

MESA L-SLIS RESEARCH BRIEF #2

# First Generation Post-Secondary Education Students

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**THE MESA PROJECT**

MEASURING THE EFFECTIVENESS OF STUDENT AID

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Post-Secondary Education Experiences  
  
b) Immigrants and Visible Minorities:  
Funding Post-Secondary Education
- 9) Urban, Suburban and Rural Students
- 10) Aboriginals In Post-Secondary Education

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(Version 02-26-10)

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# Part I: Introduction

## Major Findings

Students whose parents did not attend post-secondary education (PSE) have increasingly been understood to be a group that is less likely to access PSE. This report focuses on the experiences of those who do in fact make it to college or university ('first generation students' for short). The Longitudinal Survey of Low Income Students (L-SLIS), created to measure the effects of the Canada Millennium Scholarship Foundation's Access Bursary, offers a unique combination of information regarding students' family backgrounds, preparations for PSE, attitudes towards PSE and outcomes in PSE.

For the low income students represented in the L-SLIS data, the major findings of this brief are:

1. First generation students are much less likely than non-first generation students to say that they always knew they would attend PSE and are more likely than others to make their decision to attend PSE during their final years of high school.
2. First generation students are less likely than non-first generation students to have family members who saved for their PSE.
3. First generation students are not very different from non-first generation students when it comes to their opinions of whether they receive support and inspiration from their parents.
4. First generation students spend somewhat fewer hours studying than non-first generation students and have moderately lower grade averages.
5. First generation students are, perhaps surprisingly, not more likely than non-first generation students to leave PSE in first or second year without graduating.

Overall, we find that first generation students are not too different from non-first generation students in terms of PSE experiences. Perhaps of particular importance to policy makers is our finding that first generation students are not more vulnerable than others when it comes to leaving PSE without graduating.

The findings of this research brief thus suggest that there should be a shift in how policy makers should target students who are at risk of leaving PSE. Rather than targeting first generation students, other MESA Project L-SLIS Research Briefs provide evidence that certain measures of academic performance and engagement may be more reliable identifiers of at-risk individuals.

First generation and non-first generation students have many different individual and family characteristics that could be driving the results of this report. While we attempt to control for such factors in our analysis, we advise caution when imputing causality between being a first generation student and the outcomes we study. That said, being a first generation student does not appear to be a significant marker for encountering problems in PSE. Note that the findings of this brief apply specifically to the low income students represented by the L-SLIS and we cannot say if our findings hold for other low income students or for the student population in general.

## **Survey Data and Sample Selection**

The L-SLIS is constructed from administrative data and from surveys (carried out during the early months of 2007, 2008 and 2009) of students who entered PSE in fall 2006. The sample used for this report includes only students who enter PSE for their first time (the target group of the Millennium Scholarship Foundation's Access Bursary), and is further reduced to single dependant students, as defined by provincial student aid systems. Only students with parental incomes below the National Child Benefit (NCB) line have been included in this analysis in order to allow for consistent samples across provinces. Due to provincial differences in bursary programs, only students from Newfoundland and Labrador, Nova Scotia, New Brunswick, Ontario, Manitoba or British Columbia are included. Note that all respondents are recipients of government aid in their first year. For further sample details, see Appendix I.

## **The Question of Interest**

In the first year of the survey, students are asked, 'What was the highest level of education completed by your female (or male) guardian?' Responses have been used to create the following response categories:

1. Students with at least one guardian who attended at least some PSE ('non-first generation students' for short);
2. Students who do not have any guardians who attended PSE ('first generation students' for short).

Note that, 'first generation students' include students whose parents did not attend either college or university, while those whose parents had PSE of either type are classified as non-first generation students.

## **Part II: The Analysis**

### **Who Are First Generation Students?**

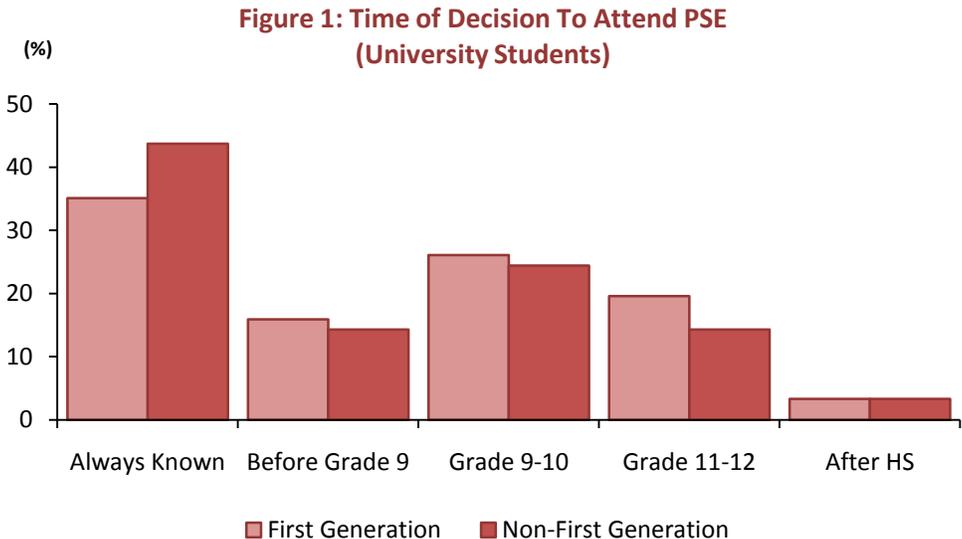
About 42 percent of the college students in our sample are first generation students while about 34.8 percent of university students are first generation students (Table A1). Among college and university students, females are

more likely than males to be first generation students. Also, students from rural communities are considerably more likely to be first generation students compared to students from larger communities.

Among college students, non-visible minority students born in Canada are more likely than visible minorities and/or immigrants to be first generation students (Table A1). For university students, those born in Canada are more likely than immigrants to be first generation students, whether they are visible minorities or not. In university, non-visible minority immigrants are the least likely to be first generation students. Among both college and university students, Aboriginal students are more likely than students of other ethnicities to be first generation students.

### Preparation For PSE

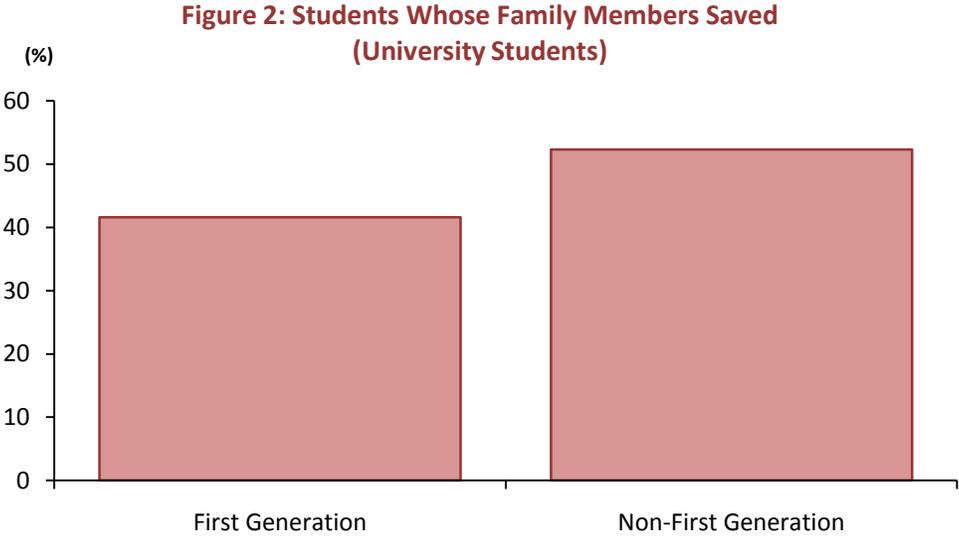
First generation university students are much less likely than others to say that they always knew they would attend PSE and more likely to make their decision to attend PSE in their final years of high school (Figure 1). The same general pattern holds for college students as well (Table A2).



Source: Table A2.

First generation students are less likely to have family members who saved for their education. Among university students, 52.3 percent of non-first generation students have family members who saved while only 41.6 percent of first generation students have family members who saved (Figure 2). Generally, the same general pattern applies to college students though college students are generally less likely than university students to have family members who saved (Table A2).

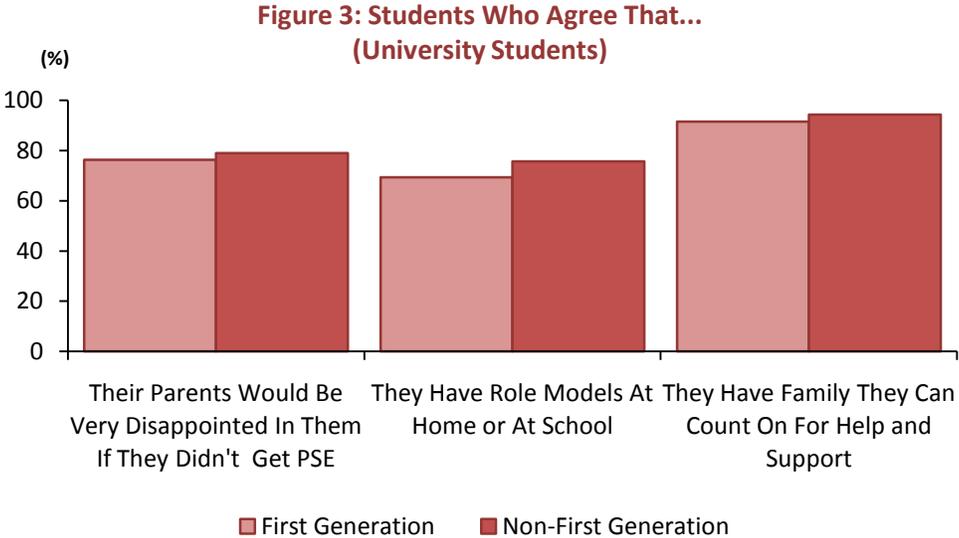
Among both college and university students, first generation students and non-first generation students are about equally as likely to have personally saved for their PSE (Table A2).



Source: Table A2.

### Attitudes Towards PSE

First generation and non-first generation students are about equally likely to agree that their parents would be very disappointed in them if they didn't get PSE (Figure 3 and Table A3). First generation students are somewhat less likely to agree that they have role models at home or at school. Finally, first generation students are almost as likely as non-first generation students to agree that they have family they can count on for help and support. Overall, the direction of these differences is consistent but the gaps are not very large.



Source: Table A3.

Respondents of the survey are asked whether they agree with a number of statements regarding the value of PSE. From the students' responses it appears that first generation and non-first generation students have more or less similar attitudes towards PSE. Both types of students agree in large proportions that PSE is worth going into debt for, that PSE is a good investment and that PSE leads to jobs that are more satisfying and prestigious (Table A3).

## **Studying and Grades**

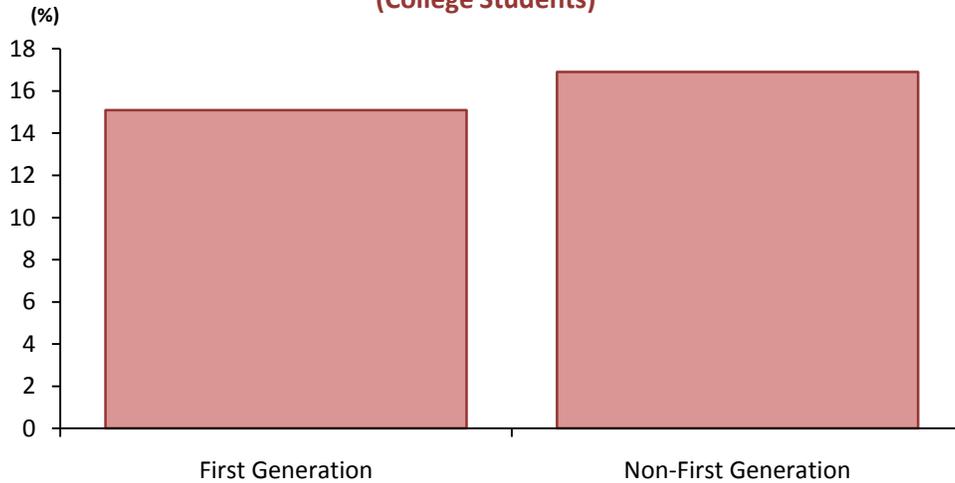
Compared to non-first generation students, first generation students spend slightly fewer hours per week studying. Among university students, first generation students spend 15.4 hours per week studying, on average, while non-first generation students spend 16.2 hours (Table A4). Among college students, the difference between first generation students' and non-first generation students' study hours is even smaller.

First generation students have slightly lower grades compared to non-first generation students. In first year of college, first generation students have an average grade of 77.7 percent while non-first generation students have an average grade of 78.5 percent (Table A4). In first year of university, first generation students have an average grade of 74.8 percent while non-first generation students have an average grade of 76.4 percent. (These comparisons do not take into account program of study or other PSE choices.)

## **Leaving PSE**

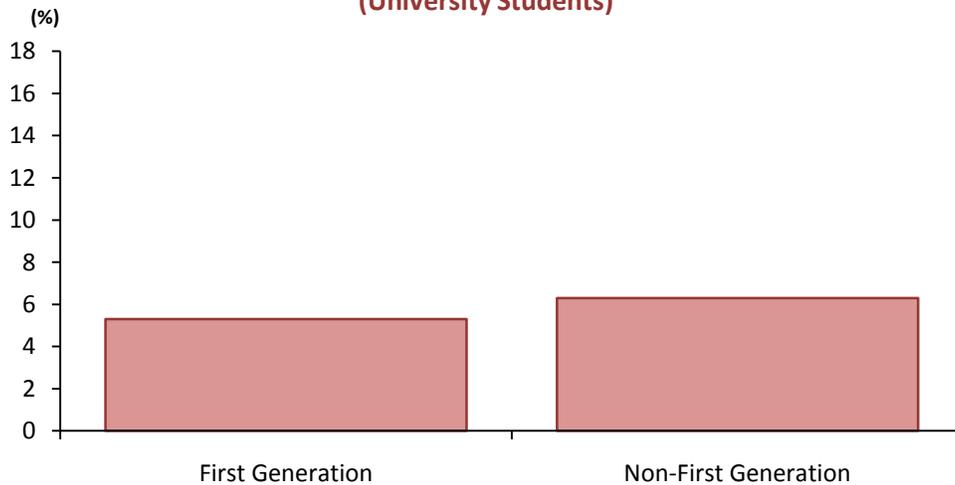
Though first generation students may compare slightly unfavorably to non-first generation students in some respects (e.g. studying and grades), first generation students are actually less likely to leave PSE in first or second year without graduating; this finding is consistent for college and university students (Figure 4 and Figure 5). Also, using regression analysis, first generation students are not found to be significantly more likely than non-first generation students to leave PSE (Table A6).

**Figure 4: Leaving PSE  
(College Students)**



Source: Table A4. Figure represents the percentage of students who leave PSE during first or second year without graduating.

**Figure 5: Leaving PSE  
(University Students)**



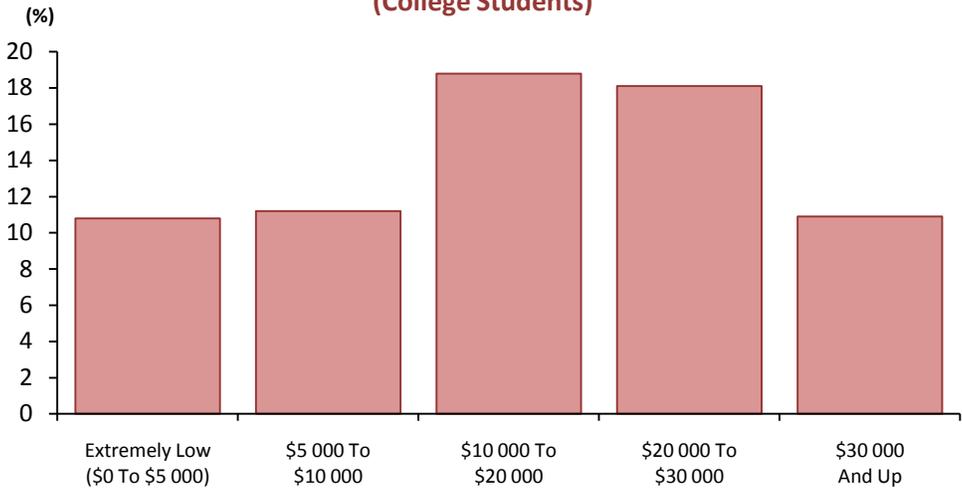
Source: Table A4. Figure represents the percentage of students who leave PSE during first or second year without graduating.

## **Does Family Income Matter More Than Parental Education?**

Students' family incomes are generally but not perfectly related to parental education levels; however, we do not find a consistent tendency when we look at the leaving rates of students of different family income categories (Figure 6 and Figure 7). We must emphasize that our sample includes only students with particularly low family incomes and therefore we cannot make any strong statements about the relationship between family income and leaving PSE as it applies to all students. We can, however, say that other L-SLIS research, which exploits larger ranges of family incomes, also finds little

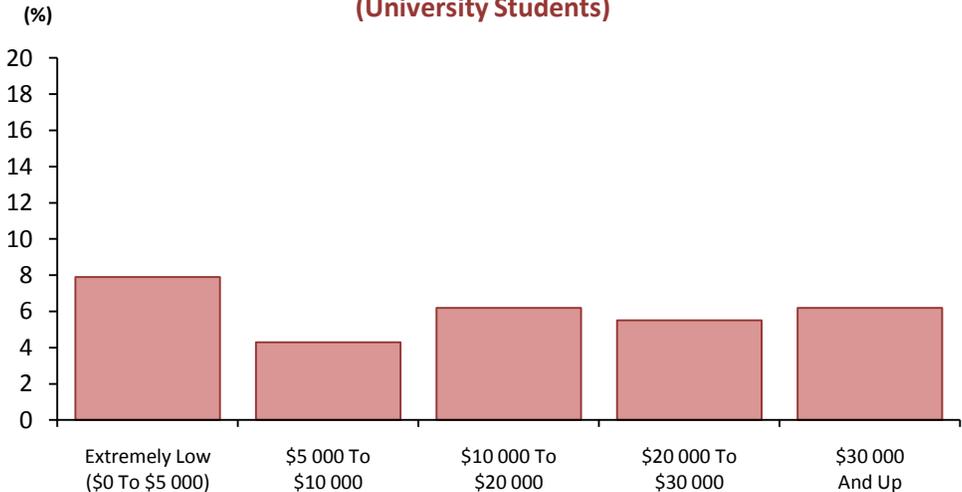
relation between family incomes and students' probabilities of leaving PSE (see MESA Project Annual Reports).

**Figure 6: Leaving PSE (College Students)**



Source: Table A5. Figure represents the percentage of students who leave PSE during first or second year without graduating.

**Figure 7: Leaving PSE (University Students)**



Source: Table A5. Figure represents the percentage of students who leave PSE during first or second year without graduating.

## Part III: Conclusion

Probably our most important finding is that parental education does not appear to be a particularly good marker for determining which students are inclined to leave PSE without graduating. Other differences are generally small, where they exist. Among students who access PSE, whether students' parents attended PSE does not make a great difference with regards to PSE experiences, in most respects.

## Appendix I: Survey Data and Sample Selection

Conducted as part of the Measuring the Effectiveness of Student Aid (MESA) project, the L-SLIS represents a longitudinal survey of recipients of the Canada Millennium Scholarship Foundation (CMSF) Access Bursaries<sup>1</sup>. The L-SLIS consists of a sample of students who entered PSE for the first time in the fall of 2006. Surveys were conducted, by telephone, in the early winter months of 2007, and then again in 2008 and 2009. Survey data have been linked to government aid administrative data. It is important to note that the eligibility requirements for the CMSF Access Bursaries were determined provincially and vary from province to province. The L-SLIS therefore represents somewhat different populations in different provinces.

Restrictions have therefore been made to the L-SLIS in order to create a consistent national sample. Due to the unique nature of the programs in Quebec, Saskatchewan and Alberta, students from these provinces are not included in this analysis. Prince Edward Island is omitted due to the absence of any administrative data. The following restrictions have been made in order to provide a consistent sample across the remaining provinces, which include Newfoundland and Labrador, Nova Scotia, New Brunswick, Ontario, Manitoba and British Columbia:

1. The sample is restricted to only students who enter PSE for their first time and are single dependant students, as defined by student aid systems.
2. Only students with parental incomes below the National Child Benefit (NCB) line are included.

Only low income students who apply for and receive government aid are included in the L-SLIS, therefore this is not a sample of all low income students in Canada. The sample has 3609 observations (after also deleting those few students who did not provide adequate information regarding parental education). Roughly 69 percent of the students in the sample are from Ontario and roughly 14 percent are from British Columbia. The remaining four provinces together make up 17 percent of the sample and each have shares of around three to five percent. Due to small sample size, college students from Nova Scotia are not well represented in the data. Samples are weighted to take account of non-response and to scale up to the underlying populations of lower income students they represent. Also, for all figures except those concerning students' backgrounds or leaving rates, the few students who leave PSE early in first year have been dropped.

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<sup>1</sup> For some provinces, certain non-recipient low-income students are also included in the L-SLIS but they are not included in this analysis due to the income restriction placed on the sample (see below).

## Appendix II: Detailed Tables

**Table A1: Individual and Family Background Characteristics (College and University Students)**

	College Students			University Students		
	First Generation	Non-First Generation	Total	First Generation	Non-First Generation	Total
<b>All</b>	42.6	57.4	100	34.8	65.2	100
<b>Gender</b>						
Female	44.1	55.9	100	37.2	62.8	100
Male	40.5	59.5	100	31.1	68.9	100
<b>Size of Community Where High School Was Attended</b>						
Rural (pop. < 10 000)	48.1	51.9	100	44.2	55.8	100
Suburban (pop. = 10 000 to 100 000)	41.5	58.5	100	32.1	67.9	100
Urban (pop. > 100000)	40.5	59.5	100	30	70	100
<b>Visible Minority/Immigrant Status</b>						
Non-Visible Minority, Born in Canada	48.4	51.6	100	39.2	60.8	100
Visible Minority, Born in Canada	38.6	61.4	100	41	59	100
Non-Visible Minority, Immigrant	19.9	80.1	100	13	87	100
Visible Minority, Immigrant	34	66	100	29.9	70.1	100
<b>Ethnic Background</b>						
White	46.7	53.3	100	36.5	63.5	100
Aboriginal	62.5	37.5	100	52.8	47.2	100
Other Ethnicity	35.8	64.2	100	32.8	67.2	100
<b>Family Income</b>						
\$0 To \$5 000	29.9	70.1	100	28.9	71.1	100
\$5 000 To \$10 000	36.9	63.1	100	35.7	64.3	100
\$10 000 To \$20 000	49.4	50.6	100	36.3	63.7	100
\$20 000 To \$30 000	44.1	55.9	100	33.9	66.1	100
\$30 000 And Up	36.1	63.9	100	35	65	100

Source: Longitudinal Survey of Low Income Students.

**Table A2: Preparation For PSE (College and University Students)**

	College Students		University Students	
	First Generation	Non-First Generation	First Generation	Non-First Generation
<b>Time of Decision To Attend PSE</b>				
Always Known	24.9	30.1	35.1	43.7
Before Grade 9	9.2	10.3	15.9	14.3
Grade 9-10	23	20.3	26.1	24.4
Grade 11-12	31.2	26.3	19.6	14.3
After HS	11.6	13	3.3	3.3
Total	100	100	100	100
<b>Saving (Percentage Which Responded 'Yes')</b>				
Did Other Members of Your Family Save For Your Education?	30.7	36.6	41.6	52.3
Prior to The End of Secondary School, Did You Save Money For Your Own Education?	45.1	47.4	47.3	47.2

Source: Longitudinal Survey of Low Income Students.

**Table A3: Attitudes Towards PSE (College and University Students)**

	College Students		University Students	
	First Generation	Non-First Generation	First Generation	Non-First Generation
<b>Percentage Who Agree:</b>				
Their Parents Would Be Very Disappointed in Them if They Didn't Get PSE	67.5	71.9	76.3	79
They Have Role Models at Home or at School	72.3	80.2	69.4	75.7
They Have Family They Can Count on for Help and Support	91.6	92.8	91.6	94.4
Going Deep Into Debt to get PSE is Still Worth It	89.1	88.3	90.4	88.2
The Time and Money Put Into a PSE is a Good Investment	93.9	94.2	91.9	93.1
People Who Have a PSE Get Jobs That Are More Satisfying	84.3	82.5	75.5	73.9
The Best Way to get a Prestigious Job is Through a PSE	82.1	81.3	78.3	76.7

Source: Longitudinal Survey of Low Income Students.

**Table A4: PSE Experiences (College and University Students)**

	College Students		University Students	
	First Generation	Non-First Generation	First Generation	Non-First Generation
Average Hours Per Week Spent Studying	12.3	12.9	15.4	16.2
Overall Grade Average in First Year of PSE	77.7	78.5	74.8	76.4
Percentage Who Leave PSE in First or Second Year Without Graduating**	15.1	16.9	5.3	6.3

Source: Longitudinal Survey of Low Income Students. \*\* Students are counted as leavers if they left PSE prior to their second interview, which took place in the winter of 2008, during their second year.

**Table A5: Leaving Rates by Parental Incomes (College and University Students)**

	\$0 To \$5,000	\$5,000 To \$10,000	\$10,000 To \$20,000	\$20,000 To \$30,000	Over \$30,000
<b>College Students</b>					
Percentage Who Leave PSE in First or Second Year Without Graduating	10.8	11.2	18.8	18.1	10.9
<b>University Students</b>					
Percentage Who Leave PSE in First or Second Year Without Graduating	7.9	4.3	6.2	5.5	6.2

Source: Longitudinal Survey of Low Income Students. Students are counted as leavers if they left PSE prior to their second interview, which took place in the winter of 2008, during their second year.

**Table A6: Rates of Leaving PSE and Regression Results (College and University Students)**

	Percentage Who Leave PSE: First Generation Students	Percentage Who Leave PSE: Non- First Generation Students	Difference	Regression Estimate of Difference, Without Controls	Regression Estimate of Difference, With Controls
<b>College Students</b>	15.1	16.9	-1.8	1.1	0
<b>University Students</b>	5.3	6.3	-1	-1.2	-2.3**

Source: Longitudinal Survey of Low Income Students. Students are counted as leavers if they left PSE prior to their second interview, which took place in the winter of 2008, during their second year.

\*/\*\*/\*\*\* indicates statistical significance at the 10/5/1% level.

Control variables were used to account for gender, province, community size, family structure, parental income and high school grades.

Non-First Generation students were used as the base line group. An indicator of whether students are first generation students was entered in regressions as a dummy variable. Marginal effects report the differences between the dummy variable group and the base line group.