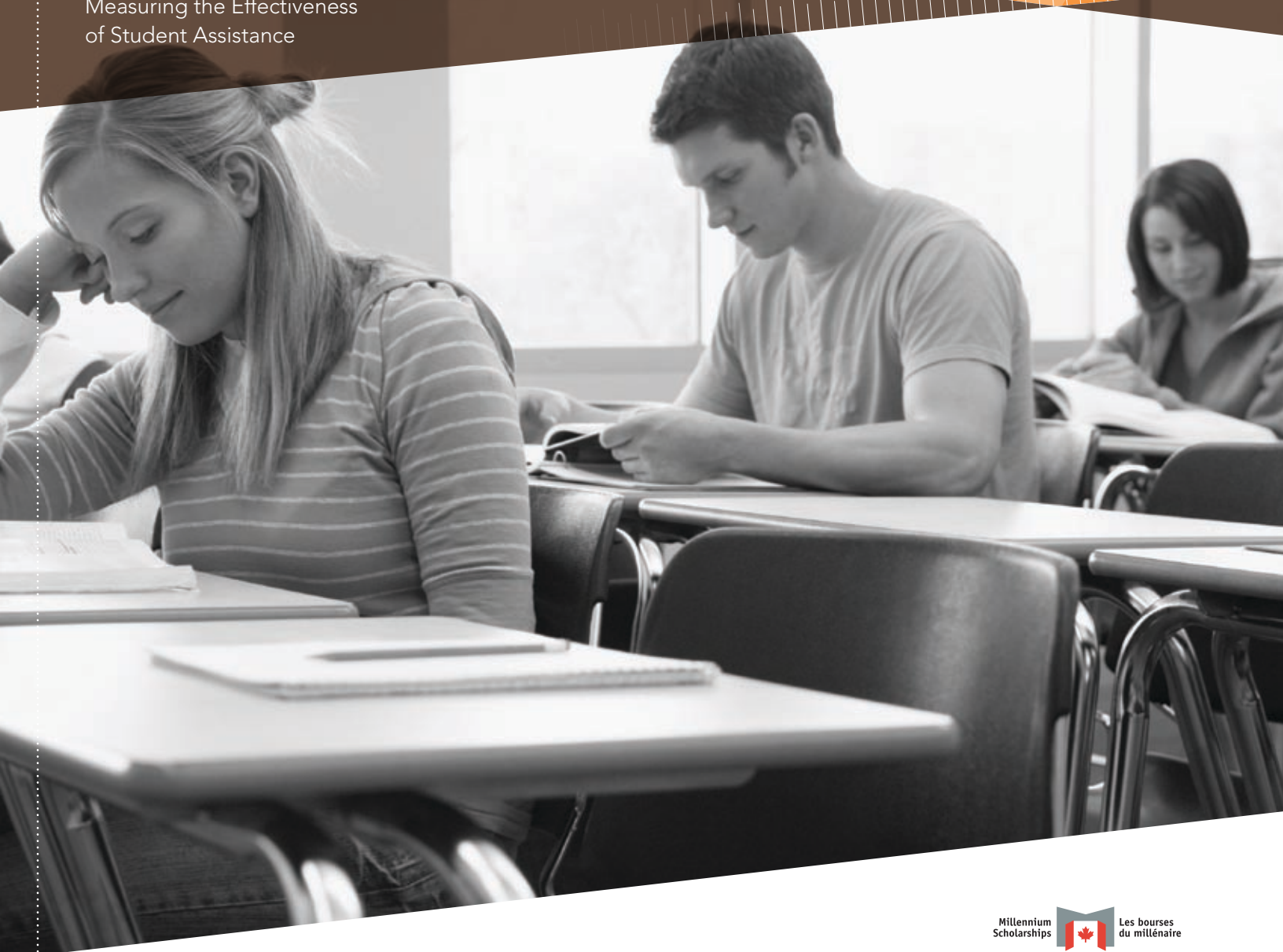


Annual Report

07

MESA Project

Measuring the Effectiveness
of Student Assistance



Millennium
Scholarships



Les bourses
du millénaire

CANADA MILLENNIUM SCHOLARSHIP FOUNDATION
FONDATION CANADIENNE DES BOURSES D'ÉTUDES DU MILLÉNAIRE

MESA Project

Measuring the Effectiveness
of Student Assistance

Annual Report 2007

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MESA Project

Measuring the Effectiveness
of Student Assistance

Annual Report 2007

Prepared by:
Educational Policy Institute

The Canada Millennium Scholarship Foundation

January 2009

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Background: About MESA

In the spring and summer of 2005, the Canada Millennium Scholarship Foundation (“the Foundation”) negotiated a series of agreements with provincial governments to deliver a set of bursaries (known as “access bursaries”) to first-time, first-year undergraduates from low-income families. These agreements are all broadly similar, although the eligibility criteria vary slightly by jurisdiction (Section 1 below describes the access bursaries as they exist in each province). Students do not need to apply for the award separately; instead, they are automatically considered for it through their application for provincial student assistance.

At the same time as it was negotiating with the provinces, the Foundation put to public tender a major research contract to evaluate the impact of the access bursaries and to answer the following four questions:

1. Which low-income teenagers decide to pursue post-secondary education (PSE) and how do they compare to low-income teenagers who decide not to pursue PSE?
2. Does providing more funding in the early years of PSE serve to attract more students from low-income families into PSE?
3. Does providing more funding in the early years of PSE contribute to increased persistence rates among low-income students?
4. Are there regional differences among students from low-income families across Canada?

The winning proposal, which was put forward by the Educational Policy Institute and the School of Public Policy at Queen’s University, proposed answering these questions in three main ways:

- A. By longitudinally examining the student aid administrative files of both access bursary recipients and those who narrowly missed the criteria (hereafter referred to as “non-recipients”)¹, by developing and administering a survey to this same group of students and by subsequently linking the survey and the administrative files.
- B. By more fully exploiting existing databases, such as Statistics Canada’s *Post-Secondary Education and Participation Survey (PEPS)*, *Youth in Transition Survey (YITS)*, *Longitudinal Administrative Databank (LAD)* and *Enhanced Student Information System (ESIS)*, in order to examine the effects of student assistance on PSE participation (both in terms of access and persistence) and by also exploring the possibility of linking *LAD* and *ESIS* to the student aid administrative files mentioned above.
- C. By conducting a random assignment experiment involving extra financial resources for low-income students and tracking their progress thereafter.

The project, which subsequently became known as Measuring the Effectiveness of Student Assistance (MESA), was designed to take roughly four years to complete, with a final report to be produced in late 2009.

Overall project management and co-ordination of the MESA project is being performed by the Educational Policy Institute under the direction of its vice-president and director (Canada), Mr. Alex Usher. Dr. Ross Finnie of Queen’s University acts as the project research director and oversees the work of two research assistants based at Statistics Canada. Academic researchers participate in the project by submitting research projects to the Research Review Committee, which is chaired by Dr. Arthur Sweetman, director of the School of

1. To be clear, the term “non-recipients” in this context does not refer to all students who did not receive the award. Rather, it signifies those students who applied for and received student aid but narrowly missed qualification for the access bursary specifically.

Policy Studies at Queen's University. The role of the review committee² is to judge research proposals from interested researchers and provide commentary and assistance on the resulting papers. Data collection for the longitudinal survey is managed by Academica Group Inc.

While the structure of the MESA project is somewhat unorthodox, it has a number of important strengths. It combines the creation of new data

sources—primarily the linked administrative student aid files—with the exploitation of existing ones at Statistics Canada. It harnesses the energy of academic researchers proposing their own research topics within a framework geared toward providing solid policy research advice to the Foundation. And it combines expertise in student assistance and data collection with input from some of the country's top experts in statistical analysis.

2. In addition to Dr. Sweetman, the full Research Review Committee is comprised of: Dr. Keith Banting (Queen's University), Dr. Charles Beach (Queen's University), Dr. Lorne Carmichael (Queen's University), Dr. Jane Friesen (Simon Fraser University), Dr. Clement Lemelin (Université du Québec à Montréal), Dr. Garnet Picot (Statistics Canada) and Dr. Hans Vossensteyn (Twente University).

Introduction

This document is the project's annual report for the year 2007. It contains information from the first round of papers written by MESA authors exploring questions of access and persistence using data from a number of existing Statistics Canada surveys. It also examines the first year's worth of data which have

emerged from the administrative survey files and the *Longitudinal Survey of Low-Income Students*. While preparatory work for the random assignment project continued throughout 2007, the project was not begun during the calendar year.

Project Year in Review

2007 was the MESA project's second year. While the data produced this year have increased our knowledge of the issues of access and retention, they really represent only the very start of the information that the program will provide over its course.

Our work this year primarily focused on two key areas: the establishment of the *Longitudinal Survey of Low-Income Students* and the exploitation of existing Statistics Canada data on access and retention. Our activities in each of these areas are described below.

1. Establishment of *Longitudinal Survey of Low-Income Students (SLIS)*

In 2005, following a series of national consultations, the Foundation introduced its access bursary program. From mid-2005 to early 2006, it concluded agreements with all ten provinces to provide grants to low-income students, with the total amount of the award per province being calculated on a per-capita basis. However, the details of the program in each province differ slightly. Notable differences include:

- In seven provinces, the primary criterion for eligibility is family income (either directly or indirectly). In two provinces (Saskatchewan and, for a portion of the awards, Manitoba), having an Aboriginal background was seen as an automatic proxy for need, while in a third (Alberta) residency outside the major metropolitan areas of Calgary, Edmonton, Sherwood Park and St. Albert was used to determine eligibility for the award.
- In nine provinces, the award is available for only the first year of study. In New Brunswick, the award was made available for three years (as a result, it is only available to two cohorts of students instead of four).
- In some provinces the grant replaces loans, in others it comes on top of the existing loan packages and in still others it is a mixture of both.
- In two provinces (Alberta and Ontario), Foundation grant money was mixed with provincial funds to provide an integrated grant program that was larger than the Foundation allocation.

The main details of the program in each province are shown in Table 1.

As part of the negotiations to set up these awards, the Foundation also received commitments from most provinces to receive enhanced data on the students receiving an access bursary—as well as data on a number of students who received provincial student aid but narrowly missed out on receiving the access bursary. This was intended to provide the Foundation not only with good data on its own clientele but also with data on a group of students who, because they are quite similar to the students who did receive the awards, can act as a “control group” using regression discontinuity techniques.³ By comparing the outcomes of people who narrowly qualified for an award with those who narrowly missed qualifying, it is possible to examine the pure effect of the Foundation's grants.

For various reasons, obtaining control group data proved problematic in many jurisdictions. Due to the way the target population is derived in Alberta, Saskatchewan and, for a portion of the awards, Manitoba (i.e., an access bursary is received only if one is from a rural area or Aboriginal), it is not possible to use a discontinuity approach, and so no “control group” data were collected. The design of the program in Quebec also made it impossible to construct a valid control group. As a result of technical challenges, no information on control groups was provided by either PEI or Newfoundland and Labrador. Ontario, meanwhile, declined to provide data on a control group; however, because

3. In most provinces, the millennium access bursaries are awarded to students whose family income is lower than a pre-determined threshold. For this reason, individuals with very similar levels of family income may be treated very differently, which allows for a discontinuity analysis, or a comparison of the very different effects experienced by those students whose incomes fall just above or just below the threshold. This comparison is considered a superior way of examining the “pure” causal effects of an intervention.

Table 1: Summaries of Low-Income Bursary Agreements by Province

Jurisdiction	AB	BC	SK	MB1	MB2	ON
Program Name	Millennium Alberta Rural Incentive Bursary	Millennium Access Bursary	Millennium Aboriginal Access Bursary	Manitoba Adult Learner Bursary	Millennium Manitoba Opportunities Grant	Millennium / Ontario Access Grant
MOU Signing Date	May 16, 2006	February 11, 2005	June 30, 2005	May 16, 2005	March 17, 2006	May 9, 2005
Students Eligible per Year	8,100	2,800	700	100	450 single dep.; 300 Aboriginal	16,000
Bursary Value	\$1,000	\$3,000	\$2,000	\$5,000 (in Year 1, diminishing thereafter)	50% of tuition (max. \$3,000; \$4,000 for Aboriginal students)	25% to 50% of tuition (max. \$3,000)
Eligibility	1st- or 2nd-year rural resident	1st-year, single dependant	1st- or 2nd-year Aboriginal student	Graduate of Adult Learning Centres	1st-year, single dependant; independent Aboriginal student	1st-year, single dependant
Low Income Definition	Rural student eligible for student aid	Less than \$1,000 parental contribution	Aboriginal student eligible for student loans	Threshold set by province and Foundation	NCB	NCB in 1st year; expanded eligibility in 2nd year
Foundation Contribution (over Duration)	\$19.8 million	\$26 million	\$6.4 million	\$3 million	\$4.44 million	\$76 million
Provincial Contribution	Commitment to cover awards beyond annual allocation and Foundation's scope			Partial funding (intended to fund beyond Foundation's scope)		\$24 million
Unmet Need or Loan Reduction	Cash grant independent of SFA assessment	Cash grant independent of SFA assessment	Unmet need first, then loan reduction	Cash grant independent of SFA assessment	Loan reduction	Loan reduction

Jurisdiction	QC	NB	NS	PEI	NL
Program Name		Millennium Access Grant	Millennium Access Grant	Millennium PEI Access Grant	Millennium Access Grant
MOU Signing Date	May 12, 2005	September 21, 2005	July 19, 2005	August 2, 2006	April 5, 2006
Students Eligible per Year	3,000	700	1,000	267	650
Bursary Value	\$3,000 (approx.)	\$1,000 (Y1) \$2,200 (Y2) \$1,800 (Y3)	\$1,000 debt relief Up to \$500–\$2,500 of unmet need	\$1,000	\$1,000 debt relief Up to \$500–\$2,500 of unmet need
Eligibility	1st-year, single dependant	1st- to 3rd-year, single dependant	1st-year, single dependant	2nd-year, single dependant	1st-year, single dependant
Low Income Definition	Lowest-income students eligible for student loans	NCB	Less than \$1,000 parental contribution	NCB	Less than \$1,000 parental contribution
Foundation Contribution (over Duration)	\$40 million	\$4.8 million	\$6 million	\$795,000	\$3.4 million
Provincial Contribution					
Unmet Need or Loan Reduction	Loan reduction	Loan reduction	Unmet need (for those who have it) and loan reduction	Cash grant independent of SFA assessment	Unmet need (for those who have it) and loan reduction

some recipients of the Foundation's awards are also recipients of a federal Canada Access Grant (CAG), there is scope to do an impact analysis with a control group *within* the sample of Foundation recipients. Because of this, the Ontario sample labelled "recipients" is actually that subset of access bursary recipients who also received a CAG—i.e., their family income was below the level required to qualify for the full National Child Benefit (NCB). "Non-recipients" are those whose family incomes exceeded the NCB threshold but only received an access bursary.

Survey Approach and Sampling

The Foundation obtained detailed administrative data on 32,403 borrowers in ten provinces, which were provided to the MESA team for analysis. The basic data on these students and their financial characteristics can be found in Table 2.

In most provinces, the majority of the students received were 18 or 19 years old, except in Alberta, Saskatchewan and (in part) Manitoba, where the program is not restricted to first-year students. The sample was a little over 60 percent female in most provinces except Saskatchewan, where it was over 70 percent female, reflecting the much higher female participation rates seen among Aboriginal peoples. In all provinces, the cases were for the most part attending university; only in Quebec (where CEGEPs represent a major part of the education system), Alberta (where the focus on rural students naturally favours colleges, since more of them cater to rural populations) and Newfoundland and Labrador did college students come close to making up or exceeding half the base. The average assessed need of access bursary recipients varied from province to province, but in most places ranged from about \$8,000 to \$10,000. In those provinces where we have data on both recipients and non-recipients, the

Table 2: Summary of Low-Income Bursary Recipient and Non-Recipient Characteristics by Province for 2006–07 Cohort

Province	Gender Ratio (F:M)	Average Age	Certificate: Bachelor's Ratio	Average Value of Assessed Need	Average Value of Millennium Bursary	Average Parental Income	Average Value of Total Awards
AB	63:37	22	58:42	\$9,085	\$984	\$27,934	\$9,832
BC Recipients	58:42	18	40:60	\$8,501	\$3,000	\$31,440	\$10,613
BC Non-Recipients	56:44	18	41:59	\$6,239	n/a	\$82,044	\$5,864
MB Recipients	61:39	21	23:77	\$8,270	\$1,723	\$20,209	\$8,090
MB Non-Recipients	59:41	19	30:70	\$6,997	n/a	\$24,461	\$6,746
MB Opp. Grant	61:39	21	23:77	\$8,270	\$1,723	n/a	\$8,090
NL	67:33	18	47:53	\$9,125	\$1,923	\$36,328	\$9,046
NB Recipients	68:32	19	25:75	\$10,949	\$1,448	\$23,845	n/a
NB Non-Recipients	63:37	19	25:75	\$9,953	n/a	\$63,291	n/a
NS Recipients	71:29	18	11:89	\$13,749	\$1,527	\$34,783	\$13,883
NS Non-Recipients	59:41	19	21:79	\$7,009	n/a	\$75,342	\$6,723
ON Recipients ⁴	60:40	19	35:65	\$8,764	\$1,741	\$20,698	\$8,511
ON Non-Recipients	61:39	18	35:65	\$8,066	\$1,168	\$58,015	\$7,971
PE	66:34	19	33:67	\$8,732	\$1,000	\$28,092	n/a
QC	66:34	20	48:52	\$8,067	\$3,303	\$12,952	\$5,256
SK	73:27	26	33:67	\$12,656	\$760 ⁵	\$19,878	\$11,230

- In Ontario, "recipient" refers to students who received the Canada Access Grant in addition to their access bursary; "non-recipient" refers to students who received the access bursary but not the CAG.
- Awards in Saskatchewan combine cash and loan remission. The number in Table 2 represents the average cash award. The average remission is \$1,240, and the average cash and remission award is \$2,000.

average assessed need for non-recipients was slightly lower than it was for recipients, which makes intuitive sense since they are by definition from wealthier families that should be able to provide more resources to their children. Similarly, there were differences in average parental incomes between recipients and non-recipients; in most provinces, the difference was about \$40,000.

These statistics are interesting, but the story they tell is a limited and descriptive one. The MESA research design therefore called for following these students through surveys for three years and combining their administrative and survey data into a single integrated file. While this design, used in the United States for its *National Post-Secondary Student Aid Survey (NPSAS)*, is considered a “best practice” among many researchers, the combination of administrative and survey data has never before been attempted in a Canadian PSE study.

The MESA project thus extracted a sample of 17,630 students from nine provinces from its database of 32,403 students; the tenth province, PEI, was

not able to transfer its data files in time to be included in the survey. MESA’s survey partner, *Academica Group Inc.*, proceeded to call these students over a four-month period from January to May 2007 and administered a roughly 25-minute survey. In the end, 10,511 students in the nine provinces completed the survey. Table 3 shows how the overall sample was constructed.

In the provinces of BC and Nova Scotia, the survey sample includes students who received the access bursary based on their income and a selection of student aid applicants who narrowly missed out due to being slightly over the cut-off point, thus creating the possibility of research based on discontinuity analysis. In Ontario, as noted above, only bursary recipients were interviewed, but roughly half of those who received an access bursary also received a federal bursary, so a discontinuity exists there as well. In Manitoba, Newfoundland and Labrador, New Brunswick, Quebec, Alberta and Saskatchewan, the survey only covers recipients of the access bursary, for the reasons explained previously.

Table 3: Longitudinal Survey of Low-Income Students—Sample Details

	# of Cases in Administrative Database	# of Cases Selected for Sample Frame	# of Completed Interviews
AB Recipients	3,926	1,573	813
BC Recipients	2,361	1,555	968
BC Non-Recipients	630	540	257
MB Recipients	517	499	284
MB Non-Recipients	1,296	0	0
NB Recipients	842	300	202
NB Non-Recipients	2,179	0	0
NL Recipients	624	624	399
NS Recipients	356	316	221
NS Non-Recipients	570	350	178
ON Recipients	7,563	5,000	3,177
ON Non-Recipients	6,888	5,000	2,956
PE Recipients	153	0	0
QC Recipients	3,331	1,500	878
SK Recipients	807	373	178
Total	32,403	17,630	10,511

The national sample generated by this process should not be thought of as being representative of the student population as a whole or even of the low-income student population as a whole. In particular, the sample is not geographically balanced; roughly half comes from Ontario, for instance.

In all provinces except Alberta, Saskatchewan and (in part) Manitoba, the survey is restricted to students in their first year of PSE. Survey subjects were re-interviewed in early 2008 and will be re-interviewed again in winter 2009. The first survey wave will be available to MESA researchers in fall 2008 and the second from early 2009. A request for proposals will be issued inviting proposals for research projects involving these data.

The following section provides a description of the survey respondents, both at the national and provincial level and with distinctions made between the “recipient” and “non-recipient” populations where useful. The totals have been weighted by province to correct for survey non-response bias.

Survey Sample Demographics

In terms of gender, the survey sample was 62 percent female and 38 percent male (see Table 4). The male-female ratio was relatively similar across the country except in Saskatchewan, where the sample was over 70 percent female. The bias in Saskatchewan is at least partly explained by the fact that the sample is restricted to Aboriginal students, among whom the female-male ratio is known to be quite high. There is

no difference between recipients and non-recipients in this respect.

Nationally, 69 percent of students said they lived with both their mother and father throughout high school, although this ranged from 83 percent in Alberta to just 41 percent in Quebec (see Table 5). A quarter of respondents overall lived in single-parent households with their mother only; however, in Alberta the proportion was just 14 percent, while in Quebec it was 50 percent. Saskatchewan had the highest percentage of students growing up with neither biological parent, at 16 percent. Again, this seems to be related to the different circumstances facing Aboriginal youth. In Ontario, students receiving both CAGs and access bursaries were substantially more likely to be from single-parent families; the same was true for access bursary recipients vs. non-recipients in Nova Scotia. To a large extent, this is natural, as the dividing line between recipients and non-recipients is income, and single-parent families are likely to have lower income than are dual-parent families.

In terms of parental education (Table 6), roughly 30 percent of both mothers and fathers had ended their education before attending any PSE. Roughly 20 percent of students’ parents had received a bachelor’s degree or higher. Parental educational attainment was substantially lower in Newfoundland and Labrador and Saskatchewan than it was in the rest of the country. The lowest-income students in Ontario were more likely than their slightly

Table 4: Survey Respondents By Gender

	All Respondents	All Bursary Recipients	NL (Recips)	NS (All)	NS (Recips)	NS (Non-Recips)	NB (Recips)	QC (Recips)	ON (All)	ON (CAG Recips)	ON (CAG Non-Recips)	MB (Recips)	SK (Recips)	AB (Recips)	BC (Recips)	BC (Non-Recips)
Female	62%	62%	69%	66%	69%	64%	66%	66%	60%	59%	60%	62%	80%	61%	58%	56%
Male	38%	38%	31%	34%	31%	36%	34%	34%	40%	41%	40%	38%	20%	39%	42%	44%

Table 5: Living Arrangements in High School

	All Respondents	All Bursary Recipients	NL (Recips)	NS (All)	NS (Recips)	NS (Non-Recips)	NB (Recips)	QC (Recips)	ON (All)	ON (CAG Recips)	ON (CAG Non-Recips)	MB (Recips)	SK (Recips)	AB (Recips)	BC (Recips)	BC (Non-Recips)
Lived with Two Parents	69%	69%	78%	81%	68%	92%	58%	41%	72%	61%	81%	64%	57%	83%	70%	91%
Lived with Mother Only	25%	25%	16%	15%	25%	7%	37%	50%	24%	33%	16%	25%	26%	14%	24%	7%
Other	5%	5%	6%	3%	6%	1%	5%	9%	4%	6%	3%	10%	16%	3%	6%	2%

Table 6: Highest Level of Parental Education

	All Respondents	All Bursary Recipients	NL (Recips)	NS (All)	NS (Recips)	NS (Non-Recips)	NB (Recips)	ON (All)	ON (CAG Recips)	ON (CAG Non-Recips)	MB (Recips)	AB (Recips)	QC (Recips)	SK (Recips)	BC (Recips)	BC (Non-Recips)
Less than HS	6%	6%	15%	7%	10%	4%	10%	4%	7%	2%	10%	5%	14%	14%	4%	1%
HS Completed	25%	25%	35%	28%	29%	26%	35%	24%	25%	23%	24%	25%	27%	20%	24%	18%
PSE—Less than Bachelor's	41%	41%	38%	43%	43%	45%	34%	43%	37%	49%	37%	46%	34%	29%	37%	43%
University—Bachelor's	13%	13%	4%	14%	10%	16%	8%	13%	13%	13%	12%	13%	11%	14%	17%	21%
University—Grad	8%	8%	2%	6%	5%	8%	2%	9%	10%	8%	5%	8%	5%	5%	10%	14%
Missing	7%	7%	7%	2%	3%	1%	11%	7%	8%	5%	11%	3%	8%	18%	9%	3%

wealthier counterparts to have parents who had not finished high school, but the proportion of parents who had achieved a bachelor's-level education or higher was essentially the same.

While 95.8 percent of respondents were Canadian citizens, just 72 percent said they were born in Canada (Table 7). The largest group of people born outside Canada were the six percent who said they were born in China or Hong Kong. The foreign-born students in the survey were not at all evenly distributed across the country: the proportion of

students born abroad was less than six percent in the Atlantic provinces, Alberta and Saskatchewan; 11 percent in Quebec; 27 percent in Manitoba; 35 percent in Ontario; and 46 percent in BC. In Ontario, recipients of both CAGs and access bursaries were substantially more likely than access bursary-only recipients to have been born outside the country. On average, those who had not been born in Canada had been resident in the country for about nine years before starting PSE.

Table 7: Birthplace and Citizenship

	All Respondents	All Bursary Recipients	NL (Recips)	NS (All)	NS (Recips)	NS (Non-Recips)	NB (Recips)	QC (Recips)	ON (All)	ON (CAG Recips)	ON (CAG Non-Recips)	MB (Recips)	SK (Recips)	AB (Recips)	BC (Recips)	BC (Non-Recips)
Born in Canada	72%	72%	>99%	98%	99%	98%	98%	89%	65%	58%	73%	73%	100%	94%	55%	72%
Canadian Citizen Not Born in Canada	23%	23%	<1%	1%	<1%	2%	2%	7%	31%	36%	25%	13%	0%	4%	36%	25%
Landed Immigrant	4%	4%	0%	1%	<1%	1%	0%	4%	4%	6%	2%	14%	0%	2%	10%	4%

Table 8: Ethnic Origin

	All Respondents	All Bursary Recipients	NL (Recips)	NS (All)	NS (Recips)	NS (Non-Recips)	NB (Recips)	QC (Recips)	ON (All)	ON (CAG Recips)	ON (CAG Non-Recips)	MB (Recips)	SK (Recips)	AB (Recips)	BC (Recips)	BC (Non-Recips)
White	58%	58%	95%	96%	96%	96%	94%	86%	49%	43%	56%	47%	19%	87%	40%	62%
Aboriginal	3%	3%	3%	1%	2%	1%	2%	<1%	1%	1%	1%	20%	72%	2%	1%	1%
Chinese	9%	9%	0%	0%	0%	0%	<1%	1%	11%	12%	10%	4%	0%	2%	21%	12%
South Asian	7%	7%	0%	0%	0%	0%	1%	1%	10%	11%	9%	1%	0%	1%	7%	6%
Other	23%	23%	2%	2%	2%	3%	2%	11%	28%	33%	23%	28%	9%	8%	31%	18%

Ethnically, 58 percent of the survey sample identified themselves as “white” (see Table 8). Eight percent of respondents identified themselves as Chinese, seven percent as South Asian and four percent as “black.” No other ethnicity represented more than three percent of the sample. Not surprisingly, the ethnic make-up of the sample also varied substantially by region. At the extremes, over 90 percent were “white” in the Atlantic provinces, while in Saskatchewan (where the target population

was meant to be Aboriginal students) less than 20 percent described themselves as white. Ontario, Manitoba and BC all had less than one in two respondents identify themselves as white.

With regard to place of origin (see Table 9), 29 percent of respondents nationally went to secondary school in communities of 10,000 or fewer people. There were significant differences across the country. In BC and Ontario, only 13 percent and 19 percent, respectively, came from such small communities,

while in Newfoundland and Labrador the proportion was 72 percent and in both New Brunswick and Alberta⁶ it was 60 percent. Only about one-sixth (17 percent) of respondents indicated that they came from cities with over 500,000 people. While this figure went as high as 22 percent in Ontario, it was below ten percent in every other province except BC and Manitoba.

Broadly, what the demographics tell us is that the survey sample—which in theory is a reasonably good proxy for the “at-risk” student population as a whole—is by no means homogeneous. Excluding for the moment Alberta and Saskatchewan (whose target populations were based on geography and ethnicity, respectively, rather than income), what we seem to have are populations from Quebec and the Atlantic provinces which are rural, white and Canadian-born, whereas in Ontario, Manitoba and BC, the respondent population is more urban and more ethnically diverse (with large Asian populations in particular).

Respondents' Secondary School Experiences

The survey examines a number of issues with respect to high school experiences, as lack of prior academic preparation has been noted in much previous

research as a cause of PSE discontinuation. These questions form the bulk of the survey's Module B.

Most (78 percent) respondents indicated that they had attended a single institution throughout secondary school. Eighteen percent had attended two schools, while five percent reported having attended three or more schools. The average number of schools attended was much higher in Saskatchewan than elsewhere; presumably, this is related to the fact that urban Aboriginals tend to be quite mobile and switching schools is more common among this population.

As Table 10 shows, 60 percent of respondents indicated that their overall grade average was 80 percent (that is, an “A” grade) or higher, although this varied significantly by province, with the highest grades being in Nova Scotia and the lowest in Alberta, Saskatchewan and Manitoba. However, these results were not equal across the board: grades appeared to be higher in language courses than they were in math. In math, only two-thirds of respondents indicated that they had taken the equivalent of a Grade 12 math class; of these, only 47 percent reported having received a grade of 80 percent or higher. In their main language class (i.e., English or French), 80 percent of respondents said they

Table 9: Size of Community of Origin

	All Respondents	All Bursary Recipients	NL (Recips)	NS (All)	NS (Recips)	NS (Non-Recips)	NB (Recips)	QC (Recips)	ON (All)	ON (CAG Recips)	ON (CAG Non-Recips)	MB (Recips)	SK (Recips)	AB (Recips)	BC (Recips)	BC (Non-Recips)
Less than 10K	29%	29%	72%	64%	71%	56%	61%	47%	19%	16%	21%	38%	48%	60%	13%	17%
City of 10K–500K	41%	41%	14%	20%	16%	26%	23%	36%	46%	44%	49%	17%	35%	32%	43%	45%
City of 500K+	17%	17%	1%	1%	1%	1%	0%	8%	22%	26%	19%	22%	3%	1%	15%	14%
Don't Know	14%	14%	14%	14%	13%	17%	16%	9%	12%	14%	11%	24%	14%	7%	29%	23%

6. The Alberta sample is deliberately weighted toward a rural population, as a stipulation of the grant is that the recipient cannot live in either Calgary or Edmonton (or St. Albert or Sherwood Park, both of which are bedroom communities of Edmonton).

Table 10: Secondary School Achievement

	All Respondents	All Bursary Recipients	NL (Recips)	NS (All)	NS (Recips)	NS (Non-Recips)	NB (Recips)	QC (Recips)	ON (All)	ON (CAG Recips)	ON (CAG Non-Recips)	MB (Recips)	SK (Recips)	AB (Recips)	BC (Recips)	BC (Non-Recips)
E/F (<50%)	<1%	<1%	0%	0%	0%	0%	0%	<1%	0%	0%	0%	0%	1%	<1%	<1%	0%
D (50–59%)	<1%	<1%	0%	0%	0%	0%	0%	<1%	0%	0%	0%	0%	2%	2%	<1%	0%
C (60–69%)	5%	5%	9%	1%	1%	1%	3%	4%	4%	4%	3%	7%	15%	11%	5%	3%
B (70–79%)	32%	32%	41%	23%	23%	21%	32%	35%	30%	31%	30%	37%	38%	39%	27%	28%
A (80%+)	60%	60%	49%	72%	72%	76%	63%	57%	64%	62%	64%	47%	30%	41%	64%	66%
Don't Know	3%	3%	2%	3%	3%	2%	3%	3%	2%	2%	2%	9%	14%	6%	4%	3%

Table 11: Time Spent Per Week in Paid Employment in Secondary School

	All Respondents	All Bursary Recipients	NL (Recips)	NS (All)	NS (Recips)	NS (Non-Recips)	NB (Recips)	QC (Recips)	ON (All)	ON (CAG Recips)	ON (CAG Non-Recips)	MB (Recips)	SK (Recips)	AB (Recips)	BC (Recips)	BC (Non-Recips)
1–9 Hours	12%	12%	9%	9%	11%	8%	11%	11%	13%	12%	13%	8%	5%	11%	15%	14%
10–19 Hours	27%	27%	14%	32%	31%	33%	25%	25%	28%	26%	30%	26%	20%	28%	26%	30%
20–29 Hours	16%	16%	6%	16%	15%	18%	15%	5%	18%	18%	18%	22%	13%	19%	14%	16%
30 Hours +	5%	5%	2%	5%	4%	5%	5%	2%	5%	5%	5%	8%	7%	8%	4%	6%
Zero/Did Not Work	39%	40%	68%	37%	39%	35%	44%	56%	35%	37%	32%	37%	55%	35%	42%	35%

had taken the equivalent of a Grade 12 class and 56 percent reported receiving a grade of 80 percent or higher.

The survey also examines issues such as time use in high school. As Table 11 shows, 61 percent of students worked for pay during their high school years, although this figure was much smaller in Quebec, Saskatchewan (44 and 45 percent, respectively) and Newfoundland and Labrador (32 percent). The median number of hours worked per week was between ten and 20. In addition, 14 percent of

respondents indicated that they had worked without pay in a family business or farm during their final year of secondary school. These figures did not vary substantially across the country.

Four out of five respondents also said they participated in clubs, sports teams and volunteer work in their final year of high school, with just over half of these saying their involvement was five hours or more per week. Table 12 shows that participation in these activities was relatively constant across the country—except in Quebec, Saskatchewan and

Table 12: Time Spent Per Week in Extracurricular Activities in Secondary School

	All Respondents	All Bursary Recipients	NL (Recips)	NS (All)	NS (Recips)	NS (Non-Recips)	NB (Recips)	QC (Recips)	ON (All)	ON (CAG Recips)	ON (CAG Non-Recips)	MB (Recips)	SK (Recips)	AB (Recips)	BC (Recips)	BC (Non-Recips)
1–4 Hours	34%	34%	37%	31%	35%	26%	33%	33%	35%	35%	33%	27%	24%	27%	36%	33%
5–9 Hours	23%	22%	22%	24%	26%	24%	20%	18%	23%	22%	23%	19%	21%	21%	22%	25%
10–14 Hours	13%	12%	12%	16%	14%	18%	10%	9%	13%	11%	14%	13%	10%	14%	12%	13%
15 Hours +	13%	13%	11%	16%	15%	18%	14%	8%	13%	13%	13%	13%	13%	13%	13%	14%
Zero/Did Not Participate	19%	19%	19%	11%	9%	13%	23%	33%	16%	16%	14%	29%	31%	24%	18%	15%

Table 13: Time Spent Per Week on Homework Outside of Class in Secondary School

	All Respondents	All Bursary Recipients	NL (Recips)	NS (All)	NS (Recips)	NS (Non-Recips)	NB (Recips)	QC (Recips)	ON (All)	ON (CAG Recips)	ON (CAG Non-Recips)	MB (Recips)	SK (Recips)	AB (Recips)	BC (Recips)	BC (Non-Recips)
0–4 Hours	26%	26%	21%	28%	28%	29%	29%	30%	24%	24%	24%	41%	44%	37%	20%	21%
5–9 Hours	33%	33%	37%	38%	40%	39%	37%	34%	32%	30%	32%	27%	30%	33%	33%	40%
10–14 Hours	22%	22%	26%	19%	19%	21%	19%	19%	22%	21%	22%	16%	17%	17%	24%	24%
15–19 Hours	9%	9%	10%	6%	7%	5%	12%	8%	10%	9%	9%	9%	5%	6%	10%	7%
20+ Hours	10%	11%	7%	6%	7%	6%	4%	10%	11%	13%	9%	8%	4%	8%	13%	7%

Manitoba, where significantly more students said they were not involved in any of these activities.

Students were also asked about time spent on homework outside of class. Table 13 shows that the median response appears to be about four or five hours per week. These results were also quite consistent across the country, although students in the three Prairie provinces were slightly more likely than others to indicate having spent less than five hours per week studying.

Respondents' Views on PSE

The survey includes a battery of eight questions about perceived rates of return on respondents' investment in PSE. These questions, which are based on work previously done by Academica Group and Dr. James Côté of the University of Western Ontario, are designed to help get a sense of the motivations students have when they enter PSE, particularly with respect to education and the labour market. These questions are in Module C of the survey.

Table 14: Views on Return on Investment in PSE

	Strongly Disagree	Disagree	Neutral	Somewhat Agree	Strongly Agree
1. Even if a person has to go deep into debt to get a PSE, it will still likely be worth it in terms of a better job and higher salary.	1%	4%	7%	38%	51%
2. The time and money put into a PSE is a good investment in today's job market.	<1%	2%	5%	30%	64%
3. People who have a PSE get jobs that are much more satisfying.	2%	8%	14%	39%	37%
4. The best way to get a prestigious job is through PSE.	2%	8%	11%	41%	38%
5. I'm not sure that a PSE would pay off in the long run, given how costly it is these days.	30%	35%	12%	18%	5%
6. People would be better off putting their money into investments like real estate and the stock market than bothering with PSE.	44%	34%	12%	8%	2%
7. You can learn enough about the real world without PSE.	14%	24%	20%	32%	11%
8. Good jobs can be found without a PSE.	8%	17%	15%	45%	16%

More specifically, students were given a number of statements regarding the value of PSE and asked to agree or disagree with them. As Table 14 shows, by and large, respondents seemed to believe that PSE was a very good investment; however, they did not seem to believe that it was necessarily an *essential* one, given their apparent strong belief that good jobs are available that do not require PSE. These results were essentially the same across the country, although students in New Brunswick and Manitoba seemed to be slightly more positive about PSE across all of these questions than were students in other provinces.

The survey also asks a number of questions about friends, families and role models (Tables 15, 16 and 17, respectively), all of which have been shown by previous research to be important contributors to student success. The survey data show that respondents seemed to have received substantial encouragement from both family and friends, although it may be worth noting that as many as 20 percent of respondents believed their parents would not be disappointed if they failed to complete their studies. Students in Ontario reported the highest levels of encouragement from both sources.

Students across the country also believed by and large that they had role models who represented where they wish to go in their careers. Again, the results were quite consistent nationally, although respondents in Saskatchewan and Quebec were substantially less likely than those elsewhere to report having such role models.

The survey also asks respondents to identify when they made their decision to enrol in PSE (Table 18). In most provinces, between 30 and 40 percent indicated that they had intended to go to PSE since primary school (what might be called “early deciders”), and 70 to 80 percent said that they made their decision prior to Grade 12. There were two real exceptions to this rule. The first was Saskatchewan, where the respondent population is primarily Aboriginal, and less than one in five respondents said they decided to attend PSE in primary school. Instead, the decision to attend PSE occurred more recently—usually in Grade 12 or even later. The other exception was Quebec, which had a high number of early deciders but also an unusually high proportion of students (roughly one-third) who did not decide to attend PSE until after secondary school.

Table 15: Agreement with Statement “Most of My Friends Think It’s Important to Get PSE”

	All Respondents	All Bursary Recipients	NL (Recips)	NS (All)	NS (Recips)	NS (Non-Recips)	NB (Recips)	QC (Recips)	ON (All)	ON (CAG Recips)	ON (CAG Non-Recips)	MB (Recips)	SK (Recips)	AB (Recips)	BC (Recips)	BC (Non-Recips)
Strongly Disagree (1)	3%	3%	4%	2%	3%	2%	2%	4%	2%	2%	2%	4%	4%	5%	3%	3%
Somewhat Disagree (2)	6%	6%	10%	8%	7%	10%	4%	4%	5%	6%	5%	9%	8%	12%	7%	8%
Neutral (3)	8%	8%	9%	11%	11%	10%	7%	6%	7%	7%	8%	10%	14%	9%	10%	11%
Somewhat Agree (4)	28%	29%	33%	31%	29%	33%	26%	25%	26%	25%	27%	38%	25%	37%	33%	30%
Strongly Agree (5)	55%	55%	44%	47%	49%	46%	62%	61%	59%	60%	58%	39%	49%	38%	48%	47%
Mean	4.3	4.2	4.0	4.1	4.1	4.1	4.4	4.4	4.3	4.3	4.3	4.0	4.1	3.9	4.2	4.1

Table 16: Agreement with Statement “My Parents Would Be Very Disappointed in Me If I Didn’t Get a University or College Degree”

	All Respondents	All Bursary Recipients	NL (Recips)	NS (All)	NS (Recips)	NS (Non-Recips)	NB (Recips)	QC (Recips)	ON (All)	ON (CAG Recips)	ON (CAG Non-Recips)	MB (Recips)	SK (Recips)	AB (Recips)	BC (Recips)	BC (Non-Recips)
Strongly Disagree (1)	10%	9%	10%	17%	16%	17%	9%	19%	7%	7%	8%	8%	15%	17%	8%	12%
Somewhat Disagree (2)	12%	12%	14%	15%	15%	15%	14%	11%	10%	10%	11%	18%	19%	22%	12%	12%
Neutral (3)	8%	8%	9%	7%	9%	6%	7%	10%	7%	6%	8%	11%	18%	10%	9%	9%
Somewhat Agree (4)	23%	22%	31%	30%	28%	32%	23%	27%	21%	19%	22%	23%	22%	25%	23%	23%
Strongly Agree (5)	48%	48%	35%	31%	31%	30%	46%	33%	55%	58%	52%	40%	26%	27%	49%	43%
Mean	3.9	3.9	3.7	3.43	3.4	3.42	3.8	3.5	4.1	4.13	3.99	3.7	3.3	3.2	3.9	3.7

Table 17: Agreement with Statement “I Have Role Models at Home or at School That Represent Where I Hope to Go in My Career”

	All Respondents	All Bursary Recipients	NL (Recips)	NS (All)	NS (Recips)	NS (Non-Recips)	NB (Recips)	QC (Recips)	ON (All)	ON (CAG Recips)	ON (CAG Non-Recips)	MB (Recips)	SK (Recips)	AB (Recips)	BC (Recips)	BC (Non-Recips)
Strongly Disagree (1)	5%	5%	2%	3%	4%	3%	4%	12%	5%	6%	5%	3%	5%	5%	5%	5%
Somewhat Disagree (2)	9%	9%	7%	10%	12%	8%	7%	8%	9%	10%	8%	14%	7%	10%	10%	9%
Neutral (3)	11%	10%	9%	7%	6%	8%	9%	9%	11%	11%	11%	12%	12%	9%	13%	13%
Somewhat Agree (4)	32%	32%	33%	32%	31%	32%	32%	29%	33%	31%	34%	35%	26%	30%	35%	33%
Strongly Agree (5)	43%	43%	50%	48%	48%	49%	48%	41%	43%	42%	42%	37%	50%	45%	38%	40%
Mean	4.0	4.0	4.2	4.13	4.1	4.17	4.1	3.8	4.0	3.95	4.01	3.9	4.1	4.0	3.9	3.9

Table 18: Age at Which Student Made Decision to Go to PSE

	All Respondents	All Bursary Recipients	NL (Recips)	NS (All)	NS (Recips)	NS (Non-Recips)	NB (Recips)	QC (Recips)	ON (All)	ON (CAG Recips)	ON (CAG Non-Recips)	MB (Recips)	SK (Recips)	AB (Recips)	BC (Recips)	BC (Non-Recips)
After High School	10%	11%	6%	4%	4%	4%	13%	32%	5%	6%	5%	20%	48%	22%	9%	7%
During Grade 12	10%	10%	14%	11%	12%	11%	17%	3%	9%	10%	9%	13%	14%	10%	11%	10%
During Grade 11	9%	9%	8%	10%	8%	13%	9%	9%	9%	10%	8%	8%	7%	9%	11%	8%
Grades 9–10	23%	24%	28%	24%	22%	24%	18%	12%	27%	26%	28%	18%	7%	19%	18%	20%
Grades 7–8	8%	7%	8%	9%	10%	9%	5%	5%	7%	7%	7%	5%	2%	7%	12%	13%
Grades 5–6	4%	4%	4%	6%	5%	6%	7%	4%	4%	4%	4%	3%	2%	3%	6%	5%
Always Known	36%	36%	33%	36%	39%	33%	31%	36%	38%	36%	39%	33%	18%	30%	36%	37%

Table 19: Respondents by Field of Study (Top Ten)

	#
Liberal Arts/General Studies	1,829
Business & Commerce	1,399
Health Profession	842
Engineering	669
Biology	649
Social Sciences	587
Visual & Performing Arts	474
Parks, Recreation, Leisure & Fitness	321
Security & Protective Service	297
Family & Consumer Sciences	271

Respondents' Experiences in PSE

Module D looks at respondents' experiences in PSE. At the start of this module, respondents were asked about their enrolment status. At the time of the interview, 2.5 percent indicated that they had ceased taking courses since January. Obviously, this is an important group of students because they are precisely the ones the MESA survey is trying to examine in order to learn about the determinants of dropping out. However, the task of examining these reasons requires multivariate analysis; univariate data on this group may be misleading because the

sample size is so small. For the purposes of presenting these data, we have therefore restricted reporting to the 97.5 percent of respondents who remained enrolled throughout the school year.

Survey respondents were studying in many different fields. The top ten areas of study (based on Statistics Canada's Classification of Instructional Programs codes) are shown in Table 19.

Roughly 95 percent of survey respondents indicated that they had enrolled with the intention of obtaining a degree, with the remainder saying they had only enrolled to take certain courses, with little variation across the country. Table 20 shows that 62 percent of respondents indicated that after finishing their current degree, they intended to go on and pursue additional certifications, with figures varying from over two-thirds in Quebec (where the substantial number of CEGEP students is presumably raising the numbers higher than the comparable figures in other provinces) to just 50 percent in Alberta. Of these students, over half stated that they wished to obtain a Master's, doctorate or professional degree (e.g., law, medicine).

Respondents were also asked about their grades in the first year (Table 22). For the most part, respondents appeared to be doing well in their studies, with nearly three-quarters saying their overall average was an "A" or "B."

Table 20: Plan to Obtain Additional Degrees, Diplomas or Certificates After Current Program

	All Respondents	All Bursary Recipients	NL (Recips)	NS (All)	NS (Recips)	NS (Non-Recips)	NB (Recips)	QC (Recips)	ON (All)	ON (CAG Recips)	ON (CAG Non-Recips)	MB (Recips)	SK (Recips)	AB (Recips)	BC (Recips)	BC (Non-Recips)
Yes	62%	62%	52%	61%	61%	62%	57%	68%	64%	65%	63%	51%	51%	50%	66%	56%
No	18%	17%	25%	18%	15%	21%	27%	21%	15%	15%	16%	24%	28%	26%	14%	22%
Don't Know	21%	22%	23%	20%	24%	17%	15%	12%	21%	20%	21%	25%	22%	25%	20%	22%

Table 21: Highest Level of Education Planned to Complete

	All Respondents	All Bursary Recipients	NL (Recips)	NS (All)	NS (Recips)	NS (Non-Recips)	NB (Recips)	QC (Recips)	ON (All)	ON (CAG Recips)	ON (CAG Non-Recips)	MB (Recips)	SK (Recips)	AB (Recips)	BC (Recips)	BC (Non-Recips)
Private School	1%	1%	1%	1%	2%	0%	2%	1%	1%	1%	1%	2%	0%	2%	1%	0%
Community College	11%	11%	14%	7%	7%	8%	10%	13%	13%	12%	14%	10%	13%	9%	5%	5%
(u) Certificate or Diploma	5%	5%	5%	3%	3%	3%	3%	5%	5%	5%	5%	3%	5%	6%	3%	4%
(u) Bachelor's Degree	23%	23%	28%	33%	32%	34%	31%	20%	20%	19%	21%	30%	30%	29%	24%	22%
Professional Degree	9%	9%	13%	9%	11%	7%	7%	10%	10%	10%	10%	8%	7%	7%	10%	13%
Master's Degree	36%	37%	26%	34%	35%	34%	38%	37%	37%	37%	37%	34%	35%	35%	43%	42%
Doctorate	15%	15%	13%	12%	10%	14%	9%	15%	15%	16%	13%	13%	11%	13%	15%	14%

Table 22: Overall GPA, Current Year

	All Respondents	All Bursary Recipients	NL (Recips)	NS (All)	NS (Recips)	NS (Non-Recips)	NB (Recips)	QC (Recips)	ON (All)	ON (CAG Recips)	ON (CAG Non-Recips)	MB (Recips)	SK (Recips)	AB (Recips)	BC (Recips)	BC (Non-Recips)
E/F (0)	<1%	<1%	0%	0%	0%	0%	<1%	<1%	<1%	<1%	<1%	<1%	1%	<1%	<1%	0%
D (1)	2%	2%	3%	3%	3%	2%	4%	1%	2%	2%	1%	1%	2%	1%	1%	1%
C (2)	16%	16%	16%	22%	26%	17%	18%	8%	15%	17%	20%	20%	21%	12%	20%	16%
B (3)	51%	50%	41%	50%	49%	51%	41%	48%	52%	51%	51%	51%	46%	46%	55%	56%
A (4)	32%	32%	36%	25%	21%	29%	37%	44%	30%	30%	28%	28%	31%	42%	25%	27%
Mean	3.1	3.1	3.1	3.0	2.9	3.1	3.1	3.3	3.1	3.1	3.1	3.1	3.0	3.3	3.3	3.1

In addition, students were asked a battery of questions regarding how they felt about their choice of program and how it was helping them with respect to their career (Table 23). These questions relate to the question of program “fit,” as originally described by Tinto (1975, 1992) and developed in Canada by Dr. Peter Dietsche of the Ontario Institute for Studies in Education. For the most part, respondents were quite positive about their experiences,

with large majorities feeling that their programs were well suited to them. These data showed little variation across provinces or by recipient status.

Respondents’ Use of Time

Module E of the survey looks at respondents’ use of time. Competing demands on students’ time (primarily studying and working, although commuting time and extracurricular activities take

Table 23: Student Views on Choice of Program

	Strongly Disagree	Disagree	Neutral	Somewhat Agree	Strongly Agree
1. I can relate what I am learning in my classes to my future career plans.	1%	3%	7%	30%	59%
2. I am interested in what I learn at school.	1%	2%	5%	31%	62%
3. The classes I am taking this year are giving me skills that will help me in the job market.	1%	4%	8%	33%	54%
4. The classes I am taking this year are helping me get a better idea of my future plans.	1%	2%	5%	29%	63%
5. Overall, I believe I am enrolled in a program of studies that is right for me.	1%	3%	6%	24%	65%

Table 24: Average Hours per Week Spent Studying or Doing Assigned Work Outside of Class

	All Respondents	All Bursary Recipients	NL (Recips)	NS (All)	NS (Recips)	NS (Non-Recips)	NB (Recips)	QC (Recips)	ON (All)	ON (CAG Recips)	ON (CAG Non-Recips)	MB (Recips)	SK (Recips)	AB (Recips)	BC (Recips)	BC (Non-Recips)
0–3 Hours	5%	5%	5%	7%	7%	7%	4%	4%	5%	4%	5%	6%	5%	4%	4%	4%
4–7 Hours	19%	19%	20%	23%	26%	21%	18%	14%	19%	19%	18%	23%	21%	16%	21%	21%
8–14 Hours	30%	30%	39%	31%	31%	30%	31%	26%	31%	30%	31%	28%	30%	30%	30%	29%
15–20 Hours	26%	27%	23%	24%	24%	24%	29%	30%	27%	26%	26%	27%	27%	25%	25%	29%
21–29 Hours	13%	12%	10%	9%	9%	9%	12%	17%	12%	12%	11%	11%	16%	15%	14%	10%
30+ Hours	7%	7%	4%	5%	3%	8%	6%	9%	7%	8%	7%	6%	3%	10%	5%	7%
Mean	21.1	21.1	23.2	20.0	18.4	21.7	21.4	22.6	20.4	20.4	20.4	19.9	21.4	25.4	19.9	21.0

their toll, too) make good academic results hard to obtain and hence may be a contributing factor to discontinuation of studies.

Table 24 shows that, on average, students spent roughly 21 hours per week in classes and laboratories. The variation by province or receipt of bursary was very small. Over 80 percent of students reported spending at least 15 hours per week in class. In Ontario, where the largest comparison group of recipients and non-recipients exists, the differences in time spent studying were virtually insignificant.

Table 25 looks at hours spent on extracurricular/volunteer activities. A similar pattern exists here: there are some non-trivial differences between provinces, but in Ontario, where we are able to compare a group that received two sets of bursaries with one that received only one bursary, there appears to be little to distinguish recipients and non-recipients.

In terms of time spent on paid employment (Table 26), the majority (63 percent) of respondents indicated that they did not work regularly during

Table 25: Average Hours per Week Spent in Extracurricular or Volunteer Activities

	All Respondents	All Bursary Recipients	NL (Recips)	NS (All)	NS (Recips)	NS (Non-Recips)	NB (Recips)	QC (Recips)	ON (All)	ON (CAG Recips)	ON (CAG Non-Recips)	MB (Recips)	SK (Recips)	AB (Recips)	BC (Recips)	BC (Non-Recips)
0–3 Hours (1)	60%	60%	63%	54%	61%	48%	54%	62%	61%	61%	62%	61%	57%	62%	55%	57%
4–7 Hours (2)	23%	23%	22%	25%	24%	27%	29%	23%	22%	23%	21%	21%	24%	21%	25%	25%
8–14 Hours (3)	12%	12%	13%	14%	12%	16%	12%	11%	11%	11%	12%	12%	14%	11%	14%	13%
15–20 Hours (4)	3%	3%	2%	5%	3%	7%	4%	3%	3%	3%	2%	5%	4%	5%	4%	4%
21–29 Hours (5)	1%	3%	0%	1%	1%	0%	1%	1%	1%	1%	1%	1%	1%	1%	1%	0%
30+ Hours (6)	1%	1%	1%	1%	0%	2%	1%	<1%	0%	0%	2%	<1%	<1%	0%	1%	0%
Mean	1.6	1.6	1.5	1.77	1.6	1.90	1.7	1.6	1.60	1.58	1.65	1.6	1.7	1.6	1.7	1.7

Table 26: Paid Employment and Earnings During the School Year

	All Respondents	All Bursary Recipients	NL (Recips)	NS (All)	NS (Recips)	NS (Non-Recips)	NB (Recips)	QC (Recips)	ON (All)	ON (CAG Recips)	ON (CAG Non-Recips)	MB (Recips)	SK (Recips)	AB (Recips)	BC (Recips)	BC (Non-Recips)
Yes	37%	37%	20%	36%	20%	49%	27%	47%	35%	36%	33%	47%	27%	40%	47%	46%
Mean Monthly Wages	\$444	\$440	\$358	\$429	\$259	\$601	\$392	\$523	\$399	\$399	\$399	\$448	\$519	\$641	\$437	\$523

Table 27: Summer Earnings and Savings

	% Reporting Summer Earnings	Mean Summer Earnings	Median Summer Earnings	% Reporting Summer Savings	Mean Summer Savings	Median Summer Savings
BC	71%	\$2,378	\$2,000	58%	\$1,509	\$1,000
AB	83%	\$5,289	\$4,000	71%	\$2,810	\$2,000
SK	61%	\$4,616	\$3,700	26%	\$1,769	\$1,200
MB	75%	\$2,860	\$2,000	55%	\$1,467	\$1,000
ON	73%	\$2,592	\$2,000	62%	\$1,729	\$1,500
QC	74%	\$3,036	\$2,500	54%	\$1,608	\$1,000
NB	74%	\$2,563	\$2,000	64%	\$1,489	\$1,000
NS	83%	\$3,096	\$2,500	74%	\$2,093	\$1,500
NL	78%	\$1,925	\$1,800	65%	\$1,204	\$1,000
Canada	74%	\$2,870	\$2,000	62%	\$1,777	\$1,500

the school year. The actual proportion working varied widely from province to province, but in all cases only a minority reported devoting time to paid employment. This contrasts somewhat with other student studies (e.g., Ekos 2007), which tend to indicate the opposite. There are a few possible reasons why the proportion of students working might be low. First, the question only includes those students who work regularly, week in, week out, and excludes the small but non-negligible group of students who work on a more casual or sporadic basis. Second, the sample is primarily made up of students in their first year of studies, who are normally less likely to be in the workforce. Third, as noted earlier, there are a lot of students from small towns and rural areas in this sample, many of whom would have had to move in order to attend PSE; these students would be less likely to find work simply because they would not yet have a local network through which to obtain part-time work. Fourth and finally, all respondents are student aid recipients, and since the student aid system puts a high effective tax rate on labour income, it may be that students with aid are simply less likely to work altogether. Still, one intriguing item of note is the very large difference in the proportion of access bursary recipients working vs. the proportion of

non-recipients doing so. This suggests that the extra grant income may be sufficient to reduce the need for students to work; however, more multivariate analysis will be needed in order to demonstrate this conclusively.

Respondents' Income

Part of Module E and all of Module F look at the issue of student income from sources outside the need-based student aid system.

The most important source of student income came from labour (see Table 26). While only a minority of respondents worked, the monthly income of those who did was substantial: over an eight-month period, those who worked could use their work income to pay for most, if not all, of their tuition. However, it is worth noting that there were substantial regional variations in the patterns of labour income. Incidence of work and amounts earned tended to be higher in the west (and, perhaps surprisingly, Quebec) than elsewhere; in the east, part-time work seemed not to be as common, possibly because of a scarcity of paid employment opportunities. The exception to this rule was Saskatchewan, where the respondent population was older and more likely to have family responsibilities.

Table 28: Incidence of Prior Savings

	Own Savings	Family Savings
BC	46%	44%
AB	49%	41%
SK	12%	16%
MB	36%	28%
ON	52%	53%
QC	35%	27%
NB	47%	35%
NS	56%	51%
NL	39%	42%
Canada	48%	47%

Across the country, most respondents indicated both that they had summer jobs and that they were able to save money for the school year as a result of working. There was less disparity in summer earnings than there was in in-school earnings, both in terms of incidence and amount earned—although reported average summer earnings in Alberta were much, much higher than elsewhere in the country. Interestingly, higher summer wages did not automatically translate into higher savings—students clearly used a proportion of their earnings to purchase consumer goods.

The presence of savings for education is often taken as an indicator of good preparation for PSE. Among survey respondents, Table 28 shows that similar proportions of respondents indicated that they and their parents had saved for their education (48 percent had saved on their own; 47 percent had other family members saving for them). The proportion of students saying that their parents had savings was roughly in line with the kind of averages seen in previous studies, such as the *Post-Secondary Education Participation Survey* (Finnie & Usher, 2007). However, the figure for savings among students themselves was about twice as high as it is for the general student population, which is potentially significant. There were very significant differences across provinces in savings rates both for parents and students, with savings rates being highest in BC, Alberta and Ontario and lowest in Saskatchewan.

A significant number of students in the sample indicated that they had received assistance from their parents, either in the form of gifts or contributions or in the form of a loan (see Table 29). There was not very much variation across the country, with the exception, once again, of Saskatchewan, where respondents were much more likely to be older and independent of their parents. The average amount of parental contributions was substantially lower in Quebec, Manitoba, Newfoundland and

Table 29: Parental Contributions

	% Receiving Contributions from Parents	Mean Contribution from Parents	Median Contribution from Parents	% Receiving Loan from Parents	Mean Loan from Parents	Median Loan from Parents
BC	39%	\$2,505	\$1,000	16%	\$2,427	\$1,800
AB	42%	\$2,279	\$1,500	19%	\$2,431	\$1,500
SK	18%	\$2,432	\$1,000	11%	\$1,743	\$1,000
MB	34%	\$1,472	\$1,000	12%	\$1,524	\$1,500
ON	43%	\$2,450	\$1,500	14%	\$2,397	\$1,200
QC	40%	\$1,540	\$1,000	15%	\$948	\$500
NB	43%	\$1,496	\$600	13%	\$906	\$700
NS	52%	\$2,444	\$1,200	17%	\$2,495	\$1,000
NL	45%	\$1,070	\$1,000	8%	\$1,282	\$500
Canada	43%	\$2,269	\$1,000	15%	\$2,195	\$1,000

Labrador and New Brunswick than it was in the other provinces; it is possibly significant that in three of these cases, provincial tuition rates are also quite low. For a very small proportion of respondents (eight percent), another source of funds came from private bank loans. While few respondents availed themselves of this option, it represented a very significant source of money for those who did, as the median private loan value was \$5,000.

A final source of income for students was income from academic awards, scholarships and prizes. This was perhaps the most surprising result of the entire survey: 70 percent of respondents indicated that they had received some kind of academic scholarship, award or prize, with a mean value of \$3,500. Several previous studies have concluded that only about a third of first-year students receive some form of merit-based aid; moreover, there has tended to be an assumption that this aid in practice does not assist the poor. Consequently, this result is somewhat puzzling and merits significant further investigation.

Analysis: Differences Between Bursary Recipients and Non-Recipients

One of the key questions in the MESA project is how the receipt of bursaries affects a range of student behaviour, the most important of which is persistence. Thus, it is obviously of key importance to examine the differences between recipients and non-recipients, specifically in the three provinces where we have good data on both: namely, Nova Scotia, Ontario and BC.

A brief glance through Tables 1 and 2 shows the most important differences of all: the income cut-offs separating recipients and non-recipients and the average family incomes of the two. By design, one group is significantly richer than the other. This has a number of fairly predictable results in terms of the demographics of the two groups. The recipient group was more likely to include children of single parents, because single-parent families are likely to be poorer. There were also significant differences in terms of parental education levels.

Some of the resulting differences in background between the two groups were not consistent across provinces. For instance, in Ontario (but not BC or Nova Scotia), being in the recipient group was associated with a greater likelihood of being non-white and urban, whereas the reverse was true in the other provinces.

Once one gets past the defining socio-demographic differences between the two groups and begins to look at differences in terms of outcome or behaviour, it becomes very difficult to spot differences between them. In terms of secondary school grades, non-recipients had very slightly higher results, but the difference was marginal. Recipients were also slightly more likely to have worked during high school, but the difference was again not very pronounced. With regard to the timing of the decision to go to PSE and attitudinal questions like the perceived value of investment in PSE, differences were non-existent. Differences in plans to obtain further education and the highest degree of education planned were virtually indistinguishable, as were differences in academic results at the post-secondary level.

The one possibly significant and intriguing difference concerns the incidence of work during the school year. Students who received extra bursaries worked less than students who did not. The effect was very small and possibly insignificant in Ontario but quite pronounced in Nova Scotia.

In short, one can say that while recipients and non-recipients did not resemble one another in terms of demographic characteristics, they did closely resemble one another in terms of behaviour and short-term outcomes. It is impossible to draw any conclusions from these observations. It may be that the receipt of grants allows poorer bursary recipients to adjust their behaviour and raise their results so as to match their slightly better off counterparts; it may equally be that the two groups would be equivalent even without the bursaries. To answer these questions requires regression and discontinuity analysis techniques, which the MESA project will be doing over the coming 12 months.

Analysis: Differences Between Bursary Recipients and the Canadian Student Body

Thanks to the fact that the *Longitudinal Survey of Low-Income Students (SLIS)* shares a number of questions with the *Youth in Transition Survey (YITS)*, there are a number of available data points which permit a comparison between the Foundation's

access bursary recipients and the general student population.

The *Youth in Transition Survey Cohort A (YITS-A)* is a national longitudinal study of 30,000 youth aged 15 which began in the year 2000. The 2000 wave included interviews with students and parents, as well as each individual student's results on the

Table 30: YITS-A Comparison: Respondents Who Attended PSE by Cycle 4

	National	NL	PE	NS	NB	QC	ON	MB	SK	AB	BC
Gender											
Male	46.1%	43.8%	43.9%	46.5%	43.3%	46.2%	45.8%	45.1%	45.6%	47.1%	47.5%
Female	53.9%	56.2%	56.1%	53.5%	56.7%	53.8%	54.2%	54.9%	54.4%	52.9%	52.5%
Family Structure											
Two Parents	84.3%	86.6%	84.6%	87.0%	86.1%	80.9%	83.7%	85.1%	88.8%	89.0%	85.3%
Single Mother	12.1%	10.7%	13.1%	10.3%	10.9%	14.1%	12.9%	11.3%	9.0%	8.7%	10.8%
Single Father	2.4%	1.4%	X	1.6%	X	3.9%	2.3%	2.1%	1.7%	1.2%	2.1%
Other	1.1%	1.4%	X	1.1%	X	1.1%	1.0%	1.5%	0.5%	1.1%	1.8%
Parental Education											
Less than HS	5.5%	9.8%	4.9%	4.5%	5.2%	8.1%	4.9%	5.7%	4.4%	3.9%	4.0%
HS Completed	18.9%	15.5%	16.9%	14.8%	18.9%	21.5%	19.3%	18.3%	20.8%	17.0%	15.7%
Some PSE	6.5%	X	X	X	X	X	X	X	X	X	X
Trade/College	30.5%	48.5%	37.1%	37.0%	39.3%	30.1%	27.7%	27.0%	35.7%	34.2%	30.3%
University—Below BA	5.3%	3.4%	4.0%	4.5%	4.2%	6.7%	5.7%	4.8%	5.9%	3.0%	4.0%
University—BA	21.7%	12.7%	21.5%	21.7%	16.4%	20.0%	22.7%	22.8%	17.9%	22.5%	23.8%
University—Grad	11.7%	6.9%	10.1%	12.6%	9.4%	9.4%	13.1%	10.1%	7.8%	11.3%	14.0%
Other/Unknown	0.1%	X	X	X	X	X	X	X	X	X	X
Family Income											
Mean (\$)	\$73,972	\$59,847	\$61,278	\$65,405	\$61,609	\$68,946	\$79,417	\$70,917	\$63,778	\$82,113	\$70,065
Extremely Low (\$0-\$5,000)	1.3%	X	X	X	X	1.2%	1.5%	0.9%	3.3%	1.0%	1.5%
\$5,000 to \$25,000	6.1%	X	X	X	X	7.3%	4.9%	5.1%	7.0%	4.3%	7.3%
\$25,000 to \$50,000	22.7%	35.8%	33.1%	28.2%	32.1%	26.7%	18.8%	26.6%	27.2%	18.2%	23.9%
\$50,000 to \$75,000	28.0%	28.3%	31.6%	31.3%	31.4%	30.2%	26.3%	28.5%	29.6%	28.1%	27.5%
\$75,000 to \$100,000	24.3%	16.4%	17.5%	19.2%	19.0%	20.2%	27.6%	23.5%	22.1%	24.7%	24.5%
\$100,000+	17.6%	9.1%	9.5%	12.3%	9.7%	14.4%	20.9%	15.5%	10.8%	23.7%	15.3%
Family Income (Students Living at Home)											
Mean (\$)	\$83,503	\$68,334	\$67,680	\$70,592	\$65,387	\$70,366	\$91,160	\$75,958	\$61,773	\$88,309	\$76,503
Extremely Low (\$0-\$5,000)	0.7%	X	X	X	X	X	X	X	4.2%	X	X
\$5,000 to \$25,000	4.2%	X	27.3%	X	28.3%	X	X	X	5.2%	X	X
\$25,000 to \$50,000	18.6%	31.9%	32.4%	25.7%	31.5%	18.3%	15.6%	32.5%	31.7%	18.1%	23.1%
\$50,000 to \$75,000	28.3%	31.3%	19.4%	33.4%	24.0%	33.2%	26.8%	28.2%	26.4%	24.5%	29.2%
\$75,000 to \$100,000	28.0%	18.9%	13.0%	22.7%	11.5%	22.8%	31.2%	12.6%	21.6%	29.4%	23.3%
\$100,000+	20.1%	12.5%	X	13.8%	X	17.2%	22.7%	X	10.9%	23.2%	17.8%

X=Censored values

OECD's Programme for International Student Assessment (PISA) exam; for more details on PISA, go to www.pisa.oecd.org. Students were re-interviewed in 2002 and 2004, at the ages of 17 and 19, with respect to their educational and labour market experiences. *YITS-A* is therefore an excellent source of data with respect to first-time access to PSE.

The *SLIS*, however, is not *entirely* comparable with *YITS-A*: the *SLIS* looks at students in their first year of studies in 2007 (except for Alberta, Saskatchewan and, in part, Manitoba), while the *YITS-A* sample of post-secondary students covers those students who were 15 in 2000 and had attended *any* PSE by 2006. But since *YITS-A* is as complete a portrait as we have of the younger end of the Canadian student population, it remains useful as a baseline for comparison. Table 30 shows some basic characteristics of the *YITS-A* population.

In comparing the data from the *SLIS* to the general student population shown in *YITS*, a few things become apparent.

First, the survey sample is considerably more female (61 percent) than the overall population (54 percent). Since the survey sample is drawn from families who are poorer than the general student population, this suggests that the gender gap in education may become more pronounced as family income decreases.

Second, the survey sample is considerably less likely than average to come from families that have two parents and families with higher levels of parental education. But both of these differences are, to a considerable extent, reflections of the fact that the survey sample is *by design* composed of people with very low family incomes. The mean family income for bursary recipients in the survey is close to \$20,000, while for non-recipients it is roughly \$65,000; in the *YITS* sample the average family income is \$74,000.⁷ As a result, a different set of demographics pertaining to family structure and parental education is inevitable.

2. Exploiting Statistics Canada Data

In addition to producing original data on student attrition, our approach was designed to utilize and analyze the very large amounts of data that already exist within Statistics Canada databases, especially the *Youth in Transition Survey* and its two cohorts: *YITS-A* (described above) and *YITS-B*. The latter is a longitudinal study of 23,000 youth aged 18 to 20 in 2000, focusing on labour market and educational experiences. Students were re-interviewed in 2002 (aged 20 to 22) and in 2004 (aged 22 to 24), thus providing a very good resource for studying access to PSE and especially issues related to retention and persistence.

In October 2006, the project's research committee selected a number of research projects to look at issues of access and persistence utilizing Statistics Canada data. These projects were completed over the course of 2007. The key findings of these documents are briefly summarized below under the headings of "Access," "Persistence" and "Student Financial Aid."

Access

Ross Finnie and Richard Mueller, in their paper *The Effects of Family Income, Parental Education and Other Background Factors on Access to Post-Secondary Education in Canada: Evidence from the YITS*, looked at the influence of various factors on access to PSE, using the *YITS-A* cohort to follow a group of students longitudinally from the age of 15 to 21. While they found that parental income superficially appears to be a major determinant of access, once parental education is introduced as a control, the role of income largely disappears among college-bound students and almost completely for university-bound students. Part of this effect is direct, in the sense that parents tend to transmit signals to their children about expectations and achievement, but some of the effect is indirect and expresses itself through academic achievement. In particular, overall high school marks (as opposed to marks in language or math specifically) have a very large effect on

7. That said, it should be noted that it is unclear how comparable the income statistics from the *YITS* survey are to the administrative data collected by governments. Furthermore, among the *YITS-A* sample, "family income" refers to family income recorded at the time of the *initial* survey (i.e., in 2000), when the students were 15.

university attendance. Engagement in secondary schools is a major determinant of access, as are, to a lesser extent, feelings of self-efficacy (i.e., feelings of competence and confidence at school). But more than academic achievement, it is simple cognitive development that is crucial: scores in the reading portion of the Programme for International Student Assessment (PISA) are the most important predictor of all. The Finnie-Mueller results strongly suggest that the cause of the participation gap between rich and poor is less financial than cultural.

Finnie and Mueller's findings largely corroborate other recent (non-MESA) work by Statistics Canada researcher Marc Frenette, who looked directly at the causes of the participation gap between rich and poor students in his *Why Are Lower-Income Students Less Likely to Attend University?* (Frenette 2008a). Frenette, while trying to explain differences in university attendance between students from rich and poor backgrounds, found that differences in long-term factors such as standardized test scores in reading obtained at age 15, school marks reported at age 15, parental influences and high school quality accounted for 84 percent of the gap. In contrast, only 12 percent of the gap was related to self-reported financial constraints. Similar results held across different income quartiles and standardized test scores in mathematics and science, although standardized reading scores accounted for a larger proportion of the gap than did other test scores.

Another MESA paper, *University Tuition Fees: An Inter-Provincial Comparison* by David Johnson, also investigated the role of financial barriers on access to PSE by examining the relationships between costs and access, using the *YITS* data. Like Finnie and Mueller (and, indeed, many other authors), Johnson found that the basic determinant was parental education, although he also found a significant effect for visible minority status as well. When he attempted to look at the effects of absolute tuition and year-on-year changes in tuition, he found effects only among youth from Quebec and youth from families where neither parent had university experience, and even these effects were relatively small. Overall, the impact of tuition was very small, which could mean either that the

benefits of PSE are very high or that existing systems of student aid are highly effective in compensating for tuition, or both.

In a final paper related to access issues, *Evolution of Aspirations for University Attendance: A Gender Comparison*, Michael Hoy and several colleagues from the University of Guelph examined the decision to enter university as an evolutionary process involving both aspirations of students (and their parents' expectations) and grade attainment, looking at differences between male and female respondents. The authors found that aspirations were correlated to many of the same family background characteristics that appeared to influence grade attainment; they also found that aspirations were significantly correlated to eventual attendance, even when holding grades constant. Moreover, they found that females at age 15 had higher overall PSE aspirations than their male counterparts and that by age 17 females were more likely to have revised their aspirations upward. The result is that a significantly higher fraction of females ends up deciding to attend university by age 19.

In sum, the research to date on access does not suggest that financial barriers are the major cause of inequality of access to PSE. Rather, it suggests that parental education is a significant socio-cultural determinant of access, helping to form higher aspirations and better study habits, which result in higher levels of educational attainment. Parental income is not a complete non-factor, but it is much less significant than other factors. The absence of any finding showing finances to be a major barrier to PSE in the research should not be interpreted to mean that "money doesn't matter." Rather, it suggests that at current levels of tuition and student aid, costs are not a significant barrier.

Retention

With respect to retention, the most important work to date from the MESA project is a paper by Ross Finnie and Theresa Qiu, *The Patterns of Persistence in Post-Secondary Education in Canada: Evidence from the YITS-B Dataset*. This paper represents something of a breakthrough in persistence studies in Canada, as it exploits the data on the *YITS-B*

cohort in order to derive five-year cohort graduation rates. Previous studies, which suffered from the defect of not being able to accurately track students who switched institutions, tended to show relatively high rates of attrition. Finnie and Qiu found that five-year graduation rates from first programs (i.e., what previous studies tended to measure) were 56 percent for college students and 52 percent for university students. However, once “switchers” (that is, students who switch programs or institutions at least once before graduating) and school leavers who subsequently returned to school were entered into the equation, completion rates rose to 73 and 69 percent, respectively. If those still enrolled in school are also added to the total, then the combined rate of retention and completion rises to 82 percent in college and 90 percent in university. Actual “losses” to the PSE system—that is, the percentage who after five years have neither graduated nor remained enrolled—are thus a relatively small proportion (between ten and 18 percent) of the total cohort.

In addition, Finnie and Qiu looked at determinants of dropping out. Unsurprisingly, parental education again appears to be a major determinant of persistence, but so too do family structure and first-year grades. In other words, the determinants of retention look a great deal like the determinants of access.

In terms of reasons for dropping out, in both colleges and universities, between 70 and 80 percent of respondents stated either that the program was “not for them” or that they wished to switch programs. Financial reasons were cited as a reason for dropping out by just nine percent of college leavers and 15 percent of university leavers. In a similar vein, David Johnson, in *University Tuition Fees: An Inter-Provincial Comparison*, looked at youths’ decisions to persist in PSE through the variation in annual increases in and the absolute values of tuition costs by province. He found that changes in tuition appeared to have negligible effects on persistence and concludes that neither the absolute amount of tuition nor recorded increases in tuition had a statistically significant effect on persistence. Again, this probably does not

mean that “money doesn’t matter” but rather that student assistance is at present sufficient in most cases to cover students’ needs.

In another paper, entitled *Student Transitions and Adjustments in Canadian Post-Secondary Education*, Dr. Felice Martinello focused on the experiences of students who switch programs, examining the characteristics of these switchers and their prospects of success after switching. Like Finnie and Qiu, he found that while most switchers changed to another program within the same institution type (e.g., from one college program to another), it was in fact those who switched institution types (i.e., moved from college to university or vice versa) that were more likely to complete their second degree. He also found that having parents with higher levels of education did not increase the likelihood of finishing one’s first-choice program—although it did increase the likelihood that a student would switch programs rather than drop out altogether.

Student Financial Aid

A number of commissioned papers focused specifically on trying to measure the effect of financial aid on persistence. This is an extremely difficult problem methodologically, as Kathleen Day notes in her paper *A Tangled Web: The Relationship Between Persistence and Financial Aid*. The central problem is one of measurement and the choice of instrumental variables. The effect of scholarships is difficult to measure because of the extent to which it is correlated with academic ability, which is endogenous. The effect of loans, meanwhile, is difficult to measure because of the extent to which it is correlated with other variables such as family structure, family income, etc.

Day’s paper begins by using *YITS-B* data to estimate a model of persistence and finds positive but very weak results when trying to locate an effect of student assistance on persistence. However, when the models were re-estimated to allow for the potential endogeneity of aid arising from the simultaneous dependence of both financial aid and persistence on the same unobservable factors, the positive correlation disappeared and was in some

cases replaced by a negative one. This does not necessarily mean that the relationship between financial aid and persistence is negative; it simply means that the limitations on measuring it using the instrumental variables available in *YITS-B* are too large to allow accurate measurement. The question is whether surveys with slightly more detailed information (for instance, *YITS-A*) might provide more answers or whether the question is simply unanswerable except through some kind of experimentation involving randomized field trials.

Another paper which looked at the effects of student assistance on persistence is *University Attainment, Student Loans, and Adult Life Course Activities: A Fifteen-Year Portrait of British Columbia Young Adults* by Lesley Andres and Maria Adamuti-Trache. It tracked the relationship between student aid and the educational and occupational outcomes of a cohort of BC college and university students who graduated from high school in 1988. The main finding of policy relevance is that a combination of adequate student financial aid and support services, including academic and career counselling, are necessary for timely degree completion and entrance into the workforce. The authors also found that women complete their studies faster than men but incur higher debt.

The final paper in this vein is *Grants for Students: Equal Access to Post-Secondary Education Requires More than a Student Loan Program* by Ross Finnie and Lorne Carmichael. This paper argues that family income affects access to PSE as a result of the greater hardship experienced by lower-income students when they are in school. Based on empirical evidence from *YITS*, the authors developed a new model for access that also shows that poorer students would likely have a larger response to changes in cost than students from middle- or high-income backgrounds. As a result, they argue that different policy mixes of student financial aid are optimal for different types of students. In particular, they find that grants rather than loans are optimal for encouraging low-income students to access PSE.

Overall Conclusions

There are a number of broad conclusions to be drawn from this collection of research.

The first has to do with the nature of persistence at the post-secondary level in Canada and whether or not it poses a significant policy problem. Clearly, students do not complete their initial programs in a timely manner very often: in fact, only about half of all students do so. However, this does not mean that there are vast numbers of students leaving PSE without credentials. In fact, after five years, between 73 percent of college students and 69 percent of university students have left with *some* kind of credential, albeit not always at the same level. Of the remainder, eight percent of college students and 20 percent of university students are still in school, leaving just 19 percent of college students and ten percent of university students as “dropouts” (i.e., not in school and without a credential five years after starting PSE). Viewed from one angle, Canada has a problem getting its youth in the *right* programs first time (roughly one-quarter of graduates in both university and college switch programs or institutions on the way to a credential); viewed from another angle, we are a success at giving students second and third chances, keeping them in the system and providing them with qualifications.

The second broad conclusion is that student finances appear to be a secondary issue as a barrier to access and a key to persistence. None of the studies reviewed here identified costs, student aid or, more broadly, student finances as a major issue in terms of access or persistence. This does not mean that money is inconsequential as a factor in access; rather, it means that with tuition and student aid at their current levels, financial factors are not predominant. The adequacy of the loan-grant mix remains an issue, as does the problem of managing student debt. But by and large, given present conditions, finances do not appear to represent a primary barrier to access.

The third broad conclusion is that the determinants of both access and persistence lie in “culture”—that is, in the mix of parental education and the expectations that young people inherit from their

parents, which manifests itself to a considerable degree in their personal aspirations, academic preparation and academic achievement. Different combinations of these factors have varying effects in different circumstances, but generally speaking they appear to be the main factors responsible for access and retention. As a result, there is a pressing need for policy research to be conducted to find ways of helping young people whose parents do not have high levels of education to reach comparable levels of academic aspiration and achievement. Unfortunately, existing data sources do not provide much assistance in this regard.

A final important conclusion from the research is that it is difficult to get reliable results about the effects of student aid. Because the incidence and amount of student aid is so closely correlated with factors such as need and income, it is almost impossible conceptually to identify the extent to which outcomes are determined by receipt of aid and the extent to which they are determined by the correlated underlying characteristics. The difficulty is such that experimental or quasi-experimental conditions are required to enable any estimates of the “pure” effect of aid.

3. Plans for 2008

Looking forward to 2008, the MESA project expects to produce the following results:

Longitudinal Survey of Low-Income Students: Between January and March 2008, we will re-interview *SLIS* respondents, with a view to re-interviewing at least 70 percent of those who answered the first round. These data are crucial because they will be able to provide a detailed look at students who drop out between year one and year two. Our aim is to be able to provide this data set for researchers by the fall of 2008.

Exploiting Statistics Canada Data: In October 2007, the MESA project’s research committee met to evaluate responses to an open request for proposals for projects involving access and retention. Five projects were chosen this year, including:

- Ross Finnie, *Persistence in Post-Secondary Education: Institution and Student Characteristic Effects*
- Mathieu Chemin et al., *Does Student Financial Aid Cause More Participation in Post-Secondary Education and Improved Labour Market Outcomes for Low-Income Students?: Evidence from Partner Income Shocks and Marital Status*
- Torben Drewes, *Gender Differences in University Participation*
- Felice Martinello, *Effects of University Characteristics and Academic Regulations in Undergraduate Students’ Persistence, Degree Completion and Time to Degree*
- Richard Mueller and Ross Finnie, *Access to Post-Secondary Education in Canada among First- and Second-Generation Canadian Immigrants*

Two more papers, one on access and high school resources by Dr. Kathleen Day and another on institutional student space allocation mechanisms by Dr. David Johnson, also received approval from the committee to receive assistance in the provision and interpretation of data.

Preliminary results will be shared at the Canadian Economics Association conference in June 2008. Final results from these papers should be available in late 2008. Working papers will subsequently be published on the MESA website and may also be published through Statistics Canada and *The Daily*.