

COOPERATIVE EDUCATION AS A CATALYST FOR RETAINING TALENTED INTERNATIONAL STUDENTS IN CANADA: A QUALITATIVE EXPLORATION

IDRIS ADEMUYIWA
CENTRE FOR ECONOMETRICS
AND ALLIED RESEARCHL

DAVID DREWERY
UNIVERSITY OF WATERLOO

ANNE-MARIE FANNON
UNIVERSITY OF WATERLOO

Abstract

This study explores how cooperative education (co-op) influences international students' decisions to immigrate to Canada. Semi-structured interviews were conducted with 25 former international students who graduated from the University of Waterloo's co-op program between 2014 and 2022. Through a thematic analysis of transcripts, we identified co-op's impact on immigration through school-to-work transitions. Participation in co-op enhanced skill development, clarified career preferences and pathways, and strengthened professional networks, resulting in early post-graduation employment, sometimes with a previous co-op employer. Most participants reported that their Canadian employment motivated their application for permanent residency, with some altering their initial plans to return to their home countries. However, immigration intentions were moderated by perceived barriers in Canada's immigration system, sociocultural factors, and aspirations for opportunities abroad. These findings highlight the pivotal role of co-op in supporting Canada's talent import strategy.

Keywords: cooperative education, international students, immigration, school-to-work transition, Canada

Résumé

La présente étude examine comment l'enseignement coopératif influence la décision d'anciens étudiants internationaux d'immigrer au Canada. Des entretiens semi-structurés ont été menés auprès de 25 anciens étudiants internationaux, diplômés du programme d'enseignement coopératif de l'Université de Waterloo entre 2014 et 2022. Une analyse thématique des transcriptions a mis en évidence que l'enseignement coopératif influe sur la décision d'immigrer en agissant sur la transition études-travail. La participation à ce programme a favorisé le développement de compétences, clarifié les préférences de carrière ainsi que les trajectoires professionnelles, et renforcé les réseaux professionnels, favorisant ainsi une insertion professionnelle rapide après l'obtention du diplôme, parfois auprès d'un ancien employeur de stage coopératif. La plupart des participants ont indiqué

que l'emploi obtenu au Canada a motivé leur demande de résidence permanente, certains ayant même revu leur intention initiale de retourner dans leur pays d'origine. Toutefois, les intentions d'immigration ont été nuancées par la perception d'obstacles dans le système d'immigration canadien, par des facteurs socioculturels et par des aspirations pour des débouchés à l'étranger. Ces résultats mettent en lumière le rôle pivot de l'enseignement coopératif pour soutenir la stratégie du Canada visant à attirer des talents internationaux.

Mots-clés : enseignement coopératif, étudiants internationaux, immigration, transition études-travail, Canada

INTRODUCTION

Like many developed nations, Canada has a skills shortage problem. Employers report that they cannot find people with the right skills to meet their needs (Gabler & Gormley, 2022). This problem is expected to worsen because of a rapidly aging population (Immigration, Refugees and Citizenship Canada [IRCC], 2021) and a low birthrate (Statistics Canada, 2024), providing fewer workers to replace retiring ones. Canada has relied on international talent for many years to address this problem. Canada's International Education Strategy (2019–2024) set out to draw talent from around the world to communities across Canada. International students were to be trained, transitioned into Canada's labour market, secure good jobs, and stay to contribute to the economy.

However, the success of this strategy has been limited by the outmigration of former international students. Only three out of every 10 international students who came to Canada in 2000 or later became permanent residents within 10 years of their arrival (Crossman et al., 2022), and most current international students intend to leave Canada after their studies conclude (Canadian Bureau for International Education, 2022). Moreover, among immigrants to Canada, those who arrived as international students have the highest outmigration rate within their first five years of landing (Blit et al., 2024; Monteiro et al., 2024).

Recent research, however, indicates that participation in cooperative education (co-op) programs may influence the immigration intentions of international students. In one study

using student records, immigration data, and income tax returns data, Blit et al. (2024) showed that international students who graduated from a co-op program at the University of Waterloo were more likely to be permanent residents eight years after their enrolment than those who graduated from a non-co-op program at the university. Co-op is a form of work-integrated learning (WIL) that alternates academic study periods with paid, relevant work experience (Co-operative Education and Work-Integrated Learning Canada [CEWIL Canada], 2021). While Blit et al.'s (2024) findings establish an association between co-op participation and international students' likelihood of remaining in Canada, less is known about how co-op experiences shape students' immigration decision-making processes.

This study examines how co-op in Canadian higher education can enhance the retention of international students. It uses qualitative inquiry to explore international students' experiences, clarifying the link between their participation in co-op and immigration decisions. The study focuses on the University of Waterloo, well known for its co-op programs and for producing top talent in academic programs in STEM fields. Through a thematic analysis of interviews with international students, this study shows that co-op is linked with immigration decisions because it supports international students' school-to-work transitions. Participation in co-op facilitated the development of key competencies and professional networks, enhancing employability and, in turn, encouraging plans to stay in Canada. The analysis further shows that this relationship is shaped by external factors, in-

cluding the appeal of employment opportunities outside Canada, frustrations with the Canadian permanent resident application process, and sociocultural ties within Canada and abroad.

The study advances the higher education literature by showing that co-op programs can influence international students' immigration intentions, bolstering our understanding of how Canada's post-secondary ecosystem can support Canada's talent strategy. Specifically, it identifies the importance of successful school-to-work transitions in influencing international students' immigration intentions. The study also contributes to the literature on international students' mobility by highlighting participation in co-op as a factor that drives intentions to immigrate to a host country. Further, the study provides valuable insights for policy makers in the Canadian higher education and immigration fields.

LITERATURE REVIEW

Canada's International Students Strategy

Canada has long relied on attracting international students as a talent strategy. McCartney (2021) provides a detailed history of Canada's international student policies from 1970 to 2020, highlighting four distinct periods. Before 1985, international students were not a central focus of policy discussions. The main policy changes during this time were the classification of international students as migrants and the introduction of differential tuition fees across provinces. From 1985 to 2001, the internationalization of Canadian education was championed. Due to provincial funding cuts, post-secondary institutions (PSIs) were encouraged to recruit more international students to make up for the loss in funding, taking advantage of the differential fees policy (McCartney, 2021).

After 2001, Canada's post-secondary education system was promoted as a global export, with the federal government introducing policies that significantly increased international student enrolment (Blit et al., 2024). A key policy change was the introduction of the Post-Graduate Work Permit (PGWP) in 2005, which was lat-

er expanded in 2008 to offer graduates an open work permit for up to three years, depending on the length of the student's program. During this period, immigration policies favoured international students with work experience (Lu et al., 2009). The Canadian Experience Class (CEC) program was introduced in 2008 to provide international students a pathway to permanent residency, further attracting more foreign students to Canada (Blit et al., 2024).

The final period, from 2014 to 2020, marked the end of the consensus on Canada's international student policy. Initially, the idea of post-secondary education as an export continued, with the government unveiling the International Education Strategy in 2014 to boost enrolment. When the new Express Entry system for permanent residency was introduced in 2015, and it became evident that it was not favourable to international students, the government responded by revising the Comprehensive Ranking System (CRS), the evaluation system for Express Entry candidates, to give more points to international students (Blit et al., 2024). However, the rapid growth of international students in Canada during this period threatened the integrity of Canada's international student program. Some educational institutions relied on international students as a means of revenue generation, leading to some abuse of the system, and putting pressure on housing, health care, and other services in Canada (IRCC, 2024). This began to reverse the consensus about the positive effect of immigration in Canada.

In response to these negative impacts, the federal government implemented some sets of policies between 2023 and 2024 to reduce the number of international students in Canada. These included: (1) requiring designated learning institutions to confirm student acceptance letters with the Immigration, Refugees and Citizenship Canada; (2) raising the financial requirements for study permit applicants; (3) limiting which international students and their spouses can qualify for post-graduate work permits, based on specific institutions, study levels, and programs; and (4) reducing the number of study permits issued and allocating pro-rated caps to the provinces. These changes were in-

tended to manage the rapid increase in international students, ensure the program's integrity, and address the pressures it has created.

However, given Canada's talent and skills shortages and the high outmigration rate of international students, it remains crucial to prioritize retaining talented students. Apart from addressing skills shortages, international talent offers several well-documented benefits to Canada during and upon completion their academic programs. For instance, in 2022, expenditures related to international students contributed approximately \$37.3 billion to Canada's economic activity, representing 1.2% of the national GDP, over 20% of service exports, and supporting more than 360,000 jobs (Roslyn Kunin & Associates, Inc., 2023). Furthermore, Canadian businesses led by immigrants are more likely to export to non-U.S. markets, thereby contributing to the diversification of Canada's exports (Sui & Morgan, 2014). Immigrants are also significantly more likely than Canadian-born individuals to start businesses or own enterprises in knowledge- and technology-based industries (Picot & Ostrovsky, 2021). These findings suggest that recent restrictive policies should be carefully evaluated to ensure they do not undermine Canada's broader strategy of attracting and retaining top global talent, especially given the strong economic contributions of immigrant-led businesses.

Factors Influencing International Students' Immigration Intentions

Social and employment factors influence whether international students remain in their host country after graduation (Netierman et al., 2022; Wu & Wilkes, 2017). First, several studies have established that social networks and connections influence immigration intentions. Attachments to friends and family in host countries and countries of origin significantly influence international students' post-graduation destinations. Stronger connections to friends and family in a country of origin are associated with a higher likelihood of returning to that country, and stronger social connections in the host country enhance immigration intentions to that country (Lu

et al., 2009; Netierman et al., 2022; Trilokekar et al., 2016). Similarly, feeling homesick for one's country of origin—a feeling tied to social relationships—often results in a desire to return home, while perceiving the host country as home leads to immigration intentions (Lu et al., 2009; Netierman et al., 2022; Trilokekar et al., 2016; Wu & Wilkes, 2017). Factors such as family wealth (Lu et al., 2009) and perceived ability to adapt to a host country's social context also explain immigration intentions (Wu & Wilkes, 2017).

Further, several employment factors are related to international students' immigration intentions. For example, research shows that the perception of the host country as a good work environment enhances immigration intentions (Arthur & Flynn, 2013), and the perception of one's country of origin as a favourable employment setting results in a return home (Lu et al., 2009; Soon, 2012). Perceiving a destination as a preferred labour market can influence plans to remain even when actual employment has not been secured (Arthur & Flynn, 2013). Beyond perceptions of employment conditions, actual employment status also matters. Employment in the host country after graduation enhances immigration intentions to that country (Netierman et al., 2022; Trilokekar et al., 2016). Although the U.S. and Canadian immigration systems differ, evidence from the United States suggests that employment can play a similar role in shaping students' migration decisions. McGill (2013) found that securing post-graduation employment is so influential that it "may trump their original intention to leave" (p. 176). Taken together, these findings suggest that both perceived and actual employment opportunities play a central role in shaping international students' decisions to remain in or leave a host country.

International Students' School-to-Work Transitions

School-to-work transitions are particularly important to understanding international students' mobility and destinations (e.g., Arthur & Flynn, 2013; Lu et al., 2009; Netierman et al., 2022; Nghia, 2019; Soon, 2012; Trilokekar et al., 2016).

For the purpose of this study, successful school-to-work transitions involve a seamless move from education into employment that aligns with students' skills, interests, and career goals. When they secure good jobs (e.g., meaningful work and decent pay), international students are likely to remain in their host country (Netierman et al., 2022). The chance to work after graduation and, in turn, to become a Canadian permanent resident, is a driving factor behind international students' decisions to study in Canada (Blit et al., 2024; Esses et al., 2018).

Historically, international students have struggled through school-to-work transitions (Canadian Bureau for International Education, 2022; Scott et al., 2015). Research suggests that a lack of Canadian labour market experience explains this struggle (Crossman & Hou, 2022; Dauwer, 2018; El Masri & Khan, 2022). International students have less experience working in Canada than their domestic peers (Crossman & Hou, 2022). Consequently, they are likely to have weaker professional networks and a limited understanding of how to secure a job in Canada (Dauwer, 2018; El Masri & Khan, 2022; Trilokekar et al., 2016). As a result, upon graduation, international students have fewer job-relevant competencies and social relationships to leverage for jobs (Arthur & Flynn, 2013; Trilokokar et al., 2016). Failing to find employment, they often leave Canada (Monteiro et al., 2024).

The Role of Cooperative Education

Co-op is an educational model and form of work-integrated learning (WIL) in which students alternate between academic study and meaningful, often paid, work experience within a workplace of practice setting (CEWIL Canada, 2021; Fannon, 2023). Co-op work experiences are typically full-time and supervised, with oversight from both the employer and the educational institution (CEWIL Canada, 2021).

Blit et al. (2024) found a link between international students' participation in co-op and immigration decisions. The authors looked at permanent resident status among former international students from the University of Water-

loo and found that 63 percent who graduated from the co-op program achieved permanent resident status compared to 52 percent who graduated without co-op. This suggests a link between co-op and immigration among international students. However, Blit et al. (2024) did not explain the link between participation in co-op and international students' immigration decisions, nor did they identify how the co-op program influenced the students' decisions, a gap addressed by this study. We believe that a qualitative inquiry can complement their findings and clarify the link.

The present study focuses on the role of school-to-work transitions in influencing the immigration intentions of international co-op students. The WIL literature suggests that participation in authentic placement-based work experiences, such as co-op, helps students to find employment earlier upon graduation, often with higher pay, and a positive perceived fit and overall satisfaction with the job (Jackson & Cook, 2023). Related research shows that forms of WIL, such as co-op, are helpful to post-graduation employment among equity-deserving students, including international students (Arthur & Flynn, 2013; Woodend & Arthur, 2018). Other studies suggest that international students perceive co-op as helpful to developing competencies and professional networks for transition to work (Chatoor et al., 2024; Scott et al., 2015; Trilokokar et al., 2016). Coupled with Blit et al.'s (2024) findings, this body of evidence suggests participation in co-op may encourage international students to immigrate because of their successful integration into the labour market.

METHODOLOGY

Participant Recruitment

We invited individuals who were international students while enrolled in the University of Waterloo's co-op program and who graduated between 2014 and 2022 to participate in semi-structured interviews about their co-op experiences, post-graduation employment, and immigration decisions. We sent information letters to poten-

tial participants through their university email. Although 115 individuals expressed interest, 25 were randomly selected, as this sample size was sufficient to reach thematic saturation and support in-depth qualitative analysis. Table 1 displays participants' faculty, gender, graduation year, and resident status. Table A1 in the Appendix provides detailed information about each participant. Interviews were conducted in June 2024 and lasted about one hour each. The study was approved by the University of Waterloo Research Ethics Board (project #44393).

Table 1
Frequency Distribution of Participants' Characteristics

Characteristics	Frequency (%)
<i>Faculty</i>	
Arts	3 (12%)
Engineering	7 (28%)
Environment	2 (8%)
Health	1 (4%)
Math	8 (32%)
Science	4 (16%)
<i>Gender</i>	
Man	13 (52%)
Woman	12 (48%)
<i>Graduation year</i>	
2014 to 2016	5 (20%)
2017 to 2019	4 (16%)
2020 to 2022	16 (64%)
<i>Resident status</i>	
In Canada	22 (88%)
Elsewhere	3 (12%)

Interviews

Interviews followed an interview guide with questions about participants' work experiences during their education, including WIL experiences and part-time employment, and post-graduation job search experiences and outcomes, including employment status at the time of the interview. The interview guide also explored participants' immigration decisions and intentions, and the links between work experiences, labour market integration, and immigration. All interviews were conducted in English, and participants received a \$30 Amazon e-gift card for their time.

Data Analysis

We analyzed interview transcripts in NVivo following Braun and Clarke's (2006) framework for thematic analysis. First, we immersed ourselves in the data by reading and re-reading the transcripts, noting initial ideas and patterns. Second, the first two authors independently coded the first six interviews and then discussed their codes. This discussion generated an initial set of codes, which we applied to the remaining transcripts. Third, as codes were applied, they were adjusted and organized into broader themes representing patterns and relationships between codes. Finally, themes were reviewed and finalized to establish a structure encapsulating participants' accounts of how co-op impacted their labour market transition and immigration decisions.

FINDINGS

Our thematic analysis revealed international students' perspectives on how their participation in co-op contributed to their transitions into the Canadian labour market and immigration decisions. Key themes included direct employment opportunities stemming from co-op as well as the role of skill development, career clarity, network development, and an improved understanding of Canadian work culture.

Co-op Helped International Students Transition into the Canadian Labour Market

Many participants (P1, P2, P12, P18, P19, P20, P23, P25) claimed co-op helped them transition into full-time employment. They told us that their current employment was linked to their participation in co-op. One reason that emerged from the data was that co-op helped international students secure early post-graduation employment, and that employment led to further successes. One-third of participants (P3, P4, P5, P6, P13, P15, P16, P17, P20, P23, P24) received job offers from former co-op employers. For example, P13, a mathematics graduate, said, “after graduation, I just found a job with one of my co-op employers. So, it was during the pandemic, so it kind of worked out for the best because it was really hard to find jobs at that time.” Similarly, P16, a psychology graduate, explained that their last co-op employer “was able to keep me on after my co-op term ended. And so, even though I graduated in April, I was working part-time with them while I was also searching for a full-time role.” Further, some participants (P3, P4, P5) reported receiving job offers from previous co-op employers before graduation, while still in school. These participants articulated how co-op helped with early employment. For example, P3, a computer science graduate, said:

I was about to start some job searching before my graduation, but at that time my current employer contacted me, and they were like, I know you are gonna graduate soon and we have a spot in the team still, so we can get you a return offer, are you interested?

When we asked participants to explain how co-op helped them secure employment (with a former employer or a new one) three factors emerged. First, participants (P3, P4, P6, P12, P13, P15, P16, P17, P21, P22, P24, P25) shared that co-op helped them gain skills and competencies that made them desirable to employers. Specifically, they told us that the skills they used in the jobs were the same ones they developed during

co-op, and this, in part, explained their employability. As one clear example, P24, a chemical engineering graduate, said her first major task at work was “to build an executive-level report, and because I have experience building reports during my co-op term, I kind of understood what the requirements were, and I understood these are the tools that would be available for me.” Likewise, P22, a software engineering graduate, linked co-op skill development to employment, saying, “I have some background in language processing and then I also have some background in mobile development,” which directly “led me to my first post-graduate employer.”

Second, participants (P1, P3, P4, P11, P12, P18, P20, P24, P25) explained that co-op helped them clarify their career preferences and paths. They learned not just what they wanted to do post-graduation but also the steps they would need to take to achieve their career goals. For example, P12 credited co-op with helping him discover his preferred area of specialization within his professional field of engineering. P1 mentioned that co-op allowed her to experience Canada’s private and public sectors, helping her understand what to expect from each. P20, who studied computational mathematics, said that co-op helped him change career plans, allowing him “to try out the different positions in the finance industry,” which helped him realize he would “literally struggle” to work in finance. Instead, he discovered a passion for machine learning, declaring, “I’m a developer, and I really love my job.” These participants discovered their career goals and developed plans to reach those.

Third, participants (P1, P2, P5, P8, P10, P11, P12, P13) shared that co-op helped them build professional networks. P1 said that co-op helped her learn “how to network” and helped her realize “the importance of talking to people,” such that “when the time came that I was looking for a job, I already felt confident enough to search and reach out to people.” Some participants (P2, P5, P10, P13) leveraged their networking skills and networks to secure post-graduation employment. For example, P13, a mathematics graduate, explained that:

one of the reasons I went back to this place was I made a lot of friends while I was on co-op

there, and one of them, my main mentor, I'm still working with him, and we still have conversations about stuff.... He was really helpful, and he always wanted me to come back.

One aspect of this social dynamic that seemed especially salient for participants was the opportunity to learn about cultural differences. Given that they grew up outside of Canada, several participants reported that exposure to cultural norms in the workplace helped them access post-graduation employment. Six participants (P1, P6, P7, P10, P13, P21) mentioned that co-op allowed them to experience working within and outside Canada, revealing cultural norms and insights into working in Canada. As one clear example, P18, an actuarial science graduate, noted:

because I am an international student, there can be cultural differences. So, when I started my first or second co-op, I was a bit quiet, but during the experience, I learned that I need to speak more and not be afraid to express my feelings or my opinion. So, that helped me, like when I graduated and started a new job. So, people appreciated that and were impressed that I started doing that at the early stages.

International Students' Transitions into the Canadian Labour Market Enhanced Their Immigration Decisions

The majority of participants (22 of 25) had either applied for permanent residency or were already permanent residents before participating in this study. Of those, half (P1, P4, P5, P6, P8, P10, P15, P18, P19, P22, P24) stated that their successful transitions into the Canadian labour market following co-op influenced their decisions to remain in Canada. Participants reported that the jobs they secured soon after graduation increased the likelihood of a successful permanent resident application, and this increased their motivation to apply to remain in Canada. P22, a software engineering

graduate, noted that a successful permanent resident application "requires you to graduate from a post-secondary school and then you need to work for more than a year." When we probed on this topic further, most participants pointed to co-op as a catalyst for their immigration plans. As one clear example, P1, a political science graduate, explained:

I don't know how my story would have been without [co-op], but I definitely think that the co-op program and the opportunity to get a job influenced me into deciding to stay in Canada and subsequently deciding to go through the immigration process as well.

Importantly, a few participants (P5, P6, P8) told us that their successful transition into the Canadian labour market changed their plans to move away from Canada. These participants said they had intended to move back to their home countries upon graduation, but securing a good post-graduation job in Canada encouraged them to remain. For example, P5, a computer science graduate, said:

When I first came to Canada, I wanted to go back to China after getting a broad academic experience, but throughout my co-op program, I realized the industry experience is quite critical as well, and therefore I decided to probably stay. I was hoping to finally land a full-time job working for two to three years, then go back to China.

Despite planning to remain in Canada for only two to three years after her graduation, P5 informed us during the interview that she had remained in Canada for 10 years. This suggests that co-op has the potential to reverse international students' plans to return to their home countries because it helps them transition successfully into the labour market.

Moderating Factors

While the data suggest links between co-op, labour market success, and immigration intentions, they also suggest several factors that moderate this chain of relationships. The first is the appeal of working in Canada versus elsewhere. Some participants perceived more favourable working conditions outside Canada. For example, P7, a financial analysis and risk management graduate who lived in Indonesia, said, "I believe in Asia, especially Indonesia, there are definitely more opportunities just because it's a developing country." Several participants (P3, P5, P7, P8, P13, P17, P20, P25) viewed the United States as an attractive destination. Indeed, one-third of participants said they planned to move to the United States at some point, and two-thirds told us they were familiar with the requirements for securing a U.S. work permit. As P25, a male computer engineering graduate, said, "I am always looking for opportunities to work in America. I think there are more opportunities compared to the Canadian market." He later added, "I have tons of like, colleagues in America, we do the same thing, but you know, compensation-wise it is just unjustifiably unequal."

Second, participants' perceived inability to meet Canada's immigration system requirements affected their intentions to remain in Canada. While some participants (P1, P8, P18, P19, P23) stated that the Canadian immigration application process is straightforward, several more (P3, P4, P5, P9, P10, P12, P17, P19), including those who were already PRs, were concerned that Canadian education and work experience were no longer sufficient to satisfy PR application requirements. The sentiment was one of frustration: despite having a Canadian undergraduate education, work experience, stable current employment, and strong English proficiency test scores, some participants reported that they still did not meet the required PR application scores. P3, a computer science master's program graduate, reminded us that "the ranking scores are very high right now, like very competitive." P17, an accounting and finance graduate, expressed frustration with the scores:

I think students who have finished their program, they've tried hard to study, and they have work experience, they have met the language requirement for English, they look at the [permanent residency application] score, they will be like, oh [expletive], I'm still 50 points from getting selected. People want to stay, but then the system itself doesn't look like it wants people to stay, you know, the score is just way too high.

Third, sociocultural factors moderated participants' immigration intentions. P23, an environmental engineering graduate, summarized this factor when they told us their intention to remain depended on their analysis of the kind of life they would have at in Canada compared to their home country. For some participants, the results of this analysis encouraged immigration. For example, P22, a software engineering graduate, told us that he chose to remain in Canada "essentially because of cultural differences." He added that political uncertainties in his home country rendered life in Canada more appealing, resulting in a decision to remain. Other participants said they felt connected to Canadian culture, encouraging their immigration intentions. For instance, P24, a chemical engineering graduate, said, "Canadians are very nice and chill," and wanted to live and work among them.

For others, life elsewhere seemed more appealing. Some participants (P1, P2, P7) had already returned to their home country before the present study, including P7, a financial analysis and risk management graduate, who said, "I have family and more friends here [in their home country]. So, this is where I see myself right now." This perspective was echoed by several participants (P3, P5, P6, P15, P18, P20) whose relationships outside Canada discouraged immigration. They expressed a desire to stay in Canada but emphasized the responsibility to care for their family, especially their parents, which required them to leave. For example, P3, a computer science graduate, said they intended to remain in Canada but would leave immediately if their parents in China needed them to do so.

DISCUSSION

Retaining talented international students in the country is key to Canada's talent import strategy, yet data show many international students leave upon graduation. Blit et al.'s (2024) analysis showed that co-op may increase the retention of talented international graduates, but did not explore this deeply. Our qualitative exploration supported Blit et al.'s (2024) findings and explained how co-op may influence international students' immigration to Canada. Most of the participants in our study remained in Canada upon graduation, found stable and rewarding work, and applied for PR status. This suggests co-op may be a previously overlooked catalyst for international students' plans to remain in Canada. Our analyses reveal that school-to-work transitions are central to the link between co-op and immigration.

Co-op and School-to-Work Transitions

Participants noted that participation in co-op made their school-to-work transitions successful, thus helping them remain in the country upon graduation. Co-op helped them develop work-ready skills, provided clarity about career goals, and assisted in professional network development. International students leveraged these to secure employment. Some participants even received offers of employment from co-op employers, which significantly reduced the efforts required to find a relevant and meaningful post-graduation job. These positive outcomes tied back to co-op are remarkable because newcomers to Canada usually struggle to transition into decent work (Arthur & Flynn, 2013). Most participants in this study were gainfully employed and identified co-op as part of their success.

These findings are consistent with robust evidence in WIL literature. Studies show that co-op helps students to develop graduate capitals (Jackson & Cook, 2023). Graduate capitals are the knowledge, skills, abilities, and characteristics that help graduates secure meaningful employment (Tomlinson, 2017). Engaging in

co-op develops employability skills and social capital that graduates can leverage for employment. Participants also highlighted the impact of co-op on their professional networks, which is consistent with earlier research (El Masri & Khan, 2022; Trilokekar et al., 2014). Thus, our findings reinforce previous research, emphasizing the importance of graduate capitals and networks for international students.

Several participants further added that their school-to-work transitions were seamless. Many found work before graduation or soon after. This is consistent with evidence that placement-based WIL experiences such as co-op expedite post-graduation employment (Pizarro Milan et al., 2021; Walters & Zarifa, 2008; Wyonch & Seward, 2023). Participating in co-op helps graduates find jobs earlier than their peers. This is especially critical for international students who need to find work to remain in the country. Because these students found work so early, they could focus on their long-term plans of staying in Canada rather than leaving.

School-to-Work Transitions and Immigration

At the time of the interviews, most participants were still in Canada and planned to remain in Canada permanently. Their post-graduation employment was central to their immigration intentions. Once they secured a job, they began to see Canada as their new home. This is consistent with the international student mobility and immigration literature that suggests employment is a key factor driving international students' intentions to remain in their host country (Arthur & Flynn, 2013; Lu et al., 2009; Netierman et al., 2022; Soon, 2012; Trilokekar et al., 2016). Canada has been a destination of choice for millions of international students because, historically, employment opportunities have been ample (Chen & Skuterud, 2018; Esses et al., 2018; Netierman et al., 2022). Further, some participants who had planned to leave Canada but found work reversed their plans, deciding instead to remain in Canada instead of returning home. This echoes McGill's (2013) observation that employment may trump inten-

tions to leave as a determinant of decisions to remain in a host country.

We also found several factors that strengthened or limited participants' plans to remain in Canada. Several participants perceived better working conditions outside Canada, particularly in the United States, and some left Canada to pursue those. Additionally, several participants reported that challenges with navigating Canada's immigration system further limited their intentions to stay. Some were surprised that their Canadian education and years of work experience gained through co-op were insufficient to meet the required permanent residency application scores. One participant noted that she met the required scores only because of the additional points she got for having a master's degree. These barriers suggest an opportunity to review immigration policies to retain more talented international graduates. Sociocultural factors, such as the appeal of the Canadian social context and lifestyle and social obligations in other places, also affected plans to remain in the country.

These findings closely mirror previous research in international student mobility literature. International students weigh the appeal of their host country's labour market against other markets and prefer the most favourable one (El Masri & Khan, 2022; Netierman et al., 2022; Wu & Wilkes, 2017). Further, friendships and familial obligations domestically and abroad, as well as feelings of home associated with host nations and countries of origin, often influence the decision to remain or return (Netierman et al., 2022; Nghia, 2019; Trilokekar et al., 2016). This suggests that whether co-op influences international students to remain in Canada depends on various social influences from within Canada and beyond.

LIMITATIONS AND FUTURE RESEARCH

This study was limited by its small convenience sample. Participants were recruited from only one Canadian university, known for having a highly regarded co-op program. Also, only a

few participants were residing outside Canada at the time of the interviews, skewing the sample to graduates who had decided to stay in the country. Future research should explore the impacts of co-op programs on immigration intentions of international learners at other post-secondary institutions, in different locations across Canada, and from colleges and polytechnics, to generalize our findings. The analysis should include more students who have left Canada to better understand how and why co-op might not influence immigration intentions. Also, our study includes only international students who participated in co-op, excluding international students who did not participate in co-op. A future study could explore the experiences of co-op and non-co-op international graduates to untangle the impacts of co-op from academic experiences in general. Further, though participants in our study were diverse, we did not analyze the impact of cultural background or region of origin on their experiences. Future research could explore the role of factors such as language proficiency and ethnicity in the link between co-op and immigration.

CONCLUSION

Our study enhances our understanding of how co-op influences international students' immigration intentions in Canada. Participants revealed that co-op helped them develop their skills, career preferences, and professional networks, facilitating school-to-work transitions. These findings bolster existing WIL literature on the benefits of WIL for students and demonstrate that these benefits are salient for international students. Further, the study shows that school-to-work transitions are critical to immigration decisions because they establish a foundation for applying for permanent residency in Canada. This suggests that co-op can be an important catalyst for retaining talented workers in Canada and addressing labour market needs with international students' immigration. This extends the international student mobility literature by highlighting co-op influences on graduates' immigration decisions. However, stringent immigration requirements and sociocultural influences, such

as personal obligations in participants' home countries, can temper these intentions. Collectively, the findings highlight the need for greater access to WIL programs among international students and the role of co-op in supporting Canada's talent import strategy.

REFERENCES

- Arthur, N., & Flynn, S. (2013). International students' views of transition to employment and immigration. *The Canadian Journal of Career Development*, 12(1), 28–37. <https://doi.org/10.82396/cjcd.v12i1.3056>
- Blit, J., Skuterud, M., & Zhang, R. (2024). *The potential of Canada's international education strategy: Evidence from the "MIT of the North"* (CLEF Working Paper No. 74). <https://clef.uwaterloo.ca/wp-content/uploads/2024/09/CLEF-074-2024.pdf>
- Braun, V., & Clarke, V. (2006). Using thematic analysis in psychology. *Qualitative Research in Psychology*, 3(2), 77–101. <https://doi.org/10.1191/1478088706qp063oa>
- Canadian Bureau for International Education. (2022). *The student voice: National results of the 2021 CBIE international student survey*. <https://cbie.ca/wp-content/uploads/2022/06/CBIE-2021-International-Student-Survey-National-Report-FINAL.pdf>
- Chatoor, K., Effah, H., Shah, H., & Kaufman, A. (2024). *Navigating the transition from school to work: The impact of career development activities and services on graduate labour market outcomes*. Higher Education Quality Council of Ontario. <https://heqco.ca/wp-content/uploads/2024/10/School-to-work-report-FINAL.pdf>
- Chen, Z. J., & Skuterud, M. (2018). Relative labour market performance of former international students: Evidence from the National Graduates Survey. *Canadian Public Policy*, 44(3), 207–225. <https://www.jstor.org/stable/90025233>
- Co-operative Education and Work-Integrated Learning Canada. (2021). *What is work-integrated learning (WIL)?* <https://cewilcanada.ca/CEWIL/CEWIL/About-Us/Work-Integrated-Learning.aspx>
- Crossman, E., Choi, Y., Lu, Y., & Hou, F. (2022). International students as a source of labour supply: A summary of recent trends. *Economic and Social Reports*, 2(3), 1–5. Statistics Canada. <https://doi.org/10.25318/36280001202200300001-eng>
- Crossman, E., & Hou, F. (2022). International students as a source of labour supply: Pre-immigration study in Canada and post-immigration earnings. *Economic and Social Reports*, 2(2), 1–12. Statistics Canada. <https://doi.org/10.25318/36280001202200200004-eng>
- Dauwer, A. Z. (2018). *Assessing Canada's support of international students: A comprehensive review of Canada's retention and settlement of its "model immigrants"* (RCIS Working Paper No. 2, Vol. 2). Ryerson Centre for Immigration and Settlement. <https://doi.org/10.32920/31328926>
- El Masri, A., & Khan, N. (2022). *International students' lived experiences: A review of literature*. CGEI Resources and Reports.
- Esses, V., Sutter, A., Ortiz, A., Luo, N., Cui, J., & Deacon, L. (2018). *Retaining international students in Canada post-graduation: Understanding the motivation and drivers of the decision to stay* (Report No. 8). Canadian Bureau for International Education. <https://cbie.ca/wp-content/uploads/2018/06/Intl-students-post-graduation-RiB-8-EN-1.pdf>
- Fannon, A. (2023). The practice of co-operative education. In K. E. Zegwaard & T. J. Pretti (Eds.), *The Routledge international handbook of work-integrated learning* (3rd ed., pp. 93–112). Routledge.

- Gabler, N., & Gormley, B. (2022, March 22). *Lost opportunities: Measuring the unrealized values of skill vacancies in Canada*. Signal49 Research (formerly The Conference Board of Canada). <https://fsc-ccf.ca/research/lost-opportunities-measuring-the-unrealized-value-of-skill-vacancies-in-canada/>
- Immigration, Refugees and Citizenship Canada. (2021, January 8). *Government of Canada announces new policy to help former international students live in, work in and continue contributing to Canada*. <https://www.canada.ca/en/immigration-refugees-citizenship/news/2021/01/government-of-canada-announces-new-policy-to-help-former-international-students-live-in-work-in-and-continue-contributing-to-canada.html>
- Immigration, Refugees and Citizenship Canada. (2024, January 22). *Canada to stabilize growth and decrease number of new international student permits issued to approximately 360,000 for 2024*. <https://www.canada.ca/en/immigration-refugees-citizenship/news/2024/01/canada-to-stabilize-growth-and-decrease-number-of-new-international-student-permits-issued-to-approximately-360000-for-2024.html>
- Jackson, D., & Cook, E. (2023). Benefits of work-integrated learning for students. In K. E. Zegwaard & T. J. Pretti (Eds.), *The Routledge international handbook of work-integrated learning* (3rd ed., pp. 93–112). Routledge.
- Lu, Y., Zong, L., & Schissel, B. (2009). To stay or return: Migration intentions of students from People's Republic of China in Saskatchewan, Canada. *Journal of International Migration and Integration*, 10, 283–310. <https://doi.org/10.1007/s12134-009-0103-2>
- McCartney, D. (2021). A question of self-interest: A brief history of 50 years of international student policy in Canada. *Canadian Journal of Higher Education*, 51(3), 33–50. <https://doi.org/10.47678/cjhe.vi0.189179>
- McGill, J. (2013). International student migration: Outcomes and implications. *Journal of International Studies*, 3(2), 167–181. <https://www.ojed.org/jis/article/view/509/420>
- Monteiro, S., Guccini, F., & Hamman, L. (2024). *The leaky bucket 2024: A closer look at immigrant onward migration in Canada*. The Conference Board of Canada. https://forcitizenship.ca/wp-content/uploads/2024/11/the-leaky-bucket_2024.pdf
- Netierman, E., Harrison, L., Freeman, A., Shoyele, G., Esses, V., & Covell, C. (2022). Should I stay or should I go? International students' decision-making about staying in Canada. *Journal of International Migration and Integration*, 23, 43–60. <https://doi.org/10.1007/s12134-021-00825-1>
- Nghia, T. (2019). Motivations for studying abroad and immigration intentions: The case of Vietnamese students. *Journal of International Students*, 9(23), 758–776. <https://files.eric.ed.gov/fulltext/EJ1226286.pdf>
- Picot, G., & Ostrovsky, Y. (2021). Immigrants and second-generation entrepreneurs in Canada: An intergenerational comparison of business ownership. *Economic and Social Reports*, 1(9), 1–16. Statistics Canada. <https://doi.org/10.25318/36280001202100900003-eng>
- Pizarro Milian, R., Seward, B., Walters, D., & Wyonch, R. (2021). *Work-integrated learning: Does it provide a labour market advantage? Evidence from the 2018 National Graduate Survey*. Future Skills Research Lab.

- Roslyn Kunin & Associates, Inc. (2023). *Economic impact of international education in Canada – An update of 2022 impact final report*. Global Affairs Canada.
- Scott, C., Safdar, S., Trilokekar, R. D., & El Masri, A. (2015). International students as “ideal immigrants” in Canada: A disconnect between policy makers’ assumptions and the voices of international students. *Comparative and International Education*, 43(3), 1. <https://ojs.lib.uwo.ca/index.php/cie-eci/article/view/9261/7447>
- Soon, J. (2012). Home is where the heart is? Factors determining international students’ destination country upon completion of studies abroad. *Journal of Ethnic and Migration Studies*, 38(1).
- Statistics Canada. (2024). *Canada’s fertility rate reaches an all-time low in 2022*. The Daily. <https://www150.statcan.gc.ca/n1/daily-quotidien/240131/dq240131c-eng.pdf>
- Sui, S., & Morgan, H. (2014). *Selling beyond the U.S.: Do recent immigrants advance Canada’s export agenda?* The Conference Board of Canada. <http://www.conferenceboard.ca/e-library/abstract.aspx?did=6250>
- Gabler, N., & Gormley, B. (2022, March 22). *Lost opportunities: Measuring the unrealized values of skill vacancies in Canada*. Signal49 Research (formerly The Conference Board of Canada). <https://fsc-ccf.ca/research/lost-opportunities-measuring-the-unrealized-value-of-skill-vacancies-in-canada/>
- Tomlinson, M. (2017). Forms of graduate capital and their relationship to graduate employability. *Education + Training*, 59(4), 338–352. <https://doi.org/10.1108/ET-05-2016-0090>
- Trilokekar, R., Safdar, S., El Masri, A., & Scott, C. (2016). *International education, labour market and future citizens: Prospects and challenges for Ontario*. <https://www.researchgate.net/publication/301532260>
- Walters, D., & Zarifa, D. (2008). Earnings and employment outcomes for male and female postsecondary graduates of co-op and non- co-op programmes. *Journal of Vocational Education & Training*, 60(4), 377–399. <https://doi.org/10.1080/13636820802591863>
- Woodend, J., & Arthur, N. (2018). International students’ university to work transition. *Canadian Journal of Career Development*, 17(1), 53–55.
- Wu, C., & Wilkes, R. (2017). International students’ post-graduation migration plans and the search for home. *Geoforum*, 80, 123–132.
- Wyonch, R., & Seward, B. (2023). *From class to career: How work-integrated learning benefits graduates looking for jobs* (CD Howe Institute Commentary No. 642). C. D. Howe Institute. <https://cdhowe.org/publication/class-career-how-work-integrated-learning-benefits-graduates-looking-jobs/>

APPENDIX

Appendix 1

Interview Participants' Characteristics

#	Faculty	Program	Year of Graduation	Gender	In Canada?	PR/Citizen
1	Arts	Political Science/Fine Arts	2018	Woman	No	Yes
2	Mathematics	Statistics	2022	Woman	No	Yes
3	Mathematics	Computer Science	2022	Woman	Yes	Applied
4	Environment	Geography & Environmental Management	2014	Man	Yes	Yes
5	Mathematics	Computer Science	2014	Woman	Yes	Yes
6	Health	Health Sciences	2022	Woman	Yes	Applied
7	Mathematics	Financial Analysis & Risk Management	2020	Man	No	No
8	Engineering	Mechatronics Engineering	2020	Man	Yes	Yes
9	Arts	Arts & Business	2021	Woman	Yes	Applied
10	Mathematics	Computer Science	2021	Man	Yes	Applied
11	Environment	Environment & Business	2014	Woman	No	No
12	Engineering	Civil Engineering	2021	Man	Yes	Yes
13	Mathematics	Mathematics	2020	Woman	Yes	Yes
14	Science	Mathematical Physics	2019	Man	Yes	Yes
15	Engineering	Mechanical Engineering	2021	Man	Yes	Yes
16	Science	Psychology	2022	Woman	Yes	No

#	Faculty	Program	Year of Graduation	Gender	In Canada?	PR/Citizen
17	Arts	Accounting	2020	Man	Yes	Yes
18	Mathematics	Actuarial Science	2018	Man	Yes	Yes
19	Science	Biology	2021	Woman	Yes	Applied
20	Mathematics	Computational Math	2019	Man	Yes	Yes
21	Science	Earth Sciences	2021	Woman	Yes	Yes
22	Engineering	Software Engineering	2013	Man	Yes	Yes
23	Engineering	Environmental Engineering	2016	Man	Yes	Yes
24	Engineering	Chemical Engineering	2020	Woman	Yes	Applied
25	Engineering	Computer Engineering	2020	Man	Yes	Yes