Two Years On:
A Survey of Class of 2007
Maritime University Graduates

January 2011

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In 2007, over 16,200 students (the Class of 2007) graduated from Maritime universities. In 2009, Ipsos Reid, on behalf of the Maritime Provinces Higher Education Commission, in partnership with the governments of New Brunswick, Nova Scotia and Prince Edward Island, surveyed a representative group of these graduates. The Class of 2007 is the fifth cohort that has been surveyed under the Commission's Graduate Survey Program. The surveys are designed to further understanding of three topics: the graduates' educational experiences; what they do after completing their degree; and the factors that influence their transition between education and the work force. The survey also continues to provide valuable information on how students finance their university education. The survey sample comprises two main groups: first-degree holders and all other graduates. First-degree holders completed their first bachelor's degree in 2007, and they enrolled in that program without any prior postsecondary education. In contrast, "other graduates" had some prior postsecondary education and indeed may have completed a second credential at any level. This report focuses on the first-degree holders, a group which is fairly homogeneous - the students have completed one degree program, and have no other postsecondary background - in order to provide a clear analysis of the principal factors influencing graduate transitions to the workforce and/or further education.

Appendix 1 provides supplementary statistics comparing first-degree holders and other graduates.

INTRODUCTION

A university education is a transformative experience in many ways: For example, graduates develop crucial skills that can be applied in countless jobs and professions, they grow as educated people, and they are prepared for further advanced studies and/or directly for a chosen profession. The payment for that experience involves an outlay of both time and money. This report shows that there are three variables that are most strongly correlated with graduate outcomes and their financial circumstances upon graduation: their parents' educational background, whether the graduates were living in the Maritime region prior to enrolling in their first degree, and the discipline of their first degree. Before reviewing the salient findings and their implications, we begin by reviewing some important background information about the three principal variables.

- Parents' educational attainment is also strongly linked to family income, in short, the more highly educated the parents, the higher their income. Students from the most highly educated families (at least one parent with a Bachelor's degree or higher) have access not only to their parents' first-hand knowledge of navigating a university education but also to greater financial resources, be it direct financial contributions by the parents, or perhaps greater access to financial credit through their parents. In contrast, students from lesser-educated families (neither parent with a postsecondary credential) are not as likely to have comparable access to these resources.

- Students who come to study in the Maritimes from outside the region make up a large proportion of university enrolments. This group differs in some important ways from Maritime students both in demographics and outcomes. The key demographic difference is linked to parental educational attainment – graduates from outside the Maritimes were much more likely to have the most highly educated parents. This is perhaps unsurprising when one thinks of the resources necessary to travel so far from home to study. It should be noted, however, that not all differences observed by geographic origin are entirely explained by family educational attainment.

- Discipline cluster – which divides the major fields of study into four categories[1] based on the basic orientation of the program (liberal arts vs. applied) - is different from family educational attainment and geographic origin as a key factor driving graduate outcomes in that it is originally determined by the student's choice. Upon graduation, discipline cluster is the strongest determinant of graduate outcomes.

The findings of this report are important for all stakeholders of the higher education sector. In their evaluation of programs and policies, both institutions and governments alike should be aware of the important relationship between these principal factors and experiences of students while they are enrolled in their program and making the transition into the workforce. Students will also be interested in the significance of their academic choices and the impact of certain demographic characteristics on their pathways through education and into the workforce. Governments in particular will be interested in the extent to which the Maritimes are retaining highly skilled graduates, one of the most important measures of the return on the public investment in postsecondary education.

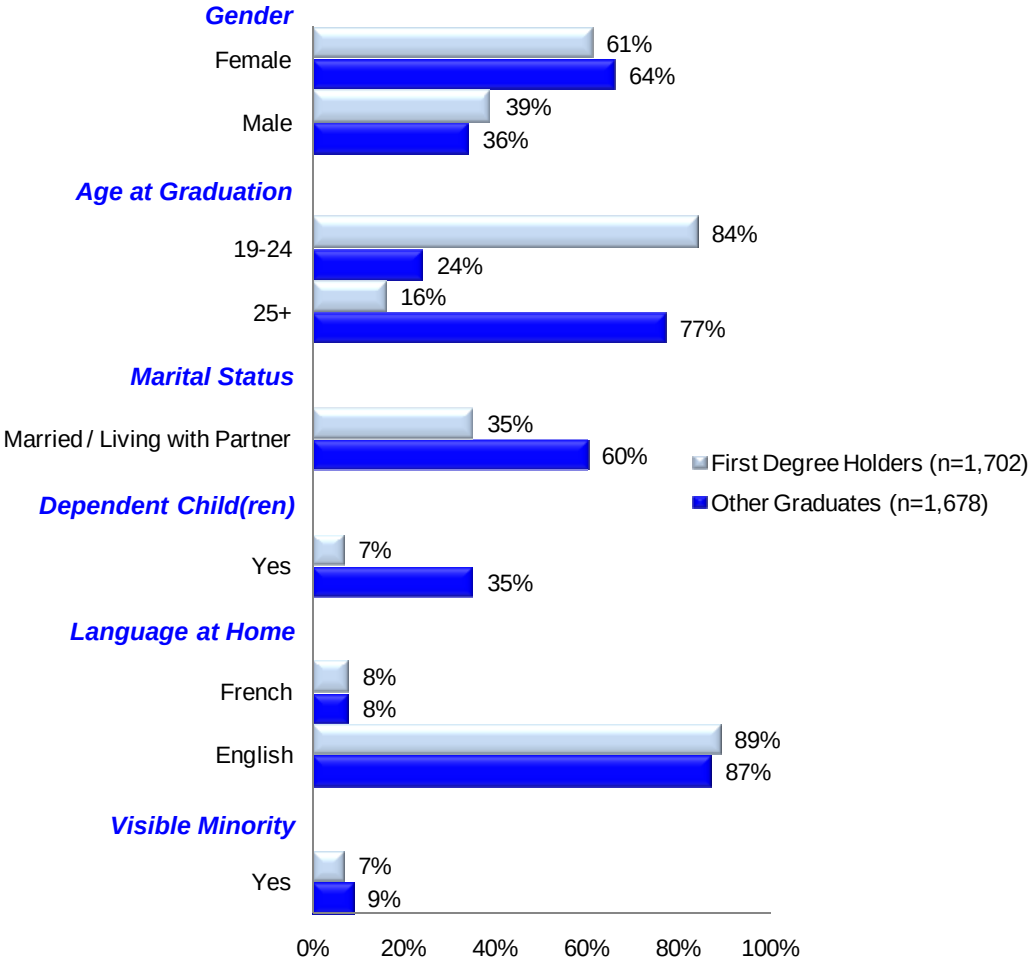
[1] The four discipline clusters are:
- *Commerce and Administration* [includes such fields as: Accounting, Business Administration, and Management];
- *Applied Arts and Sciences or Professional* programs [includes such fields as Computer Sciences, Education, Engineering, and Nursing;
- *Physical and Life Sciences and Mathematics* [includes such fields as Biology, Chemistry and Physics];
- *Humanities, Arts and Social Sciences* [includes such fields as English, History, Philosophy and Fine Arts].

Detailed information on the specific major fields of study included in each cluster is available at:
http://www.mphec.ca/resources/DisciplineClusters.pdf

1. WHO ARE CLASS OF 2007 GRADUATES?

Maritime university graduates included in the survey sample are divided into two groups that proved to be of equal size: first-degree holders and other graduates. First-degree holders are those students who enrolled in university without prior postsecondary education and graduated with their first bachelor's degree in 2007. All other graduates enrolled with prior postsecondary education and may have completed their second credential at any level. Figure 1 illustrates some key demographic characteristics of the two groups.

Figure 1
Comparison of main demographic characteristics between first-degree holders and other graduates.



Note: Language at home - categories not shown: both French and English; other

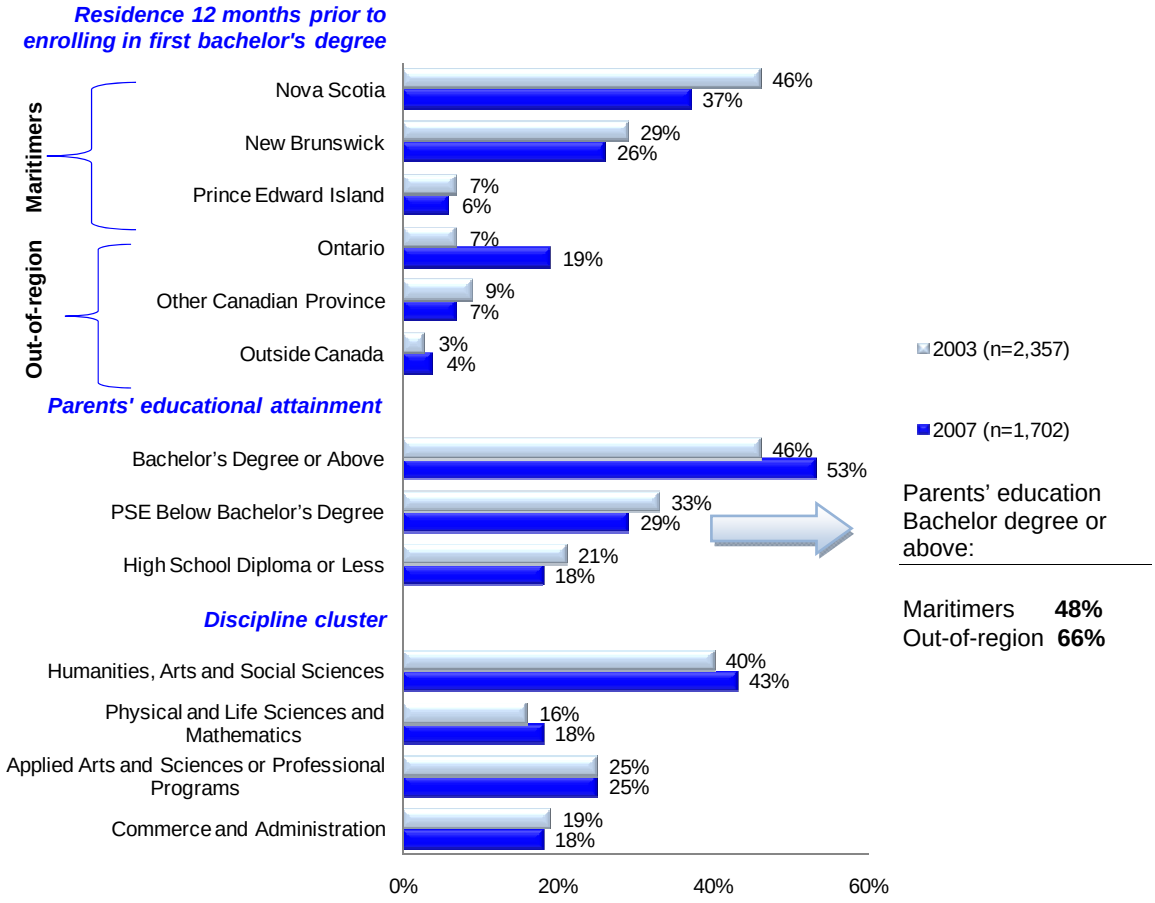
As one might expect, first-degree holders are more likely to be younger, single and without dependents. Otherwise the two groups are similar.

First-degree holders are a more homogeneous group, corresponding to the more traditional pool of students who enter university directly from high school; limiting analysis to this group permits clearer analysis and interpretation. Since the primary objective is to provide a clear description of outcomes and transitions following graduation, the analytical focus in the remainder of the report is placed on first-degree holders.

1.1 Principal drivers of the educational experience and graduate outcomes

Three principal variables are evident in a graduate's perception of their educational experience, of the skills they developed, and of their transition from education into the work world: whether they were living in the Maritime region prior to enrolling in their first degree, their family's educational background, and the discipline of their first degree. Figure 2 illustrates these demographic characteristics and their distribution among the Classes of 2003 and 2007.

Figure 2
Distribution of first-degree holders by region of residence 12 months prior to enrolling in first bachelor's degree, parents' educational attainment, and discipline cluster: Class of 2003 and Class of 2007.



Residence 12 months prior to enrolling in first bachelor's degree

Compared to the Class of 2003, there has been a marked shift in the geographic origin of graduates. The proportion of graduates from out-of-region, specifically Ontario, has risen twelve percentage points over four years. The majority of these Ontarians are members of that province's so-called "double cohort" of high-school graduates (created when grade 13 was abolished) who earlier swelled the region's enrolment numbers and are now graduating. Their presence in the survey sample influences several important statistics, and those differences will be highlighted.

Parents' educational attainment

Over previous surveys we have seen the parental educational background of the graduates shift toward higher levels of education, in part the reflection of a broader shift in the educational attainment of the

general population. However, the change between the Class of 2003 and the Class of 2007 is remarkable:

- The proportion of graduates whose parents had attained at least a bachelor's degree rose six percentage points from 46% to 53%.

- Even more remarkable is the difference in parental educational background between those originally from the Maritimes and those from out-of-region. Nearly two-thirds (66%) of those from outside the region came from the most highly educated families (i.e. at least one parent had a bachelor's degree or above), compared to 48% of graduates from the Maritimes, a difference of 18 percentage points.

The fact that the geographic origin of the graduates and parental educational background are interrelated is important to keep in mind as we explore graduate experiences and outcomes.

Discipline cluster

Over the four years between the two graduating cohorts, the distribution of graduates by discipline cluster has not changed significantly:

- Those who completed programs in the Humanities, Arts and Social Sciences dominate, comprising 43% of Class of 2007 first-degree holders.

- For the most part, graduates from the Maritimes and those from outside the region tended to choose the same disciplines in comparable proportions, with the exception that Maritimers (14% vs. 20%) were somewhat less likely to have graduated from a Commerce & Administration program.

2. How were graduates transformed by their education?

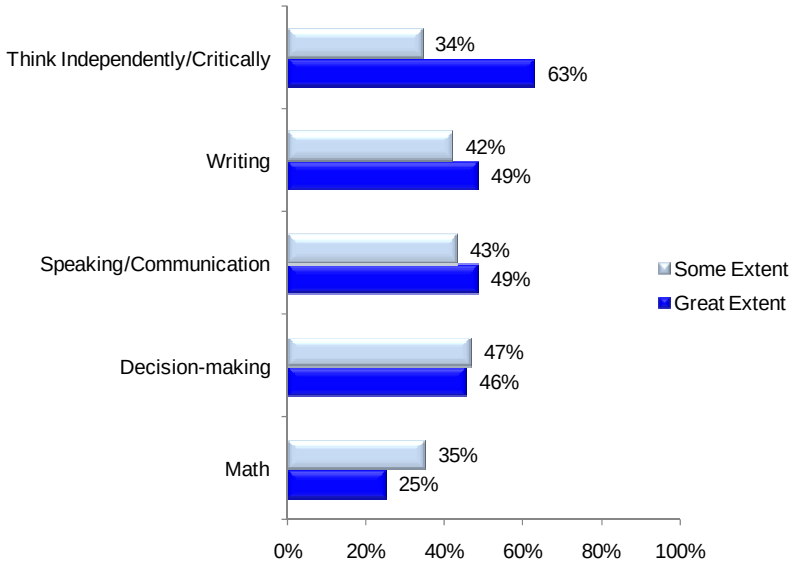
How are graduates transformed by their university education? To what extent do they develop core skills? How do they rate their university experiences? Did they make a successful transition into the workforce and/or further education? How do they evaluate their current situation?

2.1 Development of skills

More than 90% of graduates, when asked to report the extent to which they thought that their program developed core skills of decision-making, independent/critical thinking, speaking/communication and writing, agreed that these skills had been developed to at least some extent. Fewer (60%) agreed that their program had developed math skills to the same extent. This latter statistic varied widely by discipline, from a high of 88% for Commerce and Administration, and Physical and Life Sciences and Mathematics, to a low of 35% for Humanities, Arts and Social Sciences, presumably because these latter programs provide less exposure to math.

Figure 3 illustrates in more detail the graduates' perceptions about skills development.

Figure 3
Proportion of first-degree Holders reporting that particular skills were developed to "some extent" or a "great extent"



Based on Q 36: To what extent did your program develop your... skills? [Great extent, some extent, very little, not at all]

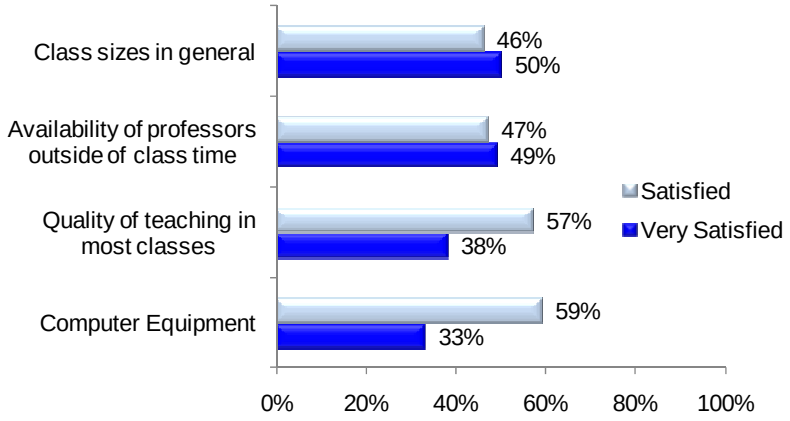
Although the qualitative difference between "to some extent" and "to a great extent" is left to the respondent to interpret, one can assume there are real differences, and that these are meaningful not only from the graduate's perspective but also a policy perspective. One can further venture that these statistics could be identified as markers of educational and program quality, especially the development of independent/critical thinking skills, a capacity which is often cited as a hallmark of a good university education.

If one compares these numbers with those for the Class of 2003, there are no significant changes over the four years between cohorts.

2.2 How do graduates evaluate their first-degree program?

More than 90% of graduates reported that they were "satisfied" or "very satisfied" with the computer equipment available, class size in general, the availability of professors outside of class, and the quality of teaching. Figure 4 illustrates in more detail the graduates' level of satisfaction with these aspects of their program.

Figure 4
Proportion reporting they were "satisfied" or "very satisfied" with aspects of program



Based on Q34: We would like to ask you to evaluate some of the services available to you during your [INSERT DEGREE] degree program. Were you very satisfied, satisfied, dissatisfied or very dissatisfied with...

Further examination of the numbers reveals interesting differences by geographic origin:

- Graduates originally from outside the region were more likely than Maritimers to report being "very satisfied" (53% vs. 45%) with the availability of professors and with the quality of teaching (45% vs. 35%). These differences were not related to discipline cluster or parental educational attainment.

As with the questions related to skill development, the qualitative difference between "satisfied" and "very satisfied" is left up to the respondent to interpret, and that difference is important from the graduate's perspective.

Graduate satisfaction with the aspects of their program illustrated in Figure 4 has remained essentially unchanged between the Class of 2003 and the Class of 2007.

2.3 Who pursues further education?

Graduates pursue further education for many reasons, but the reasons given most often are related to employability. Pursuing further education after the first degree is a very popular choice, with nearly six-in-ten going that route; furthermore, compared with the number for the previous class, that number for the Class of 2007 has increased by four percentage points, from 55% to 59%.

- Especially for those who graduate with a bachelor's degree in the Liberal Arts and Sciences, the pursuit of a second credential is the norm – 70% pursued further study within two years. Far fewer graduates of Applied Arts and Sciences / Professional programs (37%), and Commerce and Administration programs (50%) had pursued further education within two years.

- The choice of second program also differs by discipline cluster:
  - A Master's/PhD program (28%) and Bachelor of Education (29%) were equally popular among graduates of Humanities, Arts and Social Sciences.
  - Physical and Life Sciences and Mathematics (36%) as well as Applied Arts and Sciences / Professional (35%) graduates preferred the graduate level of study.
  - Commerce and Administration graduates preferred pursuing study below the bachelor degree level (30%) (e.g., undergraduate diplomas or certificates) or other levels of study (27%) which would include credentials like Chartered Accountant.

- For Liberal Arts and Sciences graduates in particular, that first degree is clearly a stepping-stone, serving as the prerequisite for admission to professional and graduate-level programs.

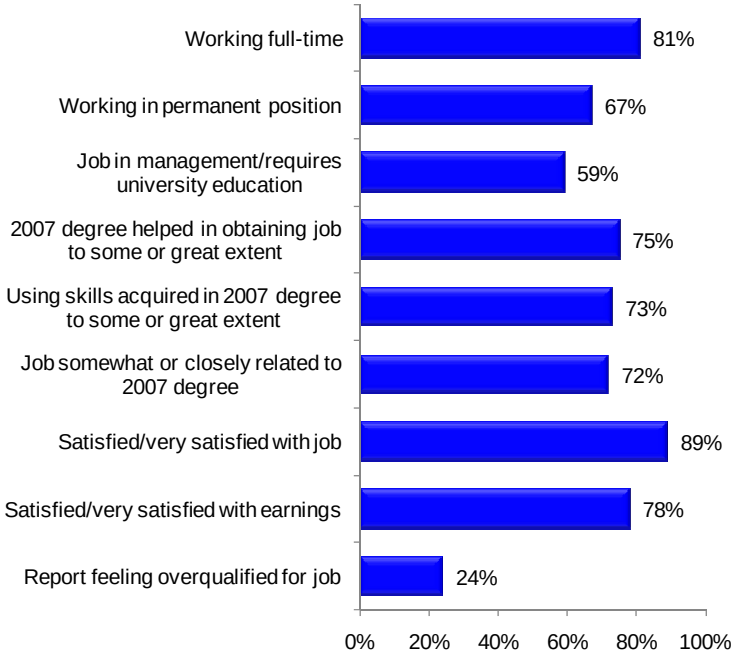
- At the time of the survey, 52% were currently enrolled in a program.

2.4 Employment Outcomes

A university degree affords access to more highly skilled and better-paid jobs. However, many graduates do not stop at one degree, but find it necessary to acquire a further credential to increase their employability. In the measurement of employment success at any time, a graduate's stage in the transition from education to the work force is an important factor to take into consideration.

The survey was conducted in the fall of 2009, in the midst of an economic downturn. This situation presumably accounts in large measure for the drop in the overall employment rate: the overall employment rate[2] in 2009 (86%) was down 9 percentage points compared to that in 2005 (when the Class of 2003 was surveyed). However, despite this decline, all other measures of employment quality (Figure 5) are holding steady.

Figure 5
In 2009, proportion of employed graduates whose/who are...



The discipline of the first degree is strongly correlated with employment outcomes. Larger numbers of Liberal Arts and Sciences graduates return for further study. At the two-year-out mark, it is evident, on comparing measures of job quality with those for graduates of Applied or Professional programs, that their full transition to the labour market is incomplete. This difference is most marked between graduates of Humanities, Arts and Social Sciences programs and graduates of Applied Arts and Sciences/Professional programs (Table 1):

[2] "Employment rate" is based on the number in the labour force.

Table 1
Measures of employment, by discipline clusters

	Applied Arts and Sciences/Professional	Humanities, Arts and Social Sciences
Proportion employed	90%	84%
Proportion of employed graduates with a permanent job	83%	59%
Proportion of employed graduates with management position or job that requires a university education	77%	45%
Proportion of employed graduates reporting using skills from their 2007 degree to some or great extent	84%	59%

While overall measures of job quality remained unchanged compared with those for the previous cohort, average earnings increased 4% (compared in 2009 dollars), from $36,204 to $37,669. It should be emphasized that these are starting salaries for first-degree holders (and whose average age at the time of the survey was 26). Salaries will increase as the graduates gain more experience.

To put the figures in perspective, in 2009, the general population earned[3]

- $35,881 (Prince Edward Island)
- $37,993 (Nova Scotia)
- $38,875 (New Brunswick)

Table 2 presents mean annualized earnings.

Table 2
Mean annualized earnings of first-degree holders in 2009 by discipline cluster and province of residence in 2009.

	Mean annualized earnings*	
	All employed	Full-time only
Discipline Cluster		
Humanities, Arts and Social Sciences	$32,048	$37,430
Physical, Life Sciences and Mathematics	$33,426	$40,044
Applied Arts/Sciences or Professional	$46,391	$50,524
Commerce and Administration	$44,104	$46,622
Province of Residence 2009		
Prince Edward Island	$34,220	$38,696
New Brunswick	$37,525	$41,498
Nova Scotia	$35,405	$41,834
Outside the Maritimes	$40,319	$47,289
All first degree holders	$37,669	$43,628

*Graduates reported their earnings on the basis of their own choosing – hourly, daily, weekly, etc. Earnings were converted to an annualized basis.

[3] Calculated based on Statistics Canada's weekly earnings statistics (weekly $ * 52) CANSIM 281-0027

- Like the employment rate, earnings differed significantly by discipline cluster:
  - Among those working full-time, graduates of Applied Arts and Sciences / Professional programs earned on average $13,094 more than Humanities, Arts and Social Sciences graduates and $10,480 more than Physical and Life Sciences and Mathematics graduates.
  - Average earnings also differed by region of residence at the time of the interview: those living outside the region earned at least $5,400 more than those living in the Maritimes.

- Although men ($45,008) earned somewhat more than women ($42,559) on an annualized basis, there is no significant difference by gender when average number of hours worked per week is taken into account.

- At the beginning of the interview, graduates were asked about their satisfaction with their employment situation, using a five-point scale. 57% of graduates reported being "satisfied" or "very satisfied" with their employment at the time of the interview, and another 20% were neither satisfied nor dissatisfied.

3. WHAT DOES A UNIVERSITY EDUCATION COST?

A university education involves an outlay of both time and money, and these costs vary depending on the program taken.

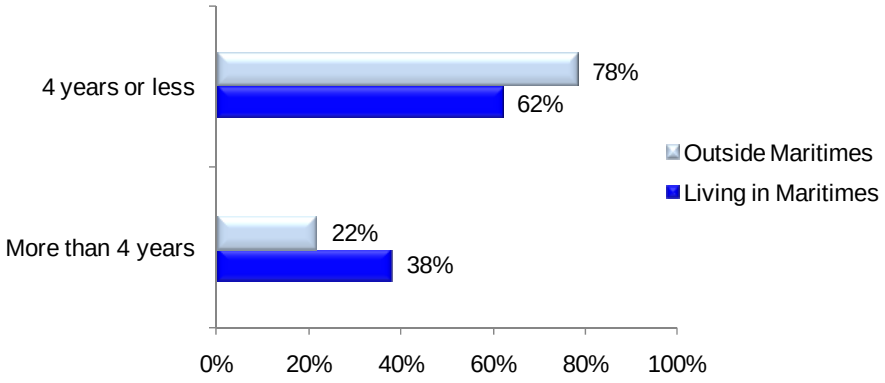
3.1 Time

On average, two-thirds (67%) of graduates completed their first bachelor's degree within four years. This statistic varied by discipline cluster – some Applied Arts and Sciences/Professional programs are five years in length, and graduates of this discipline cluster were more likely to take more than four years (43%) than were graduates of other discipline clusters:

- Humanities Arts and Social Sciences (32%);
- Physical and Life Sciences and Mathematics (27%);
- Commerce and Administration (28%)

Figure 6 illustrates the length of time taken to complete the first degree, by geographic origin of the graduates.

Figure 6
Length of time taken to complete first degree, by region of residence 12 months prior to enrolling in the 2007 degree program.



- Graduates originally from the Maritimes (62%) were less likely to complete their degree within four years than were those from outside the region (78%) – a difference of 16 percentage points, regardless of discipline cluster.

- And finally, as noted earlier, since most graduates take further study beyond the first degree, the total time invested in post-secondary education is substantial.

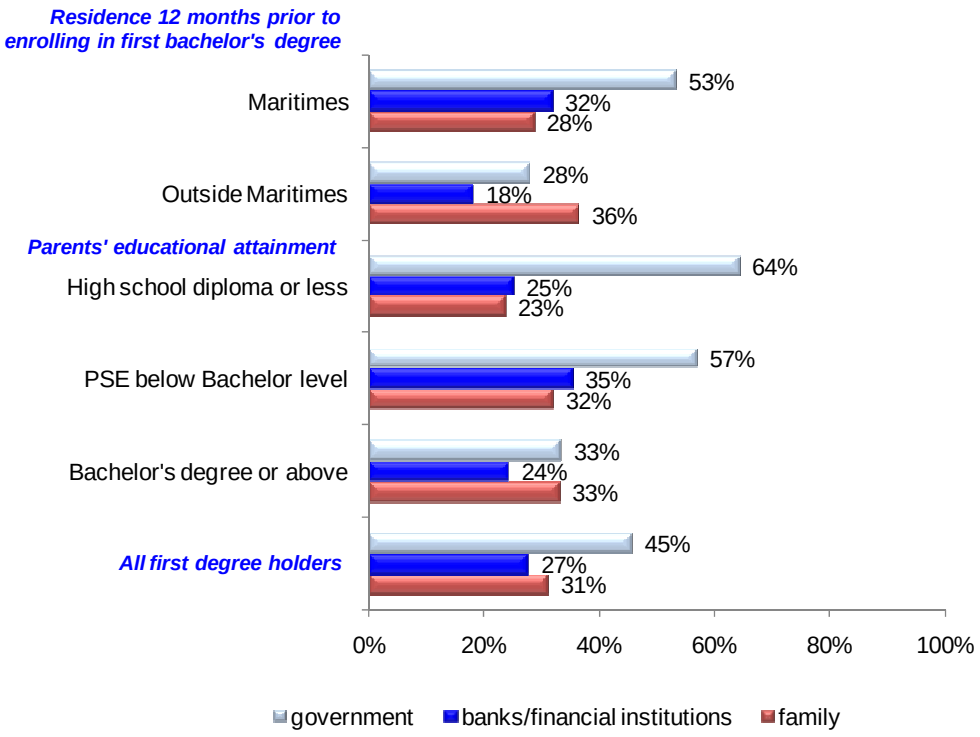
3.2 Money

Students paying for their education rely on a mix of funding sources, from employment earnings, family gifts, and grants/bursaries, to repayable loans obtained from many sources. In this section, the focus is placed on repayable loans. To provide as complete a picture as possible, we first examine the financing of the first degree, followed by graduates' financial status in 2009, including the financing of both the first degree and/or any subsequent education.

Financing the first degree

The student assistance landscape is complex – students can draw on loans from government and loans or lines of credit from financial institutions, and on money borrowed from family members[4] or other sources. And as Figure 7 illustrates, the patterns of borrowing from these sources differ greatly by geographic origin and parental educational background.

Figure 7
Proportion of all first degree holders borrowing by source, to finance the 2007 degree



Note: percent borrowing from "other" sources not shown (percentage varies at most between 2-5 %).

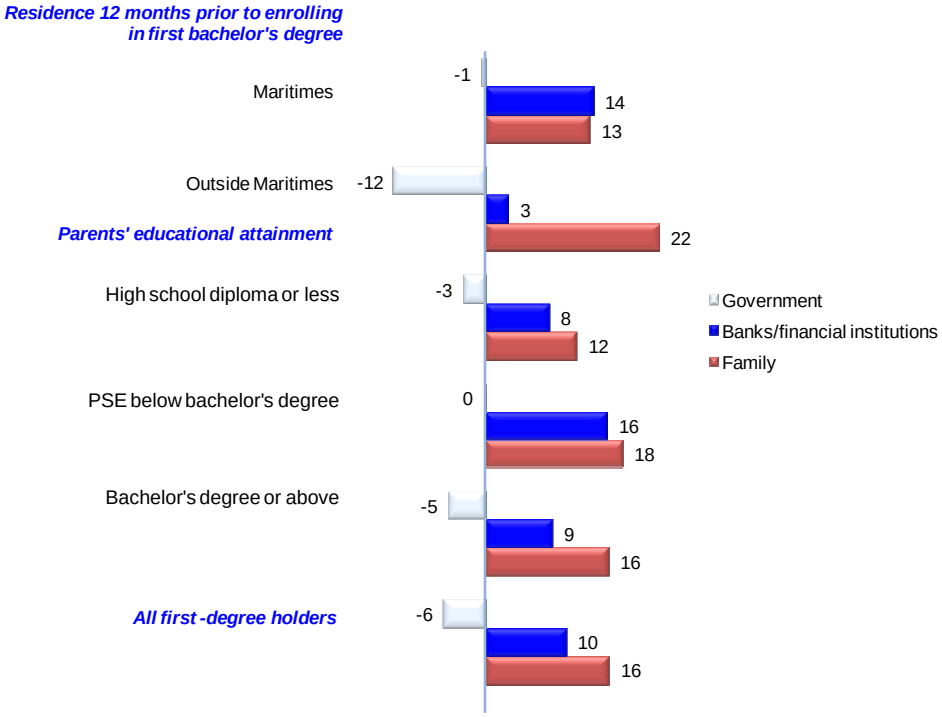
[4] Based on questions 148 (Did you ever borrow money from family members to finance your 2007 degree?) and 149 (How much did you borrow from family members to finance your degree you completed in 2007?); These questions are differentiated from those that refer to non-repayable assistance from family members.

Maritimers and those from the families where at least one parent did not have postsecondary education were much more likely to rely on loans from government and much less likely to rely on borrowing money from family members. This is correlated in part with the differences in parental educational attainment.

The findings also show that the pattern of reliance on these loan sources has shifted between the previous cohort and the Class of 2007 (Figure 8).

Figure 8

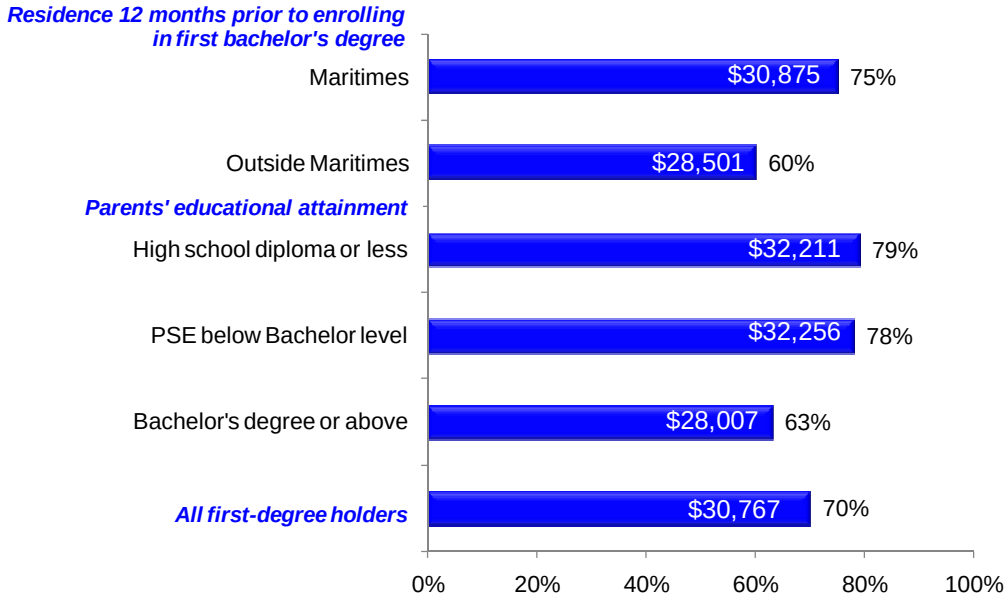
Change (percentage point) in proportion of first-degree holders reporting borrowing by loan source to fund the first degree, between two graduating cohorts – Class of 2003 and Class of 2007, by region of residence 12 months prior to enrolling in first degree program, and parent's educational attainment.



Most notably, while Maritimers' uptake of government student loans has essentially remained unchanged over the period, they are also drawing increasingly on banks/financial institutions and loans from family members. Graduates from outside the region, however, have reduced their reliance on government and increased their reliance on loans from family members.

Overall, seven out of ten first-degree holders borrowed from one or more sources to finance their first degree, up five percentage points compared to the previous cohort. The proportion borrowing from at least one source varies considerably by geographic origin and parental educational background (Figure 9).

Figure 9
Proportion of first-degree holders borrowing, and total mean amount borrowed (all sources combined) to finance the first degree.



Sources include: government, banks/financial institutions, family and other.

- Three-quarters (75%) of Maritimers reported borrowing to finance their first degree, 15 percentage points more than graduates from outside the region (60%).

- 63% of graduates whose parents had completed a bachelor's degree or above reported borrowing, compared to 79% of graduates from families where neither parent has postsecondary education.

Financial Situation in 2009: paying for the first degree and/or subsequent education

If one includes borrowing to finance the first degree and/or any further education, just under three-quarters (73%) had borrowed by 2009. This statistic is about the same as the two-year-out borrowing rate for the Class of 2003.

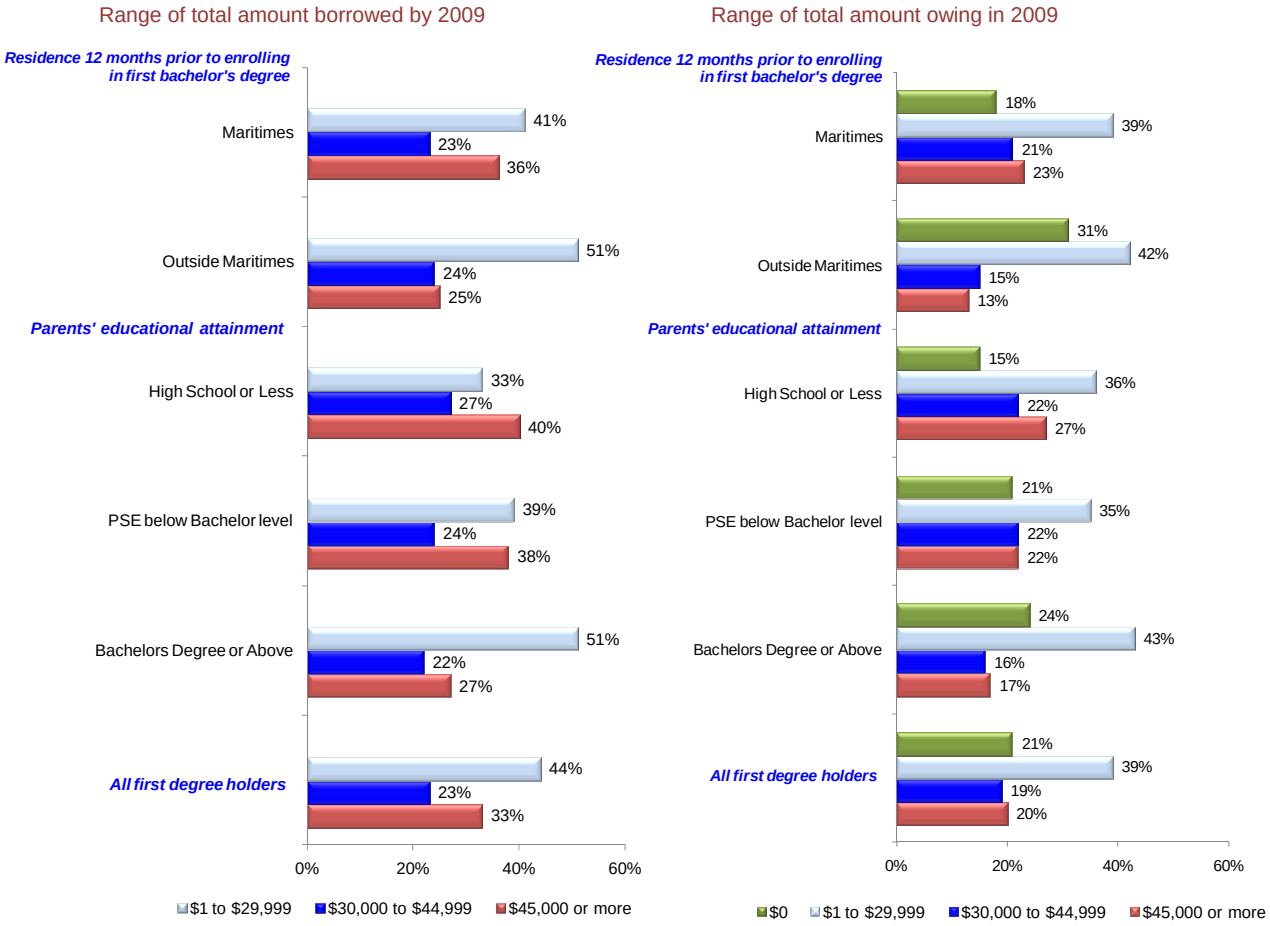
- Two years after completing their first degree, graduates owed an average of $25,743 on a total of $37,013 borrowed (all sources combined). In constant dollars, the average amount owed has increased 20% compared to that for the previous cohort.

- Among borrowers, 20% owed $45,000 or more in 2009, up eight percentage points compared to the percentage for the previous cohort.

Figure 10 illustrates the range of total amount borrowed and range of total amount owing in 2009 to finance the first and/or any subsequent education, and the relationship with two of the main variables.

Figure 10

Among borrowers, range of total amount borrowed (all sources combined) and range of amount owing in 2009, on financing the first degree and/or any subsequent education.



- Those borrowing in the highest range ($45,000 or more) were Maritimers (36 %) and graduates from families where neither parent has any postsecondary education (40%). These groups of graduates were also least likely to have fully repaid their loans (18% of Maritimers and 15% of graduates whose parents had attained a high school diploma or less).

- Graduates originally from outside the region were the least likely to borrow in the highest range (25%). They were also more likely to have completely repaid their debt within two years of graduating (31%). This is linked to higher proportions of these graduates coming from the most highly educated families and therefore having less need for financial aid.

- In comparison to the Class of 2003, the proportion borrowing $45,000 or more has increased 14 percentage points for graduates both from the families where neither parent has any postsecondary education and the families where the parents have the highest educational attainment.

Table 3 illustrates by source the proportion of first-degree holders who were able to repay in full borrowed funds as well as the average total amount borrowed and outstanding.

Table 3
Total mean amount borrowed, total owing and percent who fully repaid funds, by source, for financing the 2007 degree and/or any subsequent education

	Total borrowed	Total owing	Percent who fully repaid funds by 2009
Source			
Government	$29,622	$24,556	13%
Banks/financial institutions	$19,690	$15,389	22%
Family	$15,245	$4,228	72%
Geographic Origin			
Maritimes	$37,613	$27,870	19%
Outside Maritimes	$32,931	$18,546	33%

- It is important to note the substantial proportion who completely repaid loans to family. This figure raises the possibility that, in some cases, funds obtained from family members and originally considered as loans have been forgiven at a later date.

When one includes those who did not borrow to finance education, 44% of all first-degree holders are free of student debt two years after completing their first degree.

What is the actual repayment shouldered by those paying down their loans? To measure this, we can calculate a debt-payment-to-income ratio, and include in the calculations only those earning an income through employment, and still paying down debt (n=430). With an average monthly student debt payment of $476, first-degree holders are spending 14% of their income on loan repayment.

- Overall, 57% of first-degree holders who had borrowed to finance their education reported that they had always been able to make their loan payments on time, while one-in-five reported having missed or stopped making payments.

- 54% of first-degree holders who had borrowed reported applying for government repayment assistance/interest relief programs.

4. Is a University Education Worthwhile?

After they were asked questions about their program, further education, employment outcomes and student debt, graduates were asked to evaluate whether they thought that the time and money they had invested in their education had been worth it, and whether if they had the chance, they would choose to go to university again.

- The proportion of graduates agreeing their education had been “worth” or “well worth” the personal investment of time has not changed in the four years between cohorts – at 83%, this is a strong endorsement of the value of spending time to earn a degree.

- 69% of first degree holders agreed their education was “worth” or “well worth” the financial investment, the same as in 2003. Those who did not borrow had a much more positive view that their education was well worth the investment (47% compared to the 22% who borrowed $45,000 or more).

5. Is the Region Retaining its Highly Qualified People?

In the simplest economic terms, the return on investment in postsecondary education for governments lies in the entrance of newly- and highly-qualified people into the region's labour market. We can first note that 61% of those who completed their first degree in 2007 were still living in the region in 2009, down six percentage points compared to the number for the Class of 2003. Migration patterns are strongly affected by geographic origin, with those from outside the region far less likely to remain after graduation than their peers from the Maritimes. And, given the marked shift in the proportion of graduates from out-of-region, it is unsurprising to see a decline in this overall statistic. Table 4 presents detailed migration statistics by region/province of origin and current province of residence.

Table 4
Proportion of graduates residing in each province, by province one year prior to enrolling (or province of origin) in the 2007 degree

	Province of Graduation (2007)			Province/region of residence two years after graduation (2009)			
	NB	NS	PEI	NB	NS	PEI	Outside Maritimes
Province one year prior to enrolment							
New Brunswick (n=448)	**83%**	16%	1%	**71%**	9%	1%	18%
Nova Scotia (n=628)	8%	**91%**	<1%	4%	**74%**	<1%	21%
Prince Edward Island (n=103)	15%	19%	**66%**	7%	8%	**63%**	22%
Ontario (n=325)	22%	**77%**	2%	2%	10%	<1%	**87%**
Outside Maritimes excluding Ontario (n=194)	27%	**69%**	4%	9%	20%	1%	**71%**

In particular, we note the following from Table 2:

- In 2009, the proportion of first degree holders who were living in their home province was:
  - Prince Edward Island: 63%
  - Nova Scotia: 74%
  - New Brunswick: 71%

- Relative to the Class of 2003, these statistics have not changed significantly.

6. Implications

What are we to make of these findings, and what are their significant implications?

6.1 Evaluating the university program

How graduates evaluate their university program is important to policy makers and to university leaders; it is one marker of the extent to which a university education transforms the student, and of the quality of the program delivered.

Over the years MPHEC Surveys have reported high numbers of graduates expressing satisfaction with critical aspects of their program and student experience, such as the quality of teaching or the availability of their professors, and agreeing that core skills such as critical thinking or communicating were developed at the very least to some extent. However, the increasing focus on educational quality and efforts to improve it draw attention to the difference in what it means for a graduate to say they are "very satisfied" instead of "satisfied" with aspects of their program, or that their core skills are developed to "a great extent" rather than "to some extent". Institutions and governments who are concerned about the

delivery of quality programs will no doubt be interested in these statistics and will weigh and discuss their significance.

6.2 Understanding what influences graduate outcomes

Maritime university graduates are not a homogeneous group. They come from varied backgrounds in terms of their parents' education, and where they lived prior to enrolling whether in the region or beyond its borders, and they choose to pursue different academic disciplines. To varying degrees, each of these factors plays an important role in the nature of their transition from education into the work force, in their evaluation of their program, and in key graduate outcomes. Students who invest a substantial amount of time and money in earning their first degree, and governments who contribute significant resources in funding the postsecondary sector and in supporting students through student aid programs need to be well aware of these significant factors and how they can shape their return on their investment of time and money.

Parental educational attainment

Graduates from the families where the parental educational attainment is highest obviously have greater access to knowledge about navigating postsecondary education; given the link between education and income, they also are likely to have access to more financial resources and/or knowledge about choosing financial aid strategies. The primary differences between graduates from families where the parents have different educational backgrounds are found in the extent and pattern of student loan sources used and the level of borrowing.

Graduates from families where the highest level of education is a high school diploma or less rely most heavily on government student loans, and are least likely to borrow from family members. They also took on more debt. To finance their first degree and/or any subsequent education, 40% borrowed $45,000 or more, compared to 27% of those from families where at least one parent has a bachelor's degree.

That this disparity exists is not news, and moreover, government student assistance programs are designed specifically to enable access by these students to postsecondary education. However, the findings should serve as a reminder of the financial challenges faced by graduates who come from less-educated families. The proportion borrowing $45,000 or more has increased over the four years between surveys, and now more than one-quarter (27%) have debt in this range two years after graduating. Those who had higher debt were also less likely to agree their education had been well worth the financial investment. All of this raises the question of if and how the student financial aid landscape will need to change in future to continue to enable access to postsecondary education by these students, while ensuring the post-graduation repayment burden is not too onerous.

Geographic Origin

Maritime universities have traditionally attracted substantial numbers of students from outside the region, and indeed, in recent years, the proportion of students (and therefore, graduates) from outside the region has been increasing. In the class of 2007 we see evidence of a unique phenomenon, the so-called Ontario 'double cohort', which was created when Ontario abolished grade 13 in 2003, since students from that cohort are now entering the ranks of university graduates.

This report again shows that graduates from outside the region are much more likely to come from highly educated (and therefore higher income) families than their Maritime peers. This is perhaps unsurprising given the financial means and other resources needed to travel so far from home to study. It may also mean that larger proportions have access to assistance in navigating their program choices and educational paths from their parents who have 'been there, done that'.

The important point to note, however, is that the many differences in experiences and graduate outcomes related to geographic origin are important for this unique group, but they will also be important in times to come as the region's university-aged population continues to decline and universities increase

recruitment efforts outside the region. An awareness of the key differences in demographic profile of Maritimers and those coming to study from outside the region is important, so that the needs and resources of both groups can be taken into account when designing programs and policies.

6.3 Discipline Cluster - Assessing Graduate Outcomes

One overall goal of the survey is to characterize the nature of the transition that graduates experience as they move from education to the work force. As these findings show, there are substantial differences in graduates' educational pathways and employment outcomes that depend largely on the discipline of their first degree.

Graduates of Liberal Arts and Sciences programs are much more likely than those who completed Applied/Professional programs to pursue further education, and so they are less likely to have a permanent job, or one that requires a university education or is in management, and consequently they earn less. Applied/Professional programs are considered terminal – they are either directly or closely linked to a profession or career path, and provide the graduate with a more direct route to the labour market.

By contrast, although Liberal Arts and Sciences programs do not provide such direct links, they do provide the prerequisite for admission to graduate studies and professional programs such as Education, Law and Medicine. The numbers pursuing further education illustrate that this is a very common pathway, and it is therefore perhaps premature to make judgments about employment outcomes two years after completing the first degree for this group, when so many have not yet made a full transition to the workforce.

6.4 The significance of rising debt and diversification of sources

This report documents a rise in the proportion of students borrowing to finance their education, an increased reliance on sources other than the traditional government student loan, and an increase in combined average borrowing that now exceeds $30,000. In fact, one-quarter of Maritimers borrowed $45,000 or more to fund their first degree, and when one takes into account borrowing for both the first degree and/or any subsequent education, this proportion rises to 33%.

The fact that among Maritimers, uptake of loans from banks/financial institutions, and borrowing from family has increased while reliance on government loans has remained unchanged suggests that students are topping up funds obtained from government, and/or are taking advantage of more favourable borrowing terms available from these alternate sources. With respect to family lenders, one suspects that a large proportion of these loans may be converted to gifts sometime after graduation. Although beyond the scope of this survey, it would be interesting to discover the ultimate source of loans from family members, whether for example, the parents have drawn on their savings, or taken on a loan or line of credit.

In addition, those who borrowed in the high ranges are far less likely to agree that their education had been worth the money invested, which raises the question whether there exists a threshold where students and their families reach that conclusion before enrolment, and choose not to enrol in the first place.

6.5 Retaining highly qualified people

Fewer (down 6 percentage points) first degree holders remain in the Maritimes following graduation compared to the Class of 2003. However, migration is strongly linked to graduates' geographic origin, and the decline is explained by the increase in the number of graduates who came to study from outside the region and who are much more likely to leave the region following graduation. By contrast, the proportion of graduates who remain in their home province following graduation has held steady. If one assumes that home province retention is the best measure to track, what do these positive statistics mean for governments and universities?

There are probably at least a couple of factors at play. First, over the past two years, governments in all three Maritime provinces have launched significant policy initiatives to aid in the recruitment, retention, and repatriation of Maritime graduates and former residents. New Brunswick's *Be Our Future initiative* (part of its Population Growth Strategy), PEI's *Island Prosperity – A Focus for Change*, and Nova Scotia's employment opportunity and labour market strategies (*Invest in Youth, O2-Options & Opportunities, Student Employment Program*) reveal all three governments are paying considerable attention to the mobility issue and its impact on the economic success of the region. It is possible, therefore, that the positive status of the retention rate of Maritime university graduates can be tied to the initial successes of government policy activities, some of which have been directly targeting students and graduates. Second, the most recent economic downturn may have also had an impact on whether or not Maritime university graduates stayed closer to home. Human Resources Development Canada reported that, in 2008-09, Canada's unemployment rate increased for the first time in five years to 6.6%. And, it was the first time since 1991-92 that all provinces experienced an increase in their unemployment rates. This general increase meant that 2007 Maritime graduates probably had fewer employment choices and opportunities outside the Maritimes, which may well have reduced mobility outside the region, except for those from non-Maritime provinces who would have been going home in any case.

CONCLUSION

This report highlights a shifting demographic profile of Maritime university graduates, and groups of graduates with vastly different resources and needs, and illuminates the very different pathways that graduates take as they make the transition from education to the work force.

In any dialogue about the region's postsecondary sector and its future, in the design of academic programs and public policy, and finally in any attempt to understand the challenges confronting graduates at major transition points in their lives, these factors should be closely considered.

Appendix 1

Methodological Notes and Supplemental Tables and Figure

Methodological Notes

Survey Methodology

Between October 18th, 2009 and January 8th, 2010, Ipsos Reid completed computer-assisted telephone interviews with 3,380 graduates from sixteen public universities in the Maritime region. An attempt was made to contact all eligible graduates for inclusion in the study. The final sample was weighted to reflect the overall population in terms of institution, and as well to reflect gender proportions within each institution. The following table shows the distribution of the final sample (unweighted and weighted) by province and institution.

Distribution by participating institutions for the Class of 2007 in 2009

	Population: all graduates Class of 2007		Unweighted Sample		Weighted Sample	
Institution[1]	**n**	**(%)**	**n**	**(%)**	**n**	**(%)**
Acadia University	1,198	7.4	289	8.6	250	7.4
Atlantic School of Theology	19	0.1	5	0.1	4	0.1
Cape Breton University	703	4.3	136	4.0	147	4.3
Dalhousie University	3,852	23.8	719	21.3	803	23.8
Mount Allison University	454	2.8	109	3.2	95	2.8
Mount St. Vincent University	1,049	6.5	241	7.1	218	6.4
Nova Scotia Agricultural College	105	0.6	28	0.8	22	0.6
Nova Scotia College of Art & Design	195	1.2	36	1.1	41	1.2
Saint Mary's University	1,545	9.5	223	6.6	322	9.5
St. Francis Xavier University	1,318	8.1	312	9.3	275	8.1
St. Thomas University	648	4.0	103	3.1	135	4.0
Université de Moncton	1,059	6.5	335	9.9	221	6.5
Université Sainte-Anne	122	0.8	25	0.7	25	0.7
University of King's College	240	1.5	44	1.3	50	1.5
University of New Brunswick - Saint John	492	3.0	72	2.1	103	3.0
University of New Brunswick – Fredericton	2,369	14.6	518	15.4	493	14.6
University of Prince Edward Island	845	5.2	177	5.2	176	5.2
Total	**16,213**	**100.0**	**3,372**	**100.0**	**3,380**	**100.0**

[1] The MPHEC uses the official names of the universities in the working language of the institution.

The survey questionnaire was pre-tested to ensure respondents did not experience problems with any of the questions, and to verify that the questionnaire script worked in the intended manner (i.e. skip patterns were accurate and functioning properly). The average length of the interviews was 29 minutes and the questionnaire response rate was 28%.

Statistical Analysis

The margin of error for findings from the weighted sample of 3,380 graduates is ± 1.5 percentage points, 19 times out of 20 (at a level of probability of 0.05). In all cases, the confidence level determining statistical significance was set at 95%. The margin of error for the sample of 1,702 first degree holders is ± 2.3 percentage points, 19 times out of 20. All statistics presented have been generated from weighted data; data were weighted on the basis of gender within each institution to adjust to proportional representation in the population.

Specific cross-tabulations and analyses were conducted using SPSS (17.0) with ordinal/categorical data being tested for differences using Chi-Square and notable differences detected using adjusted standardized residuals. Ratio and continuous data main effects were tested using one-way ANOVA (SPSS 12.0) and T-tests. Differences between groups were tested using the Student-Neuman-Keuls test.

Reading the Report (data sources and key variables)

This report describes the outcomes of the graduating Class of 2007 in 2009. In many cases, comparisons are provided from the MPHEC's Class of 2003 (surveyed in 2005).

Definitions

Main Graduate Groupings

- First-degree Holders

  First-degree holders are defined as graduates who completed a bachelor's degree and who enrolled in the program with a high-school diploma as their highest completed level of education. For first-degree holders, the 2007 degree represents their starting point in postsecondary education; analyses based on this group provide a clearer picture of outcomes and transitions of Maritime university graduates from the beginning of the postsecondary education path.

- Other Graduates

  By comparison, graduates who are not classified as first-degree holders represent a mixture of people at various stages of their educational path, and for whom the 2007 postsecondary credential was not their first.

Discipline Cluster

Major fields of study are grouped into four broad categories or clusters: 1) Commerce and Administration, 2) Applied Arts and Sciences or Professional programs (often referred to collectively in this report as Applied/Professional), 3) Physical and Life Sciences and Mathematics, and 4) Humanities, Arts and Social Sciences (often referred to collectively in this report as Liberal Arts and Sciences). A list of majors comprising each discipline cluster may be found at http://www.mphec.ca/resources/DisciplineClusters.pdf

Parents' Education / Parental Educational Attainment

Parental educational attainment comprises three categories:

- High school diploma or less
- PSE below bachelor degree (includes trade, community college or hospital-based certificates or diplomas, and completion of a university certificate or diploma below the bachelor's level, or attendance at university without earning a credential)
- Bachelor's degree or above (includes bachelor's, first professional, master's or PhD degrees, and graduate level certificates/diplomas)

These categories combine both the mother's and father's highest level of education, and the category is assigned based on the highest level of education of the pair. Excluded from analysis are those graduates who did not know or declined to report the highest level of education of either parent.

Job Skill Level

The job skill level variable is created from the National Occupation Classification code structure which classifies occupations according to their combination of skill level and skill type. Skill type reflects the field of training or experience usually required and the type of work performed; there are 10 skill types.
The skill types are:

0. Management Occupations (*note - management occupations are not assigned to a skill level category)
1. Business, Finance and Administrative Occupations
2. Natural and Applied Sciences and Related Occupations
3. Health Occupations
4. Occupations in Social Science, Education, Government Service and Religion
5. Occupations in Art, Culture, Recreation and Sport
6. Sales and Service Occupations
7. Trades, Transport, and Equipment Operators and Related Occupations
8. Occupations Unique to Primary Industry
9. Occupations Unique to Processing, Manufacturing and Utilities.

Skill level corresponds to the type and/or amount of training or education typically required. The skill levels are:

a. University education
b. College level education including trade apprenticeships
c. Secondary school plus a period of job-specific training
d. Short work demonstration (no formal education required).

Job Skill Level Categories:

- Usually requires university education / management = skill type 0 + skill level A
- Occupation does not require university education = skill level B, C and D

Employment Outcomes

Graduates were asked questions related to employment in reference to 'last week' – the week before they were interviewed. Employment outcome statistics are based on this time frame.

Wage-Related Data and Analysis

Graduates reported earnings on the basis of their choosing (hourly, weekly, monthly, and annually, etc.); all responses were then converted to weekly amount and the weekly earnings variable was used to derive annual and hourly earnings for all employed graduates. To limit the effect of outliers, the lowest and highest five percent of earnings were excluded from analysis. This "trimmed" variable was used in all wage-related analysis and deriving the average annual and hourly wage variables. Data from the previous cohort (Class of 2003) is converted to 2009 dollars for comparison purposes.

Student Loan Data

To ensure a consistent base, within the Class and across cohorts, graduates who borrowed to finance their university program (the 2003 or 2007 degree, additional education and/or both) but who did not know or did not report how much they had borrowed from each loan source were excluded from analysis. Similarly, graduates who did not know or did not report the amount outstanding on each loan were excluded, and in this case only those graduates included in the calculation of the total amount borrowed were included in the calculation of the total amount owing. Data from the previous cohort (Class of 2003) is converted to 2009 dollars for comparison purposes.

Class of 2007 and 2003 Profile Comparison

	Class of 2007 n = 3,380		Class of 2003 n = 4,200	
	n	%	n	%
Gender				
Male	1,269	37	1,497	36
Female	2,111	63	2,703	64
Residence Prior to Enrolling				
Nova Scotia	1,275	38	1,834	44
New Brunswick	830	25	1,132	27
Prince Edward Island	186	6	252	6
Outside Maritimes	1,085	32	979	23
Province of Graduation				
NS	2,157	64	2,667	63
NB	1,047	31	1,337	32
PE	176	5	196	5
Age at Graduation				
19-22	811	24	1,107	27
23-24	972	29	1,247	30
25-29	739	22	927	22
30-39	442	13	489	12
40-49	258	8	294	7
50+	128	4	115	3
Marital Status				
Married	982	29	1,255	30
Living with Partner	608	18	568	14
Single	1,684	50	2,265	54
Separated/Divorced/Widowed	94	3	100	2
Dependent Children				
Yes	694	21	790	19
Language Spoken Most Often at Home				
English	2,985	88	3,695	88
French	275	8	378	9
Other	120	4	10	<1
Visible Minority				
Yes	274	8	245	6
Member of First Nations or Aboriginal				
Yes	88	3	62	1
Any Limitation on Activities				
Yes	120	4	120	3

Note: percentages may not add up to 100 due to rounding; cases of non-response are excluded.

1. Who are Class of 2007 Graduates?

Demographic Profile

Table 1.1
Demographic profile of first degree holders and other graduates

Universe: All Graduates

	First Degree Holders (n=1,702)	Other Graduates (n=1,678)	All 2007 Graduates (n=3,380)
	%	%	%
Gender			
Male	39	36	37
Female	61	64	63
Province of Graduation			
Nova Scotia	62	66	64
New Brunswick	33	29	31
Prince Edward Island	5	5	5
Age at Graduation			
19-22	39	9	24
23-24	43	15	29
25-29	13	31	22
30-39	3	24	13
40-49	<1	15	8
50+	<1	7	4
Marital Status (Two years after graduation)			
Married	14	45	29
Living with Partner	21	15	18
Single	64	36	50
Separated/Divorced/Widowed	1	4	3
Dependent Children (Two years after graduation)			
Yes	7	35	21
Language Spoken Most Often at Home			
English	89	87	88
French	8	8	8
Other	3	4	4
Visible Minority			
Yes	7	9	8
Member of First Nations or Aboriginal			
Yes	2	3	3
Any Limitation on Activities			
Yes	2	4	4

Table 1.2
Parental educational attainment, discipline cluster of degree completed in 2007/2003 and province/region of residence prior to enrolling in degree program

Universe: All Graduates, Class of 2007 and 2003

	Class of 2007 First Degree Holders	Class of 2003 First Degree Holders	Class of 2007 Other Graduates	Class of 2003 Other Graduates
	(n=1,702)	(n=2,357)	(n=1,678)	(n=1,833)
	%	%	%	%
Parental Educational Attainment				
High School Diploma or Less	18	21	27	30
PSE Below Bachelor's Degree	29	33	30	32
Bachelor's Degree or Above	53	46	43	38
Discipline Cluster				
Applied & Professional	40	44	76	80
Commerce & Administration	17	19	16	19
Applied Arts & Sciences or Professional Programs	23	25	60	61
Liberal Arts & Sciences	61	56	23	21
Physical & Life Sciences and Mathematics	18	16	6	5
Humanities, Arts & Social Sciences	43	40	17	16
Province/Region of residence 12 months prior to enrolling in program				
Maritime Provinces	69	82	67	70
Nova Scotia	37	46	39	41
New Brunswick	26	29	23	24
Prince Edward Island	6	7	5	5
Outside Maritime Region	30	19	34	29
Ontario	19	7	10	9
Other Canadian Province	7	9	13	14
Outside Canada	4	3	11	6

Table 1.3
Discipline Cluster by gender, prior region of residence and parental educational attainment

Universe: First Degree Holders

	Discipline Cluster			
	Commerce & Administration	Applied Arts & Sciences and Professional Programs	Physical & Life Sciences and Mathematics	Humanities, Arts and Social Sciences
	(n=282)	(n=391)	(n=299)	(n=730)
	%	%	%	%
Gender				
Male	58	40	40	30
Female	42	60	60	70
Region of Residence 12 Months Prior to Enrolling in 2007 Program				
Maritimes	60	74	76	68
Outside Maritimes	40	26	24	32
Parental Educational Attainment				
High School Diploma or Less	17	20	18	16
PSE Below Bachelor's Degree	28	31	24	31
Bachelor's Degree or Above	55	49	58	53

Table 1.4
Prior region of residence by gender, discipline cluster and parental educational attainment

Universe: First Degree Holders

	Region of residence 12 months prior to enrolling in the 2007 degree program			
	Maritime Province (n=1,180)	Ontario (n=325)	Other Canadian Province (n=114)	Outside Canada (n=80)
	%	%	%	%
Gender				
Male	37	40	41	48
Female	63	60	59	53
Discipline Cluster				
Humanities, Arts & Social Sciences	42	49	42	29
Physical & Life Sciences and Mathematics	19	12	18	18
Applied Arts & Sciences and Professional	24	20	22	17
Commerce & Administration	14	20	18	37
Parental Educational Attainment				
High School Diploma or Less	20	11	10	23
PSE Below Bachelor's Degree	33	22	27	11
Bachelor's degree or above	48	67	63	66

Program Characteristics

Table 1.5
Program characteristics

Universe: All Graduates

	First-Degree Holders (n=1,702)	Other Graduates (n=1,678)	All 2007 Graduates (n=3,380)
	%	%	%
Type of Credential Received in 2007			
Undergraduate Certificate or Diploma	-	12	6
Bachelor's/First Professional Degree	100	50	77
Master's Degree/PhD	-	38	17
Percent reporting they took their degree through…			
Full-time studies only	82	63	73
Part-time studies only	<1	23	12
Combination of full-time and part-time studies	17	14	16
Percent reporting they completed this program…			
In a normal amount of time	69	66	67
In a longer amount of time than normal	26	18	22
In a shorter amount of time	5	17	11

Table 1.6
Work experience while enrolled in the 2007 degree program

Universe: All Graduates

Percent who reported…	First-Degree Holders (n=1,702)	Other Graduates (n=1,678)	All 2007 Graduates (n=3,380)
	%	%	%
Work placements as part of the program			
Yes	20	32	26
Work during the school year (other than work placements)			
Yes	74	72	73
Employed during the school year			
Full Time (30+ Hours Per Week)	20	41	31
Part Time (< 30 Hours Per Week)	70	43	56
Worked part-time or full-time during the summer months			
Yes	95	71	83

Table 1.7
Percent reporting work placement as part of program, by discipline cluster

Universe: All Graduates

Percent reporting work placement as part of program	Class of 2007 First Degree Holders (n=1,702)	Class of 2007 Other Graduates (n=1,678)	Class of 2007 All Graduates (n=3,380)
	%	%	%
Discipline Cluster			
Humanities, Arts & Social Sciences	6	17	9
Physical & Life Sciences and Mathematics	12	15	12
Applied Arts & Sciences and Professional	49	40	42
Commerce & Administration	28	22	25

2. How were graduates transformed by their education?

Development of skills

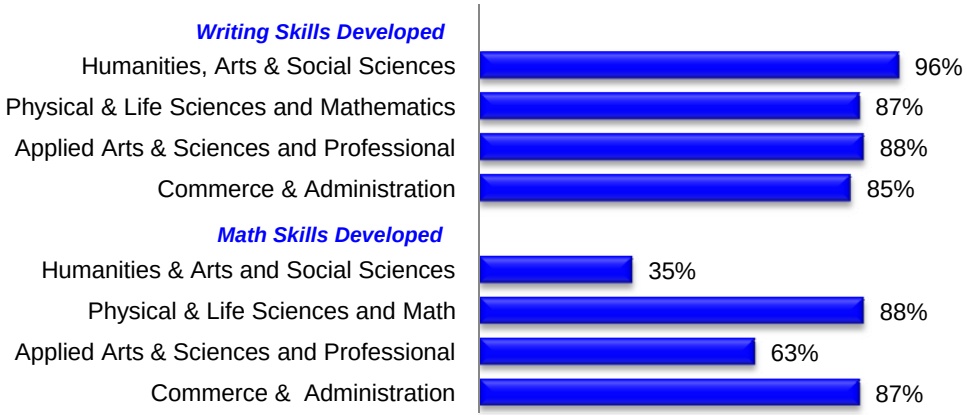
Table 2.1
Percent reporting skills were developed to some or a great extent

Universe: All graduates, Class of 2007 and 2003

Percent reporting skill developed to some or a great extent…	Class of 2007 First Degree Holders (n=1,702)	Class of 2003 First Degree Holders (n=2,357)	Class of 2007 Other Graduates (n=1,678)	Class of 2003 Other Graduates (n=1,833)
	%	%	%	%
Writing Skills	91	90	84	86
Math Skills	60	62	49	50
Speaking or Communication Skills	92	92	89	91
Ability to think independently and critically	96	97	94	94
Decision-making abilities	92	93	90	90

Figure 2.1
Percent reporting skills developed to some or a great extent, by discipline cluster

Universe: First Degree Holders



How do graduates evaluate their program?

Table 2.2
Percent reporting they were satisfied or very satisfied with aspects of program

Universe: All Graduates, Class of 2007 and 2003

Percent reporting they were satisfied or very satisfied with…	Class of 2007 First Degree Holders (n=1,702)	Class of 2003 First Degree Holders (n=2,357)	Class of 2007 Other Graduates (n=1,678)	Class of 2003 Other Graduates (n=1,833)
	%	%	%	%
Quality of teaching	95	94	94	95
Availability of professors	95	95	95	95
Class sizes in general	96	95	96	97
Computer equipment available	91	90	85	88

Who pursues further education?

Figure 2.2
Percent who pursued further education within two years of completing first degree

Universe: First degree holders (n=1,702)

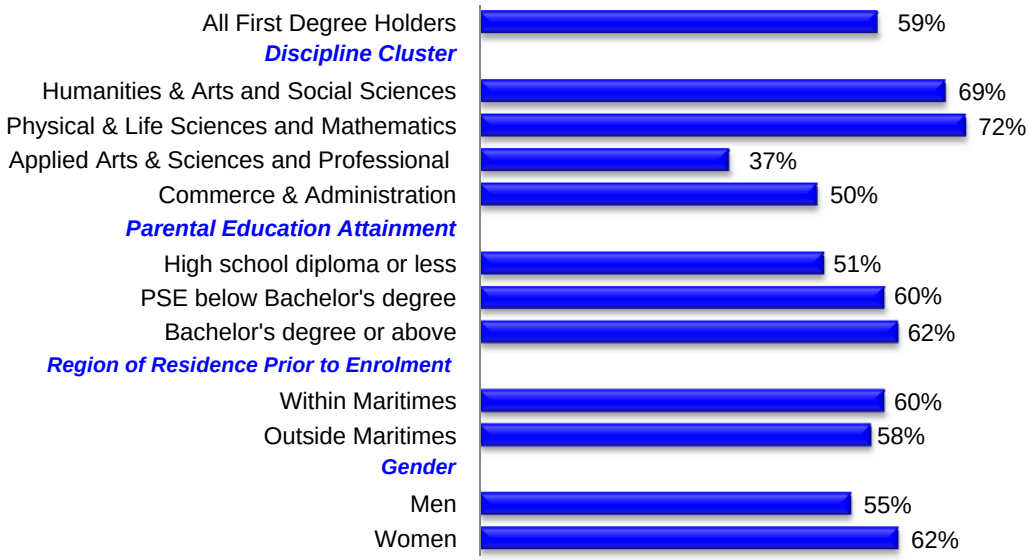


Figure 2.3
Type of program pursued (if more than one program pursued, credential at highest level assigned – note: of those who returned for further education, 86% enrolled in one program; 12% enrolled in two) after the 2007 degree

Universe: First degree holders who pursued further education within two years of completing the 2007 degree (n=996)

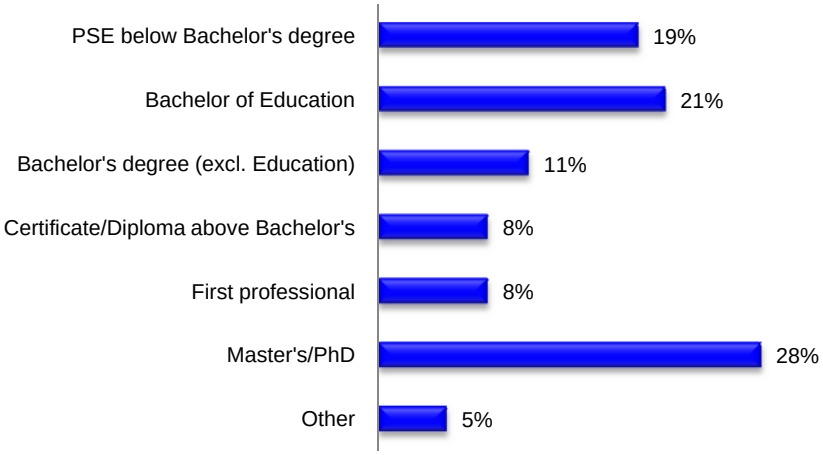


Figure 2.4
Type of program pursued after the 2007 degree, by discipline cluster of first degree

Universe: First degree holders who pursued further education within two years of completing the 2007 degree

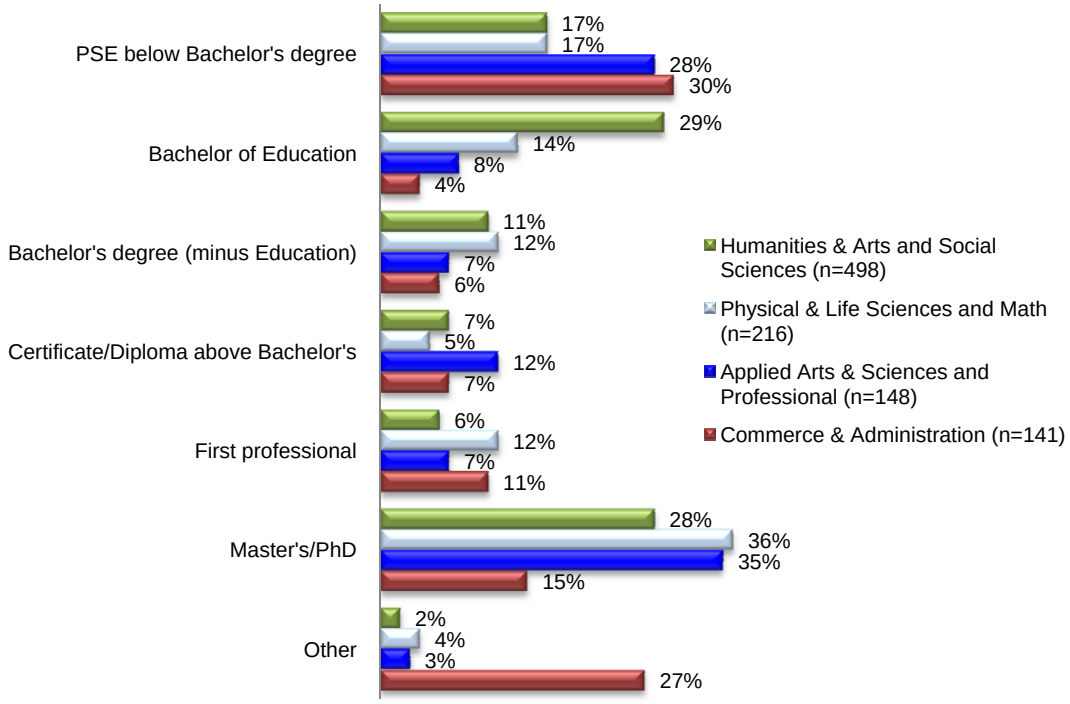


Figure 2.5
Type of program pursued after the 2007 degree, by parental educational attainment

Universe: First degree holders who pursued further education within two years of completing the 2007 degree

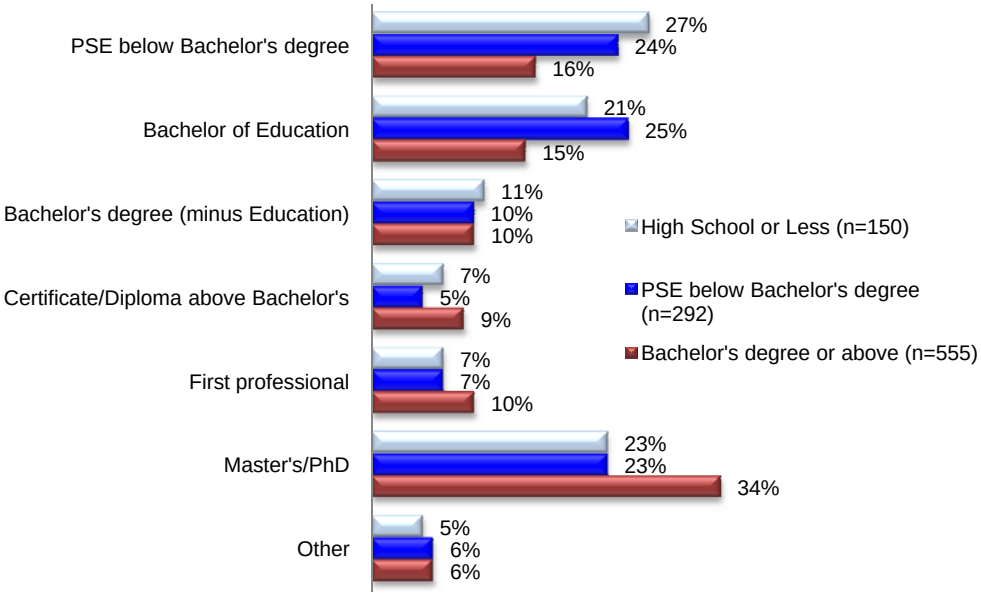
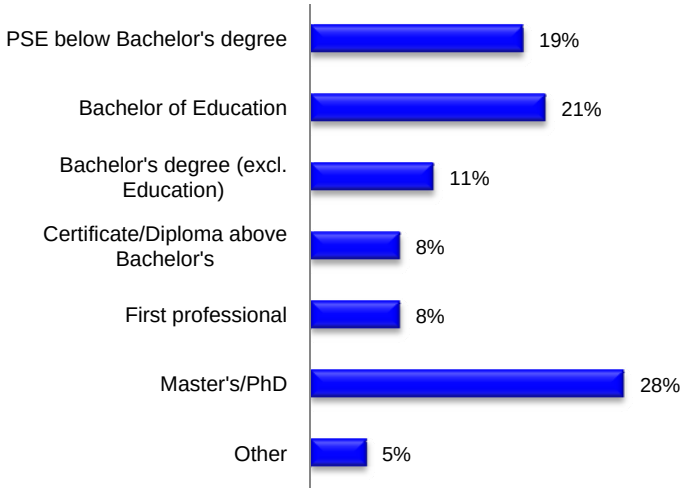


Figure 2.6
Type of program pursued after the 2007 degree, by region of residence
12 months prior to enrolment in 2007 degree

Universe: First degree holders who pursued further education within two years of completing the 2007 degree



Employment outcomes two years after graduation

Table 2.3
Labour force and employment status

Universe: All graduates, Classes of 2007 and 2003

Employment Outcome Measures	Class of 2007 First Degree Holders (n=1,702)	Class of 2003 First Degree Holders (n=2,359)	Class of 2007 Other Graduates (n=1,678)	Class of 2003 Other Graduates (n=1,840)
	%	%	%	%
All graduates				
% in Labour Force	86	85	91	90
% Not in Labour Force	14	16	8	10
Among those in the Labour Force:	(n=1,472)	(n=1,989)	(n=1,538)	(n=1,666)
Employed During Reference Week	86	95	89	97
Unemployed During Reference Week	14	5	11	3
Among those employed:	(n=1,255)	(n=1,884)	(n=1,308)	(n=1,612)
Employed in Full-time positions	81	81	89	90
Employed in Part-time positions	20	19	11	11

Figure 2.7
Percent employed by discipline cluster, parental educational attainment, region of residence 12 months prior to enrolment and gender

Universe: First degree holders in the labour force

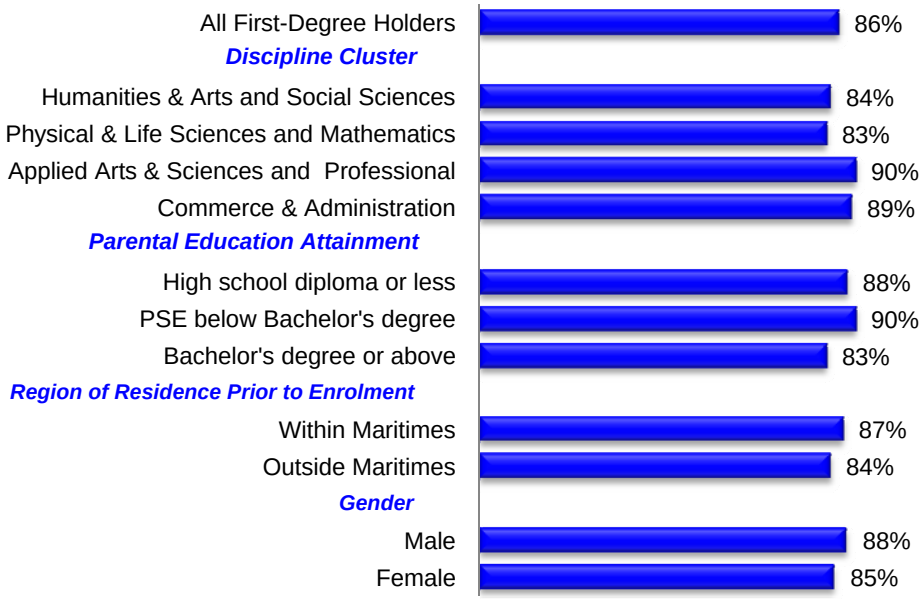


Figure 2.8
Percent of first-degree holders in full-time positions by discipline cluster, parental educational attainment, region of residence 12 months prior to enrolment and gender

Universe: Employed first degree holders

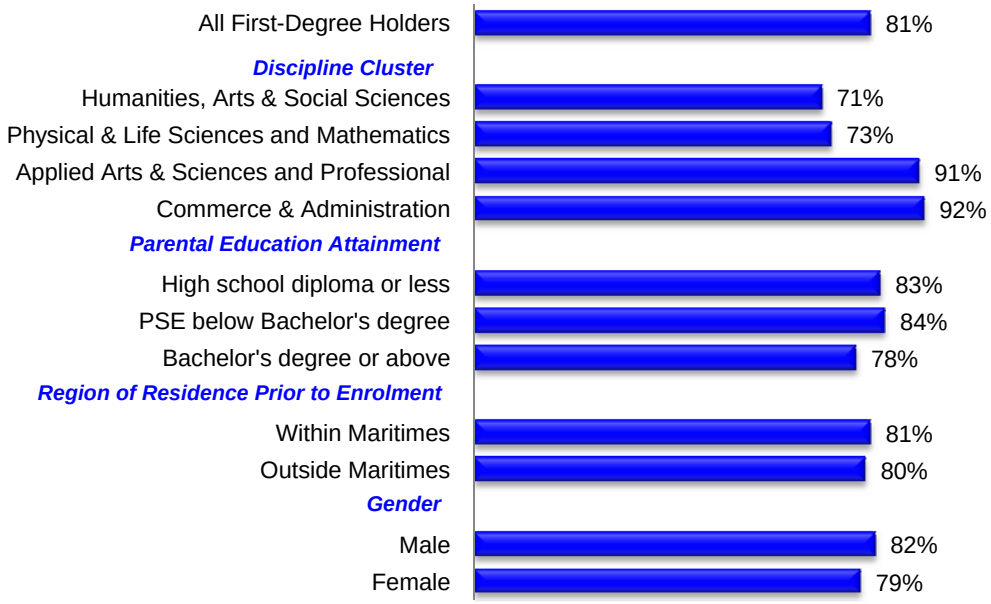


Table 2.4
Skill level of occupation

Universe: Employed graduates, Class of 2007 and 2003

	Class of 2007 First Degree Holders (n=1,090)	Class of 2003 First Degree Holders (n=2,264)	Class of 2007 Other Graduates (n=1,131)	Class of 2003 Other Graduates (n=1,743)
	%	%	%	%
Does not usually require a university education	41	44	23	22
Usually requires a university education or a management position	59	56	77	78

Figure 2.9
Percent whose job is in management and/or usually requires university education by discipline cluster, parental educational attainment, region of residence 12 months prior to enrolment and gender

Universe: Employed first degree holders

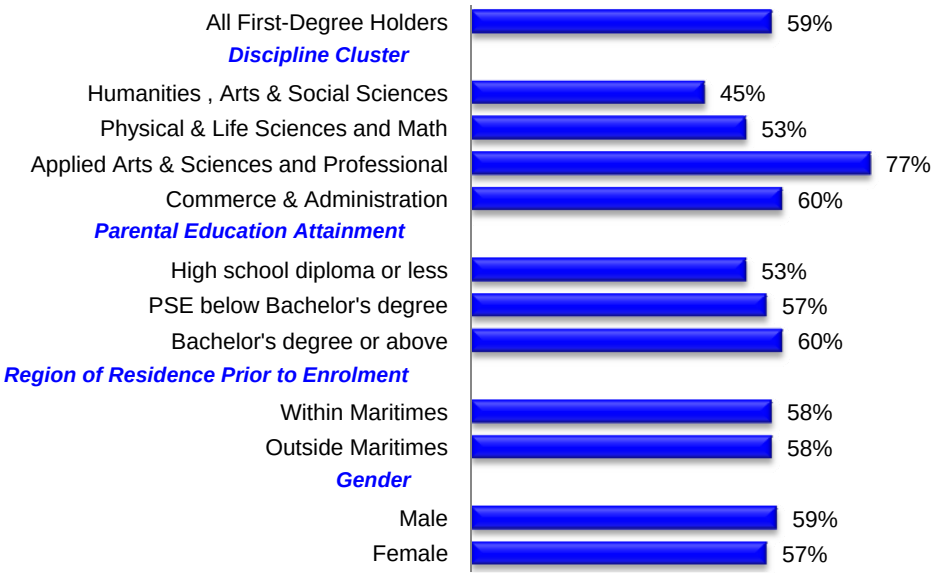


Table 2.5
Top 5 occupations in 2009

Universe: Employed graduates

Class of 2007 First Degree Holders (n=1,059)	Class of 2007 Other Graduates (n=1,119)
Occupation in 2009	Occupation in 2009
Administrative/Clerical (12%)	Manager (14%)
Manager (9%)	Teacher K-12 (13%)
Financial/Accounting (7%)	Nurse/Registered Nursing Assistant (7%)
Nurse/Registered Nursing Assistant (7%)	Administrative/Clerical (7%)
Policy Researcher/Program Officer/ Consultant (6%)	PSE Professor/Instructor (7%)

Table 2.6
Top 5 occupations, by Program Orientation

Universe: Employed first degree holders

Class of 2007 Applied Arts/Sciences Graduates (n=503)	Class of 2007 Liberal Arts/Sciences Graduates (n=554)
Occupation in 2009	Occupation in 2009
Nurse/Registered Nursing Assistant (14%)	Administrative/Clerical (14%)
Financial/Accounting (14%)	Teacher K-12 (9%)
Administrative/Clerical (11%)	Manager (8%)
Manager (10%)	Policy Researcher, Program Officer, Consultant (8%)
Engineer (9%)	PSE Professor/Instructor/Teaching Assistant/ Research Assistant (8%)

Table 2.7
Characteristics/perception of job

Universe: Employed graduates, Class of 2007 and 2003

	Class of 2007 First Degree Holders (n=1,258)	Class of 2003 First Degree Holders (n=1,884)	Class of 2007 Other Graduates (n=1,314)	Class of 2003 Other Graduates (n=1,613)
	%	%	%	%
Job is permanent (% Yes)	67	71	70	76
Job is somewhat or closely related to 2007 degree program	72	71	89	87
2007 degree helped to some or a great extent in obtaining the job	75	74	79	75
Using skills from 2007 degree to some or a great extent	73	70	87	86
Feel overqualified for the job	24	25	18	19
Satisfied or very satisfied with job	89	89	94	93
Satisfied or very satisfied with money	78	78	83	81

Figure 2.10
Characteristics/perceptions of job, by discipline cluster

Universe: Employed first degree holders

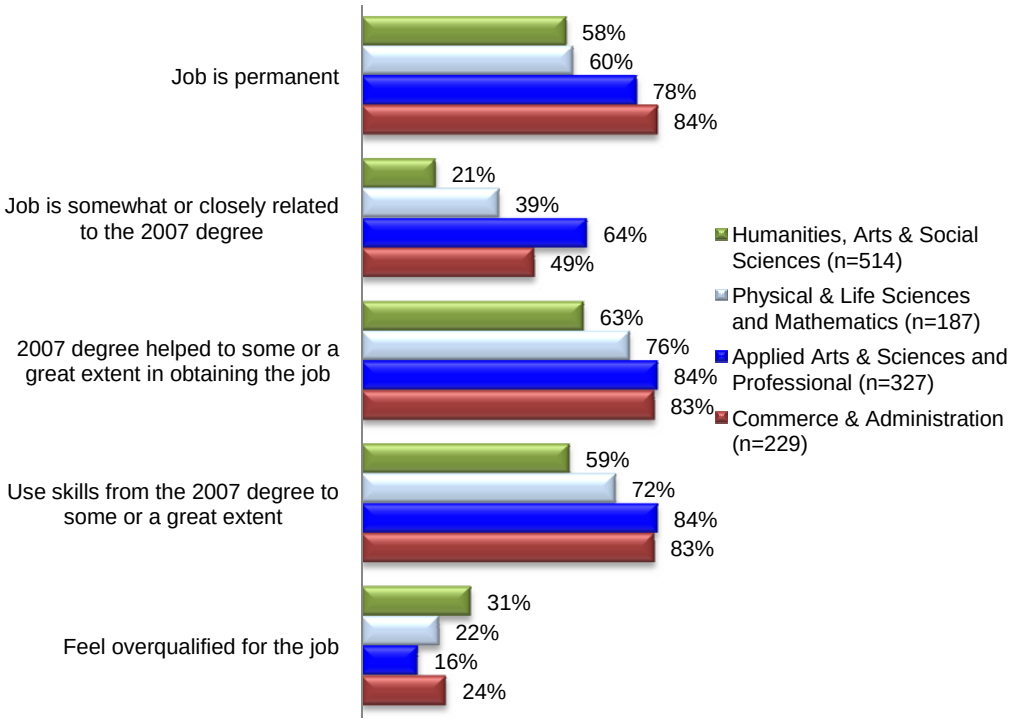


Table 2.8
Annualized employment earnings (expressed in 2009 $) two years after graduation

Universe: Employed graduates, Class of 2007 and 2003

Earnings expressed in 2009 $	Class of 2007 First Degree Holders (n=1,040)	Class of 2003 First Degree Holders (n=1,583)	Class of 2007 Other Graduates (n=998)	Class of 2003 Other Graduates (n=1,241)
Average Earnings	$37,669	$37,177	$50,038	$47,783
Average earnings based on region of residence two years after graduation				
Living within the Maritimes	$36,079	$35,383	$49,902	$47,360
Living outside the Maritimes	$40,319	$41,179	$50,285	$48,710

Figure 2.11
Average employment earnings two years after graduation by discipline cluster, parental educational attainment, region of residence 12 months prior to enrolment and gender

Universe: Employed first degree holders

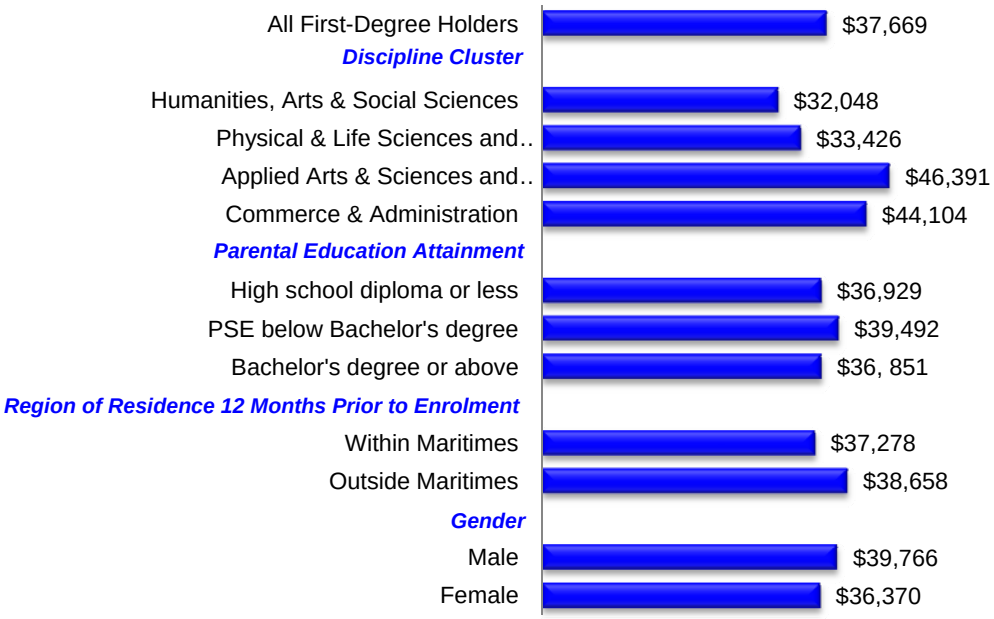


Table 2.9
Annual employment earnings (expressed in 2009 $) two years after graduation by discipline cluster, parental educational attainment, region of residence 12 months prior to enrolment and gender

Universe: Graduates employed full time, Class of 2007 and 2003

Among full-time employed graduates (reported in constant 2009 dollars)	Class of 2007 First Degree Holders	Class of 2003 First Degree Holders	Class of 2007 Other Graduates	Class of 2003 Other Graduates
	(n=874)	(n=1,368)	(n=904)	(n=1,123)
Mean Earnings	$43,628	$39,846	$54,626	$50,138
Average earnings based on region of residence two years after graduation				
Living within the Maritimes	$41,464	$37,582	$54,052	$49,669
Living outside the Maritimes	$47,289	$45,137	$55,503	$51,160

Table 2.10
Mean Hourly Wages, Annualized Earnings and number of hours worked, in 2009

Universe: First degree holders employed full time

	n	Mean Annual Earnings	Mean hours worked per week	Mean hourly wage 2009
Gender				
Women	530	$42,559	40.3	$20.67
Men	344	$45,088	44.3	$20.36
Parental Educational Attainment				
High school diploma or less	168	$42,014	41.7	$19.80
PSE below Bachelor's degree	282	$44,397	41.2	$21.25
Bachelor's degree or above	421	$43,580	42.5	$20.39
Discipline Cluster				
Humanities, Arts and Social Sciences	323	$37,398	40.1	$18.32
Physical & Life Sciences and Mathematics	124	$39,953	42.7	$18.86
Applied Arts & Sciences and Professional Programs	253	$50,679	42.8	$23.48
Commerce & Administration	173	$47,205	43.4	$20.55
Region of Residence two years after graduation				
Living in the Maritimes	551	$41,464	41.6	$19.71
Living outside the Maritimes	320	$47,289	42.5	$22.06
Occupational Skill Level				
Does not usually require a university education	309	$36,763	40.2	$17.87
Usually requires a university education /management	454	$48,620	42.5	$22.69

3. What does a university education cost?

Non-Repayable Sources

Table 3.1
What were your two main sources of funding for the degree you completed in 2007/2003?
(Statistics presented below compile both sources)

Universe: All graduates; Class of 2007 and 2003

	Class of 2007 First Degree Holders (n=1,685)	Class of 2003 First Degree Holders (n=2,352)	Class of 2007 Other Graduates (n=1,614)	Class of 2003 Other Graduates (n=1,827)
	%	%	%	%
May add to more than 100% due to multiple mentions				
Employment Earnings	45	45	41	43
Family (Parents and other Family Members including Spouse)	43	41	20	18
Government Student Loans	37	45	32	39
Banks/Financial Institutions/Line of Credit/Credit Cards	16	13	18	14
Scholarships, Awards & Fellowships (Merit & Needs Based)	15	13	16	13
Personal Savings	11	15	18	21

Table 3.2
What were your two main sources of funding educational programs taken *since* 2007/2003?
(Statistics presented below compile both sources)

Universe: Graduates who pursued further study; Class of 2007 and 2003

	Class of 2007 First Degree Holders (n=1,005)	Class of 2003 First Degree Holders (n=1,298)	Class of 2007 Other Graduates (n=611)	Class of 2003 Other Graduates (n=587)
	%	%	%	%
Employment Earnings	40	37	39	42
Government Student Loans	35	47	21	23
Scholarships, Awards & Fellowships (Merit & Needs Based)	16	16	16	15
Family (Parents and other Family Members including Spouse)	19	16	13	14
Banks/Financial Institutions/Line of Credit/Credit Cards	16	16	14	13
Personal Savings	11	14	17	20

Table 3.3
Percent who reported receiving scholarships/bursaries to fund the 2007 degree program, and mean total amount received during the program

Universe: All graduates

	Class of 2007 First Degree Holders		Class of 2007 Other Graduates	
	Percent who received…	Mean total amount received	Percent who received…	Mean total amount received
	%	$	%	$
Merit-based Awards/Scholarships	45	$4,461	28	$7,581
Needs-based Awards/Scholarships	20	$2,628	16	$2,966
Canada Millennium Scholarship/Bursary	28	$3,185	22	$3,851

Table 3.4
Percent who reported receiving scholarships/bursaries to fund the education pursued since the 2007 program, and mean total amount received

Universe: All graduates who pursued further study

	Class of 2007 First Degree Holders		Class of 2007 Other Graduates	
	Percent who received…	Mean total amount received	Percent who received…	Mean total amount received
	%	$	%	$
Merit-based Awards/Scholarships	26	$13,368	22	$17,118
Needs-based Awards/Scholarships	14	$3,179	8	$2,700
Canada Millennium Scholarship/Bursary	13	$2,934	6	$2,945

Repayable Sources

Funding the 2007 degree

Figure 3.1
Percent of graduates who borrowed from at least one source to fund the 2007/2003 program

Universe: All graduates, Class of 2007/2003

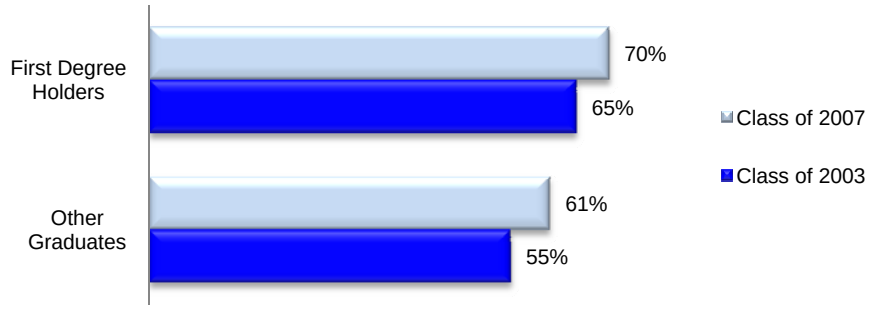


Figure 3.2
Percent of graduates who borrowed from at least one source to fund the 2007 program by discipline cluster, parental educational attainment, and region of residence 12 months prior to enrolment

Universe: All first degree holders

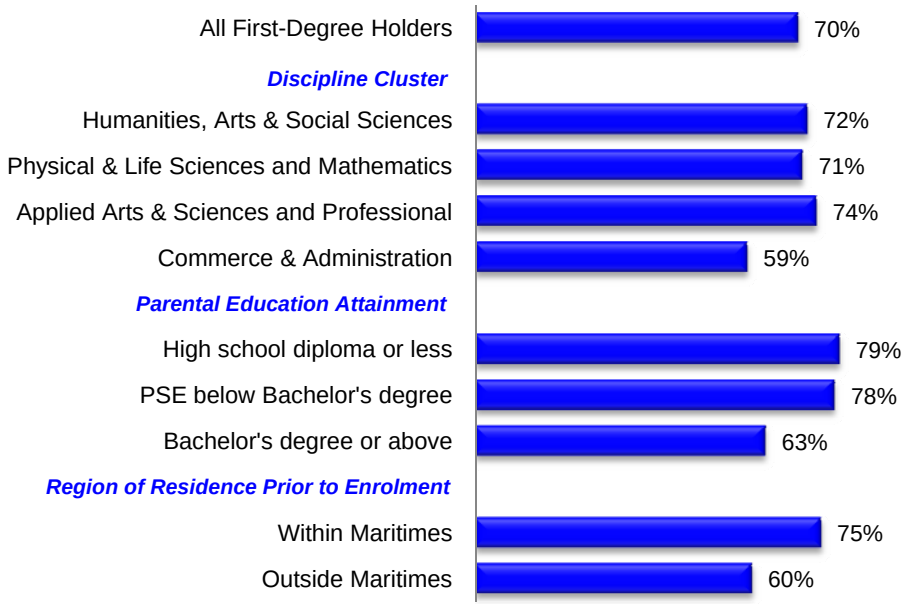


Table 3.5
Total mean amount borrowed (all sources combined), and borrowing by range, to fund 2003 or 2007 program (expressed in 2009 dollars)

Universe: Graduates who borrowed from at least one source; Class of 2007/2003

	Class of 2007 First Degree Holders (n=1,100)	Class of 2003 First Degree Holders (n=1,429)	Class of 2007 Other Graduates (n=939)	Class of 2003 Other Graduates (n=960)
(2009 dollars)	$	$	$	$
Mean Amount Borrowed (All Sources Combined)	$30,767	$25,339	$29,381	$25,621
Borrowing Range	%	%	%	%
Between $1 and $14,999	24	33	36	39
Between $15,000 and $29,999	27	31	30	32
Between $30,000 and $44,999	28	28	18	17
Between $45,000 and $59,999	15	8	7	6
$60,000 or More	7	1	9	6

Figure 3.3
Mean total amount borrowed (all sources combined) to fund the 2007 program by discipline cluster, parental educational attainment, and region of residence 12 months prior to enrolment

Universe: First degree holders who borrowed from at least one source to fund the 2007 program

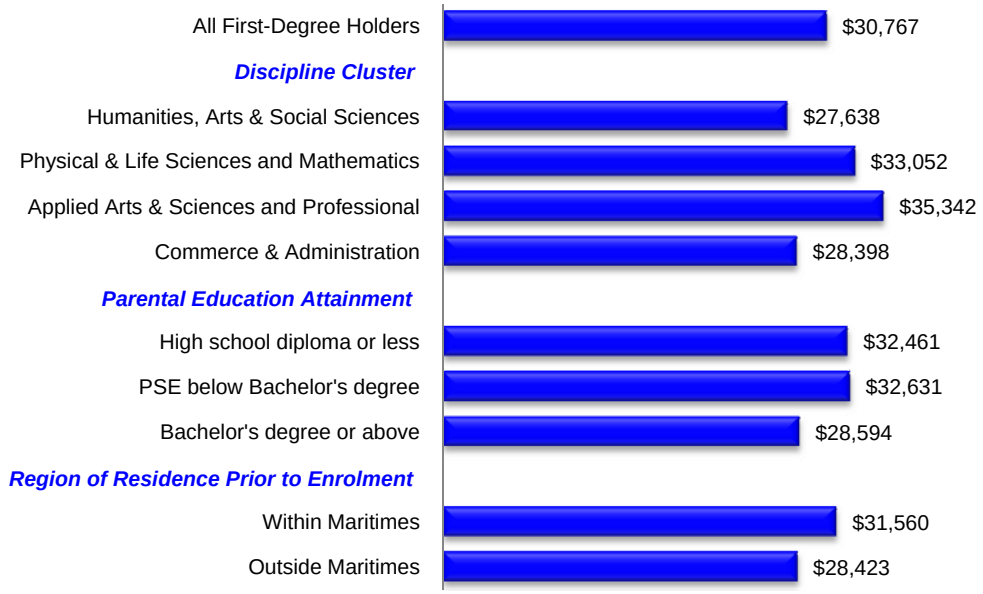


Table 3.6
Percent who borrowed, and mean amount borrowed, by source, to fund 2007/2003 program

Universe: Graduates who borrowed (from at least one source); Class of 2007 and 2003

	Class of 2007 First Degree Holders (n=1,100)	Class of 2003 First Degree Holders (n=1,429)	Class of 2007 Other Graduates (n=939)	Class of 2003 Other Graduates (n=960)
	%	%	%	%
Percent who borrowed from				
Government Student Loans	65	78	62	77
Banks, Financial Institutions	39	26	45	29
Family	44	20	33	17
Other Sources	4	5	6	7
Mean Amount Borrowed By Source	$	$	$	$
Government Student Loans	$ 27,709	$ 23,706	$ 23,310	$ 22,718
Banks, Financial Institutions	$ 16,173	$ 13,137	$ 25,494	$ 17,573
Family	$ 14,913	$ 8,553	$ 9,827	$ 7,347
Other Sources	$ 5,278	$ 10,206	$ 6,162	$ 15,533

Table 3.7
Percent who borrowed, by source, to fund the 2007 program by discipline cluster, parental educational attainment, and region of residence 12 months prior to enrolment

Universe: First degree holders who borrowed

	n	Government Student Loans	Banks, Financial Institutions	Family	Other Sources
		%	%	%	%
Discipline Cluster					
Humanities, Arts & Social Sciences	527	63	38	46	5
Physical & Life Sciences and Mathematics	211	65	36	42	2
Applied Sciences & Science and Professional	288	71	40	41	4
Commerce & Administration	165	61	46	46	1
Parental Education Attainment					
High School Diploma or Less	233	81	32	30	2
PSE below Bachelor's Degree	385	73	45	41	3
Bachelor's Degree or Above	564	53	38	53	5
Region of Residence					
Within Maritimes	881	71	42	38	4
Outside Maritimes	308	47	30	61	3

Table 3.8

Mean amount borrowed by source to fund the 2007 program by discipline cluster, parental educational attainment, and region of residence 12 months prior to enrolment

Universe: First degree holders who borrowed (from at least one source)

	n	Government Loans	Banks, Financial Institutions	Family	Other Sources
Discipline Cluster					
Humanities, Arts & Social Sciences	527	$ 28,942	$ 14,046	$ 13,232	$ 4,600
Physical & Life Sciences and Mathematics	211	$ 29,724	$ 17,683	$ 16,787	$ 7,125
Applied Arts & Sciences and Professional	288	$ 31,752	$ 18,386	$ 15,231	$ 5,938
Commerce & Administration	165	$ 21,404	$ 16,529	$ 16,614	$ 1,500
Parental Educational Attainment					
High School Diploma or Less	233	$ 30,287	$ 14,080	$ 10,948	$ 1,700
PSE below Bachelor's Degree	385	$ 27,624	$ 17,506	$ 12,006	$ 4,286
Bachelor's Degree or Above	564	$ 25,876	$ 15,728	$ 17,410	$ 6,128
Region of Residence Prior to Enrolment					
Within Maritimes	881	$ 28,973	$ 15,376	$ 12,216	$ 5,743
Outside Maritimes	308	$ 22,311	$ 19,370	$ 19,716	$ 3,650

Funding Further Education (post-2007)

Figure 3.4

Percent who borrowed to fund further study

Universe: Graduates who pursued further study within two years of completing the 2007/2003 degree

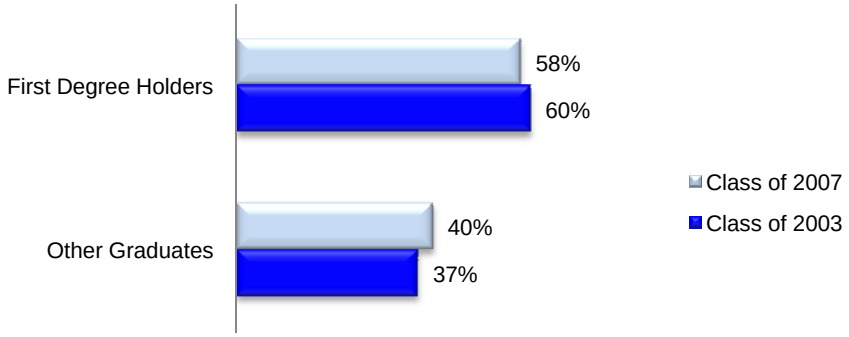


Figure 3.5
Percent who borrowed to fund further study by discipline cluster, parental educational attainment, and region of residence 12 months prior to enrolment

Universe: Graduates who pursued further study within two years of completing the 2007/2003 degree

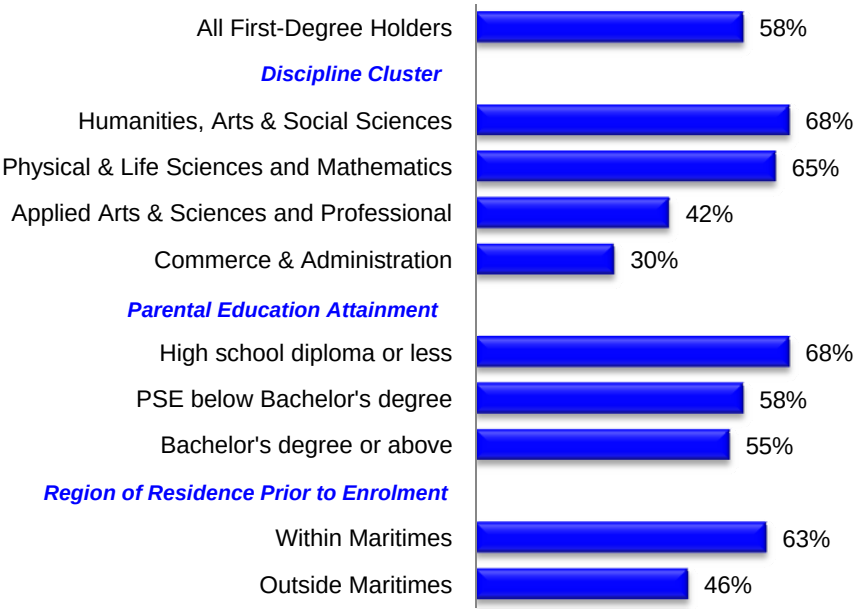


Table 3.9
Percent who borrowed, and mean amount borrowed, by source, to fund further study within two years of completing the 2007/2003 program

Universe: Graduates who borrowed; Class of 2007 and 2003

	Class of 2007 First Degree Holders (n=1,005)	Class of 2003 First Degree Holders (n=1,298)	Class of 2007 Other Graduates (n=611)	Class of 2003 Other Graduates (n=587)
	%	%	%	%
Percent who borrowed from…				
Government Student Loans	72	85	64	70
Banks, Financial Institutions	40	22	46	30
Family	27	13	25	19
Other Sources	3	7	6	8
Average Amount Borrowed By Source	$	$	$	$
Government Student Loans	$17,278	$14,771	$15,200	$15,648
Banks, Financial Institutions	$15,255	$14,329	$19,000	$12,274
Family	$12,042	$7,333	$10,750	$10,229
Other Sources	n/a	$14,822	n/a	n/a

n/a cell size too small for reliable analysis

Table 3.10
Percent who borrowed, by source, to fund further study by discipline cluster, parental educational attainment, and region of residence 12 months prior to enrolment

Universe: First degree holders who borrowed to fund further study within two years of completing the 2007 degree

	n	Government Student Loans	Banks, Financial Institutions	Family	Other Sources
		%	%	%	%
Region of Residence (12 Months Prior to Enrolment in 2007 Program)					
Within Maritimes	445	79	41	22	3
Outside Maritimes	139	51	38	44	4
Discipline Cluster					
Humanities, Arts & Social Sciences	342	73	36	27	4
Physical & Life Sciences and Mathematics	140	79	47	21	1
Applied Arts & Sciences and Professional	61	68	51	32	5
Commerce & Administration	42	n/a	n/a	n/a	n/a
Parental Educational Attainment					
High School Diploma or less	101	76	41	19	2
PSE below Bachelor's degree	174	73	38	26	2
Bachelor's Degree or above	306	71	41	31	4

n/a cell size too small for reliable analysis

Financial situation in 2009 – financing the 2007 program and/or any further education

Figure 3.6
Percent who borrowed to fund education (either the 2007/2003 program and/or any subsequent education

Universe: All graduates; Class of 2007 and 2003

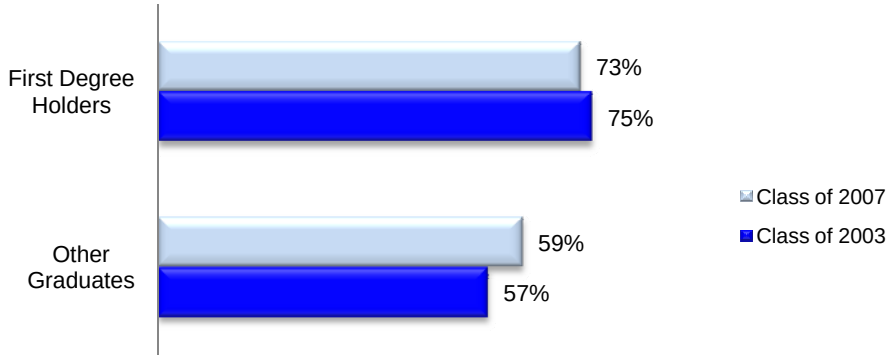


Figure 3.7
Percent who borrowed from at least one source to fund the first degree and/or further study beyond the 2007 degree by discipline cluster, parental educational attainment, and region of residence 12 months prior to enrolment

Universe: All first degree holders

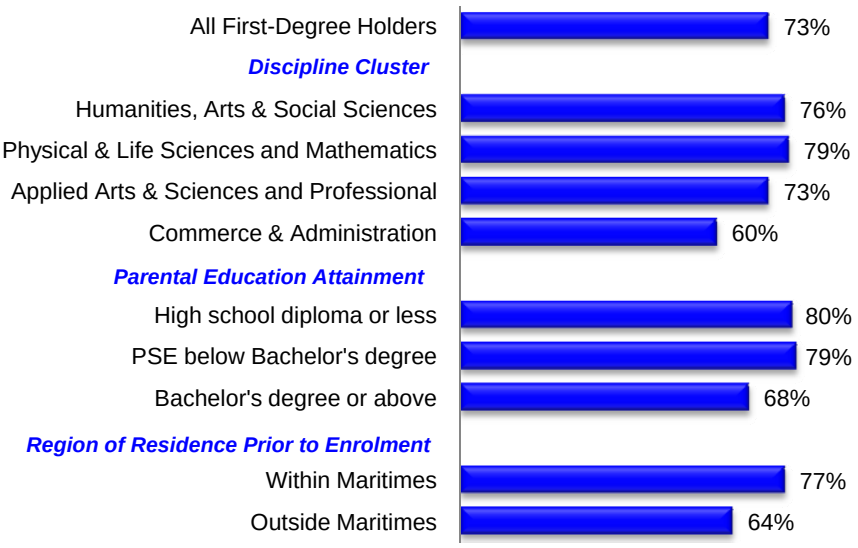


Table 3.11
Range amount borrowed (including $0) to fund the 2007 program and/or post-2007 further study by discipline cluster, parental educational attainment, and region of residence 12 months prior to enrolment

Universe: All first degree holders

Borrowing Ranges	n	Zero (Did Not Borrow)	$1 to $14,999	$15,000 to $29,999	$30,000 to $44,999	$45,000 to $59,999	$60,000 to or more
		%	%	%	%	%	%
Region of Residence							
Within Maritimes	1,180	23	16	16	18	14	13
Outside Maritimes	519	36	16	17	15	7	8
Discipline Cluster							
Humanities, Arts & Social Sciences	730	25	17	17	17	13	12
Physical & Life Sciences and Mathematics	299	21	14	16	21	10	17
Applied Arts & Sciences and Professional	391	27	14	16	18	14	12
Commerce & Administration	282	40	19	17	10	8	7
Parental Educational Attainment							
High School Diploma or Less	295	20	13	14	22	17	15
PSE Below bachelor's degree	492	21	15	16	18	16	13
Bachelor's degree or above	898	32	18	18	15	8	10

Table 3.12
Total mean amount borrowed, all sources combined, and borrowing by range

Universe: Graduates who borrowed from at least one source to fund 2007/2003 program and/or further study

	Class of 2007 First Degree Holders (n=1,313)	Class of 2003 First Degree Holders (n=1,003)	Class of 2007 Other Graduates (n=1,056)	Class of 2003 Other Graduates (n= 1,658)
	$	$	$	$
Average Amount Borrowed	$37,013	$29,484	$33,267	$28,071
Borrowing Ranges	%	%	%	%
Between $1 and $14,999	22	28	33	38
Between $15,000 and $29,999	22	28	28	31
Between $30,000 and $44,999	23	26	19	17
Between $45,000 and $59,999	16	12	9	7
$60,000 or More	17	6	11	8

Figure 3.8
Mean amount borrowed for 2007 program and/or further study (all sources combined) by discipline cluster, parental educational attainment, and region of residence 12 months prior to enrolment

Universe: First degree holders who borrowed from at least one source to fund 2007degree and/or further study

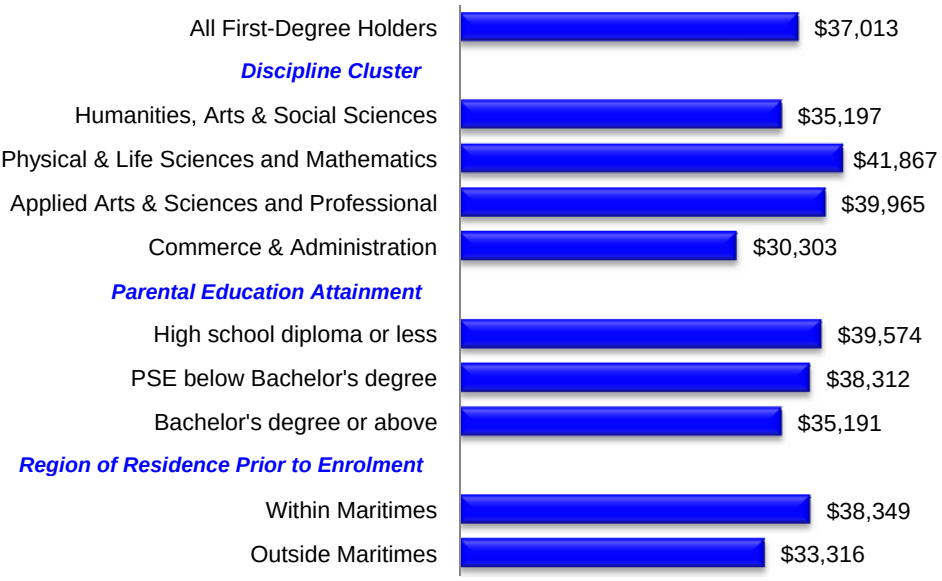


Table 3.13
Total average amount owing, and owing by range, all sources combined, in 2009/2005

Universe: Graduates who borrowed from at least one source to fund 2007/2003 degree and/or further study

	Class of 2007 First Degree Holders (n=1,232)	Class of 2003 First Degree Holders (n=1,003)	Class of 2007 Other Graduates (n=949)	Class of 2003 Other Graduates (n=1,658)
	$	$	$	$
Average amount owing	$25,743	$21,126	$24,177	$18,662
Range amount owing	%	%	%	%
Zero	23	15	29	20
Between $1 and $14,999	20	27	25	33
Between $15,000 and $29,999	19	28	20	28
Between $30,000 and $44,999	19	19	12	10
Between $45,000 and $59,999	10	8	6	5
$60,000 or More	10	4	9	5

Figure 3.9
Proportion of borrowers who completely repaid their loans (all sources combined, to finance the 2007 program and/or any further education) by 2009, by borrowing range

Universe: Graduates who borrowed from at least one source to fund 2007 degree and/or further study

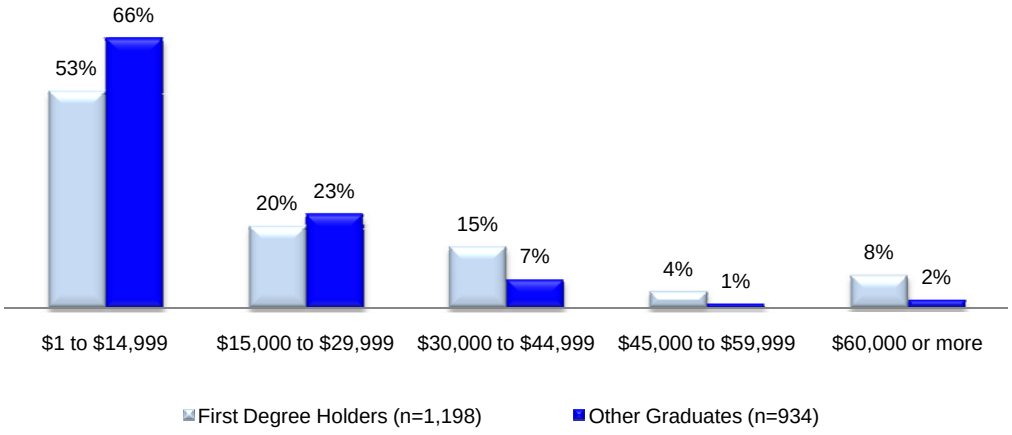


Figure 3.10
Proportion of borrowers who completely repaid their loans (all sources combined, to finance the 2007 program and/or any further education) by 2009, by borrowing source

Universe: Graduates who borrowed from at least one source to fund the 2007 program and/or further study

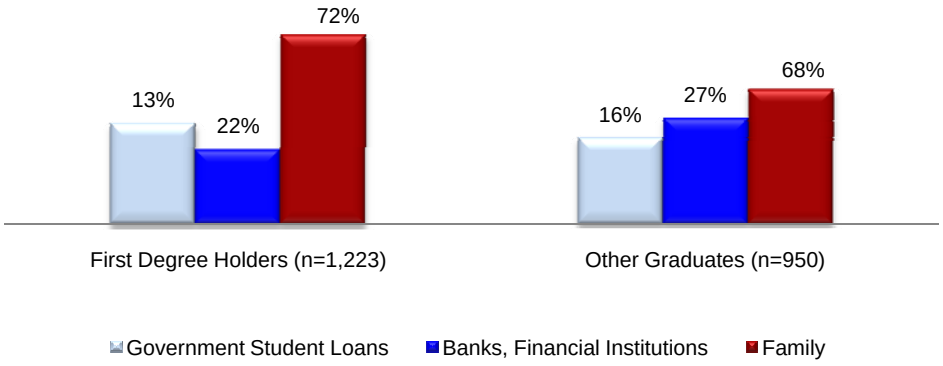


Table 3.14
Debt-payment-to-earnings ratio by gender, parental educational attainment, and discipline cluster

Universe: Graduates employed and repaying government student loans and/or loans from banks/financial institutions (financing the 2007 degree and/or any further education)

	First Degree Holders (n=430)	Other Graduates (n=336)
Overall	14	11
Gender		
Male	14	10
Female	14	12
Parental Educational Attainment		
High School Diploma or less	16	13
PSE Below Bachelor's Degree	13	11
Bachelor's Degree or Above	13	10
Discipline Cluster		
Humanities, Arts & Social Sciences	15	11
Physical & Life Sciences and Mathematics	15	10
Applied Arts & Sciences and Professional	13	12
Commerce & Administration	11	9

4. Migration Patterns

Table 4.1
Region of residence 12 months prior to enrolling in 2007 degree program and region of residence two years after graduation

Universe: All graduates; class of 2007 and 2003

	Class of 2007 First Degree Holders (n=1,698)	Class of 2003 First Degree Holders (n=2,360)	Class of 2007 Other Graduates (n=1,678)	Class of 2003 Other Graduates (n=1,838)
	%	%	%	%
From within the Maritime Region				
- and remain in Maritimes two years after graduation	80	83	83	76
- and live outside the Maritimes two years after graduation	20	17	17	23
From outside Maritime Region				
- and live in Maritimes two years after graduation	19	26	20	26
- and live outside the Maritimes two years after graduation	81	74	80	74

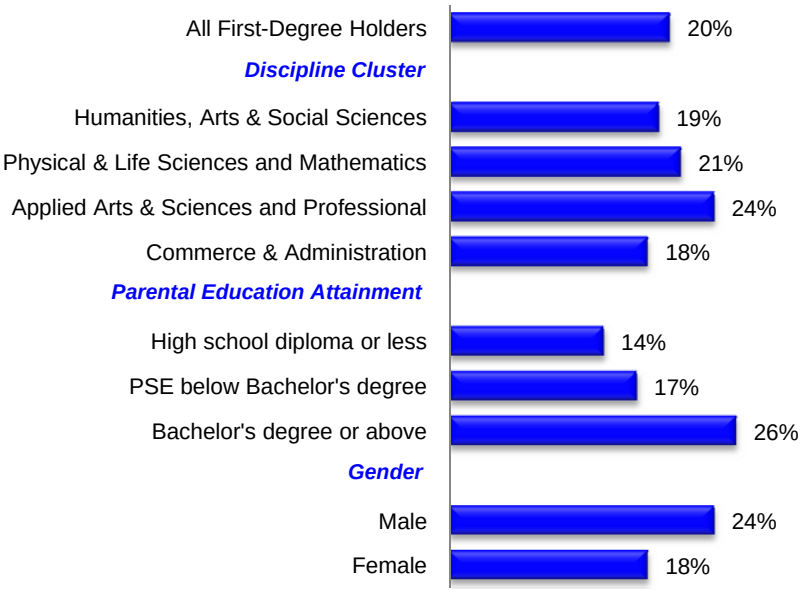
Table 4.2
Percent of all graduates residing in each province/region of residence by province/region of residence 12 months prior to enrolling in the 2007 degree

Universe: All graduates

	Province of graduation (2007) and Current region/province of residence (2009)						
	NB		NS		PEI		Outside Maritimes
	2007	2009	2007	2009	2007	2009	2009
Province of Residence 12 months prior to enrolling							
	%	%	%	%	%	%	%
Prince Edward Island (n=186)	13	7	23	9	63	64	19
Nova Scotia (n=1,275)	7	3	92	77	1	<1	20
New Brunswick (n=830)	84	74	15	8	1	1	17
Ontario (n=498)	21	3	77	12	2	1	85
Outside Maritimes *(Excludes Ontario)* (n=587)	24	6	72	16	4	<1	77

Figure 4.1
Percent of first-degree holders originally from the Maritimes, and living outside the region in 2009 by discipline cluster, parental educational attainment, and region of residence 12 months prior to enrolment

Universe: First degree holders who were living in the Maritimes 12 months prior to enrolment in the 2007 degree



5. Evaluating the university experience

Figure 5.1
Percent who reported their university experience was worth or well-worth the personal investment of time, by borrowing range for 2007 degree

Universe: All graduates

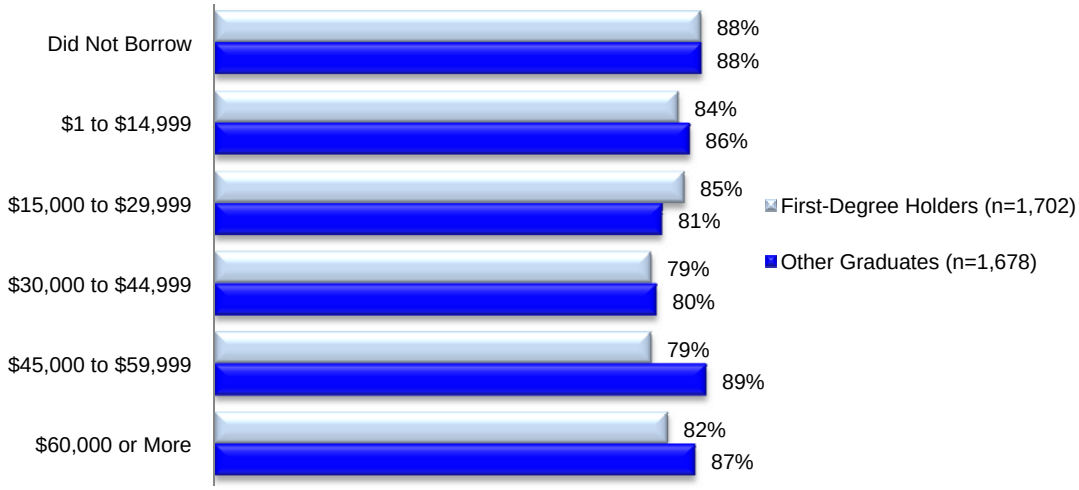


Figure 5.2
Percent who reported their university experience was worth or well-worth the financial investment by borrowing range, all sources combined, for the 2007 degree

Universe: All graduates

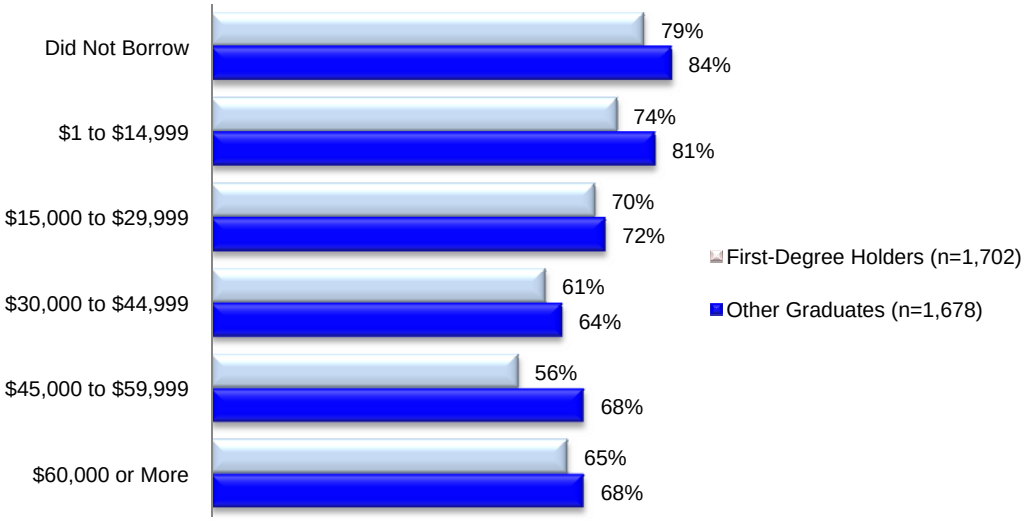


Table 5.1
Percent of 2007 graduates who, if given the opportunity would choose to …

Universe: All graduates, Class of 2007 and 2003

	Class of 2007 First Degree Holders	Class of 2003 First Degree Holders	Class of 2007 Other Graduates	Class of 2003 Other Graduates
	(n=1,702)	(n=2,350)	(n=1,678)	(n=1,830)
	%	%	%	%
Go to university again[1]	89	90	92	94
Would choose the same school or institution (% Yes)	83	90	82	94
The same field of study[1]	74	76	83	84

[1] Proportions represent 4 and 5 combined, based on a 5-point scale where 1 means “definitely NOT choose” and 5 means “definitely choose”

Table 5.2
Percent of 2007 graduates who, if given the opportunity would choose to …

Universe: All graduates, Class of 2007

	Discipline Cluster			
	Humanities, Arts & Social Sciences	Physical, Life Sciences & Mathematics	Applied Arts, Sciences or Professional	Commerce and Administration
	(n=730)	(n=300)	(n=391)	(n=282)
	%	%	%	%
Go to university again[1]	87	90	91	90
Would choose the same school or institution (% Yes)	83	82	83	82
Would choose the same field of study[1]	67	77	81	80

[1] Proportions represent 4 and 5 combined, based on a 5-point scale where 1 means “definitely NOT choose” and 5 means “definitely choose”