

Administrative Linkages: So what?

Presented by:

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Brief History: The “Dark” Ages (early 2010s)

Access/Pathways

- Toronto District School Board (TDSB) (e.g., Anisef, Brown, & Robson, 2013)
- OUAC (e.g., Dooley, Payne, & Robb, 2012)

School-to-Work Transitions

- National Graduates Survey (NGS) (e.g., Frenette, 2004; Walters, 2004)

Life Course

- Youth in Transitions Survey (YITS) (e.g., Hango & de Broucker, 2007; Milla, 2012)

Finnie, Mueller, Sweetman – Debunking the Barista Fallacy: A New Way of Measuring Earnings of University Graduates

It's time to retire the myth of the educated barista

BARRIE MCKENNA > ECONOMICS REPORTER

OTTAWA

PUBLISHED JULY 31, 2016

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Finnie: Busting the barista myth – higher education IS linked to higher salaries



By Ross Finnie




Published Aug 08, 2016 3 minute read [Join the conversation](#)



Higher education does lead to higher incomes: University of Ottawa study

Those with the biggest paycheques should come as no surprise: engineers, nurses and computer whizzes start at \$50,000 to \$60,000 a year straight out of university, and engineers can hit \$99,000 within eight years

July 26, 2016 | 2 min read   

Higher education still worth the money, new research suggests

Grads make more money in virtually every discipline, but gender gap remains

CBC News · Posted: Jul 26, 2016 10:08 AM EDT | Last Updated: July 26, 2016

News

New study debunks myth that arts graduates end up in low-paying jobs




The ELMLP Era (~2018 – present)

- **Not** a dataset, but a linkage environment.
- Growing number of **administrative + survey datasets** which can be “joined”.
 - Enrolment files (PSIS)
 - Tax records (T1FF)
 - Census 2016/2021
 - Ontario High School (EDU)
- Plethora of advantages:
 - Census-level coverage, facilitating analysis of structurally small groups.
 - No survey-related attrition, simplifies analysis.
 - Cost efficient, generated through regular operations.

Project 1: PSE Pathways and Student Debt

Research Articles

Who borrows, and how much? Student borrowing across post-secondary pathways in Ontario, Canada

Roger Pizarro Milian , Trisha Einmann , Danielle Bader, David Walters, Robert S. Brown & Gillian Parekh 

Pages 460-474 | Received 13 May 2021, Accepted 01 Nov 2022, Published online: 12 Dec 2022

 Cite this article  <https://doi.org/10.1080/03075079.2022.2145463>

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The Price of Pathways: Student Borrowing Behavior across Postsecondary Pathways Revisited

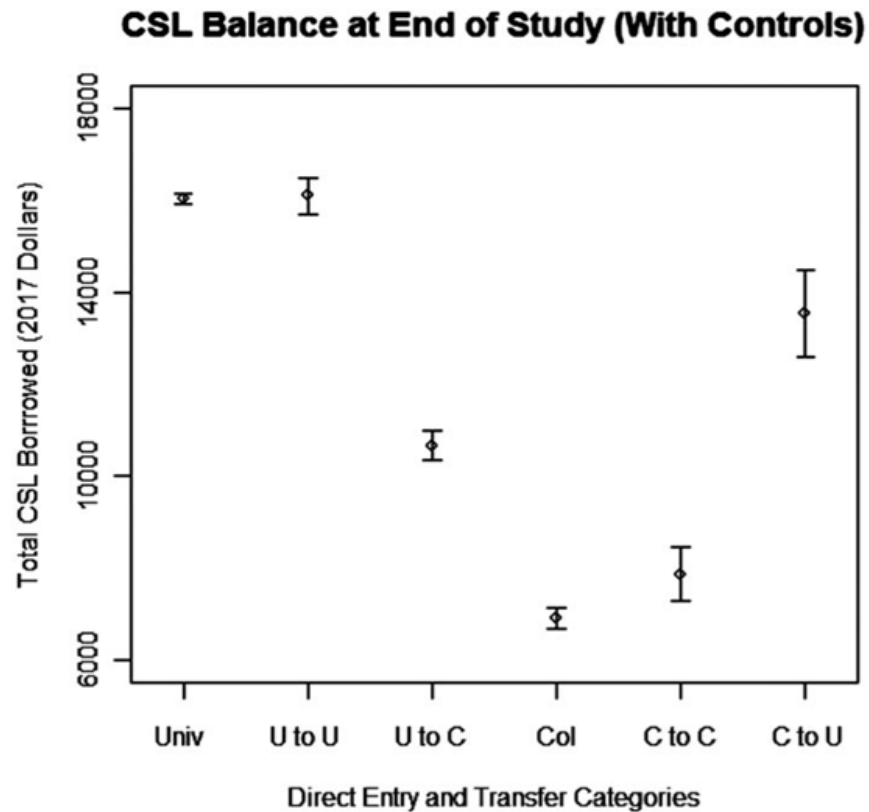
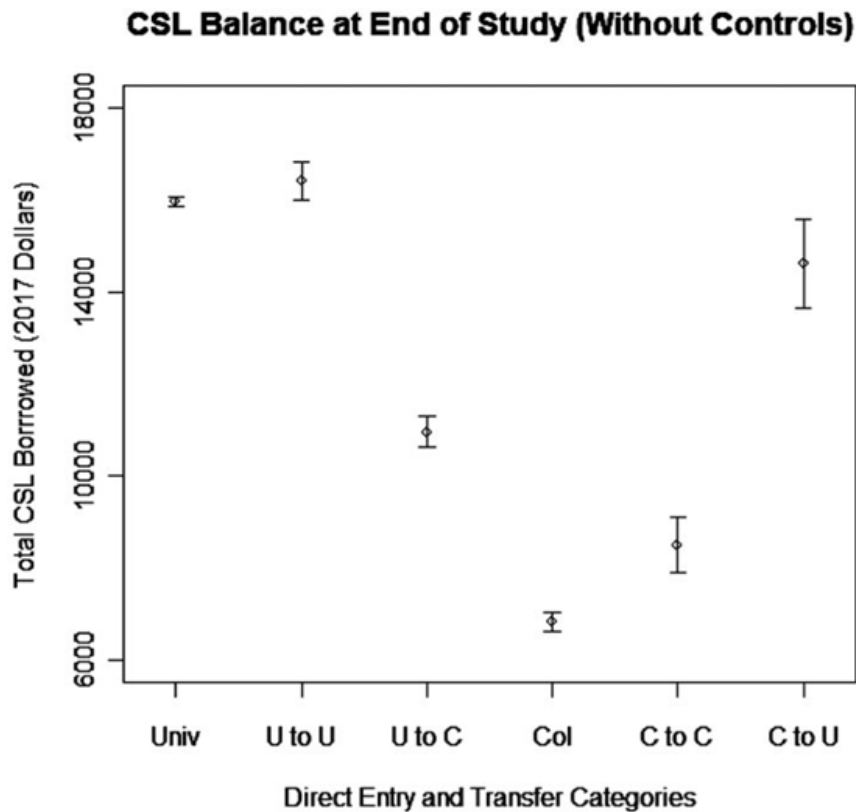
Original Article | Published: 14 August 2023

Volume 37, pages 670–691, (2024) [Cite this article](#)



Higher Education Policy

Borrowing by PSE Pathway



Project #2: Earnings by Institutional Type



Figure 1. Annual Earnings, 3-years Out

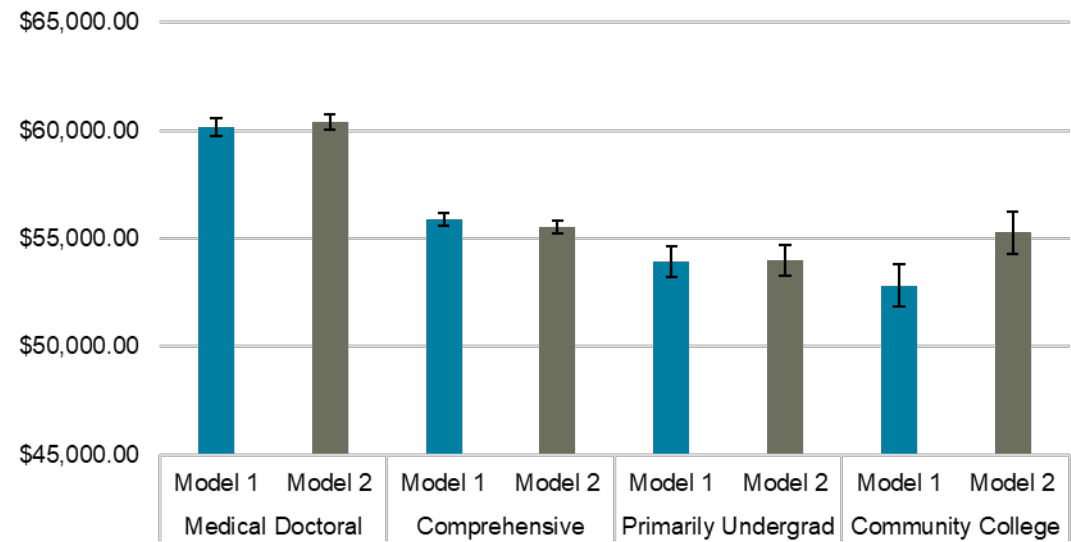
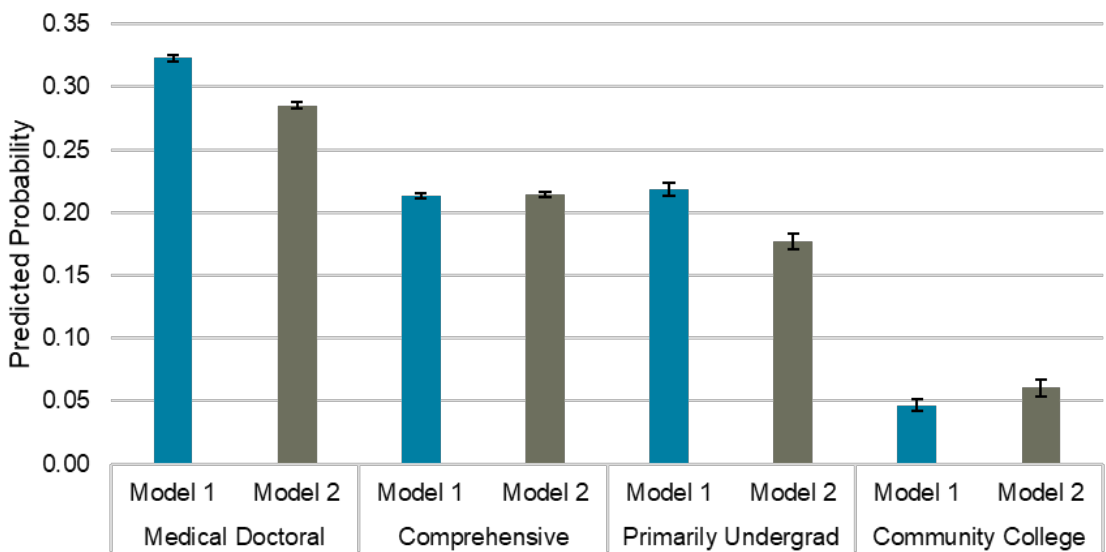
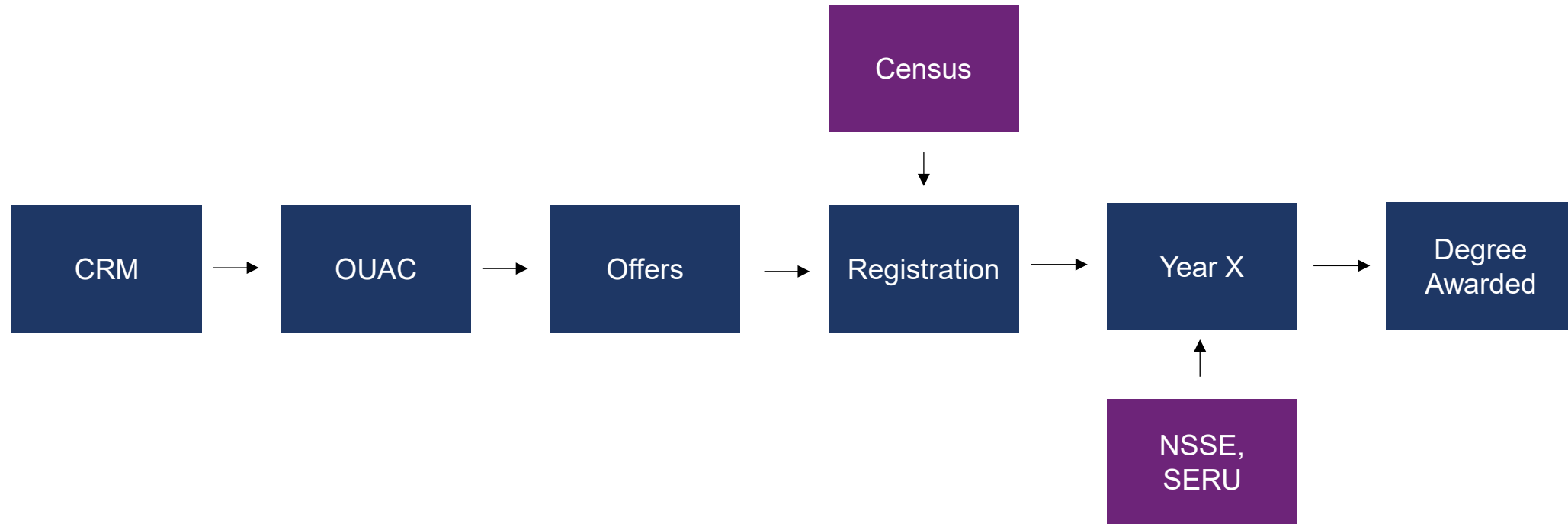


Figure 2. Graduate School Participation



Nothing Revolutionary...



Thank You!

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Follow my other rants:

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Post-secondary pathways and outcomes of international students in Ontario

Audrey Appiah, Michael Dubois, Reuben Ford, and Ashley Pullman

Nov 7, 2025 – ReimaginED: Linking Data to Understand Learner Pathways: Creative Approaches and Best Practices

About us

Who we are

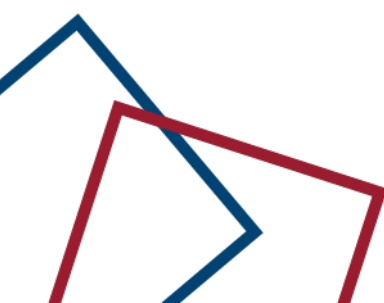
National not-for-profit research organization created to develop, field test, and rigorously evaluate new programs.

What we bring

Team expertise in complex and linked longitudinal administrative data

Who did we partner with

HEQCO through its research Consortium on International Education



Project overview

Aim

- Comprehensive system-level analysis of international study permit holders in Ontario
- 2010 entry onward
- Outcomes
 - Graduation
 - Labour market
 - Immigration outcomes

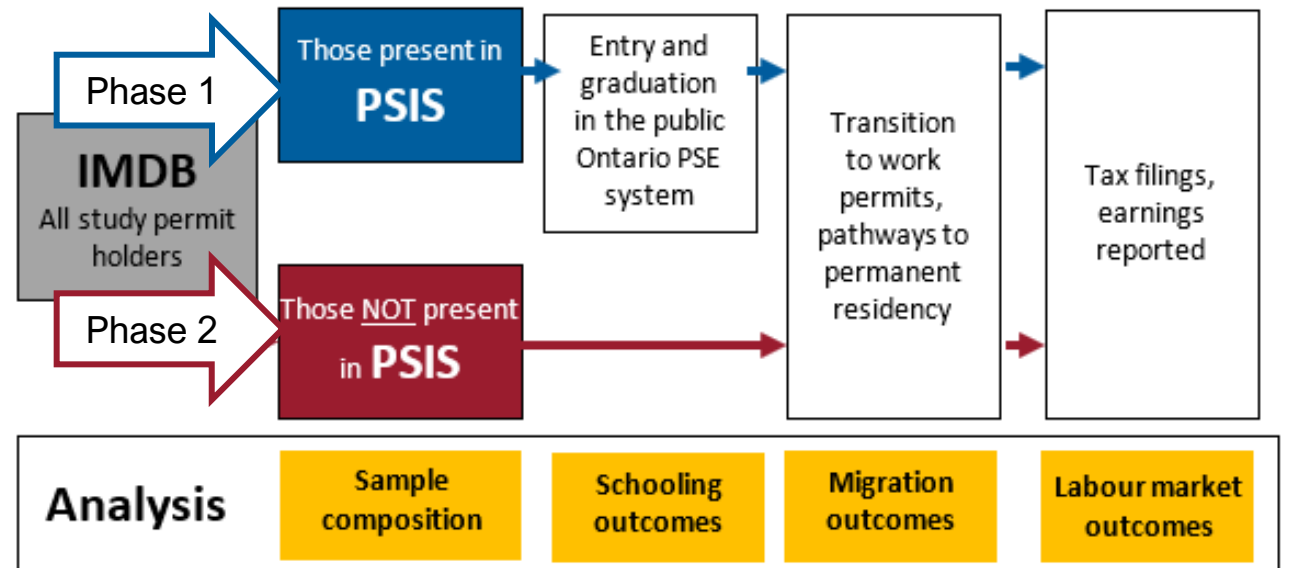
Data Sources

- Micro-level data from Statistics Canada's Education and Labour Market Longitudinal Platform (ELMLP)
 - Immigration data (IMDB)
 - Postsecondary enrollment data (PSIS)
 - Annual tax information (T1FF)

Analytical framework

Study began by identifying students issued Ontario study permits in the IMDB

- **Phase 1:** Followed students who were present in PSIS and entered a public Ontario college or university.
- **Phase 2:** Followed students who were not in PSIS.

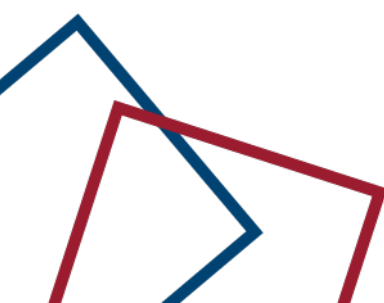


The number of study permits issued in Ontario more than doubled between the 2010 and 2019 cohorts

- **135% increase:** 49,000 to 114,000
 - **India** became the dominant source country (50% of permits by 2019)
 - **Gender** gap decreased (18 to 6 percentage points diff.),
 - **Students** were younger (77% under 24 y.o.)
 - **Toronto** remained the main destination but less so than before (64 to 50%),
 - **College-level credentials** were twice as common (certificates 6 to 16 % and diplomas 20 to 40%)

Public PSE remained the main destination for IS

- **80% entered public PSE**, meaning
 - **China and South Asian countries** were **most likely**
 - **South American and East Asian countries** were **least likely**
- No significant differences between 2010 and 2019 entry cohorts
 - Except **certificate- and diploma-level IS** were less likely to be in public PSE in later cohorts
 - Certificate: 86 to 79% public PSE entry, 8 percentage point reduction
 - Diploma 87 to 69% public PSE entry, 18 percentage point reduction



Working while in school is a growing trend among IS

- Overall, 34% of IS received a **co-op work permit**
 - 25% did among the 2010 cohort and 37% did in the 2018 cohort
- 50% of public PSE attenders **report earnings** in the first year *after study permit* issuance (65% five years out)
 - 17% of those not in public PSE did in years 1 and 5 (filed taxes at much lower rates)

Public PSE attenders only

- High graduation rates (65% within 4 years; 76% within 7 years)
- After graduation, 75% of those still in Canada reported earnings (65% five years out)

Average earnings of IS

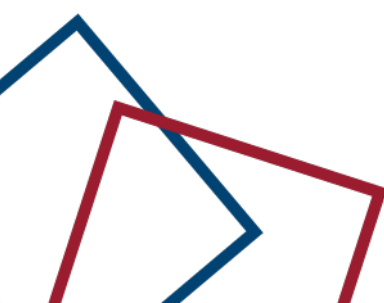
- Across all study levels, in the *first year following permit issuance*, filing IS reported earning between \$15,500 and \$17,000 (**non-public attenders earned more** than public attenders)
- *Five years out*, **attenders earned \$6,000 more** than non-attenders (\$46,500 vs \$40,500)

Public attenders only

- **After graduation**, first-year earnings were \$31,700 and \$57,600 five years later

Migration Outcomes

- Eight years out, 54% of public PSE attenders transitioned to **permanent residency** and another 12% were still in Canada studying or working
- Only 20% of those outside the public PSE system became **permanent residents** eight years later and very few were still studying or working in Canada.
 - Highest PR transition rates among **Indian** and **African** students.
 - Field of study matters: **health** and **engineering** lead to higher PR rates.



In sum

- Public postsecondary remained the main destination for IS
- Number of co-op permits increased every cohort
- Immediately after receiving their study permit, half of IS report earnings on Canadian taxes
- 2/3 of international students are still in Canada after eight years (half were PR)
- Those outside the public system are less likely to work and to stay in Canada

Value of linked administrative data

- Linked administrative data
 - enabled longitudinal tracking across education, employment, and immigration information.
- Richness and representativeness of information
 - allowed for disaggregated analysis providing regional, demographic, and program-level insights.
- Potential proxy measures possible through data linkages
 - presence of education deductions as indicators of private institution attendance if they are not in PSIS.



Administrative data, though comprehensive, are not enough on their own.

- Linked data provides a powerful lens to understand learner pathways, but
 - Has to be complemented with policy analysis
 - Lacks detail about student experiences and institutional realities
 - Lag in data availability (i.e., true impact in study permit cap and changes to PGWP eligibility won't be known for some time)
- Points to value of multi-method partnerships such as HEQCO's Consortium on International Education to tackle these types of questions

Thank you very much

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FLEMING

Mapping Program to Labour
Market Success for International
Students and Graduates

November 7, 2025

Research Questions

- How closely related is international student employment to existing programming?
- How well does international graduate employment align with the programs that graduates took?
- How can we leverage labour market intelligence to map credentials to labour market outcomes?

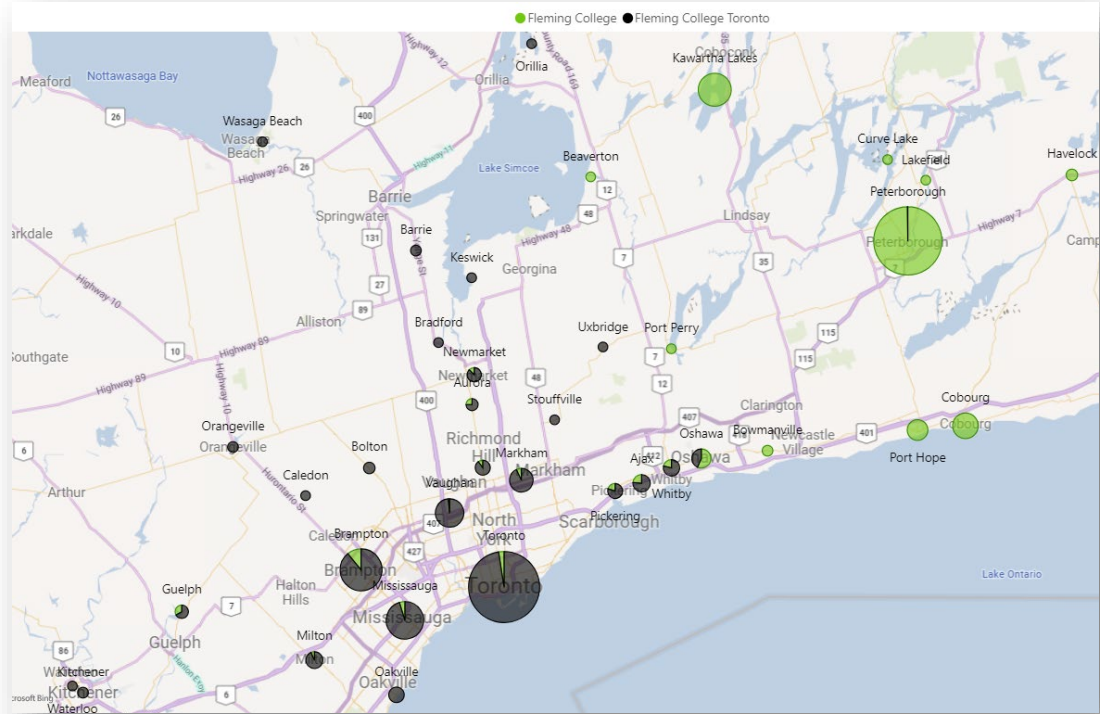
International Student Employment Footprint

3,919 students surveyed from Fall 2023 to Fall 2024.

2,317 students were working in local communities.

7.9% of employed students were working in occupations directly related to their program when the program was PGWP eligible.

0.9% of employed students were working in occupations directly related to their program when the program was **not** PGWP eligible.



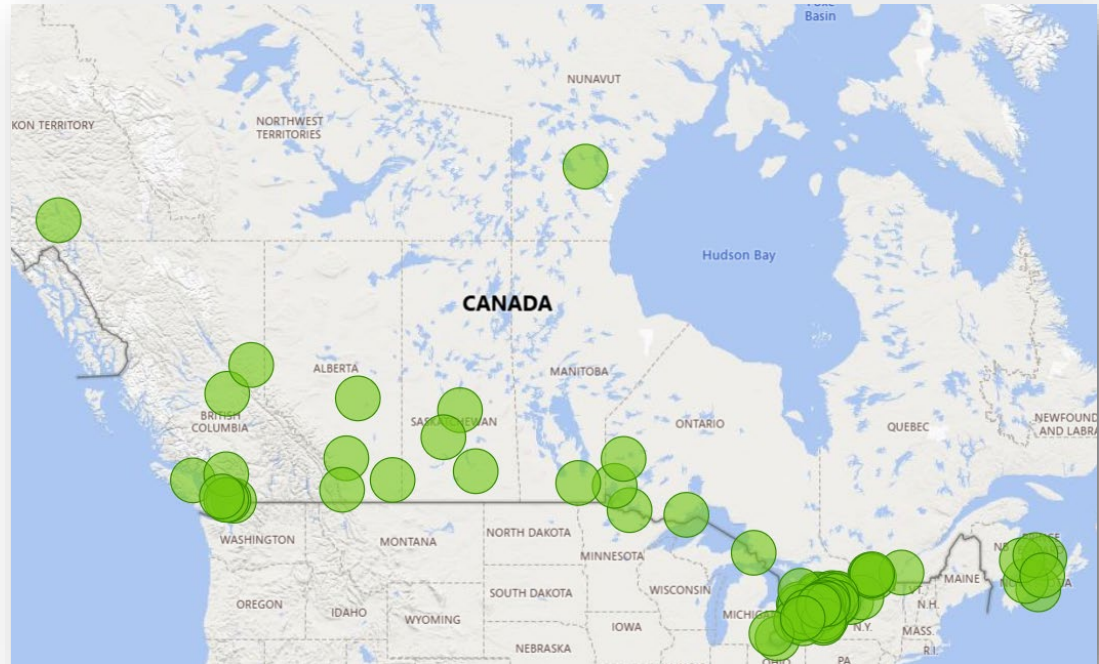
International Graduate Employment Footprint

1,810 graduate employment records accessed from 2018 to 2022.

82.8% employment rate 6 months after graduation.

31.8% of employed graduates were working in occupations directly related to their program when the program was PGWP eligible.

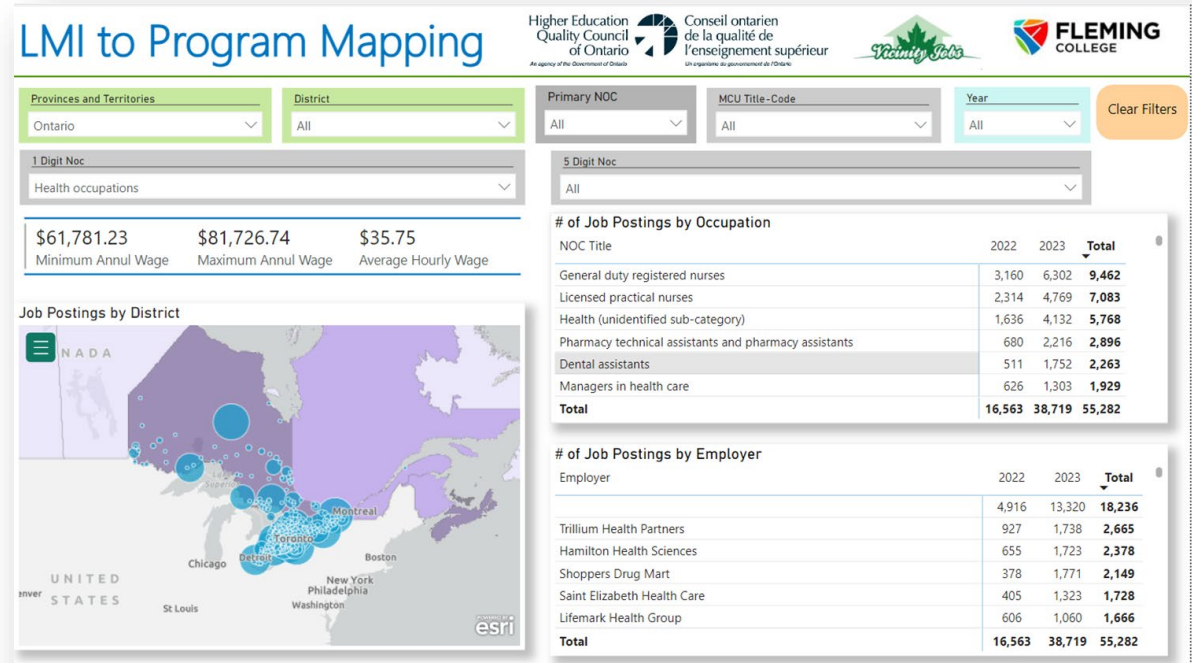
7.7% of employed graduates were working in occupations directly related to their program when the program was **not** PGWP eligible.



LMI to Program Mapping

New Opportunities

- Leverage LMI technologies to map job titles to NOC.
- Link Program MTCU Codes to NOC Codes.
- Link NOC Codes to Labour Market Data.
- Link graduate outcomes back to programming via NOC mapping
 - Primary data collection
 - Secondary data (i.e. Alumni files)



Contact

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