

THE HIGHER EDUCATION QUALITY COUNCIL OF ONTARIO

Education Decisions of Canadian Youth

A Synthesis Report on Access to Postsecondary Education

Serena Cheung
August 2007

Contents

Introduction.....	3
Education decisions made in grade 10.....	4 – 5
Education aspirations of Canadian youth.....	6 – 13
University aspirations of visible-minority immigrant youth.....	14 – 16
Dropping out of secondary school.....	17 – 20
Returning to secondary school after dropping out.....	21
Choosing postsecondary education.....	22 – 25
Choosing University.....	29 – 30
Choosing College.....	30 – 31
University versus College Participation.....	31 – 32
Not choosing postsecondary education.....	26
Dropping out of postsecondary education.....	33 – 35
Returning to postsecondary education after dropping out.....	36
Factors and trends associated with education decisions.....	37 – 39
Conclusion.....	40
Appendix.....	41 – 43
References.....	44 – 46

Introduction

The pursuit of higher education is the result of a set of complex decisions faced by millions of young Canadians. These decisions are influenced by a multitude of factors, and information on these factors is crucial for policy makers to ensure access to postsecondary education. For the purpose of this paper, access is defined as the participation and completion of higher education.

This paper is a synopsis of the published research on access to higher education in Canada prepared for the Higher Education Quality Council of Ontario (HEQCO), an agency that conducts research on higher education with a particular focus in Ontario. The report serves to provide insight on understanding education decisions that students make beginning in grade 10, and continuing throughout high school and postsecondary education (PSE). These decisions include: choosing open PSE courses in high school, finishing high school, going to university or college, delaying PSE, not pursuing PSE, switching postsecondary institutions, dropping out of a postsecondary institution, and returning or not returning to a postsecondary institution.

The purpose of this report is to identify the monetary factors (household income, scholarships and grants) and non-monetary factors (gender, culture, community size, social and academic engagement, parental influences, peer influences, school grades, etc...) related to completion of secondary school, participation, and persistence in postsecondary education. HEQCO is particularly interested in the factors that affect the differing sets of decisions made among groups, specifically the factors that influence the decisions of traditionally under-represented groups; aboriginal, disabled, first generation, and visible-minority.

The paper begins with the characteristics of students and factors associated with the differing sets of high school and postsecondary education decisions, followed by a summary of trends and factors associated with educational plans and attainments, and a conclusion. Research conducted on access to postsecondary education in Canada uses data sources from a number of surveys summarized in the appendix.

Education Decisions Made in Grade 10

A student's postsecondary education (PSE) options are affected by their course decisions made in the early years of high school. Academic streaming provides students with the opportunity to take a sequence of courses that best suits their abilities and aptitudes. While proponents of this practise suggest that students learn better when grouped with others like themselves, opponents argue that people from less advantaged backgrounds may enter streams that reduce their chances of getting postsecondary education, even if they have the ability to do well in advanced courses.

Krahn and Taylor (2007) examine the extent in which streaming of tenth-grade students was occurring in Ontario, Saskatchewan, Alberta and British Columbia. They also look at the effects of social background on the course choices made by 15 year-old high school students. The study uses data from Cohort A, from the Youth in Transition Survey, to identify two groups of students: those whose tenth grade course selection was likely to restrict their PSE options (particularly university) and those whose course selection led to university as well as other PSE options (open PSE options).

Results:

- The proportion of students with all PSE options available (open PSE options) is based on the proportion of students enrolled in all three math, science and English university preparation courses. In each province, it is the level of math that reduces the proportion of students with the most open PSE options.
- In each province, students with university-educated parents compared to students with parents lacking university education were significantly more likely to have open PSE options.¹
- In all provinces, a higher proportion of visible-minority students compared to Canadian-born non-visible minority youth have open PSE options.²
- There are provincial differences in:
 - The overall proportion of students with open PSE options, with Saskatchewan having the highest and Alberta the lowest.

¹ Open postsecondary education options refer to university or college high school preparatory courses.

² The study defines visible minority status as whether or not an individual's first language was English or French. A visible-minority's first language is not English or French.

- The proportion of females with open PSE options, with Ontario and Alberta having a significantly higher proportion of females with open PSE options.
- Ontario, Alberta and British Columbia (results from Saskatchewan were insignificant) youth from higher income families were more likely to have open PSE options, than youth from low income households.
- In Ontario and Alberta, a significantly higher proportion of students in sectarian or separate schools have all PSE options open.

In summary:

- Province of residence has the strongest impact on the probability that a student has all PSE options open. Those living in Ontario, Alberta and British Columbia compared to Saskatchewan were less likely to have open PSE options.
- Parental education has the next strongest effect, whereby students with at least one university-educated parent were two-and-a-half times more likely to have all PSE options open. In addition to parental education, family income also plays a role. These findings suggest that social background is a major factor in educational choices made by 15 year-olds.
- Females, visible minority immigrants and youth from sectarian schools were more likely to have open PSE options.

Educational Aspirations of Canadian Youth

To fully understand participation in postsecondary education, it is important to understand the variables that impact youth educational aspirations and plans. Educational aspirations are defined by the level and type of education one would ideally like to obtain.

Postsecondary educational aspirations of YITS subjects (Krahn and Taylor, 2005):

University

- 61% of Canadian 15-year-olds wanted to complete one or more university degrees
 - 27% wanted to complete a university degree
 - 34% hoped to acquire more than one degree
- 64% of parents wanted their child to complete one or more degrees
 - 16% hoped their child would obtain more than one university degree

College

- 16% of 15-year-olds wanted to complete college or CÉGEP as the main educational goal³
- 26% of parents wanted their child to complete college or CÉGEP

Apprenticeship

- 6% of students wanted to go to a trade or vocational school
- 7% of parents wanted their child to go to a trade or vocational school

No idea or response

- 11% students did not know or respond to this question
- Almost none of the parents did not know or respond to this question

In general, parents have higher educational aspirations for their children than the children do for themselves. The only exception is that the proportion of youth who aspire to complete more than one university degree is twice the proportion of parents who want their children to complete more than one university degree.

³ Collège d'enseignement général et professionnel (CÉGEP), meaning "College of General and Professional Education" is a two year pre-university or three year college program.

Looker and Thiessen (2004) examine background characteristics associated with desired educational pathways of 15-year-old youth. Multivariate regression analyses were used to determine which factors have direct and indirect effects on education aspirations, and to assess the relative importance of these factors.⁴ Data used for this study were from PISA and YITS (Cohort A) questionnaires.

Descriptive analysis of the background characteristics associated with certain desired educational pathways:

Gender

- Females aspire to higher levels of education.
- A higher proportion of females prefer university education.
- A higher proportion of males prefer apprenticeship, trade, or vocational programs.

Region or Language

- Regional differences in the desired type of education are small, with the exception of Quebec. However, regional differences may also reflect cultural differences, since the majority of the youth population in Quebec are Francophone.
 - Youth from Quebec are more likely to aspire to and obtain college or CÉGEP education over other types of education.
 - Youth from Quebec are much less likely to aspire to university education compared to youth from regions outside of Quebec.
- Anglophones aspire to higher levels of education than Francophones.
- For Anglophones, region of residence plays a minor role in educational aspirations.
- For Francophones, whether they live in Quebec or elsewhere affects educational aspirations.
 - Francophones residing in Quebec generally aspire to lower levels of education than Anglophones.
 - Francophones residing outside of Quebec have higher education aspirations than Francophones residing in Quebec, but lower aspirations than Anglophones.

⁴ Education aspirations of youth may be tempered by a variety of reality constraints, such as academic performance, financial considerations and parental pressures.

Community Size

- Educational aspirations and attainments are higher for youths living in urban rather than rural areas.

Family Structure and Birth Order

- Family structure ('mixed' households versus 'nuclear' families) exerts little effect on educational aspirations.
- Birth order has a minor effect on educational aspirations – only children and eldest children are slightly more likely to aspire to a university degree.

Maternal Work Status

- Mother's work status has no effect on their children's educational aspirations.

Parental Education and Financial Resources

- Level of parental education is one of the strongest factors in predicting the level and type of education desired by their children.
 - Youth were more likely to aspire to a non-university program, or not want to pursue education after high school, if their parents did not pursue postsecondary education.
 - Youth whose parents had postsecondary education were more likely to aspire to university education than those whose parents without postsecondary education.
- Household possessions were used as an indirect measure of wealth. Educational aspirations increase as the number of household possessions increase.

Academic Performance

- School grade retention, academic grades and program stream (academic or applied) serve as reality constraints in students' ability to perform well in an educational environment.
- Males were more likely to have repeated a grade.
- Females were more likely to enrol in university or college preparatory courses.
- A higher proportion of females who do not desire to attend college or university were enrolled in college or university preparatory courses.
- Those who took remedial classes tend to have lower aspirations.
 - Females who desire trade or vocational education are much more likely to experience academic difficulties and to have taken a remedial course in school.

- Females whose highest aspiration is to complete high school and males who desire to drop out of high school are likely to take special training to improve their study skills.
- Males were more likely to report a failing grade in all three subjects of math, science and language of instruction (English or French).
- Of those who aspire to the highest level education (more than one university degree), an equal proportion of males and females passed all three subjects: math, science and language of instruction (English or French).
- Of those who aspire to the lowest level of education (less than high school completion), females were twice as likely as males to report a passing grade in all three subjects (math, science and language of instruction (English or French)).
- The higher the aspiration, the higher the reading achievement (PISA scores).
- Females generally score higher than boys on PISA reading literacy tests.

School Involvement

- Females tend to spend more time on homework than males, which may explain why they tend to do better at school.
- The more time spent on homework, the higher the educational aspirations.

Breaking Home and School Rules

- Those who are more likely to bend school rules (skipping classes and late class attendance) are more likely to have lower educational aspirations (less than high school completion), for both sexes
- As the severity of the problems at home and in school increase, the amount of desired education decreases.⁵
- The severity of problems at home and school were higher among males at every level of desired education.

Extracurricular Activities

- The more extracurricular activities one is involved in, the higher the educational aspirations.
- Participation in extracurricular activities is regarded as a means to increase one's social capital, which is positively correlated with higher educational aspirations and attainment.

⁵ The severity of problems range from “no problems in the past year” to “has been kicked out of school”.

- Males on average spend more hours on both school-based and non-school-based extracurricular activities.

Disinterest and Estrangement from School

- Males tend to be more disinterested and feel higher levels of estrangement from school.
- Levels of disinterest and estrangement are negatively correlated with high educational aspirations.
- Males tend to experience their school environment as more alienating, at each level of aspired education.

Academic Self-Confidence

- Academic self-confidence is positively correlated with educational aspirations.
- Levels of academic self-confidence to perform well in postsecondary education are the same for both sexes at all levels of desired education, except for college, where females tend to be slightly more confident than males.

Job Relevance of Education

- Greater perceived job relevance to education is positively related to higher educational aspirations.
- Females are more likely to believe that higher education results in better job opportunities.

Information Technology

- The more time one spends using a computer, the higher their educational aspirations.

Parental Encouragement of Educational Pursuits

- Students' perceptions of their parents' views on the importance of PSE is positively correlated to educational aspirations.

Household Resources

- A positive relationship with the amount of household cultural possessions and educational aspirations exists more so for males than females.

Peer Influences

- Females are more much more likely to have close friends that value education and academic behaviours.

- Females are more likely to believe their friends are planning to attend postsecondary education.
- Negative peer influences are negatively associated with high educational aspirations.

Paid Work during the School Year

- Females tend to work more hours and days during the school year.
- A large proportion of the non-working students chose not to work because they either could not find a job or their parents did not want them to work.
- A small proportion of the non-working students chose not to work because they wanted to focus on school. This was especially true for females.
- Males that desired trade or vocational education worked the most intensive hours and most amount of days (averaging 3.7 months of the school year).
- Females that desire trade or vocational training worked the least amount of hours during the school year, and have the least work experience. This group has similar work experience to females that do not want to complete high school.
- Of the youth that are not interested in completing high school compared to those that aspire to high school completion or higher:
 - Males are more likely to work intensively during school days, but have the least regular work experience.
 - Females are more likely to work intensively and regularly during the week and on weekends.

Volunteer Work

- There is a modest connection between educational aspirations and the amount of time spent volunteering, with the lowest number of volunteer activities associated with the desire to attend trade or vocational school.

All the factors mentioned above that had statistically significant differences amongst groups were included in the multivariate regression analysis to determine the direct and indirect effects and the relative importance of each factor in influencing educational aspirations. The results of the analysis are as follows.

Academic Performance⁶

- Academic performance is the most important factor in determining educational aspirations, accounting for 29.9% of the variation and explaining 80% of the gender difference.
- School program, reading literacy score (PISA score) and the amount of time spent on homework were ranked first, second and third most important of the academic factors, respectively.
- When taking all the factors into account, school program has the greatest impact on educational aspirations. Reading achievement also has a strong influence.

School Experiences⁷

- Of all the factors included in the analysis, students' academic self-confidence and beliefs about the relevance of education to their jobs and careers has the second and third strongest influences on educational aspirations, respectively.
- A positive correlation exists between academic performance and beliefs about school experiences, but these variables each exert effects independent of each other.

Parental Roles⁸

- The importance that parents place on PSE has a strong impact on educational aspirations, ranking second along with academic self-confidence.
- Familial homework support exerts a relatively small negative influence on educational aspirations. This may seem somewhat of a paradox, but a possible explanation is that increased homework support is associated with poor academic performance.
- The effect of any one of the other parental factors is relatively small, but may exert indirect effects on academic performance and school experiences.

Background Factors⁹

⁶ Academic factors: reading achievement, advanced classes, school program, training in study skills, and homework hours.

⁷ School experience factors: academic self-confidence, job relevance of education, school disinterest, school extracurricular hours, non-school extracurricular hours, frequency of educational computer use, and weekend work hours.

⁸ Parental role factors: mother's education, father's education, parental socio-economic status, household possessions, cultural activities, cultural possessions, familial homework support, and importance of PSE to parents.

- Living in a community with a population greater than 100,000 people has a small independent effect on educational aspirations.
- English speaking students on average aspire to half a year more education than French speaking students in Quebec.

Analysis by Gender

- All factors affect both sexes in the same manner, but their relative importance differs when analyzed by gender, suggesting that the dynamics in which males and females develop their aspirations differ.
- The intercept value is significantly higher for females, indicating they have higher aspirations than males for the same characteristics.
- The effects of academic performance measures are stronger for males than females, and therefore more determinant of aspirations for males.
- The amount of time spent on homework plays a larger role in higher aspirations for females than males.

In summary, high postsecondary aspirations of Canadian youth are primarily attributed to academic performance (particularly program of study), followed by self-confidence, beliefs about the relevance of education to their jobs, and the importance that parents place on PSE. Males and females are influenced by these factors in the same manner, but males are more strongly influenced by academic performance. Females on the other hand, have overall higher educational aspirations, and put forth more effort into their educational plans.

⁹ Background factors: community with a population greater than 100,000, English outside of Quebec, French in Quebec, and French outside Quebec.

University Aspirations of Visible Minority Immigrant Youth

Research on youth educational aspirations for postsecondary education has shown these aspirations to differ among groups. Visible-minority youth aspire to higher levels of education, despite the educational disadvantages they face (Krahn and Taylor, 2005). To identify the factors that explain large ethnocultural differences in university aspirations, Krahn and Taylor (2005) use data from Cohort A of the YITS to explore the university aspirations of 15-year-old first or second generation visible minority immigrant youth (VMI), and compare them with non-immigrant members of visible minority (“mixed”) and those of Canadian-born non-visible immigrant youth (CBNVM).

Characteristics of visible immigrant minority youth:

- Chinese, South Asian and Black Canadians represent about two-thirds of the visible-minority population.
- Most VMI youth live in large urban cities.
- On average they have higher than average parental education levels (partly because of immigration policies).
- VMIs are overrepresented in low income households.
- The VMI group has more nuclear families and single parents and fewer “mixed” families.
- The VMI group has higher overall grades.
- VMIs have higher educational aspirations than non-visible minority Canadians.
 - Survey of applicants to Ontario universities found that 34% were from visible minority groups whereas they comprised only 19% of Ontario’s population.
- There are differences among visible minority groups.
 - University completion rates are 2-3 times higher than the national average, while those for Black youth were slightly above average.

Results:

The odds of aspiring to a university education for VMI youth are three times the odds for all other 15-year-olds. However, since some of the predictor variables on PSE aspirations are correlated with each other, a hierarchical logistic regression analysis was used to determine the visible minority immigrant effect by controlling for other predictor variables, such as *gender, family structure, region, community size, parents’ education, household income, overall grades, university preparation courses, first language, parent(s)’ aspirations, parent(s)’ school involvement, parent(s)’ supervision of child, student’s school engagement and friends’ educational engagement*. When controlling for correlation among variables, the odds of

aspiring to a university education for VMI youth are reduced from three to one-and-a-half times the odds for all other 15 year olds.

- Gender has almost no effect on the VMI effect on university aspirations.
- VMI group has more nuclear families and single parents and fewer “mixed” families, but when structural variables (region, community size, parent(s)’ education and household income) are taken into account, the impact of family structure on PSE aspirations is no longer statistically significant.
- VMI youth generally have more highly educated parent(s), which has the strongest effect on their PSE aspirations.
- Community size reduced the VMI effect because most VMI youth live in large cities, which is correlated with having high PSE aspirations.
- Overall grades reduced the VMI effect, because VMI youth generally have higher grades, which have a strong net effect on PSE aspirations.
- First language, parent(s)’ supervision and parent(s)’ school involvement are statistically insignificant.

Bivariate correlation coefficients were used to describe relationships between the youths’ educational aspirations and the identity formation measures: *parental school involvement, parental supervision, student’s school engagement, friends’ educational engagement and parental aspirations.*

Krahn and Taylor (2005) found:

- A weak relationship between parent(s)’ school involvement and their children’s aspirations – VMI parents are less involved in their children’s schools, even though VMI parental aspirations for their children are high.
- A weak relationship between parent(s)’ supervision of their children and their children’s aspirations.
- A strong relationship between the teenagers’ own school engagement and their friends’ school engagement.

When sociodemographic (parent(s)' education) and school performance measures (overall grades) are incorporated into the correlation analysis:

- The net effects of gender, parent(s)' education and, in particular, overall grades are further reduced once these social psychological (identity formation) measures are taken into account.
- Parent(s)' aspirations have a powerful net effect on children's aspirations.
- Students' own school engagement and friends' school engagement have moderately strong effects.
- Parent(s)' school involvement and supervision of their children's extracurricular activities have little effect.

In Summary, the VMI effect on PSE aspirations may be explained by:

- Higher parental education
- Higher parental aspirations
- Higher grades
- Higher school engagement

Dropping Out of Secondary School

With the rapid advancements in information and technology, high school completion is viewed as a minimal education requirement for entry to the labour market and access to lifelong learning. While the vast majority of Canadian youth complete high school, an estimated 12% left high school without a diploma (Bowlby, 2005).¹⁰

Zeman (2007) examines provincial, gender and household income differences of 19-year-olds YITS Cohort B subjects in the decision to drop out of high school. The following provincial, gender and household income differences are observed in the students who decide to drop out of secondary school.

- More males drop out of secondary school than females.
 - Dropout rates were particularly high for males in Quebec.
 - A large gender gap in secondary school completion exists in the Maritimes, even though drop out rates are low. Nova Scotia was the exception in that the gender gap was small, but a large proportion of males were still in secondary school at the age of 19.
- At the national level, youth from low income quartiles had higher dropout rates than those from the highest family income quartiles. The smallest differences in dropout rates between income groups were in British Columbia and Alberta, whereas the largest differences were in Manitoba, Newfoundland and Labrador.

The following ethnocultural differences in secondary school completion are evident.

- Secondary school completion rates for aboriginal youth are very low.
 - 58% of aboriginals (ages 20 – 24) living on the reserve had not completed secondary school (Berger et al., 2007 b).
- 36% of Black youth (compared to 26% of Caucasian and 18% of Asian youth) were at risk of dropping out because they were not earning enough credits to graduate (Krahn and Taylor, 2005 citing Dei et al, 1997)¹¹

¹⁰ Bowlby (2005) defines drop outs as 20 to 24 year-olds who were not in school and did not have a high school diploma.

¹¹ From Dei et al. (1997), focusing on the disengagement of Black youth in Toronto schools.

Bushnik et al. (2004) investigate the factors related to dropping out of secondary school at the age of 17. The following are characteristics of 15-year-old youth from the YITS Cohort A, who dropped out of secondary school by the age of 17, compared to high school continuers and graduates.¹²

- Family background
 - Higher proportion of dropouts lived with a single parent.
 - A higher proportion of dropouts had low household income.
 - Fewer dropouts had parents with postsecondary education credentials.

- Abilities
 - On average, had lower Programme for International Student Assessment (PISA) scores – lower reading literacy scores.
 - Lower school grades (although more than a third reported marks of 70% or higher)

- Self-perception
 - A higher proportion of dropouts than continuers had:
 - Lower levels of self-efficacy
 - Dropouts were more sceptical of their chances of success in PSE
 - Lower self-esteem
 - Lower levels of self-mastery

- Aspirations
 - 59% of dropouts had high educational aspirations, compared to the 87% of continuers and graduates.
 - A lower proportion of dropouts planned to remain in high school until graduation.
 - A lower proportion of dropouts acknowledged the importance of education in meeting their career goals.
 - A lower proportion reported that their parents felt high education was very important.
 - A high proportion underestimated their parents' view of postsecondary education.

¹² A high school dropout in this sample is a 17 year-old who was not in high school in December 2001. A high school continuer is a 17 year-old in high school in December 2001 and has not already met the minimum requirements for high school graduation. A high school graduate is a 17 year-old who had met the minimum requirements for high school completion by December 2001.

- Dropouts were less likely to have peers that valued education.
- Behaviour
 - A higher proportion of dropouts had been kicked out of school, skipped class once a week or more, or had seen their principal at least 3 times during the year from causing trouble at school.
 - Dropouts were more likely to have broken rules at home.
 - Dropouts were more likely to have friends that cause trouble at school and engaged in negative behaviours.
- School engagement and school climate
 - Dropouts are less academically and socially engaged
 - Dropouts tend to view school less favourably
 - Felt they were not handled fairly
 - Felt students were not respected
 - Felt that their school was not a friendly place

It is evident from the characteristics of dropouts that most fared less favourably compared to continuers and graduates. However, a large proportion of dropouts had reasonable grades (37% reported overall marks higher than 70%), high levels of self-efficacy, were engaged in school, aspired for postsecondary education and had a positive view of education.

Reasons for dropping out: (Bushnik et al., 2004)

- School-related reasons (most frequently cited)
 - Being bored
 - Not interested in school
 - Problems with school work
 - Problems with teachers
 - Being expelled from school
 - Missing a few credits or not worth continuing
- Personal or family reasons
 - Health reasons
 - Pregnancy/caring for own child
 - Problems at home
- Work-related reasons
 - Wanting or having to work

Although there appears to be little difference in drop out rates between 17-year-old males and females, their reasons for leaving are quite different. Both males and females cited school-related reasons most frequently, except females were much more likely to report personal or family factors for leaving school, while males often gave work-related reasons for leaving school.

Returning to Secondary School after Dropping Out

Dropping out of high school is not necessarily a permanent decision. Using Cohort B of the YITS, Bushnik et al. (2004) compare the characteristics of 18 to 20 year-olds who dropped out and returned within 2 years to those who did not return.

Bushnik et al. (2004) indicate:

- 14% of dropouts returned to high school within two years of dropping out
 - An equal proportion of males and females returned
- Provincial differences in returning dropouts
 - Quebec has the highest proportion of both dropouts and returning dropouts
 - 34% of total dropouts were from Quebec
 - 56% of returning dropouts were from Quebec
 - Alberta has a low proportion of returning dropouts.
 - 13% of total dropouts were from Alberta
 - 5% of returning dropouts were from Alberta¹³
 - The Maritime Provinces and Saskatchewan have the lowest dropout rate and the lowest proportion of returning dropouts
- Dropouts were more likely to return if:
 - They were not working full-time
 - Were 18 years old when they dropped out, as opposed to 19 or 20-years-old.
 - Had parents with PSE
 - Had higher educational aspirations – expected to complete high school or go to college

¹³ Low proportion of returning dropouts may be related to the positive labour market conditions in Alberta (Bushnik et al., 2004)

Choosing Postsecondary Education

Canada has one of the highest postsecondary education participation rates in the world, where an estimated 70% of high school graduates are pursuing or have completed some form of postsecondary education two years after grade 12 (The Conference Board of Canada, 2007; Canada Millennium Scholarship Foundation, 2007). Although participation rates are high and increasing, it is also important to consider who is participating in postsecondary education in order to fully understand barriers to accessibility.

Youth who pursue postsecondary studies have characteristics that can be distinguished from those who do not go (Lambert et al., 2005). In general, students who attend postsecondary education are more likely to be:¹⁴

- Female
- Single with no children
- Living with two parents while in high school

Zeman (2007) reveals the following provincial, gender and household income differences.

- Males are graduating high school at a lower rate and, even if they have graduated, go on to postsecondary education at a lower rate. In general, more females pursue postsecondary education.
- Postsecondary participation rates were higher than the national average in Ontario, Quebec and Nova Scotia and lower in Manitoba, Alberta and Saskatchewan.
- The smallest difference in postsecondary education participation rates by family-income quartile was in Saskatchewan; the difference was largest in Newfoundland and Labrador. Youth from the low income quartiles in these provinces, along with the Prairie provinces, had the lowest PSE participation rates. Quebec also has low PSE participation rates, but only because students typically enter CÉGEP following high school.

Zeman (2007) only looks at postsecondary participation rates of 19 year olds. A major draw back to this study is that not all 19 year olds choose to go to postsecondary institutions immediately after high school.

¹⁴ These factors most strongly related to university participation.

Tomkowics and Bushnik (2003) examine postsecondary participation of 20 year-olds and further differentiate between those who participate immediately after high school ('right-aways'), those who delay postsecondary education ('delayers') and the non-participants ('no-goers').

The delayers compared to the right-aways:

- Highest proportion found in Newfoundland and Labrador
- Smallest proportion found in Nova Scotia, New Brunswick, Quebec and Saskatchewan
- Higher proportion that spoke English as their official language
- Less academically and socially engaged
- Lower high school averages
- Fewer received scholarships, awards or prizes
- Fewer have friends going to PSE right away
- More worked a job during their last year and also worked for longer hours

The patterns of differences between the no-goers and right-aways were comparable to those observed for the delayers and right-aways, but the relative differences in magnitude varied.

- Highest proportion found in Alberta (highest), Prince Edward Island, Saskatchewan and British Columbia
- Higher proportion of males
- Higher proportion that spoke English as their official language (higher proportion than the delayers)
- A lower proportion were from a visible minority
- Higher proportion were married
- Higher proportion had dependent children
- Higher proportion lived in a rural community
- Smaller proportion had a parent with a university degree
- Higher proportion had less favourable parental influences regarding furthering their education past high school
- Higher proportion had three or more siblings
- Less academically and socially engaged (lower high school averages)
- Worked more hours for pay in their senior year of high school
- Higher proportion used marijuana or hash and drank alcohol

Predictors of delayed post-secondary enrolment:

- Those who lived in Newfoundland and Labrador, Manitoba and Alberta (compared to Ontario) (*Quebec residents were lower than Ontario residents*)
- Low levels of social engagement
- Low high school average
- Not receiving scholarships or grants (independent of school average)

Predictors of not enrolling in post-secondary education:

- Those living in British Columbia (compared to Ontario)
- Being male
- Having a dependent child
- Those whose parents had no postsecondary education
- Low high school average
- Had few friends who planned on furthering their education
- Working more than 20 hours per week during the last year of high school

The decision to pursue postsecondary participation is no doubt a decision influenced by a multitude of variables; the interaction of values and attitudes shaped by an individual's environment, family and peers. An extensive body of literature investigates the influences of socioeconomic background, namely parental education and parental income, on postsecondary participation.

De Broucker and Lavallée (1998) found that educational achievement can be largely attributed to the inherited intellectual capital, defined as “the experience and knowledge acquired by an individual or a group of individuals (such as the family) during the course of their lives that can be applied in the pursuit of economic and social goals.”¹⁵ Inherited intellectual capital influences individuals' abilities to access and succeed in post-secondary education, while their parents' occupation experience (in addition to their education), also influences their children's educational achievements. The parents' educational background is reflected in how they support the education of their children; the more educated the parents are, the more likely they are to adopt strategies that will improve the educational outcomes of their children. As the parents' level of parental education increases, the probability they will buy books for their

¹⁵ De Broucker and Lavallee (1998) - p129

children, that the child will read before grade one and have a certain amount of time set aside each day for reading at home increases, while the probability of their child failing a grade in school decreases.

High parental educational achievements have a positive effect on their children's educational achievements (Finnie et al., 2004; Butlin, 1999). Youths with at least one university educated parent are almost three times more likely to attend university than youths with parents without high school credentials (Finnie et al., 2004; De Broucker and Lavallée, 1998). This pattern however, has not been demonstrated in college participation; youths with parents with secondary credentials or less are just as likely to attend college as those with university educated parents (Drolet, 2005). Trade or vocational school participation is highest for youths whose parents had less than high school education (Butlin, 1999).

High parental income is also positively correlated with high youth educational achievements, although parental income does not have as strong an impact on their children's educational achievements as parental education (Drolet, 2005; Finnie et al., 2004). Youth of higher household income quartiles are much more likely to attend postsecondary education, but the income gap is much more pronounced at the university level (Drolet, 2005). The income gap in university attendance can be mostly accounted for by differences in long-term factors such as Programme for International Student Assessment Scores (standardized test scores for reading literacy), school grades, parental influences and high school quality; factors that are likely correlated with family income. These observable factors account for 84% and financial constraints account for 12% of the income gap in university participation (Frenette, 2007).

Not Choosing Post-Secondary Education

Youth who do not participate in postsecondary education tend to be male, come from lower socioeconomic status families, have dependent children, and lower academic grades, as mentioned in the previous section where Tomkowics and Bushnik (2003) compare the 'delayers' and 'no-goers' to 'right-awayers'. Other research investigates the students' reasons for not pursuing postsecondary education.

Reasons for not pursuing PSE: ¹⁶ (Berger et al, 2007)

1. Motivational or informational

- Most commonly cited reason – affects half of those who do not pursue PSE.
- Lack of motivation to further their education or lack of information about the importance, advantages and costs of PSE and alternatives to financing it.
- A major informational barrier is that people tend to overestimate the cost of PSE, while underestimating the benefits in terms of earnings (Mueller, 2007).

2. Financial

- 3 types of financial barriers:
 - Price constraints – in which students consider the cost of higher education is not worth its outcome
 - Cash constraints – refers to the students who would like to pursue higher education, but cannot pay for it, either through savings, income or financial assistance
 - Debt aversion – refers to those unwilling to borrow money to pay for their schooling
- Price constraints are considered the most important barrier, although some evidence implies that price constraints are not simply based on the cost of tuition, but on the cost of lost income in order to study (Junor and Usher, 2004).
- Financial constraints affect about one in five to one in three of those who choose not to pursue PSE (Junor and Usher, 2004).
- There is not a direct, straightforward relationship between the cost of tuition and the proportion of respondents reporting that they did not have enough money to pursue PSE, by province. Other costs such as living and traveling expenses may be

¹⁶ Data from SLS, PEPS and YITS.

important in determining whether the person believes PSE is affordable (Foley, 2001).

3. Employment Opportunities

- Could be a financial barrier or a motivational or informational barrier, or a mix of both.
- For some youth, it may not be the 'push' of financial need, but the 'pull' of the labour market that offers short-term economic gains.

4. Academic

- Did not meet entrance requirements or insufficient preparedness
- Academic barriers are a more important deterrent for youth wanting to enrol in university than college, because universities require higher academic grades and have more selective application procedures (Junor and Usher, 2004).

5. Other factors

- Many of these factors are personal or family reasons

The three major categories of barriers students give for not enrolling in PSE are motivational or informational, financial and academic. The YITS data indicate that motivational or informational, financial and academic factors account for about 50 per cent, 20 to 33 per cent and 10 per cent of barriers to access, respectively (Junor and Usher, 2004). When comparing students' potential barriers to concrete barriers for not pursuing PSE, the ranking of barriers remain the same, but the proportion of youth reporting academic barriers increase and the financial barriers decrease substantially (Junor and Usher, 2004)¹⁷.

Compared to high school seniors who do not expect to continue their studies after high school, university-bound students are slightly less likely to say that financial barriers pose a significant barrier and much less likely to say that factors related to lack of interest, career direction or school grades pose as significant barriers (Berger et al, 2004). Academic barriers pose more of a problem for university bound students, because universities have more stringent course requirements and are more selective than colleges.

¹⁷ Junor and Usher (2004). YITS respondents were asked whether certain barriers would prevent them from attaining the education they wanted, otherwise known as potential barriers. Respondents from the School Leavers' Survey/School Leavers' Follow-up Survey (SLS/SLF) and the Post-Secondary Education Participation Survey (PEPS) were asked for their reasons for not pursuing PSE, actual barriers that students were presently facing.

Foley (2001) explores the relationships between different barriers and backgrounds, and discovers that neither financial nor academic reasons appear disproportionately in low socioeconomic youth. Motivation/interest is the only barrier that affects youths from lower socioeconomic backgrounds and is highly correlated with income, according to Foley. The proportion of students reporting motivational/interest barriers decrease as their father's education level (strong proxy for socioeconomic status) increases.

Respondents to the survey select the most important reason based on their own subjective assessment of their circumstances. Although these reasons may not be objectively true, this type of subjective assessment helps explain what is relevant in young people's lives, shedding light on their decision-making processes (Foley, 2001).

Choosing University

Although university education is highly desired amongst secondary students, with 50 to 60 per cent of these students aspiring to one or more university degrees, only about 30 per cent actually apply to university in Canada (Junor and Usher, 2004). The explanation for the gap between those who want to attend university and those that do not actually go is unknown, but research on postsecondary participation identifies trends in, and factors associated with university attendance.

The following gender, regional and household income differences were found:

- More females attend university (Zeman, 2007).
- University participation in Alberta is lower than the national average and higher in Nova Scotia, PEI and New Brunswick (Zeman, 2007).¹⁸
- Participation rates are higher for youth from high income quartiles (Zeman, 2007).
- The largest gaps in university participation rates between youth from the lowest and highest family-income quartiles are not in the provinces with the highest tuition fees. The smallest difference between family-income quartiles was in Nova Scotia and Saskatchewan, provinces with the highest tuition fees in the country. Conversely, Newfoundland and Labrador, provinces with the second lowest tuition fees, had the highest gaps in university participation between top and bottom income quartiles. Quebec has both the lowest tuition fees and the largest difference in university participation rates between income quartiles. However, most 19-year-olds are still in CÉGEP, therefore it may be the case that youth from the lowest quartile are taking longer to get to university, rather than not going at all (Zeman, 2007).¹⁹
- Youth from rural areas are less likely to participate in university compared to those from urban areas (Butlin, 1999).

¹⁸ One possible explanation for the high rate of university participation in the Atlantic Provinces is because their college systems are less developed, making university the most viable post-secondary option (De Broucker, 2005).

¹⁹ It should be noted that youth in Quebec graduate at the age of 17, a year earlier than what is typical at other provinces. After high school, youth typically enter CÉGEP, a two to three year program that is also a prerequisite for university.

University participation varies across different ethnocultural groups.

- VMI youth are more likely to attend university (Lambert et al., 2005; Butlin, 1999).
- For the most part, the distribution of ethnicity among visible minorities in Ontario universities and colleges is roughly in line with their representative shares of the population. The only exceptions to this is that Chinese youth are over-represented among the university applicant population and underrepresented in the college population. Black applicants are underrepresented in universities, overrepresented in colleges, and disproportionately female (Berger et al., 2004a).²⁰
- Low participation rates for aboriginal youth (Berger et al, 2007 b)
- English speakers were more likely to attend university than French speakers, when sociodemographic and school-related factors were controlled for (Butlin, 1999). The majority of French speakers reside in Quebec, so the difference in participation rates between Anglophones and Francophones may simply reflect provincial differences.

Choosing College

As seen in an earlier section, university is the preferred choice of postsecondary education amongst high school students, but participation and completion rates remain higher for college or CÉGEP than for university (Bowlby and McMullen, 2002; Colleges Ontario, 2007). Explaining why a student might choose one type of institution over another requires understanding of the student college population, trends in, and factors associated with college and CÉGEP participation.

Factors most strongly related to college or CÉGEP education (Lambert et al, 2004):

- Having dependent children
- Lower academic grades in secondary school
- Non-visible minority status

The following gender, provincial and household income differences were found (Zeman, 2007):

- In general, college participation levels are slightly higher for females in most provinces.

²⁰ Data is from the University Applicant Survey and College Applicant Survey, the only surveys in Canada that look at individual ethnicities.

- In Ontario and Manitoba, among the non-university bound youth, females were more likely to attend university. If they were not already going to university, they were more likely to go to college.
- Quebec has the highest college participation rate.²¹
- In Ontario and Newfoundland and Labrador, the non-university bound youth from the top income quartile were more likely to attend college than youth from the lowest income quartile. For the rest of the provinces, non-university bound youth from the low income quartiles were just as likely as those from high income quartiles to attend college.

Ethnocultural differences in college participation:

- Non-visible minorities are less likely to attend college (Lambert et al, 2004).
- French speakers were more likely to attend college or vocational school than English speakers (Butlin, 1999).

University versus College Participation

The most notable factors that distinguish university and college participants are gender, the presence of children and visible minority status (Lambert et al, 2004). A significantly larger proportion of females participate in postsecondary education, equally distributed in university and college programs. Males are underrepresented in postsecondary education. They are more likely to enter into the college stream, but are still lagging behind their female counterparts. Individuals who are married or have dependent children are less likely to pursue postsecondary education, and if they are to pursue higher education they are more likely to go to college. Visible minority youth are less likely to attend college or CÉGEP and more likely to attend university than non-minority youth.

University participants were more likely to have had high levels of academic engagement and higher grades in secondary school than college participants. Social engagement levels between university and college participants were negligible (Lambert et al, 2004). Junor and Usher (2004) define university and college participants as two separate “markets,” best distinguished

²¹ Youth from Quebec typically enter the CÉGEP system, which is also a prerequisite for university.

by high school grades. High school grades overlap considerably, but not entirely with family income. Those that go to university tend to have high grades and are more likely to come from a higher socioeconomic background, while college participants have lower grades and tend to come from a lower socioeconomic background.

Dropping Out of Postsecondary Education

Persistence and completion of postsecondary education is an important aspect of accessibility. Research from Canada and the United States indicates that approximately 20 to 25 per cent of first year students do not continue to their second year in the institution in which they were initially enrolled in, while an additional 20 to 30 per cent leave in subsequent years (Grayson and Grayson 2003). These numbers are somewhat ambiguous since data on persistence is difficult to interpret. When a student leaves an institution, it is unclear as to whether the student has transferred to another institution or has left postsecondary education altogether (Junor and Usher, 2004). The cost of attrition to the student and to society is lost productivity, and to a university is lost money (Grayson and Grayson, 2003). For these reasons, it is important to understand persistence and attrition on a national and provincial level.

Lambert et al. (2004) investigate the characteristics of youth, age 20 to 22 from Cohort B of the YITS that drop out after one to two years of postsecondary education and their reasons for doing so.

Youth who drop out had characteristics that closely resemble those who did not go onto postsecondary studies, with those characteristics being²²:

- Male
- Married or living with a partner or had children
- Have parents who did not pursue PSE
- Did not live with two parents while in high school
- Have lower high school grades (less academically prepared)
- Less academically engaged in high school (also less engaged in their postsecondary studies)
- Lower high school grades than those who stayed

Butlin (2000) using data from the School Leavers Survey and School Leavers Follow-up Survey reported the same characteristics in individuals who leave postsecondary education. After controlling for socio-demographic and school-related predictors, they found that certain factors were only associated with community college leaving, while other factors were applicable to leaving postsecondary education in general.

²² Many of these factors are interrelated.

Butlin (2000) found the odds of leaving postsecondary education were:

- Higher for men (community college leaving)
- Higher for individuals whose parents did not pursue PSE (community college leaving)
- Lower for high school graduates from two-parent families (community college leaving)
- Higher for high school graduates in British Columbia²³
- Higher for school graduates who left high school at some point in time
- Higher for individuals who failed a grade in elementary school
- Higher for high school graduates who used drugs in high school (community college leaving)

Compared to those who stayed, a higher proportion of those who dropped out were (Lambert et al., 2004):

- Less satisfied with their first year PSE experience
 - Unhappy with their program
 - Unable to talk to people at school about personal matters
 - Less likely to be attached to their programs
- Unsure of what they wanted to do
- Less academically prepared
 - Having trouble keeping up with the workload
- More likely to perceive barriers to their education
 - 50% of PSE leavers perceived barriers to their education, compared to 42% of those who stayed or graduated
 - 50% of leavers had indicated two years beforehand that they faced some kind of barrier to going as far in school as they would like
 - PSE leavers were slightly more likely to report a financial barrier

²³ Living in British Columbia is also a predictor of not enrolling in postsecondary education.

Students' reasons for dropping out (Lambert et al, 2004):

- Lack of program fit
 - Most commonly cited reason for dropping out
 - 32% reported they did not like the program, the program was not for them or the program did not fit with their interests
 - Another 9% reported their reason for leaving was to switch institutions or programs
 - Correlated with career uncertainty – students with low career certainty scores are less likely to be comfortable with their program of study. In addition, the more time students spend on exploring career options, the higher their degree of academic involvement (Berger et al, 2007).
- Financial situation
 - 11% reported financial barriers
 - Actual reasons for dropping out do not reflect the barriers that youth had perceived prior to attending postsecondary school. Financial barriers had been the number one barrier when surveyed in 1999, but two years later the actual number one reason they gave for leaving school was “lack of fit”, or the need to change programs.
- Other reasons included:
 - lack of interest or motivation
 - they wanted to work
 - Not able to get into a program
 - It took too long to complete further schooling

Note: There is no notable difference between the proportions of groups who reported these barriers.

Returning to Postsecondary Education after Dropping Out

The Lambert et al. study demonstrates that dropping out of postsecondary education is often not a permanent decision. Many students take time off during their studies or leave to return to a different program or institution. Almost 40% of dropouts returned two years later. Because this study looks at very early postsecondary experiences, it is possible that many youth who drop out at age 20 to 22 will return to school. It is therefore possible to say that the factors related to dropping out at any point are not equally related to leaving school for long term.

Reasons for having left (return rates within two years):

- To travel (68%)
- To change school or program (47%)
- Wanted a break (38%)
- Didn't like the program/not for me (36%)
- Other (35%)
- Not enough money (32%)
- Grades too low (29%)
- Wanted to work (28%)

Factors and Trends Associated with Education Decisions

Previous sections looked at research on access to postsecondary education by sequence of education decisions. It is also useful to consider the same results by key independent variables.

One of the most notable trends is that females tend to have more open PSE options (a predictive variable explaining their higher educational aspirations), graduate secondary school at a faster rate, are more likely to attend university and are less likely to drop out. The non-university bound females are more likely to attend college in select provinces. Not only are males less likely to participate in PSE, they are also somewhat less likely to complete their program.

Provincial differences are seen in the proportion of students with most open PSE options in high school, educational aspirations, secondary school drop out rates, and if and when students participate in PSE. Regional differences associated with Quebec may reflect cultural differences, explained by differences in educational aspirations and pathways between Anglophones and Francophones.

Many youth who left high school without graduating understood the importance of education. Most dropouts believed their future job prospects depended on their success in school and wanted to pursue higher education. However, their low reading literacy scores, lower grades and lower expectations for high school completion may be an indicator or “red flag” for dropping out of high school.

Parental influence has a large net effect on PSE aspirations, participation and persistence. Youth with at least one parent with university credentials are much more likely to have open PSE options in high school and to attend university. Parents with PSE credentials may provide greater levels of parental involvement, increased expectations, attitudes and values for academic success and increased familiarity with the PSE process and experience.

Household income levels are important determinants of high school dropout rates and PSE participation, university in particular. Research shows that higher levels of parental status

or capital are positively correlated with higher youth educational aspirations and plans. Students from higher family income households are more likely to go to university, and if they are not already going to university, they are more likely to attend college. The income gap in college participation is smaller, but is still extant none the less. There is no doubt that low income students have problems with access to PSE, but the research indicates that these problems are not primarily financial in nature, rather in the form of motivational or informational barriers. Students from low income households tend to be less academically prepared (lower standardized test scores in reading and high school grades), have less favourable parental influences regarding higher education and attend lower quality high schools. This population is affected the most because they have fewer financial resources and are more likely to overestimate costs and underestimate future benefits.

Postsecondary aspirations and participation rates vary across cultures. Visible minority immigrant youth are more likely to have open PSE options and university aspirations in high school and pursue university education, even though they are overrepresented in low income households. The VMI effect is mostly explained by their parents' higher educational achievements, parents' higher aspirations for their children, higher grades and school engagement. Aboriginal youth are less likely to complete secondary school and pursue PSE than non-aboriginal youth. Francophones are less likely to attend university and more likely to pursue college or vocational school than English speakers.

Predictors of delayed PSE enrolment include: province of residence (Newfoundland and Labrador, Manitoba and Alberta), low levels of social engagement in high school, low high school average and not receiving scholarships or grants (independent of school average). Youth who do not pursue postsecondary studies resemble students who drop out of PSE: male, married, having lower high school grades and parents who did not pursue PSE. Dropouts and youth who did not pursue PSE were less likely to have friends that valued education, underscoring the importance peers play in the long-term educational choices of youths. Many students who drop out of postsecondary school return within two years. The most common reason for leaving is lack of program fit.

Youths who left PSE prior to completion were atypical of the general postsecondary student population in that they had characteristics resembling students who did not continue onto PSE. They tended to be male, married or living with a partner, less academically engaged in high school and in their postsecondary studies, and lower high school grades than those who stayed. Research has shown that low engagement at the postsecondary level can be a predictor of attrition (Lambert et al, quoting Pascarella and Terenzini 1980). Students' postsecondary experiences are related to staying or leaving school. Leavers seemed less satisfied with their first year experience, less academically prepared and generally more unsatisfied with their academic fit. Many leavers' postsecondary experiences seem to correspond with the most commonly cited reason for leaving, which was lack of program fit. Lack of program fit is also correlated with career uncertainty and low academic involvement, characteristics evident in postsecondary leavers.

Conclusion

The existing literature on access is a good starting point from which to understand the educational choice trends and the characteristics of youths who make certain educational choices. The majority of the research is descriptive analysis of the data, which fails to explain education trends and determinants of particular education pathways. Further analysis is required to examine when and how they reach their educational decisions (particularly why students plan to attend certain types of institutions) and the relative importance of monetary and non-monetary factors.

There is a paucity of research attempting to explain provincial differences. These provincial differences raise important questions as to how provincial educational policies and practices combine to produce educational attainment outcomes for students. Ontario has unique characteristics, in that it has a high visible minority population, high household income, and a large number of postsecondary institutions. To understand accessibility from an Ontario perspective, additional research on provincial, racial and ethnic differences on postsecondary participation needs to be conducted.

Appendix: Data Sources Used in the Research

College Applicant Survey and University Applicant Survey

The College Applicant Survey (CAS) was developed by the Acumen Research Group to examine applicants' perceptions of colleges, including the factors that influence college selection, concerns regarding the college experience, awareness of costs and saving habits (Acumen Research Group, 2005). The pilot study was launched in 2003. In March 2004, the refined survey was mailed to a random sample of 17,000 college applicants, selected by the Ontario College Application Services (OCAS). The response rate was 25%.

The University Applicant Survey is a survey developed by Acumen Research Group, designed to assist universities with the recruitment process by identifying factors that influence students' choice of institution (Acumen Research Group Inc., 2007). The Ontario Universities Application Centre (OUAC) selected a random sample of 10,000 participants of a total population of 115,000 Ontario university applicants for the survey in 2004. Email invitations were sent out on May 5, 2004, offering prize incentives for participation (Acumen Research Group, 2006). Of the invitations sent out, 350 emails could not be delivered and the response rate was about 27%.

Post-Secondary Education Participation Survey (PEPS)

The Post-Secondary Education Participation Survey was conducted by Statistics Canada partnership with Human Resources Development Canada and the Policy Research Initiative in February and March 2002 to collect information from 18 to 24 year-olds (17 to 24 in Quebec). The PEPS serves to provide basic indicators on access to and persistence in postsecondary education and postsecondary financing to access the efficiency and efficacy of Human Resources Development Canada's (HRDC) Harmonized Canada Student Loans Program (Statistics Canada, 2003). Residents of the Yukon, Northwest Territories and Nunavut, persons living on Indian Reserves, full-time members of the Canadian Armed Forces and inmates of institutions were excluded from the survey.

Programme for International Student Assessment (PISA)

The Programme for International Student Assessment (PISA) is an internationally standardized assessment of 15-year-olds' capabilities in reading, mathematics and science literacy (OECD,

2005). Its purpose is to assess the skills students have acquired as they near the end of their compulsory education. The first PISA assessment was conducted in 2000, the second was conducted in 2003 and the third was conducted in 2006, in 43, 41 and 57 countries, respectively. The fourth assessment will be conducted in 2009. PISA is a paper and pencil test administered to 4,500 to 10,000 students in each country. Students are also required to answer a background questionnaire about themselves and their homes.

School Leavers Survey

The School Leavers Survey was conducted in 1991 to investigate the factors associated with those who have successfully completed secondary school (“graduates”), those who were still in secondary school (“continuers”), and those who dropped out of secondary school (“leavers”) (Berger et al, 2004a). The target population consisted of 18,000 Canadian youth, aged 18 to 20, from ten provinces, excluding the Yukon and Northwest Territories (Berger et al, 2004a; Butlin, 1999). A total of 9,460 interviews were conducted.

School Leavers Follow-up Survey

The School Leavers Follow-up survey was conducted in 1995 to garner information on school-to-work transitions of the individuals that responded to the School Leavers Survey, now aged 22 to 24 (Berger et al, 2004a). The survey gathers important data on the school experiences of graduates and leavers. The target population was 9,460, but was reduced to 9,431, because some individuals decided not to participate.

Youth in Transition Survey (YITS)

The Youth in Transition Survey (YITS) is a longitudinal survey designed to provide information about school-to-work transitions and factors influencing decisions on education, training and work. A longitudinal survey allows for the study of relationships between factors measured in a certain time period and outcomes measured in future time periods. The survey is intended to examine major transitions in young people’s lives, including all formal educational experiences and most labour market experiences. This is achieved by collecting information about students before they have begun their transition process, and tracking their progress through the education system and its subsequent years.

YITS surveys two cohorts, Cohort A also known as the Reading Cohort (age 15) and Cohort B (ages 18 to 20) in 1999 (Cycle 1). The YITS follows the same people in Cohort A and B through transition periods by surveying them every two years, in 2001 (Cycle 2) and 2003 (Cycle 3) (Human Resources Development Canada, Applied Research Branch of Strategic Policy, 2000). The surveying population comprises of persons attending any form of schooling in Canada that were born in 1984 for Cohort A and years 1979 to 1981 for Cohort B. The target population excludes the northern territories, Indian reserves, Canadian Forces bases and some remote areas (Statistics Canada, 2006).

Cycle 1: The 15-year-old cohort survey consisted of interviews with 30,000 students from 1000 schools in Canada and a telephone interview from parents of selected students. Data collection for the 23,000 youth from the cohort aged 18 to 20 was conducted through computer-assisted telephone interviewing (Human Resources Development Canada, Applied Research Branch of Strategic Policy, 2000).

Cycle 2: Only respondents from Cycle 1 were surveyed in June 2002. Data was collected directly from survey respondents in June 2002. The resulting sample size was 29,660 for Cohort A and 22,352 for Cohort B, with response rates of 90.5% and 85% for Cohorts A and B, respectively (Statistics Canada, 2004).

Cycle 3: Only the respondents from both Cycle 1 and 2 were surveyed in 2003. Data was collected directly from survey respondents in February to June 2004. The resulting sample size for Cohort A and B were 26,854 and 18,743, respectively. The response rate was 84.3% for Cohort A and 78.9% for Cohort B (Statistics Canada, 2006).

References

- Acumen Research Group Inc. (2006). *Funding University Education in Ontario: Ontario University Applicant Survey Report*. Millennium Research Series. Montreal, QU: Canada Millennium Scholarship Foundation.
- Acumen Research Group, Inc. (2005). *The 2004 Ontario College Applicant Survey: Final Report*. Millennium Research Series. Montreal, QU: Canada Millennium Scholarship Foundation.
- Acumen Research Group Inc. "University Applicant Survey." 2007 Acumen Research Group Inc. Accessed 9 August 2007 < <http://www.acumenresearch.com/output1.asp?id=124&sid=3>>.
- Berger, J., Motte, A., and Parkin, A. (2007a). *The Price of Knowledge 2006-07: Chapter 1 – Why Access Matters*. Millennium Research Series. Montreal, QU: The Canadian Millennium Scholarship Foundation.
- Berger, J., Motte, A., and Parkin, A. (2007b). *The Price of Knowledge 2006-07: Chapter 2 – Barriers to Post-Secondary Education*. Millennium Research Series. Montreal, QU: The Canadian Millennium Scholarship Foundation, Research Series.
- Bowlby, J.W. (2005). *Provincial Drop-out rates – Trends and Consequences*. Statistics Canada Catalogue No. 81-004-XIE. Ottawa, ON: Statistics Canada.
- Bowlby, J.W. and McMullen, K. (2002). *At a Crossroads: First Results for the 18 to 20-Year-old Cohort of the Youth in Transition Survey*. Statistics Canada Catalogue No. 81-591-XIE. Ottawa, ON: Statistics Canada.
- Bushnik, T., Barr-Telford, L. and Bussiere, P. 2004. *In and out of high school: First results from the second cycle of the Youth in Transition Survey, 2002*. Statistics Canada Catalogue no. 81-595-MIE. Education, Skills and Learning Research Papers No. 014. Ottawa, ON: Statistics Canada.
- Butlin, G. (1999). "Determinants of Postsecondary Participation." Statistics Canada catalogue no. 81-003-XIB. *Education Quarterly Review*, 5(3): 7-35.
- Canada Millennium Scholarship Foundation. *Seven in ten high school graduates pursuing post-secondary education, but others left behind*. 14 June 2007. Canada Millennium Scholarship Foundation. Accessed 16 August 2007 <<http://www.millenniumscholarships.ca/en/newsevents/newsfull.asp?newsid=127>>.
- Colleges Ontario. (2007). *2007 Environmental Scan: An analysis of trends and issues affecting Ontario*. Colleges Ontario Research Publications. Toronto, ON: Colleges Ontario.

- De Broucker, P. (2005). *Getting There and Staying There: Low-income Students and Post-secondary Education. A Background Paper for a Canadian Policy Research Networks Workshop on Post-Secondary Access and Student Financial Aid, 1 February 2001.* Ottawa: Canadian Policy Research Networks.
- De Broucker, P. and Lavallée, L. (1998). "Intergenerational Aspects of Education and Literacy Skills Acquisition." *Labour Markets, Social Institutions and the Future of Canada's Children.* Corak, Miles (ed.). Statistics Canada Catalogue no. 89-553-XIE. Ottawa, ON: Statistics Canada. p129 – 143.
- Drolet, M. (2005). *Participation in post-secondary education in Canada: Has the role of parental income and education changed over the 1990s?* Statistics Canada catalogue no. 11F0019MIE. Analytical Studies Research Paper Series, no 243. Ottawa, ON: Statistics Canada.
- Finnie, R., Laporte, C., and Lascelles, E. (2004). *Family Background and Access to Post-Secondary Education: What Happened over the 1990s?* Statistics Canada Catalogue no. 11F0019MIE. Analytical Studies Research Paper Series, no. 226. Ottawa, ON: Statistics Canada.
- Foley, K. (2001). *Why Stop After High School? A Descriptive Analysis of the Most Important Reasons that High School Graduates Do Not Continue to PSE.* Millennium Research Series. Montreal, QU: Canada Millennium Scholarship Foundation.
- Frenette, M. (2007). *Why Are Youth From Lower-income Families Less Likely to Attend University? Evidence from Academic Abilities, Parental Influences, and Financial Constraints.* Statistics Canada Catalogue no. 11F0019MIE. Analytical Studies Research Paper Series, no 295. Ottawa, ON: Statistics Canada.
- Grayson, J.P. and Grayson K. (2003). *Research on Retention and Attrition. Does Money Matter: Millennium Research Series, No. 6.* Montreal, QU: Canada Millennium Scholarship Foundation.
- Human Resources Development Canada, Applied Research Branch of Strategic Policy. 2000. *Youth in Transition Survey - Project Overview.* Statistics Canada Catalogue no. 81-588-XIE. Ottawa, ON: Statistics Canada. p4-6, 11-22.
- Junor, S. & Usher A. (2004). *The Price of Knowledge 2004 – Access and Student Finance in Canada.* Millennium Research Series. Montreal, QU: Canada Millennium Scholarship Foundation.
- Krahn, H. and Taylor, A. (2005). "Resilient Teenagers: Explaining the High Educational Aspirations of Visible-Minority Youth in Canada." *Journal of International Migration and Integration*, 6(3-4): 405-434.
- Krahn, H. and Taylor, A. (2007). "Streaming" in the 10th grade in four Canadian provinces in 2000." Statistics Canada Catalogue no. 81-004-XIE. *Education Matters*, 4(2): 16-26.

- Lambert, M., Zeman, K. and Allen, M. (2004). "Who pursues postsecondary education, who leaves and why: Results from the Youth in Transition Survey." Statistics Canada Catalogue no. 81-595-MIE. *Culture, Tourism and the Centre for Education Statistics - Research Papers*, 2004026(6): 1-37.
- Looker, D.E. and Lowe, G.S. (2001). *Post-Secondary Access and Student Financial Aid in Canada: Current Knowledge and Research Gaps*. Ottawa, ON: Canadian Policy Research Networks Inc.
- Looker, D. And Thiessen, V. (2004). *Aspirations of Canadian youth for higher education*. PISA Publications. Gatineau, QU: Strategic Policy and Planning, Human Resources and Skills Development Canada.
- Mueller, R. E. (2007). *Access and Persistence of Students from Low-Income Backgrounds in Canadian Post-Secondary Education: A Review of the Literature, Version 1.1*. Working Paper. Lethbridge, AL: University of Lethbridge.
- Organisation for Economic Co-Operation and Development. "OECD Programme for International Student Assessment (PISA)." 14 June 2005. OECD. Accessed 9 August 2007 <http://www.pisa.oecd.org/pages/0,2987,en_32252351_32235731_1_1_1_1_1,00.html>.
- Statistics Canada. "Post-Secondary Education Participation Survey (PEPS)." 10 September 2003. Statistics Canada. Accessed 9 August 2007 <<http://www.statcan.ca/cgi-bin/imdb/p2SV.pl?Function=getSurvey&SDDS=4446&lang=en&db=IMDB&dbg=f&adm=8&dis=2>>.
- Statistics Canada. "Youth in Transition Survey (YITS): Detailed Information for 2001 (Cycle 2)." 5 April 2004. Statistics Canada. Accessed 18 July 2007 <<http://www.statcan.ca/cgi-bin/imdb/p2SV.pl?Function=getSurvey&SurvId=4435&SurvVer=1&Instald=17010&InstaVer=2&SDDS=4435&lang=en&db=IMDB&dbg=f&adm=8&dis=2>>.
- Statistics Canada. "Youth in Transition Survey (YITS): Detailed information for 2003 (Cycle 3)." 7 June 2006. Statistics Canada. Accessed 18 July 2007 <<http://www.statcan.ca/cgi-bin/imdb/p2SV.pl?Function=getSurvey&SDDS=4435&lang=en&db=IMDB&dbg=f&adm=8&dis=2>>.
- The Conference Board of Canada (2007). *How Canada Performs: A Report Card on Canada, Report June 2007*. How Canada Performs. Ottawa, ON: The Conference Board of Canada.
- Tomkowicz, J. and Bushnik, T. (2003). "Who goes to post-secondary education and when: pathways chosen by 20 year-olds." Statistics Canada Catalogue no. 81-595-MIE. *Culture, Tourism and the Centre for Education Statistics - Research Papers*, 2003007(6): 1-35.

Zeman, K. (2007). "A first look at provincial differences in educational pathways from high school to college and university." Statistics Canada Catalogue no. 81-004-XIE. *Education Matters*, 4(2): 1-15.