

Catalogue no. 81-004-X
ISSN 1710-5854

Education Matters: Insights on Education, Learning and Training in Canada

New Perspectives on Access to Postsecondary Education



Statistics
Canada

Statistique
Canada

Canada

How to obtain more information

For information about this product or the wide range of services and data available from Statistics Canada, visit our website, www.statcan.gc.ca.

You can also contact us by

email at STATCAN.infostats-infostats.STATCAN@canada.ca

telephone, from Monday to Friday, 8:30 a.m. to 4:30 p.m., at the following numbers:

- Statistical Information Service 1-800-263-1136
- National telecommunications device for the hearing impaired 1-800-363-7629
- Fax line 1-514-283-9350

Depository Services Program

- Inquiries line 1-800-635-7943
- Fax line 1-800-565-7757

Standards of service to the public

Statistics Canada is committed to serving its clients in a prompt, reliable and courteous manner. To this end, Statistics Canada has developed standards of service that its employees observe. To obtain a copy of these service standards, please contact Statistics Canada toll-free at 1-800-263-1136. The service standards are also published on www.statcan.gc.ca under “Contact us” > “Standards of service to the public.”

Note of appreciation

Canada owes the success of its statistical system to a long-standing partnership between Statistics Canada, the citizens of Canada, its businesses, governments and other institutions. Accurate and timely statistical information could not be produced without their continued co-operation and goodwill.

Standard table symbols

The following symbols are used in Statistics Canada publications:

- . not available for any reference period
- .. not available for a specific reference period
- ... not applicable
- 0 true zero or a value rounded to zero
- 0^s value rounded to 0 (zero) where there is a meaningful distinction between true zero and the value that was rounded
- ^P preliminary
- ^r revised
- X suppressed to meet the confidentiality requirements of the *Statistics Act*
- ^E use with caution
- F too unreliable to be published
- * significantly different from reference category ($p < 0.05$)

Published by authority of the Minister responsible for Statistics Canada

© Minister of Industry, 2010

All rights reserved. Use of this publication is governed by the Statistics Canada [Open Licence Agreement](#).

An HTML version is also available.

Cette publication est aussi disponible en français.

Archived Content

Information identified as archived is provided for reference, research or recordkeeping purposes. It is not subject to the Government of Canada Web Standards and has not been altered or updated since it was archived. Please "[contact us](#)" to request a format other than those available.

New Perspectives on Access to Postsecondary Education

Ross Finnie, University of Ottawa and Statistics Canada
 Richard E. Mueller, University of Lethbridge and Statistics Canada
 Arthur Sweetman, Queen's University
 Alex Usher, Higher Education Strategy Associates

Access to postsecondary education has been an issue of long-standing interest in Canada, prompted in large part by the persistent gap that is observed in postsecondary education participation rates among individuals from different socioeconomic backgrounds. Concerns are driven in part by a desire for equity – *e.g.*, do all Canadians with the ability to succeed have equal access to a postsecondary education, regardless of their families' circumstances? – as well as by economic considerations – *e.g.*, is Canada producing sufficient numbers of highly-qualified labour force participants to be competitive in a knowledge-based, global economy?

Research on the roles of tuition costs, student assistance and other related financial factors shows that these influences explain only a small part of the gap in participation rates across socioeconomic groups. This has led researchers to look to more complete explanations that take into account factors that are rooted in a youth's family and early experiences, which occur well before the point when final decisions regarding postsecondary education are made in the late teens. These latter factors influence the formation of both preferences, and preparation, for postsecondary education. These processes are complex, inter-related and – as a result – challenging to identify.

In recognition of the need for better information on a wide range of issues relating to educational pathways of Canadian youth, Human Resources and Skills Development Canada and Statistics Canada developed the [Youth in Transition Survey](#) (YITS). This is a longitudinal survey that has tracked two groups of young people over time. One group (or "cohort"), referred to as YITS-Cohort A, were 15 years old as of December 31, 1999, the reference date for the first interview, which was undertaken in early 2000; the other group, referred to as YITS-Cohort B, were ages 18 to 20. Each group of young people has been surveyed five times, at two-year intervals, with the most recent data available referring to 2008. That means that there is now a rich dataset that tracks young people from their mid-teens through to their late twenties, following them as they move through the adolescent years, making decisions about, and in some cases progressing through, the postsecondary education system, while also making decisions about moving into and out of the labour market.

Recently, a group of researchers combined their efforts to provide new insights not only into issues pertaining to access to postsecondary education, but also persistence through to completion and other related issues, using data from the Youth in Transition Survey.

A more complete view of the determinants of postsecondary participation

As noted above, much of the existing research on gaps in persistence and participation in postsecondary education has focused on the role of costs and affordability as barriers, and the off-setting role of student financial aid. But the term "barriers" is itself often poorly defined and perhaps not the most useful one when talking about the various factors that determine who accesses postsecondary education and who persists through to graduation. Indeed, the evidence points to a much more complex and nuanced set of influences, such as an individual not being sufficiently prepared for postsecondary education, not being well-informed regarding the costs and benefits of postsecondary education, not having an interest in what postsecondary education has to offer and/or being insufficiently motivated to attend. These influences develop over a long period of time and are the result of the interaction between individuals' environments and the choices they make over time. In other words, the choice to pursue a postsecondary education, along with having the marks that make one eligible to attend, are developed through the entire period of childhood and adolescence, rather than suddenly at the end of high school.

The implication is that, for many with the will and the ability to attend college or university, cost often is of secondary importance. That is not to say costs associated with postsecondary education are irrelevant – indeed, the authors cite other research that shows that over the past 40 years, students have become increasingly reliant on part-time work during the school year and on student assistance, and loans in particular, to finance their education. Parental contributions have declined sharply and student borrowing has increased, as has the debt-to-earnings ratio for some students following graduation, resulting in some graduates struggling to repay their loans. But, the researchers argue, financial considerations arise only for those eligible and motivated to attend college or university. Many students in high school lack these pre-conditions that are necessary for participation in postsecondary education. Further, the evidence points to gaps not only across socioeconomic groups but also between males and females in terms of academic preparedness and motivation to participate in postsecondary education.

The research also finds that family income is a less important determinant of participation in postsecondary education than is parental education, leading to the conclusion that the ways in which family background matters are much more than simply financial. Aspirations – of students, their parents and their peers – and preparation for postsecondary education, as captured by high school grades, for example, are strongly related to differences in participation rates across various groups. When these types of variables are included in the analysis along with family income and parental education, it is mostly the effect of parental education that is reduced. This indicates that parental education appears to affect participation in postsecondary education at least partly through its impact on student aspirations, high school outcomes and related factors.

These findings lead the researchers to conclude that family income, parental education, and factors such as aspirations and preparation for a postsecondary education are all significant determinants of who goes to postsecondary education. They further find that parental education and family income have additional indirect effects through influencing the aspirations and preparedness of young people for postsecondary education, with parental education remaining a stronger influence than income. Finally, through the interaction of family income and parental education, these factors are typically, though not exclusively, related to socioeconomic background.

Factors influencing access to postsecondary education

While parental education and income appear to be the main background factors, there are a number of others that also influence participation in postsecondary education. One of these is academic success in high school. Previous research suggested that high school math marks were key, but the research summarized here finds that the overall high school mark matters more. Further insight is provided by Canadian data from the [Programme for International Student Assessment](#) (PISA) indicates that a student's score in reading at age 15 also is an important predictor of university attendance.⁴ Also important are a student's score on indicators of "[high school engagement](#)," and "[academic self efficacy](#)," as well as personal characteristics and attitudes. The effect of parental education decreases when these other factors are taken into consideration, leading to the conclusion that the overall effect of parental education is exerted at least partly through the role parents play in promoting, for example, stronger academic performance, better study habits and more positive attitudes toward school. These factors, which the researchers term "cultural" factors, may in fact outweigh financial considerations in a student's preparedness for, and decision to attend, postsecondary education.

The gender gap in participation, in university in particular, has been one of great interest, lately so as young women participate to a far greater extent than young men. Factors related to academic performance, including high school grades and test scores as reported by the Programme for International Student Assessment (PISA), and better study habits among girls, predominate in explanations of the gender gap in participation in postsecondary education. However, as noted by the authors, identifying the importance of good academic habits in driving the gender access gap begs the question of why girls out-perform boys in this respect.

The research also finds a gender gap with respect to aspirations to attend postsecondary education. Aspirations are in turn related to the decision to attend, independent of high school grades and other factors such as parental education. Male-female differences in aspirations therefore also play an important role in the gender gap in postsecondary participation. This gap in aspirations is evident even among 15 year-olds and it increases with age.

Other research examines the effect of high school students' paid work outside of school. Previous research found that a small amount of paid work appears to have a beneficial effect on high school grades, while longer working hours have a damaging effect. The findings reported here, however, indicate that once other individual attributes are taken account of, the effect of working during high school is negative, in any amount.

Persistence in postsecondary education

Access is one part of the story. The other part is persistence, that is, following a program through to graduation.

Postsecondary pathways – persistence, mobility, and, ultimately, graduation – are dynamic processes that require longitudinal data in order to be tracked and measured. This is because many students initially start in one program, but then switch programs or institutions or take a break before starting again. Data at the level of individual institutions are unable to track these dynamics, leading to an over-estimation of postsecondary incompleteness rates.

Employing the longitudinal nature of the Youth in Transition Survey, the researchers find that the rate of incompleteness at the individual level is in fact much lower than institution-level data would suggest. It also suggests that a fair amount of "sorting" goes on once students reach the postsecondary level as they seek to find a good match for their skills and interests.

The research shows that while about 50% of all students failed to finish their initial programs of study within five years, only about 10 to 15 percent can be considered true dropouts. Many switched programs, either within a given institution or between institutions (sometimes even moving to a different level of study – e.g., switching from college to university or vice versa). Among those who left at some point, 40% of college students and 54% of university students returned to postsecondary studies within three years.

The findings also indicate that financial factors – at least as identified by students themselves – are rarely behind the decision to leave and that family background tends to have only a small effect, unlike the case for access. The most important factors leading a student to leave postsecondary education are related, essentially, to the student not finding a good fit with their chosen program of study. That being said, family background does play a limited role – those with higher parental education were more likely to switch programs or institutions rather than drop out; however, family background had little effect on whether a student would then go on to complete a subsequent program of study.

Conclusion

Issues around differences in participation in postsecondary by young people with different socioeconomic backgrounds have been of long research and policy interest in Canada. More recently, the gender gap in postsecondary participation has also raised questions as to why young women are graduating from university, in particular, in greater numbers than young men.

Observation of the gap in postsecondary participation between youth from high-income families and those from lower-income families has led to much research around the issues of cost and affordability. However, current research points to the need to take a broader perspective on the gaps that are observed, taking account of the roles of factors such as aspirations, motivations, engagement with school, study habits, and high school outcomes and related measured abilities. These latter factors, in fact, play key roles. Furthermore, the research finds that the development of such characteristics in young people is more closely related to parental education than to parental income and takes place over a period of many years.

Perhaps most surprising is the fact that differences in rates of participation in postsecondary education as related to such personal and behavioural characteristics are found both across socioeconomic groups and between males and females. And while differences in parental education may explain a good part of the gap across socioeconomic groups, such differences cannot explain the gender gap in overall school performance between boys and girls – a gap that is evident long before the end of high school.

In sum, questions around differences in rates of participation in postsecondary education are complex, involving not simply issues of costs, but also more subtle behavioural and attitudinal factors that are rooted in the family and that start early in life. The fundamental question of why such differences exist and how exactly they operate, however, remain to a significant degree unanswered, pointing to the need for further research.

Finally, it is important to keep in mind that the conclusions reported here are based on analysis of data for a single cohort of students, whose behaviour is based on existing tuition fee structures, the student financial aid systems currently in place and other financial factors as they currently hold. Were fees much higher or financial aid not so generous, for example, the outcomes might be very different than those observed.

Notes

1. Ross Finnie, Richard E. Mueller, Arthur Sweetman and Alex Usher, eds. 2008. Who Goes? Who Stays? What Matters? Accessing and Persisting in Post-Secondary Education in Canada. Montreal and Kingston: McGill-Queen's University Press, Queen's University, Queen's Policy Studies Series.

2. Also see Patrick Bussière, Roland Hébert and Tamara Knighton. 2009. "[Educational outcomes at age 21 associated with reading ability at age 15.](http://www.statcan.gc.ca/pub/81-004-x/2009002/article/10896-eng.htm)" Education Matters. Volume 6, number 2. Statistics Canada Catalogue number 81-004-X. www.statcan.gc.ca/pub/81-004-x/2009002/article/10896-eng.htm (accessed March 30, 2010).