

The Price of Knowledge

Access and Student Finance in Canada

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Persistence in Post-Secondary Education

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I. Introduction

The most important immediate outcome of entry into post-secondary education is graduation. Colleges and universities traditionally put considerable effort into the recruitment of new students, while governments have made facilitating access to higher education a priority. If these efforts are to bring maximum benefits in the long run, however, the students brought into post-secondary education must be successful in their studies. This success cannot be taken for granted. Indeed, the question of how students fare after initial entry into post-secondary studies has become increasingly important as participation in higher education has grown. As a recent OECD report puts it, “the growing portion of disadvantaged students enrolled in tertiary education makes the ongoing issue of their retention and programme completion an increasing[ly] important concern in tertiary education” (Santiago *et al.*, 2008, p. 50).

This chapter concerns itself with the issue of persistence, defined here as the ability of students to continue their post-secondary studies from one year to the next and ultimately to proceed to the completion of their program. It should be recognized at the outset that poor persistence is not always a bad outcome. For a host of reasons, discontinuing studies may be the most appropriate course of action for certain individuals (Grayson & Grayson, 2003, p. 9). Generally speaking, however, “although ‘dropping out’ is not necessarily an indicator of failure from the perspective of the individual student, high drop-out rates may indicate that the education system is not meeting students’ needs” (OECD, 2008, p. 92).

More specifically, low levels of persistence pose a problem for students, institutions and societies. For students, the failure to complete their program of study leaves them without a credential that would lead to greater earnings and opportunities. For institutions, low levels of persistence may signal the poor use of resources (e.g., resources spent on recruitment and admission are not matched by continuing income in the form of tuition and per-student government

funding) or poor performance in terms of teaching or administration. For societies, poor persistence results in lower educational attainment at a time when higher levels of education are important to both prosperity and quality of life. To the extent that specific groups have lower rates of success in post-secondary education than others, poor persistence can also exacerbate social inequities that are costly to society.

For these reasons, persistence is an issue of concern to policy-makers. Fortunately, as will be discussed below, policy-makers in Canada can now benefit from a significant amount of new research on the persistence of Canadian post-secondary students. Both the availability of new data (most notably from Statistics Canada) and the considerable investment in recent years in research on access and student success by the Canada Millennium Scholarship Foundation has allowed the issue to be explored in more depth than ever before. The goal of this chapter is to review the latest Canadian research on persistence rates and determinants of student success and to offer some reflections on the performance of Canada’s post-secondary system.

The data presented here will show that between one in five and one in ten students in Canada who access post-secondary education leave without completing their program of study. Many more take longer than expected to graduate. Of course, for certain groups of students—that is to say, more marginal students whose success must be ensured if we are to improve educational outcomes in Canada—persistence rates are lower. This is the challenge to which educators must respond: to act to ensure that all those who enter post-secondary education have the opportunity to succeed. As we will demonstrate, the efforts of post-secondary institutions to respond to this challenge—by putting in place support services for students at-risk of discontinuing their studies—can be bolstered by the lessons learned through demonstration projects already underway.

II. Persistence Rates in Canada

Background

Until recently, there was relatively little research on the issue of student persistence in post-secondary education in Canada (Grayson & Grayson, 2003, p. 3). “We know very little about how many students drop out of programs, or why,” concluded a major review of post-secondary education in Ontario as recently as 2005 (Rae, 2005, p. 15). In recent years, however, new research tools have become available that are enabling Canadian researchers to examine the issue much more seriously than before.

The most important of these tools is the longitudinal Youth in Transition Survey (YITS) of Canadian youth conducted since 1999 by Statistics Canada. One of the ways it can be used is to study persistence, since entering and leaving education after high school is one of the main activities the survey tracks. Another tool is the Post-Secondary Student Information System (PSIS), which contains a vast array of student information collected by colleges and universities and passed on to Statistics Canada, including a number of personal characteristics as well as enrolment and program information. While both the YITS and PSIS data are collected by Statistics Canada, in-depth analysis of these data in order to investigate the issue of student persistence was made possible by the Millennium Research Program through its commissioned research on access and student success, including research conducted through the MESA project.¹

New Research

Until recently, data on persistence in Canada were obtained from institution-specific studies and reports. A review of the literature published in 2003 by Grayson and Grayson found evidence that both first-year attrition and long-term degree completion rates in Canada were similar to those in the United States, where research on the subject has been more extensive. In both countries, first-year attrition averages about 20 to 25 percent, while over the long term about 60 percent of students beginning their studies could be expected to graduate (2003, pp. 7–8).

There are, however, several significant limitations of institution-specific data. The first is that institution-specific findings may not be generalizable and so reveal little about the performance of the post-secondary sector as a whole. The second is the inability of institution-specific studies to differentiate between students who discontinue their studies and students who simply switch to another institution. The third is that few institution-specific studies are sufficiently longitudinal, and they therefore cannot distinguish between those who drop out permanently and those who “stop out” temporarily, only to re-enter post-secondary education at a later date. As a result of the latter two issues, institution-specific studies tend to underestimate rates of persistence.

1. “Measuring the Effectiveness of Student Aid” (MESA) is a research project designed to evaluate the impact of the millennium access bursaries. It is funded by the Canada Millennium Scholarship Foundation and conducted by the Educational Policy Institute in partnership with the School of Policy Studies at Queen’s University. See <http://www.mesa-project.org>.

Table 3.II.1 — Change in Post-Secondary Education Status over Time

Age of Youth	% of All Youth*				Discontinued Post-Secondary Studies (% of Youth Having Participated in Post-Secondary Studies)
	Graduated from Post-Secondary Studies	Continuing Post-Secondary Studies	Never Enrolled in Post-Secondary Studies	Discontinued Post-Secondary Studies (% of all Youth)	
18–20	7%	43%	45%	5%	9%
20–22	23%	38%	28%	11%	15%
22–24	45%	19%	23%	12%	16%
24–26	60%	7%	21%	12%	15%
26–28	66%	4%	19%	11%	14%

*NB: Rows may not total 100% due to rounding.

Source: Shaienks and Gluszynski, 2009; authors' calculations.

Information on persistence in Canada has greatly improved as a result of the availability of the aforementioned YITS data, which has tracked the behaviour of a cohort of youth over time at two-year intervals since 1999. Data obtained from a longitudinal study of a national sample of youth overcome all three limitations of institution-specific data mentioned above (see Finnie & Qiu, 2008, p. 181 ff.).

The data from the so-called “YITS-B” cohort of youth aged 18 to 20 in 1999 provide five separate “snapshots” of their status at successive two-year intervals. The results show increases over time in the proportion participating in post-secondary education, as well as the proportion discontinuing their studies (see Table 3.II.1). The post-secondary drop-out rate rises significantly between the ages of 18 to 20 and 20 to 22 before stabilizing at 11 to 12 percent of all youth or about 15 percent of those who begin post-secondary studies.

The 15 percent figure represents the proportion of post-secondary students who had discontinued their studies and not returned at the time of the fifth wave of the survey. The proportion of students who had ever dropped out of a program of study would, of course, be higher. As the YITS survey makes clear, many of those who discontinue their post-secondary studies do so only temporarily. For example:

- Shaienks, Eisl-Culkin and Bussière report that of those who had dropped out relatively early in their studies (i.e., by the time they were 18 to 20 years old), 35 percent returned within two years and 46 percent returned within four years. One in four graduated within four years of their initial decision to discontinue (2006, p. 15, 38, Table C5).
- Similarly, Finnie and Qiu find that “by one year after first having left school, 22.3 percent of college leavers and 35.6 percent of university leavers have returned. By three years later... the returns stand at 40.3 percent and 54.0 percent, respectively, for college and university leavers. These are substantial numbers” (2008, p. 193).

- Finally, Martinello’s analysis of the same data shows that of the 40 percent of university undergraduates who did not complete their initial program of study within the YITS survey tracking period, 78 percent entered a second program; for college students, the figures are 47 percent and 65 percent respectively (2008, Figures 1 and 3, pp. 219–221). Thus only about one in five students who did not complete their first university program ended their post-secondary education at that point; the equivalent figure for college students is roughly one in three. The remainder either transferred directly to another program or institution or re-enrolled, after a period away from studies, within the tracking period covered by the survey.

It is thus possible to calculate different rates of persistence and discontinuation depending on how this movement of students into, out of and around the post-secondary system is treated. For example, a separate analysis of the same YITS-B data examines the proportion of students who by the time they had reached the age of 24 to 26 (i.e., the fourth wave of the YITS study) had dropped out of either the college or university “stream” of post-secondary education and not returned to that stream. This approach yields a drop-out figure of 21 percent, including 16 percent of those who had started at university and 25 percent of those who had started at college (Shaienks, Gluszynski & Baynard, 2008). The difference between this figure of 21 percent and the previously noted figure of 15 percent is explained by the fact that a number of students who discontinue a university program go on to enrol in college, or vice versa. These students therefore are not “true” dropouts, in that they return to post-secondary education (albeit in another stream).

Any attempt to calculate “true” rates of persistence and discontinuation has to go beyond the “snapshot” approach that simply reports students’ status at a given moment in time, while at the same time fully taking into account both the switching of programs, institutions and post-secondary education streams and the tendency of many students to “stop

out” and subsequently return to their studies. Such an endeavour has recently been completed by Finnie and Qiu (2008). Using the YITS-B data, they calculate the likelihood of students graduating within a specific time period, regardless of whether or not they switched or stopped out at some point along the way.

Finnie and Qiu’s findings show that 82 percent of university students continue with their original program of study (or, in a very small number of cases, graduate) after the first year, as do 74 percent of college students (2008, p. 191, Table 2). Of the remaining 18 and 26 percent respectively, a relatively small number switch programs within the same institution. Excluding these “within institution” switchers, this means that universities lose about 14 percent of their students and colleges about 20 percent after the first year of study. Yet about half of these university students and a third of these college students in fact continue their studies elsewhere—they simply switch institutions. The real proportion of those who leave post-secondary education after their initial year of studies is 7.9 percent for university students and 12.9 percent for colleges.

Taking their analysis further, Finnie and Qiu calculate that while only 54 percent of university students and 58 percent of college students graduate from their original program within five years, many of the remaining students either continue in that program or, if they discontinue it, switch programs within the same institution or switch institutions. Some of these continuers and switchers stop out for a period of time before returning. Relatively few non-graduates can therefore be accurately classified as “dropouts.”

From an institutional perspective (counting students who have switched programs within the same institution as continuers rather than leavers), the five-year drop-out rate is 26 percent for university students and 32 percent for college students (2008, p. 191, Table 2). The remainder (i.e. 74 percent and 68 percent of university and college students respectively) have either graduated or are continuing in their original program or another program within

the same institution. These drop-out rates, however, still do not take into account those who switch institutions or who stop out and subsequently re-enrol in another program or institution at a later date and who thus are not true dropouts. Once all these “switchers” and “stop-outs” are taken into account and reclassified as either graduates or continuers, the five-year drop-out rate falls to 10 percent for university students and 18 percent for college students (see Table 3.II.2). This represents by far the best estimate of overall persistence rates currently available in Canada, at least for young adults.

Note that drop-out rates change relatively little after the second year. This does not mean that virtually no one drops out after year two. It means rather that after year two, the system has reached a kind of “steady state” in which the number of new drop-outs is roughly equally to the number of previous drop-outs who have come back to school. The data do confirm, however, that most discontinuation occurs in the early years of study.

It should also be noted that these data pertain only to the “YITS-B” cohort of youth who were 18 to 20 years old in 1999 and who were tracked until they were 24 to 26. The sample therefore is not represen-

tative of the general post-secondary population, which includes students who enrol for the first time in their late twenties or even later. It can be assumed therefore that the results presented here are somewhat more positive than what could be expected for the general post-secondary population, since, as will be discussed below, older students tend to have more trouble persisting. In this context, it is interesting to note that Finnie and Qiu have recently made a first attempt to conduct the same analysis using the data from the “YITS-A” cohort of youth who were 15 years old in 1999. Their analysis shows that, on the whole, three-year graduation rates and drop-outs rates from college and university are remarkably similar to those reported for the slightly older “YITS-B” cohort, although some specific results are slightly more positive, as could be expected for students of a younger age. For instance, the three-year graduation rate for the younger YITS-A college students is 62 percent, compared with 57 percent for the YITS-B students (Finnie and Qiu, forthcoming).

In a separate study of the persistence and mobility of students in Atlantic Canada, using data from the Post-Secondary Student Information System (PSIS), Finnie and Qiu are once again able to confirm

Table 3.II.2 — Overall Persistence Rates of Young Adults in Post-Secondary Education in Canada*

	Graduated	Still in Post-Secondary Education	Discontinued Post-Secondary Education
College			
Year 1	12.0%	75.2%	12.9%
Year 2	36.9%	45.8%	17.3%
Year 3	57.0%	25.1%	17.9%
Year 4	66.2%	14.8%	19.0%
Year 5	73.1%	8.8%	18.0%
University			
Year 1	1.1%	91.0%	7.9%
Year 2	3.6%	86.7%	9.6%
Year 3	11.2%	78.8%	9.9%
Year 4	45.0%	45.2%	9.8%
Year 5	69.4%	20.4%	10.2%

*Note: Columns may not total 100% due to rounding.

Source: Finnie & Qiu, 2008, p. 197, Table 6.

the same general pattern.² They analyze the patterns of students enrolled in the twenty-two public post-secondary institutions in Atlantic Canada over a period covering the academic years 2001–02 to 2004–05. The nature of the PSIS data (individual records for each student in each year of study) allows longitudinal student records to be created by linking each student file across the years of the dataset. The PSIS data project was initially piloted in the four Atlantic provinces; thus, the most extensive and robust data were available for that region. Statistics Canada also prioritized the processing of the Atlantic college PSIS data for this project, which allowed PSIS university and college data to be linked together for the first time.

Looking at first-year transition rates using a restricted sample of first-time entrants to post-secondary education aged 17 to 20, Finnie and Qiu find that 79.8 percent of university undergraduate students continued their studies at the same institution into second year. In the college sector, 23.5 percent of students graduated after one year while 52.6 percent continued their studies at the same institution into second year. Only 5.1 percent of university undergrads and 1.3 percent of college students switched institutions after their first year. Finally, the PSIS first-year university leaving rate is 15.1 percent,

and the first-year college leaving rate is 22.6 percent (see Table 3.II.3). (Note that by accounting for “switchers” the institutional drop-out rate of 20.2 percent for university students falls significantly to the “true” drop-out rate of 15.1 percent.)

The data also show that an additional group of students who made it past first year drop-out in the second year of study and that the cumulative drop-out rate after two years of study is 24.5 percent and 33 percent for university and college students respectively (Finnie and Qiu, 2009, Table 3). Two years after enrolling, 66.4 percent of university students were still studying at the same institution, as were 13.1 percent of college students; a little over half of college students have graduated (see Table 3.II.3).

These drop-out rates are higher than those derived from the YITS sample as reported above. This difference is explained by differences between the two datasets and by limits that apply to the PSIS-based study but do not apply to the YITS-based one. First, the PSIS-based data does not take account of those who “stop out” of their studies or return after having discontinued. This results in higher leaving rates. Secondly, in the nationwide YITS study, students can be tracked across provincial boundaries as long as they continue to respond to the surveys being applied. However, while PSIS itself is a national

Table 3.II.3 — Cumulative Transition Rates After Two Years for Students Entering Atlantic PSE Institutions (17- to 20-Year-Olds)

	Continuers	Graduates	Switchers	Leavers
University				
Year 1	79.8%	0.1%	5.1%	15.1%
Year 2	66.4%	0.7%	8.4%	24.5%
College				
Year 1	52.6%	23.5%	1.3%	22.6%
Year 2	13.1%	52.2%	1.7%	33.0%

Note: Unlike the figures in Table 3.II.2, these figures do not account for students who return to studies after leaving.

Source: Finnie & Qiu, 2009, Table 5.

2. The PSIS data set consists of administrative data collected from all of Canada’s public post-secondary colleges and universities. Each student who registers at a public post-secondary institution has a data record in PSIS for each year. More information on PSIS can be found at: <http://www.statcan.gc.ca/concepts/psis-siep/index-eng.htm>.

database, Finnie and Qiu did not have access to student records west of New Brunswick for their analysis. Any student who left the four Atlantic provinces was lost to the study and would appear in this study as a “leaver.”

In order to check the validity of the PSIS-based results, Finnie and Qiu re-ran their YITS-based results but with a restricted YITS sample that would more closely resemble the PSIS one. Once this is done, the results appear more similar (see Table 3.II.4). The similarity between the rates observed in the two data sets is a positive confirmation of each study’s findings.

The study of the Atlantic region confirms again that somewhere between one in ten (university) and one in five (college) post-secondary students are not persisting past the early years of study. These figures—which take into account the effect of switching institutions and, in the case of the original, larger YITS study, “stopping out” (or leaving and returning)—are perhaps not as high as previous institution-based studies had indicated. Nonetheless, it represents significant lost opportunities for individuals, for institutions, and for society. In the next section, we take up the questions of who is discontinuing their studies, and why.

Table 3.II.4 — First-Year Transition Rates in the Atlantic Region in YITS and PSIS

	Continuers	Graduates	Switchers	Leavers
University				
PSIS	79.8%	0.1%	5.1%	15.1%
YITS	81.2%	0.4%	7.8%	10.5%
College				
PSIS	52.6%	23.5%	1.3%	22.6%
YITS	50.4%	27.1%	2.1%	20.4%

Note: The YITS sample here is restricted to more closely match the PSIS population and therefore differs from the one used to produce Table 2, above. Note also that, unlike in Table 3.II.2, these figures do not account for students who return to studies after leaving.

Source: Finnie & Qiu, 2009, Table A.4.1.

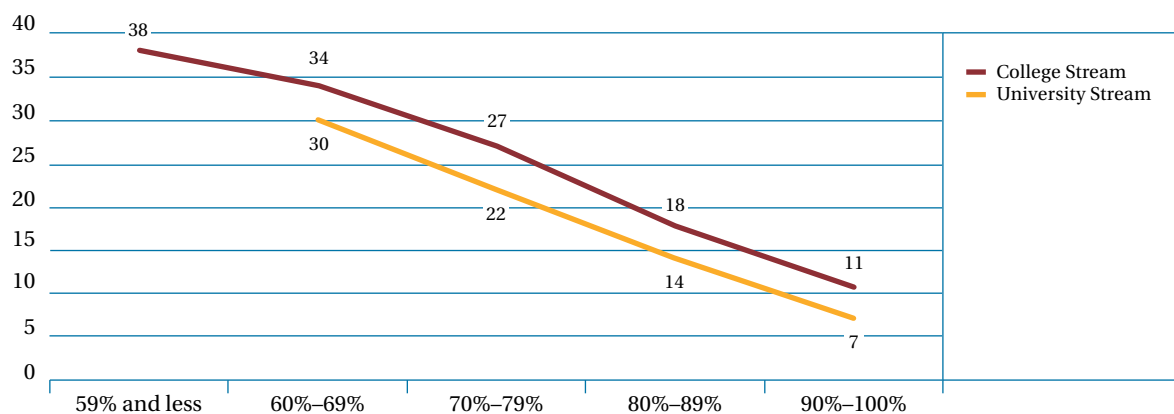
III. Who Leaves Post-Secondary Education and Why?

Different studies tend to offer somewhat different portraits of the attributes and factors associated with dropping out. Conclusions reached by one study are not always replicated in others (Grayson & Grayson, 2003, p. 31). Moreover, studies often lack the instruments or the sample to allow them to assess with precision the importance of certain key factors, such as the type or amounts of student financial aid received by students or students' ethno-cultural or socio-economic backgrounds. While these points and the need to avoid what Grayson and Grayson call the attempt to "fabricate" generalizations should be kept in mind, several patterns can nonetheless be derived from the Canadian literature on persistence reviewed for this chapter.³

Gender, age and dependants: Men are more likely to drop out than women, and older students and students with dependent children or who become parents during their studies have greater difficulty persisting.

Academics: Academic performance and engagement at both the high school and post-secondary level are associated with persistence (see for example Ma and Frempong, 2008). Simply put, grades are a very strong predictor of who is likely to succeed in their post-secondary studies and who is likely to discontinue. As Shaienks, Gluszynski and Bayard (2008, p. 20) report with respect to high school grades and studying habits, "learning habits are developed early and often persist with progressive levels of education" (see Figure 3.III.1). While weaker and less engaged

Figure 3.III.1 — Percentage of Post-Secondary Students Aged 24 to 26 Who Discontinued Their Original Post-Secondary Stream* by Grade Average in High School



* Note: While some of these students discontinued their studies, others switched streams.

Source: Shaienks, Gluszynski & Bayard, 2008.

3. One source included in the research summarized in this section is not in fact Canadian. A review of the link between persistence and student financial aid published recently by Don Hossler and his colleagues focuses almost exclusively on the American experience. However, as it summarizes the conclusions of a wide range of studies, we have decided to include it in our discussion where relevant.

students are less likely to persist, however, Shaienks and Gluszynski emphasize that a significant portion of capable students nonetheless drop out (2007).

Parental income: The Canadian literature offers little insight into whether parental income is correlated with persistence. The YITS data analyzed to date are of little help in this regard because they contain no information on parental income. Parental income data is collected for a younger cohort of youth (YITS-A), but their progress through post-secondary education has yet to be fully tracked. (An early attempt to analyze persistence using the YITS-A data by Finnie and Qiu suggests that youth from higher income families are less likely to drop out of college programs (Finnie and Qiu, forthcoming).)

Financial aid: It appears that receiving need-based student assistance in the form of loans or grants can improve persistence. At the same time, students whose financial aid package is not adequate to cover the actual cost of studying or who accumulate high levels of debt are less likely to complete their studies (Grayson & Grayson, 2003, p. 34.; Hossler *et al.*, 2008; McElroy, 2004, 2005a, 2005b, 2008a). This suggests that within a financial aid package, the non-repayable grant component, which can limit the accumulation of debt by substituting for loans or alternatively provide extra funds not provided through loans, is the key component in encouraging persistence. As Hossler *et al.* put it, “loans are not as effective as grants in enhancing persistence” (2008, p. 102). This conclusion is consistent with those reached by Lori McElroy in the context of her studies of the impact of the introduction of millennium bursaries in Canada in 2000 (for a summary of McElroy’s studies, see Canada Millennium Scholarship Foundation, 2006). It is interesting to note, however, that according to Hossler and his colleagues, the real effect of financial aid (especially grants) on persistence is an “indirect” one, in that it allows students to work less, worry less and focus more on the various components of student life. They explain: “the most beneficial effect of financial aid may be that it increases students’ freedom to become more engaged in the academic

and social environments of the institutions they attend. This may in turn lead to increased student persistence” (Hossler *et al.*, 2008, p. 111; see also p. 103).⁴

Parental education: The relationship between persistence and parental education is unclear. An analysis of YITS data prepared for this chapter shows that the proportion of students who drop out of college or university five years after beginning their studies decreases as parental education increases. Specifically, 21 percent of those whose parents did not complete high school dropped out, compared with 12 percent of those whose parents completed university. As Finnie and Qiu point out, however, the relationship holds more strongly for college students and is not so evident in the case of university students (2008, p. 201).⁵ Other studies offer a slightly different view. Given the important influence of parental education in the initial decision of youth to pursue a post-secondary education, Shaienks and Gluszynski find it interesting that in their analysis “drop-out rates did not differ significantly between students whose parents held various educational attainments” (2007, p. 18). This is confirmed through further analysis of the YITS data conducted by Martinello, who notes that “surprisingly, parents’ education and the importance of PSE to parents were unrelated to students’ success in their first program” (2008, p. 230; 235). According to Martinello, however, parental education is related to the decision of students to re-enrol after initially discontinuing their studies, a point that is discussed further below.

Career guidance: There is some evidence that certainty about career goals positively affects persistence. In other words, students are more likely to stay in school when there is a clear connection in their minds between their studies and their intended career path (Berger, Motte & Parkin, 2007, p. 40; Canadian Career Development Foundation, 2007, p. 21; Grayson & Grayson, 2003, p. 28).

Aboriginal status: Until recently, there has been little solid quantitative evidence available about the persistence of Aboriginal students. This has been the case despite the fact that the lower educational participation and attainment rates of Aboriginal

4. Note that these hypotheses will be explored further in the final report from the MESA project, which will be published in 2010.

5. Finnie and Qiu speculate that the weaker effect of parental education on university persistence compared with access could be the result of a “selection effect”: “once students are selected into the university system, further background effects are nullified because they are an especially talented, accomplished group who have overcome the barriers that often prevent others of their type from making this start, and are therefore able to overcome any additional challenges they may face as they advance through their studies” (2008, p. 201).

students are well documented (see, for example, Berger, Motte & Parkin, 2007, pp. 20–22), as is the scale of the obstacles facing Aboriginal students (Malatest & Associates Ltd., 2004, p. 1). Analysis prepared for this chapter confirms that the persistence rates of those Aboriginal students who do embark on post-secondary studies are lower than those of their non-Aboriginal counterparts (see Figure 3.III.2). The drop-out rate of Aboriginal post-secondary students is between 33 and 56 percent higher (depending on the age of students) than the rate for non-Aboriginals. Higher drop-out rates for Aboriginal students are also reported by Shaienks, Gluszynski and Bayard (2008). It should be noted, however, that the YITS sample excludes First Nations youth living on reserve. Since these students tend to face the greatest obstacles in moving through the education system, the figures presented here, if anything, can be said to overestimate the persistence rates of Aboriginal students as a whole.

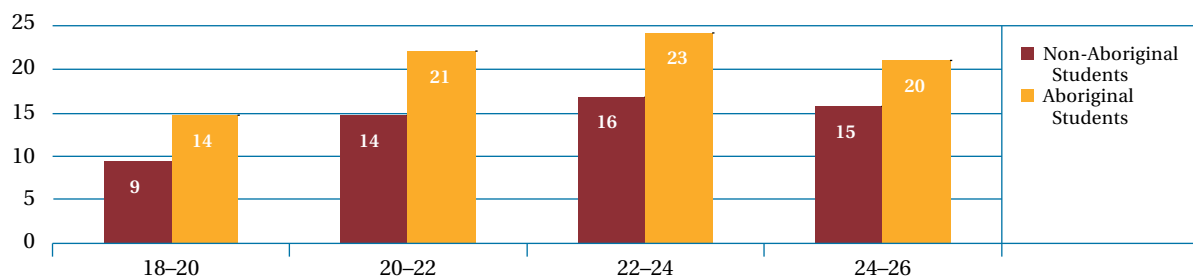
In addition to studying the demographic, behavioural and attitudinal factors associated with persistence, researchers in Canada have also reported students' own explanations. One study of students two years after their final year of secondary school found that among those who had already discontinued post-secondary studies, lack of interest in their studies (29 percent) or the program not meeting expectations (27 percent) were the reasons most likely to be cited for dropping out. An additional 14 percent said they were undecided about their career. Taken together, reasons related to a lack of interest or satisfaction with their program or a lack

of direction in their career were cited as the reason for discontinuing studies by 52 percent of dropouts. Financial reasons were cited by one in five (22 percent) of those who discontinued studies, while academic difficulties were cited by 12 percent (Berger, Motte & Parkin, 2007).

These findings are in line with those derived from the first two waves of the YITS study, which suggest that “among youth who had left post-secondary education without completing their program, the major reason cited related to a lack of program fit... Ultimately, a notable proportion of post-secondary leavers stated that they had done so either because they didn't like their program or their program wasn't ‘for them’ or because they were going to change programs or schools” (Lambert *et al.*, 2004, p. 19). Specifically, one-third of those who left their studies did so because they did not like their program or did not feel it fit with their interests. Another nine percent left to change schools or programs. Financial reasons were the next most important reason: 11 percent of those who discontinued their studies did so because they did not have enough money. These results are echoed by those produced by Finnie and Qiu, who find that “students leave school mostly because the schooling is judged not to be the right thing for them or they want to do other things such as work, make a change or take a break” (2008, p. 193).

Some refinement of these findings is provided by Shaienks and Gluszynski, who examine those who had dropped out by age 24 to 26 according to whether or not they had to borrow to finance their post-secondary

Figure 3.III.2 — Percentage of Post-Secondary Students Who Have Discontinued Their Studies (by Age Group and Aboriginal Status)



Note: The YITS sample excludes First Nations youth living on reserve.

Source: YITS (Cohort B)—special calculation.

education. They find that for students who did not borrow, the most likely reason offered for discontinuing their studies remains that they did not like their program. For those who borrowed, on the other hand, dissatisfaction with the program and not having enough money were equally likely to be mentioned (2007, pp. 21–22). This difference between the reasons offered by different groups of students again points to the difficulties associated with trying to develop general explanations that apply to all students who leave post-secondary education.

Finally, there is new evidence that even institutions' own administrative procedures, such as the timing of course withdrawal dates and tuition refund policies, can affect persistence (Martinello, 2009).

We can summarize this review of the research on who drops out and why by noting that, while different studies of persistence may stress different individual factors that affect student outcomes, they all agree that a variety of factors are at play. This observation leads to the conclusion that policy responses should

be comprehensive in scope. Thus Grayson and Grayson argue that “attrition should be addressed systematically throughout the university rather than through isolated policies implemented by various departments of a college or university” (2003, 39), while Berger, Motte and Parkin maintain that:

Specific interventions designed to alleviate a narrow set of barriers—by targeting one kind of barrier, such as academic ability—will be limited in their effectiveness because they leave the other sources of the problem untouched. Interconnected barriers need solutions that are wide in scope and that include elements of academic support, financial assistance, and the provision of information and encouragement. (2007, 34)

Similarly, with specific reference to Aboriginal students, Malatest writes that “no program or initiative will be effective unless it factors in the entire scope of barriers.” (Malatest, 2004, 11).

Myth: PSE Continuers “Get it Right” on Their First Try

In assessing why some students drop out and others persist, it is important to avoid drawing an over-simplistic contrast between those who enrol in a program of studies and stick with it and those who leave. As we have seen above, many of those who discontinue their studies subsequently re-enrol. In other words, many students make a “second attempt” at post-secondary education, and this is an important element in contributing to overall persistence rates. This point is emphasized by Shaienks and Gluszynski, who show that less than 40 percent of those who persist only attempt one program, compared to 64 percent of dropouts (2007, p. 21). As one journalist reviewing the latest data on persistence put it, “today’s students are a mobile bunch, just about as likely to take a zigzag course through college and university as they are to follow a straight line” (Church, 2008; see also Finnie & Qiu, 2008, p. 202). The difference between many of those who persist and those who drop out,

therefore, is not that those who persist achieved optimal “program fit” on their first try but that they were able to make an adjustment that led them to stay enrolled.

It is in this context that Martinello’s findings on the influence of parental education become especially important. As noted above, Martinello finds that parents’ education was unrelated to students’ success in their first program. He finds, however, that “for students who stopped their first program...Parents’ education was positively and significantly correlated with the decision to re-enrol in another PSE program.” On this basis, he argues that parents’ education “appears to be related to students’ ability to adjust to adversity in their first program by finding and undertaking alternative programs” (2008, p. 230).

In light of this, one difference between those who persist and those who drop out can best be viewed in terms of resilience, a concept that

Myth: PSE Continuers “Get it Right” on Their First Try *(continued)*

features in health and social work literature but which has lately been the focus of career development theory and curriculum development (Canadian Career Development Foundation, 2007). In general, resilience in this context refers to “the capacity to overcome obstacles, adapt to change, recover from trauma or to survive and thrive despite adversity.” Notably, factors contributing to

resilience in youth include supportive relationships with adults and parental expectations (Canadian Career Development Foundation, 2007, pp. 3–4). Thus, family background is correlated with resilience, which in turn is an essential tool that students need to persist in their studies, especially when setbacks are encountered and changes of plan required.

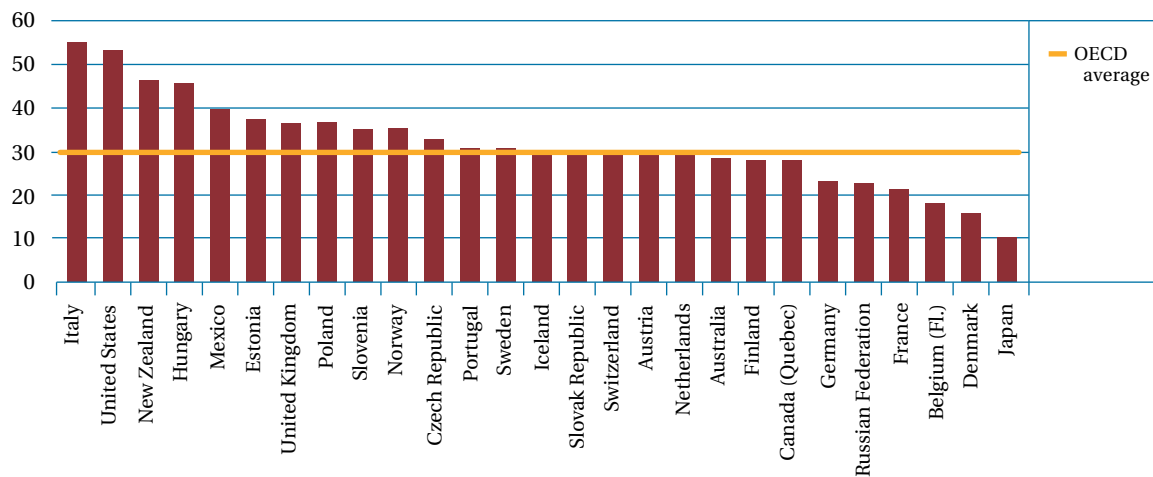
International Data

In view of this emerging data about persistence of Canadian post-secondary students, a reasonable question for discussion arises: are Canada’s persistence, completion and drop-out rates good or bad? Certainly drop-out rates on the whole appear better than previously reported, although this is likely because, as was always suspected, previous institution-based studies tended to overestimate them. Looking outward, international data available

from the OECD can provide some additional context for the Canadian data presented here, especially the results of the two studies by Finnie and Qiu.

The international comparison seems to provide a basis for feeling positive about the Canadian situation. The OECD average drop-out rate is 31 percent (Figure 3.III.3); the Canadian result presented here (for Quebec only) is below that

Figure 3.III.3 — Proportion of Students Who Enter a Tertiary Program and Leave Without at Least a First Tertiary Degree (2005)



Source: OECD, 2008. Table A4.1.

International Data *(continued)*

and among the best. Unfortunately, these international comparisons are less than perfect due to differences in methodology used to calculate drop-out rates across countries as well as differences in the structure of each nation's post-secondary education system. Indeed, these differences are significant enough to render the comparisons not entirely useful. The OECD figures also do not fully account for those students who switch institutions mid-stream in a period of study or those who stop out for one or more academic years before taking up their studies again, whether at the same institution and level or at a different institution or level. The fact that the Canadian entry in the OECD figure only reflects Quebec is also, of course, less than ideal.

Given the difficulty in comparing the new data on persistence in Canada either with previous studies or with international data, it is perhaps more productive to leave aside the question of whether our results are good or bad and focus instead in what has been learned. In this regard, the importance to policy-makers of the work done

by Finnie and Qiu, Martinello and others showing the rates at which students who leave their first program of study return to some form of post-secondary education cannot be understated. Looking at the issue of persistence from a perspective that is wider than that of an individual institution provides a better sense of what is happening in the post-secondary system as a whole. This brings the discussion back to the issue of the degree of movement into, out of and through the Canadian post-secondary system. In comparison to students abandoning their studies permanently, it is clearly preferable for students to stop out and return to studies later or switch from a program in which they do not enjoy success into one in which they do. It is far from clear, however, whether this amount of switching and pausing is optimal, either from the perspective of the individual student, or from that of the system as a whole. For this reason, the paths taken by these "switchers" and "pausers" are in fact of equal if not greater interest to policy-makers than those of the "graduates" and "continuers."

IV. Conclusion: The Need for Intervention and Evaluation

While the bottom-line completion rates may be more encouraging than expected, it remains clear that for many young people the route through the post-secondary education system is hardly straightforward. Between one in five and one in ten students are discontinuing their college or university programs and not returning, and many more are taking longer than expected to graduate. Clearly, many students would benefit from additional support—both before and after arriving on a post-secondary campus, and in both financial and non-financial forms. As Santiago and his colleagues argue, “greater emphasis needs to be placed on equity of outcomes with policies more targeted at ensuring the success of students from under-represented groups. This would translate into more emphasis being placed on student progression throughout studies with special support and follow-up measures to assist those students at risk of failure” (Santiago *et al.*, 2008, p. 66). Universities and colleges must be able to identify their students from backgrounds that might lead them to experience challenges along the route to graduation and provide them with support programs created for and tailored to them so that they can make the necessary adjustments over time in order to succeed. Thus while the findings discussed in this chapter can allow governments and other policy-makers to look at persistence at the system-wide or “macro” level, institutions will increasingly need to focus on the “micro” level of subsets of their student populations. Their actions regarding these groups will help determine the success of the Canadian post-secondary system as a whole.

In this regard, the ongoing research by the Canada Millennium Scholarship Foundation on practices that might improve outcomes for selected groups of students is particularly relevant. The OECD’s recent overview of tertiary education lamented that “presently...there is little evidence about the effects of institutional support programmes on student outcomes” (Santiago *et al.*, 2008, p. 50). This observation has been echoed in Canada. A recent independent review of post-secondary education commissioned by the Government of Ontario concluded specifically that more research was needed in the area of retention, noting that “it is ironic that institutions that spend so much time and money insisting on evidence-based decisions, spend so little time on research that evaluates higher education itself” (Rae, 2005, 15). Similarly, a separate survey of literature in the subject of Aboriginal peoples in post-secondary education in Canada found that there is “virtually no worthwhile empirical or quantitative evidence on the subject” of interventions believed to help increase enrolment and completion rates of Aboriginal students. The authors underlined “the need for more comprehensive studies that would include a larger statistical tracking element” (Malatest, 2004, 10). The Foundation, however, is currently completing a select number of research experiments designed to provide exactly this type of information. These experiments include Foundations for Success, a pilot project currently underway at three Ontario community colleges, that is designed to respond to the concern that too few Ontario college students complete the program they initiate. Foundations for

Success directs students who are deemed to be at risk of dropping out to case managers who in turn direct them to the specific support services they need most. They also include LE, NONET, a research project designed to test the effectiveness of initiatives to improve the retention and success of Aboriginal students at the University of Victoria in British Columbia. Early results of these projects

have started to become available (see University of Victoria, 2008, and Malatest, 2009a, 2009b, and 2009c). The completion of these and similar projects will hopefully make it easier for colleges and universities to initiate and shape support programs so as to improve their performance as institutions and the success of their students.

Millennium Pilot Projects

Foundations for Success

Foundations for Success is a pilot project currently underway at three Ontario community colleges: Seneca College in Toronto, Mohawk College in Hamilton, and Confederation College in Thunder Bay. It is designed to respond to concern about completion rates by directing students who are deemed to be at risk of dropping out to case managers who in turn direct them to the specific support services they need most (see Malatest, 2009a).

The selection of participants began in the spring of 2007 at the time when entering college students are required to undergo post-admission examination. For the purpose of this project, the tests were also used to determine whether students could be deemed to be at-risk of dropping-out for at least one of three reasons: English placement results below college-level requirements; self-reported uncertainty regarding program selection and career direction; or self-reported difficulty in adapting to new environments.

At the end of the tests all students entering two-year programs were informed of the project and asked to sign an informed consent form that would make them eligible to participate in the project if their test results identified them as being at risk.

Students who consented to participate and who were deemed at risk for at least one of the three attrition factors were randomly assigned into one of three groups:

- a “services” group that would be assigned case managers to direct them to services in accordance with the needs identified through the test;
- a “services plus” group that would be assigned case managers and also offered a financial incentive in the form of a bursary of \$750 (representing approximately 50 percent of tuition per term) in the following term of study should they participate in at least 12 hours of approved support programming or campus engagement activities; and
- a comparison group that would be offered neither of these things.

Approximately 3,100 participants were recruited in three cohorts across the three colleges between the autumn of 2007 and the autumn of 2008. The case-managers were in place throughout the 2007–08 and 2008–09 academic years, and the students are being tracked until the autumn of 2009 to determine persistence and graduation rates.

Millennium Pilot Projects *(continued)*

Perhaps the most unique feature of the Foundations for Success project is the use of the case management approach to advise students identified as being at risk of dropping out. Case managers' initial interactions with students are informed by the results of the post-admission test. In addition, however, case managers follow students' progress during the two years of the project, responding to their needs and directing them to appropriate services available at the college. The main types of services to which case managers direct students are:

- tutoring and related academic support, both in program-specific subjects and in English for those with low English proficiency and who are required on the basis of their post-admission test score to take remedial English courses;
- peer mentoring, in which students are assigned to a trained student mentor who serves to answer questions about adapting to college life;
- career clarification workshops, followed by a group debriefing and an individual follow-up with a career counsellor, to confirm or help revise students' program choices.

The primary research question is whether a case-manager system in which students are matched with college advisors who guide and facilitate their access to support services will increase the likelihood that students at risk of dropping out will persist in their studies and graduate. It should be noted that the difference between the services and the comparison group lies not so much in their access to services, since students in the comparison group have access to

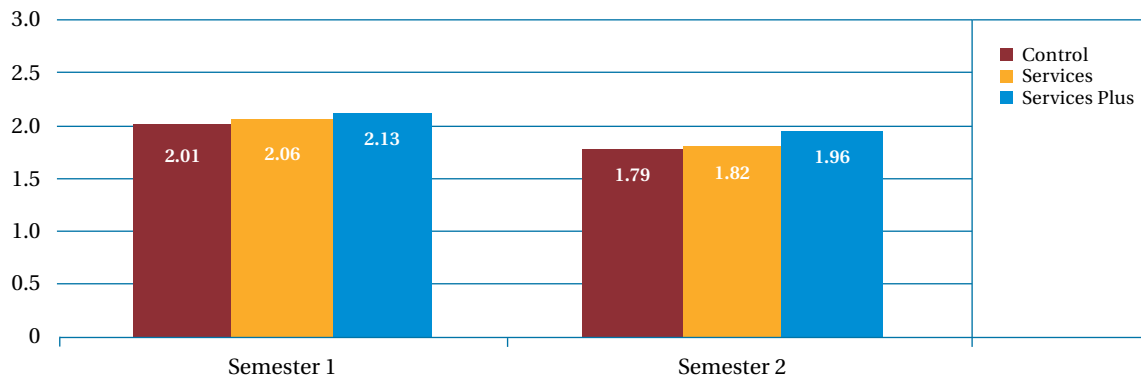
an array of services available at the colleges, but rather in the provision of a trained case manager who can direct them to specific services and encourage their participation in those service in the context of their post-admission test results. The secondary research question is whether the payment of a bursary as an incentive for participation will improve persistence either by successfully inciting students to participate in other support programming or by providing students with additional funds to pay for their studies.

The interim results from the project show first that services and services plus group students were more likely to make use of relevant support services than those in the control group (see Malatest, 2009c). Overall, 50 percent of the students in the services groups, and 72 percent of those in the services plus group, participated in relevant support activities, compared with 14 percent of those in the control group. Older students, low-income students, students with less confidence in their ability to succeed and students with English as a second language were all among those most likely to participate. Note that these results show that, in the absence of the case manager approach, only 14 percent of college students *at risk of dropping out* avail themselves of the campus services that are intended to help them succeed. They also show that financial incentives can be effective at influencing the behaviour of at-risk students.

More importantly, it seems that participation in the support services leads to better academic performance and persistence. The interim results show that students in the two program groups had higher grade point averages than those in the

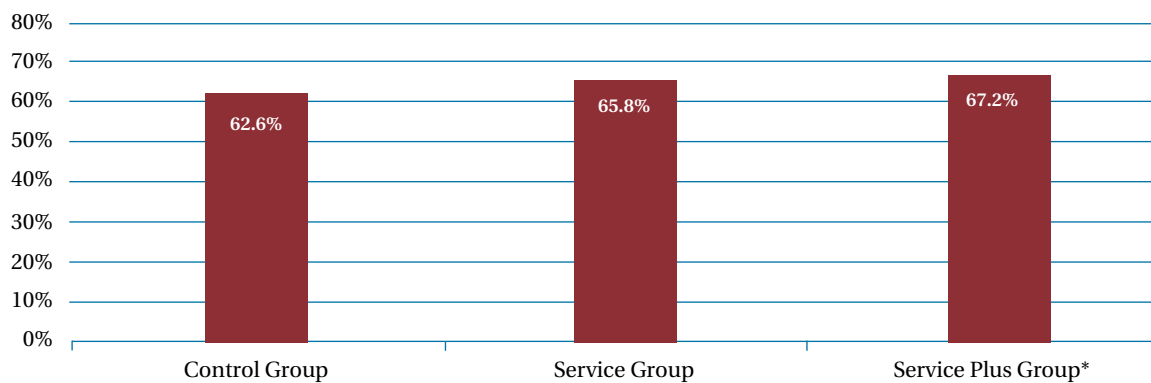
Millennium Pilot Projects *(continued)*

Figure 3.IV.1 — Foundations for Success: Grade Point Average By Program Group



Source: Malatest, 2009c, Figures 4 and 5.

Figure 3.IV.2 — Foundations for Success: Year 1 to Year 2 Retention Rates By Program Group



Source: Malatest, 2009c, Figure 6.

control group (see Figure 3.IV.1). They also had a statistically significantly greater likelihood of returning for their second year of study (Figure 3.IV.2).

In the absence of the final results based on the full tracking of all the project cohorts, it is too early to conclude definitely that Foundations for Success has been effective at improving persistence. Further research will also be conducted

to confirm whether or not the benefits of any increase in persistence and ultimately graduation rates outweigh the costs of delivering the program. The interim results, however, are encouraging and, if nothing else, demonstrate clearly the advantage of introducing interventions in the context of a research experiment designed to empirically measure their effect.

Millennium Pilot Projects *(continued)*

LE,NONET

“LE,NONET” is a word meaning “success after enduring many hardships”, in SENĆOŦEN, the language of the Straits Salish people of Vancouver Island. It is the title given to a research project designed to test the effectiveness of initiatives designed to improve the retention and success of Aboriginal students at the University of Victoria in British Columbia. As noted throughout this book, the educational outcomes of Aboriginal peoples in Canada are well below average. The University of Victoria is concerned in particular that it become an attractive option for Aboriginal students and that those Aboriginal students that it is able to attract are able to succeed once enrolled.

In conceiving the project, the university recognized that improved outcomes for Aboriginal students necessitate change not only in Aboriginal students but perhaps first and foremost in the institutional culture and practices of the university itself. Accordingly, while many of the interventions put in place by the project are directed towards students, others are directed towards faculty and staff so that they might “increase faculty and staff awareness of Aboriginal historical and contemporary realities in order to create a more respectful and culturally safe environment for students” (University of Victoria, 2008, 52).

The program is directed to all Aboriginal undergraduate students on campus enrolled in degree programs who participate voluntarily. The program itself supports students through a suite of services, each designed to address particular obstacles that Aboriginal students are likely to encounter, as follows:

- A bursary program provides financial aid to qualifying students;
- A peer mentoring program links new students with those already familiar with the university and its Aboriginal community and services;
- A research apprenticeship program provides an opportunity for students to work with a university faculty member on a research project;
- A community internship program provides an opportunity for students to gain experience and understanding by working in an Aboriginal community or organization;
- A preparation seminar prepares students for the apprenticeships and internships;
- A staff and faculty cultural training seminar increases awareness of Aboriginal culture and the needs of Aboriginal students among university personnel.

The primary research question in this case is as follows: will a series of interventions involving financial, academic, peer and cultural support have a demonstrable effect on the performance of Aboriginal students in post-secondary education and specifically on their persistence year-to-year and on their likelihood of completing their program of studies? To answer this question, the persistence of Aboriginal students during the period in which the program is in place will be compared to the persistence of Aboriginal students registered at the university in the five-year period before the program was introduced (2000–2005). Researchers will establish probabilities of students in the different cohorts completing courses, progressing from one year of study to the next, and graduating. This quantitative research will be complemented by qualitative research that will help to establish whether any changes in persistence rates can be attributed to the program and, if so, why.

Between the start of the program, in September 2005, and January 2008, 145 students participated in one or more elements of the program. Preliminary observations from qualitative research suggest

Millennium Pilot Projects *(continued)*

that the program appears to have had a positive effect on most participating students including:

- contributing to students' sense of connection to the on-campus Aboriginal community;
- contributing to students' sense of connection to the general university community;
- contributing to their success as students;
- strengthening their own Aboriginal identity and understanding of Aboriginal culture.

At this stage, just over half of students interviewed stated that the program had influenced their decision to continue with their studies. Certainly some individuals who had received financial support through the program stated that this support was a critical factor in enabling them to persist. Preliminary quantitative results also suggest an impact

of the project on persistence, with a withdrawal rate for participants of less than half that of the historical cohort used for comparison (University of Victoria, 2008, 62).

The researchers note, however, that for many participants the program has enhanced their educational experience and therefore contributed to their sense of success as Aboriginal students without necessarily being a determinant in their decision to continue their studies at the university. It could be that for Aboriginal students this improved educational experience is no less important than improved persistence. Further qualitative and quantitative research will outline more conclusively the way in which the program impacts participants and the connections between enhanced educational experience and retention.