Student pathways through postsecondary education, 2011 to 2016

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The onset of the COVID-19 pandemic dramatically changed the world, and Canadian postsecondary education is no exception. For international students, it could mean that some who went home at the beginning of the pandemic may not return to continue their postsecondary programs here, while others who considered studying in Canada may opt out. Online learning presents new possibilities for international students pursuing Canadian credentials, but may come with its own challenges or simply not be an option for some students. For others, Canada may become a more attractive option compared with other countries.

Canadian universities have become increasingly diverse since the turn of the century, with international students accounting for over one-quarter of new master's students nationally in 2016, up from just over one-fifth in 2011. Data on international student pathways in master's degree programs shed light on pre-pandemic trends in Canadian postsecondary education by showing the time it took to complete a program of study and graduation rates. These data come from the Education and Labour Market Longitudinal Platform (ELMLP), an innovative dataset that allows for a more complete understanding of student pathways and outcomes, and will serve as a baseline for future analyses on the pandemic's effects on postsecondary education in Canada.

International students have been enrolling in increasing numbers at every level in Canadian universities, and they were more likely to graduate and finish their programs earlier than their Canadian counterparts. While 15% of new students were international students in 2016, these students comprised a larger share of enrolments in graduate (master's and doctoral) programs. Previous research has shown that although higher levels of education generally lead to higher earnings, a master's degree provides a sizable earnings premium compared with other types of postsecondary credentials.

New enrolments in master's degree programs are increasing, especially among international students

Just over 43,000 students entered a master's degree program at a Canadian university in 2016. Over one-quarter (12,195) were international students, and 30,873 were Canadian students. The number of new entrants to master's programs rose 51% from 2011 among international students, and 11% among Canadian students.

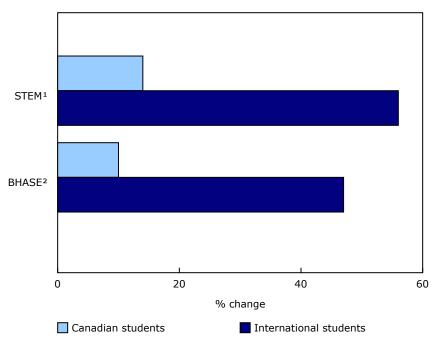
The proportion of women enrolled in Canadian universities has been increasing over the past few years. However, among international students, men were more likely to enrol in master's programs. Women (60%) accounted for the majority of new entrants to a master's degree program among Canadian students in 2016. In contrast, less than half (46%) of new international master's students were women.

The growth in international students entering science, technology, engineering, and mathematics and computer science (STEM) master's programs and business, humanities, health, arts, social science, education, legal studies, trades, services, natural resources and conservation (BHASE) master's programs has rapidly outpaced that of new Canadian entrants. From 2011 to 2016, for example, enrolments of new international students entering a STEM master's program in Canada rose four times faster than those of their Canadian counterparts (+56% versus +14%)—almost five times faster in BHASE programs (+47% versus +10%).





Chart 1
The number of international students entering a master's degree program grew four times faster than that of new Canadian entrants from 2011 to 2016



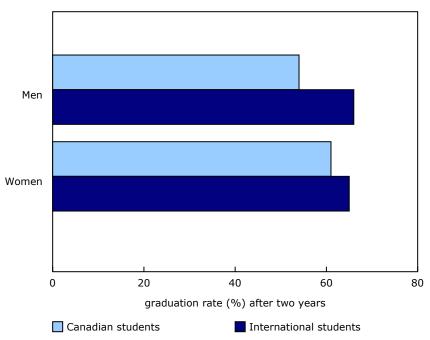
^{1.} Science, technology, engineering, and mathematics and computer science.

2. Includes fields of study in business, humanities, health, arts, social science, education, legal studies, trades, services, natural resources and conservation. **Source(s):** Education and Labour Market Longitudinal Platform (5017).

International students are more likely than Canadian students to graduate from a master's degree program within two years

International students graduated earlier and were more likely to complete their master's program than their Canadian counterparts. Almost two-thirds of international master's degree students who started their program in 2013 (65%) had graduated within two years, compared with 58% of Canadian students. Most international (87%) and Canadian (83%) master's students had graduated within four years of starting the program.

Chart 2 International students were more likely to graduate within two years than Canadian students



Source(s): Education and Labour Market Longitudinal Platform (5017).

International students' earlier graduation and higher graduation rate may be the result of various factors, such as educational qualifications or qualifying programs started or completed outside Canada before attending a Canadian university. International graduate students may also be more likely to complete their studies in less time because of their higher tuition fees, the costs of living away from home and the terms of their study permits. In 2013, international students in graduate programs paid an average of \$13,490 in tuition, more than double what Canadian students paid (\$6,038). A recently published research article found that Canadian students may also take longer to complete their studies because they are more likely to combine school and work and to study part time at the master's level. Future research using the Education and Labour Market Longitudinal Platform and other sources will be able to examine the impact of the pandemic on international student pathways in the years to come.

Note to readers

The Education and Labour Market Longitudinal Platform (ELMLP) is a platform of securely integrated anonymized datasets that are longitudinal and accessible for research and statistical purposes.

The ELMLP enables analysis of anonymized data on past cohorts of college and university students and registered apprentices, to better understand their pathways and how their education and training affect their career prospects in terms of earnings.

Statistics Canada would like to thank the provinces and territories, Employment and Social Development Canada, and other stakeholders in the development of the ELMLP and the indicators.

This release includes seven data tables that show student pathway indicators for postsecondary students over a six-year period (from 2011/2012 to 2017/2018), a data visualization tool and a technical reference guide. The tables can be manipulated to add programs and indicators of interest. Although the titles are not all listed in this release, the data section of the Statistics Canada website lists multiple views for five of the seven tables: one view for each of the five types of educational qualifications (career, technical or professional training certificate [college-level]; career, technical or professional training diploma [college-level]; undergraduate degree; master's degree; and doctoral degree).

While this article focuses on new enrolments in master's programs and closely examines graduation rates of international students in these programs, another recent release focuses more broadly on international student enrolment at all levels of postsecondary education: "Which postsecondary programs had high levels of international student enrolment prior to COVID-19?"

Available tables: 37-10-0136-01, 37-10-0138-01 to 37-10-0140-01, 37-10-0143-01, 37-10-0145-01 and 37-10-0146-01.

Definitions, data sources and methods: survey number 5017.

The technical reference guide entitled "Persistence and graduation indicators of postsecondary students, 2011/2012 to 2016/2017" is now available.

The data visualization tool entitled "Persistence and graduation of postsecondary students aged 15 to 19 years in Canada: Interactive tool" is also available.

For more information, or to enquire about the concepts, methods or data quality of this release, contact us (toll-free 1-800-263-1136; 514-283-8300; **STATCAN.infostats-infostats.STATCAN@canada.ca**), or Media Relations (613-951-4636; **STATCAN.mediahotline-ligneinfomedias.STATCAN@canada.ca**).