publicly funded universities, with a focus on engineering and business programs (see Appendix 1). This scan was based on publicly available information on university and program websites for their co-operative education, WIL and internship programs. Through it, we gathered data on the characteristic of

WIL programs, including whether they were part of a degree requirement, paid or unpaid, the length of co-op options, fees associated with participation, and admission requirements. Through this scan, we aimed to develop a bird’s eye view of WIL programming across the Ontario university sector - one that would inform our subsequent empirical analysis.

The qualitative component of this project comprised one-on-one interviews with 25 individuals whose work supports WIL at one of Ontario’s universities. With a focus on business and engineering co-ops, these individuals included Executive Directors and Directors of Co-op or Experiential Education, Managers of Student Experience, Co-op or WIL Coordinators, Career Consultants, and Employer Relations Managers. The trends that shape the literature directly informed the interview protocol (see Appendix 2). Participants were invited for an interview through direct e-mail correspondence and were interviewed in person or over the phone. Participants’ contact information is publicly available and was gathered in our environmental scan. In addition, Co-operative Education and Work-Integrated Learning Canada (CEWIL) and Education at Work Ontario (EWO) assisted by posting the announcement to its membership, to introduce the research and offer legitimacy to interview requests. In total, 86 people were invited, and two participants contacted the researchers to volunteer. Of these, 25 participants representing 10 institutions

participated in an interview. Interviews lasted, on average, 45 minutes and were audio taped and then transcribed semi-verbatim. All interviews were conducted by the same researcher. The interviews explored the processes used to select students for WIL programs (e.g., entry requirements, qualifications, interviews) and solicited participants' perspective on potential barriers or challenges that under-represented groups face during the application process or during the work term (e.g., socio economic status, language, cultural norms, previous experience, social networks). Overall, we aimed to determine the degree of awareness of diversity issues among these key stakeholders, and the degree to which diversity informs the management and execution of WIL. The Research Ethics Board (REB) at Ryerson University approved the research, and we obtained approval or exemption, as necessary, from external university REBs. All participants gave their informed verbal or written consent to participate and all participants were assigned a pseudonym by the interviewer prior to conducting data analysis. Interview participants are identified by de-identified versions of their titles (e.g., Coordinator, Manager, or Director) to offer an indication of the participants' level in the WIL program and the degree of regular interaction they have with students.

Once transcribed, interview data was analyzed using the QSR NVivo software. This is a powerful tool that allows the analyst to systematically track the presence of themes across texts, query data for keywords, and produce summary statistics to compare the presence of thematic trends. We employed a "hybrid" coding strategy that encompassed both inductive and deductive elements. First, the research team re-surveyed the existing equity research within the field of education and work on the barriers that traditionally marginalized groups currently face within those spheres. Through our second review of such literatures, we collaboratively deduced a list of pertinent a priori themes whose presence we subsequently systematically tracked while reading of interview transcripts (see Table 1). During the coding process, we also remained open to unforeseen themes within the data, engaging in "open coding" (Ryan & Bernard, 2003) for those that did not fit neatly into the a priori themes.

Table 1: Preliminary Coding Scheme

Code	Relevant Details
Internal Sorting Mechanisms	<p>Criteria for assessing students (e.g., GPA requirements, qualitative assessments [in-person interviews] of “soft skills,” vulnerable sector checks)</p> <p>Variations in criteria across programs or student types (e.g., full- vs. part-time)</p> <p>Program-related fees</p>
Job Market Preparation	<p>Types of training provided to students in search of co-op opportunities (resume writing, mock interviews, social media training)</p>
Perceived Student WIL Experience	<p>Forms of discrimination experienced by students during interviews/placements.</p> <p>Presence of data gathering on WIL experiences, such as site visits/long distance interviews (for international placements)</p> <p>Presence of institutional supports (e.g., peer mentors or references to accessibility services)</p>
Post-WIL Evaluation	<p>Types of feedback for WIL office/employer from students (e.g., final work-term reports/journals and reflections/presentations or creative projects)</p>
Internal WIL Office Procedures	<p>Institutional procedures guiding responses to reported discrimination</p> <p>Relationship with other university offices and employers</p> <p>Presence of data collection/analysis</p> <p>Forms of interaction with student groups, faculty, support programs/services</p>
Mandatory WIL training	<p>Presence of health and safety training for students or employers</p> <p>Presence of diversity training</p>
Miscellaneous	<p>Other emergent themes</p>

Coding was performed by a team of three analysts. At the beginning of the project, the coders were trained by the PI on the meaning of thematic codes, and instructed on how it should be applied using excerpts from the interview data. This initial “norming” exercise (Kennedy & Long, 2015, p. 146) was performed to ensure consistency in the application of thematic codes. Collaborative approaches to qualitative data analysis have been dubbed as “ideal” for their ability to improve the thoroughness of coding efforts, ensuring that empirical trends within texts are not overlooked. As Auerbach & Silverstein (2003) outline: “Even if one or two of the coders has missed some

important repeating ideas, using input from four people usually ensures that no important ideas are lost” (p. 61). Lastly, collaborative coding, given that it is informed by the decisions made by researchers with contrasting viewpoints and life experiences, is said to be capable of producing “richer” and more holistic interpretations of empirical trends (Sweeney et al., 2013). As Moyer & Juang (2011) note, collaborative coding allows for the leveraging of “individual coders’ unique perspectives” for the production of rich and diverse interpretations of data (p. 7). The diverse experiences and knowledges that coders bring to the analysis can prompt productive disagreements and discussions about the data, allowing for the refinement of both codes and theoretical explanations (Barbour, 2001). One potential drawback of team-based research is that it can be channeled by social hierarchies and power imbalances that can mediate the influence which individuals have on adopted coding schemes (Richards, 2015). To neutralize this potential problem, we adopted an “egalitarian” team structure (Sanders & Cuneo, 2010, p. 328) during the open coding stage, which allowed each member to have equal input into the way we coded interview data.

The quantitative component of this project involves offering a broad-level overview of trends in access to WIL by different equity-seeking groups. To this end, we examined the 2013 National Graduates Survey public use microdata

file (PUMF), made available through the Ontario Data Document, Extraction and Infrastructure (ODESI) portal. This data set is one of the few existing publicly accessible data sources which contains both co-op participation data, as well as socio-demographic data on students. We focused specifically on trends among the 1124 Ontario graduates with a bachelor’s degree in the data set which, when weighted, represent a total of 76,584 graduates within the province. We performed non-parametric tests of statistical significance (e.g. corrected weighted pearson chi-squared test), primarily with a view towards identifying any significant disparities in access by sex, racialized status, disability and citizenship. We are currently in the process of acquiring access to enter the Statistics Canada Research Data Centre (RDC) at the University of Toronto in order to examine the NGS 2013 Master File which contains data on a larger number of individuals, and which will allow us to engage in more advanced (logistic) regression modeling. We have also made inquiries into the 2016 NGS, but unfortunately it will not be available until December 2019. Through an examination of the 2013 NGS, we will be able to engage in a multivariate analysis of the impact of particular factors on participation in co-op programs, holding other factors constant.

Qualitative Findings

Several trends were observed throughout the course of our interviews with university staff whose work supports WIL, including the i) presence of university-level and employer-level “sorting mechanisms” that systematically reward certain types of students while excluding others, ii) occurrence of inequitable experiences once within co-op placements, and iii) absence of established, formalized procedures to handle such occurrences. We document these trends below, drawing on representative examples from the data.

Sorting Mechanisms

INTERNAL SELECTION CRITERIA

Through our interviews, as well as our environmental scan of WIL program entrance requirements, we observed that students were sorted through a combination of minimum GPA requirements, typically around a cumulative average of 70% (or equivalent for institutions on a point scale), and through an evaluation of their broader skill sets. Though a seemingly objective indicator of ability, GPA requirements have the unintended consequence of disproportionately excluding low-SES students, given that GPA has been linked in numerous studies to SES background, as measured by family income and parental education (Geiser & Santelices, 2007; Sirin, 2005). These are students who are already structurally disadvantaged, and who would stand

to benefit the most from the outcomes associated with WIL, such as extended professional networks and industry-specific capital. One co-ordinator explicitly noted this as a concern:

For our mandatory program, we have certain requirements that might systemically exclude certain students... especially some of our marginalized students, they might not have the same socioeconomic status as, let's say, other groups of students. So, some of our students, they're working two or three part-time jobs and their CGPA is suffering... when I used to work with our optional programs, like business, for example, some of those students would always be on the cusp of not being eligible for co-op... they are not able to be as academically diligent because they have other responsibilities. So, I've noticed that especially with some of our racialized students...they have a number of other [obligations], whether it's family obligations and responsibilities or again, they have to do a variety of other activities to afford to be at Ryerson, right? (emphasis added)

Such requirements also indicate a clear preference on the part of WIL program to identify “high achievers,” and exclude or withdraw from WIL those with lower averages.

WIL INTERVIEWS AND THE PRIVILEGING OF EXPERIENCE

These basic GPA requirements are sometimes complemented by interviews at one or multiple stages of

the application process; at this stage (admission into the program), WIL offices emphasize the desirable qualities that will make a student “competitive” on the WIL job market. According to one key informant who was also a longtime and active member of a co-op education association, it is only programs with voluntary WIL opportunities that conduct internal interviews. These interviews served as “filters” that helped to select out individuals who lacked the “soft” skill-set or professional polish that employers want candidates to have. As one co-ordinator explained, performance in these interviews, alongside work experience and extra-curriculars, informed eventual decisions to grant access to the WIL program:

We interview everybody that applies and we base admission decision on a combination of academics, their work experience, their extracurricular involvement and their interview performance.

Another co-op coordinator, in outlining how he supports students in the job search, framed his role as one that ensures that:

...their applications look good and presentable for employers, you know, to make sure that their resume, cover letter are in the best shape as possible, to help them go through their LinkedIn profiles and with their online presences to make sure that those are presentable and attractive as well... We want to find people that have, you

know, extracurriculars or previous work experience or volunteer experience and have at least some of the skills that would make a good co-op student (emphasis added).

He also indicated that while the co-op program would have:

...accepted some students that maybe weren't as well rounded and did have some gaps in communication skills, or didn't have any work and volunteer experience... [these same students] would have difficulty marketing themselves when it came time to applications and interviews.

The overarching assumption among co-ordinators was that “though co-op is designed to give students experience,” employers had a bias towards hiring students that already possessed it. When asked whether employers have an expectation that the student will come as a fully-formed employee, in a context in which the employer has inadequate resources dedicated to training, a managing director indicated that “that has been our experience...[and] sometimes it's not even just a thought. It actually has come out in their verbiage.”

SES, AND CO-OP PLACEMENT “CHOICE SETS”

Beyond being disproportionately impacted by GPA restrictions, one Director outlined that the options available to low-SES students, including first-generation students, working parents and working-class students,

were limited vis-a-vis those of their high-SES counterparts. The geographical constraints placed on the latter by familial (e.g., childcare or eldercare) and other responsibilities (e.g., full-time employment) were framed as rendering them immobile, and limiting their “choice sets” to those opportunities proximate to their place of residence:

Many of our students are from the [lower SES] area so a lot of them have family responsibilities, from first-generation at university, they’re often working part time supporting family, often living at home, and so, one of the barriers we see is that many of our students cannot leave [home] for their co-op work term.

The inability to travel to more distant WIL opportunities excluded low-SES students from potentially rewarding WIL opportunities, which in some industries or professions tend to be clustered around particular geographical regions. As a second director explained, with regards to public policy-related WIL placements in the capital region:

Most of our students are living at home, and the other challenge is they’re also paying for most of their own tuition and they need the money they get on their work term to pay for the next term...they say they can’t go to take great public policy jobs in government [because] if they pay for their rent, they can’t pay for their tuition next term.

This aversion by low-SES students to participating in distant co-op placements coincides with their documented resistance to travelling long distances to enroll in a university, with studies routinely finding that these students lack the financial and cultural capital to make these distance transitions (Frenette, 2004; 2006; Newbold & Brown, 2015). It also aligns with U.S.-based research which finds that the ability of students to take on employment opportunities in distant locations is heavily mediated by social class, with the parents of high-SES students subsidizing their offspring’s career development (see Armstrong & Hamilton, 2013; Ramirez, Main, Fletcher & Oland, 2014).

EMPLOYER SELECTION CRITERIA

Access to and participation in WIL is also shaped by the criteria that employers use to evaluate students during interviews. This criteria directly reflects the values that guide contemporary corporate hiring practices, given that they are beyond the university’s control. As one manager admitted: “we don’t have a lot of control over the culture of a company a student’s going to.” Through these interviews, employers evaluated pre-screened candidates for “well-rounded” individuals, and those that they perceived to be a good “fit” for the company. Exactly what determined fit remained elusive, and perceived to be a function of the company, role and numerous other factors:

What the employer wants really depends on the role, the position in the company... Some want someone with high academic grades or specific programs, but then when they interview, employers often leave that by the wayside and are focused instead on “fit” or skill set or passion for the role. And, students need to be able to successfully navigate the interview and convince the employer that they are the best “fit.” The positions we post are often posted across multiple programs and many employers will post across multiple schools so our students are not only competing with their peers in a program, peers in other programs, as well as potentially in other schools.

Several participants stressed that the interview is where students who identify with one or more equity-seeking groups will have the most challenges, given the degree to which prior experience in combination with soft skills--leadership, adaptability--affirm for employers that a candidate is a strong “fit.” For example, in the experiences of those whose work supports WIL programming, international students whose first language is not English were described as being at a noticeable disadvantage during the interview process, specifically because of their developing communication skills. As one coordinator put it:

There are international students who come here who really do struggle because of their English skills...in that maybe they can write a really good cover letter and resume, but when it gets into

the interview [with the employer], they do have difficulty communicating because English is not their first language.

Another director, reflecting upon her many years supporting WIL, indicated that “when I first started, I would hear from employers, ‘So could you send me students that speak English?’ And I’d have to just kind of take a deep breath and realize that this is part of an educational opportunity for the employer.” Another participant, a student advisor, emphasized that “if they [students] struggle to speak clearly [in English] it impacts their ability to present themselves in a positive way,” suggesting an awareness of employers’ preferences for candidates fluent in English and confident in their communication skills. Further, in participants’ experiences, students who had “ethnic” or non-Anglo Saxon names might also face hiring bias. One director indicated that employers “would just assume that having a last name, again, that is not what they feel might be seen as Canadian--someone may make assumptions about their culture or background.” Many indicated that students often anticipate this bias and contemplate using a different name or choose a white-sounding name to diminish their difference.

Participants also indicated that students with disabilities also faced challenges during employment interviews. One Director indicated that, for students with invisible disabilities, such as anxiety, “an interview is not their area to shine. So [we work on] creating other pathways

for that, or [coming up with] a different way for you to see how great this student is but still assess the skills that you want?” She added that employers are not always able to respond affirmatively to such requests, particularly “when they’ve got a system and they’re short on time; it’s really hard to come up with that process” or alternative. She also indicated that students with physical disabilities, particularly those who use wheelchairs, “feel that there’s a judgment made as soon as they appear.” Many participants indicated that they had limited interaction with students with disabilities and wondered if that was a result of their self-selecting out of WIL. One coordinator said that with students with disabilities, “again, there hasn’t been a lot of disclosure, but I also think that some of them are choosing not to enroll in the internship program and this is what we want to change.” She also wondered if “they’re self-selecting themselves out, thinking, ‘well, I won’t be able to do that or I wouldn’t get selected anyway’.”

INSTITUTIONAL REACTION TO EMPLOYER STANDARDS

An awareness of the types of technical and soft skills that employers value pushed WIL programs to develop compensatory structures to develop such qualities among their students. Several universities require that co-op students register in a mandatory “work preparatory course” that one coordinator explicitly stated is “about job readiness [and] skill development.” As the results of our environmental scan demonstrate, some

general trends emerge in this preparatory context, in that most programs organized this around preliminary workshops or additional courses that focus on interviewing, resume preparation, and workplace performance (see Appendix 1).

Mandatory for every student, including international students, the focus of these courses is to teach them about about “speaking effectively and concisely,” and to build “confidence.” One coordinator described these as being “all about oral communication.” Another coordinator whose work supported business students in the co-op process described the recent introduction of “career readiness online modules,” that included “live actor simulations” delivered by a professional services firm, and were: “designed to simulate a real work environment where we have professional actors who will pose as colleagues or managers within the workplace, and then set the students through different situations.”

In another, smaller “boutique” WIL program, students and recent graduates are invited to participate in an interview. Despite being a mock interview, it, alongside their resume, are evaluated and form their “employability score,” which ultimately determines acceptance into the program. When asked what would make a student less likely to be accepted into this program, its Director stated that “their ability to comprehend the questions that we’re asking them,” was crucial. He added that:

...some people seem confused or give answers that seem to reflect the lack of comprehension...We ask them very standard behavioural questions, and then we see if they're able to give us the STAR [situation, task, action, result] response in the situation...and we tell them ahead of time, 'This is a behavioral question, we are looking for a STAR response, please be specific'.

In addition to executing communications and professionalism training, many students are often required to complete technical skills training. One manager of a WIL program indicated that their program requires students to complete eight and a half hours of Excel training over three sessions before students can start their first work term, in addition to "professional behavioural training."

The perspectives of WIL coordinators, managers, and directors indicate that the curriculum delivered to support and prepare students for on-site WIL experiences is primarily employer-facing. Such training and coaching, whether mock interviews, behavioural scenarios, or communications seminars, are designed to ensure that students enter the corporate environment able to conduct themselves "professionally" and seamlessly integrate into the corporate environment.

Perceptions of Students' Experiences of Discrimination and Harassment

Participants generally believed that their students did not experience inequality, such as discrimination or harassment, during employer-facing WIL experiences. One manager indicated that she could not "think of any specific issues related to diversity. Honestly, our employers are looking for diversity...I don't see it as an issue or challenge at all." When asked about the presence of barriers or challenges to students from underrepresented groups, most participants perceived that because the WIL program was open to applications and welcomed participation from students from all social groups, there were "absolutely no barriers" present at any point in the WIL experience. However, respondents provided many anecdotes where harassment and discrimination had occurred, which they understood and discussed as isolated incidents.

Many participants were unaware of, or reticent, about inequalities or barriers in relation to sex. One coordinator indicated that she "wouldn't put [women] in the inequity area anymore," while another said that "they don't have an issue; there's no barrier." However, some participants still perceived that there existed barriers and inequitable treatment of students along the lines of sex, particularly in disciplines and

fields such as engineering. For instance, one respondent indicated that they had been involved in responding to a female student's claim of sexual harassment in the workplace when:

...she [the student] contacted me to tell me that she had had a few unfavourable interactions with the director of her department where they...had made some comments that were demeaning against women...he berated another female employee that she was being too emotional. All of this stuff sounded like it was out of a case study, a textbook; it was kind of unbelievable to hear.

Another coordinator felt that these kinds of situations persist because "patriarchy" and "frat party ideology" dominate fields like engineering, resulting in an unwelcoming and unsupportive environment for women and transwomen. She felt that male dominance made women and out members of the LGBTQ+ community reluctant to self-advocate within engineering. One coordinator pointed to an incident in the recent past when an employer site was inhospitable towards female students because it did not provide a separate bathroom for women, resulting in the student's discomfort and refusal to use the bathroom.

Interviewing was also found at times to facilitate discrimination, given that it provided the opportunity for employers to directly observe traits which might not be clear via a mere review of resumes. As one coordinator explained:

So, there was a student who came in a couple of weeks ago. She didn't always wear a hijab and then she started wearing one. And, so she'd gone to her first interview without the hijab, and went to her second interview with the hijab, and told me that she felt like they weren't treating her the same, or they weren't really looking her in the eye, making a lot of eye contact, didn't ask a lot of follow-up questions or weren't really holding the conversation for long with her. And, you know, it's unfortunate to hear that.

Respondents also commonly alluded to the barriers that students with disabilities faced during the employer-facing application and recruitment process. One coordinator indicated that:

The first challenge starts when they're actually applying to jobs itself. For example, if someone gets really stressed, they're not going to be able to apply to a lot of jobs if they're also taking their full course load. So, that might be a discussion to have with the student about extending their academic term here at the university so they can actually be in good health and successfully complete their academic and co-op requirements. Those are sort of the challenges that we've had around disability.

Another coordinator provided the example of a student who had a speech-related disability and with whom she had worked in the past:

She got picked for so many interviews because she was a great candidate and then never got an offer. And, I was sure, I was pretty confident that it was because of her speech impediment.

Another manager spoke to employers' reluctance to accommodate students with physical disabilities because they are "afraid to make exceptions to their process. Like, one of our students did get hired with a major corporation--you would be shocked if I named them--and he has a visible disability, he's [a wheelchair user]." In order to support the student's participation in the placement, the university "worked through what the accommodations were" and split the cost of software with the employer only to have the employer say "'you know what? This is too much work; I'm just gonna cancel it.' And it's a way of just saying to the HR rep, 'So are you gonna tell this case manager, or are we, that that's illegal?'"

Although WIL offices were aware that their students were experiencing barriers and challenges in the recruitment and selection process, the offices did not report the existence of official mechanisms to gather data or track these experiences. As one coordinator admitted, their program does not seek out that information and she herself does not make an effort to gather it from students for whom she is responsible. Another participant outlined that, given the absence of such data-gathering mechanisms, it was likely that there was underreporting, specifically with respect to sexual harassment:

As far as sexual harassment in the workplace [goes], as I said, I'm only aware of a few instances [within the program]. But, based on what's happening globally, there could have been more, but we were just not brought into the situation.

In this case and all other cases, the WIL office is unable to address discrimination if the student does not disclose its occurrence to their coordinator or their placement supervisor. Although WIL offices conduct site visits and require students (and employers) to complete post-WIL evaluations, which are detailed in the environmental scan (see Appendix 2), offices do not generally solicit feedback from students about their experiences of WIL or give students an opportunity to inform the office of challenges or barriers that might emerge beyond criteria such as learning objectives and skill development. Further, WIL offices did not have an official process or policy in place to inform how it responds to such claims if they are disclosed. As one coordinator explained:

We've had one situation that I'm aware of overall...I don't think it was sexism; I think it was more like harassment...I don't think there's a clear process here at the university, per se, in terms of what happens; however, in the case that something does happen like that and the student does report to us, we will seek the support of the human rights department. But in this particular case, the student decided to just speak with their manager and they decided together that the student was going to switch

to a different term so that they were no longer in contact with the person that allegedly was harassing this person. Now we learned about this a little bit late, because again, the student told us late.

In both cases, it was challenging for the WIL office to intervene in cases of discrimination when students did not feel empowered to disclose experiences of inequity. Because, in the majority of cases, the WIL experience--particularly in the case of co-op--becomes a relationship that is primarily between the student and their employer, the monitoring of placements focuses on performance and skill development and thus does not allow them to proactively address such challenges.

Equity and Diversity Limitations of Internal WIL Procedures

In response to complaints about discrimination, there was an absence of established protocols to guide WIL staff in their engagements with diverse students or in their reactions to adverse events. Still, there was a commitment on the part of WIL administrators to help to address situations where perceived discrimination or conflicts occurred during placements. As one co-ordinator explained, in such cases, the university would step in to attempt to mediate talks about remediations:

For sure. Not every situation is perfect, and I know that that [discrimination]

is still out there and still does happen occasionally. And, then we would work with the, again, I can't speak in specifics, but if a student runs into a situation that's our responsibility to work with the student and the employer and HR to sort of sort that out and make sure we aren't putting students in a situation where they could be facing those kinds of things.

In all programs that were included in this study, students' experiences of discrimination or harassment are responded to and treated on a "case-by-case" basis with the student at the centre of decision-making. For example, a manager indicated that they

...look at the resources that we have on campus first of all... We have a Sexual Victims Officer, [and] we have an Equity Officer, and we would actually bring them in and sit with the student and this expert to talk through the scenario: 'Okay, what happened? How does it make us feel? What could have been the intention? And then we talk to the student about what do you want to do with this? Here's some options'.

A notable characteristic of these mediation processes is that they are enacted informally by university representatives, and are generally only loosely informed by official policy frameworks that dictate how the situation ought to be handled. This afforded individuals within WIL offices the ability to exercise professional discretion in these situations, consult with colleagues and/or superiors, and discuss with

employer partners. This process is described in detail in the quoted passage below:

...when I was working in [another department at the same institution] as a career consultant, I had complaints from my female students about sexism in the interview process...being asked illegal and inappropriate questions with a very prominent employer that we would frequently host on campus. So, what we did in that situation is I met with all the students, we investigated and documented their experiences, all of their experiences were similar even though the students didn't know each other and what we did is I consulted with my manager and our director at the time to determine the best course of action and we actually contacted the employer, we contacted the manager of this individual who had been doing the recruiting interviews to share some of these experiences and to talk about the best course of action because we were concerned about these practices being done with other students at other institutions... So we, in speaking with the manager of the individual who was doing the recruiting, we you know, informed them that this wouldn't be something that, you know, we would not want this practice to happen again to not only our students at Ryerson but also other students at other universities and we would like to hear, you know, what they were planning to do about it. And I believe that they dismissed the individual from their position as a result of the allegations...

Some coordinators cited the lack of training and framing to deal with these scenarios as an area for improvement, from an organizational standpoint:

So, obviously one thing we could definitely improve on is to have more diversity training and have more processes in place that will kinda outline what we need to go through, and make sure we do when some of the situations [discrimination] arise. So, if that does happen with an employer we don't have a relationship with, how do we make sure that doesn't happen with other students who go through that process? So, just that kind of diversity training and how to accommodate for the different types of students that might come in and will need some of those accommodations, or even the ways to spot some of that without students coming right out and telling us that?

A troubling aspect of these informal conflict resolution processes is that, if an amicable solution cannot be reached through conversations between the university and employers, the relationship is simply terminated to protect students. But, there is no official mechanism in place to ensure information sharing across WIL offices, to identify problematic employers and prevent students in other universities from being placed with those employers. In the words of one coordinator:

if those [discriminatory] comments were made, or if students reported feeling exposed to that type of discrimination

for whatever reason it may be...that partnership would effectively, at least the way that we approach it, that partnership would end immediately...If that were to happen, I would say we have a zero tolerance [policy].

Participants also expressed that they had limited awareness of the demographics of students in the WIL program. None of the WIL programs captured in our interview process solicited demographic data from students or conducted a diversity self-identification (ID). As a result, offices had no way of knowing the percentage of students who belonged to one or more underrepresented groups. Instead, students were put “at the centre of the decision-making process,” as one coordinator put it, in that the decision to disclose or not was theirs to make. When asked whether their program conducted diversity self-IDs with students at any point in the process, respondents deferred to an explanation of messaging that encourages students to disclose challenging circumstances or requests for accommodation. One longtime coordinator explained that collecting such information is very challenging because “students have to feel willing and comfortable in order to disclose.” He added that:

...if you can get past the first step of disclosure [and] identify the groups are there, then we can put programs in place to better support them,” which, he felt “will mean ultimately a better retention rate of that student and a higher success rate for those students, right? But if you

can’t get past the barrier of consent, it’s really hard to create programs.

Similarly, a manager indicated that “we definitely have a process where they can [identify]. In their cover letter where they’re applying internally, they’ll [be able to] identify circumstances that they think are notable and that could be personal situations, it could be something that they’ve encountered recently. It could be that they want to disclose that they’re registered with [the accessibility office].” In all cases, disclosure or self-identification with an underrepresented group took an “individualized approach,” in the words of one manager, in that students are never formally asked to participate in any surveying of their identities.

Quantitative Findings

We performed an exploratory analysis of the 2013 NGS PUMF to examine disparities in access to co-operative education, the form of WIL captured by the NGS. Table 2 below contains descriptive statistics for enrollment in programs with and without co-op components by sex, visible minority status, disability, parental education and citizenship status. The data in this table represents the subset of individuals within the NGS that i) lived within the province of Ontario and ii) attained a bachelor’s degree as their highest level of education. The data show only negligible disparities in the representation of women, visible minorities, students with disabilities, students from a high-

SES background (at least one parent with PSE-level education) and non-citizens in co-op programs relative to their representation in non-co-op programs, as well as the broader student population. However, there are important aspects of this data that should be kept in mind while interpreting the trends displayed in Table 2.

First, the visible minority category encompasses a variety of both low- and high-achieving groups with respect to educational performance and labour market outcomes. It, for example, pools Black and Latin American students together with South and South East Asian groups (see Thiessen, 2009 for a discussion of diverging patterns of educational attainment of these groups). If we were to examine access to co-op programs by each of these groups, it is likely that we would observe disparities that are masked by their combined grouping within the NGS. More detailed demographic data is available in the Master File of the NGS at the Statistics Canada RDCs.

Second, once the categories are broken down by region (Ontario) and credential level (Bachelor's degree), the number of individuals upon which weighted estimates within the table are based for certain demographic groups is remarkably small. This issue is magnified when multiple parameters are applied to the sample. For example, the category of students with disabilities is based on 53 individuals within the sample, with only 11 of those students participating in co-

op programs.

Third, it is likely that the relationship between the variables listed in Table 2 and co-op participation is mediated by other factors. It is reasonable to expect, for example, that the effects of sex on co-op participation could be mediated by family background (e.g., parental education), visible minority status and other factors. Unfortunately, the limited number (~1,100) of Ontario university students in the 2013 NGS PUMF prevents us from fitting the multivariate logistic regression models required to tease out factors contributing to co-op participation. In preliminary models fitted with this data, missing data across variables of interest further reduced the sample size to roughly 550 individuals.

Fourth, participation in co-op varies considerably across program area. This variance is something that is evidenced by the existing literature, as well as our environmental scan and interview findings. While, for example, a 25% female participation rate may be considered low within the humanities or social sciences--where women are overrepresented--it may be considered high in fields that remain male-dominated (e.g., engineering). Participation thus needs to be understood within the context of fields of study. Unfortunately, given challenges with sample size, we are unable to explore this issue through the 2013 NGS PUMF.

In light of the abovementioned deficiencies in the NGS data, it is best to exercise caution when interpreting

the small disparities in Table 2, none of which proved to be significant through non-parametric tests (corrected weighted Pearson chi-square tests). Nonetheless, the descriptive trends documented below are generally consistent with the findings of a recent Higher Education Quality Council of Ontario (HEQCO) survey on WIL participation, which found that neither ethnicity, disability or immigration status had a statistically significant effect on WIL participation at the university level in multivariate models (see Sattler & Peters, 2013).

Table 2: Weighted Descriptive Statistics

	Co-op	No Co-op	Overall
Sex			
Male	40.2%	37.2%	37.5%
Female	59.8%	62.8%	62.5%
Visible Minority Status			
Visible Minority	34.5%	26.8%	27.9%
Non-Visible Minority	61.8%	66.9%	66.1%
Not Stated	3.7%	6.3%	5.9%
Disability			
Yes	6.7%	4.1%	4.5%
No	90.6%	91.2%	91.1%
Refused to Answer	0.0%	0.1%	0.1%
Not Stated	2.7%	4.6%	4.3%
Parent With University-Level Education			
Yes	53.3%	53.4%	53.3%
No	46.7%	46.6%	46.7%
Citizenship Status			
Citizen by Birth	70.8%	76.3%	75.5%
Citizen by Naturalization	21.6%	17.1%	17.8%
Landed Immigrant	4.9%	1.6%	2.0%
Not Stated	2.7%	5.0%	4.7%

To overcome these data issues with the 2013 NGS PUMF, we are applying for access to the RDC to examine the 2013 NGS Master File, which contains data on over 34,000 individuals (roughly twice the size of the PUMF). We will employ a logistic model with four blocks of independent variables to examine the correlates of WIL participation at the university level. The first block will introduce a number of individual-level traits, including sex, ethnicity, and disability. The second will contain family SES, as measured through parental educational attainment. This will be a key contribution of this analysis, given that the existing HEQCO (2013) report did not present data on family SES. The third block will contain field of study variables. The fourth will contain a series of interaction terms between individual characteristics (e.g., sex) and field of study variables. Through these nested models, we will be able to better understand how each of these factors impact access to WIL programs in Ontario universities.

Key Findings

Several key, yet preliminary, findings emerged as a result of this study. First, we found that, throughout WIL programs in Ontario's universities, university- and employer-level "sorting mechanisms" advantage certain types of students while excluding others. Second, our interview findings show that the inequities and discrimination faced by underrepresented students are generally underacknowledged and unknown on

the part of WIL staff. Third, we found that WIL offices lack formalized procedures to handle such occurrences and rely on informal mechanisms to manage experiences of discrimination and diversity-based challenges.

The entrance requirements within WIL programs were geared primarily towards the identification of the most "talented" and "professional" students. Internal selection criteria, largely determined by a student's ability to meet and maintain a certain GPA limits participation to high-achieving students. In non-mandatory WIL programs, students who meet minimum GPA requirements are typically invited to participate in an interview process that privileges prior employment or volunteer experience and, with that experience, the likelihood that the student/candidate will possess skills that employers will find attractive. Taken together, GPA requirements and interview processes serve to present employers with competitive candidates, rather than encourage employers mentorships or coach students who have not yet had or who have had limited employment experience. Furthermore, such requirements further disadvantage students from low-SES backgrounds in cases where other obligations, such as work or familial obligations, may have had a negative impact on their GPA or their ability to take on paid employment. Recent research shows that these ambiguous assessments of soft skills or "fit" are typically biased against underrepresented groups, given that low-

SES students lack the cultural capital and refined interaction styles that are valued by employers (Rivera, 2012; 2015; 2016). Moreover, certain indirect signals of competence, such as volunteering and extracurriculars (e.g., high-level sports), are difficult for students from low-SES backgrounds to acquire given that they are costly (Rivera, 2011). In response to their increasing awareness of and focus on employer demands, WIL programs have established preparatory courses and skills training designed to ensure that students are as successful as possible on their WIL placements. Ultimately, the overarching logic is to provide employer partners with workers capable of “hitting the ground running,” which is prioritized at the expense of providing all students with equitable access to WIL experiences.

Although WIL offices focus carefully on ensuring that students have a degree of employment and workplace preparedness that will best support their success, WIL staff were less cognizant of the equity-related challenges their students faced while competing for or completing placements. In general, they believed that since no group was formally excluded from their programs, there were no barriers to their participation in WIL. Respondents generally did not believe that their students experienced discrimination or bias based on their race, gender, gender identity, sexual orientation, ability, or religion, but did frequently recognize a bias against international students whose first

language was not English. Those who did express an awareness of the presence of bias, refusal to accommodate, or discrimination were likely to present these situations as uncommon; however, they also noted that student under-reporting could have an impact on their awareness of the frequency of such experiences.

Despite increasing attention in Ontario’s postsecondary institutions toward diversity, equity and inclusion, WIL offices did not operate through a diversity or inclusion lens. Respondents indicated that no formalized procedures existed to respond to and/or manage complaints from students who experience bias or discrimination in the competition or placement process. Offices operated on a highly informal, “case-by-case” basis and responded to complaints or requests for accommodation as they were raised by students; there was no process in place to proactively engage with employers about diversity and equity issues.

Finally, our non-parametric tests show no significant differences in access to co-op by sex, visible minority status, disability or citizenship status. However, we identified multiple deficiencies in the NGS PUMF data which prevent any strong conclusion to be drawn from such data. We specify a more complex multivariate analysis that we will carry out using the NGS Master File.

The key findings of this interim study are as follows:

- > Ontario's WIL programs do not have formal, obligatory mechanisms to encourage diversity self-identification among students; however, informal self-identification processes are accessible via other university offices such as disability services and Indigenous services who then, at the student's request, interface with WIL staff to support or discuss accommodations;
- > Although some respondents cited examples of barriers and challenges faced by diverse students, respondents generally did not seem aware of diversity and equity issues that might arise in the WIL process;
- > Respondents who worked with students were not mandated to attend formal training on diversity and equity matters, although those in management and director positions were sometimes aware of or introducing initiatives to develop such training;
- > Respondents who worked more closely with students were more likely to be aware of challenges that diverse students would face in the WIL process. Respondents at higher levels were generally not aware of diversity and equity issues, and generally did not believe that students experienced discrimination except in isolated incidents. Those who were more attuned to diversity and the challenges faced by underrepresented groups gained this awareness as a result of further self-education;
- > WIL staff at all levels generally placed high value on their relationships with employers, and thus, did not feel empowered to challenge employers that may engage in discriminatory or biased recruiting practices;
- > WIL offices, in developing and maintaining relationships with employers, did not develop processes or make proactive efforts to ensure that the challenges traditionally marginalized groups face in the workplace are accounted for and addressed in the WIL experience;
- > WIL offices do not have in place formalized processes to address the unique circumstances of underrepresented groups; they rely on related offices to execute this support work (e.g., Accessibility Services);
- > Conversations about accessibility and equity in WIL programs are nascent at best, with most programs only recently starting to involve relevant stakeholders (e.g., Diversity and Equity Offices; Offices of Sexual Violence) in dialogues about process improvements;
- > Limited, publicly available, demographic data exist to show not only the degree of participation of underrepresented groups in WIL, but also the degree of access to such programs. Additional research employing large-scale survey data and multivariate regression modelling is required to better understand

the relationship between specific demographic factors and WIL participation.

Policy Implications

Existing data and knowledge on disparities in access to, and student experiences within, WIL programming is currently insufficient to inform effective government policy-making within the Ontario university sector. We propose that future diversity and inclusion-related research within this sector could be usefully oriented by the six principle components of the Diversity Assessment Tool (DAT) developed by the Diversity Institute. This tool was developed through an analysis of organizational practices within the Information Communications and Technology (ICT) sector (Cukier, 2009), and subsequently refined through analyses of other corporate sectors (e.g., finance). Through it, it is possible to orient attention towards consequential features of WIL offices that research finds are associated with workplace diversity and inclusion:

Leadership and Governance: The first pillar of the DAT focuses on the importance of the top-down implementation of diversity practices and policies within organizations. For these initiatives to be effective, there must be “buy in” from senior managers across WIL offices, and their superiors, who possess the power/authority to effect change. Efforts to measure such

commitment among senior managers would be a valuable area of study for future research.

Strong and Transparent Human Resources Practices: A second area that the DAT focuses on is the strategic efforts made by organizations to recruit, develop and engage with employees from traditionally marginalized groups. Mapping such efforts across WIL offices, both as it relates to recruiting staff and students for their programs, would be a valuable goal for future research.

Quality of Life and Organizational Culture: The internal environment of organizations is a third pillar of the DAT, given how the environment shapes the experiences of individuals within organizations. Research shows that internal environment is a key determinant of worker retention and quality of life. Efforts to assess such environments as well as their correlates and outcomes would be instrumental to establishing “best practices” within the WIL sector in Ontario universities.

Measure and Track Diversity: Research repeatedly finds that “what gets measured, gets done.” If efforts are made to track the outcomes of diversity and inclusion programs, there is a greater likelihood that they will produce more positive results. Publicizing the results of these exercises not only demonstrates a commitment to diversity and inclusion, but can also help to identify best practices. Future work should aim to map how WIL offices track diversity.

Integrate or Mainstream Diversity Across the Value Chain: Organizations cannot passively signal a commitment to diversity and inclusion at the management level and expect results. Instead, the ethos of diversity and inclusion needs to be spread across the value chain, and outwards towards their external environment. Future research should aim to examine how this plays out within the context of WIL, specifically as to how WIL offices promote diversity and inclusion among affiliated employers in which their students are placed.

Developing the Pipeline: This element of the DAT focuses on measuring the proactive, long-term efforts made by organizations to reach out and develop prospective employees from traditionally underrepresented groups (Cukier, 2009). It would be worthwhile to examine what proactive efforts WIL offices are making to develop a diverse workplace, and to develop interest in their programming across traditionally marginalized student groups.

Research in these outlined areas is necessary in order to inform future policy-making within the WIL sector, given the lack of available empirical work on these topics.

References

Adjapong, E. S., Levy, I. P., & Emdin, C. (2016). Empowering Girls of Colour Through Authentic Science Internships. *Journal of Urban Learning, Teaching, and Research (JULTR)*, 12, 24-34.

Advisory Council on Economic Growth, (2017). *Learning nation: Equipping Canada's workforce with skills for the future*. Ottawa, Canada: Advisory Council of Economic Growth

Alasia, A., & Magnusson, E. (2005). *Occupational skill level: The divide between rural and urban Canada*. Ottawa, Canada: Statistics Canada, Agriculture Division

Allen, K., Quinn, J., Hollingworth, S., & Rose, A. (2013). Becoming employable students and "ideal" creative workers: exclusion and inequality in higher education work placements. *British Journal of Sociology of Education*, 34(3), 431-452.

Armstrong, E. A., & Hamilton, L. T. (2013). *Paying for the Party*. Cambridge, United States: Harvard University Press.

Auerbach, C., & Silverstein, L. B. (2003). *Qualitative data: An introduction to coding and analysis*. New York: NYU Press.

Banerjee, M., Capozzoli, M., McSweeney, L., & Sinha, D. (1999). Beyond kappa: A review of interrater agreement measures. *Canadian Journal of Statistics*, 27(1), 3-23.

Banerjee, R., Reitz, J. G., & Oreopoulos, P. (2018). Do large employers treat racial minorities more fairly? An analysis of Canadian field experiment data. *Canadian Public Policy*, 44(1), 1-12.

Barbour, R. S. (2001). Checklists for improving rigour in qualitative research: a case of the tail wagging the dog?. *BMJ: British Medical Journal*, 322(7294), 1115.

Brooks, R., & Everett, G. (2009). Post-graduation reflections on the value of a degree. *British Educational Research Journal*, 35(3), 333-349.

BHER (2016). Taking the pulse of work-integrated learning in Canada. London, Canada. Retrieved from: <http://bher.ca/wp-content/uploads/2016/10/BHER-Academica-report-full.pdf>

Bowen, N. (2004, Jun 07). Program opens doors at college: Help for students with disabilities now available. *Observer*. Retrieved from <http://ezproxy.lib.ryerson.ca/login?url=https://search-proquest-com.ezproxy.lib.ryerson.ca/docview/348266492?accountid=13631>

Andrewartha, L., & Harvey, A. (2017). Employability and student equity in higher education: The role of university careers services. *Australian Journal of Career Development*, 26(2), 71-80.

Business Council of Canada (2016). Labour market information: an essential part of Canada's skill agenda. Retrieved from <http://thebusinesscouncil.ca/wp-content/uploads/2016/06/Labour-Market-Information-June-13.pdf>

Canwest, (2008, Jul 15). Canwest launches national internship program for students with disabilities. *Canada NewsWire*. Retrieved from <http://ezproxy.lib.ryerson.ca/login?url=https://search-proquest-com.ezproxy.lib.ryerson.ca/docview/453118932?accountid=13631>

Caranci, B. K., & Judge, K. O. (2017). *Women and STEM: Bridging the divide*. Toronto: TD Economics. Retrieved from <https://economics.td.com/domains/economics.td.com/documents/reports/bc/wistem/Women-and-STEM.pdf>

Chicha, M.T. (2011). Pay equity: Lessons from a comparative international approach. Retrieved from http://ec.europa.eu/justice/gender-equality/files/conference_sept_2011/mt_chicha_session_ii_en.pdf

Chraibi, R., & Cukier, W. (2017). Muslim women in senior management positions in Canada. *Muslim Minorities, Workplace Diversity and Reflexive HRM*, 162.

Cocks, E., & Thoresen, S. H. (2013). Barriers and facilitators affecting course completions by apprentices and trainees with disabilities. *National Vocational Education and Training Research Program, Research Report*. Victoria, Australia.

Cocks, E., Thoresen, S. H., & Lee, E. A. L. (2015). Pathways to employment and quality of life for apprenticeship and traineeship graduates with disabilities. *International Journal of Disability, Development and Education*, 62(4), 422-437.

Conference Board of Canada. (2016). Aligning skills development with labour market need. Retrieved from <http://www.conferenceboard.ca/e-library/abstract.aspx?did=7926>

Conference Board of Canada, (2013). The need to make skills work: The cost of Ontario's skills gap. Ottawa, Canada: Conference Board of Canada

Cormier, L., & Drewery, D. (2017). Examining the effect of co-op non-employment and rejection sensitivity on subjective well-being. *Education*, 18(3), 213-224.

Corrigan, T. (2015). Media and Cultural Industries Internships: A Thematic Review and Digital Labor Parallels. *tripleC: Communication, Capitalism & Critique. Open Access Journal for a Global Sustainable Information Society*, 13(2), 336-350.

Council of Ontario Universities. (2016). Graduate survey: A better future for university students. Toronto, Canada: Council of Ontario Universities

Cukier, W. (2014). Understanding Employer Needs and the Skills of Social Science and Humanities Graduates. Toronto: Diversity Institute.

Cukier, W. (2009). Attracting, retaining, and promoting women: Best practices in the Canadian Tech Sector. Canadian Advanced Technology Alliance (CATA) Women in Technology (WiT) Forum.

Cunnah, W. (2015). Disabled students: Identity, inclusion and work-based placements. *Disability & Society*, 30(2), 213-226.

Davies, S., & Hammack, F. M. (2005). The channeling of student competition in higher education: Comparing Canada and the US. *The Journal of Higher Education*, 76(1), 89-106.

Davies, S., Maldonado, V., & Zarifa, D. (2014). Effectively maintaining inequality in Toronto: predicting student destinations in Ontario universities. *Canadian Review of Sociology/Revue canadienne de sociologie*, 51(1), 22-53.

de Villiers Scheepers, M. J., Barnes, R., Clements, M., & Stubbs, A. J. (2018). Preparing future-ready graduates through experiential entrepreneurship. *Education and Training*, 60(4), 303-317.

Dechief, D. & Oreopolous, P. (2012). Why do some employers prefer to interview Matthew, but not Samir? New Evidence from Toronto, Montreal, and Vancouver. Toronto, ON: HireImmigrants. http://www.hireimmigrants.ca/wp-content/uploads/Dechief_Oreopoulos_2012.pdf

Deloitte & HRP. (2017). The intelligence revolution future proofing Canada's workforce. Canada: Deloitte Canada. Retrieved from <https://www2.deloitte.com/content/dam/Deloitte/ca/Documents/human-capital/ca-en-hc-IntelligenceRev-POV-Oct25-AODA.pdf>

Doherty, L. (2011). Filling the female political pipeline: Assessing a mentor-based internship program. *Journal of Political Science Education*, 7(1), 34-47

Drysdale, M. Goyder, J., Nosko, A., Easton, M., Frank, K., & Rowe, P. "The role of co-op in the transition from high school to post-secondary education." *Journal of Cooperative Education and Internships* 41.1 (2007): 48-55.

Drysdale, M., & Mcbeath, M. (2012). Self-concept and tacit knowledge: Differences between cooperative and non-cooperative education students. *Asia-Pacific Journal of Cooperative Education*, 13(3), 169-180.

Education and Social Development Canada (ESDC), (2017). Government of Canada launches student work placements. Retrieved from: https://www.canada.ca/en/employment-social-development/news/2017/08/government_of_canadalaunchesstudentworkplacements.html

Elliott, S. L. (2016). From the editor-in-chief: Questions of gender equity in the undergraduate biology classroom. *Journal of Microbiology & Biology Education*, 17(2), 186.

Felton, K., & Harrison, G. (2017). Supporting inclusive practicum experiences for international students across the social sciences: building industry capacity. *Higher Education Research & Development*, 36(1), 88-101.

Florida, R., Shuttters, S., & Spencer, G. (2016). Pathways to Ontario's knowledge economy: A system for identifying existing regional strengths and future prospects. Toronto, Canada: Martin Prosperity Institute. Retrieved from <http://martinprosperity.org/media/Pathways-to-Ontario-Knowledge-Economy.pdf>

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

Frenette, M. (2006). Too far to go on? Distance to school and university participation. *Education Economics*, 14(1), 31-58.

Frenette, A. (2013). Making the intern economy: Role and career challenges of the music industry intern, *Work and Occupations*, 40(4), 364-397.

Frenette, M., & Frank, K. 2017. Do postsecondary graduates land high-skilled jobs? Ottawa, ON: Statistics Canada

Frey, C. B., & Osborne, M. A. (2017). The future of employment. *Technological Forecasting and Social Change*, 114, 254-280.

Geiser, S., & Santelices, M.V. (2007). Validity of high-school grades in predicting student success beyond the freshman year: High-school record vs. standardized tests as indicators of four-

year college outcomes. Research & Occasional Paper Series, 6.

Gerber, T. P., & Cheung, S. Y. (2008). Horizontal stratification in postsecondary education: forms, explanations, and implications. *Annu. Rev. Sociol.*, 34, 299-318.

Gribble, C., Blackmore, J. and Rahimi, M. (2015). Challenges to providing work integrated learning to international business students at Australian universities. *Higher Education, Skills and Work-based Learning*, 5(4), 401-416.

Gribble, C., Blackmore, J., & Rahimi, M. (2015). Challenges to providing work integrated learning to international business students at Australian universities, *Higher education, skills and work-based learning*, 5(4), 401-416.

Guile, D. (2009). Conceptualising transition from education to work as vocational practice. Lessons from the UK's creative and cultural sector. *British Educational Research Journal*, 35(5), 761-779.

Hango, D., Zarifa, D., Pizarro Milian, R. & Seward, B. (2018). Roots and STEMS? Examining Field of Study Choices Among Northern and Rural Youth in Canada, to Higher Education (Working Paper). North Bay, Canada: Nipissing University.

Harrison, G., & Felton, K. (2013). Fair go in the field: inclusive field education for international students in the social sciences. Sydney, Australia: Australian

Government, Office for Learning and Teaching. Retrieved from <https://espace.library.uq.edu.au/view/UQ:318842>

Holford, A. (2017). Access to and returns from unpaid graduate internships. IZA Discussion Paper No. 10845

Hudak, T. & Leone, R. (2013). Paths to prosperity: Higher learning for better jobs. Toronto, Canada: Ontario Progressive Conservative Party. Retrieved from <http://studentunion.ca/docs/OPCP%20-%20Paths%20to%20prosperity%20-%20Higher%20learning%20for%20better%20jobs%20-%20February%202013.pdf>

Information and Communications Technology Council, (2017). The smart economy reshaping Canada's workforce: Labour market outlook 2015-2019. Ottawa, Canada: Information and Communications Technology Council

Jackson, D. (2015). Employability skill development in work-integrated learning: Barriers and best practice. *Studies in Higher Education*, 40(2), 350-367.

Jackson, D., Ferns, S., Rowbottom, D., & McLaren, D. (2015). Working together to achieve better work-integrated learning outcomes: Improving productivity through better employer involvement. Perth, Australia: Edith Cowan University.

Kennedy, K., & Long, S. (2015). The Trees within the Forest: Extracting, Coding, and Visualizing Subjective Data in Authorship Studies. In J. Ridolfo, & W. Hart-

Davidson (eds.), *Rhetoric and the Digital Humanities* (pp. 140-151). Chicago, IL: University of Chicago Press.

Klein, M., & Weiss, F. (2011). Is forcing them worth the effort? Benefits of mandatory internships for graduates from diverse family backgrounds at labour market entry. *Studies in Higher Education*, 36(8), 969-987.

Leonard, P., Halford, S., & Bruce, K. (2016). 'The new degree?' Constructing internships in the third sector. *Sociology*, 50(2), 383-399.

Lucas, S.R. (2001). "Effectively Maintained Inequality: Education Transitions, Track Mobility, and Social Background Effects." *American Journal of Sociology* 106(6):1642-90.

Mackaway, J., Winchester-Seeto, T., & Carter, L. (2014). Work-integrated learning and the "inclusive" challenge of preparing a diverse student cohort for the world beyond the academy. HERDSA Annual International Conference. 7-10 July, 2014 : Hong Kong.

Main, J., Ohland, M., Ramirez, N., Fletcher, T. L., & Davis, J. (2015). Factors Associated with Student Participation in Cooperative Education Programs (Co-Ops). In 2015 ASEE Annual Conference & Exposition.

Messinger, L. (2013). Reflections on LGBT students in social work field education. *Field Scholar*, 3, 1-16.

Messinger, L. (2004). Gay and Lesbian Social Work Students' Experiences in Field Placement. *Journal of Social Work Education*, 40(2), 187-204.

Milley, P. (2017). Commercializing higher learning through the discourse of skills in university co-operative education: Tensions and contradictions. *Canadian Journal of Educational Administration and Policy*, 180, 99-128.

Miner, R. (2010). *People without jobs jobs without people: Canada's labour market future*. Toronto, Canada: Miner & Miner Management Consultants. Retrieved from http://www.minerandminer.ca/data/CO_PWJ_Brochure_CAN_2010_v4.pdf

Miner, R. (2012). *Jobs of the future: options and opportunities*. Toronto, Canada: Miner & Miner Management Consultants. Retrieved from http://www.minerandminer.ca/data/Jobs_of_the_Future_Final.pdf

Miner, R. (2014). *The great Canadian skills mismatch: People without jobs, jobs without people and more*. Toronto, Canada: Miner & Miner Management Consultants. Retrieved from [http://www.minerandminer.ca/data/Miner_March_2014_final\(2\).pdf](http://www.minerandminer.ca/data/Miner_March_2014_final(2).pdf)

Moyer, A. M., & Juang, L. P. (2011). Adoption and identity: Influence on emerging adults' occupational and parental goals. *Adoption Quarterly*, 14(1), 1-17.

- Moylan, C. A., & Wood, L. (2016). Sexual harassment in social work field placements: Prevalence and characteristics. *Affilia*, 31(4), 405-417.
- Newbold, K. B., & Brown, W. M. (2015). The urban-rural gap in university attendance: Determinants of university participation among Canadian youth. *Journal of Regional Science*, 55(4), 585-608.
- Newhook, R. (2016). Are university co-operative education students safe? Perceptions of risk to students on work terms. *The Canadian Journal of Higher Education*, 46(1), 121.
- Nunley, J. M., Pugh, A., Romero, N., & Seals, R. A. (2015). Racial discrimination in the labor market for recent college graduates: Evidence from a field experiment. *The BE Journal of Economic Analysis & Policy*, 15(3), 1093-1125.
- Nunley, J., Pugh, A., Romero, N., & Seals, R.A. (2016). College major, internship experience, and employment opportunities: Estimates from a résumé audit. *Labour Economics*, 38, 37-46.
- Nunley, J., Pugh, A., Romero, N., & Seals, R.A. (2017). The effects of unemployment and underemployment on employment opportunities: Results from a correspondence audit of the labor market for college graduates. *ILR Review*, 70(3), 642-669.
- Oreopoulos, P. (2009). Why do skilled immigrants struggle in the labor market? A field experiment with six thousand resumes (No. w15036). National Bureau of Economic Research.
- Orser, B., Riding, A., & Stanley, J. (2012). Perceived career challenges and response strategies of women in the advanced technology sector. *Entrepreneurship & Regional Development*, 24(1-2), 73-93.
- Perlin, R. (2012). *Intern nation: How to earn nothing and learn little in the brave new economy*. London: Verso.
- Peters, J., Sattler, P., & Kelland, J. (2014). *Work-integrated learning in Ontario's postsecondary sector: The pathways of recent college and university graduates*. Toronto, Canada: Higher Education Quality Council of Ontario.
- Pilgrim, C. (2012, January). Industry and university perspectives of work integrated learning Programs in ICT Degrees. *ACIS 2012: Location, location, location: Proceedings of the 23rd Australasian Conference on Information Systems 2012*, 1-9.
- Ramirez, N. M., Main, J. B., Fletcher, T. L., & Ohland, M. W. (2014, October). Academic predictors of cooperative education participation. In *Proceedings of the 2014 Frontiers in Education Conference (FIE)* (pp. 1-6).

- Raftery, A. E., & Hout, M. (1993). Maximally maintained inequality: Expansion, reform, and opportunity in Irish education, 1921-75. *Sociology of education*, 41-62.
- Reitz, J. G., Curtis, J., & Elrick, J. (2014). Immigrant skill utilization: Trends and policy issues. *Journal of International Migration and Integration*, 15(1), 1-26.
- Richards, L. (2015). *Handling Qualitative Data: A Practical Guide*. London: Sage Publications.
- Rivera, L. A. (2011). Ivies, extracurriculars, and exclusion: Elite employers' use of educational credentials. *Research in Social Stratification and Mobility*, 29(1), 71-90.
- Rivera, L. A. (2012). Hiring as cultural matching: The case of elite professional service firms. *American Sociological Review*, 77(6), 999-1022.
- Rivera, L. A. (2015). Go with your gut: Emotion and evaluation in job interviews. *American Journal of Sociology*, 120(5), 1339-1389.
- Rivera, L. A. (2016). *Pedigree: How elite students get elite jobs*. Princeton, United States: Princeton University Press.
- Ryan, G.W., & Bernard, H.R. (2003). Techniques to identify themes. *Field methods*, 15(1), 85-109.
- Sanders, C. B., & Cuneo, C. J. (2010). Social reliability in qualitative team research. *Sociology*, 44(2), 325-343.
- Saniter, N., & Siedler, T. (2013). Door opener or waste of time? The effects of student internships on labor market outcomes. IZA Discussion Paper, No. 8141, Institute for the Study of Labor (IZA). Bonn, Germany.
- Sattler, P., & Peters, J. (2013). *Work-integrated learning and postsecondary graduates: The perspective of Ontario employers*. Toronto, Canada: Higher Education Quality Council of Ontario.
- Schofer, E., & Meyer, J. W. (2005). The worldwide expansion of higher education in the twentieth century. *American sociological review*, 70(6), 898-920.
- Scholl, L., & Mooney, M. (2004). Youth with Disabilities in Work-Based Learning Programs: Factors that Influence Success. *Journal for Vocational Special Needs Education*, 26, 4-16.
- Sirin, S.R. (2005). Socioeconomic status and academic achievement: A meta-analytic review of research. *Review of educational research*, 75(3), 417-453.
- Smith, V. (2010) *Enhancing employability: Human, cultural, and social capital in an era of turbulent unpredictability*. *Human Relations*, 63(2), 279-300.
- Statistics Canada. (2005). Occupational skill level: The divide between rural and urban Canada. *Rural and small town Canada analysis bulletin*, 6(2). Retrieved from <http://publications.gc.ca/collections/Collection/Statcan/21-006-X/21-006-XIE2005002.pdf>

Statistics Canada. (2011). Fact Sheet - 2011 NHS aboriginal demographics, educational attainment and labour market outcomes. Ottawa, Canada: Statistics Canada. Retrieved from <https://www.aadnc-aandc.gc.ca/eng/1376329205785/1376329233875>.

Sullivan, K. (2017). Talent in transition: Addressing the skills mismatch in Ontario. Toronto, Canada: Ontario Chamber of Commerce.

Sweeney, A., Greenwood, K. E., Williams, S., Wykes, T., & Rose, D. S. (2013). Hearing the voices of service user researchers in collaborative qualitative data analysis: the case for multiple coding. *Health Expectations*, 16(4).

Sweet, R., Robson, K., & Adamuti-Trache, M. (2017). Ethnicity and Effectively Maintained Inequality in BC Universities. *Canadian Review of Sociology/Revue canadienne de sociologie*, 54(4), 497-518.

Tal, B. (2012). The haves and havenots of Canada's labour market. Toronto, Canada: CIBC World Markets, Inc.

Tamburri, R. (2014). Co-op programs are popular and growing at Canadian universities. But some wonder whether rapid growth can continue without compromising quality. *University Affairs*. Retrieved from <http://www.universityaffairs.ca/news/news-article/co-op-programs-are-popular-and-growing-at-canadian-universities>

Taylor, A., Hamm, Z., & Raykov, M. (2015). The experiences of female youth apprentices in Canada: just passing through?. *Journal of Vocational Education & Training*, 67(1), 93-108.

Thiessen, V. (2009). The pursuit of postsecondary education: A comparison of First Nations, African, Asian, and European Canadian youth. *Canadian Review of Sociology/Revue canadienne de sociologie*, 46(1), 5-37.

Tran, L. T., & Soejatminah, S. (2016). 'Get foot in the door': International students' perceptions of work integrated learning. *British Journal of Educational Studies*, 64(3), 337-355.

Turcotte, J. F., Nichols, L. Philipps, L. (2016). Maximizing opportunity, mitigating risk: Aligning law, policy and practice to strengthen work-integrated learning in Ontario. Toronto, Canada: Higher Education Quality Council of Ontario.

Turcotte, M. (2014). Persons with disabilities and employment. Ottawa, Canada: Statistics Canada. Retrieved from <https://www.statcan.gc.ca/pub/75-006-x/2014001/article/14115-eng.htm>

Uppal, S., & LaRochelle-Côté, S. (2014). Overqualification among recent university graduates in Canada. *Insights on Canadian Society*: no. 75-006-X. Statistics Canada. Retrieved from

<http://www.statcan.gc.ca/pub/75-006-x/2014001/article/11916-eng.htm>

Wall, T., Tran, L. T., & Soejatminah, S. (2017). Inequalities and agencies in workplace learning experiences: international student perspectives. *Vocations and Learning*, 10(2), 141-156.

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

Wayland, S. V., & Goldberg, M. P. (2009). Access to trades for newcomers in Ontario. Council of Agencies Serving South Asians. Toronto, Canada: Council of Agencies Serving South Asians (CASSA).

Yee, J. Y. 2003. Apprenticeship opportunities and barriers for immigrant youth in the greater Toronto area. Toronto, Canada: CERIS: The Ontario Metropolis Centre.

Zarifa, D., Hango, D., & Pizarro Milian, R. (2017). Proximity, prosperity, and participation: Examining access to postsecondary education among youth in Canada's provincial north. *Rural Sociology*.

Zarifa, D., Walters, D., & Seward, B. (2015). The earnings and employment outcomes of the 2005 cohort of Canadian postsecondary graduates with disabilities. *Canadian Review of Sociology/Revue canadienne de sociologie*, 52(4), 343-376.

Appendix: Interview Guide

What WIL activities does your department/institution support (Co-op? Apprenticeship? Field placement? Incubator? Paid or unpaid internship)?

To your knowledge, how many students participate each year in your WIL program (approximately)?

In what ways does your role support WIL?

Tell me about the process for students: What are the requirements for students to gain and retain access to WIL, and to gain and hold a position (objective/subjective criteria)?

Do you track student learning or monitor student progress and, if so, how? Are there specific strategies you use to facilitate student learning via WIL?

Do you consult with the Diversity and Equity office in the development or enhancement of WIL programs and activities (staff training; policy)?

In your experience, is your institution's WIL program equally accessible to all students who participate or may want to participate?

Do students have the opportunity to self-identify with a diverse group to your office/their coordinator? What is done with this data?

Tell me about your experiences working with diverse students (female students,

LGBTQ+ students, students of colour, Indigenous students and/or students with disabilities). What, if any, challenges do you face working with students who identify with diversity?

In your experience, do students from diverse groups face barriers when participating in WIL via your institution? What barriers do you think students from diverse groups face when participating in WIL programs (at the university/college and/or on-site)?

Are there accommodations, policies and/or practices in your institution to support students from diverse backgrounds in the WIL experience?

To your knowledge, have students disclosed experiences of discrimination during placement (sexism, homophobia, racism, ableism)? If so, how does your institution respond?

Does your institution's WIL program offer student participants the opportunity to provide feedback on their experiences (either during or after completion)?

Does your role need more support to ensure it can adequately and appropriately work with students who identify with diversity or do you see room for improvement in the WIL program (structurally, conceptually) with regard to meeting the needs and interests of students who identify with diversity?

Is there anything you wish to add?

