



## Postsecondary Non-completion in Ontario: A Research Dialogue with SRDC and HEQCO

Higher Education  
Quality Council  
of Ontario  
An Agency of the Government of Ontario



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## Project overview

### Research aim

- Better understand system-wide non-completion in the Ontario postsecondary education (PSE) system – *generate evidence on the extent of the issue*
- Through new data linkages, undertake detailed sub-group analysis – *generate evidence on who is more likely to experience it*
- Begin to understand the “cost” of non-completion – *generate evidence on the earnings penalty for non-completers*

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### Research questions

- What is the systemwide rate of non-completion in Ontario?
- What are the rates of non-completion for students with different characteristics?
- What are the labour market outcomes (i.e., economic activity and earnings) of non-completers and how do they vary across student characteristics? and
- How do labour market outcomes of non-completers compare to students who complete a post-secondary credential?



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## A “system-wide” approach

A “system-wide” approach that **examined time to completion**, regardless of the characteristics of the entry program and if a student transferred or paused their studies

- An outcome that **captures any program completion** within 6, 7, and 8 years of starting PSE
- Long enough to allow for changes and breaks, yet short enough for the outcome to be reasonably associated with the initial enrollment

Six year outcomes for four hypothetical students

	Enrollment spell									2011 outcome (Completion by 16)	
	2009	2010	2011	2012	2013	2014	2015	2016	2017		
1	Not enrolled	Not enrolled	Start 1 <sup>st</sup> program			1 <sup>st</sup> program credential					Completer
2	Not enrolled	Not enrolled	Start 1 <sup>st</sup> program		Start 2 <sup>nd</sup> program		2 <sup>nd</sup> program credential				Completer
3	Not enrolled	Not enrolled	Start 1 <sup>st</sup> program			Restart 1 <sup>st</sup> program			1 <sup>st</sup> program credential		Non-completer
4	Not enrolled	Not enrolled	Start 1 <sup>st</sup> program			Resuming 1 <sup>st</sup> program					Non-completer

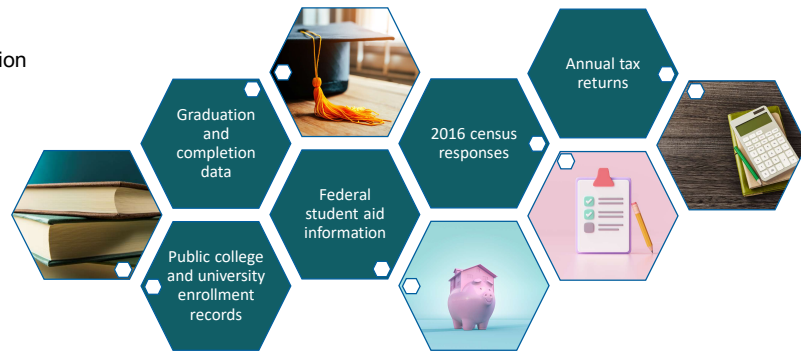


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## The Education and Labour Market Longitudinal Platform (ELMLP)

### Linked administrative and survey data from multiple source:

- Postsecondary Student Information System (PSIS)
- Registered Apprenticeship Information System (RAIS)
- 2016 Census, and
- Canada Student Loan Program (CSLP) data
- T1 Family File (T1FF)



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## Analysis samples

### The main Ontario sample (n=584,310)

- ✓ Students who started a full-time diploma, certificate, or undergraduate program in the fall semester
- ✓ Attended a public Ontario college or university
- ✓ Four cohorts: 2011 to 2014
- ✓ No restriction by age, but must not have been observed as enrolled in previous two years
- ✓ Can transition and graduate elsewhere across Canada, including from an apprenticeship program

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### Sub-samples



**2016 Census Ontario sample:**  
Responded to the 2016 long-form  
CENSUS (weighted n=517,000)



**Ontario CSLP student aid sample:**  
Received Canada Student Loan  
Program (CSLP) student aid in their first  
year (n=251,860)

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## Outcome variables & analysis approach



### Non-completion

- **Measure:** a binary outcome that measures non-completion six, seven, and eight years after starting a program.
- **Analysis:** a linear probability model specification



### Economic activity

- **Measure:** a categorical outcome examining four types of activity the first year after leaving or completing school: 1) in school; 2) did not file taxes; 3) filed taxes but zero earnings; and 4) filed taxes and reported earnings
- **Analysis:** a multinomial logit model specification



### Earnings

- **Measure:** inflation-adjusted log annual earnings
- **Analysis:** an ordinary least squares regression (OLS) specification

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## Explanatory variables



### All analysis

- Age
- Male/female
- Immigration status
- Recipient of federal student aid in entry year
- Entry cohort
- Program level
- Field of study



### Census analysis

- Indigenous or racial identity
- Home language
- Immigration generation
- Activity limitations



### Student loan analysis

- Loan assessment groups
- Recipient of disability-related and/or other grant
- Total aid decile



### Labour market analyses

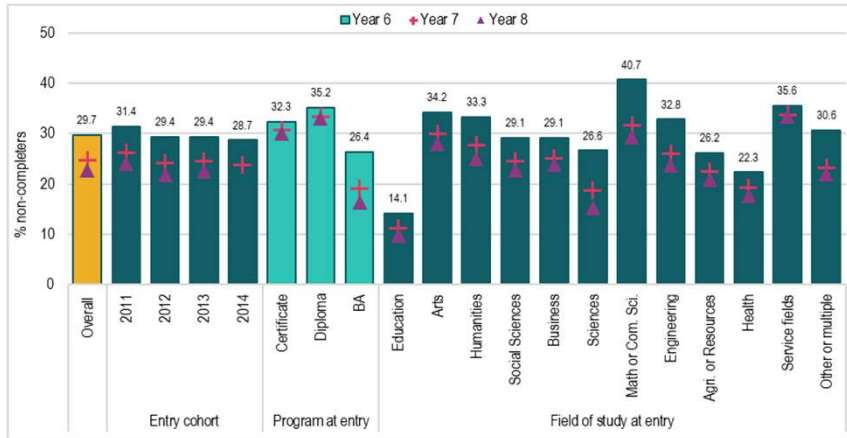
- Completion status by year six
- Elapsed time since the start of PSE enrollment

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## Findings

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## Non-completion rates by cohort and program



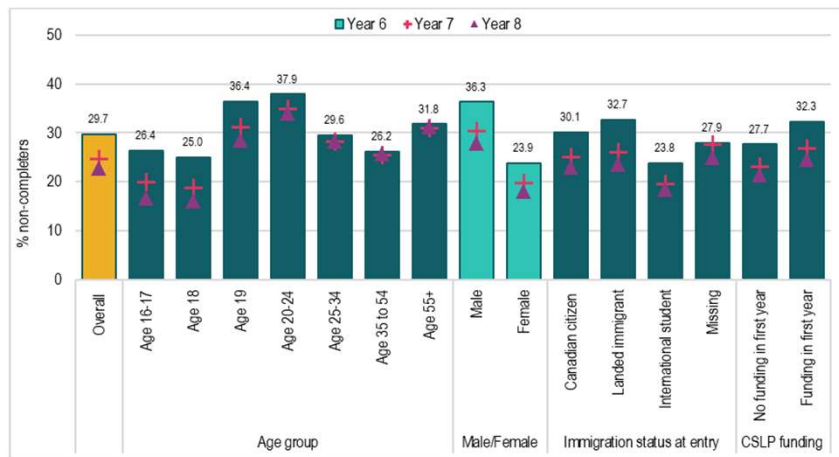
- After six years, 1-in-3 students were non-completers. Reduced to 1-in-4 after eight years
- Non-completion was higher for diploma programs and lower for undergraduate programs
- Non-completion was lower for Education programs and higher for Math/Computer Science programs



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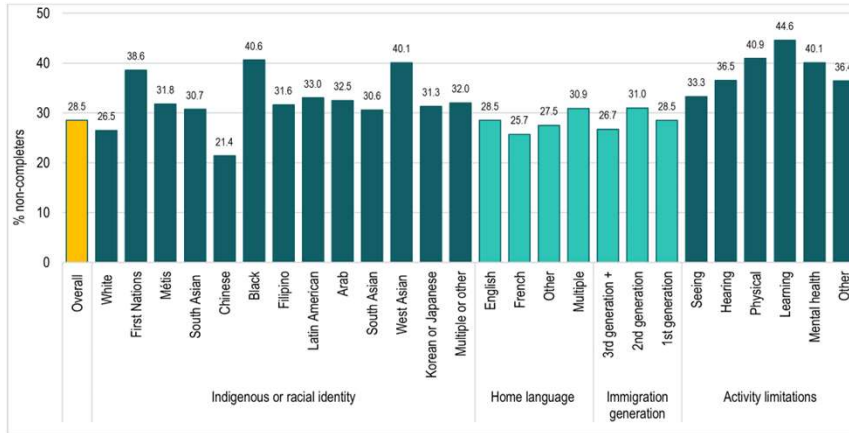
## Non-completion rates by student characteristics

- Non-completion was lowest for students who were aged 18. It increased for students with delayed entry (aged 19, 20-24)
- Female and international students had lower non-completion rates compared to their counterparts
- Students with CSLP funding had slightly higher non-completion rates compared to those without this student aid



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## Non-completion rates by census characteristics



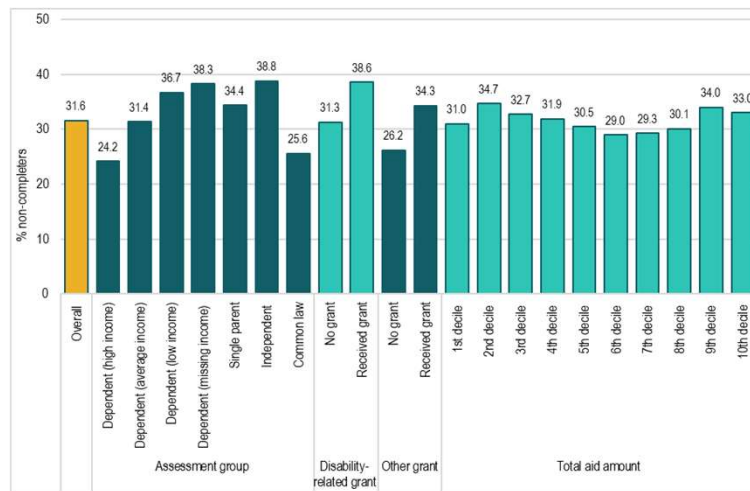
- White and Chinese students had lower rates of non-completion, while First Nations, Black, and West Asian (e.g., Iranian, Afghan) students had higher rates
- Students who reported an activity limitation were more likely to be non-completers, particularly if they reported a physical, learning, or mental health limitation



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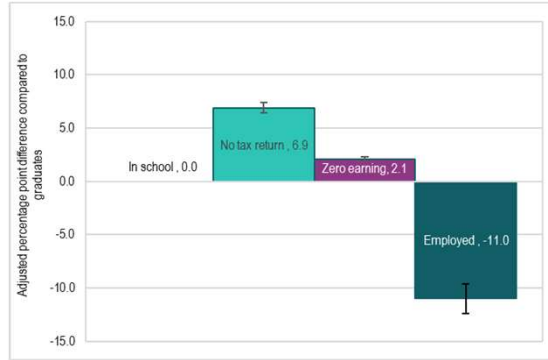
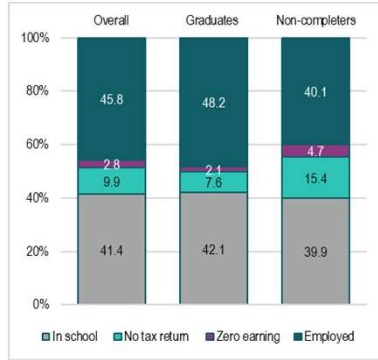
## Non-completion rates by student aid characteristics

- Dependent applicants from households with high parental income and common-law applicants were less likely to be non-completer
- Being a grant recipient was associated with non-completion, identifying students who faced barriers to completing PSE
- Both the descriptive and regression results found no relationship between the amount of student aid and non-completion



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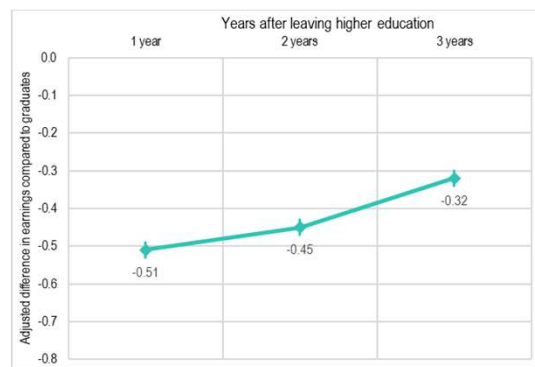
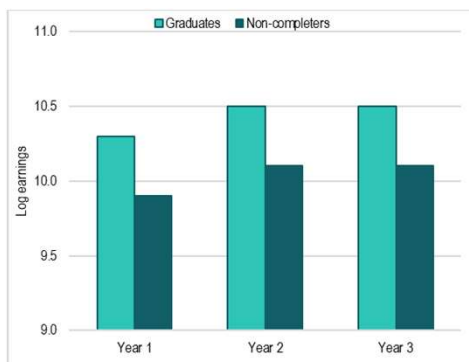
## Economic activity results: Descriptive and regression results



- A high percentage of non-completers and graduates remained or returned to school
- Compared to graduates, non-completers were more likely to have no tax return and less likely to report employment earnings

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## Earnings results: Descriptive and regression results

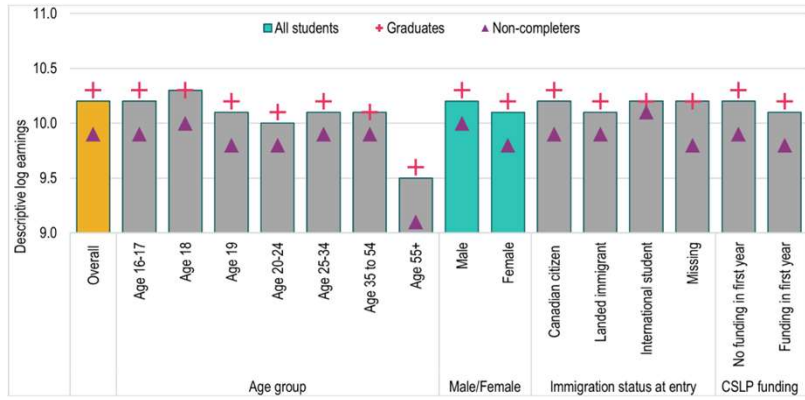


- There was a large first-year earnings gap for non-completers
- Once a model controlled for all observed factors, one-year post-PSE earnings of non-completers were 51 per cent lower than graduates, although the gap decreased over time

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## Descriptive log earnings by student characteristics



- Non-completers earned less across all age groups; however, the gap was notably large among those aged 55 or older at entry
- Male non-completers earned more than female non-completers, an adjusted 14.0 per cent less in the regression models

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## Key findings

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### Overall results

- After six years, 1-in-3 students who started a certificate or diploma program and 1-in-4 students who entered an undergraduate program had not yet earned a credential
- After adjusting for other factors, non-completers earned approximately 50 per cent less than graduates when entering the labour market

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## Key findings

### Overall results

- After six years, 1-in-3 students who started a certificate or diploma program and 1-in-4 students who entered an undergraduate program had not yet earned a credential
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### Associated student factors

While the study does not provide insight into the mechanisms of early leaving, certain student factors are associated with non-completion:

- There was a male/female completion gap (11 adjusted percentage points in favour of females)
- First Nations, Black, and West Asian (e.g., Iranian, Afghan, etc.) students had the highest non-completion rates, ranging from 10 to 14 adjusted percentage points higher than white students in the final regression model
- International students had lower non-completion rates compared to Canadian citizens (9 adjusted percentage points lower after six years)
- Students who faced activity limitations also experienced higher non-completion rates, particularly if they reported a learning or mental health limitation

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