Volume 1

Future to Discover Pilot Project:
[Early Implementation Report]

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Executive Summary

The *Future to Discover* (FTD) Pilot Project was established to determine what approaches work best to increase participation in post-secondary education. Although the pilot project is intended to help high school students in general, it also includes a focus on those students who are commonly identified as under-represented in post-secondary education: students from lower-income families whose parents have little or no post-secondary experience. *Future to Discover* is testing two interventions, which are called *Explore Your Horizons* and *Learning Accounts*. The pilot project is designed to determine the impact of these two interventions on access to post-secondary education, measured as participants' completion of the first year of their chosen post-secondary program.

Explore Your Horizons[1] is composed of enhanced career education components that are intended to improve high school students' capacity to explore and make decisions about their post-secondary and career options. It is being tested in 51 New Brunswick and Manitoba high schools. Three years of career education programming is offered in *Explore Your Horizons*, commencing in the first year with an overall project orientation session, and followed by a series of six career exploration workshops called Career Focusing. In addition, participants are invited to two workshops led by Post-secondary Ambassadors, and are able to access a members-only Web site and magazine. The latter two resources offer enhanced information about the benefits of post-secondary education as well as summaries of the Career Focusing workshops.

Learning Accounts is a financial incentive intervention for students who have a demonstrated family income below the provincial median. It is composed of an early guarantee of a grant worth up to $8,000 that is conditional upon completion of high school and subsequent participation in post-secondary education. It is being tested in New Brunswick only.

Grade 9 high school students in New Brunswick and Manitoba were informed about the project and were able to opt out. Only a small proportion (less than 0.5 per cent) chose to decline the chance to participate before a random sample was drawn for recruitment. In New Brunswick, 78 per cent of those sampled agreed to participate and completed the baseline survey and consent forms. The equivalent proportion for Manitoba was 60 per cent. Students in New Brunswick were randomly assigned to one of three different program groups (*Explore Your* Horizons; *earning Accounts; or Explore Your Horizons* plus *Learning* Accounts) or to the comparison group. The proportions to be assigned were based on objectives for future analysis and incorporated stratification by linguistic sector and income level. This random assignment design has been adopted to permit the calculation of rigorous estimates of the impacts of the interventions on those offered them, compared with a statistically identical comparison group that is not offered the interventions.

The project recruited a total of 5,429 students. Their demographic and socioeconomic characteristics as reported in a baseline survey were those expected for a sample of Grade 9 students from the participating provinces. The students generally appeared interested in pursuing post-secondary education, and three in every four participants felt they were at a point in their lives when it was important to make decisions about their future careers.

The pilot project has completed its design, recruitment, and early implementation phases. The early implementation phase comprises the initial 12 months (or "Year 1") following the offer of each intervention to program group members. The report finds that the early implementation of the interventions has been successful and was conducted as intended. The team of Facilitators and Post-secondary Ambassadors delivered workshop components following the recommended scripts and materials consistently across sites and according to schedule. Staff adopted a variety of methods to try to promote maximum participant exposure (including holding make-up sessions and offering incentives for attendance), and together they brainstormed ways to promote and increase attendance.

Most participants attended at least one *Explore Your Horizons* session, and many attended multiple sessions. Attendance rates varied among sessions and tended to decrease throughout Year 1. Attendance was higher in both

1 *Explore Your Horizons* is delivered in Manitoba under the name "*Future to Discover*." However, in this report, unless noted otherwise, *Future to Discover* refers to the larger *Future to Discover* Pilot Project, not *Explore Your Horizons* as delivered in Manitoba.

linguistic sectors in New Brunswick than in Manitoba. On average, Manitoba participants attended 4.5 sessions in Year 1, compared with 5.2 for New Brunswick francophones and 5.3 for New Brunswick anglophones. Attendance at Year 1 sessions ranged from 31.5 per cent to 65.0 per cent in Manitoba, from 46.1 per cent to 69.9 per cent in the New Brunswick francophone sector, and from 46.7 per cent to 73.1 per cent among New Brunswick anglophones.

Among francophones in New Brunswick, significantly more females than males attended sessions. Participants from families with lower income and/or lower levels of parental education attended fewer sessions than participants from families with higher income or higher parental education. This was particularly apparent in Manitoba and francophone New Brunswick, and less so among anglophones in New Brunswick.

Participants who were in a combined *Explore Your Horizons* plus *Learning Accounts* group in New Brunswick attended more sessions than those in the group receiving only *Explore Your Horizons*. This was particularly true in the francophone sector, where attendance was significantly higher in all *Explore Your Horizons* sessions. This impact of the combined interventions on session attendance was lower for the anglophone sector, where the combined group had significantly higher attendance rates in roughly half the sessions.

The specially developed members-only Web site was not used by a majority of *Explore Your Horizons* participants, However, participants who frequently attended *Explore Your Horizons* were much more likely to access the Web site than others.

Learning Accounts was successfully implemented as planned during Year 1. A total of 1,097 participants from lower-income families were randomly assigned to receive *Learning Accounts* either by itself or in combination with *Explore Your Horizons*. Staff notified eligible participants and provided information and support to encourage completion of the required paperwork in order to open their Learning Accounts. A large majority of participants (93.3 per cent) took the necessary steps to open their Learning Accounts and 90.3 per cent received an instalment of $2,000 at the end of Year 1.

Future reports will provide additional evaluation of *Future to Discover* by assessing both the interim- and long-term impacts of the *Explore Your Horizons* and *Learning Accounts* interventions on the participants to whom they were offered. Comparing outcomes for the combined interventions with each individual intervention will indicate the additional benefit of offering *Learning Accounts* to *Explore Your Horizons* participants, and offering *Explore Your Horizons* to *Learning Accounts* participants.

Interim-term impacts will compare outcomes observed up to the point when students typically leave high school, including high school grades and graduation rate. Long-term impacts will compare outcomes observed up to the point when students complete their second full year out of high school, including the post-secondary education enrolment rates. Implementation research will document future operations to determine whether *Future to Discover* continues to be implemented according to plan. A benefit–cost analysis will determine the benefits of *Future to Discover* relative to its costs for participants, governments, and society as a whole.

The successful recruitment and implementation of *Future to Discover* has built a promising foundation for learning important policy and program lessons about how to help students access post-secondary education.

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1

The *Future to Discover* Pilot Project

Introduction

Future to Discover is a pilot project that aims to find out what works to increase access to post-secondary education. It has been established by the Canada Millennium Scholarship Foundation working in partnership with two Canadian provinces—Manitoba and New Brunswick—to test two interventions to meet that aim.[2]

This is the first of two introductory chapters. This chapter is focused on the research rationale and design of the project. It opens with a discussion about access to post-secondary education in Canada (including a definition of the term), a brief examination of specific barriers to access to post-secondary education that are the focus of this pilot project, an overview of what may work to improve access, and a short discussion about what can be learned from evaluations of similar interventions. The main research questions underlying *Future to Discover* are then presented, followed by the rationale for running *Future to Discover* as a demonstration project. The logic models for the *Explore Your Horizons*[3] and *Learning Accounts* interventions and an overview of the planned research are covered in the remaining sections. This chapter ends with a review of the contents of the remainder of the report. The following chapter describes the design and timelines for the interventions themselves.

2 The term "intervention" is used throughout this report to describe *Explore Your Horizons* and *Learning Accounts*, since these are at present temporary rather than permanent programs.
3 Hereafter, any reference to *Explore Your Horizons* in this chapter is taken to mean the *Future to Discover* intervention in Manitoba as well as the *Explore Your Horizons* intervention in New Brunswick.

CHAPTER SUMMARY

- ***Future to Discover* has been established to find out what works to increase access to post-secondary education.** It aims to do this both for high school students in general and among students from lower-income families whose parents have little or no post-secondary experience and who are commonly identified as under-represented in post-secondary education.
- ***Future to Discover* is testing two interventions called *Explore Your Horizons* and *Learning Accounts*.** *Explore Your Horizons* (termed *Future to Discover* in Manitoba) is comprised of enhanced career education components intended to improve high school students' exploration and decision making about their post-secondary and career options. *Learning Accounts* is a financial incentive intervention for students with a family income below the provincial median. It is comprised of an early guarantee of a grant worth up to $8,000 conditional upon completion of high school and subsequent participation in post-secondary education.
- **The project is aiming to pilot *Explore Your Horizons* and *Learning Accounts* as practical working interventions that could be used by provincial governments to find out whether either or both will increase access to post-secondary education.** Because there is little existing evidence to determine whether interventions like *Explore Your Horizons* and *Learning Accounts* will be successful, *Future to Discover* will create such evidence.
- **Many short-term and intermediate impacts on participants are anticipated as a result of participation in *Explore Your Horizons* and *Learning Accounts*.** The logic models under which *Explore Your Horizons* and *Learning Accounts* are expected to operate include a number of assumptions about delivery of the interventions and participants' responses. These conditions need to be met to allow each intervention to operate successfully. Students are expected to respond in ways that reflect increased motivation to pursue post-secondary goals. The study has been designed to determine the interventions' impacts on completion of the first year of a participant's chosen post-secondary program.
- ***Future to Discover* analyses will include implementation research, an impact study, and a benefit–cost analysis.** The evaluation of *Future to Discover* will use a random assignment design, collecting data from many sources for at least six years. *Future to Discover* will produce at least three research reports to disseminate findings after key project milestones have been achieved.

INCREASING ACCESS TO POST-SECONDARY EDUCATION IN CANADA

Currently, there is disagreement about the state of access to post-secondary education in Canada. This is likely because access to post-secondary education means different things to different people. Post-secondary education is defined differently in various statistical studies and surveys. Often, in everyday usage, and often for purposes of student assistance eligibility, it is taken to mean university and college (degree- and diploma-granting) programs only. For the purposes of the *Future to Discover* pilot project, post-secondary education encompasses four streams: Apprenticeships, Private Vocational Institutions, Community Colleges, and University.[4]

The next two sections consider two popular characterizations of access to post-secondary education. Before presenting these two characterizations, post-secondary access needs to be defined. For the purposes of this research, access to post-secondary education encompasses each student's enrolment in his or her chosen post-secondary program and his or her successful completion of the first year of the program. Due to the Foundation's limited-duration mandate, this research does not consider outcomes such as persistence beyond Year 1 of the chosen program nor "completion" of the program. Nonetheless, the expected outcome of the pilot project interventions would include continued persistence beyond Year 1 and the achievement of a post-secondary education degree, certificate, or diploma.

4 It is important to note that this "four streams" definition does not necessarily match other post-secondary education definitions referred to by the research cited in this report. Where studies that do not match the "four streams" definition are cited, the mismatch or specific scope of the studies will be clarified.

Access to Post-secondary Education as Measured Against Subjective Normative Standards

The first characterization of access to Post-Secondary Education relates to overall Post-Secondary Education enrolment where access is measured against subjective normative standards. When contemplating full-time Post-Secondary Education enrolment, the state of access in Post-Secondary Education in Canada is quite good. As stated by Junor and Usher (2004), "in 2002–03, the last year for which reasonably complete data are available, just under 1.7 million Canadians were enrolled in university and college programs leading to a degree, certificate or diploma—the highest total ever" (p. 33).

According to a recent Statistics Canada report (Shaienks, Eisl-Culkin, & Bussière, 2006), three quarters of youth from the *Youth in Transition Survey*, Cycle 3, who were no longer in high school as of December 2003 had taken some form of Post-Secondary Education.[5] About 12 per cent of these youth were Post-Secondary Education graduate continuers, 32 per cent were graduate non-continuers, 21 per cent were non-graduate continuers, and 12 per cent were dropouts.

As newly reported by the Organisation for Economic Co-operation and Development (OECD) in 2006, "Canada has the highest level of tertiary attainment in the OECD."[6] More specifically, 45 per cent of 25- to 64-year-olds hold a tertiary degree (i.e. have completed a tertiary degree-granting program), about 20 percentage points above the OECD average (of 25 per cent). This finding is spread equally between graduates of programs that are occupationally oriented and that lead to direct labour market access and graduates of programs that are largely theoretically based and designed to provide qualifications for entry to advanced research programs and professions with high skill requirements. According to the same report, these findings mainly result from higher participation in and completion of occupationally oriented programs in Canada compared with other OECD countries.

Based on access defined on normative expectations like these, access to Post-Secondary Education in Canada appears to be sufficient, perhaps even approaching the maximum that might be expected in a developed country. If this is true, then the prospects of any new intervention—even a very well-designed one—raising the average rates of access to Post-Secondary Education a great deal higher would be low.

Equalized Access to Post-secondary Education

The second portrayal of post-secondary access paints a different picture. It relates to the first, but is more concerned with equalizing access for different youth groups.[7] Various subgroups of Canadian youth have Post-Secondary Education participation rates below the national average. Post-secondary education seems to be less accessible to lower-income youth than their higher-income counterparts (Barr-Telford, Cartwright, Prasil, & Shimmons, 2003). Several studies have also found Canadian youth with parents who have minimal-to-no Post-Secondary Education experience characterized by Post-Secondary Education participation rates below the national average (Statistics Canada, 2007; Tomkowicz & Bushnik, 2003; Human Resources Development Canada & Statistics Canada, 2002; Looker, 2001). Moreover, members of Canada's Aboriginal population are under-represented in the Post-Secondary Education system (Canada Millennium Scholarship Foundation, 2005; Association of Universities and Colleges of Canada, 2002). Individuals with disabilities experience unique challenges as well, especially when it comes to university participation (Canada Millennium Scholarship Foundation, 2005).

The fact that there are under-represented groups in Post-Secondary Education could imply that there are barriers to access specifically for these groups. The existence of such barriers may or may not be amenable to policy intervention. For instance, under-representation may be rooted in group-socialization patterns or cultural-specific preferences. Alternatively, if there are differences in enrolment rates by specific factors, such as family income and parental education, then efforts to increase access to Post-Secondary Education might eliminate such differences.

This pilot project aims to test the effectiveness of *Future to Discover* at improving access to Post-Secondary Education, with special focus on improving access for a specific "designated" group of students who are considered lower-income and who have parents[8] with little or no post-secondary experience.[9] The following section illustrates the low rates of participation associated with these characteristics. For the purposes of the present project report, an improvement in access to Post-Secondary Education will be defined both as an increase in rates of Post-Secondary Education enrolment universally *and* among this specifically defined designated group.

5 The data used are from the first three cycles and pertain to the entire cohort; that is, youth between 18 and 20 years of age in 1999 who participated in the *Youth in Transition Survey* and who were still participating in the survey in December 2003. Cycle 1 refers to December 1999 when the youth were between 18 and 20 years of age; Cycle 2 refers to December 2001 when the youth were between 20 and 22 years of age and Cycle 3 refers to December 2003 when the youth were between 22 and 24 years of age.

6 By "tertiary education," the OECD refers to "a level or stage of studies beyond secondary education. Such studies are undertaken in tertiary education institutions, such as public and private universities, colleges, and polytechnics, and also in a wide range of other settings, such as secondary schools, work sites, and via free-standing information technology-based offerings and a host of public and private entities." (Wagner, 1999, as cited in Salmi and Hauptman, 2006, p. 3).

7 Unless otherwise specified, this report defines youth as those between 15 and 24 years of age.

8 "Parents" is used in this report to mean parents/guardians. In later discussions of the interventions involving parent participation, the term "parents" also includes other significant adults the project participant may wish to include in project activities.

9 In this report, "lower income" is used as shorthand to describe income below the level of the provincial median (as at Census 2001) and equivalized for families of different size (see Chapter 3) and rounded up to the nearest $5,000. "Higher income" describes incomes above this threshold.

Lower Income and Parental Education as "Barriers" to Access

This section focuses on youth from lower-income families and youth whose parents lack a post-secondary diploma. These youth are commonly identified as under-represented in post-secondary education.[10] In both cases, evidence is presented of under-representation and of the nature of the barriers to access. In neither case is there sufficient evidence to conclude that under-representation is due to barriers that will be overcome by the kinds of interventions under consideration in *Future to Discover*. The lack of evidence provides the rationale for testing the interventions.

Lower-Income Youth

According to longitudinal data from the *Survey of Labour and Income Dynamics*, participation in post-secondary education increases as parental income increases.[11] The survey shows that about 75 per cent of youth between 18 and 21 years of age with after-tax family income in the highest income quartile participated in some form of post-secondary education,[12] but only 56 per cent of similarly aged youth with parental after-tax income in the lowest income quartile participated (Knighton & Mirza, 2002). More recently, the *Post-secondary Education Participation Survey* revealed that 83 per cent of 18- to 24-year-olds from families with estimated annual earnings of $80,000 or higher pursued post-secondary schooling.[13] [14] Conversely, the corresponding percentage for youth from families with estimated annual family earnings below $55,000 was about 55 per cent.

Another study showed wider gaps for university participation alone. In 1997 the university participation rate of 18- to 24-year-olds from families with more than $100,000 in total income was close to 40 per cent (Corak, Lipps, & Zhao, 2004).[15] The university participation rate of 18- to 24-year-old youth from families whose total income was less than $100,000 was about 25 per cent. The university participation rate for those from families with less than $25,000 in total income was less than 20 per cent. These data suggest an association between post-secondary participation (in this case, university participation) and parental income.

While it might seem apparent that one barrier to access for lower-income youth is that their parents have fewer financial resources to offer than higher-income parents, further research is needed to substantiate the premise that participation rates are lower for this reason. According to Corak, Lipps, and Zhao:

> *there is a clear positive correlation between parental income and university attendance … the correlation, however, declined during the latter half of the decade reflecting rises in participation of those from the lowest income groups.* (2004, p. 29)

As indicated by the same authors, even though the out-of-pocket costs of post-secondary education have increased substantially since the 1990s, the gap between lower-income and high-income participation rates has narrowed.[16]

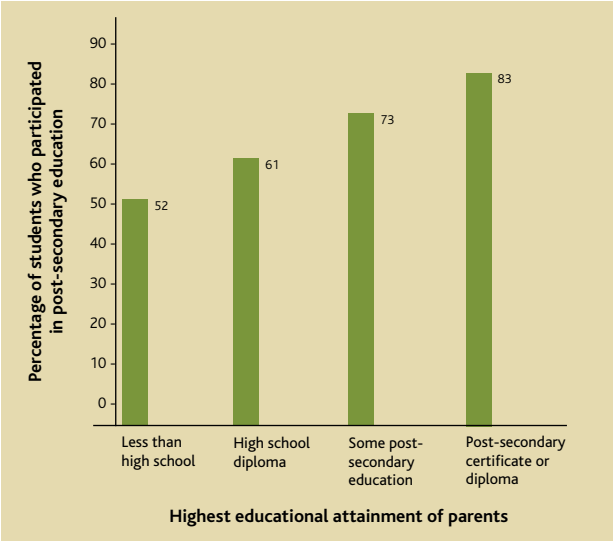
It could be that lower-income youth experience unique barriers to access to post-secondary education that are unrelated to their families' scarce financial resources. This argument would imply that—to the extent that they are targeted on improving access—Canada's current financial assistance policies are not the appropriate instrument to increase access for certain lower-income groups. Student financial assistance might simply be too late for some youth despite their income status; innate factors such as cognitive ability or environmental determinants can represent barriers that student financial assistance itself cannot tackle (Heckman, 2000). Various other barriers to access to post-secondary education for lower-income youth may also exist, such as lower-income parents' lower levels of education, lack of post-secondary education experience, lack of awareness about post-secondary costs, student loan debt, family type, place of residence, language, and ethnicity (Finnie, Lascelles, & Sweetman, 2005). With regard to the lack of awareness of post-secondary costs, data from an Ipsos-Reid poll in 2000 showed that recent high school graduates in Alberta generally over-estimated all mandatory post-secondary costs—especially tuition—for all types of post-secondary education (Ipsos-Reid, 2001). Youth from lower-income households were the most likely to perceive costs as a major barrier to their participation in post-secondary education.

10 The groups are described separately here, although it is recognized that youth who fall under more than one classification may face increased disadvantages in their post-secondary education participation.
11 Here, "post-secondary education" refers to university, community college, institute of applied arts and technology, CEGEP, or trade vocational school at any time during participation in the survey from 1993–1998. College participation refers to enrolment in community college, institute of applied arts and technology, or CEGEP during the same period. Because of the small sample size, trade vocational school was not examined on its own. Business/commercial schools were not included.
12 Income was observed at an earlier wave of the survey to ensure that the students' parental incomes were being included in family income.
13 Here, post-secondary schooling means programs above the high school level that require three or more months to complete if taken full-time and that result in a diploma, certificate, or degree. Such programs include university, university-college (which may contribute to acquisition of a university degree), community college or CEGEP in Quebec, trade/vocational or any of a number of other post-secondary programs such as those undertaken in private training institutions.
14 The *Post-secondary Education Participation Survey* did not use household income data, because the majority of youth were not expected to know the actual income of their parents. Instead data on parents' occupations were gathered to get information from the 2001 Census on the mean wages and salaries of men and women in specific occupations. These data provided an estimate of parental pre-tax earnings that permitted determination of whether a youth came from a high-, middle-, or lower-income family.
15 Total income here represents income from all sources for the household head and his or her spouse.
16 Post-secondary participation relates to university, community college, CEGEP, or trade school.

Youth Whose Parents Do Not Hold a Post-secondary Certificate or Degree

According to Gándara and Bial (2001, p. A-3), "experience, knowledge, resources, and expectations of parents play a significant role in the kinds of choices that students make." The *Survey of Approaches to Educational Planning* showed that parental expectations for their children were positively associated with their own educational experiences—97 per cent of parents who had a graduate degree expected their children to pursue some form of post-secondary education.[17] Parents with a graduate degree were also four times more likely to provide financial resources for their children's post-secondary education than parents without a high school diploma—60 per cent versus 15 per cent respectively (Junor & Usher, 2002).

Figure 1.1: Post-secondary Participation as a Function of Highest Educational Attainment of Parents



Source: Lambert et al., 2004, p. 10.

Several studies assert that youths' decisions to pursue post-secondary education are associated with their parents' education (Tomkowicz & Bushnik, 2003; Foley, 2001; Looker, 2001). Data from the *Youth in Transition Survey* for youth who were 18 to 20 years of age in December 1999 reveal that by 2001, 71 per cent had made the transition to some form of post-secondary education (Lambert, Zeman, Allen, & Bussière, 2004).[18] As seen in Figure 1.1, the percentage of students who participated in post-secondary education among those who had at least one parent with a post-secondary certificate or diploma was 83 per cent, and among those who had at least one parent with some post-secondary education experience it was 73 per cent. By comparison, 61 per cent of students participated in some form of post-secondary education among those whose parents' highest educational attainment was a high school diploma, and 52 per cent of students participated in some form of post-secondary education among those whose parents' highest educational attainment was less than high school (Lambert et al., 2004).

Lower parental education appears to indicate the presence of a barrier to access to post-secondary education for some youth. By using the data from the *Youth in Transition Survey*, Tomkowicz and Bushnik (2003) show that the odds of not participating in any post-secondary education were three times greater for youth whose parents had no post-secondary education compared with youth whose parents had completed a university degree.[19] According to a more recent study, the gap in university attendance between higher- and lower-income families is not only connected to parental education: differences in academic performance at age 15 and, to a lesser extent, financial constraints, also matter (Statistics Canada, 2007).

Few interventions are likely to change parental education levels. It may be possible, however, to change whatever effect that parents' lower level of education has on children's post-secondary decisions. Some research suggests parents with limited exposure to post-secondary education may feel uncomfortable, overwhelmed, or ill-equipped to advise their children on their post-high school plans. For instance, Tomkowicz and Bushnik (2003) show that a substantial proportion of youth who had been out of high school for more than one year and who had not yet enrolled in a post-secondary education program had been exposed to negative parental influences regarding higher learning. For example, less than 50 per cent of this youth group reported that their parents thought continuing education after high school was important. Interventions that help parents to better advise their children may therefore be effective for this subgroup.[20] The next section presents different approaches that might have the potential to improve access for students universally and for lower-income students who have parents with little or no post-secondary experience.

What interventions might work to increase access to post-secondary education?

Research has already indicated that offering developmentally appropriate information about post-secondary and career education to students through a coordinated network of services and sources during different stages of their high school program could increase their access to post-secondary education (Looker & Lowe, 2001; Canada Millennium Scholarship Foundation, 2003). According to research by Looker, a recurring suggestion given by students for increasing their own participation in post-secondary education was to offer information about post-secondary and career education earlier in high school (Cogem Research Inc., 2001, as cited in Looker, 2001).

17 Graduate degree includes trade, CEGEP/college, university, or other types of degree-granting post-secondary institutions.
18 Post-secondary education here includes trade and vocational programs, college and CEGEP programs, university transfer programs offered in a college or CEGEP, programs leading to an undergraduate university diploma below the baccalaureate level, baccalaureates, first professional degrees (e.g. medicine, dentistry), master's degrees, and doctorates (Lambert et al., 2004, p. 21).
19 Post-secondary education here means university, community college, institute of applied arts and technology, CEGEP, or trade/vocational schools.
20 Some barriers to access may take different forms for different types of post-secondary education. These and other issues related to barriers to access to post-secondary education are complex and go beyond the scope of this report and will not be discussed further.

Other research suggests that students would benefit from stronger career guidance throughout high school and that "strategies to reach out to more parents would be highly effective" (Canada Millennium Scholarship Foundation, 2003, p. 31). The authors of this research suggested that parents are generally keen to be part of their children's post-secondary and career education planning.

Additional factors implicated in students' decision-making about post-secondary education are perceived lack of finances and as mentioned earlier, students' over-estimations of mandatory post-secondary education costs, especially tuition, for all types of post-secondary education (Junor & Usher, 2004).[21] Canadians from lower-income households in particular are more inclined to perceive costs as a major barrier to post-secondary education.[22] Therefore, high school students' early awareness of an offer of non-repayable financial assistance might be an effective intervention for increasing their access to post-secondary education. This may be especially true for lower-income students who believe they have insufficient funds to go on to post-secondary education and/or who are concerned about going into debt.

Combining (1) post-secondary and career education information in high school (e.g. about different financial assistance programs available for various types of post-secondary education) and stronger career guidance with (2) an offer of non-repayable financial assistance could represent an even more effective strategy for increasing access to post-secondary education.

The design of the *Future to Discover* Pilot Project—to test two interventions that aim to increase high school students' access to post-secondary education—was informed by the research cited in the previous paragraphs. The design and early implementation of the project is the topic of this present report, including the remainder of this chapter. The two interventions are as follows:

- ***Explore Your Horizons.*** This intervention encompasses enhanced career education components designed to improve students' exploration and decision-making about their post-secondary and career options while in high school. *Explore Your Horizons* also endeavours to teach parents how better to support and respond to their children's exploration of post-secondary and career options. The components include after-school and evening workshops, a members-only Web site, and a magazine.[23]
- ***Learning Accounts.*** This financial incentive intervention offers lower-income high school students—as they enter Grade 10—a guarantee of non-repayable financial assistance of up to $8,000. Payment will be made only to students who enrol in a recognized post-secondary program after leaving high school. This second intervention is being tested only in New Brunswick. The Learning Account thus acts as an early guarantee that financial assistance will be available. The offer may or may not result in an actual increase in the total net dollar amount of assistance available to the student at the time of post-secondary application. This amount will depend on the interaction of *Learning Accounts* payments with other forms of assistance.

While various terms associated with this research are listed in Text Box 1.1, the interventions are described in more detail in Chapter 2.

The Canada Millennium Scholarship Foundation is also testing further approaches that may work to increase access to post-secondary education. The *BC AVID Pilot Project* is being run in partnership with the British Columbia Ministry of Education. It aims to increase access to post-secondary education for middle academic achievers by offering an academic elective course specifically designed to prepare and support students for entry into post-secondary education. *Making Education Work*—another Canada Millennium Scholarship Foundation pilot project being run in partnership with Manitoba Education, Citizenship and Youth—is designed to encourage aboriginal students' access to post-secondary education by offering academic, counselling, and community supports.[24] The Canada Millennium Scholarship Foundation is also conducting pilot projects at the post-secondary level to determine policy-relevant ways to improve retention.

21 Here, post-secondary education includes apprenticeships (where tuition costs are nominal, in-school time is generally covered by Employment Insurance, and on-the-job training is covered by a wage), private vocational institutions, community colleges, and university.
22 Findings are based on data from a Canada Millennium Scholarship Foundation sponsored Ipsos-Reid poll in 2003.
23 After extensive deliberation, the provinces of New Brunswick and Manitoba agreed to run the majority of the components of the *Explore Your Horizons* intervention through a series of workshops outside of school hours but on school grounds to support attendance.
24 For more information on the *Making Education Work* project, see the Manitoba news release dated March 7, 2005. Retrieved January 12, 2006, from http://www.gov.mb.ca/chc/press/top/2005/03/2005-03-07-02.html.

TEXT BOX 1.1: PROJECT NAMES

This box lists alphabetically the various project names that are used throughout this report. Full descriptions of these names are provided later in the report.

Career Focusing—One of the six components of *Explore Your Horizons*.
Explore Your Horizons—The name given to the career education intervention being tested in New Brunswick.
F2D—A magazine, one of the six components of *Explore Your Horizons*.
Future in Focus—One of the six components of *Explore Your Horizons*.
Future to Discover—The name given to the career education intervention (identical to *Explore Your Horizons* in New Brunswick) being tested in Manitoba.
***Future to Discover* Pilot Project**—The name given to the overall pilot project being run in New Brunswick and in Manitoba. The project title is shortened to *Future to Discover* in situations where this will not be confused with the name of the career education intervention in Manitoba.
***Future to Discover* Web site**—One of the six components of *Explore Your Horizons*.
Learning Accounts—The name given to the financial incentive intervention being tested in New Brunswick.
Post-secondary Ambassadors—One of the six components of *Explore Your Horizons*.

What Can *Future to Discover* Learn from the Evaluation of Similar Interventions?

No interventions like *Explore Your Horizons* and *Learning Accounts* have been rigorously evaluated in Canada and none elsewhere is directly comparable. Nonetheless, lessons for *Future to Discover* can be learned from a small number of projects subject to rigorous evaluation in the United States. Three with some similarities are reviewed here and illustrate an uneven track record.

The Quantum Opportunities Program

The *Quantum Opportunities Program* was a comprehensive youth program that involved a strong measure of mentoring over multiple years, targeted on disadvantaged youth.[25] Program elements included after-school educational activities, such as computer-assisted instruction and peer tutoring; after-school service activities such as helping out at public events and holding regular jobs; after-school development activities, including skills training and job planning; the opening of financial accounts for college or other post-secondary training (for example, $1.25 for every hour a student spent on program activities); and case manager incentives paid based on participation levels. In total there were 750 program hours per year over four years, starting in Grade 9. Key objectives of the *Quantum Opportunities Program* were to increase the likelihood of youth completing their high school program and enrolling in post-secondary education. The program also aimed to improve the students' grades and achievement test scores.

In 1995 Mathematica Policy Research Inc. conducted a social experiment to assess both participation in *Quantum Opportunities Program* services and its program impacts. The students were randomly assigned to either a program or comparison group and were followed through to the end of Grade 12 and beyond. Findings showed that more program group members graduated from high school and enrolled in a post-secondary education than comparison group members. However, the impacts seem to have been generated by only two of the seven sites. The program did not improve grades or achievement test scores, nor did it reduce risky behaviours in youth.

The *Quantum Opportunities Program* encountered several implementation challenges, including program variability across sites. In particular, two of the seven sites implemented a version of the *Quantum Opportunities Program* that "deviated substantially from the program model."[26] The remaining sites implemented versions that deviated to a lesser degree. To minimize this problem, the evaluation authors recommend providing more time for schools to adequately plan and set up the program and additional operations documents, training, and technical assistance early on to increase the likelihood that the program model was replicated.

There are at least two lessons from the *Quantum Opportunities Program* for *Future to Discover*. First, an intervention combining multiple elements including job planning using after-school sessions combined with a promise of financial assistance generated large impacts on post-secondary access. Second, implementation may have been sub-optimal due to variations in delivery between sites, in turn linked to shortfalls in training and program documentation.

Upward Bound

Upward Bound, a program funded by the US federal government to help improve post-secondary access for low-income first-generation students was found to have limited success.[27] The services offered by *Upward Bound* to eligible students included tutoring, mentoring, counselling, career planning, and information about post-secondary education. In addition, a six-week residential academic session was offered during the summer at a post-secondary

25 Unless otherwise stated, most of the information contained in this section was taken from Mathematica Policy Research Inc. (2002, 2003).
26 Additionally, none of the seven sites implemented all aspects of the after-school education component of the Quantum Opportunities Program, and few implemented the after-school community service component as intensely as set by the program model (Mathematica Policy Research Inc., 2002, p. xi).
27 *Upward Bound* "is the oldest and largest of the federal TRIO programs, all of which share the objective of helping disadvantaged students achieve success at the postsecondary level." (Retrieved on January 14, 2007, from http://www.ed.gov/offices/OUS/PES/higher/upward.html.) There are many other TRIO programs, but the set is called TRIO because there were initially three such programs.

institution setting. *Upward Bound* was generally offered to low-income students before they began high school and continued until they graduated.

A random assignment evaluation of *Upward Bound* (Mathematica Policy Research Inc., 2004) found that the program had virtually no important impacts on high school outcomes (high school credits or high school graduation rates, for example) and no impact on overall post-secondary enrolment. Subgroup analysis revealed that the program had positive impacts on the subgroup that began with low educational expectations (as measured by the number of years of education they expected to attain). There was some evidence that *Upward Bound* increased university enrolment, although it did not increase enrolment in all post-secondary programs considered as a whole.

A major problem with the *Upward Bound* program evaluated by Mathematica was that participants did not become intensively engaged with the program for the expected four-year period. Roughly 20 per cent of those who applied and were accepted never participated at all. Less than half of all participants were still enrolled in Grade 12. Another issue was that the comparison group received significant equivalent services (although not from *Upward Bound*).

There may be some parallels between *Explore Your Horizons* and *Upward Bound*. *Upward Bound* was aimed at low-income first-generation students, but many participants were African-American or Hispanic. Where *Explore Your Horizons* is focused on career education development, the *Upward Bound* interventions were disproportionately academic in nature, including tutoring in math and science and a six-week intensive summer program on a college campus. *Explore Your Horizons* involves similar participation in sessions outside regular school hours where low attendance may limit the potential for impacts.

I Have a Dream

Alternatively, another US program called *I Have a Dream* has been quite successful despite ongoing problems with participation. The *I Have a Dream* program currently operating throughout the US offers an early guarantee of financial aid as one of its components. According to an often-cited evaluation of *I Have a Dream* (Kahne & Bailey, 1999), high school graduation was increased for the *I Have a Dream* students compared with a comparison group. College enrolment rates the following fall were also found to be higher than the average college enrolment rates for high school graduates locally, though participation rates were quite low.

I Have a Dream provides a comprehensive set of financial, academic, and social supports to classes of Grade 6 students attending public schools in very low-income areas in the US. One of those supports (and the best known) is an early guarantee of financial aid for post-secondary education, somewhat resembling the *Learning Accounts* intervention. *I Have a Dream* also had some features in common with *Explore Your Horizons*. However, according to Kahne and Bailey, the most important components of *I Have a Dream* were long-term mentoring by a caring adult, academic support, and access to a powerful social network, which are not explicit elements of the *Explore Your Horizons* and *Learning Accounts* interventions.

There is as yet no direct evidence that an early guarantee of financial assistance and/or enhanced career education will lead high school students to think more seriously about accessing post-secondary education because they know early on that it will be affordable, for instance. However, there are some program similarities between *Quantum Opportunities*, *Upward bound*, and *I Have a Dream* and *Future to Discover*'s interventions, so any success of the first three implies that *Explore Your Horizons* or *Learning Accounts* might be effective at increasing access to post-secondary education. Since there is little existing evidence to determine whether such interventions will be successful, the *Future to Discover* pilot project has been established to create such evidence.

FUTURE TO DISCOVER'S RESEARCH QUESTIONS

The two interventions, *Explore Your Horizons* and *Learning Accounts*, while clearly different in their focus, are being tested against the same basic set of research questions. The major goal of the *Future to Discover* pilot project is to answer these questions in the context of a social experiment. The questions are whether, in due course, those offered the intervention(s) will be more likely than those not offered to successfully

- graduate from high school,
- enrol in post-secondary education,
- persist in their post-secondary learning (such as complete the first year of their chosen post-secondary program)[28], and
- graduate from a post-secondary program.

In addition to these basic questions about post-secondary access, persistence, and completion, additional questions will be raised in the evaluation of each intervention. These questions derive from the logic models described described further on.

The rationales for running the *Future to Discover* pilot project to answer these questions are presented below, including the rationale for adopting a random assignment design for the evaluation.

28 It was decided early on in the development of the *Future to Discover* pilot project that it would measure students' completion of the first year of a Canada Student Loan-recognized post-secondary education program rather than students' completion of such a program because of the Foundation's mandate to be in operation only until 2010. Nonetheless, the interventions are intended to help students complete their post-secondary education program.

RATIONALE FOR A DEMONSTRATION PROJECT

Demonstration projects are often carried out to improve the quality of evidence about what works to tackle social policy problems. Such projects often use random assignment experimental designs and are considered the "gold standard" in program evaluation. When properly implemented, social experiments provide estimates of program impacts that are internally valid, establishing unbiased measures of how offering a specific program affected a program group at a particular time and place (Burtless, 1995; Gueron, 2000). With a random assignment design, individuals in program and comparison groups come from the same target population. Because chance is the only determinant of group assignment, there will be no systematic differences between the groups aside from the offer of the intervention.[29] As a result, the groups will be equally likely to experience external events that are unrelated to the program being tested. For this reason, a valid estimate of the impacts of the program is provided by the differences in outcomes (such as the proportion enrolling in post-secondary education) between the groups.

Given policy-makers' growing interest in access to post-secondary education and persistence, the *Future to Discover* demonstration project is timely. Up until now, no Canadian program designed to increase access to post-secondary education and persistence has been put through rigorous evaluation using a randomized experimental design. More specifically, the *Future to Discover* demonstration project is the first of its kind in how it hopes to test the impact and cost-effectiveness of (1) a career education intervention, (2) a financial incentive intervention in the form of *Learning Accounts*, and (3) a combination of the two. The demonstration project will demonstrate the effectiveness of (1), (2), and (3), relative to a comparison group with no additional services, and the differential effectiveness of (3) relative to (1) and (2).

Future to Discover hopes to generate intervention designs that have the potential to increase access to community colleges, apprenticeships, private vocational institutions, and universities, as well as the first-year completion of a Canada Student Loan-recognized post-secondary education program in one of these four streams. Furthermore, these should be practical working examples of programs that could be used by provincial governments. An important objective of the demonstration is to show that such intervention designs can actually be established in the field. Other rationales for the project are to gain first-hand knowledge of students' attitudes and behaviours in relation to post-secondary education and to fill gaps in the existing literature that will aid in the understanding of project impacts. The next section reviews the logic models underlying how the interventions are expected to produce impacts on post-secondary access.

LOGIC MODELS FOR THE INTERVENTIONS

Social experiments can provide an opportunity to test theory. This can be an academic theory that tries to explain human behaviour—such as human capital theory—or, as in *Future to Discover*, a program theory—sometimes labelled a program "logic model"—that sets out how an intervention is assumed to create its effects. This section presents the logic model for the *Explore Your Horizons* intervention and then the logic model for *Learning Accounts*.

The logic models are very important to *Future to Discover* because they set out what the research project should expect to observe if the interventions work as intended, both in terms of implementation and outcomes. The logic models below provide guides for the development of the project's research instruments and data collection, and thus in turn for assessing the success of the interventions.

The *Explore Your Horizons* Logic Model

In developing *Explore Your Horizons*, it was assumed that

- some students are not thinking about life after high school;
- some of the students who are thinking about life after high school are basing important decisions on inadequate, inaccurate, uncoordinated, or sometimes overwhelming information that at times is inappropriately biased towards particular streams;
- those who receive accurate, unbiased, or better-coordinated information and personal career development support (such as strategies to help structure the information and engage more actively with it) will understand the information, remember it, value it, and use it to guide their career education exploration and planning activities; and
- their career education behaviours will change, altering their career education aspirations and planning activities, course choices, school attendance, chances of graduating high school, choices of post-secondary education program, and financing, including decisions over whether to enrol at all in post-secondary education, whether to continue, and whether to complete their chosen program.

These assumptions make up the framework under which *Explore Your Horizons* is expected to operate.[30] In the next section, a basic logic model is used to illustrate what the intervention hopes to achieve and how. More specifically, the logic model lists what resources are needed to accomplish the intervention's objectives, what any initial and intermediate changes in behaviour would be required for the intervention to meet its objectives, and the short-, intermediate-, and long-term impacts that are expected as a result of the intervention.

29 Even with random assignment, chance differences do sometimes occur between the groups being compared; however, researchers agree that the differences represent errors in precision rather than bias (Orr, 1999; Mohr, 1995). To correct for such errors, data on the characteristics of the sample can be collected prior to random assignment so that they can be used in regression models to improve the precision of outcome estimates.

30 These assumptions flow from several important underlying theories, including Career Development Theory, Cultural Capital Theory, Future Time Perspective, Group-socialization Theory, and Learning Theory.

Resources Expected to be Needed to Achieve the Objectives of the Intervention
The following conditions that will allow *Explore Your Horizons* to operate successfully are expected:

- Provision of all project services in accordance with the operations manual
- A high school and post-secondary education system with sufficient places to accommodate any likely increase in student numbers generated by the experiment
- Grade 9 students who have agreed to participate in the intervention
- Parents who have agreed to participate alongside their children in the intervention

Expected Initial and Intermediate Changes in Behaviour
For *Explore Your Horizons* to have a chance to work, students and parents must respond in a particular way.[31] The following two conditions are assumed:

- Students and parents must be notified of what participation in *Explore your Horizons* involves and must understand what participation involves
- Students and parents should participate in the intervention: attend and engage in sessions, read mail and Web-based material, learn how to use the material and other relevant resources, and undertake any homework

Short-Term and Intermediate Impacts
Anticipated short-term and intermediate impacts on students that are expected as a result of participation in *Explore Your Horizons* include the following:

- Increased orientation towards future activities
- Increased awareness of post-secondary options
- Increased interest in high school and attendance at high school
- Lower high school drop-out rates
- Changes in chosen high school courses
- Increased chances of high school graduation
- Improved course grades, test scores, and overall GPA
- Altered expectations about post-secondary education
- Change in peer groups (their composition, future orientations, and future expectations)
- Change in perceived worth of post-secondary education
- Change in intentions and rate of application to pursue post-secondary education
- Increased knowledge of post-secondary costs and financing
- Increased saving to meet the costs of post-secondary education

Expected impacts on short-term and intermediate outcomes stem largely from the assumption that students newly motivated to enrol in post-secondary education or motivated to pursue different post-secondary goals (e.g. college instead of university enrolment) will engage more in behaviours conducive to achieving that goal.

Long-Term Impacts
Two major long-term impacts are of particular interest in *Explore Your Horizons*:

- successful enrolment in a Canada Student Loan-recognized post-secondary education program and
- successful completion of the first year of a chosen post-secondary education program.

Impacts on long-term outcomes such as persistence into the second and later years of post-secondary programs, completion of programs, and certification will not be observed under the current research described in this report. Similarly, subsequent labour market participation outcomes are beyond the scope of the current work.

The *Learning Accounts* Logic Model

In developing the *Learning Accounts* financial incentive intervention, it was assumed that

- some students are not thinking about life beyond high school;
- some of the students who are thinking about life after high school are making important decisions while uncertain about their ability to afford post-secondary education;
- those who receive the chance to open a Learning Account will understand the rules of *Learning Accounts*;
- this understanding will reduce students' uncertainty about the affordability of post-secondary education;
- the students will use the rules and their implications to guide their behaviour;
- as the result of at least one Learning Account event—the creation of the Learning Account, a deposit into that account, the receipt of an account statement—Learning Account holders will increase the extent to which they think about their post-secondary lives, and this increased thinking about the future will have concrete behavioural consequences; and
- their behaviour will change, altering their course choices, school attendance, chances of graduating from high school, personal post-secondary program and institution cost-benefit analysis, choices of post-secondary program/institution and financing, including whether to enrol at all in post-secondary education, whether to enrol in a specific post-secondary, and whether to continue on and to complete their chosen post-secondary program.

31 For simplicity, and unless indicated otherwise, the term "parents" in this report should be taken to include parents or guardians. Participants could extend "parent" workshop invitations to significant adults in their lives, who were not required to be their parents.

These assumptions comprise the framework under which *Learning Accounts* is expected to operate.[32] In the next section, a basic logic model is used to illustrate what the financial incentive intervention hopes to achieve and how. As for *Explore Your Horizons*, the logic model lists the resources required to accomplish the intervention's objectives, initial and intermediate changes in behaviour required, and the short-, intermediate-, and long-term impacts that are expected.

Resources Expected to be Needed to Achieve the Objectives of the Intervention

Inputs are the factors that will allow *Learning Accounts* to operate successfully. The following major inputs are expected:

- Provision of all project services in accordance with the operations manual, including a payment system
- Ongoing provision of high school and post-secondary education with sufficient places to accommodate any likely increase in student numbers generated by the experiment
- Grade 9 students who have agreed to participate in the intervention
- Parents who have agreed to their children participating in the intervention

Expected Initial and Intermediate Changes in Behaviour

For *Learning Accounts* to have a chance to work, students and parents must respond in a particular way:

- Students and parents must be notified of what participation in *Learning Accounts* involves and must understand what participation involves, and
- students and parents should participate in the intervention: provide required information at the required time to open the account and to request payments; remain contactable for mail-based account administration.

Short-Term and Intermediate Impacts

Anticipated short-term and intermediate impacts expected as a result of participation in *Learning Accounts* include the following:

- Increased orientation towards future activities
- Increased awareness of post-secondary options
- Increased interest in high school and attendance at high school
- Lower high school drop-out rates
- Changes in chosen high school courses
- Increased chances of high school graduation
- Improved course grades, test scores, and overall GPA
- Increased certainty about the ability to cover post-secondary program costs
- Altered expectations about post-secondary education
- Change in intentions and rate of application to pursue post-secondary education
- Increased knowledge of post-secondary education options, costs, and financing
- Increased saving to meet additional costs of post-secondary education

If the students understand how *Learning Accounts* will work, this might well increase certainty about their ability to afford post-secondary education. With early knowledge of guaranteed financial assistance, then they may think more about the period of their lives when the accounts become payable; in other words, their future orientation might increase.

Some students' understanding of *Learning Accounts* may also involve an expectation of incremental assistance, which may guide their behaviour regardless of whether incremental assistance is actually realized.[33] Either way, more students may see post-secondary education as a realistic affordable goal and change their behaviour to increase their chances of finishing high school and enrolling in a post-secondary education program.

Yet other outcomes may stem from the way in which *Learning Accounts* works as an income-tested *early high school* intervention. This means it might differ from some other student financial assistance programs in Canada at the time of application for assistance. Students applying for a payment from their Learning Accounts will not have taken into consideration their current income, their parents' or guardians' current income, the financial need that their choice of post-secondary program will place upon them, and the duration of the program. Therefore, some impacts might be expected relative to other student financial assistance that does take these factors into account. *Learning Accounts* might be expected to encourage *Learning Accounts* recipients (and their parents to a lesser extent) to work more, to choose lower-cost shorter programs (because the student gets to keep the difference), choose lower-cost accommodation (including living at home), and to graduate sooner. They might also be less likely to delay their post-secondary education, since *Learning Accounts* become unavailable after the third year following high school. At the margins, *Learning Accounts* may have a strong incentive effect on several different kinds of students: those who can attend a low-cost institution close to home, those who are willing to work during the school year or to take a program with a paid work component, those who do not have strong income needs, and those who do not have the alternative of high wage employment.

32 A possible underlying theory for these assumptions is Human Capital Theory.

33 "Incremental assistance" is used here to mean a net gain in student financial assistance. If a *Learning Accounts* participant receives *Learning Accounts* payments that are not fully offset by reductions in other student financial assistance, then they gain financially from the intervention. If, on the other hand, *Learning Accounts* payments displace other assistance dollar for dollar, there is no incremental assistance effect (financial gain) from *Learning Accounts* .

Thus, expected impacts on short and intermediate outcomes stem largely from the assumption that students newly motivated to enrol in post-secondary education or motivated to pursue different post-secondary goals (e.g. more expensive course of study or more expensive locations to maximize their short-term income gains) will engage more in behaviours conducive to achieving that goal. If students offered *Learning Accounts* are offered enhanced career education as well (as planned for one experimental group described below), those students might be expected to participate more in the enhanced career education on offer, as a consequence of holding a Learning Account.

Long-Term Impacts

Two major long-term impacts are of particular interest in *Learning Accounts*:

- successful enrolment in a post-secondary education program, and
- successful completion of the first year of a chosen post-secondary education program.

Learning Accounts may contribute additionally to the second impact because students who successfully enrol in a post-secondary education program with guaranteed financial assistance (especially if it exceeds the amount they might have received in the absence of *Learning Accounts*) might be able to afford to persist further in their studies toward the completion of the chosen program.

Impacts on long-term outcomes such as persistence into the second and later years of post-secondary programs, completion of programs, and certification will not be observed under the current research described in this report. Similarly, subsequent labour market participation outcomes are beyond the scope of the current work.

OVERVIEW OF PLANNED RESEARCH

Future to Discover analyses will have three major parts: (1) an impact study, (2) implementation research, and (3) benefit–cost analysis. While a short overview appears here, Chapter 8 provides a more detailed review.

The impact study is intended to collect evidence of *Future to Discover*'s effectiveness from Grade 9 through to the start of the second year of a post-secondary education program, through surveys and administrative records. The main outcome of interest is whether or not *Future to Discover* leads to an increase in the rates that students complete the first year of a post-secondary program.

For New Brunswick, project participants are assigned in one of four groups: (1) *Explore Your Horizons*, (2) *Learning Accounts*, (3) *Explore Your Horizons* plus *Learning Accounts*, or (4) a comparison group. The average outcomes of each of the three program groups and the comparison group will be compared to determine incremental impacts. For Manitoba, the outcomes for the *Future to Discover* program group will be compared with the outcomes for those in the comparison group.

Implementation research is an important complement to the impact study because it provides context for understanding the impact findings and it contributes to the plausibility of the evaluation through several key objectives:

- Determining whether *Future to Discover* had a "fair test" in a real-world setting
- Learning whether the delivery of *Future to Discover* was consistent across sites and over time
- Tracking the operation of the *Future to Discover* pilot project to provide an account of the activities undertaken
- Interpreting the "black box" findings produced by the impact analysis[34]
- Profiling the educational and socio-economic environments within which *Future to Discover* is operating

Early implementation research findings are presented later in this report.

34 Interpretation of "black box" findings through implementation research here is taken to mean the careful study of the delivery of *Explore Your Horizons* and *Learning Accounts*, including evaluating how well the interventions were implemented and investigating any associations between the interventions' different components and outcomes. Consideration is also given to the influence of factors outside of the delivery of *Future to Discover*. Such interpretations can provide grounds for modifying interventions prior to more widespread introduction and can change how people think about such interventions. Although implementation research can help with this interpretation, the *Future to Discover* pilot project has been designed to determine the impact of *Explore Your Horizons* as a whole rather than the impact of each of its distinct components.

Given the significant resources that will be spent on *Future to Discover*'s two interventions, and potentially on any provincial or national program that might be based on them, *Future to Discover*'s benefit–cost analysis will provide estimates of the cost-effectiveness of such spending once final impact results are known.

Overview of Report Writing and Dissemination of Findings

The *Future to Discover* pilot project will produce at least three research reports to disseminate findings after key project milestones have been achieved. The current **early implementation report** documents *Future to Discover*'s project design, implementation of that design, and progress in achieving early project objectives.

An **interim impact report** is planned for March 2009 that will use data from the first follow up survey of participants after 30 months and implementation research to assess the ongoing implementation and impacts on school-level outcomes such as graduation.

Finally, a comprehensive final **impact report** will use data from the final follow-up survey at 66 months as well as implementation research to document the impact analysis for outcomes following the first post-high school year, final lessons from implementation, and the benefit-cost study.

THE REMAINDER OF THIS REPORT

Chapter 2 provides further detail on *Future to Discover*'s interventions, design, and organizational structure. Chapter 3 offers a complete description of the selection and recruitment of *Future to Discover*'s research samples. The baseline characteristics of the research sample are subsequently identified in Chapter 4. Chapter 5 summarizes the implementation of *Explore Your Horizons* and related activities. Participation rates in *Explore Your Horizons* sessions, as well as usage of the *Future to Discover* Web site, are reported in Chapter 6. The implementation of *Learning Accounts* is summarized in Chapter 7. The report ends with a discussion on future research (Chapter 8).

2

Design and Organizational Structure of the Interventions

Introduction

This chapter describes the key organizational features of *Future to Discover* and of its two interventions: *Explore Your Horizons* (*Future to Discover* in Manitoba)[35] and *Learning Accounts*, including how the two interventions came into being. First, the design and planning of the interventions are reviewed, together with the timelines for each. Next, the *Explore Your Horizons* career education intervention (including each of its components) and the *Learning Accounts* financial incentive intervention are described. The chapter concludes with a description of how the project is organized.

35 Hereafter, any reference to *Explore Your Horizons* in this chapter is taken to mean *Future to Discover* in Manitoba.

CHAPTER SUMMARY

- ***Future to Discover* is made possible through partnerships between the Canada Millennium Scholarship Foundation and the New Brunswick Department of Education and between the Canada Millennium Scholarship Foundation and Manitoba Education, Citizenship and Youth.**
- **The main phase of design and planning for the *Future to Discover*** pilot project took place over the course of a year. Although tentative planning and design necessarily began beforehand, the more formal design and work plan for the project took shape in the fall of 2003. Most of the components of the career education intervention, called *Explore Your Horizons*, and the financial incentive intervention, called *Learning Accounts*, were decided by the beginning of 2004, though some details of the later components were still under development in 2006.
- **Six career education components were selected for *Explore Your Horizons***. Design decisions were made via consultations among the key stakeholders with the assistance of the Canadian Career Development Foundation, PGF Consultants Inc., and Allegro 168 Communications + Design. The components selected were Career Focusing, Lasting Gifts, Future in Focus, Post-secondary Ambassadors, the *Future to Discover* Web site, and F2D Magazine.
- ***Learning Accounts* originated in early discussions between the Canada Millennium Scholarship Foundation and potential project partners about effective strategies to increase access to post-secondary education through financial assistance.** The intervention is being tested with New Brunswick students only. Stakeholders in the project agreed on an eligibility criterion based on household income below the New Brunswick median. A major assumption was that lower-income students anticipate having inadequate financial resources to pay for their post-secondary education.
- **A National Working Group, an Operations Group, and a Research Sub-committee were formed to oversee the research objectives and implementation of the *Future to Discover* pilot project.** Each group was comprised of one or more representatives of the Canada Millennium Scholarship Foundation; the New Brunswick Departments of Education and Post-secondary Affairs/Post-secondary Education, Training and Labour; Manitoba Education, Citizenship and Youth; and the Social Research and Demonstration Corporation (SRDC). Other partner organizations have been consulted as required.

DESIGN AND PLANNING OF THE INTERVENTIONS

The main phase of design and planning of the pilot project took place over the course of a year. While tentative planning and design necessarily began beforehand, the more formal design and work plan for the project took shape in the fall of 2003.

Early in the design and planning phases, when the project was little more than an idea, project stakeholders began consulting with experts in the field to learn more about how to maximize what could be achieved in practice. Stakeholders envisaged *Future to Discover* to consist of two general types of interventions to increase access to post-secondary education. The first intervention, called *Explore Your Horizons*, would comprise separate and complementary career education components designed to increase high school students' early exploration of their post-secondary and career options. The second intervention, named *Learning Accounts*, would guarantee lower-income high school students—as they entered Grade 10—non-repayable financial assistance should they choose to pursue post-secondary education.

The Province of New Brunswick is participating in both strategies under the umbrella of the *Future to Discover* pilot project: the career education intervention (called *Explore Your Horizons*) and the non-repayable financial assistance intervention.[36]

The Province of Manitoba expressed specific interest in *Explore Your Horizons* but opted not to participate in the *Learning Accounts* strategy. The label "*Future to Discover*" was subsequently adopted by Manitoba to describe the career education intervention identical to *Explore Your Horizons* in New Brunswick.

36 Career Focusing and Lasting Gifts were not originally developed for *Future to Discover*. The programs already existed independently of *Future to Discover*. Assorted content from the Indiana Career and Postsecondary Advancement Center, a US career education resource model, was also selected by Educational Policy Institute in 2003 for the *Future to Discover* pilot project. Significant modifications were subsequently required for these existing programs and resources to fit within the framework of *Future to Discover*.

Stakeholder discussions ensued to finalize what each intervention would look like and what the ideal method of delivery would be. Early consideration had to be given to the context of the K-12 system in New Brunswick and in Manitoba. The New Brunswick Department of Education consists of two distinct education sectors, anglophone and francophone, under the direction of two deputy ministers. Both sectors were invited to participate in *Future to Discover* and all school districts in the province were represented. Manitoba's school system includes public schools, independent schools that receive provincial funding, as well as non-funded independent schools. Only public schools not engaged in the Canada Millennium Scholarship Foundation's Making Education Work initiative were eligible to participate in the pilot project.[37]

Due to the analytical requirements of the project, discussed in greater detail in Chapter 3, Grade 9 students in New Brunswick had to be recruited from the same schools two years running—Cohort 1 and Cohort 2—ready for intervention activities starting at the schools the following fall. A single cohort of recruitment was sufficient in Manitoba. Stakeholders agreed that Manitoba Grade 9 students would be recruited over the same time period as the second cohort of students—Cohort 2—in New Brunswick.

Project stakeholders decided that as *Future to Discover*'s procedures, curriculum, and scripts were developed, they would be captured in an operations manual and provided to the deliverers of the interventions in each province, such as facilitators and Post-secondary Ambassadors, to assist in intervention delivery. While most of the particular components of *Explore Your Horizons* and *Learning Accounts* were decided by the beginning of 2004, some details of the later components were still under development in 2006.

A total of six career education components were selected for the *Explore Your Horizons* intervention through consultations among key stakeholders from the Canada Millennium Scholarship Foundation; Manitoba Education, Citizenship and Youth; and the New Brunswick Department of Education with the assistance of the Canadian Career Development Foundation. The components were selected based on the wealth of education, policy and programming knowledge and experience and opinions of the experts sitting around the table as well as the program and research evidence they drew upon. Factors such as practical considerations, provincial preferences, and research and project design requirements were relevant in the decision to proceed with the career education intervention.

For example, *Future to Discover* originated as a test of an early intervention to promote access to post-secondary education. As such, there was a choice to be made about in which grade-year it should begin. However, since the duration of the Foundation's mandate would not extend beyond 2010, there was a practical constraint on intervening earlier than Grade 9, since outcomes would not be observed within the project lifetime. The developers of *Explore Your Horizons* felt that recruiting students in Grade 9 for interventions commencing in Grade 10 would represent a reasonable time frame, given the constraints, since research has found students in earlier grades less prepared to commit to career choices and to "exhibit distinct patterns of needs regarding developing their readiness for career decision making" (Akos, Konold, & Niles, 2004, p. 8). Other research has shown that high school students in higher grades demonstrate greater career maturity than those in lower grades—findings have shown significant differences in career maturity scores between students in Grade 9 compared with their Grade 10 counterparts, and similarly compared with their Grade 11 and Grade 12 counterparts (Patton & Creed, 2001).

A key assumption of *Explore Your Horizons* was that while a large volume of information available on post-secondary education and career development exists, this information is not always easy to access, navigate, understand, and/or manage by the students who most need it. According to an Organisation for Economic Co-operation and Development report (Grubb, 2002), there has been increasing recognition in a variety of different countries of the importance of career-related information and guidance. According to the report, developmental perspectives on career development imply that early career education planning and choices may be enhanced, corrected, or even reversed as individuals acquire more information and experiences or as they change either their preferences or the way they see their future. Accordingly, there has been a push for new policies to increase the amount and quality of both information and guidance in high school and equity of access to such resources (Grubb, 2002).

After extensive deliberation, stakeholders decided that the most effective delivery model for the majority of the components of the *Explore Your Horizons* intervention would be a series of workshops run outside of school hours but on school grounds. Delivering *Explore Your Horizons* workshops to students on school property immediately after their last class (other than sessions involving parents) was also thought more likely to support attendance than if *Explore Your Horizons* workshops were scheduled later in the evening or at different venues (Canada Millennium Scholarship Foundation, 2007).

The *Learning Accounts* intervention is being tested with students in New Brunswick. Stakeholders in the project agreed on an eligibility criterion based on household income below the New Brunswick median (the median was taken from Census 2001 data for households with children 6 to 17 years of age and rounded up to the nearest $5,000 level; see Table 3.4). A major assumption was that lower-income students anticipate having inadequate financial resources to pay for their post-secondary education. *Learning Accounts* participants who attend high school until graduation and who successfully enrolled in a Canada Student Loan-recognized post-secondary education program would receive up to a maximum of $8,000 to subsidize their post-secondary education expenses.

37 Information on New Brunswick and Manitoba high school curricula can be found in Appendix 1 of this report.

The process of accumulation of funds in *Learning Accounts* was intended to recognize each participant's continued commitment to education. Thus, participants in *Learning Accounts* had to still be attending high school at the end of Grade 10 to receive an instalment of $2,000 in their account and had to still be attending high school at the end of Grade 11 to receive another $2,000. Thereafter, *Learning Accounts* participants who successfully graduate from a New Brunswick high school have another instalment of $4,000 in the account. If they successfully enrol in a post-secondary education program, they can draw from the accumulated funds in their account. Each *Learning Account* participant can request a $2,000 payment twice a year once their enrolment status has been confirmed,

Table 2.1: Timelines for the *Explore Your Horizons* Pilot Intervention

Grade	New Brunswick Cohort 1 Activities					
9	Recruitment (baseline survey)					
10	Orientation Sessions					
	Career Focusing	Lasting Gifts	Future in Focus	PSA	F2D	Web Site Access
	6 workshops (2 hours each)			2 workshops (2 hours each)	Issue 1, 2	Yes
11		4 workshops (2 hours each)		2 workshops (2 hours each)	Issue 3, 4	Yes
12			4 workshops (2 hours each) plus orientation session	2 workshops (2 hours each)	Issue 5, 6	Yes
	(30-month follow-up survey)					
PSE 1	Early implementation report					
PSE 2	Interim impact report					
PSE 3	(66-month follow-up survey)					
PSE 4						
PSE 5	Final impact report					

Table 2.2: Projected Pattern of Instalments and Payments for the *Learning Accounts* (LA) Pilot Intervention (New Brunswick Only)

Grade	Cohort 1 Activities			
	LA Instalments	LA Statements	LA Payments for ≥ 2 year PSE Program	LA Payments for ≤ 1 year PSE Program
9	Recruitment (baseline survey)			
10	$2,000 at end Grade 10	Mailed end Grade 10		
11	$2,000 at end Grade 11	Mailed end Grade 11		
12	$4,000 at end Grade 12	Mailed end Grade 12; sent with payment request package		
	(30-month follow-up survey)			
PSE 1			$2,000 with confirmation of initial PSE enrolment; $2,000 start winter term	$2,000 with confirmation of initial PSE enrolment; $2,000 start winter term
PSE 2		Sent with payment request package	$2,000 start fall term; $2,000 start winter term	
	Interim impact report			
PSE 3	(66-month follow-up survey)			
PSE 4				
PSE 5	Final impact report			

for a total maximum of $8,000 over three years.[38] All funds must be claimed within six years of the account being offered at the start of Grade 10.[39]

Future to Discover's two interventions will now be described. These descriptions provide background information when considering their early implementation as described in the remainder of the report. The implementation stages of *Explore Your Horizons* and *Learning Accounts* can be found in tables 2.1 and 2.2. Some major research activities are included in the tables for reference purposes. A more detailed account of the actual implementation of components, for the first year of programming only, appears in Chapter 5 and Chapter 7.

Grade	New Brunswick Cohort 2/Manitoba Activities					
8						
9	Recruitment (baseline survey)					
10	Orientation Sessions					
	Career Focusing	Lasting Gifts	Future in Focus	PSA	F2D	Web Site Access
	6 workshops (2 hours each)			2 workshops (2 hours each)	Issue 1, 2	Yes
11		4 workshops (2 hours each)		2 workshops (2 hours each)	Issue 3, 4	Yes
12			4 workshops (2 hours each) plus orientation session	2 workshops (2 hours each)	Issue 5, 6	Yes
	(30-month follow-up survey)					
PSE 1	Interim impact report					
PSE 2						
PSE 3	(66-month follow-up survey)					
PSE 4	Final impact report					

Grade	Cohort 2 Activities			
	LA Instalments	LA Statements	LA Payments for ≥ 2 year PSE Program	LA Payments for ≤ 1 year PSE Program
8				
9	Recruitment (baseline survey)			
10	$2,000 at end Grade 10	Mailed end Grade 10		
11	$2,000 at end Grade 11	Mailed end Grade 11		
12	$4,000 at end Grade 12	Mailed end Grade 12; sent with payment request package		
	(30-month follow-up survey)			
PSE 1			$2,000 with confirmation of initial PSE enrolment; $2,000 start winter term	$2,000 with confirmation of initial PSE enrolment; $2,000 start winter term
	Interim impact report			
PSE 2		Sent with payment request package	$2,000 start fall term; $2,000 start winter term	
PSE 3	66-month follow-up survey			
PSE 4	Final impact report			

38 The check on enrolment is performed by New Brunswick Student Financial Services.

39 It is important to note that, unlike *Explore Your Horizons*, there is no fixed year for *Learning Accounts* delivery; rather instalments and payments can be made over a range of years. A student who takes three years to complete grades 10 through 12 is entitled to receive a payment in any two of the three years following their graduation, and the payment amount depends on the amount of instalments in the student's account. For example, a student who has accumulated only $4,000 in his or her account by the end of Grade 11 but who graduates from a Quebec school (rather than a New Brunswick school) before enrolling in a post-secondary education program will receive $4,000, which will be made available to them during the delivery period for *Learning Accounts*.

The *Explore Your Horizons* Intervention

The *Explore Your Horizons* career education intervention is made up of the following six components: (1) Career Focusing, (2) Lasting Gifts, (3) Future in Focus, (4) Post-secondary Ambassadors, (5) the *Future to Discover* Web site, and (6) the F2D magazine. All participants in the intervention are offered all six components over three years of programming, as shown in Table 2.3. The table also provides the rationale for each component. When feasible, the developers of the components and those who would deliver them met with each other to ensure that connections were established among the *Explore Your Horizons* components.

Explore Your Horizons expects parents to play a supporting role in their children's participation by attending workshops with them at the beginning and at the end of the intervention, as well as throughout the Lasting Gifts series. As Table 2.1 shows, the very first *Explore Your Horizons* activity is the orientation session for participants and their parents in Grade 10 to learn more about *Explore Your Horizons* and to sign a participation declaration (described later in Chapter 5). Parents attend the last of the six Career Focusing workshops in Grade 10 and are also invited to the final Future in Focus workshop that takes place near the end of Grade 12—the closing *Explore Your Horizons*' workshop. Attendance of parents at the last workshop is intended to give them the opportunity to celebrate their child's participation in *Explore Your Horizons* and to learn what was accomplished in Future in Focus. Each of the six components of *Explore Your Horizons* will now be introduced.

Career Focusing

Research shows that the majority of high school graduates in Canada do not have clearly articulated career goals (Barr-Telford et al., 2003). Career Focusing was designed by Jobmatics™ (see Text Box 2.1) to help high school students explore career options and develop suitable educational and career plans beginning during middle and high school years. As described by Jobmatics™, Career Focusing supports participants' efforts to discover personally meaningful and realistic career options and to learn how to best prepare for post-secondary education and/or the labour market following high school graduation.

Career Focusing workshops typically take place in a classroom setting directly after the end of the school day.[40] As shown in tables 2.1 and 2.3, Grade 10 participants have the opportunity to participate in a total of 12 hours of Career Focusing activities during the academic year by way of six two-hour workshops.

Facilitators help participants work through a Career Focusing workbook, including the preparation of personal focus statements that are designed to set in motion the career exploration process. These statements are intended to represent a way for the participants to distinguish the careers that they should examine more closely from those they can disregard. Participants are taught how to research appropriate resources for labour market information and are encouraged to store their research in activity binders, which they can carry forward to Grade 12 and beyond.

Lasting Gifts

Lasting Gifts is a four-workshop series intended to help parents become "career allies" for their children. Developed by the Canadian Career Development Foundation (see Text Box 2.1), Lasting Gifts is designed to inform parents and their children about how to research labour market information and to better understand career development (Bezanson, 2002).

Lasting Gifts workshops are planned as evening sessions with the goal of maximizing attendance of parents or guardians. The location is a classroom on school property. Over the course of the academic year, facilitators offer the four Lasting Gifts workshops and help parents explore various career-planning approaches with their children by way of information sharing, interactive activities, group discussions and exercises, and small reflective assignments to be completed between workshops.

As shown in Table 2.3, participants and their parents are invited to four Lasting Gifts workshops where parents and their children are helped to understand the process of career education development. The content of workshops includes "Trend tracking," "The benefits of lifelong learning," and "The art of being curious" in addition to further information about learning and work sectors. Participants and their parents are encouraged to discover their "natural gifts" and to connect these gifts with participants' future careers and education.

40 Career Focusing was initially developed by Jobmatics(tm) as an in-school curricular program.

Table 2.3: The Six Components of *Explore Your Horizons*

Component	Rationale	Frequency in Grade 10	Frequency in Grade 11	Frequency in Grade 12
Career Focusing	To help high school students explore career options and develop suitable educational and career plans. Parents are invited to attend the last Career Focusing session so that their children have the opportunity to share their educational and career development plans with them.	6 workshops of 2 hours (12 hours)		
Lasting Gifts	To help parents and their children understand the process of career education development.		4 workshops of 2 hours (8 hours)	
Future in Focus	To help students manage transitions, create and/or access support groups, and build resilience to overcome challenges.			4 workshops of 2 hours (8 hours) plus orientation session
Post-secondary Ambassadors	To promote career exploration and education planning by establishing connections in a classroom setting between groups of high school students and a small team of students currently enrolled in a range of post-secondary education and training programs.	2 workshops of 2 hours (4 hours)	2 workshops of 2 hours (4 hours)	2 workshops of 2 hours (4 hours)
Future to Discover Web site	To provide career exploration and education planning information to encourage student enrolment in community colleges, apprenticeships, universities, and private vocational institutions.	Accessible throughout *Explore Your Horizons*; the Web site is comprised of six layers of information that directly tie to other components of *Explore Your Horizons*. Participants gain graduated access to these layers as they progress through the workshops.		
F2D Magazine	To provide career exploration and education planning information to encourage student enrolment in community colleges, apprenticeships, universities, and private vocational institutions.	2 issues	2 issues	2 issues

Future in Focus

The Future in Focus component of *Explore Your Horizons* is based on the concept of personal resilience. The Canadian Career Development Foundation, which developed both Lasting Gifts and Future in Focus, describes resilience as "the ability to overcome risk and adversity." Future in Focus is intended to build and strengthen Grade 12 students' resilience, helping them to develop support networks, explore the value of community engagement, and learn how to work through unexpected life challenges. Participants taking part in Future in Focus are encouraged to build resilience by learning how to enhance the development of certain protective factors such as social and coping skills and interpersonal supports (Canadian Career Development Foundation, 2006).

For example, facilitators encourage participants to think of specific skills, attitudes, and strategies that are required to overcome unexpected obstacles. They provide participants with a Future in Focus student workbook that explains the concept of resilience and lists examples. This workbook contains the activities and exercises that are undertaken throughout the four Future in Focus workshops. Participants are encouraged to maintain action plan steps that will eventually help them to prepare to leave high school. In addition, participants discuss positive coping skills, attitudes, and strategies and are taught how to apply them to real-life scenarios.

The first three Future in Focus workshops are scheduled after school in a classroom on school property. The fourth workshop—to which parents are invited—is planned in the evening to be more convenient for both parents and their children to attend. This workshop is not always on school grounds. For example, participants at some sites have opted to meet at a restaurant.

In line with the *Explore Your Horizons* career education intervention as a whole, the Grade 12 Future in Focus curriculum attempts to balance concrete, practical information about the realities of post-secondary education life with interesting activities geared to building the skills participants will need as they face the transitions and challenges ahead. For example, one workshop is devoted to building a network of supporters for participants' pursuit of post-secondary studies, including parents or guardians, friends, teachers, neighbours, and other significant adults.

Post-secondary Ambassadors

Post-secondary Ambassador workshops were designed to establish connections in a classroom setting between groups of high school students and a small team of older students currently enrolled in post-secondary education. The intent was that Post-secondary Ambassadors could act as peer mentors and role models, thereby both directly and indirectly promoting career exploration and education planning.

The content of the Post-secondary Ambassadors workshops is based on an information course-pack prepared by the Educational Policy Institute under contract to the Canada Millennium Scholarship Foundation in 2003, following a model established by the Indiana Career and Post-secondary Advancement Center (ICPAC).[41] According to the ICPAC model, developmentally appropriate information should be offered to high school students to encourage their informed contemplation of life after high school. The major underlying assumption is that high school students do not know everything they ought to know about post-secondary life. The Canadian Career Development Foundation and the Canada Millennium Scholarship Foundation refined the course pack to ensure the material was organized according to an agreed upon learning taxonomy and according to developmental career tasks considered appropriate for each grade level. In addition, linkages to other *Explore your Horizons* components were built into the course-pack by the Canadian Career Development Foundation and the Canada Millennium Scholarship Foundation. The workshops themselves were developed by PGF (see Text Box 2.1).

The Post-secondary Ambassadors component gives high school students opportunities to speak directly with students already in post-secondary education about a number of different post-secondary education issues (Miller & Gallaway, 2004). Students currently enrolled in one of four post-secondary streams—Apprenticeships, Private Vocational Institutions, Community Colleges, and Universities—are targeted to become Post-secondary Ambassadors. The provinces put considerable effort into trying to achieve representation from each stream within the Post-secondary Ambassadors team. How the post-secondary ambassadors were selected for the *Explore Your Horizons* intervention is described in detail in Chapter 5.

As shown in Table 2.3, participants are to meet with Post-secondary Ambassadors a total of six times over the course of the *Explore Your Horizons* intervention by attending two two-hour workshops per academic year in each of Grade 10, Grade 11, and Grade 12.

Future to Discover Web site

Stakeholders decided to include a members-only Web site in the *Explore Your Horizons* intervention as a supplementary medium for providing post-secondary and career education material to students early on in high school. There was some concern about a potential digital divide, since research shows that there are regional disparities in access to a computer in the home and to the Internet from school (Corbett & Willms, 2002). Consequently, similar content was made available to students in a magazine format described below.

The *Future to Discover* Web site was designed by Allegro 168 Communications + Design. The Web site permits *Explore Your Horizons* participants with project-issued user codes to gain access to and explore detailed post-secondary and career education material.

As summarized in Table 2.3, the rationale for the *Future to Discover* Web site was to serve as a Web portal for useful information to encourage post-secondary education enrolment, from exploring post-secondary education programs through to understanding how student loans work. The Web site includes many features. For example, it contains scenarios of young people in a variety of post-secondary paths, and provides information about labour-market trends such as earnings of Canadians by highest level of education. It also includes information about post-secondary and career education (such as a glossary of post-secondary education words and phrases) and links to other career education Web sites.

F2D Magazine

"F2D" is the name of the magazine specifically designed for the *Future to Discover* pilot project. Like the *Future to Discover* Web site just described, the F2D magazine was designed by Allegro 168 Communications + Design, who harmonized the content of the two components for *Explore Your Horizons*. As with the Post-secondary Ambassador workshops, the content of the F2D magazine originates from the information course pack produced by the Educational Policy Institute under contract to the Foundation in 2003.

The aim of the F2D magazine was to use a different medium for conveying post-secondary and career education information to participants since some might have difficulty accessing the *Explore Your Horizons* workshops, a computer, or the Internet. Although students can typically access the Internet at school, this is not always the case at home

41 The Learn More Resource Center is the successor to the Indiana Career and Postsecondary Advancement Center (ICPAC). For more information on ICPAC see http://www.myfuturestuff.org/@default.

(Plante & Beattie, 2004). In addition, by mailing a magazine to the home, the developers of F2D anticipated that parental discussions regarding their children's plans for life after high school might be promoted.

Allegro 168 Communications + Design (see Text Box 2.1) designed the F2D magazine to capture the interest of high school students through the use of specific graphics, layout, and short, easy to read articles. The aim was to provide core post-secondary and career education information to *Explore Your Horizons* participants starting early in high school. *Explore Your Horizons* participants were mailed their first issue of F2D in the fall of Grade 10 and their second issue in the spring of Grade 10. The same distribution cycle is observed for the four additional magazines in grades 11 and 12.

THE *LEARNING ACCOUNTS* INTERVENTION

The key partners responsible for delivering *Learning Accounts* are the New Brunswick *Future to Discover* office, which liaises directly with participants, New Brunswick Student Financial Services, which will verify applications, and the Foundation, which maintains the accounts and makes payments.

To be eligible for this intervention, students and their parents had to provide their annual household income at the time of the in-home interview. As described in Chapter 3, income amounts were to be taken from the previous year's income tax returns. Only students from households with an annual income below the provincial median were eligible to be randomly assigned to *Learning Accounts*. Following assignment to a program group that offered *Learning Accounts* (*Learning Accounts* alone or a combined *Explore Your Horizons* plus *Learning Accounts* group), students were required to sign a participant declaration they received by mail in order to open an account and receive instalments.[42] Parents signed the declarations to agree to verification of their earlier reported income amounts through Revenue Canada. At the end of each school year, *Learning Accounts* participants receive an account statement from the New Brunswick *Future to Discover* office.

An instalment of $2,000 is added to the accounts of participants still attending high school at the end of Grade 10 and again at the end of Grade 11. A final instalment of $4,000 is added to participants' accounts upon graduation from high school. *Learning Accounts* participants accumulate the full $8,000 in their accounts as long as they obtain their high school diploma from a New Brunswick high school within four years of signing their participation declarations.[43] Participants must complete at least two years of one or more Canada Student Loan-recognized post-secondary education program(s) within six years of signing their declaration, in order to receive the full $8,000. Eligibility for *Learning Accounts* instalments and payments is not affected by changes in parents' financial circumstances over the course of the intervention. In other words, even if household income increases above the provincial median, participants who were initially eligible for *Learning Accounts* remain eligible.

To receive payments from their account, participants in *Learning Accounts* are required to return completed application forms to the *Future to Discover* office by stated deadlines. There are three deadlines in each calendar year. Participants must apply in time for up to two of the deadlines in each year to qualify for their two payments of $2,000 per year. New Brunswick Student Financial Services, acting on behalf of the Foundation and the New Brunswick *Future to Discover* office will then confirm that *Learning Accounts* participants' are enrolled in a recognized post-secondary education program. Participants who fail to meet a deadline may apply at the next one, assuming they are still within their eligibility period.

Once the information provided by *Learning Accounts* participants has been verified, the New Brunswick *Future to Discover* office will provide a file to the Foundation to ensure that *Learning Accounts* payments are made.

Most Cohort 1 participants will graduate from high school in June 2007. These students will be able to request payments from their account for three years. Monies that remain in participants' accounts will no longer be accessible after that date, and soon after the accounts will close. The New Brunswick *Future to Discover* office will remind these participants in May 2009 of any remaining funds in their account and that payments of these funds are available for only 12 remaining months.

The majority of Cohort 2 participants in *Learning Accounts* will graduate from high school in June 2008 and will be able to request payments from their account for three years. After that date, payments cannot be made and the accounts will be closed. The New Brunswick *Future to Discover* office will send a reminder that accumulated funds will remain available to participants for only 12 more months.

Any money accumulated in participants' accounts is intended to subsidize participants' education expenses for a post-secondary program. However, as is true for traditional student financial assistance programs in Canada, funds are paid directly to students and can be used for any purpose.

This next section sets out the framework for coordinating the *Future to Discover* pilot project. Roles and responsibilities of the main partners and their subcontractors are presented further on.

42 Here, "instalment" means a deposit into a student's Learning Account, to be distinguished from "payment" that occurs later on after the student has successfully enrolled in a post-secondary education program. The number of payments will vary depending on the total instalment amount accrued in a student's Learning Account. The timing of applications may vary with the type of post-secondary education program he or she enrols in.

43 Students may take a "grace" year in the course of completing their studies. This can apply either to high school (allowing the student four years to complete grades 10 through 12) or to post-secondary study (taking a "year off" before commencing a post-secondary program, or between two years of post-secondary study) but not to both, while still qualifying for *Learning Accounts* instalments and payments.

PROJECT ORGANIZATION

The Partners

The *Future to Discover* Pilot Project is made possible through partnerships between the Canada Millennium Scholarship Foundation and the New Brunswick Department of Education and between the Canada Millennium Scholarship Foundation and Manitoba Education, Citizenship and Youth. The nature of the relationship and the obligations of partners are outlined in the respective Memoranda of Understanding. These three stakeholders in the project are responsible for the major design and operational decisions affecting the interventions under test in *Future to Discover*.

As part of the Government of Canada's mandate to invest in post-secondary education, the Canada Millennium Scholarship Foundation was established in 1998 with an endowment of $2.5 billion to help young Canadians gain access to post-secondary education and to increase their post-secondary education participation by reducing student debt. The Foundation—as part of its administrative mandate to undertake rigorous evaluation of its programs—sought to understand means of broadening access to post-secondary education, especially for groups that are traditionally under-represented in the post-secondary education system. Its internal discussions about the barriers to access, both financial and non-financial, led to the genesis of the Millennium Pilot Projects. As its first steps, the Foundation analyzed Canadian data, reviewed existing North American programs, and took steps to engage the interest of Canadian provinces.

As mentioned earlier, the Province of New Brunswick opted to participate in the *Future to Discover* pilot project that included a career education intervention and that offered non-repayable financial assistance to high school students. The Province of Manitoba expressed specific interest in *Explore Your Horizons* but not *Learning Accounts*, as the province had already decided to implement another project.

The Canada Millennium Scholarship Foundation hired SRDC to undertake the evaluation of the *Future to Discover* pilot project. SRDC developed the research design to answer the key questions required of the evaluation and a "research protocol" for each province—a formal description of the set of scientific and ethical methodologies and rules that would govern the evaluation of the project. SRDC was responsible for recruiting over 5,400 participants in two provinces, including all procedures necessary for securing the informed consent and baseline data from the students and their parents/legal guardians. It is responsible for managing the ongoing collection of data on outcomes and implementation, gathering information for the benefit cost analysis for each strategy, and publishing the findings in early implementation, interim impact, and final impact reports.

Advised by SRDC and the Canadian Career Development Foundation and other subcontractors described in Text Box 2.1, the provinces and the Foundation formed various working groups and committees to implement and evaluate *Future to Discover*.

Working Groups and Committees

A National Working Group, an Operations Group, and a Research sub-committee oversee the research objectives and the implementation of the *Future to Discover* pilot project. Each group is comprised of one or more representatives of the Foundation; the New Brunswick departments of Education and Post-secondary Affairs/Post-secondary Education, Training and Labour; Manitoba Education, Citizenship and Youth; and SRDC. The roles of each of these groups, plus the roles of two provincial management committees—one for Manitoba and one for New Brunswick—are summarized in Table 2.4.

Table 2.4: *Future to Discover*'s Working Groups and Committees

Main Pilot Project Activities	National Working Group Meets as required	Operations Group Meets twice monthly as required	Research Sub-committee Meets as required	Provincial Management Committees Meets weekly or as required
Oversees research objectives	■	■	■	
Oversees implementation of *Future to Discover*	■	■	■	
Sets broad policy objectives	■			
Intervention design and coherency	■			
Approval of research design	■			■
Approval of research reports	■			
Future research and implementation needs	■			
Communication strategies for research results	■	■		
Communication strategies for implementation updates	■	■		
Operational considerations and challenges	■	■		
Design of strategies to enhance project participation		■		
Management of information relating to program delivery		■		
Ensuring consistent delivery of interventions		■		■
Adapting program content and delivery as required		■		
Review and approval of workshops and materials		■		
Review of content of *Future to Discover* Web site and F2D		■		
Approval of content of *Future to Discover* Web site and F2D		■		
Province-specific issues relating to delivery				■
Securing participation of schools and other agencies				■
Budget and management of funds				■
Recruiting/training personnel for *Future to Discover* offices				■
Implementation and project management reports				■
Contracts				■
Collaboration with subcontractor				■

The National Working Group

The role of the National Working Group is to oversee the research objectives and the implementation of the *Future to Discover* pilot project. As a committee, the group focuses on setting broad policy objectives, program design and coherency, and approving research design and reports.

The National Working Group meets in person and by teleconference to share updates and discuss emerging issues. The group also serves as a strategic committee to anticipate future research and implementation needs, focusing on gaps and reaching stakeholders. Finally, members of this group collectively decide on overall communication strategies for both research results and implementation updates, including the dissemination of research reports.

Members of the National Working Group deliberated on many issues related to *Future to Discover*, including intervention design, operational considerations, and challenges in the selection of participants and sites, including equity among school districts, school size, timelines, and availability of resources.

TEXT BOX 2.1: SUBCONTRACTOR ORGANIZATIONS

This box lists the different organizations that were hired to assist with the development or implementation of the project. These organizations have been listed in alphabetical order.

Allegro 168 Communications + Design
Allegro 168 Communications + Design, using the information course pack prepared by Educational Policy Institute and revised by the Canadian Career Development Foundation and the Canada Millennium Scholarship Foundation, proposed the adapted content for the F2D magazines as well as the *Future to Discover* Web site, and in collaboration with the members of the FTD Operations Group, finalized the content for both.

Canadian Career Development Foundation
The Canadian Career Development Foundation plays an important advisory role on *Explore Your Horizons*. The Canadian Career Development Foundation was initially instrumental in advising on key rationales for each of the different components of *Explore Your Horizons*, as well as on the overall coherence of the intervention. The Canadian Career Development Foundation also designed the Lasting Gifts component of *Explore Your Horizons*, customized it for Grade 11 *Explore Your Horizons* participants and their parents/guardians, and later trained New Brunswick and Manitoba facilitators on how to facilitate it in the field. The Canadian Career Development Foundation was later contracted to develop a component of the intervention for Grade 12 students (Future in Focus), and then to train New Brunswick and Manitoba facilitators on how to facilitate that component.

Educational Policy Institute
The Educational Policy Institute created the initial information course pack used as the basis of the curriculum for the Post-secondary Ambassadors component and the F2D Magazine and Web site.

Jobmatics™
Jobmatics™ created the Career Focusing component and tailored it for Grade 10 participants in *Explore Your Horizons* and trained New Brunswick and Manitoba facilitators on how to facilitate that component in the field.

DMHS Group Inc.
The Post-secondary Ambassadors component of *Explore Your Horizons* was prepared initially by PGF Consultants Inc. and later finalized by the DMHS Group Inc. In 2005, prior to the departure of PSA workshops' main developer from PGF, PGF requested that the Canada Millennium Scholarship Foundation transfer this contract to the Post-secondary Ambassadors workshops' main developer's new firm, DMHS Group Inc. All parties were in agreement. DMHS Group Inc. trained New Brunswick and Manitoba staff and facilitators as well as the student Ambassadors themselves on how to facilitate the Post-secondary Ambassadors component in the field.

Sierra Systems
To plan and track the delivery of *Future to Discover*'s programming across sites and to support its project management and administrative responsibilities, Canada Millennium Scholarship Foundation funded, and project stakeholders directed the implementation of a computerized Project Management Information System to be available to both provincial *Future to Discover* Offices. Sierra Systems was hired to custom-develop the web-based application and technical architecture for the project. The developers specifically designed the Project Management Information System to contain components that were capable of supporting the various operations of *Future to Discover*.

The Operations Group
The Operations Group is made up of senior *Future to Discover* team members from the Foundation; the New Brunswick Department of Education; Manitoba Education, Citizenship and Youth; and SRDC.

The group typically meets by teleconference twice monthly to share updates and discuss implementation issues. Two or three times annually, there are longer (two to three days in length) meetings in person. The Operations Group discusses the best approaches for implementing the strategic communication strategies approved by the National Working Group, including preparing regular implementation updates to stakeholders. The Operations Group also addresses issues arising in management of information relating to program delivery.

The Operations Group is responsible for many specific project tasks. Such tasks include ensuring consistent delivery of the interventions across all sites, reviewing and approving workshops and materials prepared by the consultants and the content of the *Future to Discover* Web site and F2D magazine, finding solutions to operational challenges, sharing "lessons learned," adapting program content and delivery as required, and designing strategies to enhance participation in the project.

The Research Sub-committee
The Research sub-committee's main responsibility is to provide overall guidance to the National Working Group in research matters relating to the *Future to Discover* pilot project. The Research sub-committee meets as required. Generally, the work of the group results in recommendations being made to the National Working Group.

Provincial Management Committees
There are two provincial management committees (one for Manitoba and one for New Brunswick) that are responsible for discussing province-specific issues relating to the delivery and budgetary implications of the *Explore Your Horizons* and *Learning Accounts* interventions. The provincial management committees meet as requested by one or more of the partners. SRDC, as an agent of the Foundation retained for evaluation purposes, is invited to take part in some of these discussions, when warranted.

The Foundation and/or the New Brunswick Department of Education and the Manitoba Education, Citizenship and Youth, working by consensus, are responsible for many tasks. Some of these tasks include overseeing new contracts; collaborating with contractors who develop and deliver the interventions; approving all *Future to Discover* interventions; developing research protocols; securing the participation of schools and other agencies as required; recruiting and training personnel for the *Future to Discover* office, including facilitators and Post-secondary Ambassadors; ensuring consistency in the delivery of the interventions through appropriate training; and regular monitoring of all staff. Provincial management committees

are also responsible for managing funds related to the project, producing reports relating to the implementation and management of the project, and taking of appropriate steps to resolve any issue or problem arising from components of the project.

The next chapter provides an overview of the recruitment of *Future to Discover*'s research participants and initial data collection.

3

An Overview of *Future to Discover*'s Research Samples and Data Sources

Introduction

This chapter describes the selection and recruitment of the research samples in the *Future to Discover* Pilot Project and the many sources of data required to evaluate the *Explore Your Horizons* (*Future to Discover* in Manitoba) and *Learning Accounts* interventions. This chapter outlines the process for identifying and engaging with the participating schools and recruiting the project's participants and their parents. It includes a description of the random assignment process and notification and a review of the initial data collection for the evaluation. Other data sources are described in Appendix 2.

CHAPTER SUMMARY

- **The selection of the research sample was successfully implemented in both New Brunswick and Manitoba.** All students in New Brunswick were screened for *Learning Accounts* eligibility. Efforts were made to have equal representation of students from both anglophone and francophone sectors.
- **Grade 9 students in New Brunswick and Manitoba were informed about the project and were able to opt out of the project.** Only a small proportion (72 out of a possible 15,578 students) chose to decline the chance to participate before being contacted by Statistics Canada.
- **The students randomly sampled by Statistics Canada were more likely to agree to participate in the project in New Brunswick than in Manitoba.** In New Brunswick, 78 per cent of those sampled agreed to participate and completed the baseline survey and consent forms. The equivalent proportion for Manitoba was 60 per cent.
- **The in-person interviews successfully collected baseline information.** Students completed a paper form while interviewers captured survey information from their parents electronically. Income information from parents was used to determine eligibility for random assignment into groups that included *Learning Accounts*. Students and parents consent to participate in the project was obtained at the same time.
- **Students were successfully randomly assigned to one of several different program groups or comparison groups.** The assignments reflected objectives for future analysis and incorporated stratification by linguistic sector and income level.

Recruitment of Research Sample Members

The recruitment process involved identifying a valid sample of Grade 9 students in New Brunswick and Manitoba who would be asked to volunteer to become part of the pilot project. The sample needed to be large enough to ensure that the study could detect impacts of the interventions of sufficient size to be relevant to policy-makers. The sample size was derived following the identification of minimum detectable effects of the interventions, as described in Text Box 3.1. In the case of New Brunswick, the sample needed to include sufficient numbers of lower-income students to provide a valid test of *Learning Accounts* both in combination with and separate from *Explore Your Horizons*. A sufficiently large group of students from low-income families was necessary to determine significant impacts for this subgroup alone.

Learning Accounts was not available in Manitoba or for higher-income students in New Brunswick. This meant that these project volunteers were assigned either to receive the offer of *Explore Your Horizons* or to the comparison group.

Provincial Differences

The principal data partners in recruitment for *Future to Discover* were the provinces of New Brunswick and Manitoba. While essentially the same data from student school records were required from both provinces for selection, recruitment, and analysis, there were differences in the procedures adopted. These differences arose due to differences in the plans for analysis by income group for the two provinces, the need to run equivalent studies separately for the two linguistic sectors in New Brunswick, and regulations and practices concerning the sharing of data in each jurisdiction.

New Brunswick: In New Brunswick the analytical model required a larger sample of Grade 9 students than a single year of recruitment from the available schools in each linguistic sector was likely to support. The relatively small size of the francophone sector was the limiting factor. Therefore, the New Brunswick sample was recruited across two years of Grade 9 intake (in 2003–4 and 2004–5). This approach was necessary in order to secure a sample sufficiently large to offer a good chance of observing impacts of a size likely to be found significant to policy-makers. Thus, in New Brunswick, Grade 9 students were recruited from the same schools for two years running, in spring 2004 and spring 2005, ready for intervention activities starting at the schools the following fall.

The most obvious implication of recruiting two cohorts was that the intervention had to be delivered and research data collected twice in successive years. In addition, the pilot project reports can be made available only once analysis has been undertaken on the pooled sample, which will be one year later than would be the case for a single-cohort study initiated at the same time.

Manitoba: Recruitment of a single cohort was sufficient in Manitoba. Grade 9 students were recruited over the same time period as the second cohort of students in New Brunswick. The recruitment process involved a much smaller francophone sector in Manitoba (represented in the project by a single school). However, this Manitoba francophone sample will be pooled with the anglophone sample for analysis as part of a single Manitoba-level evaluation.

TEXT BOX 3.1: MINIMUM DETECTABLE EFFECTS

The smallest true impact of an intervention that is likely to be detected by an experiment with a specific confidence level and specific statistical power is termed its minimum detectable effect (MDE). Commonly, evaluators seek to determine the appropriate sample size for an experiment that will produce a MDE that is thought to be policy-relevant. While the study could be designed to detect impacts that are smaller, usually by recruiting more participants (which incurs additional costs), this is unwise if smaller measured effects are viewed as too small to have an influence on policy. The efficiency of the experimental design is optimized if the sample size is just large enough to determine this minimum effect.

The minimum detectable effect is an extremely useful indicator of the statistical power of any particular design. Small MDEs mean that policy-makers can be quite confident that if the program has even a small effect on the outcome; the experiment will have a good chance of detecting it (that is, of rejecting the null hypothesis of "no effect"). It is important to identify the program population of interest at the design stage. The requirement to measure separate impacts for specific program populations will affect the overall sample size. The MDE required for each specified program population will determine the overall sample size.

For example, if the post-secondary participation rate of the program population of interest in the absence of the intervention is 61 per cent and policy-makers are likely to take note only of interventions that are estimated to increase this rate above 70 per cent, then an MDE of nine percentage points is required. If a smaller MDE were sought (for example, of five percentage points) this might raise costs recruiting extra sample unnecessarily. A larger MDE (for example, 13 percentage points) might save resources but would risk leaving policy-relevant impacts undetected.

For *Explore Your Horizons* (EYH) and *Learning Accounts* (LA), the sample sizes needed to be determined in the fall of 2003. Discussions with project partners had previously revealed that small impacts would not be policy-relevant so that MDEs could be relatively large. For example, an estimated increase of around 10 percentage points in the proportion of students completing the first year of a post-secondary program would generate policy interest. The actual sample sizes were then chosen by balancing the monetary resources set aside for the project (which implied a maximum number of participants) with the size of minimum detectable impacts. Various proposals for the sample sizes of each program population were discussed with members of the National Working Group and a consensus was achieved on the minimum detectable effects set out in the table below. The program populations of interest in New Brunswick were defined by linguistic sector and income group: the same level of precision was required for students from francophone and anglophone schools.

Minimum Detectable Effects for *Explore Your Horizons* and *Learning Accounts* (post-secondary education participation)

Program population		Minimum sample size	Minimum Detectable Effects (percentage points)				
			EYH vs. no intervention	LA vs. no intervention	EYH plus LA vs. no intervention	Incremental effect of LA on EYH	Incremental effect of EYH on LA
New Brunswick (per linguistic sector)	Lower-income families	928	14.4	14.1	14.1	12.5	12.5
	Higher-income families	600	11.7	–	–	–	–
	All families	1,528	9.1	–	–	–	–
Manitoba	All families	1,000	9.1	–	–	–	–

Note: The MDEs assume a one-tailed test with a power of 80 per cent, a significance level of 0.05, and a sample attrition rate of 25 per cent over six years.

THE RECRUITMENT PROCESS

Recruitment for the *Future to Discover* pilot project for both New Brunswick and Manitoba involved multiple stages. The steps for sample recruitment included identifying appropriate schools and securing their participation, getting school records data from both Manitoba and New Brunswick via their *Future to Discover* offices, allowing students to opt out, obtaining students' and parents' informed consent, conducting surveys, and randomly assigning students to program and comparison groups.

Selection of School Districts/Divisions and Schools

All school districts in New Brunswick (francophone and anglophone sectors) were invited to take part in the *Future to Discover* pilot project. In Manitoba school divisions with sufficiently large schools not participating in the Foundation's Making Education Work pilot project were invited. Within districts/divisions, the selection of schools was based on research criteria, which included the size of the school's Grade 9 population and the proportion of students likely to be members of the project's designated group. In total, 30 New Brunswick high schools (15 French-language, 15 English-language) and 21 Manitoba high schools are taking part in *Future to Discover*.

The project needed to maximize inclusion of the designated group in the sample. This was largely achieved at the level of school selection rather than at the level of individual student selection. The project was not to target students for selection within any one school, other than through application of the income test for eligibility for *Learning Accounts*. Thus, students invited to become project participants would represent a random sample (or actually all students, in some cases) within the Grade 9 at the selected schools. Schools were thus selected against specific income and parental education criteria.

In September 2003 representatives from the Foundation, the Social Research and Demonstration Corporation (SRDC), and the New Brunswick *Future to Discover* office made presentations on the project to all New Brunswick district superintendents. All New Brunswick district superintendents were invited to volunteer their school districts to participate in the study. In Manitoba, which had many more school divisions than New Brunswick had districts, superintendents of 15 divisions with schools of sufficient size were approached to support the sampling of *Future to Discover* students. In March 2004 the Foundation, SRDC, and the Manitoba *Future to Discover* office presented the project to this subgroup of Manitoba superintendents. Subject to the superintendents' agreement, the researchers identified one or more schools within each participating district, based on pre-agreed selection criteria. These criteria (described in Appendix 3) were systematic across all districts and designed to identify a sample that would maximize the recruitment of the designated group: first-generation scholars from low-income families.

The criteria for New Brunswick intended to maximize sampling of members of the designated group made use of data from the 2000 Programme of International Student Assessment (PISA) / Youth in Transition Survey (YITS) on the proportion of 15-year-olds in each school with parental incomes below $60,000 and whose parents had a highest education level of a high school diploma or less. These data were combined with data on the size of each school's Grade 9 to produce an index prioritizing schools for selection within each district. Because schools would be the sites for delivery of the interventions, the schools were eligible only if they included students in all four grades (Grade 9 through Grade 12). This criterion did not exclude any New Brunswick high schools. A maximum of two schools were eligible per anglophone district, three per francophone district. Given allowances for opt-outs and survey non-response, schools were selected for inclusion in the project incrementally until the cumulative total of Grade 9 students at the selected schools for each sector was sufficient to produce the desired achieved sample (of 1,015 students per sector per year, 4,060 total). To meet this target, two large francophone sector schools were included twice, meaning that they contributed approximately twice the number of students compared with other sites.

The criteria for Manitoba intended to maximize sampling of members of the designated group made use of data on populations resident in the same Forward Sortation Area as each school.[44] The data included the proportion of census families with pre-tax incomes below $40,000 and the proportion of adults with no college or university qualifications. These were combined with data on the size of each school's Grade 9 to produce an index prioritizing schools for selection within each division. Because schools would be the sites for delivery of the intervention, the schools were eligible only if they included students in all four grades (Grade 9 through Grade 12). A maximum of two schools would be eligible per district. Given allowances for opt-outs and survey non-response, schools were selected for inclusion incrementally until the cumulative total of Grade 9 students at the selected schools was sufficient number to produce the desired achieved sample of 1,000.

In New Brunswick each participating anglophone district contributed students from at least one school to the pilot project study while each participating francophone district contributed students from at least two schools. In Manitoba each invited division contributed at least one school,

44 These data from the 2001 Census of Population were obtained from Statistics Canada in the absence of available YITS breakdowns for every school. "Forward Sortation Area" refers to the geographic area covered by the first three characters of the postal code.

Table 3.1: Proportion of Sample in Large Urban Areas Compared With Census Estimates, 2001

Located in:	New Brunswick			Manitoba		
	Families with children under 18	FTD schools (count)	FTD sample	Families with children under 18	FTD schools (count)	FTD sample
Urban areas with population of 40,000 or more	43.6	6	22.4	62.4	12	57.5
Other areas	56.4	24	77.6	37.6	9	42.5
Total	100.0	30	100.0	100.0	21	100.0

except for one division that declined to participate. The reason that this division declined was that it was already engaged in additional research projects. Additional schools were prioritized within the remaining divisions to maintain the sample size.

Nearly all the prioritized schools in both provinces agreed to participate. Two schools prioritized for the project were reluctant to participate in one Manitoba division that had agreed to participate. This resulted in the identification of two new school sites within the division for the delivery of the intervention that were Grade 10 to Grade 12 schools. In this division, therefore, *Future to Discover* recruitment took place from the four feeder schools of the intervention delivery sites. The Grade 9 students at these four schools would become the following year's Grade 10 intake at the two high schools identified for delivery of *Future to Discover*.

One consequence of the selection systematically including a small number of schools across a range of districts and divisions is relatively low concentration of project sites in larger urban areas, especially in New Brunswick. Table 3.1 shows the number of high schools and eventual participant numbers involved in both provinces in large urban centres compared with other areas. While 44 per cent of families with children under 18 years of age in New Brunswick live in large urban centres (Fredericton, Moncton, and Saint John), only 22 per cent of the FTD sample comes from these cities. In Manitoba urban centres are represented more proportionately in the sample: 62 per cent of Manitoba families live in larger urban areas (Winnipeg and Brandon) and 57 per cent of the *Future to Discover* sample is located in these areas.

Preparing the Sample Frame and Making Contact

Provincial school records data were used to identify the sample eligible for selection at each school. As shown in figures 3.1 and 3.2, a slightly different intake process was used for both provinces.

Figure 3.1 shows the intake process for Cohort 1. In February 2004 the New Brunswick Department of Education transmitted a file to SRDC that included the contact information of all eligible Grade 9 students at participating *Future to Discover* schools.

Since *Future to Discover* is delivered to parents as well as students and to avoid the risk of "spill over" of information to comparison group members, students in the Cohort 2 eligible population were excluded if they had a sibling who was enrolled in the *Future to Discover* project in 2004 (students in Cohort 1). Furthermore, to minimize the chances of "spill over" and maximize power in the analysis, only a single Grade 9 student from each physical residential address was to be selected (if there was more than one student present at an address, one was randomly selected). The records were processed using a set of criteria that compared address information, names, and telephone numbers to select one student per household. Any students with incorrect or missing address information were not included in the eligible sample.

The file was processed and forwarded to the *Future to Discover* office in New Brunswick and to Statistics Canada, who would be conducting the surveys. Recruitment letters were mailed to all eligible Cohort 1 Grade 9 students and their parents by the *Future to Discover* office. The letters allowed students to opt out of the project.

Figure 3.1: Overview of Recruitment Process in New Brunswick

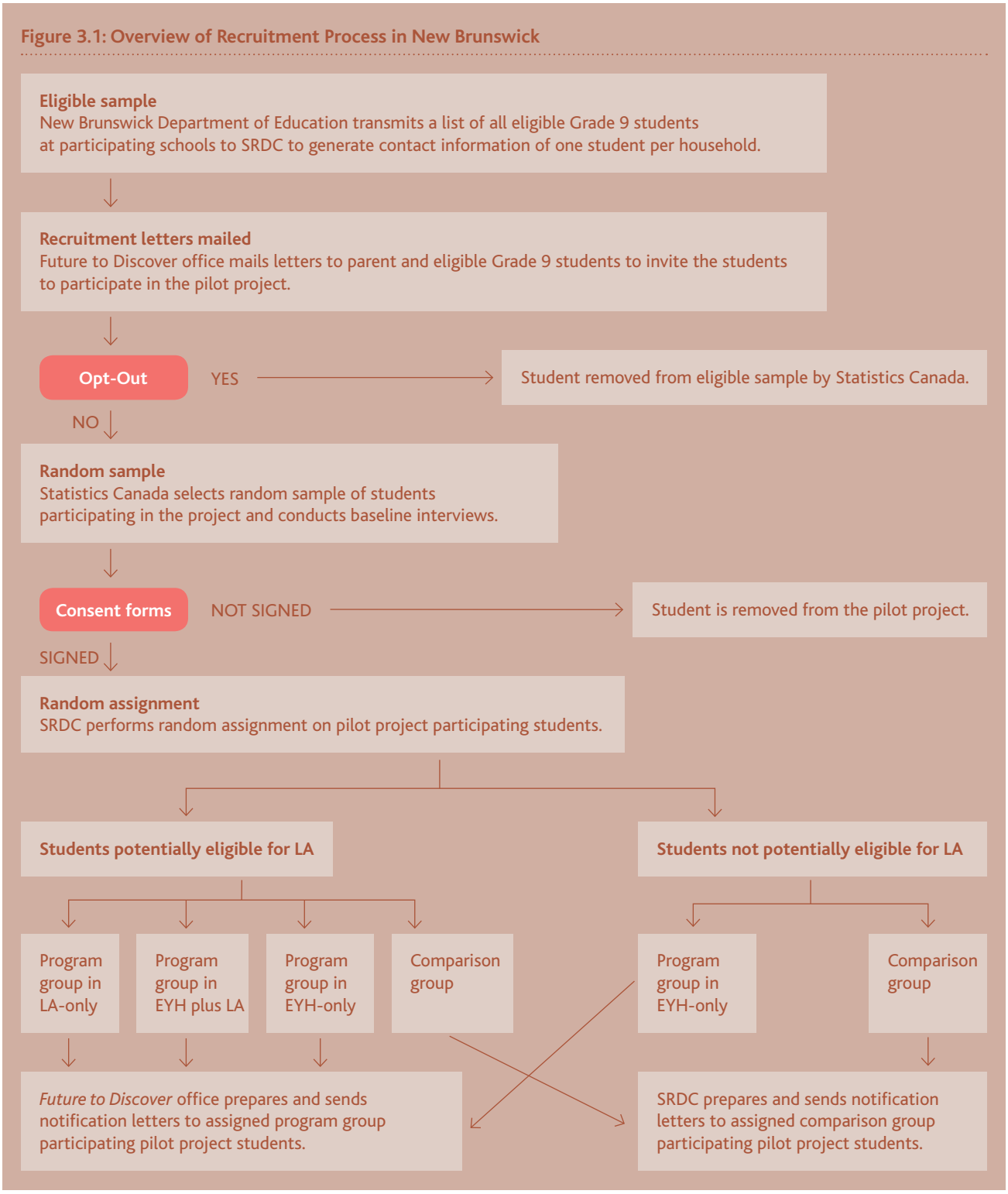
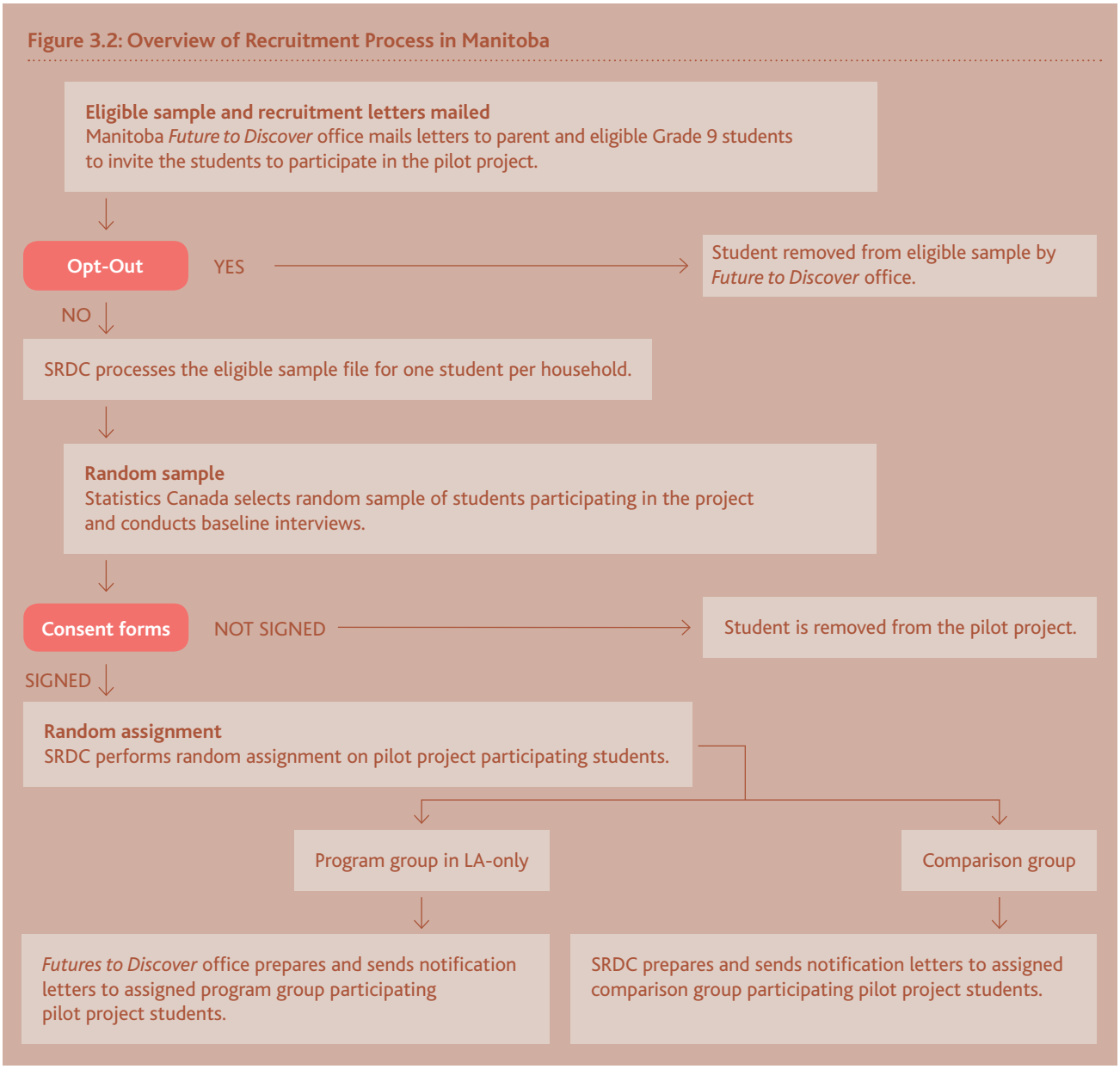


Figure 3.2: Overview of Recruitment Process in Manitoba



By the end of April 2004, those who had decided not to participate in *Future to Discover* were removed from the sample held by Statistics Canada. Statistics Canada selected a random sample of students and identified one of their parents who would complete baseline surveys during in-home interviews. Interviews took place between May and the end of July 2004. Parental and student informed consent were collected at the same time. Statistics Canada processed the baseline surveys and sent the data to the researchers at SRDC. The next step of the process involved random assignment. The researchers randomly assigned students to either a program group or a comparison group. Students in the program groups were sent notification letters by the *Future to Discover* office. These told students which intervention(s) they had been assigned to. SRDC also sent notification letters to those who were assigned to the comparison group.

The process shown in Figure 3.1 was repeated for Cohort 2 beginning in January 2005 with New Brunswick Department of Education transferring the file including the contact information to SRDC. The process ran about a month earlier in the year than in 2004. Thus, Statistics Canada undertook interviews in April through to the end of June 2005 and random assignment notification took place in late July.

Table 3.2: Number of Students at Each Recruitment Step

	Numbers of students			
	Manitoba	New Brunswick		All
	2005	2004	2005	
Initial file of Grade 9 student records at selected schools	3,385	6,057*	6,136**	15,578
Opt-outs per province	46	10	16	72
SRDC selection of unique households for sampling	3,282	5,917	5,347	14,546
File transferred to Statistics Canada (after opt-outs)***	3,282	5,907	5,331	14,520
Random sample of students at each school for Statistics Canada contact	1,748	3,151	2,501	7,400
Data file of completed cases to SRDC	1,044	2,388	1,993	5,425
Additional cases (children in care of the province)	2	3	6	11
Students withdrawing from project****	2	4	1	7
Total number of project participants for random assignment	1,044	2,387	1,998	5,429

Notes: * There were 3,351 anglophone students and 2,706 francophone students.
** There were 3,360 anglophone students and 2,776 francophone students.
*** Opt-out students from Manitoba were excluded before the unique households sampling.
**** Includes only students' withdrawals before baseline analysis.

The recruitment of Manitoba participants began almost one year after the start of recruitment of Cohort 1 *Future to Discover* participants in New Brunswick. The recruitment process in Manitoba was slightly different from New Brunswick. As shown by the intake process shown in Figure 3.2, the *Future to Discover* office first sent recruitment letters to eligible Grade 9 students and their parents to inform them about the pilot project and to allow students to opt-out of the project. By the middle of February 2005, those who had decided not to participate were removed from the sample by the Manitoba *Future to Discover* office. The office then transmitted the sample contact information—representing all Grade 9 students who decided to participate in the project — to SRDC. The processed file was forwarded to Statistics Canada to select a random sample for baseline surveys of students and their parents. Interviews began in April and ran through to the end of June 2005. Statistics Canada sent SRDC baseline data that was used to randomly assign students either to the *Explore Your Horizons* program group or to the comparison group. Students who were assigned to the program group were sent notification letters by the *Future to Discover* office. Those assigned to the comparison group were notified by SRDC.

Table 3.2 shows the number of students at each recruitment stage. In New Brunswick Cohort 1, there were 3,351 student records in the initial anglophone master file. The final eligible students file for the anglophone sector contained 3,261 student records. Hence 90 student records were eliminated in total. Similarly, there were 2,706 student records in the francophone master file. The final eligible students file for the francophone sector contained 2,656 student records. Hence 50 student records were eliminated. In New Brunswick Cohort 2, there were 3,360 student records in the initial anglophone master file. The final eligible students file for the anglophone sector contained 2,890 student records. Hence 470 student records were eliminated in total. Similarly, there were 2,776 student records in the francophone master file. The final eligible students file for the francophone sector contained 2,457 student records. Hence 319 student records were eliminated. In Manitoba there were 3,339 student records in the Manitoba master file. The final eligible students file for Manitoba contained 3,282 student records. Hence 57 student records were eliminated.

The contact information from the final eligible students file was provided to Statistics Canada by SRDC and used to prepare four mailing list files for the *Future to Discover* office in New Brunswick to use to mail recruitment letters in each recruitment year. The lists covered anglophone students, francophone students, anglophone parents, and francophone parents. The letters were to inform the students and parents about the pilot project and to allow students to opt out of the pilot project.

Opt-Outs

The researchers at SRDC and the New Brunswick Department of Education made special arrangements under a clause in the New Brunswick *Protection of Private Information Act* (POPIA) for the researchers to receive students' data. The

information would be used to generate contact information for the *Future to Discover* office to send initial letters to Grade 9 students and their parents in participating schools informing them about the pilot projects. Students were then able to contact the *Future to Discover* office to opt out of the project.

Manitoba Education, Citizenship and Youth and SRDC made a similar arrangement under a clause in the Manitoba *Freedom of Information and Protection of Privacy Act* (FIPPA). The approach in Manitoba, unlike New Brunswick, allowed students to opt out from the project before student data was transferred to the researchers.

The opt-out process allowed students or parents acting on behalf of students who had received the initial letters to call the *Future to Discover* toll-free lines to express their preference to opt out of the pilot project. The *Future to Discover* office staff in both provinces offered additional information in the hope that this might encourage the student to stay in the project. Students were assured about the confidentiality of the information collected and told about the potential benefits of participation in the project. Students were also informed that by opting out they would forfeit the chance to receive any *Future to Discover* interventions.

Students who chose not to take part in the pilot project were asked to provide their name, school, address, and telephone number so that they could be excluded from the eligible project sample. Table 3.2 shows that, respectively, 10 and 16 students from the first and second New Brunswick cohorts were excluded from the eligible pilot project sample. Similarly, 46 students were excluded from the Manitoba eligible project sample. These numbers are quite small—a total of 72—considering the size of the eligible project samples in both provinces—a total of 15,578.

The opt-out process was adopted—in preference to requiring students to opt in—because of the need for a large sample of high school students with a high proportion in the designated group — to support the impact analysis. If students were asked to opt in before they could be contacted for surveys, the *Future to Discover* pilot project response rate was likely to be low and the likelihood of losing important subsections of the desired sample (including those less inclined to opt in to educational initiatives) would have been high.

Setting Up Interviews With the Research Sample

Statistics Canada enrolled over 5,400 eligible Grade 9 students in 30 schools across New Brunswick and 21 schools across Manitoba. To do so, they held the contact details for the final eligible project sample, net of the sample exclusions and opt-outs described above.

Table 3.2 shows the final eligible samples of 5,907, 5,331, and 3,282 for New Brunswick Cohort 1, New Brunswick Cohort 2, and Manitoba respectively.

Statistics Canada randomly sampled 3,151 students for New Brunswick Cohort 1, 2,501 students for New Brunswick Cohort 2 and 1,748 students for Manitoba to contact and arrange interviews for the pilot project. Letters were mailed to each of these 7,400 students and their parents to remind them about the *Future to Discover* pilot project and to inform them that they would be contacted by Statistics Canada. Brochures about the project were also sent simultaneously by the *Future to Discover* offices. These contacts were intended to improve survey response rates. Students who received Statistics Canada letters and the brochures were called by Statistics Canada within two months of the mailings.

Statistics Canada called each student's telephone number to confirm the identity of the student and parent or legal guardian and to set up an appointment time for an in-home visit at a time when both student and (at least one) parent would be home to complete the baseline survey. Statistics Canada also confirmed the student was in Grade 9 and enrolled in a participating school and that the student was either a Canadian citizen or landed immigrant.[45] In addition, Statistics Canada verified that the adult contacted for *Future to Discover* pilot project had legal signing authority for the student and could sign the Informed Consent Form.[46]

Since the Grade 9 students participating in the project were minors, it was necessary to obtain the consent of the student jointly with the consent of the parent or legal guardian. A face-to-face meeting between the interviewer, the student, and his or her parent or legal guardian was judged the most effective way to ensure that the consent was truly informed. Students and their parents could ask questions about the research. In addition, interviewers could ask questions of the student during the meeting to ensure that the student understood the implications of participating in the project. Either the home or the "preferred location" was expected to present a less threatening atmosphere where parent and child could consult each other before agreeing to participate in the pilot project. Given these considerations and the need to collect accurate income data from tax records, the project adopted in-home interviews (or at another location the family preferred) to collect baseline survey data and informed consent simultaneously. Thus, the recruitment screen, the collection of baseline data, and the informed consent were all completed in the same visit with a single interviewer. A typical visit of this sort is described in Table 3.3.

45 This was a requirement for receipt of Foundation bursaries, including Learning Accounts.

46 Birth parents, adoptive parents, and legal guardians all have legal signing authority for their children. Step-parents do not have this authority unless they have legally adopted the child, and accordingly there was a screening question at the beginning of the survey.

Table 3.3: A Typical *Future to Discover* Baseline Interview Scenario

1	The Statistics Canada interviewer calls the student and adult contact to verify the identity of the student and whether parent or legal guardian has legal signing authority. Also, the interviewer will verify that the student is enrolled at a school participating in the pilot project and is a Canadian citizen or permanent resident.
2	The Statistics Canada interviewer will set up an appointment time for an in-home visit at a time convenient for student and at least one parent or legal guardian. The interviewer will request that the parent or legal guardian to make available the amount on line 150 of their tax return during the visit.
3	At the in-home visit the Statistics Canada interviewer will ask the student to complete the student self complete survey while he or she conducts the parental interview with the parent. Answers from the parental survey are used to determine whether a participant meets the project's lower-income criteria. In New Brunswick those who do are potentially eligible for *Learning Accounts*. The survey application determines which student and parental consent form to issue.
4	The Statistics Canada interviewer completes the process by going through the informed consent process with both student and parent.

Table 3.4: Higher- and Lower-Income Thresholds for *Learning Accounts* Eligibility

New Brunswick	
Census 2001 median income estimate for families with children 6–17 years of age	$47,705
Average number of members of this family type	3.6
Equivalent income for 2-person family	$35,557
Equivalent income for 3-person family	$43,549
Equivalent income for 4-person family	$50,285
Equivalent income for 5-person family	$56,221
FTD Project lower-income cut-off levels	
1 parent 1 child	$40,000
1 parent 2 children	$45,000
1 parent 3+ children	$55,000
2 parents 1 child	$45,000
2 parents 2 children	$55,000
2 parents 3+ children	$60,000

In-home interviews may also have helped the achievement of additional objectives for recruitment, such as helping to secure the participation of the designated group. Lower-income families may agree to in-home interviews but may be more likely to respond negatively to invitations that require more active participation to secure consent (like attending an information session at a specified venue) with no guaranteed return. Furthermore, the pilot project was better able to screen potential participants for low-income family status as interviewers could request verification of information from income tax forms more readily in the home than elsewhere. The ability to determine each family's study status with respect to income during the baseline interview was important in New Brunswick because issuing the correct consent form relied upon it. The consent form that included the *Learning Accounts* intervention option could be issued only to families with verified lower incomes. The interviewer used computer-assisted personal interviewing technology to determine whether the total income from co-resident parents—given the family's size—qualified the family for the *Learning Accounts*-eligible consent form or the consent form that included only an offer of *Explore Your Horizons*. The threshold family income levels used to determine these amounts are based on median income levels from the 2001 Census and are shown in Table 3.4.

Baseline Interviews

The evaluation of the *Future to Discover* pilot project includes a series of surveys of student participants and their parents. The first of these surveys was known as the baseline survey and asked student participants and their parents about their background, attitudes to education and their school, work, and volunteer experiences. Among the randomly sampled students for the survey by Statistics Canada, students in New Brunswick were more likely to participate and complete the survey than students in Manitoba. The proportion of the random sample of students who were to be contacted by Statistics Canada who actually agreed to participate can be calculated from the data in Table 3.2: 78 per cent and 60 per cent completed the baseline survey and consent form in New Brunswick and Manitoba, respectively. Some of the data from the baseline survey is presented in the following chapter.

The *Future to Discover* pilot project baseline survey was largely based on the Youth in Transition Study (YITS) for 15-year-olds implemented in 2000 by Statistics Canada. The baseline survey had two parts: a student self-completed survey and a parental survey administered using computer-assisted personal interviewing (see Appendix 2 for more details on the baseline survey).

The major sections of the parental baseline survey were as follows:

- Introduction and household, which confirmed administrative records and basic family information
- Child school experience, in which the parent is asked about the child's school record, disciplinary problems, their aspirations for the child's post-secondary education, and the practical steps that they have taken to achieve those aspirations
- Demographics
- Child health status
- Education of parent and spouse
- Employment of parent and spouse
- Income of parent and spouse
- Eligibility determination and transition to the informed consent process

The participating student self-completion survey in *Future to Discover* is virtually unchanged from the YITS survey for 15-year-olds. It asks about the following:

- Child school experience
- Grades and marks
- Teams and clubs
- Relations with others
- Events (behavioural problems)
- Volunteer activities
- Work
- Feelings (self-worth)
- Use of various skills such as working with money and preparing resumés
- Ideas and aspirations for post-secondary education and careers as well as steps taken to realize those aspirations

Great care was taken over the study's informed consent and permissions requested from parents and students, since these were critical parts of recruitment for the pilot project.

Informed Consent

The *Future to Discover* pilot project required a voluntary and informed consent on the part of all participants in the research, including a guarantee of the right to withdraw from the research project. All potential participants were provided with comprehensive information about the research—in both written materials and oral summary—to help them decide whether or not to participate in the pilot project.

Participation in the research project was voluntary. In recognition of and respect for the developing rights of minors, written consents were obtained from both the student and the parent or legal guardian before the student could join the pilot project. This was to ensure that both were fully informed of the nature of the research project for which they were volunteering.

In signing the informed consent, students and parents acknowledged the organizations that would collect and access their data for the purposes of undertaking the pilot project and the uses to which the data would be put. The informed consent also informed students and parents that any subsequent offer to participate in *Explore Your Horizons* or *Learning Accounts* interventions would be made at random. The consent form indicated the chances the

participant had of being assigned to *Explore Your Horizons* or *Learning Accounts* groups or to the comparison group that would not receive any additional intervention.

The informed consent form was drafted in age-appropriate language and administered by a Statistics Canada interviewer in a meeting with the minor and parent where the interviewer read through the informed consent document. There were two kinds of informed consent used in the *Future to Discover* pilot project. One offered people a place in the *Explore your Horizons* program or a comparison group. This was the option available for all Manitoba students (since *Learning Accounts* was not an intervention under test in Manitoba) and higher-income New Brunswick students, since they were not eligible for the *Learning Accounts* intervention.

New Brunswick's sample was partitioned into higher-income and lower-income segments because income had a bearing on the chances of random assignment. A rigid income test was administered to determine who was in the lower-income group, which required parents who had filed a tax return in the previous year to provide an amount from their most recent tax filing in order to determine eligibility for *Learning Accounts*. Those found eligible signed a consent and were given roughly equal chances of assignment to one of four options:

- *Explore your Horizons* only,
- *Explore your Horizons* and *Learning Accounts* together,
- *Learning Accounts* only, or
- the comparison group.

Students were considered part of the higher-income sample and were not offered the chance of *Learning Accounts* if income was determined higher than the thresholds in Table 3.4 or if income information was incomplete or if it was not provided by the parent. The informed consent for those found ineligible for *Learning Accounts* offered participants a chance of *Explore your Horizons* only or a place in the comparison group.

Similar information was asked of the parents of students eligible for the Manitoba *Future to Discover* pilot project, but parents did not have to engage in the rigid income test for the chance of a Learning Account. Hence, income information was more frequently self-reported (as is more common in social surveys). The Manitoba sample was not partitioned by income, because income had no bearing on the chances of random assignment.

Participants' signatures on the informed consent form allowed Statistics Canada to transfer their survey data files and inform consent documents securely to SRDC for the duration of the project.

RANDOM ASSIGNMENT

The random assignment for *Future to Discover* was undertaken by SRDC using a computer program. The assignments were applied to each school as a group to ensure that school-based workshop sizes (offering 25 to 32 places per school was the aim) did not fluctuate by chance between sites. The actual ratios for the assignment were not the same for both provinces or for each experimental group

or linguistic sector. Instead they were set to maximize the opportunities to pool the samples from both cohorts for analysis of impacts while respecting operational objectives.

The random assignment process adopted for *Future to Discover* in New Brunswick was actually one of the most complex applied in a Canadian demonstration project. The assignment had to serve several purposes simultaneously:

- To respect the fixed assignment fractions that were promised in the informed consent forms that participants and their parents had signed.
- To assign students to interventions delivered to groups at the school level, where having program groups that were too large or too small would interfere with delivery of the interventions. *Explore Your Horizons* is delivered in workshops, akin to school classes, in which staff-to-student ratios and peer group composition may represent important features of the intervention. Thus, random assignment had to keep *Explore Your Horizons* group sizes comparable and maintain similar ratios of lower- to higher-income students in classes between years.
- To assign students to a limited number of Learning Account "slots." Approximately 1,000 such accounts could be promised over two years.
- To provide an analytically useful sample, once students in different groups were pooled, in order to permit analyses of provincial and linguistic sector specific impacts capable of detecting policy-relevant impacts.
- To allow straightforward pooling of New Brunswick students in analysis of each of the different experimental groups across the two cohorts, avoiding the need to apply complex survey weights to each cohort.
- To avoid exceeding budgetary allowances for follow up surveys and tracking contacts.

The project met these requirements through a number of approaches. The second and last two requirements were met in New Brunswick in part through assignments to "no follow-up survey" groups. This focused the collection of follow-up survey data for impact analysis on groups of sufficient size for analysis but in the same fixed proportions from cohorts 1 and 2. If the number of participants necessarily assigned to a group for operational reasons would be in excess of this fixed proportion, then participants in this group were randomly assigned not to receive follow-up surveys. This applied to higher-income comparison group members in both cohorts and a smaller number of participants in Cohort 2.

The proportion of each New Brunswick school's Grade 9 population to be randomly sampled by Statistics Canada was also very carefully allocated, based on school-level YITS data. This varied the number of students approached for recruitment at each school in proportion to the chances of those students being found *Learning Accounts*-eligible. In addition, small adjustments in the actual assignment ratios between groups were possible while respecting the promises made in the informed consent. For example, a "one-in-four chance" of assignment in the informed consent might actually have been applied in the program as 0.27.[47] Finally, the project team took stock between the survey waves to determine whether the overall sample size for the second New Brunswick cohort needed to be smaller or larger than the first cohort, given response rates and resulting assignment group sizes.

Students participating in the pilot project in Manitoba were subject to a much simpler random assignment. There were small adjustments to the assignment ratio, nonetheless, due to a lower response rate than expected. To ensure that the resulting program group sizes at each school were roughly in line with those assigned in New Brunswick, the final assignment ratio was modified from 50:50. The ratio implemented was 55 per cent to the program group offered *Explore Your Horizons* and 45 per cent to the comparison group.

In New Brunswick the ratios that were applied were more complicated. The *Learning Accounts*-eligible students were divided into four groups in Cohort 1 and five groups in Cohort 2. The additional group in Cohort 2 was the "no follow-up survey" *Explore Your Horizons* group, generated for operational and survey budget reasons. This additional *Explore Your Horizons* group "tops up" the workshop attendance.[48]

It is important to note that in later impact analysis, the only valid comparisons for *Learning Accounts*-eligible experimental groups are the other *Learning Accounts*-eligible experimental groups. Pooling across lower- and higher-income students for impact analysis could only be done following re-weighting of the sample in the different groups.

Table 3.5 divides the resulting sample by cohort, language, income threshold, and random assignment group. For impact analysis, the researchers intend to pool across New Brunswick cohorts but not across the language or *Learning Accounts* eligibility groups. For example, students from anglophone and francophone schools are not intended to be pooled in the impact analysis. The assignment groups are shown by rows in Table 3.5, the impact analysis "study groups" are the column headings.

47 The ratios, once decided, applied across the province for each cohort and linguistic sector so that equity was preserved between students from different schools who had signed the same consent form.

48 Although administrative data will still be collected for these students, the absence of survey data will mean they are absent from a number of analyses. The assignment ratio avoided the need for complex weights in later analyses using pooled-cohort survey data because the ratio between the four "follow-up survey" groups is maintained across both cohorts. Weights will still be required if the impacts are analyzed for the full sample using administrative data.

Table 3.5: Random Assignment of Experimental Groups

	Number of students				
	Manitoba All families	New Brunswick			
		Francophone		Anglophone	
		Lower-income families (Fr-LI)	Higher-income families (Fr-HI)	Lower-income families (En-LI)	Higher-income families (En-HI)
Total number of project participants for random assignment	1,044	1,145	1,094	1,153	993
By cohort					
2004	0	614	589	646	538
2005	1,044	531	505	507	455
Cohort 1 (2004) random assignment follow-up survey sample					
Explore Your Horizons (EYH) group	0	125	147	129	149
Learning Accounts (LA) group	0	158	0	168	0
Explore Your Horizons and *Learning Accounts* (EYH/LA) group	0	156	0	168	0
Comparison group	0	175	208	181	203
Additional (no follow-up survey) sample					
Explore Your Horizons (EYH) group	0	0	0	0	0
Comparison group	0	0	234	0	186
Cohort 2 (2005) random assignment follow-up survey sample					
Explore Your Horizons (EYH) group	575	85	158	93	156
Learning Accounts (LA) group	0	107	0	116	0
Explore Your Horizons and *Learning Accounts* (EYH/LA) group	0	107	0	117	0
Comparison group	469	117	222	131	215
Additional (no follow-up survey) sample					
Explore Your Horizons (EYH) group	0	115	0	50	0
Comparison group	0	0	125	0	84
Summary of random assignment for follow-up survey sample					
Explore Your Horizons (EYH) group	575	210	305	222	305
Learning Accounts (LA) group	0	265	0	284	0
Explore Your Horizons and *Learning Accounts* (EYH/LA) group	0	263	0	285	0
Comparison group	469	292	430	312	418
Total follow-up survey sample	1,044	1,030	735	1,103	723
Total additional (no follow-up survey) sample	0	115	359	50	270
Total number of project participants randomly assigned	1,044	1,145	1,094	1,153	993
Includes additional cases (children in care of the province)	2	5	0	4	0
Sample size for analysis (less additional cases) (total = 5,418)	1,042	1,140	1,094	1,149	993

The different sizes of the two New Brunswick cohorts are seen in Table 3.5. Response rates for Cohort 1 in New Brunswick were higher than anticipated (76 per cent). In 2005 SRDC anticipated a similar response rate for Cohort 2, which would have yielded too large a sample overall, given the fixed number of *Learning Accounts* that could be offered. Statistics Canada was thus instructed to sample a smaller fraction of available students for Cohort 2. As expected, response rates were high again for Cohort 2 (80 per cent). Nonetheless, because of the lower sampling fractions used by Statistics Canada, Cohort 2 contributes somewhat less than half the participants when the sample is pooled in the analysis in Chapter 4 as well as in later analyses.

Notification to Participants

All students in the *Future to Discover* pilot project received notification letters to inform them of their group assignment. The mailing of the letters was coordinated such that students in each recruitment cohort received their notification letters at about the same time. The letter reminded the project participants of their role as a program or comparison group member. Those in the comparison group were reminded of their important status in the pilot project and assured that they would still be eligible for all existing school and educational services, as before. The letters offered participants the opportunity to call the *Future to Discover* offices in the provinces and the researchers at SRDC for questions regarding their participation in the project.

SRDC transferred the contact details of those in the program groups to the relevant provincial coordinator. These contact details were used to initiate intervention activities (see chapters 5 and 6).

Data Sources Used in this Report

This report is focused on the first year of implementation following recruitment for each cohort of students and relies on baseline survey data, the Project Management Information System (PMIS), *Future to Discover* Web site data, and implementation research fieldwork. The Web site data covers the period starting from the Web site launch in November 2004 to June 2005 for New Brunswick Cohort 1 and from September 2005 to June 2006 for New Brunswick Cohort 2 and Manitoba. The Web site usage among *Explore Your Horizons* participants (including those in the combined *Explore Your Horizons* plus *Learning Accounts* group) will be examined. Only students who were offered the *Explore Your Horizons* intervention have access to the Web site. The PMIS data on the other hand, document the workshop sessions and other activities of program participants from September to July of each year following recruitment. Student participation in the intervention over the first year is examined in chapters 5 through 7. The following chapter first presents baseline survey data on the characteristics of the pilot project sample. The project's planned later analyses are described in Chapter 8 and the additional data sources that will be required are described in Appendix 2.

4

Baseline Characteristics of the Research Sample

Introduction

During the recruitment of *Future to Discover* (FTD) participants, parents and students were asked to respond to a survey that serves as a baseline for understanding the sample exposed to *Future to Discover*'s interventions. This chapter presents some characteristics of the 5,418 sample members recruited.[49]

49 There were 5,429 students recruited for Future to Discover. The analysis in this chapter excludes 11 students who were children in care of the province at the time of selection, and for whom full survey data was not collected.

CHAPTER SUMMARY

- **The project recruited students with demographic and socio-economic characteristics that might be expected for a sample of Grade 9 students from the participating provinces.** Roughly equal numbers of students—between 1,000 and 1,150—were recruited for each of the "program populations" of interest to the project: New Brunswick francophone *Learning Accounts*-eligible students (with income below the provincial median), New Brunswick francophone *Learning Accounts*-ineligible students, New Brunswick anglophone *Learning Accounts*-eligible students (with income below the provincial median), New Brunswick anglophone *Learning Accounts*-ineligible students, and Manitoba students.
- **The project recruited students in the project's "designated group" with co-resident parents reporting below median income and neither parent holding a certificate or diploma from a post-secondary program lasting two years or longer.** In New Brunswick roughly 8 in 10 of the *Learning Accounts*-eligible groups met this definition and 1 in 10 of the *Learning Accounts*-ineligible groups did so. Three in ten Manitoba students met this definition.
- **The baseline survey collected data on students' high school engagement and educational aspirations that identified useful subgroups for later analyses.** Generally, students appeared interested in pursuing post-secondary education. The parents of project participants were strongly in favour of participants going on to attend post-secondary education and the participants knew this. Three in every four participants felt they were at a point in their lives when it was important to decide about their future career.
- **Random assignment worked to create statistically equivalent groups.** The differences between the experimental groups on nearly all observed characteristics were statistically indistinguishable from zero. Some isolated chance differences did arise. Although these do not introduce bias, future impact analyses will likely use regression adjustment to improve the precision of impact estimates in the presence of small differences at baseline between experimental groups.

AIMS OF THE CHAPTER

This chapter examines respondent characteristics in order to provide the context for the experimental test of *Future to Discover*. It seeks to answer two sets of questions:

- Upon whom have the interventions *Explore Your Horizons* and *Learning Accounts* been tested? Has the project recruited the population of interest for whom the principal research questions about the effectiveness of *Future to Discover*'s two strategies (*Explore Your Horizons* and *Learning Accounts*) should be answered?

- Did the random assignment experimental design create the statistically equivalent groups necessary for later analysis of the impacts of Future to Discover's two strategies?

Answering the first question is not straightforward, because there are different populations of interest for *Future to Discover*: the "designated group" and the program population. The "designated group" is the same for both strategies but the program population differs. For *Learning Accounts*, the program population is comprised of Grade 9 students from lower-income families, while the program population for *Explore Your Horizons* is all Grade 9 students.

The pilot project will be examining the behavioural changes of program participants over time, and especially those from the "designated group": students who currently do not go on to post-secondary education whose behaviour must be changed by *Future to Discover* for the intervention to have an impact on post-secondary access. These students can only be identified in advance of observing their actual behaviour in terms of characteristics that make them statistically less likely to pursue post-secondary education, based on historical information. As such, the group is defined as students from families with below provincial median income whose parents have not secured a certificate or diploma from a post-secondary program lasting two years or more. It is this "low-income low-education" (LILE) group of Canadians that research typically pinpoints as least likely to access post-secondary education (Knighton & Mirza, 2002). For *Future to Discover* to increase access to post-secondary education, it should change the behaviour of this "designated group" of students who do not access PSE at present. Thus, by implication, the project recruitment made every effort to secure sufficient sample size to test the strategy on the "designated group." The distribution of the sample across "designated group" and other characteristics comprises the first four sections of this chapter.

Answering the second question is straightforward. Because the recruited sample was assigned to program and comparison groups using a computer program, the groups assigned this way should be statistically identical. Statistical tests—identical to those that will be applied later in the project to determine the presence of impacts on key outcomes—can be used now to assess whether the assignment generated groups that were significantly different on observed characteristics. For the most part, the assignment created experimental groups that did not differ significantly, and the results are summarized in the final section of this chapter.

THE ROLE OF BASELINE DATA

The FTD sample was drawn to maximize the effectiveness of the test of FTD.[50] It was not drawn in order to represent all students who might be subject to such intervention(s) nor to represent particular demographic groups (such as "all Grade 9 students in Manitoba"). Importantly, therefore, the sample characteristics are not presented here with the intention of drawing any conclusions about the educational prospects of the population of Grade 9 students in either province or to identify a particular policy program or solution beyond the interventions under test.[51]

The most important roles for the baseline survey were as follows:

- To describe the sample involved in each experiment.
- To identify subgroups of the sample for whom separate impact analyses can later be conducted (such as gender, income, or ethnic groups) to better understand the different effects (including zero or negative effects) of interventions.
- To create covariates for the impact analyses. These are statistical controls that can be used in regression adjustment to improve the precision of impact estimates (discussed in the final section of this chapter).

In presenting data from the baseline survey, the chapter does provide interesting background information and context against which later impact analyses can be compared. The baseline characteristics describe a population of 14- to 16-year-olds chosen because they are likely to change perspectives and outlook rapidly over a short period of time. Therefore, comparison of later findings to the tables below will offer some insight into the magnitude of changes over time for this cohort of students, which provides a context for assessing the magnitude of the impacts attributable to the interventions.

Interpreting the Tables

The tables in each section of this chapter adopt a standardized format. Student characteristics are presented under five broad population or "study group" headings: Manitoba, New Brunswick francophone *Learning Accounts* (LA)-eligible, New Brunswick francophone LA-ineligible, New Brunswick anglophone LA-eligible, and New Brunswick anglophone LA-ineligible. Each group includes approximately 1,000 project participants. These groups require some explanation.

- **Manitoba**—These data cover all students recruited in 2005 in Manitoba, regardless of income level or linguistic group. The characteristics are presented for this the *Future to Discover* program population,[52] because this is the only program population in Manitoba.
- **New Brunswick francophone *Learning Accounts* (LA)-eligible**—These data cover students from schools in New Brunswick's francophone sector whose parents provided evidence of family income below the provincial median at the time of recruitment in 2004 and 2005. These students represent a program population for *Learning Accounts* and for the combined *Explore Your Horizons* plus *Learning Accounts* interventions. As such, the Social Research and Demonstration Corporation (SRDC) assigned all students meeting this definition into the four program groups in roughly equal proportions.
- **New Brunswick francophone *Learning Accounts* (LA)-ineligible**—These data cover students from schools in New Brunswick's francophone sector whose parents did not provide evidence of family income below the provincial median at the time of recruitment in 2004 and 2005. They either provided proof of higher-than-median income or insufficient evidence of the family's income. These participants represent all New Brunswick francophone students not eligible for *Learning Accounts*; as such they were assigned either to *Explore Your Horizons* or a comparison group. They will be subject to a different experimental analysis in later reports, distinct from the analysis of *Learning Accounts*-eligible students, and so their characteristics are presented separately.
- **New Brunswick anglophone *Learning Accounts* (LA)-eligible**—These data cover students from schools in New Brunswick's anglophone sector whose parents provided evidence of family income below the provincial median at the time of recruitment in 2004 and 2005. These students represent a program population for *Learning Accounts*, similar to the equivalent francophone group (above). As such, SRDC assigned all students meeting this definition into the four program groups in roughly equal proportions.
- **New Brunswick anglophone *Learning Accounts* (LA)-ineligible**—These data cover students from schools in New Brunswick's anglophone sector whose parents did not provide evidence of family income below the provincial median at the time of recruitment in 2004 and 2005. They either provided proof of higher-than-median income or insufficient evidence of the family's income and are included separately for the same reason as the equivalent francophone group (above).

50 As described in the preceding chapters, the project very deliberately attempted to recruit students most likely to benefit from Future to Discover, and so the resulting sample is not representative of all students

51 This chapter does not report findings, and so when the proportions of different study groups with particular characteristics are compared, no attempt is made to report the statistical significance of the comparison. With group sample sizes of 1,000 or so, differences in proportions in the order of ±3.7 percentage points are statically significant at the 95 per cent confidence level.

52 *Future to Discover* is the name applied to the *Explore Your Horizons* program in Manitoba

There is no separation of program and comparison groups in most of the tables at this stage of the project's reporting. Because the baseline data were collected before random assignment, and because the random allocation creates identical groups, any division on assignment status will create almost duplicate columns of information. In later reports where the characteristics being reported are outcomes, and in the final section of this chapter reviewing the success of random assignment, the experimental groupings will be used.

PARTICIPANT CHARACTERISTICS

Student and Household Profiles

The key objective of this section is to show how well the project recruited students with appropriate demographic and socio-economic characteristics (representing gender and income groups as expected). It provides evidence that students were recruited from low-income families, one of the two characteristics of the "designated group."

Some key characteristics of the project participants are shown in Table 4.1. These reveal few differences from what might be expected from a sample of Grade 9 students. They are typically either 14 or 15 years old and half are male. The students in the lower-income, *Learning Accounts*-eligible groups are somewhat older, and this may reflect a higher proportion retaking an earlier grade-year. Parental reports indicate a low incidence of disability or impairments among project participants at baseline. Typically, the participants were described as "white." Aboriginal students represented the only other ethnic group of any size, especially in Manitoba. The low incidence of other ethnic minorities may reflect the absence of major metropolitan centres in the sample, other than Winnipeg.

Parental characteristics also presented few surprises (Table 4.2). The parent who signed the student's informed consent was typically female and most of these signing parents were employed. This was less often the case in households where the student was *Learning Accounts*-eligible, probably reflecting the influence that employment income has on *Learning Accounts* eligibility. In this context,

Table 4.1: Demographic Characteristics of Project Participants

	Column percentages				
	Manitoba	New Brunswick			
	All	Fr-LA-eligible	Fr-LA-ineligible	En-LA-eligible	En-LA-ineligible
Male	50.5	46.9	48.5	46.2	51.3
Female	49.5	53.1	51.5	53.8	48.7
14 years or younger	58.0	52.9	59.0	50.8	57.6
15 years	40.0	41.1	38.7	42.7	40.1
16+ years	2.0	6.0	2.4	6.4	2.3
has difficulty hearing, seeing, communicating, learning, walking, climbing stairs, bending, or similar activities...(parent report)					
...sometimes	5.3	3.3	3.1	5.7	4.4
...often	3.7	3.7	2.3	4.6	4.0
...never	91.1	93.0	94.6	89.6	91.5
Cultural or racial group (parent report, ever mentions)†					
White	88.2	99.0	99.4	95.0	98.2
Chinese	0.7	+++	+++	+++	+++
South Asian	1.3	+++	+++	+++	+++
Black	1.4	0.5	+++	0.7	+++
Filipino	1.0	0.0	0.0	+++	+++
Latin American	1.0	0.0	0.0	+++	+++
Southeast Asia	0.7	+++	+++	+++	+++
Arab	+++	+++	+++	+++	+++
West Asian	+++	0.0	0.0	0.0	0.0
Japanese	+++	+++	+++	0.0	0.0
Korean	+++	+++	+++	+++	+++
Aboriginal	15.5	1.8	1.0	7.4	2.5
Another group	0.9	+++	1.4	+++	+++
Sample size (total = 5,418)	1,042	1,140	1,094	1,149	993

Notes: +++Results are based on sample sizes that are too small for publication (less than five persons) or that may reveal small sample sizes by subtraction.
† Percentages sum to more than 100.0 because more than one cultural or racial group could be reported per participant.

it is important to note that there were many more single parents and younger parents—under 40 years of age—among the *Learning Accounts*-eligible sample.

There are three income classifications in Table 4.2. This is because the recruitment interviews included a calculation based on the income information parents provided to determine *Learning Accounts* eligibility in New Brunswick. Parents and students received different informed consent forms (mentioning or not mentioning *Learning Accounts*) depending on this calculation. The calculation also took place in Manitoba, although the outcome had no bearing on *Learning Accounts* eligibility there.

The income data used to determine the "family income project category" in the table is based on parents' reports of the amount on Line 150 of their income tax return for the previous year. The calculation used parental self-report of income for the previous year (rather than the tax return amount) *only* when such tax returns were not filed. The category is either "higher" or "lower" depending on whether this report of income was above or below the *Learning Accounts* threshold for a family of the given size. Parents who refused to provide the amount from their tax return are classified as "higher income" (above the *Learning Accounts* threshold), because they are *Learning Accounts* ineligible. In New Brunswick this "project category" status uniformly distinguishes *Learning Accounts*-eligible from

Table 4.2 Characteristics of Parent(s) of Project Participants

	Column percentages				
	Manitoba	New Brunswick			
	All	Fr-LA-eligible	Fr-LA-ineligible	En-LA-eligible	En-LA-ineligible
Currently in paid work (signing parent)	86.4	66.2	90.6	69.2	85.5
Sex (signing parent)					
Male	20.4	16.6	21.9	15.6	24.1
Female	79.7	83.4	78.1	84.4	75.9
Age (signing parent)					
Under 40 years	25.7	38.1	21.2	43.6	24.1
40–49 years	63.4	55.3	71.7	49.2	66.9
50+ years	11.1	6.6	7.1	7.3	9.1
Sex of spouse/partner of signing parent					
Male	63.4	52.7	72.2	51.9	70.5
Female	18.1	12.2	20.5	11.8	21.8
No spouse/partner	18.4	35.1	7.3	36.3	7.7
Age of spouse/partner of signing parent					
Under 40 years	14.4	15.4	13.8	20.5	17.0
40–49 years	53.7	41.8	68.8	33.8	63.1
50+ years	13.5	7.7	10.1	9.5	12.2
No spouse/partner	18.4	35.1	7.3	36.3	7.7
Total family income by category					
less than 20K	8.0	28.3	1.7	32.0	1.2
20K less than 40K	15.3	42.5	1.2	40.9	2.3
40K less than 60K	21.8	28.9	20.4	26.8	17.0
60K less than 80K	21.2	+++	34.1	+++	37.6
80K or more	33.7	+++	42.6	+++	41.9
Family income project category					
Lower income	37.2	100.0	0.0	100.0	0.0
Higher income	62.8	0.0	100.0	0.0	100.0
Total family income category					
Lower income	41.6	99.6	14.3	+++	12.9
Higher income	58.4	0.4	85.8	+++	87.1
Sample size (total = 5,418)	1,042	1,140	1,094	1,149	993

Notes: +++Results are based on sample sizes that are too small for publication (less than five persons) or that may reveal small sample sizes by subtraction.

Table 4.3: Number of Moves Since Child Was Born

	Column percentages				
	Manitoba	New Brunswick			
	All	Fr-LA-eligible	Fr-LA-ineligible	En-LA-eligible	En-LA-ineligible
None	27.3	35.9	39.4	23.8	33.1
Mean (including zeros)	2.2	2.2	1.5	2.8	2.0
Standard deviation of mean	(2.3)	(3.1)	(1.9)	(3.3)	(2.4)
Sample size (total = 5,411)	1,038	1,140	1,094	1,146	993

Note: Total sample size is less than 5,418 due to non-response (including refusals and "don't know" replies).

Learning Accounts-ineligible families. In Manitoba 37 per cent of families had characteristics (based on reported Line 150 income) that would have placed them in the *Learning Accounts*-eligible group had they been in New Brunswick.

Income data was also collected sequentially by each family income source, to generate estimates of family income for those not providing tax return information. When such sequential reporting was also unsuccessful, such as when parents could not or did not want to provide a precise amount, parents were asked to provide income within categories. Taken together with the tax return information, income reporting was very high in this study. Only 68 families (1 per cent) did not report a family income level.

Using these more complete income data, family income is broken down in the second half of the table under the heading "Total family income by category." Three in ten *Learning Accounts*-eligible families had pre-tax family incomes below $20,000. The final pair of rows in Table 4.2 indicates the families' status on total family income against *Learning Accounts* thresholds once all reported income has been taken into account. Comparison with the "project category" status reveals that roughly 13 to 14 per cent of *Learning Accounts* ineligible families would have been eligible had they actually reported Line 150 income that matched their self-reported income level. In Manitoba about 42 per cent of families (based on all reported income) that would have placed them in the *Learning Accounts*-eligible group had they been in New Brunswick.

Because the "total family income" figure covers more families than the "project category," this definition of income is used to identify the proportion of participants falling within the project's "designated group" later in the chapter.

Families reported somewhat different levels of residential mobility (Table 4.3). The most mobile were *Learning Accounts*-eligible students from anglophone schools. Four in every ten families ineligible for *Learning Accounts* in the New Brunswick francophone sector had stayed in the same home since the project participant was born.

In summary, the project recruited students who matched the expected profile for Grade 9 students in the participating provinces. Students were usually 14 or 15 years old, most were white, and half were male. There were relatively few aboriginal students in New Brunswick. Aboriginal students represented one sixth of the Manitoba sample. Nearly all families provided income data and these data show that the project was successful in recruiting students whose parents have incomes below the provincial median. In fact more than half the total sample have this characteristic of the project's "designated group."

Educational Characteristics of Parents

The purpose of this section is to show that the project recruited students who had the other characteristic of the "designated group": co-resident parents who had not achieved a certificate or diploma from post-secondary education.

Parents were asked whether they or their partners had completed the requirements for a high school diploma or its equivalent and also the "highest" level of education completed.[53] If parents reported a certificate or diploma that was not a university bachelor's degree or higher, they were asked to confirm whether their diploma or certificate required two or more years of full-time classroom instruction. The results appear in Table 4.4 and are combined with family income to identify designated group members in Table 4.5.

There was some variation in male parental education level across families. A third of *Learning Accounts*-eligible participants in the New Brunswick francophone sector had no male parent residing with them. For those who had a co-resident male parent, half held less than a high school diploma. Just one fifth of such students lived with a male parent with some post-secondary experience and less than one in fifty lived with a male parent with a university degree. A similar story prevailed for *Learning Accounts*-eligible students in the anglophone sector, except that rather more of co-resident parents held at least a high school diploma. One in thirty lived with a male parent with a university degree. By contrast, 94 per cent of participants in *Learning Accounts* ineligible families in both sectors had a co-resident male parent. Half lived with a male parent with post-secondary experience and nearly one in five lived

53 The Youth in Transition Survey questions used in the FTD baseline survey were asked of the signing parent: "What is the highest grade of elementary or high school you have ever completed?"; "What is the highest level of education you have ever completed?"; "What is the highest grade of elementary or high school your spouse or partner ever completed?"; and "What is the highest level of education your spouse or partner ever completed?" It must be recognized that in Canada there is no objective equivalency between different education systems (e.g. between university and apprenticeship programming), and so responses rely on parents' subjective interpretations of which system delivered their "highest" level of education.

Table 4.4: Parents' Highest Level of Education

	Column percentages				
	Manitoba	New Brunswick			
	All	Fr-LA-eligible	Fr-LA-ineligible	En-LA-eligible	En-LA-ineligible
Co-resident male parent's highest level of education					
No male parent	16.5	31.2	6.5	32.6	5.6
Less than a high school diploma	21.2	34.5	20.2	23.5	9.8
High school diploma	20.0	14.2	19.1	20.5	25.8
Trade/College/Apprenticeship	30.1	18.2	36.4	19.9	41.0
University degree	12.2	1.9	18.2	3.4	17.9
Co-resident female parent's highest level of education					
No female parent	3.0	5.4	2.0	3.8	2.6
Less than a high school diploma	16.0	30.4	9.8	20.0	6.5
High school diploma	27.2	28.3	20.0	35.3	26.7
Trade/College/Apprenticeship	39.2	31.6	48.1	37.3	44.1
University degree	14.6	4.3	20.0	3.6	20.1
Co-resident parent with highest level of education					
Less than a high school diploma	11.3	26.5	5.2	15.7	2.2
High school diploma	20.5	27.3	14.1	33.4	18.2
Trade/College/Apprenticeship	46.7	40.7	51.7	44.7	50.0
University degree	21.4	5.5	29.1	6.3	29.6
Sample size (total = 5,418)	**1,042**	**1,140**	**1,094**	**1,149**	**993**

Table 4.5: Is Participant in Designated G8roup?

	Column percentages				
	Manitoba	New Brunswick			
	All	Fr-LA-eligible	Fr-LA-ineligible	En-LA-eligible	En-LA-ineligible
Yes: student is in lower parental income category and neither co-resident parent has a two-year PSE diploma or certificate	30.7 (n = 316)	78.7 (n = 897)	9.6 (n = 104)	82.5 (n = 948)	9.8 (n = 96)
Yes: student is in lower parental income category and neither co-resident parent has a two-year PSE diploma or certificate	69.3 (n = 713)	21.3 (n = 243)	90.4 (n = 981)	17.5 (n = 201)	90.3 (n = 889)
Sample size (total = 5,388)	**1,029**	**1,140**	**1,085**	**1,149**	**985**

Note: Total sample size is less than 5,418 due to non-response (including refusals and "don't know" responses).

with a male parent with a university degree. In Manitoba 42 per cent of participants had a male parent with post-secondary experience. This represents more than half of those with a co-resident male parent.

Patterns were broadly similar for female parents, except that nearly all students had co-resident female parents. For all study groups, the chances of living with a female parent who had post-secondary experience was higher than the chances of living with a male parent who had such a background. The same pattern applied for which co-resident parent held a university degree.

When the post-secondary experience of both co-resident parents are considered together, the proportion living with at least one parent who had extended education beyond high school was higher. Only for *Learning Accounts*-eligible participants in the francophone sector was this proportion less than half (46 per cent). Eighty per cent of the *Learning Accounts* ineligible participants and two thirds of the Manitoba participants lived with at least one parent with post-secondary experience.

Table 4.6: Student's Academic Identification With High School

	Column percentages				
	Manitoba	New Brunswick			
	All	Fr-LA-eligible	Fr-LA-ineligible	En-LA-eligible	En-LA-ineligible
Think about all of your classes this school year. Students responding that statements are true for them "often" or "always"					
I am given interesting homework	14.4	29.4	23.7	22.4	22.4
I get along well with teachers	76.7	85.6	89.1	75.2	82.4
I am interested in what I am learning in class	47.8	76.5	74.8	55.0	60.1
Proportion who agree or strongly agree					
School is one of the most important things in my life	79.5	90.6	88.5	83.4	85.1
Many of the things we learn in class are useless	28.7	30.7	32.9	27.8	23.3
Most of my teachers don't really care about me	11.6	11.5	10.1	11.4	8.5
Most of the time I would like to be any place other than in school	42.9	26.7	28.1	34.6	30.4
Most of what I learn in school will be useful when I get a job	80.2	87.7	87.1	85.8	85.7
School is often a waste of time	15.4	9.2	8.8	11.9	10.6
School is more important than most people think	90.9	92.7	93.2	91.3	93.1
Most of my teachers do a good job of teaching	86.1	91.3	89.5	88.1	90.4
My school is a place where I do not want to go	14.5	10.9	11.9	13.3	9.4
Most of my teachers really listen to what I have to say	81.7	90.4	90.0	79.8	87.0
If I need extra help I will receive it from my teachers	90.4	93.1	93.5	89.8	92.4
Most of my teachers treat me fairly	91.3	90.6	91.6	89.0	94.1
Sample size (total = 5,402)	**1,038**	**1,134**	**1,093**	**1,148**	**989**

Note: Total sample size is less than 5,418 due to non-response.

There was a strong association among the parents of participants between their income level and their completion of post-secondary program. Table 4.5 indicates membership of the project's "designated group"—those most expected to benefit from the *Explore Your Horizons* and *Learning Accounts* interventions. Low parental education here is defined as not holding a post-secondary diploma, certificate, or degree requiring two or more years of study. Roughly four in five of the *Learning Accounts*-eligible participants lived in families with lower income and lower parental education (LILE status) by this definition, and are therefore in the project's designated group. Only 1 in 10 of those in the *Learning Accounts* ineligible groups met the definition.

Even though the study targeted schools in Manitoba where students were more likely to be members of the designated group, the proportion of the Manitoba sample in the designated group was just 31 per cent, lower than expected. This may be due to differential project participation rates by income and education status, making lower-income students less likely to participate in Manitoba.[54] Only 60 per cent of Manitoba students approached to participate in the study agreed to take part. The equivalent figure for New Brunswick was 78 per cent.

The size of the designated group is large enough in Manitoba and among the *Learning Accounts*-eligible participants in New Brunswick to permit subgroup analyses of the interventions' impacts on this important group.

High School Engagement and Educational Aspirations

This section provides an overview of some of the characteristics of the sample with respect to orientation towards and attitudes about their education in general and their high school in particular, which provides a context for later analyses of changes in these attributes.

The baseline survey was based on Statistics Canada's Youth in Transition Survey (YITS) and includes many of the items from that survey used to measure high school engagement: a broad set of student emotions and behaviours (enthusiasm, effort in school and on school-related activities, interactions with teachers and peers, attention to and participation in learning activities) that may influence their learning. The concepts underlying this measure are described before the survey data on its measures are reviewed.

54 Also, the group is defined against the *Learning Accounts* threshold income levels set for New Brunswick. Family median income is lower in New Brunswick than Manitoba ($47,705 versus $54,889 respectively, 2001 Census median income for families with children 6 to 17 years of age). Against a separate Manitoba lower-income threshold, based on Manitoba median income, more Manitoba participants are identified as in the designated group.

High school engagement is believed to influence learning because it indicates how well each student's motivation matches the learning environment the school offers to him or her. The premise is that students learn best when they take pleasure in learning and when they believe that the material presented to them is within their abilities to learn and that it will be meaningful and useful to them (National Research Council and the Institute of Medicine, 2004). The model of high school engagement applied in the baseline survey considers high school engagement to be comprised of two main parts: academic engagement and social engagement. Academic engagement itself is further divided into two parts: academic participation and academic identification. Questions seeking to measure the students' positions on all these three parts of the model of high school engagement were included in the baseline survey.

Academic identification focuses on two components: belonging and valuing. "Belonging" refers both to the match between the student's perception of his or her needs and what the school offers and to the student's perception that they are cared about and respected within the school. Both are believed to enhance a sense of belonging to a school because it is the combination of both the necessary skills and adequate social resources to overcome difficulties and succeed that make learning possible (Statistics Canada, 2005). "Valuing" embraces the student's appreciation of education-relevant goals. Student's academic identification with high school based on these two components was explored using 15 items in the student self-completed survey, shown in Table 4.6.[55]

55 To improve the reliability of measures, responses on the items included in the survey can be combined to produce "scores" using Item Response Theory. This is especially useful when using these measures to derive and compare outcomes or to define subgroups within the population. However, for the present purposes, more information about the characteristics of the recruited students is provided by considering the responses on the individual items, rather than a score, so these responses are included in the tables.

Table 4.7: Student's Academic Participation at High School

	Column percentages				
	Manitoba	New Brunswick			
	All	Fr-LA-eligible	Fr-LA-ineligible	En-LA-eligible	En-LA-ineligible
Think about all of your classes this school year. Students responding that statements are true for them "often" or "always"					
I complete my assignments	83.2	88.2	89.2	81.2	88.9
I complete my homework on time	71.8	82.0	86.5	72.0	82.1
On average how much time do you spend each week on English language and literature homework?					
No time	16.0	13.4	15.9	8.4	6.7
Less than 1 hour	45.0	41.5	45.1	38.5	36.7
1–3 hours a week	32.4	37.6	30.5	39.7	42.9
3 hours or more	6.6	7.5	8.5	13.5	13.7
On average how much time do you spend each week on mathematics homework?					
No time	16.5	10.0	8.1	10.2	8.5
Less than 1 hour	39.1	31.4	30.2	40.2	35.9
1–3 hours a week	33.6	40.8	41.5	36.0	40.7
3 hours or more	10.8	17.8	20.3	13.5	14.9
On average how much time do you spend each week on science homework?					
No time	18.9	12.0	9.4	15.2	9.3
Less than 1 hour	44.7	37.7	34.7	42.7	40.7
1–3 hours a week	29.2	33.5	37.6	32.8	37.5
3 hours or more	7.2	16.8	18.3	9.3	12.6
About how often have you cut or skipped a class without permission? (this school year)					
Never this year	59.9	78.2	80.8	67.6	77.7
1–2 times this year	20.7	15.3	14.7	19.8	15.4
3–8 times this year	9.5	3.4	3.1	7.7	4.4
About 1–3 times this month	3.2	1.1	0.9	1.7	1.2
About once a month	2.4	0.9	+++	0.9	0.6
More than once/week	4.3	1.1	+++	2.3	0.7
Sample size (total = 5,282)	**1,023**	**1,116**	**1,072**	**1,115**	**956**

Note: +++Results are based on sample sizes that are too small for publication (less than five persons) or that may reveal small sample sizes by subtraction. Total sample size is less than 5,418 due to non-response.

Academic participation concerns behaviours ranging from the student's acquiescence to the need to attend school, to be prepared, and to respond to directions and questions, through the student's demonstration of initiative-taking behaviours to the student's participation in the social, extracurricular, and athletic aspects of school life. The latter can be in addition to or as a substitute for extensive participation in academic work (Statistics Canada, 2005). Students' academic participation was explored using six items in the student self-completed survey, shown in Table 4.7.

Social Engagement captures the student's identification with and participation in the social aspects of high school. This is thought important because friendships, sports, and leisure interests, a sense of identity with the school as institution can motivate students to attend school. The idea is to measure individual's attachment to and degree of fit or "membership" within the school's social life (Newmann, Wehlage, & Lamborn, 1992). The survey concentrates most on the students' sense of belonging as reflected in the nine items presented in Table 4.8.

For the most part, these items measuring high school engagement do not discriminate between groups defined by province or in terms of *Learning Accounts* eligibility. However, there were some marked differences by dominant linguistic group. New Brunswick students in anglophone schools and Manitoba students (nearly all attending anglophone schools) were much less likely to agree that they were interested in what they were learning in class and got along well with teachers (Table 4.6) and that people in school were interested in what they had to say (Table 4.8). On some items, francophone respondents and *Learning Accounts*-ineligible respondents from anglophone

Table 4.8: Social Engagement in High School—Proportion of Students Who Strongly Agree or Agree

	Column percentages				
	Manitoba	New Brunswick			
	All	Fr-LA-eligible	Fr-LA-ineligible	En-LA-eligible	En-LA-ineligible
People at school are interested in what I have to say	76.1	85.1	86.1	74.4	80.0
I have friends at school whom I can talk to about personal things	89.8	93.0	94.0	90.2	94.3
I have friends at school who can help me with school work if needed	91.3	93.6	92.6	91.1	93.5
My school is a place where:					
I feel like an outsider	8.0	7.4	4.8	9.2	6.5
I make friends easily	88.9	93.3	93.1	91.7	92.8
I feel like I belong	89.7	81.4	84.0	89.3	93.6
I feel awkward and out of place	9.0	8.8	5.7	10.5	6.5
Other students seem to like me	94.8	92.4	94.2	95.1	95.6
I feel lonely	6.9	5.1	3.6	6.6	4.5
Sample size (total = 5,392)	1,034	1,133	1,093	1,144	988

Note: Total sample size is less than 5,418 due to non-response.

Table 4.9: What is Your Approximate Overall Mark This Year?

	Column percentages				
	Manitoba	New Brunswick			
	All	Fr-LA-eligible	Fr-LA-ineligible	En-LA-eligible	En-LA-ineligible
90%–100%	8.5	7.1	16.2	8.9	20.8
80%–89%	32.6	28.1	38.4	30.5	36.2
70%–79%	29.6	28.8	25.2	31.5	27.0
60%–69%	17.9	22.3	13.4	19.6	11.4
55%–59%	5.5	7.7	4.4	4.7	3.6
50%–54%	3.9	3.2	1.5	2.0	0.5
Less than 50%	2.0	2.7	1.0	2.8	0.5
Sample size (total = 5,267)	1,010	1,110	1,069	1,107	971

Note: Total sample size is less than 5,418 due to non-response.

high schools responded similarly, and different from anglophone *Learning Accounts*-eligible and Manitoba students (such as on "most of my teachers really listen to what I have to say"). Nonetheless, there were many more similarities than differences between groups, and students' responses tended to indicate strong academic identification and participation and high social engagement.

In later reports, the responses to these questions will be used to divide students into subgroups that were "more" and "less" engaged with high school at baseline, to better understand the differential impacts of the *Future to Discover* interventions.

Students were asked for their approximate overall mark (shown in Table 4.9) and by subject (English, math, science: not shown in the table). Some differences between the groups were revealed in reporting of higher marks, but the majority of students seemed to be scoring at "70%–79%" or above. In Manitoba, 71 per cent of participants reported marks of "70%–79%" or above. This is in line with the national estimates obtained from 15-year-olds in 2000 from the Youth in Transition Survey (72 per cent above "70%–79%") (Bushnik, Barr-Telford, & Bussière, 2004). The equivalent figures for New Brunswick among francophone school students are 64 per cent for *Learning Accounts*-eligible and 80 per cent for those ineligible. Among anglophone school students, the proportions are 71 and 84 per cent respectively.

Table 4.10: What do You Think About the Following ...?—Proportion of Students Who Agree or Strongly Agree

	Column percentages				
	Manitoba	New Brunswick			
	All	Fr-LA-eligible	Fr-LA-ineligible	En-LA-eligible	En-LA-ineligible
Getting a good job later in life depends on my success in school now.	92.1	94.9	93.7	92.4	93.2
I will need to go to college or university to achieve what I want.	84.9	95.5	95.1	88.2	90.9
I know enough about the different kinds of occupations that exist to make a choice about my future.	66.4	79.4	74.5	73.8	72.8
I think I would enjoy going to college or university.	84.8	95.0	97.0	90.9	93.6
I'm smart enough to do well in university.	79.0	83.0	87.4	80.9	88.8
I'm smart enough to do well in college.	84.0	92.6	94.3	86.2	92.2
At this point in my life, it is important to me to decide what my future career or work will be.	74.6	86.1	78.2	79.4	76.5
I know my own interests and abilities well enough to decide on a future career or type of work.	76.6	84.5	79.0	83.6	81.8
Sample size (total = 5,336)	1,025	1,124	1,077	1,126	984

Note: Total sample size is less than 5,418 due to non-response.

Table 4.11: Proportion of Students Who Reported Having Done the Following to Find Out About Future Careers or Types of Work

	Column percentages				
	Manitoba	New Brunswick			
	All	Fr-LA-eligible	Fr-LA-ineligible	En-LA-eligible	En-LA-ineligible
Talked to counsellor/teacher	34.5	31.6	30.9	36.6	33.2
Talked to someone working in a job I might like	39.2	40.0	40.9	45.6	50.3
Completed a questionnaire	35.7	19.9	26.1	45.2	54.1
Read information	57.6	44.8	43.9	52.9	56.5
Attended an organized visit	31.1	24.6	29.7	32.6	44.2
School course where I spent time with an employer	14.2	15.4	14.9	11.7	11.0
Attended presentation	34.0	25.8	24.4	20.2	25.1
Have not done any of these	12.1	17.4	18.5	13.2	9.5
Sample size (total = 5,418)	1,042	1,140	1,094	1,149	993

Questions probing students' attitudes, orientations, and behaviours to future education were especially of interest in *Future to Discover*. Thus tables 4.10 through 4.12 present students' views on future education. Their parents' expectations are reported in tables 4.13 through 4.15 and perceived barriers to future education are addressed in the final three tables of this section.

In general, students appeared interested in pursuing post-secondary education. Their parents were strongly in favour of them doing so, and students knew this. Only a minority reported barriers to pursuing these goals.

In terms of students' attitudes toward post-secondary education and the role of current behaviour (Table 4.10), students seemed almost uniformly aligned with idea that their future job prospects depended strongly on what they did in school now and that college or university would necessarily pay a role in getting what they wanted. Fewer students (but still at least two thirds in each group) felt they knew enough about the different kinds of occupations to make a choice about their future. Most thought they would enjoy going to college or university. This was especially true among New Brunswick participants, who were also more likely to agree that they were "smart enough" to do well in these two streams of post-secondary education.

Table 4.12: Highest Level of Education You Would Like to Get?

	Column percentages				
	Manitoba	New Brunswick			
	All	Fr-LA-eligible	Fr-LA-ineligible	En-LA-eligible	En-LA-ineligible
Ranked					
High school diploma or less	8.6	5.0	2.3	8.7	3.6
Trade / vocational certificate / apprenticeship	6.7	9.3	7.5	7.1	4.7
College certificate or diploma	6.9	11.8	9.3	10.3	5.8
University degree	62.6	58.6	70.0	60.0	73.8
Don't know	15.3	15.3	10.8	14.0	12.1
Ever mentioned					
Less than high school	0.9	1.8	0.6	0.6	0.8
High School diploma	29.3	18.2	13.9	30.3	29.5
Trade / vocational certificate / apprenticeship	15.1	20.4	17.7	14.0	12.2
College certificate or diploma	14.7	20.8	17.9	19.0	16.2
University degree	62.6	58.6	70.0	59.9	73.8
Sample size (total = 5,298)	1,018	1,109	1,074	1,121	976

Note: Total sample size is less than 5,418 due to non-response.

Table 4.13: How Important is it to Your Parent(S) That You Get More Education After High School?

	Column percentages				
	Manitoba	New Brunswick			
	All	Fr-LA-eligible	Fr-LA-ineligible	En-LA-eligible	En-LA-ineligible
To your father or other male guardian					
Not important at all or slightly important†	6.4	4.1	3.1	5.4	2.7
Fairly important	24.0	24.1	19.1	21.8	16.4
Very important	67.1	69.4	77.3	66.8	79.6
No such person	2.5	2.4	0.5	6.1	1.3
To your mother or other female guardian					
Not important at all or slightly important / No such person†	5.4	3.2	3.1	3.6	2.0
Fairly important	21.2	19.8	15.6	17.0	13.0
Very important	73.4	77.0	81.3	79.4	85.0
Sample size (total = 5,030)	951	1,049	1,032	1,057	941

Notes: Total sample size is less than 5,418 due to non-response.
† Response categories are combined to avoid sample sizes too small for publication (less than five persons).

Table 4.14: Importance to Signing Parent That Child Gets More Education After High School

	Column percentages				
	Manitoba	New Brunswick			
	All	Fr-LA-eligible	Fr-LA-ineligible	En-LA-eligible	En-LA-ineligible
Not important at all or slightly important†	3.2	0.8	+++	1.6	0.7
Fairly important	11.8	11.8	+++	7.8	4.3
Very important	85.0	87.4	91.0	90.7	95.0
Sample size (total = 5,414)	1,041	1,140	1,094	1,149	990

Note: +++Results are based on sample sizes that are too small for publication (less than five persons) or that may reveal small sample sizes by subtraction.
Total sample size is less than 5,418 due to non-response (including refusals and "don't know" responses).
† Response categories are combined to avoid sample sizes too small for publication (less than five persons).

Table 4.15: Highest Level of Education That Signing Parent Hopes Child Will Get

	Column percentages				
	Manitoba	New Brunswick			
	All	Fr-LA-eligible	Fr-LA-ineligible	En-LA-eligible	En-LA-ineligible
High school diploma / equivalent or less	3.6	3.7	1.8	2.1	1.2
Trade / vocational certification / apprenticeship	8.5	7.5	5.5	8.5	5.7
College certificate / diploma	11.4	19.9	13.1	12.7	7.6
One university degree	39.9	39.4	49.4	35.7	44.1
Two or more university degrees	15.3	12.5	17.1	14.0	20.7
Any level of PSE	21.3	17.0	13.2	27.0	20.8
Sample size (total = 5,416)	1,042	1,140	1,094	1,149	991

Note: Total sample size is less than 5,418 due to non-response (including refusals and "don't know"s).

Table 4.16: Is There Anything Standing in Child's Way of Going That Far?

	Column percentages				
	Manitoba	New Brunswick			
	All	Fr-LA-eligible	Fr-LA-ineligible	En-LA-eligible	En-LA-ineligible
Yes	24.8	28.5	19.8	42.4	25.0
No	75.2	71.5	80.2	57.6	75.0
Proportion reporting something standing in child's way for each choice of highest education level...					
High school diploma / equivalent or less	27.8	19.5	+++	+++	41.7
Trade / vocational certification / apprenticeship	28.1	30.6	26.7	34.7	21.4
College certificate / diploma	26.9	33.8	28.0	47.9	30.7
One university degree	24.5	30.3	19.1	45.4	23.8
Two or more university degrees	18.2	27.3	19.8	51.6	30.7
Any level Of PSE	27.0	20.1	12.5	35.5	19.4
Sample size (total = 5,416)	1,042	1,138	1,094	1,149	993

Notes: +++Results are based on sample sizes that are too small for publication (less than five persons) or that may reveal small sample sizes by subtraction.
Total sample size is less than 5,418 due to non-response (including refusals and "don't know" responses).

Table 4.17: What Is Standing in the Child's Way of Pursuing PSE?

	Column percentages				
	Manitoba	New Brunswick			
	All	Fr-LA-eligible	Fr-LA-ineligible	En-LA-eligible	En-LA-ineligible
Financial situation	16.5	19.3	11.5	37.9	19.4
Not enough interest or motivation	4.2	4.3	4.6	3.1	3.8
Learning disability	3.2	5.4	3.4	2.9	2.4
Health problems	+++	0.5	0.7	0.6	+++
Won't have requirements to get in	2.0	2.3	2.8	2.4	1.5
No programs available close to home	0.5	+++	+++	+++	+++
Other	1.2	+++	+++	+++	0.7
Sample size (total = 5,418)	1,042	1,140	1,094	1,149	993

Note: +++Results are based on sample sizes that are too small for publication (less than five persons) or that may reveal small sample sizes by subtraction.

Three quarters of students agreed with the statement that they were at a point in their lives when decisions about future careers were important. The proportion stating this view was especially high among *Learning Accounts*-eligible students in the New Brunswick francophone sector. New Brunswick *Learning Accounts*-eligible students were also more likely to agree that they knew their own interests and abilities well enough to decide on a future career. The responses to these last two items are interesting given the focus of *Explore Your Horizons* on supporting students to realize post-secondary and career goals in the context of improving understanding of interests and abilities. They imply that the majority of participants would be receptive to the idea that they have reached a stage where starting to make decisions about their future is important, while a similar majority may feel that they know enough already without a new intervention.

It is interesting to contrast the attitudes and future orientations of students in Table 4.10 with the students' actual behaviours towards finding out about careers and types of work in Table 4.11. While 82 per cent reported ever having done at least one of the activities listed in the questionnaire, only a third had undertaken one of the more obvious steps of talking to a counsellor or teacher to find out more about future careers or types of work. The most commonly reported information-seeking behaviours were to have read some information and talking to someone in a job the participant felt he or she might like.

Students were asked what was the "highest" level of education they would like to get.[56] However, they often recorded more than one choice. Therefore Table 4.12 presents the proportions that chose each particular education outcome as well as the proportions choosing a "highest" level as defined in the question. The proportions choosing each particular outcome must be considered lower-bound estimates of program preferences, because students were not directed to list all types of educational achievement. This is clear from low reports of wanting to achieve a "high school diploma" when this is clearly an interim stage for entry into most post-secondary programs. The majority aspired to obtain a university degree as their "highest level," although around 6 to 12 per cent mentioned a college certificate or diploma. Importantly for *Future to Discover*, between 11 and 15 per cent could not venture a preference.

Participants were asked how important they thought it was to their parents that they obtained more education after high school. They tended to feel that moving into post-secondary education was very important to their parents (Table 4.13) with little distinction between whether male or female parents' views were being discussed. Proportions reporting that this was only "slightly important" or "not important" were in the single digits.

The parents who signed the informed consent form were also asked this question about their educational aspirations for their children directly in their own interviews. Very high proportions of parents (85 per cent and above) thought it was very important for their child to get more education after high school (Table 4.14). The majority of these signing parents were female as shown in Table 4.2. The proportions considering post-secondary education not at all or only slightly important was even lower than among their children's perceptions. When asked about the "highest" level they hoped their child would get, parental aspirations were in aggregate very similar to those of their children.

The responses discussed above can be combined and analyzed longitudinally in later analyses to see what bearing educational aspirations have on post-secondary outcomes and on the impact of the interventions. Parent and student aspirations can be considered in tandem to see whether students from households where parental and student aspirations are similar benefit more or less from *Explore Your Horizons* and *Learning Accounts*.

Parents were asked, given their aspirations for their child, whether something stood in the child's way of going that far. There was a lot of variation in the reporting of barriers, ranging from the parents of *Learning Accounts*-eligible participants in the anglophone sector, 42 per cent of whom perceived barriers, to parents of *Learning Accounts*-ineligible participants in the francophone sector, fewer than 20 per cent of whom perceived barriers (Table 4.16). Interpreting these responses is difficult, because possible barriers can vary with the levels of aspirations of parents. For example, it is one thing to say that there is a barrier preventing a child's completion of two or more university degrees; it is quite another to say there is a barrier to his or her obtaining a high school diploma.

The second part of Table 4.16 tries to tease out these differences. These show that there is actually not a lot of variation—within each study group—on the existence of barriers by level of educational aspiration. Parents of *Learning Accounts*-eligible participants in the New Brunswick anglophone sector were more likely to perceive barriers when they aspired to college and university qualifications for their children than when they aspired to trade/vocational certificates and apprenticeship, but in other groups the differences were not substantial.

Parents were asked what the barriers were that might stand in their children's way (Table 4.17). Financial situation was the dominant reason cited among those perceiving any barriers. Nearly two in every five parents of *Learning Accounts*-eligible participants in the New Brunswick anglophone sector perceived financial barriers to their educational aspirations for their children. On this indicator as well as several others, this group seemed to face more hurdles to pursuing their educational aspirations. Notably

56 The Youth in Transition Survey question used in the *Future to Discover* baseline survey asked "What is the highest level of education you would like to get?" As with questions on parental education, it must be recognized that in Canada there is no objective equivalency between different education systems (e.g. between university and apprenticeship programming). Therefore, responses rely on the participants' subjective interpretations of which kind of qualification listed on the questionnaire would represent their "highest" desired level of education.

Table 4.18: Anything Specific Done to Ensure Child Would Have Any Money for Further Education After High School

	Column percentages				
	Manitoba	New Brunswick			
	All	Fr-LA-eligible	Fr-LA-ineligible	En-LA-eligible	En-LA-ineligible
No	39.8	68.4	42.3	78.0	49.0
Yes	60.1	31.6	57.7	22.0	51.0
If Yes, ever mentions...					
Started savings account	20.3	9.9	12.6	6.7	10.1
Started RESP	31.5	14.8	37.9	10.1	31.9
Made investment, such as mutual funds	11.1	2.5	7.9	3.7	9.2
Encouraged child to earn money	11.3	2.3	5.3	2.8	3.5
Set up trust fund for this child	4.8	4.4	4.7	2.0	3.1
Encouraged child to get scholarship	7.2	1.2	3.8	1.5	3.3
Started working or working more	0.7	+++	0.8	+++	+++
Other	3.9	1.0	1.5	0.8	0.5
Sample size (total = 5,418)	1,042	1,140	1,094	1,149	993

Note: +++Results are based on sample sizes that are too small for publication (less than five persons) or that may reveal small sample sizes by subtraction.

the proportions of parents feeling finances stood in their child's way were much lower (fewer than one in five) for other groups.

Parents' reports that financial barriers may exist are relevant to *Learning Accounts*. Later analyses can consider whether the offer of a Learning Account was more likely to have an impact on Grade 9 students whose parents foresaw financial barriers to the pursuit of post-secondary education before they knew their child had a Learning Account.

Parents were asked if they had done anything specific to ensure that their children would have money for further education (Table 4.18). Responses varied a great deal again between groups. Fewer than a quarter of parents of *Learning Accounts*-eligible participants in the New Brunswick anglophone sector reported having done something specific to help their child financially, again indicating a particular disadvantage for this group. The proportion of *Learning Accounts*-eligible participants in the New Brunswick francophone sector who reported having done something specific was a third. In the *Learning Accounts*-ineligible groups and Manitoba, the proportions were much higher, between 50 and 60 per cent. Parents who had done something had typically started a savings account,

Table 4.19: Participation in School-Based Extracurricular Activities Class Such as Teams or Clubs

	Column percentages				
	Manitoba	New Brunswick			
	All	Fr-LA-eligible	Fr-LA-ineligible	En-LA-eligible	En-LA-ineligible
Took part in sport or physical activity?	47.8	29.2	36.0	31.9	46.2
Took part in an art, drama, or music group?	19.9	11.9	13.3	13.3	20.3
Took part in a student council/government?	5.5	5.0	5.0	4.2	6.7
Took part in other extracurricular activities?	11.0	11.0	13.5	13.3	16.8
Took part in any of above?	58.6	42.2	49.8	45.8	61.3
Hours of activity (among those with any)					
Less than 1 hour	13.6	29.0	25.0	18.3	12.1
1–3 hours	42.5	43.2	42.2	37.0	31.9
4–7 hours	33.1	21.9	26.1	31.6	36.5
8 or more hours	10.8	5.9	6.7	13.1	19.5
Sample size (total = 5,330)	1,025	1,119	1,085	1,119	984

Note: Total sample size is less than 5,418 due to non-response.

and most often this was a RESP (Registered Education Savings Plan). But while approximately a third of Manitoba participants and more than a third of New Brunswick *Learning Accounts* ineligible participants could in Grade 9 look forward to support from an RESP, only 10 to 15 per cent of *Learning Accounts*-eligible students could do so.

Other Characteristics

This section provides an overview of some other characteristics of participants—extra-curricular activities and peer group characteristics—to provide context for later analyses.

It is conceivable that taking part in *Explore Your Horizons* and *Learning Accounts* will change program group members' behaviour in many areas. Simply participating in activities for *Explore Your Horizons* may mean that students have less time to engage in other activities. The interventions under test may also prompt participants to change their behaviour with respect to school work, choice of peer groups, earning income, and other uses of their discretionary time. It will be valuable to learn whether participants already engaged in particular activities are more or less likely to take up the offer(s) to participate in the interventions and/or benefit from the interventions. Therefore, in the baseline and later surveys, project participants were asked about their participation in a number of activities outside school, such as employment, voluntary activities, and non-school-based extra-curricular activities as well as those that take place on school premises. Only a narrow range of the collected data can be presented here and school-based extra-curricular activities have been chosen as an illustrative example in Table 4.19.

Roughly half the project participants were engaging in some kind of extracurricular school-based activity at baseline (asked in the spring of Grade 9). Sports and physical activity were the most common activities, especially for students from Manitoba and those ineligible for *Learning Accounts* in New Brunswick's anglophone schools. This latter group of students were not only the most likely to engage in activities, but they were also active for longer when they did so. Among the 61 per cent who were active, 56 per cent—which is equivalent to a third of all students—spent more than four hours each week engaged in extra-curricular activities. Not only were a much smaller proportion of *Learning Accounts*-eligible students in francophone schools active (41 per cent), but only 28 per cent of these—equivalent to just one in nine students—were engaged in activities for four hours or more.

A number of assessments of potential negative behaviours and their consequences (disruptive behaviour, skipping classes, being kicked out of school) were included in the study, including reports by the project participants themselves as well as their parents. Table 4.20 presents one illustration based on the signing parents' reports of whether the school has contacted them within the past year due to a problem with their children's behaviour. Between 16 and 24 per cent of parents reported that this had happened in the past 12 months, and the proportion rises to 21 to 32 per cent when only the parents of boys are considered. Such indicators are valuable for identifying subgroups that may have more to gain from new intervention(s).

Table 4.20: During Past 12 Months Has a Teacher or Other School Official Contacted You Because of a Problem With Child' Behaviour?

	Column percentages				
	Manitoba	New Brunswick			
	All	Fr-LA-eligible	Fr-LA-ineligible	En-LA-eligible	En-LA-ineligible
Yes, at least once	17.6	17.6	15.5	24.3	17.8
Once only	7.6	7.0	8.7	9.1	9.6
Twice	4.1	4.5	3.0	5.7	3.8
3-4 times	2.4	2.7	2.0	4.7	2.2
5 times or more	3.5	3.3	1.7	4.7	2.1
Males: at least once	20.7	27.3	22.1	32.4	25.1
Females: at least once	14.3	9.1	9.2	17.3	10.1
Sample size (total = 5,418)	1,042	1,140	1,094	1,149	993

Table 4.20 breaks down parents' reports by the frequency of contact with a teacher or other school official. Two or more such contacts about behaviour were most common among New Brunswick *Learning Accounts*-eligible students in anglophone schools.

A final key area where *Future to Discover* interventions may generate effects is in the peer associations of participants. With its many session-based activities, *Explore Your Horizons* may create new peer groups focused on post-secondary and career exploration. Alternatively it may encourage students to seek out new peer groups more committed to the achievement of educational goals. If the interventions work by changing the social connections young people have, they may have their largest impacts, therefore, on students who do not have such peer groups at the outset. Questions about close friends, such as those in Table 4.21 appear in the baseline and later surveys to monitor these potential effects.

The responses at baseline shown in Table 4.21 indicate some variation in the composition of participants' peer groups at baseline within each of the study groups, but the variation is similar between the groups. One exception is on whether participants have close friends who have a reputation for causing trouble. New Brunswick anglophone students, especially those found *Learning Accounts*-eligible, and Manitoba students, were more likely to report such friends than francophone students.[57]

SUCCESS OF RANDOM ASSIGNMENT

This section presents the impact of random assignment on the characteristics of experimental group members observed at baseline. The aim of this section is to show how well random assignment created groups that were statistically equivalent on observed baseline data.

Random assignment of participants is a critical aspect of the research design. The interventions' effects cannot be determined by simply examining outcomes for those offered the intervention. Inevitably, some high school students will access post-secondary education regardless of whether they have access to an intervention like *Explore Your Horizons* or *Learning Accounts*. It would be erroneous to attribute outcomes to the interventions that would have occurred anyway in their absence. Random assignment ensures that the assigned groups have close to identical backgrounds and characteristics. Therefore, beyond any chance differences that arise during assignment, the experimental groups should differ in one respect only: the different *Future to Discover* interventions that the groups are offered. The important consequence is that differences in post-secondary (and other) outcomes for each of these groups can be attributed to the offer of a place in *Explore Your Horizons* and/or *Learning Accounts* and not to some other observed or unobserved differences in the groups to whom the offer was made. It is important to know how well random assignment in the *Future to Discover* pilot project has worked to ensure that this consequence will hold for later analyses.

The impact of random assignment on the baseline characteristics of experimental group members is being presented here in a way that anticipates the impact analysis of later reports. The later analysis will look for differences in outcomes occurring up to six years after baseline. The section thus has three roles:

57 An important consideration when differences such as these arise from survey data is whether differences in students' interpretation of the questions arise from the translation of the questions. These different interpretations could lead to different responses being provided, even in the absence of differences in peer group make up. YITS—from which the *Future to Discover* baseline survey was derived—was part of the Organisation for Economic Cooperation and Development (OECD) Programme for International Student Assessment for which comparison between countries was an important objective. Considerable attention was thus paid to appropriate translation of questionnaires. Nonetheless, it remains possible that differences between linguistic sectors arise from differences in interpretation. This problem will not affect experimental comparisons of outcomes, since random assignment ensures that an equivalent range of question interpretations will exist in all groups being compared experimentally.

Table 4.21: Think About Your Closest Friends. How Many of These Friends...

	Column percentages				
	Manitoba	New Brunswick			
	All	Fr-LA-eligible	Fr-LA-ineligible	En-LA-eligible	En-LA-ineligible
... think completing high school is very important?					
None of them / Some of them†	16.2	9.1	8.0	18.0	12.4
Most of them	43.6	42.2	39.8	46.7	40.0
All of them	40.3	48.7	52.2	35.3	47.7
... skip classes once a week or more?					
None of them	45.2	56.6	58.9	47.9	62.1
Some of them	46.4	37.6	36.5	45.6	34.6
Most of them / All of them†	8.4	5.8	4.6	6.6	3.4
... have dropped out of high school without graduating?					
None of them	87.5	78.9	86.2	80.1	91.0
Some of them	11.0	17.7	13.0	18.6	+++
Most of them / All of them†	1.5	3.3	0.8	1.3	+++
... are planning to further their education or training after leaving high school?					
None of them	2.7	2.0	0.6	3.2	1.5
Some of them	25.4	13.0	11.1	23.8	15.5
Most of them	51.5	47.9	49.4	50.8	51.9
All of them	20.4	37.2	38.9	22.3	31.1
... have a reputation for causing trouble?					
None of them	34.2	61.6	58.7	35.2	42.6
Some of them	56.8	33.7	38.0	56.3	51.2
Most of them	7.4	4.0	2.7	6.4	+++
All of them	1.7	0.7	0.6	2.1	+++
... think it's okay to work hard at school?					
None of them	2.2	2.8	2.1	3.0	1.4
Some of them	22.7	16.4	13.9	22.0	14.8
Most of them	50.9	46.6	49.2	47.6	49.0
All of them	24.1	34.2	34.8	27.4	34.7
... work for an employer or at odd jobs such as babysitting?					
None of them	6.4	4.4	4.2	6.4	4.7
Some of them	49.8	37.7	36.7	44.0	45.8
Most of them	37.2	46.7	47.9	39.6	39.9
All of them	6.6	11.3	11.2	10.0	9.6
Sample size (total = 5,338)	**1,028**	**1,118**	**1,086**	**1,129**	**977**

Notes: +++Results are based on sample sizes that are too small for publication (less than five persons) or that may reveal small sample sizes by subtraction.
Total sample size is less than 5,418 due to non-response.
† Response categories are combined to avoid sample sizes too small for publication (less than five persons).

Table 4.22: The Experimental Contrasts in *Future to Discover*

Sample	Experimental contrast(s)	Contribution to impact analysis
New Brunswick LA-eligible sample (separately for anglophone and francophone linguistic sectors)	EYH versus comparison group	Impact of offering EYH
	LA versus comparison group	Impact of offering LA
	EYH plus LA versus comparison group	Impact of offering a combined intervention of EYH with LA
	EYH versus LA	The relative impact of offering one intervention compared with the other
	EYH plus LA versus LA	The incremental impact of offering EYH in addition to a Learning Account
	EYH plus LA versus EYH	The incremental impact of offering a Learning Account in addition to EYH
New Brunswick LA-ineligible sample (separately for anglophone and francophone linguistic sectors)	EYH versus comparison group	Impact of offering EYH
Manitoba	EYH versus comparison group	Impact of offering EYH

- It provides an opportunity to review the experimental design of Future to Discover and review the many different pairs of statistically equivalent groups across whom baseline and—eventually—outcome data can be compared.
- It assesses how well the project's application of random assignment created statistically equivalent groups.
- It provides an illustration of how impact analyses can be presented in later reports.

Note that the experiment is testing the "offer" of the interventions. There was no compulsion upon program group members to take up the interventions and so—depending on the offer—they could choose whether or not to sign up for a Learning Account or participate in *Explore Your Horizons* activities. With long-run multi-component interventions like those in *Future to Discover* it is in any case difficult to discriminate clearly between behaviours that represent "participation" and "non-participation" (See Chapter 7). Students may miss workshop sessions but still read the F2D magazine. Students may sign up for a Learning Account but not apply to receive the funds. The experiment thus replicates a situation in which program participation is voluntary. Using the language of clinical trials, the *Future to Discover* impact estimates will reflect the effect of "intention to treat" rather than the effect of the "treatment on the treated."

While "intention to treat" may reflect the likely impact of a voluntary program, some may be interested in the effect of intervention services on those who actually receive them. Several methods exist to estimate the impact of "treatment on the treated" using impact estimates derived from experiments testing "intention to treat." These often involve assumptions that those who receive the offer are unaffected by the offer unless they participate. These methods are unable fully to control for selection effects due to those who choose to receive the treatment being different from those who do not.

The Range of Possible Experimental Comparisons in *Future to Discover*

This section describes the different group comparisons (or contrasts) in *Future to Discover* where similarity between groups is expected. As is typical in experimental studies, impact estimates are derived by subtracting mean outcomes of comparison group members from mean outcomes of program group members. The difference provides the estimate of mean impact of the intervention(s) on each outcome.[58] Provided the groups being contrasted are randomly assigned, the estimate provides an internally valid (unbiased) estimate of the impact. The *Future to Discover* pilot project has been designed to generate no less than 15 different experimental contrasts of this type (seven for each of the two New Brunswick linguistic sectors and one for Manitoba). These are set out in Table 4.22.

Within each of the 15 contrasts in the table, further experimental contrasts are likely also to be possible, on participant characteristics reviewed earlier in this chapter, such as family income, educational background, and gender, which will further illuminate for which subgroups the interventions were most effective. The number of such comparisons is limited only by the potential hypotheses to test and the available sample size of subgroups within the relevant groups.

One consequence of having such a large number of possible experimental comparisons is presentational. For any one outcome, there are at least fifteen separate impact estimates to report. In this section, which is focused on success of random assignment, 15 separate tables would be required to show success for each experimental contrast. Instead

58 Differences in proportions are analyzed in the same way.

Table 4.23: Characteristics of Report Sample Members in Manitoba—Program and Comparison Groups

Baseline Characteristic	Program Group	Comparison Group	Difference (Impact)	Standard Error
Household characteristics				
Number of adults in household	2.1	2.1	0.0	(0.0)
Signing parent male (%)	19.7	21.2	-1.6	(2.5)
Number of children in household	2.1	2.1	0.0	(0.1)
Age of signing parent (years)	43.0	43.2	-0.2	(0.4)
Student characteristics				
Male (ever mentioned %)	51.8	48.8	3.0	(3.1)
Aboriginal (ever mentioned %)	16.7	13.9	2.8	(2.3)
White (%)	87.1	89.5	-2.4	(2.0)
Age (years)	14.5	14.4	0.0	(0.0)
Has difficulty seeing, hearing, learning, etc. (%)	8.2	9.9	-1.7	(1.8)
Average mark this year 80%+ (%)	40.5	41.8	-1.2	(3.1)
Parent views on student's education				
Very important child gets PSE (%)	85.9	83.7	2.2	(2.2)
Parent hopes child will get vocational/apprentice qualification (%)	9.0	7.9	1.1	(1.7)
Parent hopes child will get college diploma (%)	11.7	11.1	0.5	(2.0)
Parent hopes child will get university degree (%)	55.1	55.3	-0.1	(3.1)
Parent hopes child will get some kind of PSE (%)	96.4	96.6	-0.2	(1.2)
Something standing in child's way (%)	25.9	23.3	2.6	(2.7)
Barrier to going this far is financial (%)	17.9	14.8	3.1	(2.3)
Parents' highest level of education				
High school diploma (%)	21.6	19.3	2.3	(2.5)
Trade/College/Apprenticeship (%)	43.3	51.0	-7.7	(3.1)
University degree (%)	23.3	19.1	4.3	(2.6)
Employment and income				
Family income in previous year ($)	66,303	69,018	-2,716	(2,439)
Signing parent is employed (%)	85.7	87.2	-1.4	(2.1)
Student has ever worked (%)	91.4	88.4	3.0	(1.9)
Sample size (total = 1,042)	**575**	**467**		

Source: Calculations from parent and student baseline survey data.
Notes: Two-tailed t-tests were applied to differences in characteristics between the program and comparison groups.
Statistical significance levels are indicated as: * = 10 per cent; ** = 5 per cent; *** = 1 per cent.
Rounding may cause slight discrepancies in sums and differences.

of including such a large number of tables, only the last of the contrasts in Table 4.22—for Manitoba—is discussed for illustrative purposes. The remaining 14 contrasts appear in Appendix 4.

Comparison of Baseline Characteristics in Manitoba

Table 4.23 presents the characteristics of 1,042 Manitoba sample members in terms of means and proportions (expressed as percentages). For example, it shows that each participant's household was home to 2.1 adults on average and that approximately half the sample was male. These means and proportions are calculated separately for the program and comparison group members in Manitoba and shown in their respective columns in the table. The third column shows the difference between the program and comparison group estimates. This difference represents the "impact" of random assignment on that variable. When the variables are baseline characteristics, as they are in Table 4.23, the "impact" is expected to be zero because random assignment occurred *after* the survey data were collected.

When the variables are outcomes, as they will be in later reports, the "impact" will be hypothesized to be different from zero if the offer of the intervention is expected to have an impact on a particular outcome. This is because the intervention offer is the only difference brought about by random assignment. Differences between the groups after baseline are therefore attributable to the different intervention offers to each group.

Asterisks (*) next to an impact estimate indicate that the estimate is statistically significant, meaning that it is large enough to be interpreted as evidence that the assignment has generated an impact. The final column indicates the standard error of the impact estimate—which is a measure of the statistical uncertainty associated with the impact estimate. One can be about 95 per cent confident that the actual impact lies within the range defined by the estimated impact, plus or minus two standard errors. Thus, when the difference between the groups in the proportions of parents with a "highest" qualification identified as trade/college/apprenticeship is calculated to be 7.7 percentage points, there is less than a 5 per cent chance that the real difference is zero.

Table 4.23 and those in Appendix 4 show that random assignment has worked to create statistically equivalent groups. Nearly all the differences between the contrasted groups on observed characteristics at baseline were not statistically significantly different from zero. Because SRDC's computer program assigned groups independently of any and all respondent characteristics, the same conclusion can also be assumed for unobserved characteristics (something that cannot be assumed for other evaluation models).

Nonetheless a few chance differences are detected. In Table 4.23, the parents of comparison group members are more likely to have their "highest" level of education reported as participation in trade/college or apprenticeship than program group members, while program group members' parents are more likely to report university degrees. Such chance differences do not introduce bias in impact estimates. Impact estimates and standard errors are still genuinely attributable to the intervention as the only systematic difference between the groups, with random statistical variation taken into account in the calculated confidence intervals around each impact estimate. But, when chance differences like these do occur, intuitive alternative explanations for impacts can arise—other than the desired explanation, which is the difference in groups' exposure to the intervention. Clearly then, it is preferable to produce more precise estimates.

The usual approach to improve precision when there are chance differences in baseline characteristics between experimental groups is regression adjustment. A regression analysis "adjusts" the impact estimate to account for the baseline differences between program and comparison group members.

In a random assignment study, approaches with and without regression adjustment yield valid estimates of the impacts. Nonetheless, there are advantages to using regression-adjusted estimates:

- Given that any observed baseline differences between program and comparison group members can be accounted for, the regression-adjusted impact estimates are potentially more accurate than the unadjusted mean differences in outcomes.
- Even in the absence of statistically significant experimental group differences at baseline, regression-adjustment can improve the statistical precision of impact estimates. Standard errors of the regression-adjusted impact estimates may be lower (when correlation between the characteristics and the outcome is accounted for in the regression), which results in improved statistical power.

However, there are also some disadvantages to using regression-adjustment, which can make the unadjusted impact estimates preferable:

- Unadjusted impact estimates are more widely understood.
- Adjusted impact estimates may depend on the functional form and regression method that is chosen. This makes the interpretation of adjusted-impacts more difficult, compared with the straightforward unadjusted estimates, which are differences in mean outcomes between the program and comparison groups.

For many outcomes, the improvement in statistical precision that is achieved through regression-adjustment is actually quite small (Meyer, 1995). Nonetheless, given the relatively small samples involved in the experimental contrasts for *Future to Discover* and the occurrence of chance variations on a small proportion of important baseline variables, researchers are very likely to adopt regression adjustment in later impact analyses.

Table 4.23 and Appendix 4 are worth reviewing as an introduction to the later impact analysis (discussed further in Chapter 8). Each table describes a future experimental contrast, and the bottom line presents an upper bound of the sample size of the experimental groups available for the later impact analyses, as at the time of baseline. There may be attrition by the time the actual outcomes are being observed. Chance variations in sample characteristics can be reviewed. Finally, the differences between these groups on some key characteristics can be seen.

5

Explore Your Horizons Year 1 Activities

Introduction

This chapter provides a review of the implementation objectives for *Explore Your Horizons* (*Future to Discover* in Manitoba)[59] and an assessment of whether these objectives were achieved, based on the available evidence. The main sources of evidence are primary data from the Social Research and Demonstration Corporation (SRDC) field observations and staff interviews, which illustrate participant reactions to *Explore Your Horizons*, and a combination of primary and secondary data sources such as minutes from meetings associated with project implementation. The bulk of the chapter is devoted to a description of each of the activities involved in the four components that comprise Year 1 of *Explore Your Horizons*—Career Focusing, Post-secondary Ambassador workshops, F2D magazine, and the *Future to Discover* Web site. As a reminder, "Year 1 activities" refers to each participant's first full year of potential exposure to the intervention (typically the Grade 10 school year), regardless of which cohort he or she belonged to.

59 Hereafter, any reference to *Explore Your Horizons* in this chapter is taken to mean the *Future to Discover* intervention in Manitoba as well as the *Explore Your Horizons* intervention in New Brunswick.

CHAPTER SUMMARY

- ***Explore Your Horizons* was delivered as it was designed.** Facilitators and Post-secondary Ambassadors made use of the available scripts and materials that were prepared for the workshops.
- ***Explore Your Horizons* components were delivered consistently across sites and time.** Provincial Coordinators monitored Facilitators through field observations, frequent meetings, and by stating and checking on the steps for consistency contained in the Operations Manual. Facilitators monitored the Post-secondary Ambassadors on site and reported back to fellow Facilitators and Coordinators.
- **Facilitators and *Future to Discover* staff were aware of implementation objectives and were prepared to carry out their tasks.** Staff received adequate training and were aware of the importance of following the implementation objectives. Principles of consistency and encouraging participation were understood and sought by staff.
- **Staff took steps to maximize participant exposure to *Explore Your Horizons* components.** Staff adopted ways to promote maximum participant exposure, including holding make-up sessions and offering incentives for attendance, and together brainstormed ways to attract non-attendees.

DATA SOURCES

Both primary and secondary data are analyzed in this chapter. Primary data were collected by SRDC researchers during 40 field observations and depth interviews with nine Future to Discover staff (see Text Box 5.1). SRDC researchers developed protocols for both the observations and the interviews to ensure that this qualitative data would be systematically gathered and able to address the question of whether or not implementation objectives were achieved.

Field observation notes recorded the Facilitators' use of *Explore Your Horizons* scripts and materials and the participants' use of their Career Focusing Workbook. The types of questions asked by participants, and whether and how Facilitators answered them, were also recorded. Participants' responses to *Explore Your Horizons* were noted by their observed attentiveness. Both the preparations made by Facilitators and the classroom environment were recorded for purposes of describing the implementation of *Explore Your Horizons*.

SRDC staff planned field observations consulting a grid demarcating the site locations and the Facilitator teams assigned to the sites over time. The purpose of this strategy was to ensure that a range of sites and Facilitators were observed by SRDC researchers over the course of the implementation, in turn to promote better understanding of the intervention. SRDC's initial implementation research plan included provision to observe six sessions of each *Explore Your Horizons* workshop: two in Manitoba, two in New Brunswick francophone sites, and two in New Brunswick anglophone sites. However, after several months of conducting field observations of Orientation and Career Focusing workshops #1–3, it was apparent that the implementation of the observed sessions was consistent and it was felt that adequate data could be gathered in fewer than six observations. Thus the number of New Brunswick observations was reduced from four to three, maintaining an overall balance of anglophone and francophone observations that was roughly equal. Two Manitoba observations are done for each workshop, for a total of five instead of the six initially proposed for the two provinces combined.

Depth interviews asked staff to describe their tasks as they relate to the implementation of *Explore Your Horizons* and probed whether there were parts of the tasks that might be problematic as well as those that run smoothly. Staff were asked for their impressions of participants' responses to *Explore Your Horizons* and their feedback on whether and how the intervention might succeed.

The protocols for the field observations and for the depth interviews were developed to gather the data needed to achieve SRDC's implementation research objectives: to determine whether or not the *Future to Discover* interventions were implemented as planned; to help interpret findings from the impact analysis; to describe and document the operations; and to profile the environment within which the pilot test took place. SRDC researchers developed a framework for coding all of the data gathered through qualitative methods, and this framework was directly linked to answering the questions required to achieve the implementation research objectives. All transcripts and notes from qualitative data collection activities were coded using NVivo software to assist in the organization and analysis of the data.

The secondary data sources for this chapter include the *Future to Discover* Operations Manual for each of the two provinces. While the core content is the same for each province, the manuals reflect the uniqueness of the two in terms of administrative arrangements affecting staffing or accounting for expenses, for example. All *Explore Your Horizons* scripts—an important source of secondary data for this chapter—are found as appendices to the operations manuals. An additional source of secondary data for this chapter is the minutes of the *Future to Discover* staff meetings from October 2004 to June 2006 in New Brunswick and July 2005 to June 2006 in Manitoba.

IMPLEMENTATION OBJECTIVES

The objectives for implementing the *Explore Your Horizons* career education intervention are to

- ensure that *Explore Your Horizons* received a "fair test" by being delivered as designed,

Text Box 5.1: Sources of Primary Data

Field Observations

Orientation: 6 sessions (2 Manitoba, 4 New Brunswick)
Career Focusing Workshop #1: 6 sessions (2 Manitoba, 4 New Brunswick)
Career Focusing Workshop #2: 6 sessions (2 Manitoba, 4 New Brunswick)
Career Focusing Workshop #3: 6 sessions (2 Manitoba, 4 New Brunswick)
Career Focusing Workshop #4: 5 sessions (2 Manitoba, 3 New Brunswick)
Career Focusing Workshop #5: 6 sessions (2 Manitoba, 4 New Brunswick)
Career Focusing Workshop #6: 5 sessions (2 Manitoba, 3 New Brunswick)

Total: 40 sessions (14 Manitoba, 26 New Brunswick)

Depth Interviews

New Brunswick Provincial Coordinator July 2006
Manitoba Provincial Coordinator September 2006
New Brunswick Future to Discover Office Staff November 2006
New Brunswick Facilitators (2 Francophone) April 2005
New Brunswick Facilitators (2 Anglophone) November 2006
Manitoba Facilitators (2) February 2006

- promote consistent delivery of *Explore Your Horizons* components across sites and time through adherence to the scripts and other materials prepared for the workshops and the Operations Manual and through monitoring of activities,
- ensure that staff involved in the implementation of *Explore Your Horizons* were aware of implementation objectives and prepared to facilitate the activities accordingly, and
- encourage participation in and maximize participant exposure to *Explore Your Horizons* components.

IMPLEMENTATION PARTNERS

A number of partners are involved in the implementation of the *Explore Your Horizons* career education intervention. Central coordination of all the *Explore Your Horizons* activities is provided by *Future to Discover* offices in Fredericton and in Winnipeg under the direction of the respective Provincial Coordinator.

Future to Discover Facilitators facilitated the workshops that formed the Career Focusing component. Facilitators report to the Provincial Coordinator. The Post-secondary Ambassadors who facilitate the Post-secondary Ambassador workshops also report to the Provincial Coordinator, but have Facilitators on site with them acting in a supervisory role. The Provincial Coordinators in turn report to the Foundation; they also provide regular implementation reports to the National Working Group and the Operations Group.

The contractors who developed the respective components were responsible for providing scripts for the staff to use for facilitating workshops, as well as overheads, handouts, and exercises or other materials for use by the participants.[60] Contractors were also responsible for training staff to facilitate the workshops; thus, for Year 1 activities, Jobmatics™ trained Facilitators for Career Focusing and DMHS[61] undertook the training for Post-secondary Ambassadors. DMHS was also contracted to develop Behaviour-Based Interviewing (see Text Box 5.2) models for the Facilitators and the Post-secondary Ambassadors and in the first year of implementation in each province participated directly in the hiring of both.

Central Coordination: The *Future to Discover* Office

The *Future to Discover* office staff answer calls coming to the *Future to Discover* toll-free lines and respond to questions or concerns from participants, parents/guardians, school staff, and the general public. The volume of calls fluctuates according to other *Future to Discover* activities. For example, large mailouts to participants and telephone surveys undertaken for the evaluation may generate calls. Even at times of peak activity, the call volume is reported to be manageable, with an estimated number of calls of three to four per day in New Brunswick,[62] and even fewer in Manitoba, where participants with inquiries are more likely to call Facilitators directly. Most often, callers are seeking information about workshop times or locations or for clarification about the contents of letters received from the *Future to Discover* office. Callers to the New Brunswick *Future to Discover* office may ask about *Learning Accounts* (see Chapter 7). For example, they may seek information on the type of post-secondary programs that qualify for *Learning Accounts* payments. Infrequently, New Brunswick *Future to Discover* office staff receive more challenging

60 Following a suggestion by Jobmatics™, a series of 28 laminated occupational posters developed by the Toronto School Board were purchased and translated by New Brunswick as a resource for *Explore Your Horizons* workshops.
61 The Post-secondary Ambassadors component of *Explore Your Horizons* was prepared initially by PGF Consultants Inc. However, with the departure of the main developer from PGF to DMHS Group Inc. in 2005, the contract for Post-secondary Ambassadors training and for subsequent workshops was transferred to DMHS Group Inc. The name "DMHS" is used throughout this chapter but refers to both PGF and DMHS Group Inc. in their role as contractor for this component of *Explore Your Horizons*.
62 Depth interview with New Brunswick *Future to Discover* office staff, November 2006.

calls, such as calls questioning the fairness of offering *Learning Accounts* to some participants and not others. However, the *Future to Discover* office staff are well trained to answer inquiries. They do so with confidence and without the need to refer callers to higher authorities.

The *Future to Discover* staff support the work of the Facilitators, who work mainly out of their homes. All Facilitators are provided with a kit of resources including a laptop computer, a portable printer, and career resource materials in addition to standard office supplies.[63] Laptop computers are required for remote access to the *Future to Discover* Project Management Information System (PMIS), which is a tool for scheduling sessions and keeping track of attendance.[64] *Future to Discover* office staff assist the Facilitators in PMIS data entry, workshop scheduling, locating participants, and ensuring that they have adequate quantities of *Explore Your Horizons* materials and other supplies. The New Brunswick *Future to Discover* office staff are also responsible for training staff in both provinces in the use of the PMIS.

The *Future to Discover* office staff support the Provincial Coordinator in achieving the implementation objectives by conducting field support, tracking workshop attendance data to prepare charts, and collecting workshop feedback forms and Facilitator / Post-secondary Ambassador feedback forms for appraisals. They also help to organize staff training and retreat, and must ensure that they themselves are fully aware of the implementation objectives as well as supporting the objectives in the actions of the Facilitators and Post-secondary Ambassadors.

In Manitoba the *Future to Discover* staff are seconded from other areas of government or hired on a term/contract basis following the procedures outlined for government employment in the province. Student Project Officers are hired through the Student Temporary Employment Services Program (STEP).[65] The office staff includes the Provincial Coordinator, Administrative Officer, Administrative Assistant, and Student Project Officers (temporary and/or part-time). The New Brunswick *Future to Discover* office has three full-time staff: a Project Manager / Anglophone Provincial Coordinator and two Project Officers. There is also a half-time francophone Provincial Coordinator. Three of the four staff were working in other areas of the Department of Education when seconded to work for *Future to Discover*; the fourth was hired externally. In addition, there is a Project Assistant who is a co-op student working in a term position (in some cases, there may be two).

PREPARING FOR IMPLEMENTATION

Facilitators

Recruitment

The number of Facilitators to be hired to implement *Explore Your Horizons* in each province and the timing of hiring was based on the number of sites and sessions to be delivered, as well as travel distances among sites. Facilitators were required to deliver all facilitator-led *Explore Your Horizons* workshops, beyond the Year 1 activities described here. Because there were two cohorts of participants recruited in consecutive years in New Brunswick, it would be possible for some of the initial facilitator recruits to work for up to four years on the project. However, because the volume of project work varies by calendar year, the number of Facilitators needed to increase from 8 in Year 1 for Cohort 1 to 12 the next year when Facilitators had to cover not only Year 1 activities with Cohort 2, but also Year 2 activities with Cohort 1 participants. Additional hiring therefore was required at the same time as the second cohort of participants was being recruited. Facilitators were evenly split in number between anglophone and francophone sectors in New Brunswick and worked in teams of two with each team responsible for seven to eight sites in the first year. In Year 1 in Manitoba, six Facilitators organized into three teams

63 Facilitators are provided with a portable flipchart, carrying bins and a cart to enhance the portability of their required equipment.
64 The PMIS was not operational until the spring of 2005, and thus New Brunswick Facilitators did not have use of the system until towards the end of Year 1 activities for Cohort 1. In Manitoba not all Facilitators had access to high-speed Internet initially, which severely compromised the usefulness of the PMIS; however, once this was overcome Facilitators found that with some exceptions they could access the PMIS.
65 More information about STEP can be found at www.gov.mb.ca/educate/studentjobs/index.html.

of two were responsible for delivery to six to eight sites per team. One of the three Manitoba teams is bilingual and covers the one French-speaking site.

To reduce the risk of interruption in the delivery of *Explore Your Horizons* workshops due to the unexpected departure of Facilitators, additional "alternate" Facilitators were selected in each province. The alternates undergo training alongside the Facilitators and are thus prepared to substitute for / replace a Facilitator who leaves his or her position or who is absent for an extended period of time.

Facilitators in both provinces are certified teachers, most with a counselling background and experience in providing high school students with information on career development and post-secondary education options. Job advertisements posted in both provinces stated that candidates should be "high-energy," possess "outstanding interpersonal skills," and be prepared for significant amounts of travel. In New Brunswick, where guidance counsellors require a master's degree in education with a specialization in guidance and counselling, the job posting included this additional requirement. However, candidates with other types of master's degree in education were also considered and hired. All New Brunswick Facilitators working in the anglophone sector, and most in the francophone sector, were hired on secondment from positions in the province's high schools for a period of one year with the possibility of renewal for up to three years. The remainder of the francophone Facilitators were hired on contract. In Manitoba Facilitators were either seconded from existing positions with school divisions or hired on employment contracts for a period of one year with possibility of renewal.

As part of the recruitment process, the candidates whose applications passed an initial screening of qualifications were interviewed using Behaviour-based Interviewing (see Text Box 5.2) by representatives of the respective province, the Foundation, and DMHS (the contractor who developed the *Future to Discover*-specific Behaviour-Based Interviewing approach to hiring Facilitators). The interviews lasted about two hours. Following committee selection of preferred candidates, the final steps of the hiring process included clearance of Criminal Records and Child Abuse Checks, signing of confidentiality agreements, and approval of secondments as required.

Text Box 5.2: Behaviour-based Interviewing

The premise of Behaviour-based Interviewing is that a candidate's past behaviour is the best predictor of their future behaviour; interviewees must relate real situations and demonstrate how their strengths and weaknesses are manifested on the job. For example, instead of being asked how they handle conflict in the workplace, they are asked to describe a time when they worked with others who did not work well together and how they dealt with it. Some candidates remarked that Behaviour-based Interviewing was demanding but represented a "good experience unto itself."

Training

Training to prepare Facilitators for Year 1 activities included general orientation to the Project, scheduling and facilitating Orientation and Career Focusing workshops, and overseeing Post-secondary Ambassador workshops as well as professional development and leadership training. The Career Focusing workshops are trademarked by Jobmatics, and only Jobmatics staff who have achieved a high level of experience with Career Focusing—referred to as "Master Trainers"—are qualified to train new facilitators for delivering the workshops.

Although the amount of time spent in training and the scope of training was essentially the same in the two provinces, the timing differed between Manitoba and New Brunswick Cohort 2 on one hand and New Brunswick Cohort 1 on the other. The main difference was that the schedule for Career Focusing training—performed by Jobmatics™ Master Trainers—was adjusted between the training session in New Brunswick in 2004–2005 and in Manitoba in 2005–2006. The original intent was to provide a single block of training immediately prior to Year 1 delivery. However, training for the facilitation of Career Focusing 1–6 required a full seven days of intensive training. Doing this in one block meant that there was a great deal of curriculum to absorb and a long time lag between training and delivery of the actual workshops. New Brunswick Facilitators who trained in a single block in August 2004 actually delivered Career Focusing 6 to Cohort 1 participants in June 2005—nine months after participating in the training.

Facilitators suggested that training might be more effective if split into two parts with initial training limited to Career Focusing 1–3, with Career Focusing 4–6 training occurring only once the first three workshops have been completed. This approach was adopted and another day of training added so that for Facilitators preparing for Year 1 in Manitoba, or Cohort 2 Year 1 in New Brunswick, four days of training (Career Focusing workshops 1–3) took place in August 2005 and four days of training (Career Focusing workshops 4–6) took place in December 2005. Provincial Coordinators collaborated to maximize the efficiency of the training resources by combining New Brunswick and Manitoba training sessions and by inviting a New Brunswick Facilitator to take part in the Orientation of the Manitoba Facilitators. In New Brunswick new Facilitators were paired with experienced Facilitators as a means to reinforce their training and also promote consistency of delivery (see earlier section "Central Coordination: The *Future to Discover* office").[66]

During training, Master Trainers from Jobmatics gave Facilitators an overview of the curriculum and provided them with instruction, modeling, and guided practice in the "Focusing" and "Matching" elements of the program. Before training began, Facilitators received a package including the Student Workbook and were asked to complete the Artifact Bag exercise intended to help participants find their "Focus."[67] Training culminated with a practicum where Facilitators integrated and applied all the skills learned by working with volunteer students. Not surprisingly, staff reported training in the second year to be smoother than the first. However, Facilitators who received the training in the second year in the two-part format found it potentially awkward to be delivering Career Focusing workshops 1–3 without full knowledge of the content that lay ahead in workshops 4–6.

SRDC field observations, *Future to Discover* meeting minutes, and feedback from Provincial Coordinators all indicate that the Facilitators recruited in both provinces were highly organized professionals who cared about the participants in the project and who were dedicated to a high-quality delivery of *Explore Your Horizons*. The individuals hired were energetic and good communicators. They were well-prepared for workshops, typically arriving at least 45 minutes prior to sessions to ensure that the room was open and set up with the appropriate *Future to Discover* posters and other materials, that refreshments were ready, and that all equipment was set up by the time participants started to arrive.

Post-secondary Ambassadors

Post-secondary Ambassadors are responsible for leading two-hour workshops in on career exploration and the benefits of post-secondary studies. They also share their real-life experiences and personal stories with *Explore Your Horizons* participants. Two Post-secondary Ambassador workshops are offered during each year of *Explore Your Horizons*—one in the fall term, the other in the spring. Post-secondary Ambassadors work in teams of three, ideally having representation from different streams of post-secondary education. Teams work under the supervision of Facilitators and most often travel with them to sessions. Because travel time from Post-secondary Ambassadors' homes to school sites varies widely—from 10 minutes to four hours—the number of sites each covers varies as well. For example, Post-secondary Ambassadors responsible for more remote Manitoba sites may deliver fewer workshops than their peers in more urban areas of Manitoba or New Brunswick, where participating schools are closer

66 Because training was not directly offered in French to the Manitoba Facilitators, provision was made for them for connect by telephone and computer with the francophone Master Trainer from Jobmatics.

67 A description of the Artifact Bag exercise and focusing process is found in the later section "Career Focusing Workshop #1."

in proximity. The overall time commitment is roughly the same for all, for which they are paid a $3,000 honorarium in 10 monthly instalments of $300.[68]

Many factors were considered to determine the number of Post-secondary Ambassadors required in each province, including the desired representation of Post-secondary Education streams, number of schools and distances between them, desired Post-secondary Ambassador/student ratio, and maximum time commitment that can be reasonably expected from full-time post-secondary education students. In the end, the project approved the hiring of 15 Post-secondary Ambassadors in Manitoba for Year 1; in New Brunswick, 20 Post-secondary Ambassadors were hired in the first year.[69] This number was increased to 32 in the second year of implementation to cover the needs of the two cohorts (the first cohort now being in Grade 11 and the second cohort in Grade 10).

Post-secondary Ambassadors are screened and hired on their demonstration of competencies in three areas: intellectual, relationship, and personal. Intellectual competencies include knowledge about education and about the student group attending the workshops and presentation/facilitation skills. Relationship competencies refer to interpersonal, leadership, and communication skills, while maturity, commitment, and personality are the desired personal competencies. The job advertisement briefly describes *Future to Discover*, then appeals to students currently enrolled in a post-secondary program "who will share their real life experiences and personal stories" while leading workshop activities as part of the *Explore Your Horizons* intervention.

The Post-secondary Ambassador position was advertised via posters at Student Employment Centres, Financial Aid Services and other campus offices, links from youth employment Web sites, and direct e-mail or mail contact with school representatives, Apprenticeship coordinators, and so on. Phone calls were made to these organizations to encourage the application of posters to bulletin boards. In addition, phone calls were made to universities, colleges, and private vocational institutions to promote these positions. Despite efforts to reach out to students at all streams of post-secondary education, there were very few applications received from non-university streams in Year 1. Thus the composition of the Post-secondary Ambassador teams in both provinces contains more university students than initially envisioned. To promote equity of under-represented groups, both provinces made extra efforts to encourage applications from First Nations students, visible minorities, and persons with disabilities as well.

As is the case for the Facilitator interviews, Behaviour-based Interviewing was conducted for the recruitment of Post-secondary Ambassadors by a panel comprising DMHS and *Future to Discover* office staff. Assessment involved a set list of questions and activities upon which candidates were scored. However, following Year 1 in New Brunswick, a group interview approach was adopted for the hiring of Post-secondary Ambassadors. The Post-secondary Ambassador Interview Guide developed by DMHS describes the two main advantages of group interviews as (i) their practicality in terms of being less time-consuming and (ii) the insight into candidates' capabilities provided by their interaction and sharing of experiences. Following the scoring and reference checks, successful candidates were offered positions pending the outcome of their Criminal Records and Child Abuse checks.

Post-secondary Ambassador training has occurred twice yearly in late September / early October and in January. Typically, the training has been held during a weekend retreat lasting two to three days.[70] Attendance was compulsory. Both provinces have accepted resignations from Post-secondary Ambassadors who were unable to commit to attending the entire training session. Facilitators were required to attend the retreat in order to learn the workshop curriculum and to provide feedback to Post-secondary Ambassadors. The September retreat has typically lasted longer than the January retreat. While all training sessions involved learning the workshop curricula, the additional training time in September/October has been used to provide Post-secondary Ambassadors with an overview of the project, promote team-building, learning how to deal with difficult people, and to build the Post-secondary Ambassadors' presentation skills. The shorter January retreats have focused on the content of the spring workshop and also reinforced good presentation practices. Following the Year 1 retreat in New Brunswick, several enhancements to the training were proposed by the Coordinators and Facilitators and adopted for subsequent retreats. As with the Facilitator training, Post-secondary Ambassadors were asked to come prepared to participate in the main Career Focusing activities; secondly, subsequent retreats commenced earlier in order to hear presentations about the four streams of post-secondary education either from representatives of the stream or by facilitators who had researched them. A third enhancement was to videotape the Post-secondary Ambassadors during the practice delivery sessions so that they could review and refine their facilitation skills.

Although it has been difficult to recruit from post-secondary education streams other than university (particularly among French-speaking candidates), Facilitators and the *Future to Discover* office staff are pleased with the results of the recruitment in terms of the calibre of Post-secondary Ambassadors they have hired. Adjectives used to describe the young Post-secondary Ambassadors include "phenomenal," "dynamic," "amazing, very talented, qualified," and having "good classroom management." One staff volunteered that "after recruiting and interviewing…it made me feel

68 In 2005–2006, Manitoba Post-secondary Ambassadors were paid eleven instalments of $273.40 for a total of $3,007.40 in order to comply with the payment software program.

69 One of the twenty Post-secondary Ambassadors left the position after being hired, thus New Brunswick operated with nineteen Ambassadors.

70 In Year 1 for New Brunswick, there was a 2.5-day Post-secondary Ambassador weekend retreat in October 2004, followed by a one-day refresher in January 2005.

pretty good about the youth of today…I've met some exceptional people…"[71] Thus the available information indicates a successful recruitment of suitable Post-secondary Ambassadors.

STAFF MONITORING AND APPRAISALS

Provincial Coordinators monitor the work of Facilitators through site visits to observe workshops and through regular teleconferences, in-person meetings, and e-mail. During Year 1, teleconferences were held weekly and in-person meetings monthly. These meetings typically began with a "check-in" report from each attendee, followed by discussion of agenda items including issues encountered in the operation of *Explore Your Horizons*. In addition to regular meetings, Facilitators were required to report any problems or "red flags" immediately to their Provincial Coordinator, who would provide advice and circulate it to all the Facilitators in case they encountered the same issue. In both provinces, minutes and action plans from all teleconferences and in-person meetings were recorded and circulated.

Performance appraisals of Facilitators were scheduled annually and used a "360 degree" approach that combined self, peer, and supervisor evaluations.[72] All Facilitators were required to complete a standard form assessing their own performance against a number of categories. They completed the same form to assess the performance of all of their Facilitator colleagues (in New Brunswick this was *within* each linguistic sector). Post-secondary Ambassadors completed evaluations for the Facilitators they worked with, assessing their support to the Post-secondary Ambassadors, their presentations at Post-secondary Ambassador training, and their interactions with participants at Post-secondary Ambassador workshops. *Future to Discover* office staff also completed evaluations of the Facilitators to the extent that they had been exposed to the Facilitators' work. The forms were sent either directly to the Facilitators or to a *Future to Discover* office staff member who compiled the assessments for each Facilitator. The Facilitator received the tabulated data prior to their meeting with the Provincial Coordinator, who reviewed how the Facilitator perceived his or her own performance compared with how it was assessed by their peers and their Supervisor (the Provincial Coordinator). Performance appraisals of Post-secondary Ambassadors also employed a 360-degree approach. Facilitators undertook evaluations for the Post-secondary Ambassadors they supervised twice each year following the completion of the fall and spring workshops. As soon as Post-secondary Ambassadors finished all sessions of their workshops in each season, they were given the standard form to complete and asked to identify two fellow Post-secondary Ambassadors who had worked with them to deliver at least one workshop. These nominated Post-secondary Ambassadors then completed the forms for every Post-secondary Ambassador who had nominated them. In addition to providing oral feedback immediately at the end of each workshop, Facilitators also completed forms for every Post-secondary Ambassador they observed. The *Future to Discover* office received the completed forms and compiled the data. After reviewing the data with the Provincial Coordinator, the supervising Facilitator met in-person with the Post-secondary Ambassador to conduct the appraisal.

The monitoring and feedback mechanisms for Facilitators and Post-secondary Ambassadors were intended to support the consistent implementation of *Explore Your Horizons* as described in the following section.

PRINCIPLES OF THE *EXPLORE YOUR HORIZONS* IMPLEMENTATION

Two important principles of implementation for the delivery of *Explore Your Horizons* differentiate it from that of regular educational curricula. Firstly, the project aims to test the effectiveness of a specific intervention—*Explore Your Horizons*. This makes it critical that the intervention is delivered consistently across all sites. Secondly, participation in *Explore Your Horizons* is not mandatory and workshops are held outside regular school hours. To support the implementation objective of ensuring adequate participant exposure to *Explore Your Horizons*, other means of encouraging participation must be employed.

Consistency of *Explore Your Horizons* Delivery

Consistency in delivery across all sites and for all participants is required in order for the *Explore Your Horizons* intervention to get a "fair test" of whether or not it works. This is the particular intervention that has been selected for evaluation, and so if the intervention shifts during implementation, the "fair test" objective will not have been met. The *Future to Discover* office staff and Facilitator training stressed this principle, and available evidence suggests it is accepted and reinforced at all levels. Facilitators were asked during training to recognize—as stated in the Operations Manual—that at times they could feel constrained by the research need to follow the *Explore Your Horizons* scripts and materials. Steps taken to promote consistency included the following:

- The approach to staff training was consistent, with emphasis on use of scripts.
- Program design and delivery as described in the Operations Manual was adhered to.
- Pairs of Facilitators reviewed scripts independently and together prior to workshops. Facilitators reviewed Post-secondary Ambassador workshop content with Post-secondary Ambassadors prior to sessions.
- Potential variations were raised immediately with Provincial Coordinators and circulated to all Facilitators.

71 Interviews with the New Brunswick Provincial Coordinator (July 2006), New Brunswick Facilitators (April 2005, November 2006), Manitoba Facilitators (February 2006), and New Brunswick *Future to Discover* office staff (November 2006).

72 In Year 1 in Manitoba, two performance appraisals were conducted, the first in January and the second in June. The first was a provincial government requirement for securing the staff secondments. The term "360 degree" approach means that the appraisal is undertaken from multiple perspectives surrounding the subject The person being appraised not only completes their own appraisal, but their supervisor and colleagues do as well. The assessments of supervisors and colleagues are presented to the subject.

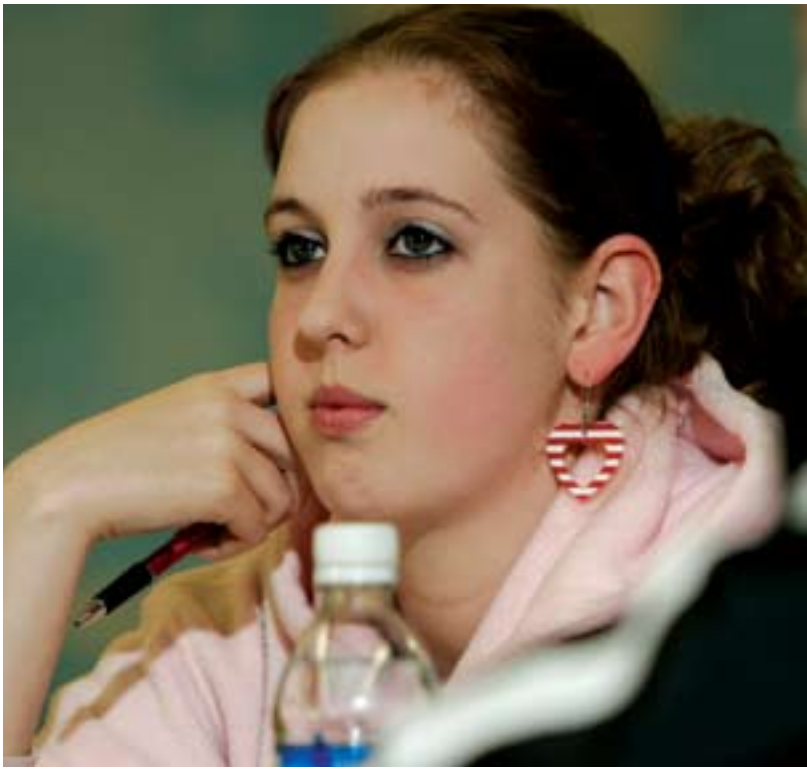
- Consistency in delivery was included as an agenda item at staff teleconferences, in-person meetings, and in communications shared among Facilitators in both provinces (and both linguistic sectors in New Brunswick).
- Beginning in Year 1 Manitoba and Cohort 2 New Brunswick implementation, Facilitator teams observed each other in the field to compare delivery styles and to ensure that content covered was the same.
- When staff were observing sessions, any potential consistency issues were discussed afterwards with the Facilitators and raised as appropriate with the Provincial Coordinator.
- Facilitators or Post-secondary Ambassadors experiencing troublesome areas of the scripts or difficult sessions were instructed to speak immediately to the Provincial Coordinator.
- All communications among New Brunswick staff or among Manitoba staff were shared between the two provinces.
- Provincial Coordinators brought concerns about consistency in delivery to the Operations Group for review to ensure information sharing about consistency between provinces.

Despite the general emphasis on consistency, some variations in the delivery of *Explore Your Horizons* were accepted. Potential variations were raised at staff meetings and developed as appropriate into proposals for consideration by the Operations Group or National Working Group. If accepted, the variations were implemented. For example, in Year 1, it was agreed that there could be flexibility in the order in which Career Focusing and Post-secondary Ambassador workshops were offered; because there was no program preference for having Career Focusing Workshop #1 or Post-secondary Ambassador workshop 10A first, Facilitators were free to schedule them according to local circumstances. Another permitted variation in delivery occurred with Career Focusing Workshop #2. For this workshop, the preferred Facilitator/student ratio should not exceed 1:6. Some Facilitator teams chose to divide their classes in half and run two consecutive sessions, while others chose to invite an additional Facilitator team to work with them in a single larger session. A third example of variation in delivery was the flexibility permitted in composition of Career Focusing workshops 3, 4, and 5, as described in the "Career Focusing Workshops" section later in this chapter.

Because *Explore Your Horizons* is a pilot project that takes place in a "real world" environment there were also occasions in which unforeseen circumstances caused a variation in delivery. Year 1 in New Brunswick operated through progressively intensifying job action on the part of teachers, affecting the timing of some sessions and hindering attempted contacts with non-attending participants via school staff, as suggested in the Operations Manual. Year 1 delivery in both provinces was also interrupted due to weather—snowstorms and flooding—and the resulting school closures.[73] Sessions were not to be cancelled due to low attendance, but in some cases Facilitators enacted last-minute cancellations due to safety concerns rather than risk the travel. One pair of Manitoba facilitators sought and were granted permission a day prior to a scheduled Career Focusing session to conduct the workshop with only one Facilitator although this would not normally have been permitted.

Encouraging Participation

Participants not exposed to the intervention cannot receive potential benefits from it. Thus, from the Operations Manual through to the staff training and monitoring, encouraging participant attendance has been emphasized. No target was set for attendance—short of 100 per cent—because the required attendance could not be specified in advance. The central assumptions of the project are that the impact of *Explore Your Horizons* depends upon changing the behaviour of the designated group—students who are not likely to go on to post-secondary education in the absence of *Explore Your Horizons*[74]—and that participants need to receive the intervention to be affected by it. However, membership of the designated group within the program group cannot be identified ahead of their likely time of enrolment in post-secondary education. Therefore, high rates of attendance across the program group represents the best way for the project to ensure that the intervention has a chance to influence the designated group. Thus from the start of implementation, staff were given the task of encouraging participation and attempting to increase attendance without a specified target. The Operations Manual lists steps that were initially defined and that were regularly performed to encourage attendance and included



73 For various reasons, one of the rural New Brunswick sites had repeated cancellations, and Facilitators bemoaned the fact that they were not able to meet with the participants for over three months.

74 Students from lower-income households and with parents having lower levels of education are those who are least likely to continue on to post-secondary education after high school.

- phone messages[75] to all participants prior to sessions and telephone follow-up with those who did not attend,[76]
- financial or logistical assistance with transportation or child care to reduce potential barriers to attendance,
- attendance prizes—small prizes for everyone with perfect attendance and eligibility for a draw for a bigger prize such as an iPod or digital camera,
- snacks at sessions—appealing to teenagers but conforming to the nutritional guidelines of the schools,[77]
- working with school contacts / guidance counsellors/ principals to attempt to connect with participants who did not attend,
- reminder announcements and posters on site,
- workshop schedules mailed to participants' homes, and
- punch cards circulated to encourage uninterrupted attendance.

Because of the continued drive to encourage participation, as well as concern over lower attendance rates, brainstorming sessions to propose and adopt additional measures designed to increase attendance occurred among various parties including the Facilitators, the National Working Group Operations Group, and the *Future to Discover* office staff, as described in Chapter 6. As well, early in the implementation, Facilitators began holding "make-up" sessions for students who missed the scheduled workshop. Make-up sessions occurred in various forms as Facilitators attempted to impart *Explore Your Horizons* content. Some examples of make-up sessions include

- inviting participants half an hour early to a subsequent session to catch up on what they missed or to stay half an hour after the workshop,
- meeting with students during a lunch break, and
- briefly reviewing misse d activities by telephone.

A more detailed description of make-up sessions in presented in Chapter 6.

Encouraging participation goes beyond garnering attendance at *Explore Your Horizons* workshops. It includes trying to increase participants' exposure to the print (F2D magazine) and Web site components of *Explore Your Horizons* as well. It includes integration of the components via references to the magazine and Web site at Career Focusing and Post-secondary Ambassador workshops. These "hooks"—as they are called by project staff—were written into the session scripts. For example, at all workshops, including the final Career Focusing workshop of the year, Facilitators reminded participants about the *Future to Discover* Web site and illustrated its content using overhead slides. As well, during workshops Facilitators asked questions that participants could answer by accessing information from the Web site or the magazine. Students were also notified of the impending arrival of the magazines. Small prizes were sometimes awarded to participants who arrived at a subsequent workshop with the right answer.

YEAR 1 ACTIVITIES

Students were invited to nine workshops in their first year of *Explore Your Horizons*: Orientation, Career Focusing Workshops numbered 1 through 6, and Post-secondary Ambassador Workshops 10A and 10B. All *Explore Your Horizons* workshops were designed to be delivered with the aid of overheads and "scripts" prepared by Jobmatics (Orientation and Career Focusing) or DMHS (Post-secondary Ambassador workshops).[78] Two issues of the F2D magazine—fall and spring—were delivered to participants' homes as part of the first year of *Explore Your Horizons* programming. The *Future to Discover* Web site was available to participants throughout the year. This section of the report describes Year 1 activities and, where appropriate, presents qualitative data on participants' reactions to them collected by SRDC from field observations, depth interviews, and from secondary data from the *Future to Discover* office and Facilitator staff meeting minutes.

Prior to the implementation of the first workshop, Facilitators visited each of the schools for which they were responsible for delivering workshops in order to meet with the principals and/or other school contacts. During these meetings, Facilitators inquired about the school scheduling and calendar of regular and special events, discussed the logistics of where and when the workshops would be held and the provision of refreshments, any arrangements related to access and security after regular school hours, emergency contacts, and any other special considerations about the school or population of students and parents.

During Year 1 SRDC research staff conducted 6 field observations of Orientation sessions, 34 field observations of Career Focusing workshops, and depth interviews with 9 *Future to Discover* Staff including Provincial Coordinators, Facilitators, and the *Future to Discover* office staff. Data collected during these activities is presented primarily to illustrate the operation of *Explore Your Horizons* and determine the success of implementation, rather than to "evaluate" the individual *Explore Your Horizons* components. The *Future to Discover* Interim Impacts report will present quantitative data from the first follow-up survey of participants; this data is collected systematically from all program

75 All New Brunswick homes and some Manitoba schools have access to a "talkmail" or "Phone Master" system in which a recorded message is sent simultaneously to a list of telephone numbers. Where available, Facilitators and Future to Discover office staff make use of these systems to contact students.

76 In Manitoba students indicating a preference for e-mail correspondence received session updates via e-mail; if no e-mail response was received from them, Facilitators followed up by phone.

77 In Year 1 for New Brunswick's Cohort 1, pizza was the most commonly served snack at *Explore Your Horizons* workshops and field observations clearly noted students' enthusiastic response to it. However, new nutritional guidelines for schools introduced by the New Brunswick Department of Education in 2005 required Facilitators to seek more nutritious and low-fat alternatives. Where available, thin-crust whole-wheat vegetarian pizza might still be offered at *Explore Your Horizons* workshops, along with bagels or wraps and platters of fresh fruit. Students tended to express less excitement about these choices, but for the most part the food is consumed. Although Manitoba does not have the same restrictions on food served at schools, attempts are made to offer nutritious snacks.

78 New Brunswick Facilitators and Provincial Coordinators worked quickly to review and finalize some of the scripts for Career Focusing for Cohort 1, which they felt needed fine-tuning before being delivered.

participants and thus will provide more systematic feedback regarding the participants' assessments of *Explore Your Horizons* components.

Orientation

The Orientation session for participants and parents was the first occasion that *Explore Your Horizons* participants met the Facilitators. It was held in the September or October following random assignment. The *Future to Discover* office mailed invitations—in the form of postcards—to all *Explore Your Horizons* and *Explore Your Horizons* plus *Learning Accounts* program group members; Facilitators followed up by telephone a few days prior to the session to confirm attendance and assist in overcoming potential barriers related to transportation or child care.

Orientation sessions varied in length from one hour and 15 minutes to two hours, depending on the amount of audience participation. They were held on site at participating schools during the evenings so that parents could attend with the participants. School staff—the principal and/or guidance counsellor and/or *Future to Discover* school liaison contact—often attended as well.

With a "Who, What, Why, Where, When" approach, the Facilitators explained *Explore Your Horizons* and described the three years of activities. To provide an example of the types of activities contained in Career Focusing, Facilitators led the audience through an exercise of naming occupations by the letters of the alphabet, writing them on a flipchart as members of the audience called them out. In the Orientation sessions observed by SRDC, this activity seemed to capture the imagination of the audience, and the discussion was quite lively with participants and parents alike calling out their responses.

Facilitators then distributed and explained the *Explore Your Horizons* Participant Declaration, which participants and parents were asked to read, sign, and return to the Facilitators. The Declaration was comprised of a three-page document that reiterated information contained in the *Future to Discover* Informed Consent form about how data would be shared, extended the collection of contact information for participants, and provided more detailed information about the *Explore Your Horizons* program rules and expectations, including that participants and parents would participate "to the extent reasonably possible."[79] Unlike the *Learning Accounts* Participant Declaration, which was mandatory, the *Explore Your Horizons* Participant Declaration was not deemed essential to participation, but rather was intended as a means of encouraging familiarity with the intervention and subsequent active participation.

The introduction and review of the Participant Declaration sometimes slowed the pace and energy of the Orientation sessions, but participants and parents did not voice concerns about signing it. Overall, the audience reaction to Orientation sessions was positive, perhaps more visibly so from the parents, who expressed approval that *Explore Your Horizons* would encourage their children to plan for careers after high school and provide them with information to guide them. Facilitators stayed behind after Orientation sessions to answer further questions and to chat informally with parents and participants. Most attendees seem satisfied with what they heard during the sessions and did not stay behind afterwards.

Facilitators took attendance at the Orientation sessions and mailed information packages including Participant Declarations to households that had no representation at the session. They then followed up by telephone and, where feasible, provided the information over the phone and encouraged participants to attend the upcoming Career Focusing 1 workshop or Post-secondary Ambassador 10A, whichever was being offered next at each participant's site.

Career Focusing Workshops

Year 1 *Explore Your Horizons* participants were invited to a series of six Career Focusing workshops over the school year. A variety of means were employed to invite participants to the workshops depending on local availability of mass communication technology such as school "talkmail" or "PhoneMaster" systems. In Manitoba, based on participant-stated preference, invitations might also be issued via student e-mail addresses. Approaches intensified and diversified over time as Facilitators stepped up efforts to gain higher attendance throughout Year 1.[80]

As with all *Explore Your Horizons* workshops, Career Focusing was held on site at the participating schools. Unlike the Orientation session, Career Focusing was essentially for participants only and not parents, although parents were invited to the sixth and last workshop. Career Focusing workshops 1–5 were held at the end of the school day to make it more convenient for participants to attend. Typically there was a short break of about 15 minutes between the end of class and the beginning of the workshops, in order to give participants a chance to pack up their belongings and to get to the workshop location, where they were invited to help themselves to refreshments while waiting for the session to begin. Career Focusing 6 was held in the evening to make it easier for parents to attend with their children.

Each workshop began with a quick review of the previous one(s), and a look at the agenda for the current session. Facilitators used overhead slides and scripts they received during training, contained in the *Future to Discover* Operations Manual. Career Focusing Student workbooks were distributed for participants to use during each session; some Facilitators chose to gather and keep the workbooks between sessions to avoid participants forgetting them for the next session.[81] Each session ended with the checking off of activities completed in the workbooks.

79 *Explore Your Horizons* Participant Declaration, section 7.ii.
80 See the earlier section entitled "Encouraging Participation."
81 Regardless of whether or not participants took their workbooks home or Facilitators gathered them, the intent of the workbooks is for in-workshop use; *Explore Your Horizons* purposely does not include additional "homework" for participants.

Participants also received an *Explore Your Horizons* project binder to store work booklets and handouts. The binder is intended as a convenient means of cataloguing the *Explore Your Horizons* materials so that participants can revisit the exercises after the workshops.

Career Focusing workshops offered a different activity level than Post-secondary Ambassador workshops. The curriculum for Post-secondary Ambassadors was delivered largely through interactive activities including games. Career Focusing workshops included "ice-breaker" and small group activities but also required participants to listen attentively for significant amounts of time and to complete exercises in their Workbooks, alone or in groups.

Observations by SRDC staff and reports from the *Future to Discover* office staff and Facilitators indicate that for the most part participants were attentive during the workshops. Students who offered feedback to the *Future to Discover* office staff and facilitators tended to say positive things. Facilitators and the *Future to Discover* office staff strongly believed that the content of Career Focusing sessions resonated with the young people who attended and that it had the potential to make a positive impact on the way they thought about their futures. As would be expected, some participants were more responsive than others during the Career Focusing workshops, and not all sessions ran smoothly. Facilitators have become familiar with a core group of *Explore Your Horizons* participants at each school who represented "regulars" who attended with enthusiasm. The size of this group varied among sites. Occasionally, a student did indicate that he or she was less enthusiastic about attending. One of the Facilitators described these participants: "… who don't want to be there. I know they don't want to be there; everyone knows they don't want to be there and their parents have said, 'You're going!' And they've told us that straight up."[82] Even when confronted with less-than-enthusiastic participants, Facilitators were skilled at maintaining order in the session, often making use of gentle humour or other means to encourage reluctant participants. Even in the rare cases when a student was disrupting the class, attention could be maintained, because there were two Facilitators present at each workshop; one Facilitator would address the problem while the other continued the presentation.

Career Focusing Workshop #1 (CF1)

Career Focusing 1 was an introductory session intended to provide context for the later Career Focusing workshops and to engage participants in the process of exploring their interests and developing a career focus. Participants were given Career Focusing workbooks containing the exercises they would be completing for all six workshops. The workshops began with an "icebreaker" exercise comprised of an occupation name game similar to the one used in Orientation as an example of Career Focusing activities. In this version, participants chose occupations that began with the letters of their first and last names, following the lead of the Facilitators. A "Future Telling" activity followed, in which one participant was the subject of a "This is Your Life" script addressed to them by Facilitators, with opportunities along the way for group discussion about the pros and cons of this subject's "future." "Career Focusing" was introduced as a means to help participants learn how to make decisions to create a future that would be a good fit for them. The remainder of the time—the majority of the workshop—involved explanation and modeling of the Artifact Bag assignment and focusing that would take place

82 Interview with Manitoba Facilitators, February 2006.

in Workshop #2. The Artifact Bag exercise involved individuals selecting and presenting five items from their home or surroundings that they felt represented something important in their lives or something they like to do. Individuals had to be prepared to describe their artifacts, and their significance, in some detail, as listeners were encouraged to ask questions and to identify themes of importance in the person's presentation of their artifacts. The Facilitator's role was to propose a single statement—or "focus statement"—for each individual intended to describe the person's core values or *raison d'être*.

Developers of Career Focusing claim that a good indication of when a focus statement has been attained is when the subject has a psychological "Aha moment"[83] upon hearing it. In Career Focusing 1, the two Facilitators took turns playing the roles of "subject" and "facilitator" (leading the development of the focus statement and brainstorming about four to five types of work that match the focus). Following this, the participants and Facilitators engaged in discussion about potentially suitable occupations for the subject using Career Focusing resource materials. The materials included 28 occupational posters that participants examined to select occupations to fit their focus. They then placed their chosen occupations on a "Work Wheel" as options for consideration. Participants were typically quiet when the subject shared his or her artifacts and explained the personal significance of each item. The sessions came to an end after participants had tracked their progress through a review of the Career Focusing Checklist in their workbooks.

Career Focusing Workshop #2 (CF2)

Career Focusing 2 lies at the heart of the design of the Career Focusing workshop series, as this is where participants were to "find" their own personal focus with the support of Facilitators and fellow participants. Developers of Career Focusing recommended a ratio of no more than six participants to each Facilitator for the focusing process, in order to permit each student 15 minutes to explain their artifacts and obtain their focus. For this reason, Facilitators chose one of two ways to deliver the workshop. They split the *Explore Your Horizons* group into two and either held two consecutive workshops for each half, or they ran concurrent sessions by inviting another Facilitator team to join them so that the 6:1 ratio was maintained.

As with the other Career Focusing workshops, the sessions began with a review and follow-up on questions the Facilitators previously gave to participants for which answers could be sought on the *Future to Discover* Web site. A warm-up activity for the whole group followed, in which groups of four participants were asked to work together to list as many occupations as possible connected with french fries. After two minutes participants posted their lists and the winning team received a round of applause, or in some cases, a small prize (such as chewing gum). The Facilitators then began the Artifact Bag exercise with a group of no more than six participants each, while—depending on the chosen format of the session—other participants worked on an activity called the "Work Preferences Filter #1."[84] Career Focusing exercises contained a series of "filters" that were applied to help participants progressively pare down a large number of potential career choices into a small number thought to be most suited to them. Filter #1 encouraged participants to examine their strengths, challenges, and workplace needs in order to identify an "Ideal Workplace" for them. This filter exercise could occur either before or after the Artifact Bag exercise, because the criteria for the two were independent of each other.

Not all participants brought their artifacts to Career Focusing 2. Some brought drawings or used other means to describe them. In the majority of cases, participants were engaged in this process and paid close attention to their peers as they described their artifacts. The desired "Aha moment" could be clearly observed at times. One male participant, when asked how it felt to read the focus statement that was prepared for him by a Facilitator, said, "It feels a little strange, it's like falling in love."[85] In fewer numbers, there were also participants who appeared less engaged, as indicated by lack of participation in the discussion. Regardless, their artifacts were discussed and their focus statements were prepared.[86] The session culminated with participants brainstorming and helping one another find potential occupations to place on their Work Wheel.

During interviews with Facilitators and other *Future to Discover* staff, SRDC heard Career Focusing 2 described as a highlight of *Explore Your Horizons*. Clearly, those interviewed believed that focusing could act as a motivating and directional force in participants' lives. Some of their comments included the following:

> *To see the process that's used to determine personal interests and educational interests of the students and just to see the interaction between the two of them and how the facilitators are moved by the students and the students are impacted by the facilitators…made me feel proud of being a part of the project.*

> *"Anytime the students are able to work in small groups, we seem to get good feedback from that. So, if I think back to Career Focusing, probably the most interesting and the most fun part for them was actually finding their focus….*

Because the focus statement attained during Career Focusing 2 acted as the foundation for future Career Focusing workshops, and would be required for Grade 11 and Grade 12 *Explore Your Horizons* activities, Facilitators took extensive measures to complete the focusing process with

83 An "Aha moment" occurs when a subject experiences a sudden conscious recognition that a problem has been solved with insight (Jung-Beeman et al., 2004).
84 An audio CD was made available as an option for guiding this process when the Facilitators were occupied with the Focusing process.
85 New Brunswick, November 2005.
86 Facilitators reminded participants that their focus statements were to be considered "draft" statements and that they could change and refine them as they continue through Career Focusing and beyond.

participants, whether they attended the workshop during the regularly scheduled time, or made up the time at a later date in person or even by phone.[87]

Career Focusing Workshop #3 (CF3)
Career Focusing 3, 4, and 5 were intended to build on the work done in focusing through a "Matching" process in which participants' focuses were matched to potential occupations through the use of a variety of "Filters." The three workshops took place in a schoolroom with access to computers so that participants could look at online resources for career and post-secondary education planning in addition to the hard copy materials that were available in the resource kit. As Year 1 progressed, New Brunswick Facilitators described Career Focusing 3, 4, and 5 as being "fluid" in relation to one another. Facilitators felt it was important to be flexible in order to meet the needs of their participants rather than insist on fixed start and end points for each workshop. The same content was delivered across the three workshops, but with variations in timing across the sites.

The main objective of Career Focusing 3 was to complete the first component of the Matching process by finishing the Work Wheel started in Career Focusing 2, using print and electronic resources. The participant workbooks included "clarifying tools" intended to help them narrow down the array of choices written on their work wheels. The Matching #2 process aimed to establish "Top Work Options" by reviewing the print or electronic occupational profiles of their proposed occupations. Participants had to first see how closely the verbs in the profiles matched their verbs from their Work Wheels and then record their top work options in their workbooks.

For some participants, Career Focusing 3 seemed to cover a lot of material, and the exercises were not simple. When one of the resource books (National Occupational Classification[88]) was brought out, one boy said, "Not that book again, there is so much stuff in it."[89] Another participant at the same session spoke up saying: "I am having a hard time understanding." The Facilitator reassured him that she had trouble the first time she did the exercise too, and she took the time to review it so that all participants understood before moving on. Overall, participants in Career Focusing 3 workshops were observed to be animated and engaged in the process of researching different occupations.

The Career Focusing 3 script required Facilitators to start the session by checking with participants that they had access to the *Future to Discover* Web site and (for Manitoba and New Brunswick Cohort 2) by asking for answers to the question given at Career Focusing 2. Because the Filtering and Matching done in Career Focusing 3 required the use of verbs, the chosen warm-up exercise was a "Verb Game" in which small groups of participants worked together to name as many verbs associated with an occupation of their choosing as they could.

Career Focusing Workshop #4 (CF4)
The objectives of Career Focusing 4 were to familiarize participants with the post-secondary education options available to them, to teach them how to use educational planning resources, and to identify the post-secondary education admission requirements for the programs related to their top work options. After a warm-up exercise in which participants were asked to brainstorm all the types of work they could think of related to cars, participants were divided into two groups. One Facilitator led a discussion about university and apprenticeship while the other discussed college and private vocational institutes. Both referred to handouts and the workbooks. After 20 minutes the facilitators switched, so that all participants could become familiar with the four streams. Students spent the final 60 minutes exploring post-secondary education options that could prepare them for their Top Work Options. At the closing of Career Focusing 4, participants were asked to bring their report cards or transcripts to the next session, where they would be looking at their academic history and future.

Career Focusing Workshop #5 (CF5)
In Career Focusing 5, participants applied CF Filter #2 "My Academic Realities." This involved examining the courses they were taking and their (estimated) marks in grades 9 and 10, and matching them to the courses they would need to take in grades 11 and 12 in order to prepare for the post-secondary education required for their desired occupation(s). In this way, gaps could be identified and course choices potentially adjusted and/or alternative post-secondary education options/occupations examined. Participants were asked to list the potential occupations that remained after the filtering and matching in their workbooks, and to draft plans for their Grade 11 and 12 courses. The Career Focusing 5 script implored participants to consider their plans as "draft forms," because they would be undertaking a journey with potentially lots of twists and turns, and over the next two years they would be likely to make adjustments to their plans using the same Career Focusing process.

The warm-up activity for Career Focusing 5 was for a volunteer to name an occupation and for the group to list the hypothetical consequences of this occupation ceasing to exist. The session was to end with a review of the agenda for Career Focusing 6, including instructions for preparing presentations for the session.

Although Career Focusing 3, 4, and 5 included warm-up activities and group discussion regarding the Filters and Matching processes, much of the time in these workshops was dedicated to participants' own thinking and research. Facilitators were available for support, but participants were required to make a significant effort. Some were quick and keen to work through the exercises while others required more time and/or one-on-one guidance. Compared with the excitement and energy of the focusing activities of Career Focusing 2, these sessions were both observed and

87 "Make-up" sessions are described in Chapter 6.
88 More information about the National Occupational Classification can be found at www.hrsdc.gc.ca/en/hip/hrp/noc/noc_index.shtml.
89 New Brunswick November 2005.

reported to be less lively. One of the Facilitators described the workshops Career Focusing 3, Career Focusing 4 and Career Focusing 5 like this: "It was work. They had work to do, research, and that's not the most exciting thing in the world."[90] Similarly, when asked to recall an example of an *Explore Your Horizons* delivery challenge, another Facilitator thought immediately of Career Focusing 5: "I think in Career Focusing 5, where they have to look at their marks from last year, their current marks, and they have to forecast what their marks might be and whether or not they're on track for the career…the Top Work Options that they have. There was…one who just would not put it on her paper. She just could not. She was, was 'locked' in regards to that and, you know, we had a bit of discussion and…said well you know, that's Okay if you really can't, you know, no one would be forced to, right?"[91]

Career Focusing Workshop #6 (CF6)

Career Focusing 6 was the culmination of the Career Focusing curriculum, and the main objective of the workshop was for *Explore Your Horizons* participants to celebrate and share their work in Career Focusing with their parent(s) or other significant adult. Career Focusing 6 was also intended to set the stage for the Year 2 *Explore Your Horizons* activities, comprised of Lasting Gifts workshops with parents and the continuation of the Post-secondary Ambassador workshops. Because parents were invited to Career Focusing 6, these workshops were held in the evenings, typically commencing with refreshments from 6:45 to 7:00 p.m. School principals and/or other school contacts were also invited to attend these celebratory sessions, and often did.

Facilitators began the workshop with an overview of the Career Focusing process, mostly for the benefit of the parents, who were about to hear the participants make presentations on their Career Focusing experience. The participants took turns making short—approximately one minute—presentations to the parents. Their presentations were based on the planning notes in their workbooks, as encouraged at the previous (Career Focusing 5) workshop. Content could include their focus statement, their strengths, types of work they were considering, post-secondary education plans, and so on.

Following the sharing of presentations, participants and their parent(s) found a private space for a participant-adult interview. In this activity, the participant presented their Career Focusing workbook, and reviewed the pages showing the exercises they did. They were to recapitulate the steps taken and explain to their parents how they came to their preferred occupations and draft post-secondary education choices. The entire group then met up again for a plenary session, where the adults were encouraged to ask questions like "What did you learn? Were there any surprises?" The workshops ended with the Facilitators describing the Year 2 activities and the parental role in Lasting Gifts workshops.

Facilitators and the *Future to Discover* office staff[92] described Career Focusing 6 as a highlight of the Year 1 *Explore Your Horizons* activities. Comments made during interviews with SRDC staff included the following:

> *Oh, every single one of those Career Focusing 6 sessions gave me that same feeling—like I'm doing something important and they* [students] *are getting something out of this.*

> *I think Career Focusing 6, when their parents come, that was an amazing experience for the teens as well as the parents… those sessions were just incredible…it was so rich and the parent reaction was so positive and the interactions between the students and the parents was so special. And to me it was like—YES!*

> *It's touching to see parents who are genuinely concerned about their children's future and to have them participate and come in and have the students present to their parents what they've been working on in regards to the* Future to Discover *project for the year… and to see how proud the students are to be just conversing with their parents in a different environment.*

From field observations of Career Focusing 6, SRDC staff also noted the engagement of participants and parents in this session. Parents seemed to like the idea that their children were planning for their careers, and some asked about whether or not this type of programming would be added to the school curriculum. Some parents seemed surprised to hear what their children presented in terms of their strengths and weaknesses or their career options, but whether they agreed with them or not, their interest was evident. One father said he learned how to respect his son in his career choices, while another parent (mother) remarked that she had learned more about her son's interests by attending the session.

Post-secondary Ambassador Workshops

There were two Post-secondary Ambassador workshops offered in the first year of *Explore Your Horizons*. Like the Career Focusing workshops, Post-secondary Ambassador 10A and 10B were held on site after a short break at the end of the regular school day. The Post-secondary Ambassador workshops were designed to be delivered by three Post-secondary Ambassadors and overseen by a Facilitator.[93] The Facilitators' presence was to provide support for the Post-secondary Ambassadors in the event of problems or safety issues, to help set up or distribute materials, and to answer difficult questions. Particularly in rural areas, Facilitators provided transportation for the Post-secondary Ambassadors by driving them to and from sessions. Post-secondary Ambassadors were clearly the lead facilitators of these workshops, and hence the presence of the Facilitator(s) was intentionally discreet. Post-secondary Ambassadors had been chosen deliberately for their youth and potential to act as effective facilitators of content and as role models

90 Interview with Manitoba Facilitators, February 2006.
91 Interview with New Brunswick Facilitators, November 2006
92 *Future to Discover* office staff conducted field observations of Career Focusing workshops..
93 In cases where travel arrangements and time permitted, sometimes two Facilitators monitored Post-secondary Ambassador workshops. Although not a requirement, it was felt that there was merit in additional oversight for the purpose of providing additional feedback to the Post-secondary Ambassadors; additionally, Facilitators attended simply out of interest in *Explore Your Horizons* and the students who were taking part.

for the *Explore Your Horizons* participants. It was thus anticipated that they could require the backup of an adult presence at the sessions.

Post-secondary Ambassadors delivered the workshops using the detailed "Delivery Guidelines" and materials (overheads and handouts) provided by DMHS, the developers of the workshops, in accordance with how they were taught during the training at the Post-secondary Ambassador retreats. As with the Career Focusing workshops, each two-hour session began with participants applying name tags while they helped themselves to refreshments, and ended with the completion of workshop feedback forms for the Post-secondary Ambassadors. The Facilitator(s) reviewed the feedback forms with the Post-secondary Ambassadors following each session, and they also provided their own feedback about the session.

Workshop 10A "Introduction to Post-secondary Education" contained information and activities designed to emphasize the variety and large number of possible occupations as well as the post-secondary education qualifications they required. A "Human Bingo" game encouraged participants to identify their transferable skills, and teams within the class competed with one another to name as many occupations as possible. The workshop challenged participants to examine stereotypes about occupations through a guessing game where they matched people with their real-life occupations. The teams wrote and performed a song about post-secondary education for another activity. One team of Post-secondary Ambassadors found participants reticent to take part in this activity the first time they held this workshop and responded by leading with a song of their own in future sessions. The limited available data suggests that, in general, participants were enthusiastic about the activities. More insight will be available from the follow-up survey and from focus groups with participants and with Post-secondary Ambassadors. The sessions ended with participants being asked to record (on a "Future to Action" handout) an action that they would take to help complete their own journey towards post-secondary education.

Workshop 10B "Making the Most of High School" began with a game in which small groups of participants received an envelope containing a mix of words to form into a sentence. When a group had correctly deciphered "The time you spend now in high school can make a big difference in what you can do when you graduate," the Post-secondary Ambassadors congratulated them and repeated the phrase as a lead into a discussion about factors that play a role in opening or closing doors to post-secondary education. Students then played "Graduate Pursuit"—a customized version of the popular board game "Trivial Pursuit"—followed by a game of "Jeopardy." In both cases, the games were played to impart information about education and career choices in an interactive format. Following this, Post-secondary Ambassadors recounted their own "post-secondary education journeys" in accordance with the specifications in the scripts and encouraged participants to ask them questions. The sessions ended with participants being asked to take a few minutes to record an action that they would take towards their own post-secondary education journey on a "Future to Action" handout.

SRDC's evaluation plan does not include researcher observations of Post-secondary Ambassador workshops in order not to interfere with the important peer-to-peer Post-secondary Ambassador–student dynamic. However, Facilitators were required to attend and the *Future to Discover* office staff observed some sessions. These sources offered their feedback at their meetings and in interviews with SRDC staff. These sources indicated that with few exceptions, participants were enthusiastic to take part in the workshop activities and could relate to the Post-secondary Ambassadors as students not much older than themselves. One spoke of the "high energy" at the Post-secondary Ambassador workshops and how participants are "so engaged in these young people (Post-secondary Ambassadors) and they can relate to them and they think that they're cool."[94] Another described how the participants "ate up every single word that these Post-secondary Ambassadors said…" and how the participants "are talking to people who are closer to their age who have recently been through all this and been in high school so…I think they could relate really well."[95]

Post-secondary Ambassador workshops scheduled for Year 2 and Year 3 will be included in the Interim Impact report. SRDC is receiving feedback about the Post-secondary Ambassador workshops directly from participants in the 30-month follow-up survey and in focus groups. Focus groups with the Ambassadors themselves will provide an understanding of their assessment of the workshop content and the Post-secondary Ambassador component of *Explore Your Horizons*.

F2D Magazine

In each of the three years of *Explore Your Horizons*, participants received two issues of the F2D magazine. Mailed by the *Future to Discover* office in fall and in spring, the F2D magazine presented education and career development information in a format intended to be appealing and resonant with the target audience. Each issue contained profiles of students attending various post-secondary institutions, as well as articles related to the topics covered in Career Focusing. A "Whazzamean?" section included definitions of education or career-related terms.

The magazine was designed with the belief that students were more likely to read one or more section(s) or article(s) at a time than to read straight through from front to back. This belief informed the use of different colours and text

94 Interview with New Brunswick Facilitators, November 2006.
95 Interview with Manitoba Facilitators, February 2006.

styles, boxes, and the integration of pictures into the text. In Career Focusing sessions, participants were told that the F2D magazine would represent a good reference for them and their parents, and they were encouraged to keep the magazines in their F2D binder for ongoing use. The magazines were three-hole-punched for this purpose.

The magazine and Web site were linked not only in terms of shared content, but also because they referred to one another. This represented a deliberate attempt to integrate the components of *Explore Your Horizons* and to reinforce messages regarding career exploration and education planning. For example, the first inside page of the Year 1 spring issue of F2D asked "What's online this spring?" and described the contents of the Web site, including links back to F2D magazine content such as the complete list of "Whazzamean?" terms. The same issue made six other direct references to the *Future to Discover* Web site to encourage participants to check out the Web links or other resources that can be found on the *Future to Discover* homepage. To further link the F2D magazine—and all other *Future to Discover* correspondence—with the Career Focusing workshops and the Web site, the decision was made to stamp all envelopes being mailed from the *Future to Discover* office with the Web site address.

Explore Your Horizons participants will provide feedback about the F2D magazine in the follow-up surveys and in future focus groups.

Future to Discover Web Site

The *Future to Discover* Web site was designed as a dedicated, members-only Web site with education and career development information intentionally similar to that provided in the F2D magazine. All *Explore Your Horizons* participants were assigned User IDs and unique "access key" codes that had to be entered in order to gain access to the site. Allegro 168 Communications + Design created individual codes for each student, and transmitted them securely to the *Future to Discover* office. Students received their access key in a scratch card inserted into the first (fall) issue of the F2D magazine mailed to their home. While access keys were required for initial access to the Web site, once logged in, participants could choose their own password for subsequent use.

Access keys comprised an eight-digit combination of numbers and upper and lower case letters, and this format caused problems for some participants who were not aware of nor alerted to case sensitivity or who could have found the combination otherwise difficult. Furthermore, some participants scratched the cards so hard that they obliterated their access keys. In these cases, participants could obtain their access keys by calling the *Future to Discover* office. Once this problem was identified, participants were cautioned against scratching too hard.

In order to overcome some of the potential problems related to the use of access keys and to promote access to the Web site, Facilitators adopted a proactive approach to encourage participants to log in. As time permitted during Career Focusing workshops, Facilitators utilized the schools' computers to help guide their participants through the process of accessing the Web site. Reports from Facilitators and SRDC field observations indicated that this approach was successful in getting participants to log in. Once access keys were correctly inputted, there were no apparent problems accessing the site itself. Regardless of access problems, however, Web site usage statistics presented in Chapter 7 indicate that the *Future to Discover* Web site was not used extensively.

Explore Your Horizons participants will be asked for their feedback about the *Future to Discover* Web site in the follow-up surveys and in focus groups.

CONCLUSION

This chapter has described the Year 1 *Explore Your Horizons* activities and the preparations required for their implementation, including hiring and training of staff, and monitoring of operations. Data from field observations and interviews with staff have been presented to illustrate participant reactions to *Explore Your Horizons* activities; these data, combined with information from secondary sources such as the Operations Manual and meeting minutes, support the conclusion that *Explore Your Horizons* was successfully implemented as planned.

6

Explore Your Horizons Year 1 Participation

Introduction

This chapter examines the extent to which participants were actively taking part in *Explore Your Horizons* activities. In order for the intervention to have an impact on access to post-secondary education, it is crucial for participants to be adequately exposed to it through active participation. Differential rates of participation among subgroups are also of interest to determine whether or not *Explore Your Horizons* attracts and/or resonates more with some groups than others. The results of these analyses are included in this chapter. The participation findings summarized below will be further explored and illuminated with the findings from follow-up surveys and additional qualitative research activities.

Participation data for Year 1 is presented for participants in the *Explore Your Horizons* groups in Manitoba and in New Brunswick (shown by linguistic sector) and the combined *Explore Your Horizons* plus *Learning Accounts* group in New Brunswick.[96] Participation is examined by gender, family income, parental education, and a combination of the latter two. Data on access to the *Future to Discover* Web site is presented, along with characteristics of the participants who made use of the Web site. Steps taken by *Future to Discover* staff to further encourage participation in *Explore Your Horizons* activities—and thereby attempting to increase the intervention's impact—are described in the last section of this chapter.

96 "Year 1" refers to the first year of each participant's potential exposure to *Explore Your Horizons* activities, typically during Grade 10, regardless of which cohort he or she belongs to.

CHAPTER SUMMARY

- **Most participants attended at least one *Explore Your Horizons* session, and many attended multiple sessions.** Over two thirds of New Brunswick participants, and nearly 60 per cent of Manitobans attended the Orientation.
- **Attendance rates varied among sessions but tended to decrease throughout Year 1.**
- **Attendance at Year 1 *Explore Your Horizons* sessions was higher in both linguistic sectors in New Brunswick than in Manitoba.** On average, Manitoba participants attended 4.5 sessions in Year 1, compared with 5.2 for New Brunswick francophones and 5.3 for New Brunswick anglophones. Attendance at Year 1 sessions ranged from 31.5 per cent to 65.0 per cent in Manitoba, from 46.1 per cent to 69.9 per cent in the New Brunswick francophone sector, and from 46.7 per cent to 73.1 per cent among New Brunswick anglophones.
- **Gender was a factor associated with attendance among francophones in New Brunswick, where significantly more females than males attended sessions.** The difference in attendance rates between New Brunswick francophone males and females was statistically significant for all sessions, ranging from 6.3 percentage points for Career Focusing 1 to 16.0 per cent for Career Focusing 3.
- **Participants from the designated group—those from families with lower income and/or lower levels of parental education—attended fewer sessions than participants from families with higher income or higher parental education.** This was particularly apparent in Manitoba and francophone New Brunswick, and less so among anglophones in New Brunswick.
- **Participants who were in the combined *Explore Your Horizons* plus *Learning Accounts* group in New Brunswick attended more sessions than those in the group receiving *Explore Your Horizons* alone.** This was particularly true in the francophone sector, where attendance was significantly higher for all sessions. Lower impacts were found in the anglophone sector, where the combined group had significantly higher attendance rates at about half the sessions.
- **The *Future to Discover* Web site was not used by a majority of participants;** Manitoba participants were most likely to access it, followed by New Brunswick Cohort 2 and New Brunswick anglophones.
- **Participants who frequently attended *Explore Your Horizons* were much more likely to access the *Future to Discover* Web site than those who did not attend.**

DATA SOURCES

This chapter contains data from three primary sources: the Project Management Information System (PMIS), the *Future to Discover* baseline survey, and Web site usage data gathered by Allegro 168 Communications + Design as the contractor for the *Future to Discover* Web site. The PMIS was designed primarily for the use of the *Future to Discover* staff for maintaining contact information for all *Future to Discover* participants, preparing and sending correspondence, scheduling *Explore Your Horizons* sessions, and keeping track of attendance at the sessions. The PMIS is housed at the New Brunswick Department of Education and is remotely accessed by Facilitators in both provinces using their laptop computers. The participation (largely attendance) data referred to in this chapter were obtained via files extracted from the PMIS and sent to the Social Research and Demonstration Corporation (SRDC) for analysis. The same secondary data sources as referred to in Chapter 5 are also beneficial to this chapter, namely the *Future to Discover* Operations Manual and appendices and meeting minutes of *Future to Discover* staff.

ATTENDANCE AT *EXPLORE YOUR HORIZONS* WORKSHOPS YEAR 1

Participant attendance data for each of the nine workshops that comprise the first year of *Explore Your Horizons* are presented in tables 6.1 through 6.4. All workshops are held outside of school hours, with most (seven out of nine) being held immediately following regular school hours and the two sessions involving parents being held in the evening. The attendance of parents[97] is also presented for the two workshops—Orientation and Career Focusing 6—to which parents were invited to accompany their son or daughter. Attendance data is presented for Manitoba, New Brunswick anglophones, and New Brunswick francophones. Within each of these three sub-samples of the *Future to Discover* participant population, attendance is examined by gender, family income, level of parental education, cohort (New Brunswick only), and the Lower-Income/Lower-Education or LILE variable.[98] The LILE variable combines family income and parental education characteristics for the purposes of identifying the *Future to Discover* "designated group" of students least likely to access post-secondary education (PSE). It is these students for whom it is thought that *Future to Discover* may have the biggest impact and for whom attendance is particularly sought.

Attendance of Manitoba Participants

As illustrated in Table 6.1, in Manitoba the attendance rates varied from session to session. On average across all sites, nearly 6 in 10 Manitoba participants (59 per cent) attended Orientation, with equal numbers bringing at least one parent with them. The same proportions attended both Career Focusing 1 (60.5 per cent) and the first Post-secondary Ambassador workshop (59 per cent). The highest attendance rates were realized for Career Focusing 2, with almost two thirds (65 per cent) of participants showing up. Attendance rates show a pattern of decline throughout the year, culminating in less than one third (31.5 per cent) of participants attending Career Focusing 6 and 40.9 per cent attending the second Post-Secondary Ambassador workshop.

97 Participants may attend workshops with a guardian or other significant adult in lieu of a parent. For the purposes of this chapter, the term "parent" encompasses other adults.

98 The designated group of students whom *Future to Discover* is endeavouring to engage are those who are least likely to pursue post-secondary education after high school. For analytical purposes, these are identified as students from *lower-income* families and/or with parents with *lower* levels of *education* (referred to as LILE).

Table 6.1: Attendance at *Explore Your Horizons* Sessions by Manitoba Participants

Session	Session Number	Per cent						
		All	Male	Female	Difference	LILE	Non-LILE	Difference
Orientation								
Participants	1	59.0	55.4	62.8	-7.4*	46.9	64.3	-17.4***
Adults	1	59.3	57.0	61.7	-4.7	45.2	65.6	-20.4***
Career Focusing								
Participants	1	60.5	58.4	62.8	-4.4	45.8	67.4	-21.6***
Participants	2	65.0	63.8	66.4	-2.7	53.7	70.4	-16.8***
Participants	3	52.3	53.0	51.6	1.4	41.8	57.1	-15.3***
Participants	4	43.5	40.9	46.2	-5.3	32.2	48.6	-16.4***
Participants	5	43.0	43.0	43.0	0.0	32.8	47.3	-14.5***
Participants	6	31.5	28.2	35.0	-6.8*	22.0	35.5	-13.4***
Adults	6	31.0	27.5	34.7	-7.1*	21.5	35.2	-13.8***
Post-secondary Ambassador Workshops								
Participants	1	59.0	55.7	62.5	-6.8	46.3	65.0	-18.7***
Participants	2	40.9	39.3	42.6	-3.3	33.3	44.2	-10.9***
Session Attendance								
Attended no sessions		21.6	21.8	21.3	0.5	31.1	17.2	13.8***
Attended seven sessions or more		39.8	37.2	42.6	-5.4	28.2	45.0	-16.7***
Number of Sessions Attended		Number of sessions						
Career Focusing		3.0	2.9	3.1	-0.2	2.3	3.3	-1.0***
Post-secondary Ambassador Workshops		1.0	0.9	1.1	-0.1	0.8	1.1	-0.3***
All sessions		4.5	4.4	4.7	-0.4	3.5	5.0	-1.4***
First four sessions[1]		2.4	2.3	2.4	-0.1	1.9	2.6	-0.7***
Last four sessions		1.6	1.5	1.7	-0.2	1.2	1.8	-0.6***
Other		Per cent						
Participation agreements signed		59.7	58.7	60.7	-1.9	45.8	66.1	-20.3***
Sample size		575	298	277		177	389	

Source: Program Management Information System.
Notes: [1]Excluding Orientation session.
A two-tailed t-test was applied to differences between the outcomes for the program and comparison groups.
Statistical significance levels are indicated as: * = 10 per cent; ** = 5 per cent; *** = 1 per cent.
Percentages may not precisely sum due to rounding.
Sample sizes vary by variable due to missing data.
LILE means "lower income, lower education," meaning the participant's co-resident parents jointly had below provincial median income and neither held a two-year PSE degree, diploma, or certificate at the time of recruitment.

On average, Manitoba participants attended 4.5 of the 9 workshops[99] offered during Year 1. Declining attendance rates can also be seen in the average numbers of workshops attended by comparing average attendance at the first four (Career Focusing 1–3 plus the first Post-secondary Ambassador workshop) of 2.4 sessions with average attendance at the last four (Career Focusing 4–6 plus the second Post-secondary Ambassador workshop), which was 1.6 sessions.

In most cases, gender was not associated with attendance at *Explore Your Horizons* sessions in Manitoba. However, significantly more girls than boys attended Orientation and Career Focusing 6.

Higher levels of family income and parental education were both correlated with attendance. This was true for all sessions. Table 6.1 indicates that the "designated" (LILE) group did not attend *Explore Your Horizons* sessions as frequently as participants from families with higher income or higher parental education. The difference in the attendance rates between the two groups was statistically significant for all sessions. The biggest difference in attendance was experienced for Career Focusing 1, which was attended by 67.4 per cent of non-LILE participants compared with 45.8 per cent of LILE participants. The smallest difference in attendance was for the second Post-secondary Ambassador workshop, with 44.2 per cent (non-LILE) and 33.3 per cent (LILE) attending respectively.

99 Including Orientation.

Table 6.2: Attendance at *Explore Your Horizons* Sessions by New Brunswick Anglophone Participants

Session	Session Number	Per cent						
		All	Male	Female	Difference	LILE	Non-LILE	Difference
Orientation								
Participants	1	67.9	66.8	69.0	-2.2	66.7	69.4	-2.7
Adults	1	68.4	66.6	70.1	-3.5	66.7	70.5	-3.8
Career Focusing								
Participants	1	65.9	65.1	66.5	-1.4	63.9	68.4	-4.5
Participants	2	73.1	72.8	73.3	-0.4	71.3	75.3	-4.1
Participants	3	55.2	54.3	56.0	-1.6	54.4	56.0	-1.6
Participants	4	49.9	51.4	48.5	2.9	49.9	49.9	0.0
Participants	5	50.4	49.8	51.0	-1.3	47.8	53.6	-5.8*
Participants	6	46.7	46.4	47.0	-0.6	42.1	52.5	-10.5***
Adults	6	45.8	46.4	45.2	1.2	41.5	51.2	-9.7***
Post-secondary Ambassador Workshops								
Participants	1	69.8	70.2	69.4	0.8	68.4	71.6	3.2
Participants	2	50.4	51.7	49.2	2.5	47.6	53.9	6.2*
Session Attendance								
Attended no sessions		16.1	16.3	16.0	0.4	17.5	14.5	3.0
Attended 7 sessions or more		48.1	47.8	48.3	-0.5	45.8	50.9	-5.1
Number of Sessions Attended		Number of sessions						
Career Focusing		3.4	3.4	3.4	0.0	3.3	3.6	0.3*
Post-secondary Ambassador Workshops		1.2	1.2	1.2	0.0	1.2	1.3	0.1*
All sessions		5.3	5.3	5.3	0.0	5.1	5.5	0.4*
First four sessions[1]		2.6	2.6	2.7	0.0	2.6	2.7	-0.1
Last four sessions		2.0	2.0	2.0	0.0	1.9	2.1	-0.2**
Other		Per cent						
Participation agreements signed		73.3	73.1	73.5	-0.4	72.7		-1.3
Sample size		861	416	445		487		

Source: Program Management Information System (PMIS).
Notes: [1]Excluding Orientation session.
Make-up sessions for Career Focusing 10 are not included.
A two-tailed t-test was applied to differences between the outcomes for the program and comparison groups.
Statistical significance levels are indicated as: * = 10 per cent; ** = 5 per cent; *** = 1 per cent.
Percentages may not precisely sum due to rounding.
Sample sizes vary by variable due to missing data.
LILE means "lower income, lower education," meaning the participant's co-resident parents jointly had below provincial median income and neither held a two-year PSE degree, diploma, or certificate at the time of recruitment.

Lower participation of the target group was also seen when comparing the frequency of attendance statistics: Nearly one third (31.1 per cent) of the LILE group did not attend any sessions, compared with only 17.2 per cent of the non-LILE group. Only 28.2 per cent of the LILE group attended sessions frequently, compared with 45.0 per cent of the non-LILE group.

The participant declaration for *Explore Your Horizons* was not mandatory for taking part in the sessions; rather, the declaration was intended as more of a recognition of commitment to participate (Chapter 5). In Manitoba nearly 6 in 10 (59.7 per cent of) participants signed their declaration. There was no difference in signing rates between genders; however, participants from the LILE group were significantly less likely to have signed, at 45.8 per cent compared with 66.1 per cent of the non-LILE group.

Table 6.3: Attendance at *Explore Your Horizons* Sessions by New Brunswick Francophone Participants

Session	Session Number	Per cent						
		All	Male	Female	Difference	LILE	Non-LILE	Difference
Orientation								
Participants	1	69.4	66.0	72.4	-6.4	66.3	73.1	-6.8**
Adults	1	66.4	62.7	69.7	-7.0	62.6	70.9	-8.3***
Career Focusing								
Participants	1	69.9	66.5	72.8	-6.3	68.9	70.9	-1.9
Participants	2	68.8	62.4	74.3	-11.9	64.8	73.3	-8.5***
Participants	3	54.2	45.7	61.7	-16.0	50.6	58.3	-7.7**
Participants	4	52.4	45.2	58.7	-13.5	49.2	56.0	-6.9**
Participants	5	46.8	42.6	50.5	-7.9	43.0	51.1	-8.1**
Participants	6	46.1	41.9	49.9	-8.0	43.4	49.4	-6.0*
Adults	6	42.7	39.5	45.5	-6.0	39.3	46.7	-7.4**
Post-secondary Ambassador Workshops								
Participants	1	64.0	57.1	70.1	-13.0	61.9	66.3	-4.4
Participants	2	52.1	47.5	56.2	-8.7	47.6	57.3	-9.7***
Session Attendance								
Attended no sessions		15.9	19.1	13.1	6.1	17.3	14.3	3.0
Attended 7 sessions or more		46.7	40.2	52.4	-12.2	43.8	49.9	-6.1*
Number of Sessions Attended		Number of sessions						
Career Focusing		3.4	3.0	3.7	-0.6	3.2	3.6	-0.4**
Post-secondary Ambassador Workshops		1.2	1.0	1.3	-0.2	1.1	1.2	-0.1**
All sessions		5.2	4.7	5.7	-0.9	5.0	5.6	-0.6***
First four sessions[1]		2.6	2.3	2.8	-0.5	2.5	2.7	-0.2**
Last four sessions		2.0	1.8	2.2	-0.4	1.8	2.1	-0.3***
Other		Per cent						
Participation agreements signed		72.8	68.7	76.4	-7.8	74.3	70.9	3.4
Sample size		893	418	475		486	405	

Source: Program Management Information System (PMIS).
Notes: [1]Excluding Orientation session.
Make-up sessions for Career Focusing 10 are not included.
A two-tailed t-test was applied to differences between the outcomes for the program and comparison groups.
Statistical significance levels are indicated as: * = 10 per cent; ** = 5 per cent; *** = 1 per cent.
Percentages may not precisely sum due to rounding.
Sample sizes vary by variable due to missing data.
LILE means "lower income, lower education," meaning the participant's co-resident parents jointly had below provincial median income and neither held a two-year PSE degree, diploma, or certificate at the time of recruitment.

Attendance of New Brunswick Anglophone Participants

As shown in Table 6.2, Year 1 session attendance rates were higher among New Brunswick anglophones than the Manitoba participants, although they were comparable to the francophones in New Brunswick (Table 6.3). Over two thirds (67.9 per cent) of participants and parents (68.4 per cent) attended Orientation, and a comparable number of participants (69.8 per cent) attended the first Post-secondary Ambassador workshop.

Attendance rates varied among the workshops from a high of 73.1 per cent for Career Focusing 2 to 46.7 per cent for Career Focusing 6, and showed a similar decreasing pattern over the year as in Manitoba.[100]

On average, New Brunswick anglophones taking part in *Explore Your Horizons* attended 5.3 sessions over the course of the year, more than their Manitoba counterparts (4.5 sessions) and virtually the same as the francophones in New Brunswick (5.2 sessions, see Table 6.3). The drop-off over the year was less marked among New Brunswick anglophones than Manitoba participants, with an average attendance of 2.6 for the first four sessions and 2.0 for the last four.

100 Attendance for Year 1 sessions in New Brunswick are pooled averages across cohort 1, who attended the sessions in 2004–5, and cohort 2, who attended the sessions in 2005–2006. Attendance for Year 1 sessions in Manitoba are for the single cohort of participants who attended the sessions in 2005–2006.

Gender was not linked to attendance among the New Brunswick anglophone participants, with males and females equally likely to be present.

Compared with Manitoba participants, and with the New Brunswick francophones, LILE status was not as strong an influence on attendance. Statistically significant differences in attendance between the LILE target group and others were noted only for Career Focusing 5 and 6 and the second Post-secondary Ambassador workshop. The most marked difference in attendance was realized at Career Focusing 6, where 52.5 per cent of the non-LILE group attended compared with only 42.1 per cent of the LILE group; similarly, 51.2 per cent of non-LILE parents attended compared with 41.5 per cent of LILE parents.

New Brunswick anglophones were more likely than Manitoba participants to have attended seven or more sessions (48.1 per cent compared with 39.8 per cent) and less likely not have attended any sessions at all (16.1 per cent compared with 21.6 per cent). Overall, the frequency of attendance of anglophones and francophones in New Brunswick was essentially the same.

Not surprisingly, the rate of signing participation declarations for *Explore Your Horizons* was closely associated with attendance at Orientation, where the declarations were introduced and attendees were encouraged to sign.

Thus it is not surprising that a relatively higher number of New Brunswick anglophones signed their declarations (73.3 per cent) than Manitoba participants (59.7 per cent), as this difference reflects the attendance at Orientation in both cases.

Attendance of New Brunswick Francophone Participants

Attendance rates at *Explore Your Horizons* sessions among New Brunswick francophone participants were higher than the Manitoba participants but very similar to their anglophone counterparts in New Brunswick. Attendance ranged from a high of 69.9 per cent at Career Focusing 1 to a low of 46.1 at Career Focusing 6, with a similar pattern of decrease over the year as experienced both by Manitoba and by anglophone New Brunswick. The New Brunswick francophone sample attended on average 5.2 sessions over the year, attending an average of 2.6 of the first four sessions and 2.0 of the last four sessions. This was very similar to the New Brunswick anglophone sample.

It is interesting to note that unlike the New Brunswick anglophones and the Manitoba participants, gender was a significant factor in attendance of New Brunswick francophones—in favour of girls—at all *Explore Your Horizons* sessions. This is particularly true for Career Focusing 2, 3, and 4, and both Post-secondary Ambassador workshops. The biggest difference in attendance was for Career Focusing 3, attended by 61.7 per cent of the female sample and only 45.7 of the males.

In a pattern more similar to Manitoba participants than to the New Brunswick anglophones, francophones from the LILE group were less likely to attend *Explore Your Horizons* sessions than those from higher income or higher parental education families. This was true for every workshop except Career Focusing 1 and the first Post-secondary Ambassador workshop.

Table 6.4: Attendance Rates at *Explore Your Horizons* Sessions in New Brunswick by Group

Session	Session Number	Francophone			Anglophone		
		EYH/LA	EYH	Impact	EYH/LA	EYH	Impact
Orientation							
Participants	1	73.0	62.4	10.6**	69.7	62.2	7.6*
Adults	1	70.7	59.5	11.2**	69.7	62.2	7.6*
Career Focusing							
Participants	1	74.5	63.3	11.2***	70.1	64.0	6.1
Participants	2	72.6	60.0	12.6***	75.7	69.4	6.3
Participants	3	58.9	45.2	13.7***	60.2	48.6	11.6***
Participants	4	58.9	42.4	16.6***	54.9	44.6	10.3**
Participants	5	54.4	36.2	18.2***	53.9	46.4	7.5*
Participants	6	55.5	33.8	21.7***	47.9	41.9	6.0
Adults	6	52.9	31.0	21.9***	46.8	41.0	5.8
Post-secondary Ambassador Workshops							
Participants	1	69.2	56.7	12.5***	71.5	64.4	7.1*
Participants	2	59.5	41.9	17.6***	52.8	46.8	6.0
Session Attendance							
Attended no sessions		10.3	22.9	-12.6***	14.4	20.3	-5.8*
Attended seven sessions or more		55.1	35.2	19.9***	51.1	41.9	9.2**
Number of Sessions Attended							
Career Focusing		3.7	2.8	0.9***	3.6	3.1	0.5**
Post-Secondary Ambassadors		1.3	1.0	0.3***	1.2	1.1	0.1*
All sessions		5.8	4.4	1.3***	5.6	4.9	0.7**
First four sessions[1]		2.8	2.3	0.5***	2.8	2.5	0.3**
Last four sessions		2.3	1.5	0.7***	2.1	1.8	0.3**
Other							
Participation agreements signed		77.9	71.4	6.5	75.7	70.7	5.0
Sample size		263	210		284	222	

Source: Program Management Information System (PMIS).
Notes: [1]Excluding Orientation session.
The sample excludes the no-follow-up participants in order to be valid experimental impact. See Chapter 3 for details.
Make-up sessions for Career Focusing 10 are not included A two-tailed t-test was applied to differences between the outcomes for the program and comparison groups.
Statistical significance levels are indicated as: * = 10 per cent; ** = 5 per cent; *** = 1 per cent.
Percentages may not precisely sum due to rounding.
Sample sizes vary by variable due to missing data.

The New Brunswick francophones, like the anglophones, were more likely to attend sessions frequently than the Manitoba participants. Only 15.9 per cent of francophones had never attended a session compared with 21.6 per cent of the Manitoban participants; 46.7 per cent had attended seven sessions or more, compared with 39.8 per cent in Manitoba. Among those who attended frequently in the francophone sector, there was a significant difference according to LILE status, favouring the non-LILE participants.

Again reflecting attendance at Orientation, 72.8 per cent of New Brunswick francophones in *Explore Your Horizons* signed their participation declarations.

Table 6.5: Characteristics of Manitoba Participants by Frequency of Attendance

	Percentage of participants who attended:			
	All EYH students	No EYH sessions	Seven or more EYH session	Difference
Gender				
Male	51.8	52.4	48.5	3.9
Female	48.2	47.6	51.5	-3.9
Total	100.0	100.0	100.0	
Total family income by category				
Less than 20K	8.5	18.2	4.1	14.1***
20K less than 40K	15.3	19.0	10.6	8.5**
40K less than 60K	21.8	21.5	22.5	-1.0
60K less than 80K	21.9	19.0	25.2	-6.2
80K or more	32.6	22.3	37.6	-15.3***
Total	100.0	100.0	100.0	
Designated group				
LILE[1]	31.3	45.1	22.2	22.9***
Non-LILE	68.7	54.9	77.8	-22.9***
Total	100.0	100.0	100.0	
Parental education				
Less than high school	11.8	14.5	5.7	8.8**
High school diploma	21.6	29.0	16.6	12.4***
Apprenticeship, private vocational, or community college	43.3	40.3	47.2	-6.8
University	23.3	16.1	30.6	-14.4***
Total	100.0	100.0	100.0	
Sample size	575	124	229	

Source: Program Management Information System (PMIS).
Notes: [1]Low household income (adjusted for family size) and highest parental education is less than a two-year Post-secondary Education degree diploma or certificate.
A two-tailed t-test was applied to differences between the characteristics of the non-attendees and those who attended seven or more sessions.
Statistical significance levels are indicated as: * = 10 per cent; ** = 5 per cent; *** = 1 per cent.
Percentages may not precisely sum due to rounding.
Sample sizes vary by variable due to missing data.

Cohort Differences in New Brunswick

Year 1 participation rates of Cohort 1 and Cohort 2 in New Brunswick were essentially the same, with two exceptions: Cohort 1 attendance rates at both Post-secondary Ambassador workshops were slightly higher than Cohort 2,[101] and Cohort 1 participants were more likely to have signed their participation agreements (77.3 per cent) than Cohort 2 (68.8 per cent).

Attendance at *Explore Your Horizons* Sessions by Program Group in New Brunswick

Because New Brunswick is testing two strategies—*Explore Your Horizons* and *Learning Accounts*—as part of *Future to Discover*, participants in that province were randomly assigned into one of three program groups: *Explore Your Horizons*, *Learning Accounts*, or a combined *Explore Your Horizons* plus *Learning Accounts* group. Although there is no requirement for participants in the combined group to attend *Explore Your Horizons* in order to maintain eligibility for their Learning Account, it was speculated that there might be an impact on session attendance for this group. As presented below, this was clearly the case.

Table 6.4 shows the Year 1 participation rates of the two *Explore Your Horizons* program groups, that is the group receiving *Explore Your Horizons* only (shown as "EYH"), and the group receiving the combined strategies ("EYH/LA"). The participants in the combined *Explore Your Horizons* plus *Learning Accounts* group attended more sessions. This was true for all sessions at either the 5 per cent or 1 per cent level of statistical significance for the New Brunswick francophone sample. Impact on attendance was less marked among the anglophones, but still there were statistically significant differences recorded for about half the sessions, including Orientation, Career Focusing 3, 4, and 5, and the first Post-secondary Ambassador workshop.

101 Cohort 1 attendance at PSA Workshop #1 was 68. 2 per cent compared with Cohort 2 at 65.6 per cent; Cohort 1 attendance at PSA Workshop #2 was 53.7 per cent compared with Cohort 2 at 48.9 per cent.

Table 6.6: Characteristics of Anglophone Participants in New Brunswick by Frequency of Attendance

	Percentage of participants who attended:			
	All EYH students	No EYH sessions	Seven or more EYH session	Difference
Cohorts				
Cohort 1	51.8	43.9	53.1	-9.3*
Cohort 2	48.2	56.1	46.9	9.3*
Total	100.0	100.0	100.0	
Gender				
Male	48.3	48.9	48.1	0.9
Female	51.7	51.1	51.9	-0.9
Total	100.0	100.0	100.0	
Total family income by category				
Less than 20K	21.9	30.9	17.6	13.4***
20K less than 40K	26.3	28.8	27.8	1.0
40K less than 60K	23.0	14.4	23.2	-8.8**
60K less than 80K	14.7	13.0	15.4	-2.4
80K or more	14.1	13.0	16.1	-3.1
Total	100.0	100.0	100.0	
Designated group				
LILE[1]	56.6	61.2	54.0	7.2
Non-LILE	43.4	38.8	46.0	-7.2
Total	100.0	100.0	100.0	
Parental education				
Less than high school	11.0	16.5	7.0	9.5***
High school diploma	27.9	28.8	25.8	2.9
Apprenticeship, private vocational, or community college	45.8	42.4	48.8	-6.3
University	15.3	12.2	18.4	-6.1*
Total	100.0	100.0	100.0	
Sample size	861	139	414	

Source: Program Management Information System (PMIS).
Notes: [1]Low household income (adjusted for family size) and highest parental education is less than a two-year post-secondary education degree diploma or certificate.
A two-tailed t-test was applied to differences between the characteristics of the non-attendees and those who attended seven or more sessions.
Statistical significance levels are indicated as: * = 10 per cent; ** = 5 per cent; *** = 1 per cent.
Percentages may not precisely sum due to rounding.
Sample sizes vary by variable due to missing data.

In terms of signing the participation declaration, although the combined group was more likely to have signed than those receiving only *Explore Your Horizons*, the difference was not statistically significant.

The reasons participants in the combined group attended sessions at higher rates than those receiving *Explore Your Horizons* alone are not known. Future data collection via participant survey and/or focus groups may address this question.

CHARACTERISTICS OF PARTICIPANTS BY FREQUENCY OF ATTENDANCE

Who are the participants most likely to attend *Explore Your Horizons* workshops? In this section, the characteristics of participants (as recorded in the baseline survey) who were actively involved in attending *Explore Your Horizons* workshops are compared with those with no participation. Tables 6.5 through 6.7 compare the characteristics of these two groups.

Table 6.7: Characteristics of Francophone Participants in New Brunswick by Frequency of Attendance

	Percentage of participants who attended:			
	All EYH students	No EYH sessions	Seven or more EYH session	Difference
Cohorts				
All Cohort 1 participants	47.9	44.4	49.4	-5.0
All Cohort 2 participants	52.1	55.6	50.6	5.0
Total	100.0	100.0	100.0	
Gender				
Male	46.8	56.3	40.3	16.1
Female	53.2	43.7	59.7	-16.1
Total	100.0	100.0	100.0	
Total family income by category				
Less than 20K	20.1	29.1	14.5	14.6
20K less than 40K	27.2	23.4	28.6	-5.2
40K less than 60K	26.3	21.3	28.6	-7.3
60K less than 80K	10.1	9.9	10.9	-1.0
80K or more	16.3	16.3	17.4	-1.1
Total	100.0	100.0	100.0	
Designated group				
LILE[1]	54.5	59.2	51.3	7.8
Non-LILE	45.5	40.8	48.7	-7.8
Total	100.0	100.0	100.0	
Parental education				
Less than high school	19.5	30.3	13.0	17.3*
High school diploma	22.8	17.6	23.5	-5.9
Apprenticeship, private vocational, or community college	44.5	43.7	47.0	-3.3**
University	13.2	8.5	16.5	-8.1*
Total	100.0	100.0	100.0	
Sample size	993	142	417	

Source: Program Management Information System (PMIS).
Notes: [1]Low household income (adjusted for family size) and highest parental education is less than a two-year post-secondary education degree diploma or certificate.
A two-tailed t-test was applied to differences between the characteristics of the non-attendees and those who attended seven or more sessions.
Statistical significance levels are indicated as: * = 10 per cent; ** = 5 per cent; *** = 1 per cent.
Percentages may not precisely sum due to rounding.
Sample sizes vary by variable due to missing data.

Manitoba Participants

Table 6.5 compares some of the characteristics of Manitoba's "Frequent Attendees" (defined as participants who attended seven or more workshops in Year 1) with those who did not attend even one session (termed "Non-attendees"). Gender did not correlate significantly with attendance. However, marked differences are apparent when comparing the two groups on family income, parental education, and a combination of the two (LILE).

In Manitoba, Year 1 Frequent Attendees came from families with higher income and/or higher levels of parental education. Well over a third (37.6 per cent) of Frequent Attendees came from families in the highest income category ($80K +) while just over one fifth (22.3 per cent) of Non-attendees were in this income category. Furthermore, 18.2 per cent of Non-attendees were in the lowest income group (< $20K) compared with only 4.1 per cent of Frequent Attendees. In terms of parental education, 30.6 per cent of Frequent Attendees in Year 1 were from families where at least one parent had completed university, compared with 16.1 per cent of Non-attendees. Only 5.7 per cent of Frequent Attendees came from families where no parent had finished high school, compared with 14.5 per cent of Non-attendees' families.

The data in Table 6.5 indicate that in Manitoba the LILE group did not participate as much in Year 1 as those from higher-income families or those with parents with higher levels of education. Only 22.2 per cent of Frequent Attendees in

Manitoba were in the LILE group, with over three quarters (77.8 per cent) of them coming from the Non-LILE group. While Non-attendees were also more likely to come from the Non-LILE group than the LILE group, the gap was much closer at 54.9 per cent and 45.1 per cent respectively.

New Brunswick Anglophone Participants

As shown in Table 6.6, Frequent Attendees among the New Brunswick anglophone participants were found more in Cohort 1 (53.1 per cent) than Cohort 2 (46.9 per cent) and in relation to Non-attendees, had at least one parent with, university education (18.4 per cent compared with 12.2 per cent respectively). Only 7.0 per cent of Frequent Attendees were in the lowest category of parental education (parents had not completed high school), while 16.5 per cent of Non-attendees were in that category. Nearly a third (30.9 per cent) of Non-attendees came from families in the lowest income category (< $20K) compared with only 17.6 per cent of Frequent Attendees.

There were no significant differences between the New Brunswick Frequent Attendees and Non-attendees in terms of LILE status, nor were any gender differences apparent.

New Brunswick Francophone Participants

Frequent Attendees among the New Brunswick francophone participants were found in equal proportions among Cohort 1 and Cohort 2 (see Table 6.7), but Cohort 2 had a much higher proportion of Non-attendees (55.6 per cent) than Cohort 1 (44.4 per cent).[102]

Year 1 Frequent Attendees among New Brunswick francophone participants were different in one respect from the New Brunswick anglophone and Manitoba participants in that there were significantly more females (59.7 per cent) than males (40.3 per cent). Otherwise, their profile is similar to the New Brunswick anglophone participants. They came from families where at least one parent had gone to university (16.5 per cent) compared with Non-attendees (8.5 per cent). Non-attendees came from families where no parent had graduated high school (30.3 per cent), compared with Frequent Attendees (13.0 per cent).

Family income was also different between Non-attendees and Frequent Attendees, with 29.1 per cent of the former in the lowest income category (less than $20K) compared with only 14.5 per cent of Frequent Attendees.

As with the New Brunswick anglophone participants, there were noticeable differences in LILE status for francophone Frequent Attendees and Non-attendees, but these differences were not statistically significant.

FUTURE TO DISCOVER WEB SITE USAGE

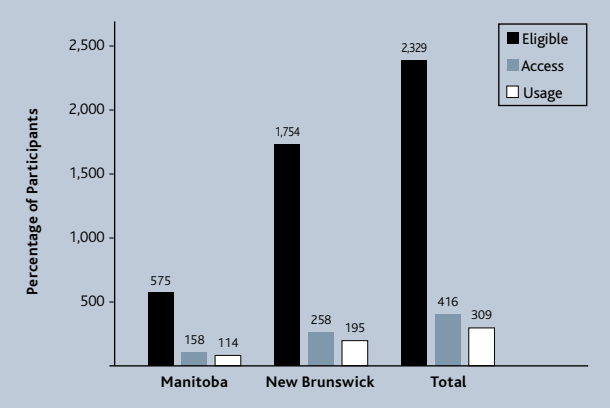
The analysis of *Future to Discover* Web site usage covers the first year of participation in *Explore Your Horizons* for each of the two cohorts; in other words, data for New Brunswick Cohort 1 is from November 2004 to the end of June 2005, and data for New Brunswick Cohort 2 and for Manitoba is from September 2005 to the end of June 2006. These data were gathered by Allegro 168 Communications + Design as the contractor responsible for developing and maintaining the *Future to Discover* Web site. Because the Web site can only be accessed by unique usernames and passwords, usage is tracked for all participants individually.

In this section, a distinction is made between *Future to Discover* Web site "access" and "usage." "Access" occurs for the first time when a participant enters in their unique access key to activate their *Future to Discover* Web site account. This occasion and any subsequent occasion when a participant logs in is considered to be "access" even if the participant does not go beyond the Web site's introductory or "splash" page. Web site "usage" refers to situations when participants go beyond the splash page. Thus, it is possible for an eligible participant to "access" the Web site multiple times without registering "usage."

Future to Discover Web Site Eligibility, Access, and Usage by Province

Figure 6.1 shows that most participants who were eligible to access the *Future to Discover* Web site did not take the opportunity to do so. Out of the 2,329 participants who were eligible, 416 *accessed* the Web site at least once during their first year in the pilot project—about 18 per cent.[103]

Figure 6.1: *Future to Discover* Web Site Eligibility, Access, and Usage by Province



Source: Calculations from *Future to Discover* Web site data and parent and participant baseline survey data.

102 This difference is explained by recalling the definitions of Non-Attendees as those who did not attend even one session and Frequent Attendees as those who attended seven or more. There are significant numbers of participants in the middle category between the two.

103 Eligible participants include those in both provinces who are part of the *Explore Your Horizons* program group, and the *Explore Your Horizons* plus *Learning Accounts* group and *Explore Your Horizons* no follow-up group in New Brunswick only.

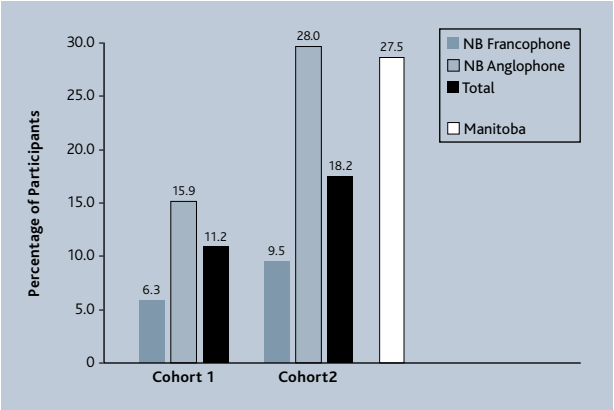
Most of the participants who accessed the Web site went on to explore it: 309 out of 2,329 or 13 per cent of eligible participants *used* the Web site. Of the 416 participants who accessed the *Future to Discover* Web site, nearly three quarters (74 per cent) registered usage, while the remaining 26 per cent did not go beyond the *Future to Discover*'s splash page.

A significantly higher percentage of Manitoba participants accessed the Web site than their New Brunswick counterparts.[104] Figure 6.2 shows that 158 out of a possible 575 participants in Manitoba (27.5 per cent) accessed the Web site versus 258 out of 1,754 participants in New Brunswick (14.7 per cent).

Future to Discover Web Site Access by Cohort, Province, Sector, and Gender

Figure 6.2 shows that overall, a higher percentage of participants in New Brunswick Cohort 2 accessed the *Future to Discover* Web site than participants in Cohort 1; 160 participants out of a possible 880 (18.2 per cent) versus 98 out of a possible 874 (11.2 per cent), respectively.

Figure 6.2: Participants Who Accessed the *Future to Discover* Web Site in Their First Year



Source: Calculations from Future to Discover Web site data and parent and participant baseline survey data.

As discussed later in this chapter, this may have been due to Facilitators' increased efforts over time to encourage participation in all of the *Explore Your Horizons* activities; however, no conclusions can be drawn at this time.

Web site access by participants in Manitoba was close to 28 per cent, which is almost identical to Web site access by anglophone Cohort 2 participants in New Brunswick (28 per cent).

When looking solely at New Brunswick, more anglophone participants accessed the Web site in their first year of the intervention than francophone participants, in both cohorts. Access took place for 15.9 per cent of anglophones in Cohort 1 and 28 per cent in Cohort 2, compared with 6.3 per cent of francophones in Cohort 1 and 9.5 per cent in Cohort 2.

Significantly more female than male participants in *Explore Your Horizons* accessed the Web site (19 per cent versus 16 per cent).[105]

Web Site Access by Designated Group in New Brunswick

"Designated group" or LILE status was not associated with Web site access.[106] That is, participants in the "designated group" in New Brunswick were no more or less likely to access the Web site than other New Brunswick participants in the sample. Furthermore, the designated group is neither more nor less likely to register usage of the Web site than the other New Brunswick participants who accessed the Web site.

104 ***t = -6.24, p < .001
105 **t = -2.10, p = 0.04
106 The LILE status indicates participants come from "lower-income, lower-education" families—meaning that the participant's family was in the lower parental income category (at or below the provincial median) and neither of the participant's co-resident parents/guardians held a two-year (or longer) post-secondary education diploma or certificate at the time of recruitment.

Table 6.8: Web Site Access and Usage by *Explore Your Horizons* Session Attendance

	Participants who attended:			
	All participants	Seven or more EYH session	No EYH session	Difference
Manitoba				
Accessed Web site	27.5	53.7	0.8	52.9***
Used Web site	19.8	41.9	0.8	41.1***
New Brunswick				
Accessed Web site	14.7	22.0	1.4	20.6***
Used Web site	11.1	16.7	1.1	15.7***
Francophone NB				
Accessed Web site	8.0	12.5	1.4	11.1***
Used Web site	4.8	7.7	0.7	7.0***
Anglophone NB				
Accessed Web site	21.7	31.6	1.4	30.2***
Used Web site	17.7	25.8	1.4	24.4***
Cohort 1 NB				
Accessed Web site	11.2	17.1	0.8	16.3***
Used Web site	10.1	15.5	0.8	14.7***
Cohort 2 NB				
Accessed Web site	18.2	27.2	1.9	25.2***
Used Web site	12.2	18.0	1.3	16.8***
Sample size	2,329	1,060	405	

Source: Program Management Information System (PMIS) and *Future to Discover* Web site data.
Notes: A two-tailed t-test was applied to differences between the characteristics of the non-attendees and those who attended seven or more sessions.
Statistical significance levels are indicated as: * = 10 per cent; ** = 5 per cent; *** = 1 per cent.
Percentages may not precisely sum due to rounding.
Sample sizes vary by variable due to missing data.

Web Site Access by Frequency of Attendance at Sessions

Frequent Attendees at *Explore Your Horizons* sessions accessed and used the Web site more frequently than those who did not attend sessions at all. As shown in Table 6.8, this was true across the board—for both provinces as well as for both linguistic sectors and both cohorts in New Brunswick. Over half (53.7 per cent) of Manitoba's Frequent Attendees accessed the Web site, followed by nearly one third (31.6 per cent) of New Brunswick anglophones and 12.5 per cent of francophones. Web site access by participants who did not attend any sessions was negligible, ranging from 0.8 per cent in the Manitoba sample to 1.4 per cent in both of New Brunswick's linguistic sectors.

ENCOURAGING PARTICIPATION: MAKE-UP SESSIONS AND OTHER INITIATIVES

This section describes the efforts that Facilitators took to encourage participation in *Explore Your Horizons*. It describes initiatives that went beyond the steps initially envisaged at the start of implementation outlined in Chapter 5. Minutes and Action Plans from Facilitator meetings show the development of additional efforts that Facilitators engaged in to encourage participation. Facilitators progressively increased their efforts over Year 1 (and beyond) to maximize participant exposure to the career education intervention components.

Make-Up Sessions

In the early weeks of *Explore Your Horizons* implementation, Facilitators recognized that not all participants would attend the regularly scheduled workshops and for a variety of reasons. Some could not be contacted, some had schedule conflicts, some said they were not interested, and some said they were coming but did not show up. Facilitators attempted to "make up" the missed content through whatever reasonable means were possible. Participants missing a session would be contacted by telephone and offered materials from the session along with explanation of the material through means of telephone, at school during a lunch hour or spare period, or by coming early or staying late at the next scheduled workshop. Where Facilitators could confirm that a number of participants would attend a full-length make-up session of the missed workshop, they might offer the same workshop a second time. Since these latter cases of "make up" sessions offered

essentially the same experience as the regularly scheduled sessions, the analysis in this chapter has included them with the regular sessions in calculating attendance.

The form of the make-up sessions was not defined in the original design of *Explore Your Horizons*. Their structure and scheduling developed over time in response to a need identified during implementation. Facilitators were not initially required to conduct or record them systematically. To the extent that make-up sessions succeeded in increasing participant exposure to *Explore Your Horizons* content, it is important to better understand their frequency and nature. It is anticipated that a more detailed account of the Year 1 make-up sessions will appear in a future report, after more data from Facilitators on the make-up sessions they organized has been collected and analyzed.

Other Initiatives to Encourage Participation

Over the course of Year 1 and beyond, Facilitators and *Future to Discover* office staff and contractors developed additional ways to integrate the different *Explore Your Horizons* components and to encourage participation in each of the components. These initiatives included the following:

- Facilitators took every reasonable opportunity to mention the F2D magazine and Web site during Career Focusing and Post-secondary Ambassador workshops.
- All correspondence—including the F2D magazine—mailed from the *Future to Discover* office was stamped with the address of the *Future to Discover* Web site (Manitoba and Cohort 2 New Brunswick).
- Letters were sent from school principals lending support to *Future to Discover* and encouraging participants and parents to attend workshops (New Brunswick only).
- Notes were added into the magazine prior to mail out in an effort to reach those who were not attending (Manitoba only).
- Facilitators met with participants over lunch or on their breaks to encourage participation.
- F2D magazine highlighted examples of Web site information.
- Examples of Web site information were e-mailed to participants with e-mail addresses (Manitoba only).

- Facilitators visited schools in an attempt to make contact specifically with participants not attending sessions.
- *Explore Your Horizons* sessions schedules were mailed to participants not attending.
- Voicemail invitations to sessions specifically mentioned that refreshments would be served.

"Inactive" Participation and Project Withdrawals

Despite facilitators' efforts, some participants could not be contacted, some refused to attend, some said they would attend but did not, and some made it clear that they no longer wished to take part and requested no further contact from *Future to Discover*. The latter group were deemed "inactive participants"—not to be contacted for *Explore Your Horizons* workshops or mailings—although they remained important members of the research project.[107] These participants are still contacted for *Future to Discover* telephone surveys, and their administrative data continues to be collected and analyzed by SRDC. After a period of time, Facilitators may choose to contact inactive participants to see if they have changed their mind and wish to return to active participation in *Explore Your Horizons*; Facilitators choose the timing of these endeavours based on their knowledge of the participants' stated reasons for requesting to become inactive. If participants agree to actively participate again, or even to continue receipt of the F2D magazine, their status returns back to "active" on the PMIS. The numbers of inactive participants is small in both provinces.

Participants who not only wish to be removed from active *Explore Your Horizons* participation, but who also wish to withdraw from the *Future to Discover* research project are required to call SRDC's toll-free line in order to do so. An SRDC staff member attempts to address their concerns and convince them to stay in the project, but failing this mails them an official withdrawal form. Once their signed form is received back by SRDC they are no longer a participant in the *Future to Discover* research project. The number of participants who have officially withdrawn from *Future to Discover* is negligible.

107 An additional subgroup of participants was identified who stated that they were not interested in attending workshops but who agreed to continue receiving mailings from the *Future to Discover* office, including the F2D magazine. Facilitators were not calling these participants prior to every workshop, but were still calling them occasionally in case they had changed their minds and wished to attend.

7

Learning Accounts Activities and Participation

Introduction

This chapter describes the first year activities of *Learning Accounts*, the financial incentive intervention of *Future to Discover,*[108] and the participation in these activities. In order for *Learning Accounts* to have an impact on access to post-secondary education, it is important that adequate numbers of participants open Learning Accounts and accumulate instalments, as reported in this chapter. The implementation objectives for *Learning Accounts* and the actions that *Future to Discover* Staff took to achieve them are also presented.

Learning Accounts is offered only in New Brunswick where 1,097 students recruited to *Future to Discover* were randomly assigned to receive *Learning Accounts* either by itself or in combination with *Explore Your Horizons*.[109] In order to be eligible for *Learning Accounts*, participants had to be from families with lower income, as determined at the time of the baseline interview (described in Chapter 3).

108 Some information about activities beyond the first year of implementation is included for context.
109 Half of the 1,097 participants were randomly assigned to the *Learning Accounts* group (549) while the other half (548) were randomly assigned to the combined *Learning Accounts* plus *Explore Your Horizons* group (see Chapter 3, Table 3.5).

CHAPTER SUMMARY

- **Among students recruited into *Future to Discover*, 1,097 were randomly assigned to receive *Learning Accounts* either by itself or in combination with *Explore Your Horizons*.** In order to be eligible for *Learning Accounts*, participants had to be from families with lower income as determined at the time of the baseline interview.
- **A large majority of participants (93.3 per cent) took the necessary steps to open up their *Learning Accounts* and 90.3 per cent received an instalment of $2,000 at the end of Year 1.**
- **New Brunswick Future to Discover office staff are responsible for keeping records of ongoing *Learning Accounts* instalments and for notifying the Foundation of eligibility for *Learning Accounts* payments.**
- ***Learning Accounts* was successfully implemented as planned during the first year of implementation for both cohorts.** Staff notified eligible participants and provided informational support to encourage completion of the required paperwork in order to open their Account. They allowed sufficient time and opportunity for participants and parents to ask questions about *Learning Accounts*, and they informed them about their account status at the end of the school year.

LEARNING ACCOUNTS IMPLEMENTATION OBJECTIVES

Unlike *Explore Your Horizons*, the *Learning Accounts* intervention does not involve routine in-person contact between participants and *Future to Discover* staff. Communication between participants and staff regarding *Learning Accounts* is solely for the purpose of clarifying the terms and conditions of the financial incentive and/or details of the applications for payments. Thus, first-year participant activities consisted of mailings and telephone contacts to support the understanding of the intervention, encourage participation, and notify participants about their Learning Account balance after the first year. As well, *Future to Discover* office staff engaged in activities not directly involving participants but required for operation of the intervention. Both types of activities—those involving participants and those not—are embedded in the first year implementation objectives:

- Participant and parent notification by mail and by telephone, as required, about the eligibility rules for accumulating instalments and understanding of these rules
- Notification early in participants' high school years in order for the long-term effects of the *Learning Accounts* offer to be fully tested
- Adequate time and *Future to Discover* office support to participants to take part in the intervention: provide required information at the required time to open the Account and remain in contact for mail-based Account administration
- Verification of eligibility for first-year instalments
- Notification by mail and by telephone as required regarding eligibility for the first-year instalment
- Notification by mail of Account balance at the end of the first year and reminder of ongoing eligibility status

Learning Accounts was successfully implemented as planned, based on information gathered directly from *Future to Discover* Office staff and from their meeting minutes as well as from the Project Management Information System (PMIS). Staff made all reasonable efforts to achieve the implementation objectives. They notified eligible participants and provided informational support via mail and telephone to encourage them to complete the required paperwork in order to open their Account. They allowed sufficient time and opportunity for participants and parents to express concerns and ask questions about *Learning Accounts* and duly informed them about their Account status at the end of the school year.

LEARNING ACCOUNTS ACTIVITIES AND PARTICIPATION

Signing Participation Agreements

Participants allocated to the *Learning Accounts* or *Learning Accounts* plus *Explore Your Horizons* program groups received notification about their eligibility for *Learning Accounts* by mail from the *Future to Discover* office following random assignment in August 2004 (for Cohort 1) and August 2005 (for Cohort 2). In the fall the *Future to Discover* office mailed packages containing a *Learning Accounts* Participation declaration to the same participants. These packages explained in detail all of the terms and conditions of *Learning Accounts* eligibility, accumulation, and receipt (see Text Box 7.1). The cover letter explained that the declaration must be signed and returned to the *Future to Discover* Office by a fixed deadline in order for participants to open their Learning Accounts and to remain eligible for instalments. They were encouraged to call the *Future to Discover* Office toll-free line if they had any questions.

The *Learning Accounts* declaration was developed by the *Future to Discover* representatives of the Foundation and provincial partners with advice from their respective legal counsels and with support from the Social Research and Demonstration Corporation (SRDC). The final version

Text Box 7.1: Topics covered in the *Learning Accounts* Participation Declaration

- Definition of terms
- Participation conditional on *Future to Discover* office receipt of completed Declaration
- Agreement for sharing of updated participant contact information
- Provision of parent SIN
- Notification of eventual provision of participant SIN
- Annual verification of active student enrolment during high school
- Verification of graduation or completion of equivalent diploma
- Eligibility of post-secondary programs
- Application for receipt of payments from Learning Account
- Payment of *Learning Accounts* instalments
- Confidentiality of participant data

was a five-page document requiring signatures from both participant and parent(s). Efforts were made to write the declaration in plain language while retaining its legal content. As an aid to promoting recipients' comprehension of the information in the declaration, a "Learning Account Holder's Guide" was included in the packages mailed to participants. While the declarations were returned to the *Future to Discover* office, the Guide could be kept for future reference. Pre-addressed postage-paid envelopes were provided in the packages for the convenience of the participants.

Cohort 1 participants' packages were mailed in November 2004 with a requested return date of February 15, 2005; Cohort 2 packages were sent in October 2005 for return by December 15, 2005. In both cases, to increase the chances that as many participants as possible opened their *Learning Accounts*, and to allow for staff efforts to contact non-responders, the completed declarations were accepted until the last day of the school year in which the packages were sent for each of the respective cohorts.

As the deadline approached, *Future to Discover* office staff sent a second package containing a copy of the declaration and an updated cover letter to participants from whom declarations had not been returned. Following that, *Future to Discover* office staff made phone calls to non-responding participants and a third or (in some cases) fourth package was sent as required. These additional mailings occurred in circumstances where participants did not possess the earlier packages either because they had moved or had misplaced them. The follow-up phone calls also allowed *Future to Discover* office staff to answer any remaining questions about the Learning Accounts offer. *Future to Discover* office staff reported that, by and large, respondents indicated their willingness and intention to complete the declarations. However, not all who said they were going to mail their package back actually did so.

As shown in Figure 7.1, the vast majority (93.3 per cent) of all participants who were eligible for *Learning Accounts* returned their declarations to the *Future to Discover* office before the deadline. However, despite the extensive efforts of the *Future to Discover* office staff, and the *de facto* extension of the deadline, there remained 73 participants (6.7 per cent)[110] who did not return them in time and thus their eligibility was terminated. There was a difference between the two linguistic sectors in terms of their rates of signing the declaration, with 95.4 per cent of the 525 francophone participants signing, compared with 91.3 per cent of the 566 anglophones.

Participants who did not return their signed declarations to the *Future to Discover* office were sent letters informing them that their *Learning Accounts* eligibility had lapsed. If they were also in *Explore Your Horizons*, the letter informed them that they were still eligible to participate in that intervention.

The reasons participants did not return their declarations were not sought formally by *Future to Discover* office staff. However, actual and attempted interactions between participants and *Future to Discover* office staff suggest several reasons:

- participants moved out of the province;
- participants and/or parents did not fully understand the terms of the *Learning Accounts*;
- the volume of information in the package was overwhelming, causing families to either set it aside temporarily for later review or discard it;
- the package was perceived as "junk mail".

The 30-month survey (asked of all *Learning Accounts* and *Explore Your Horizons* plus *Learning Accounts* program group members) will explore understanding of the intervention and the reasons for non-take-up more systematically. The results will appear in a later report.

Verifying Ongoing Eligibility for *Learning Accounts*

Ongoing eligibility for each *Learning Accounts* instalment depends on a participant's status as an "active student" at a New Brunswick secondary school at the end of the school year for which the deposit is being made. Participants in New Brunswick alternative sites or in home schooling count as "active students" for this purpose. Participants who are "inactive" at the end of the school year will not receive an instalment.

110 Learning Accounts were offered to 1,097 students. However, statistics on declarations and take up are based on 1,091 program group members. Six *Learning Accounts* participants are excluded from analysis since they were recruited as children in care of the province (see chapters 3 and 4).

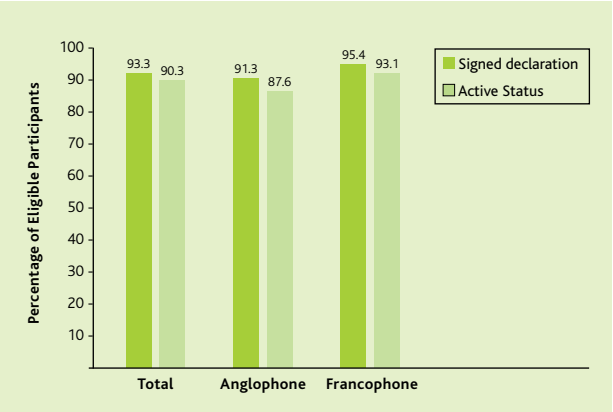
Active status is verified by the New Brunswick Department of Education's Central Student Data Repository. At the end of each school year, the *Future to Discover* office sends a file of all *Learning Accounts* participants to be matched with the file at the central repository. In return, they receive back a file confirming the participants who are listed as "active" and thus for whom instalments should be recorded. *Future to Discover* office staff then directly contact any *Learning Accounts* participants who are not listed as "active" on the central file to determine whether they have moved or are present but not attending school or to otherwise confirm their status.

While the vast majority of *Future to Discover* participants were in active status at school at the end of the school year, Figure 7.1 shows that there was a difference between the two linguistic sectors, with a greater proportion of the francophones in the sample being in active status (93.1 per cent) than the anglophones (87.6 per cent). However, when looking just at the active status of participants who signed their participation declaration, there is no difference between the sectors, and overall virtually all (96.7 per cent[111]) of the 1,018 New Brunswick participants who signed their declarations were listed as "active" at the end of their first year. These 985 participants—who had signed declarations and were in active status—recorded their first *Learning Accounts* instalment of $2,000 and were sent a letter from the *Future to Discover* office informing them so. The small percentage of participants who had signed declarations but who were not in active status at the end of the school year (3.2 per cent[112]) were sent a letter informing them that they had not qualified for their first *Learning Accounts* instalment that year but that they could still receive the full $8,000 if they met the attendance and high school graduation requirements during the next three consecutive years.

111 The 96.7 per cent is calculated as the 90.3 per cent of participants in active status at the end of the school year as a fraction of the 93.3 per cent of students who signed their declarations.

112 There was no statistically significant difference between the two linguistic sectors, with 2.4 per cent of francophone participants and 4.1 per cent of anglophone participants with signed declarations not being in active status at year end.

Figure 7.1: *Learning Accounts* Participation by Linguistic Sector



Making Instalments

Participants accumulate *Learning Accounts* funds in three instalments typically made during the last three years of their secondary studies.[113] *Learning Accounts* are "virtual" accounts, meaning that instalments are recorded electronically for each participant, rather than individual accounts being opened at a financial institution. The first instalment of $2,000 is recorded after the first verification of active student status, typically at the end of Grade 10. The second instalment of $2,000 is recorded after the second verification of active student status, typically at the end of Grade 11. The third instalment is for $4,000 and is recorded upon successful completion of a New Brunswick high school diploma, having completed the program of studies prescribed by the Minister or Education, either through attending a New Brunswick high school or alternative site. Participants who do not graduate high school but gain admission to a recognized post-secondary institution can withdraw the funds they successfully accumulated in their *Learning Account*.

To facilitate the administration of *Learning Accounts*, all participants who obtain a New Brunswick high school diploma are eligible for the full $8,000 in their Learning Account, regardless of their accumulation of instalments or active status during each year of high school. However, to receive the full amount, graduation from a New Brunswick high school must take place before the end of the fourth year after signing the Learning Account. This is not articulated in materials produced for *Learning Accounts* participants, but rather was adopted as a reasonable means of removing unnecessary program complication for what is anticipated to be a very small number of cases.

New Brunswick *Future to Discover* office staff are responsible for keeping records of participants' annual *Learning Accounts* instalments and notifying the Foundation about which participants are ultimately eligible to receive their Learning Accounts payments.

Notifying Participants of Account Balances

Participants receive a letter in the mail at the end of each school year from the *Future to Discover* office indicating the amount of the instalment and the balance on their Account. Those who do not receive an instalment because they are not registered in active status at school are sent a letter to inform them why they have not received an instalment and that they remain eligible for future instalments.

Near the end of Grade 12, participants will be mailed an information package with detailed instructions on how to apply for payments from their Learning Accounts. Participants who successfully enrol in a recognized post-secondary education program[114] within the time frame of the pilot project are eligible to apply for *Learning Accounts* payments. Once the package has been completed and returned to the *Future to Discover* office and post-secondary education enrolment confirmed via the New Brunswick Student Financial Services Branch, the Foundation will mail the participant a cheque for $2,000 from their Learning Account. Participants can choose up to two out of three set deadlines to request their cheques per calendar year and are permitted to receive a maximum of two instalments totalling $4,000 each year from their Learning Account.

CONCLUSION

The *Learning Accounts* intervention was successfully implemented as planned during the first year of implementation for both cohorts. Staff notified eligible participants and provided informational support to encourage completion of the required paperwork in order to open their Account. They allowed sufficient time and opportunity for participants and parents to ask questions about *Learning Accounts*, and they informed them about their Account status at the end of the school year.

The *Future to Discover* interim impact report will include information about the implementation in second and subsequent years, the continued participation rates, and the accumulation of instalments in participants' *Learning Accounts*. Detailed information about the process for applying for payments, verifying post-secondary enrolment, sending cheques to participants, and tracking Account balances will be included in the *Future to Discover* final report. As discussed in the following chapter, analysis of the impact of *Learning Accounts* on participants' post-secondary access will also be included in the final report.

113 Students may take four years to do the final three years of high school studies, or they may compress their studies into less time and still be eligible for the full $8,000 upon graduation from a New Brunswick high school.

114 All post-secondary education programs recognized by the Canada Student Loans Program are considered eligible for Learning Accounts payments.

8

Future Research on *Future to Discover*

Introduction

This chapter briefly reviews the *Future to Discover* research design and looks forward to future research on *Future to Discover* that will be presented in two later reports. The planned analyses of the ongoing implementation of *Future to Discover,* the short- and long-term impacts of its interventions and of their relative costs and benefits are described.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CHAPTER SUMMARY

- **The evaluation of *Future to Discover* will use survey and administrative data to assess the impacts of the *Explore Your Horizons* and *Learning Accounts* interventions.** Comparing outcomes for the combined interventions with each intervention on its own will indicate both the additional benefit of offering a Learning Account to *Explore Your Horizons* participants and the additional effect of offering *Explore Your Horizons* to *Learning Accounts* recipients.
- **Short-term impacts will compare outcomes observed up to the point when students typically leave high school.** These will include high school grades, graduation rate, and experiences of participants in the three program groups and the comparison group in order to determine the effectiveness of each of the *Future to Discover* interventions relative to each other and the comparison group.
- **Long-term impacts will compare outcomes observed up to the point when students complete their second full year out of high school.** These include the post-secondary education (PSE) enrolment rates and experiences of participants after high school to determine whether *Future to Discover* was successful in increasing access to education after high school.
- **Implementation research will document future operations using program data and interviews to determine whether *Future to Discover* was implemented as planned.** It will also use depth interviews, focus groups, and a longitudinal panel to help propose explanations for findings from the impact study.
- **A benefit–cost analysis will determine whether the benefits of *Future to Discover* outweigh the interventions' costs for participants, governments, and society as a whole.**

FUTURE TO DISCOVER RESEARCH

Future to Discover is intended to increase access to post-secondary education. To that end, *Future to Discover* implemented new interventions,[115] recruited high school students, and randomly assigned them into three program groups and a comparison group in order to test whether the interventions achieved their objective. A random assignment experimental design was adopted to ensure that there were no systematic differences between the groups except for the different interventions that each group received. Consequently, later comparison of the differences in outcomes between the groups will provide a valid estimate of the causal effect or impact of the different intervention experiences relative to the comparison group and relative to each other.

The four groups in the *Future to Discover* experiment are

1) those who received a place in *Explore Your Horizons*,
2) those who received the opportunity to receive a Learning Account,
3) those who received both a place in *Explore your Horizons* and the opportunity to receive a Learning Account, and
4) a comparison group that continues to receive services (with respect to career education and student financial aid) that are usually available in the absence *Future to Discover*.

Explore Your Horizons provides enhanced career education information. Its activities are intended to help participants focus on potential careers, better use available information, and choose courses more oriented towards later PSE choices as well as to encourage graduation from high school and, critically, attend a PSE program after leaving high school. *Explore Your Horizons* is available to students from both higher- and lower-income households in both New Brunswick and Manitoba.

The *Learning Accounts* intervention provides New Brunswick students from lower-income households with an early guarantee of a non-repayable, fixed-sum, time-limited grant if they should attend a PSE program after high school. The aim is that this early offer of funding will cause some lower-income students and their parents to feel that attending PSE is more affordable and thus less risky than they might otherwise have felt. Again, an early guarantee of funding should encourage students to maintain good marks, select courses more oriented towards PSE in high school, and to enrol in a PSE program. The *Learning Accounts* bursary may not in fact provide students with more financial aid as it may reduce student aid funding from other sources. However, the early offer may encourage participants to alter their plans for PSE and for employment because the Learning Account is a non-repayable fixed-sum bursary that is granted earlier than other forms of student aid. Consequently, it will not vary with educational expenses, other student aid grants, family and personal earnings at the time of enrolment, nor with student living expenses.

A third program group in New Brunswick will receive both a place in *Explore Your Horizons* and the offer of a Learning Account. The comparison group will receive the career education, information, student aid, and services that are usually received by students who in all respects equivalent to those in the program group, but for the receipt of a *Future to Discover* intervention.

As outlined in Chapter 3, the research will use both administrative and survey data. High school and district-level administrative data will include courses, marks, and high school graduation records. PSE administrative records will include such measures as part-time or full-time program attendance, field of study, and credentials awarded. Student financial aid data, including data on

115 While *Explore Your Horizons* represents a new intervention, it includes some components that are modified versions of existing interventions.

Learning Accounts, will also be available from the provinces and the Canada Millennium Scholarship Foundation. Data from the Canada Revenue Agency will be sought to provide additional information on earnings, employment, income taxes, and education tax credits. In addition, there will be two surveys of participants in addition to the initial baseline survey. One survey occurs 30 months after recruitment when most participants are in Grade 12. The other survey occurs 66 months after recruitment when many participants will be attending PSE or working in the labour force. The baseline survey collected data that will allow researchers to look at the impact of the intervention on various subgroups of the sample, defined by characteristics (such as plans to attend PSE) that were at the time of collection unaffected by the assigned intervention. *Future to Discover* administrative data—collected by the project management information system—is very valuable for the research on project implementation and for the benefit–cost analysis. The benefit–cost analysis will also draw upon other administrative data as well as survey data. Appendix 2 contains more information about the data used in the study.

Results from the above analyses will be presented in future reports. The first of these reports will present project implementation and interim impacts on participants up to the time they usually graduate from high school. The final report will focus on "long-term" impacts on participants up to about two years after they usually graduate from high school.

The remainder of this chapter is divided into four sections. The first section will discuss what short-term impacts can be expected in the interim impact report for *Future to Discover*, due to be published in 2009. The second section of the chapter will discuss the longer-term impacts that will be presented in the final impact report in 2011. The third section will discuss the implementation research that remains to be presented in future reports. The fourth section discusses the benefit–cost analysis.

SHORT-TERM IMPACTS

The analysis of short-term impacts will provide indications of the early strengths and weaknesses of the interventions and give early indications of the potential longer-term impacts. These short-term impacts are measured from recruitment at baseline up to the completion of a typical student's final (Grade 12) year in high school using data from the 30-month survey and administrative records.[116] At the time of the 30-month survey, some participants will be applying for admission to PSE programs and for student financial aid. *Explore Your Horizons* participants will also be receiving their final year of the intervention. The report can examine whether the offer of a Learning Account had an impact on participants' *Explore Your Horizons* activities. However, the important impacts related to PSE enrolment and attendance will be described in the final report.

Analysis of short-term impacts would typically involve comparison of the observed outcomes for each of the three program groups with the comparison group and with each of the other program groups. For example, the difference between the high school graduation rate of the *Explore Your Horizons* group and the graduation rate of the comparison group would represent the impact of *Explore Your Horizons* on the high school graduation rate. This would help answer the policy question of whether the graduation rate would be increased if other similar students were to be offered the choice of receiving *Explore Your Horizons*. The difference in the graduation rates between the other two program groups and the comparison group would yield similar results for *Learning Accounts* and for the *Explore Your Horizons* plus *Learning Accounts* combination. The difference between the graduation rates of the *Explore Your Horizons* group and the *Learning Accounts* group would represent the relative effectiveness of the two interventions on increasing the graduation rate. This comparison could help policy-makers decide between the two interventions if implementing both interventions was not an option. The difference between the combined interventions of *Explore Your Horizons* and *Learning Accounts* and either intervention alone would represent the added (or "incremental") impact of the additional intervention. This analysis answers the question "What is the added value of running *Learning Accounts* alongside *Explore Your Horizons*?"

The Social Research and Demonstration Corporation (SRDC) will use administrative data to measure the impacts of *Explore Your Horizons* and *Learning Accounts* on high school drop-out rates, grade completion (including graduation), high school courses, and marks. These outcome measures focus on the first three years after baseline. These measures are potentially important indicators of educational progress and important predictors of future PSE enrolment. For example, a participant who has dropped out of high school may be less likely to attend PSE than a participant who has not dropped out of high school.

SRDC will use survey data to measure the impacts of *Explore Your Horizons* and *Learning Accounts* on high school behaviour and attitudes. These measures include attitudes towards class attendance, homework completed, relationships with teachers and other students, and participation in voluntary activities. It will also include measures of behavioural problems, work habits, and membership of different peer groups. These measures will be used to calculate the impact of the interventions on the integration of the project participants into school life as well as their willingness to engage in tasks that may influence their success in high school and PSE. A student who does not attend classes and does not complete homework in the structured high school environment may be less likely to do so in the less-structured environment of PSE. A student who has poor relationships with teachers and is not involved in school activities may be less likely to seek further education after high school.

116 Thirty-month survey data will collect data only up until to the fall of Grade 12, but data from school records will be linked to survey data to provide observations of the same students' Grade 12 course completion and high school graduation.

SRDC will measure the impacts of *Explore Your Horizons* and *Learning Accounts* on the receipt of services and information such as PSE information, career education workshops, and PSE funding with both survey and administrative data. For example, SRDC will use survey data to assess the extent to which program groups received additional information, post-secondary focused workshops, or early guarantees of PSE funding relative to comparison group members. The impact of the interventions on receipt of services (or the "treatment differential" created by the experiment) can help to explain other short-term and long-term impacts. For example, if the parents of comparison group members were only slightly less likely to attend workshops similar to Lasting Gifts than the *Explore Your Horizons* group, this knowledge would be useful in explaining the impact of *Explore Your Horizons* on PSE attendance.

SRDC will use administrative data from the project management information system to compare services and information received by the *Explore Your Horizons* group and the *Explore Your Horizons* plus *Learning Accounts* group. For example, participants receiving the combined interventions may or may not attend more *Explore Your Horizons* workshop sessions than participants only in *Explore Your Horizons*. This information could be used if required to help provide explanations should the combined interventions be found more effective in promoting PSE attendance than either intervention alone.

The 30-month survey will ask participants about their likelihood of attending PSE or working in the coming year. The relative impact of *Explore Your Horizons* and *Learning Accounts* on this important predictor of PSE attendance has the potential to predict the impact on actual PSE attendance in the final *Future to Discover* report. In addition, the participants' responses and the extent to which their plans are later found realized will aid understanding of the timing of participant decisions about post-secondary education, the levels of uncertainty surrounding those decisions, and the appropriate timing for other policy interventions to encourage PSE attendance.

A comparison of impacts between *Explore Your Horizons* and the *Explore Your Horizons* plus *Learning Accounts* combined intervention will determine whether the combined intervention improved participation in *Explore Your Horizons* activities such as attendance at workshops and Web site usage. An impact comparison between the *Learning Accounts* and the combined intervention will determine whether the combined intervention increased the take up of *Learning Accounts*.

Finally, an analysis of interim impacts on important measures of participant outcomes will be undertaken for subgroups of the sample. The subgroups may be defined by gender, language, participants' academic performance, income level, and parental education status, as measured at baseline. For example, students from very low-income families might benefit more from the combined intervention than students from less disadvantaged families. In this case, policy-makers may choose to target the more expensive combined intervention only on the most disadvantaged students.

LONGER-TERM IMPACTS

The pilot project was created to enable the analysis of longer-term impacts. Nonetheless, their development is at earlier stage than the short-term impacts. This is because long-term impacts will use data sources whose collection has yet to begin: the 66-month survey, administrative data on post-secondary enrolment, performance, and student financial aid. After 66 months, typical participants will be young adults around 20 years of age who will have completed high school, and many will be current or recent participants in PSE, working in the labour market, or both. Unfortunately, the measurement of very long-term impacts, such as PSE graduation and post-PSE labour market performance, is not feasible under the current time frame of the pilot project.

PSE participation and achievement represent the central impacts of interest in the *Future to Discover* pilot project. Irrespective of impacts on other participant outcomes, *Future to Discover* would have a plausible claim to success against its original objectives if it raised PSE participation and achievement but a substantially less plausible claim if it did not. An impact comparison of PSE participation and PSE program achievement will rely on administrative and survey data. It is likely that in the absence of centralized data on post-secondary students, the analysis of impacts for Manitoba will rely more heavily on survey data than for New Brunswick. The answers to some questions will rely solely on survey data, such as whether the interventions increased the likelihood that participants would apply for PSE. In addition, there will be a comparison of participants' reasons for attending or not attending PSE, their choice of PSE institutions and fields, as well as their choice of full-time or part-time studies. These comparisons are conditioned on participation in PSE and thus may be more readily structured as non-experimental comparisons. However, experimental estimates of the interventions' impacts on these measures may be possible if they are combined with other variables. For example, reasons for non-attendance could be combined with attendance to obtain an experimental impact result.

For the most part, SRDC will use administrative data to determine the interventions' impacts on the types and amounts of student financial aid received by the participants. In contrast, SRDC will use survey data to measure student funding that was not received from the federal government or the student's province. Types of aid will include loans, grants, and Learning Account funds. This comparison will help to determine whether Learning Account participants received more or different types of financial aid than other participants. For example, the

Learning Account group might have fewer student loans on average than the comparison group or the *Explore Your Horizons* group.

An impact comparison of employment, earnings, and income will use survey data. This comparison is important because lower employment and earnings represent major opportunity costs of PSE.

The interventions' impacts on attitudes to PSE and future career will be analyzed using survey data. There will also be a non-experimental comparison of the perceptions of PSE among PSE students. A comparison of plans for future PSE attendance and work in the short term and in the long term will use survey data. Both will give insight into possibility of future PSE enrolment and program completion beyond the current time frame of the study.

The interventions' impacts on various subgroups of the sample will determine the effectives of the interventions for these subgroups. The subgroups would likely be defined by gender, language, income, parental education status, and other characteristics measured at baseline.

Finally, short-term and longer-term impacts have the potential to be used together to gain insight into why the interventions had the levels of effectiveness that they did. For example, if *Explore Your Horizons* increased both graduation from high school and participation in PSE among the same people but had no other short-term or long-term impacts, one conclusion would be that the effect of the intervention on increasing high school graduation rates was an important factor in its success. Alternatively, if the intervention had no effect on high school graduation rates but still increased PSE attendance, the conclusion would be that the intervention was more effective for participants who, in the absence of the intervention, would have graduated from high school but not have attended PSE. Policy-makers can use this information in considering target populations for development of any future program. Potentially, there may be many similar insights to be gained by combining short-term and longer-term impacts. However, realizing these types of insights will depend upon the configuration of the data and outcomes and cannot be guaranteed in advance.

LONGER-TERM IMPLEMENTATON RESEARCH

Early implementation research has been presented in this report. This research will continue in the two impact reports but will shift in focus from the initial start-up and early development toward the implementation of the various interventions in their later stages in order to complement the impact and cost-benefit analysis. The implementation research will use Project Management Information System (PMIS) data from the relative stages of delivery for each cohort, qualitative information from field observations of the three years of the activities of the career education intervention, quantitative data from the 30-month survey, and depth interviews with *Future to Discover* staff.

Over time, implementation research will help researchers to interpret the impact findings in the interim and final impact reports. For example it will help determine whether the interventions received a "fair test." The target groups need adequate exposure to both the *Explore Your Horizons* and *Learning Accounts* interventions and both interventions need to be delivered as intended in order for the interventions to have received a fair test. Participation rates in *Explore Your Horizons* sessions and qualitative data from field observations and focus groups will be used to profile the participants' and parents' exposure to the workshops. Web site usage data aids understanding of exposure to information provided by the *Future to Discover* Web site. For *Learning Accounts*, the percentage of participants signing a participation declaration, plus the accumulation and cash out of account funds will be taken from the PMIS and Foundation records and used in the analysis. The 30-month and 66-month surveys will include a module in which program group members will quantify their awareness and usage of components of the intervention.

The implementation analysis will determine how well the pilot project delivery matched the model detailed in the *Future to Discover* operations manual. For *Explore Your Horizons*, field observations, depth interviews with facilitators and descriptions of monitoring strategies (such as facilitator meetings and staff observations) will yield information about adherence to curricula and procedures. For the delivery of *Learning Accounts*, the PMIS regarding notices mailed and indicating that cash out procedures are followed, plus survey respondents' knowledge of the features of *Learning Accounts*, will provide the necessary information for analysis.

The implementation research will document *Future to Discover* operations. This descriptive analysis will provide a detailed account of the implementation and operation of the *Explore Your Horizons* and *Learning Accounts* interventions, beyond the recruitment and first year of operations presented in this report. Sometimes referred to as "process research," the purpose is to create a document of record and source of "lessons learned" about delivery of the interventions. All materials for delivery of the intervention—including the curricula for the workshop sessions, the F2D magazine, the Web site, the participation agreements, the *Future to Discover* operations manual, and the *Learning Accounts* application forms—will inform this analysis. In addition, depth interviews with facilitators and *Future to Discover* office staff, focus groups with Post-secondary Ambassadors, minutes of facilitator meetings, and field observations will yield qualitative information about the operation of *Future to Discover*.

Implementation research endeavours to propose explanations for findings from the impact study. Depth interviews and focus groups with participants and staff as well as field observations will provide a foundation for further qualitative exploration as the 30-month survey data and the 66-month survey data are analyzed for program impacts. To aid this understanding of impacts, a National Longitudinal Panel (NLP) is collecting qualitative information from participants about their expectations and decision-making concerning their life plans once they leave high school. It will be valuable to examine the timing and direction of changes in behaviour that the impact study observes over time against the more in-depth understanding of youths' decision-making that the NLP is intended to generate. Quantitative data from the follow-up surveys and from the PMIS will also be used to help explain any differential impacts among subgroups. Most of this analysis will be presented in the final *Future to Discover* report, alongside the findings from the impact study.

The implementation research will also note factors with the potential to influence the operation and success of the interventions including the availability of PSE opportunities, financing for PSE, and assistance with planning and making post-secondary and career choices. SRDC will use data from secondary sources such as Statistics Canada, provincial governments, and post-secondary institutions to profile the environment within which *Future to Discover* has been operating. The interim impact report will summarize significant changes in the environment while the final report will recapitulate these findings. For example, major changes in the unemployment rate, student aid policy, or labour disputes at PSE institutions may affect PSE enrolment. SRDC will probe participants' perceptions of the environment, awareness of PSE opportunities, potential barriers, and strategies for overcoming them through the follow-up surveys, focus groups, and the NLP.

BENEFIT–COST ANALYSIS

A benefit–cost analysis will determine whether *Explore Your Horizons* and *Learning Accounts* represented a net benefit to participants, government, and society as a whole. It will do so by attributing a discounted dollar value to PSE attendance and possibly other impacts for the participants, government, and society as a whole. It will then subtract the discounted costs of each intervention.

In principle, it is straightforward to measure the costs of each intervention, such as direct expenses for the intervention, student tuition costs, student financial aid, and forgone participant earnings provided they occur to the program group within the study period. There are standard methods to collect these data accurately. Benefits such as enhanced earnings for the participants and savings on student financial aid and other programs for government and society are less straightforward to measure because they require a comparison with what would have happened without the program. Their estimation is much easier in the context of a randomized experiment with longitudinal data collection of kind pursued in *Future to Discover*. One of the central advantages of the *Future to Discover* benefit–cost analysis is the wealth of data related to student aid, program costs, administrative costs, and participant earnings over the course of the study for both program and comparison group members. Other benefit–cost analyses are sometimes either missing some of these data sources for periods or missing them entirely. Another central benefit is the random assignment design that incorporates a counterfactual comparison group. This allows for a "gold standard" estimate of the differences in program benefits and costs. Other benefit–cost analyses must rely on non-experimental data and, consequently, must leave open the possibility that their estimates of benefits and costs are influenced by such factors as selection bias. An offsetting disadvantage of the *Future to Discover* benefit–cost analysis is that most of the benefits and some of the costs occur after the study period is over. These benefits and costs can be estimated using within study costs and benefits, external survey and administrative data, and, potentially, academic estimates of the returns to education. However, the estimates of these benefits and costs are not as reliable as the actual benefits and costs that are measured directly during the period of the study.

CONCLUSION

A wide range of outcome measures will allow the study to determine the effectiveness of *Explore Your Horizons* and *Learning Accounts* relative to the comparison group and to each other. The most important experimental impact will be PSE enrolment and achievement. Other important measures of effectiveness, such as PSE graduation, cannot be collected or studied within the current time frame of the study. Implementation research will add insight into why these impacts occurred. The benefit–cost analysis will attempt to determine the net benefit of the interventions to participants, government, and society.

Appendices

Appendix 1: The High School Context in Manitoba and New Brunswick

Appendix 2: Data Sources for the *Future to Discover* Pilot Project

Appendix 3: School Selection for the *Future to Discover* Pilot Project

Appendix 4: Random Assignment Outcomes Across New Brunswick Experimental Groups

Appendix 1: The High School Context in Manitoba and New Brunswick

This appendix provides a very brief summary of information on high school curricula in Manitoba and in New Brunswick. Manitoba senior years' graduation credit requirements are presented first followed by New Brunswick's high school graduation requirements.

THE HIGH SCHOOL CONTEXT IN MANITOBA

A minimum of 28 credits from a combination of compulsory courses and optional courses is required for graduation from the senior years in Manitoba. A student may earn one credit by undertaking and successfully completing a course of study designed for a minimum of 110 hours of instruction. Half credits (courses designed for a minimum of 55 hours of instruction) may be earned similarly.

Individual schools have the authority to designate courses as compulsory for their students and to exceed the minimum 28-credit graduation requirement. These credits must follow a pattern established in one of the school programs presented in Table A1.1.

School-Initiated Courses (SICs) and Student-Initiated Projects (SIPs) may be used to fulfill the graduation requirements within the optional credits to a maximum of 11 and 3 credits respectively. SICs are curricula that have been developed and approved by schools and school divisions to meet local needs and interests of students, for example Native Studies. Depending on the different requirements of the school programs that are listed in Table A.I, the number of possible SICs used as optional credits may vary. Concerning SIPs, Senior Years students can also develop projects of special interest, which must be supervised by teachers. One example is the Community Service Student-Initiated Project, where students can earn one credit toward graduation for volunteer work in the community.

Students can earn optional credits through distance learning courses, Senior Years Apprenticeship Option, and summer school and credits for abilities and skills that are developed outside of school. Such options as private music lessons, Royal Winnipeg Ballet training, special language credits, and Cadets apply (Manitoba Education, Citizenship and Youth, 2005).

Students are responsible for ensuring that they meet the entrance requirements of the post-secondary education, training, or work situations they intend to pursue.

THE HIGH SCHOOL CONTEXT IN NEW BRUNSWICK

Graduation requirements for a New Brunswick high school diploma vary as a function of the school program. High schools from the anglophone sector in the province have the option of organizing courses in a 16-credit or a 20-credit system, though most choose the latter. High schools from the francophone sector use a 30-credit system. In all systems, students must meet the requirements of the prescribed common curriculum presented in Table A1.2.

In the 16-credit system, students are required to complete 14 of 16 credits, including six compulsory credits, and accumulate a minimum of four credits at the Grade 12 level. They must also acquire a literacy credential by achieving a successful rating on the English Language Proficiency Assessment written in Grade 9, or its Reassessment in Grade 10, 11, or 12.

In the 20-credit system, students must attain 17 of 20 credits (including seven compulsory credits), as well as accumulate a minimum of five credits at the Grade 12 level.

In the 30-credit system, students must attain 24 of 30 credits (including 17 compulsory credits), as well as passing a French and a mathematics provincial exam at the end of Grade 11.

Table A1.1: Manitoba Education, Citizenship and Youth Senior Years Graduation Credit Requirements[117]

Program	Grade 9	Grade 10	Grade 11	Grade 12
English	**Compulsory subject areas 5 credits required, 1 credit each**	**Compulsory subject areas 5 credits required, 1 credit each**	**Compulsory subject areas 3 credits required, 1 credit each**	**Compulsory subject areas 2 credits required, 1 credit each**
	English language arts Mathematics Science Social studies Physical/health education	English language arts Mathematics Science Social studies Physical/health education	English language arts Mathematics Social studies (history)	English language arts Mathematics
	Optional credits, 13 required			
	From subject areas such as: language arts (additional), mathematics (additional), sciences (additional), social studies (additional), basic French, other second languages, the arts (e.g. music, drama), physical education, skills for independent living, technology education, and career education (new courses under development).			
English – Senior Years Technology Education	**Compulsory subject areas 5 credits required, 1 credit each**	**Compulsory subject areas 5 credits required, 1 credit each**	**Compulsory subject areas 2 credits required, 1 credit each**	**Compulsory subject areas 2 credits required, 1 credit each**
	English language arts Mathematics Science Social studies Physical/health education	English language arts Mathematics Science Social studies Physical/health education	English language arts Mathematics	English language arts Mathematics
	Senior Years Technology Education Program credits, 8–14 required			
	To graduate with an approved Senior Years Technology Education Option, students must complete 14 compulsory credits, at least 8 approved Senior Years Technology Education Program credits, plus 0–6 optional credits. Within the approved Senior Years Technology Education Program cluster, students must complete the minimum of two Grade 11 credits and two Grade 12 credits. A minimum of 8 to a maximum of 14 approved credits are required from within an approved Senior Years Technology Education Program cluster as listed in the Manitoba Subject Table Handbook, Technology Education available at http://www.edu.gov.mb.ca/ks4/docs/policy/sthte/index.html (retrieved February 12, 2007).			
	Optional credits, 0–6 required from subject areas such as those listed under the Senior Years English Program above			
Français/French Immersion – Senior Years Technology Education	**Compulsory subject areas 6 credits required, 1 credit each**	**Compulsory subject areas 6 credits required, 1 credit each**	**Compulsory subject areas 3 credits required, 1 credit each**	**Compulsory subject areas 3 credits required, 1 credit each**
	Français Anglais or English Language Arts Immersion Mathématiques Sciences de la nature Sciences humaines Éducation physique et éducation à la santé	Français Anglais or English Language Arts Immersion Mathématiques Sciences de la nature Sciences humaines Éducation physique et éducation à la santé	Français Anglais or English Language Arts Immersion Mathématiques	Français Anglais or English Language Arts Immersion Mathématiques
	Senior Years Technology Education Program Credits, 8 to 10 required			
	To graduate with an approved Français/French Immersion Senior Years Technology Education Option, students must complete 18 compulsory requirements, at least 8 approved Technology Education Program Credits, plus 0–2 optional credits. Out of a total of 28 credits, the minimum 14 credits from courses taught in French are required to obtain the provincial diploma in French Immersion: at each grade in Grade 9 and Grade 10, the minimum of 4 credits must be completed in French and at each grade in Grade 11 and in Grade 12, the minimum of 3 credits must be completed in French. Within the approved Senior Years Technology Education Program cluster, students must complete the minimum of 1 Grade 11 and 1 Grade 12 credit. A minimum of 8 to a maximum of 10 approved credits are required from within an approved Senior Years Technology Education Program cluster as listed in the Manitoba Subject Table Handbook, Technology Education.			
	Optional Credits, 0–2 from subjects such as those listed under the Francais/French Immersion programs below			

117 Updated information on Manitoba's senior years graduation credit requirements can be found at http://www.edu.gov.mb.ca/k12/policy/grad_require.html (English) and http://www.edu.gov.mb.ca/m12/progetu/diplo-secondaire.html (French). Retrieved February 12, 2007.

Table A1.1: Manitoba Education, Citizenship and Youth Senior Years Graduation Credit Requirements (Cont'd)

Program	Grade 9	Grade 10	Grade 11	Grade 12
Français	**Compulsory subject areas 6 credits required, 1 credit each**	**Compulsory subject areas 6 credits required, 1 credit each**	**Compulsory subject areas 4 credits required, 1 credit each**	**Compulsory subject areas 3 credits required, 1 credit each**
	Français Anglais Mathématiques Sciences de la nature Sciences humaines éducation physique et éducation à la santé	Français Anglais Mathématiques Sciences de la nature Sciences humaines éducation physique et éducation à la santé	Français Anglais Mathématiques Sciences humaines	Français Anglais Mathématiques
	Optional credits, 9 required			
	From subject areas such as Français (additional), Anglais (additional), autres langues, mathématiques (additional), sciences de la nature (additional), sciences humaines (additional), éducation physique (additional), éducation à la santé (additional), études technologiques: formation professionnelle et industrielle, économie familiale, affaires et commercialisation, arts industriels, les arts : arts plastiques, éducation musicale, arts dramatiques, danse, vie autonome.			
French Immersion	**Compulsory subject areas 6 credits required, 1 credit each**	**Compulsory subject areas 6 credits required, 1 credit each**	**Compulsory subject areas 4 credits required, 1 credit each**	**Compulsory subject areas 3 credits required, 1 credit each**
	Français English language arts immersion Mathématiques Sciences de la nature Sciences humaines éducation physique et éducation à la santé	Français English language arts immersion Mathématiques Sciences de la nature Sciences humaines éducation physique et éducation à la santé	Français English language arts immersion Mathématiques Sciences humaines	Français English language arts immersion Mathématiques
	Out of a total of 28 credits, the minimum 14 credits from courses taught in French are required to obtain the provincial diploma in French Immersion: at each grade in Grade 9 and Grade 10, the minimum of 4 credits must be completed in French and at each grade in Grade 11 and in Grade 12, the minimum of 3 credits must be completed in French.			
	Optional credits, 9 required			
	From subject areas such as: Français (additional), Anglais (additional), autres langues, mathématiques (additional), sciences de la nature (additional), sciences humaines (additional), éducation physique (additional), éducation à la santé (additional), études technologiques: formation professionnelle et industrielle, économie familiale, affaires et commercialisation, arts industriels, les arts : arts plastiques, éducation musicale, arts dramatiques, danse, vie autonome.			

Table A1.2: New Brunswick Department of Education High School Graduation Requirements

<table>
<tr><th>Program</th><th>Grade 9</th><th>Grade 10</th><th>Grade 11</th><th>Grade 12</th></tr>
<tr><td rowspan="4">Anglophone Sector:[118]

20-credit system</td><td colspan="4">Compulsory subject areas</td></tr>
<tr><td>English Language Arts (180 hours)
Mathematics (180 hours)
French (90 hours)
Social Studies (90 hours)
Science (90 hours)</td><td>English Language Arts (180 hours)
Mathematics (180 hours)
French (90 hours)
Social Studies (90 hours)
Science (90 hours)
*Students earn credits in one or two Grade 11/12 course if their timetable permits.</td><td rowspan="2">English (2 credits)
Geometry and Applications in Mathematics (enriched or regular) or Applications in Mathematics (for students who may have difficulty with regular level or who do not intend to pursue PSE) (1 credit)
Modern History (1 credit)
Science or approved Technology Course (1 credit)
Fine Arts /Life Role Development cluster (1 credit)
Elective (1 or more credits)</td><td rowspan="2">English (1 credit)

6 electives (1 or more credits each)

Students must attain 17 of 20 credits (including 7 compulsory credits) to graduate.</td></tr>
<tr><td colspan="2">90 hours minimum in each of: art, music, physical education, technology (or 135 hours in one, 45 in another & 90 in two), personal development and career planning–40 hours over 2 years, and family studies–40 hours over 2 years
French language requirements are met in the Grade 9/10 program</td></tr>
<tr><td rowspan="2"></td><td colspan="4">Elective credits</td></tr>
<tr><td colspan="4">From subject areas such as: fine arts, health and physical education, home economics/family studies, Native studies, and technology/vocational education. The Fine Arts cluster offers visual arts, music, fine arts, theatre arts, graphic arts, and design. The Life Role Development cluster offers family living, career explorations, co-op education, outdoor pursuits, health and physical education, and entrepreneurship.</td></tr>
<tr><td rowspan="3">Anglophone Sector:

16-credit system</td><td colspan="4">Compulsory subject areas</td></tr>
<tr><td colspan="4">There are 6 compulsory credits that include those listed above (under compulsory subject areas for the 20-credit system) with the exception that English in Grade 11 earns 1 credit only. Students are required to successfully complete 14 of 16 credits, including 6 compulsories, to graduate.</td></tr>
<tr><td colspan="4">Elective credits same as above</td></tr>
</table>

Notes: A credit is granted for successful completion (minimum 60 per cent) or work that usually requires 90 hours (a half year) of instructional time.
The student course load is 10 credits per year–students typically begin to earn credits for graduation only during grades 11 and 12, though some can earn an elective credit or two during Grade 10.
For students who completed Grade 11 in the 16-credit system, and who are entering Grade 12 in the 20-credit system, Grade 11 is an 8-credit year and Grade 12 is a 10-credit year. Fifteen credits (including six compulsory credits from the 16-credit system) and four credits at the Grade 12 level are required for graduation.
Students may take up to two "Challenge for Credit" courses and one Independent Study for graduation purposes.
Only one Locally Developed Course is eligible for credit(s) for graduation purposes, but this course may not replace a compulsory course. ***(continued)***

118 Information on New Brunswick high school graduation requirements retrieved March 7, 2007, from www.gnb.ca/0000/pol/e/316AA.pdf (English).

Table A1.2: New Brunswick Department of Education High School Graduation Requirements (Cont'd)

Programme	9e année	10e année	11e année	12e année
Secteur francophone:[119] 30 crédits	**Cours du tronc commun**			
	Français 10131 Anglais langue seconde 21111 ou 22111 Mathématiques 30131 Sciences de la nature 50111 Géographie 41111 Éducation artistique 91111 ou 92111 Éducation physique 71111 Formation personnelle et sociale 74111	Français 10231 ou 10232 (2 crédits) Anglais langue seconde 21211 ou 22211 (1 crédit) Mathématiques 30231 ou 30232 (2 crédits) Sciences de la nature 50211 ou 50212 (1 crédit) Histoire du monde 42211 ou 42212 (1 crédit) Formation personnelle et sociale 74211 (1 crédit) Éducation physique 71211 (1 crédit) Techno 60211 (1 crédit) (les écoles ont le choix d'offrir ce cours en 10e, 11e ou 12e année)	Français 10331 ou 10332 (2 crédits) Mathématiques 30311 ou 30312 (1 crédit) Histoire du Canada 42311 ou 42312 (1 crédit) Option Sciences ou Sciences de la nature 50312 (1 crédit) Anglais langue seconde 21311 ou 22311 ou Anglais option ou 3e langue (1 crédit)	Français 10411 ou 10412 ou Option français (1 crédit)
		Cours au choix (7 crédits)		

Notes: Le régime pédagogique du secondaire comprend un total de 30 crédits de la 10e à la 12e année.
Un crédit équivaut à 93,5 heures d'enseignement au minimum et les conditions d'obtention du diplôme stipulent que l'élève doit obtenir un minimum de 17 crédits obligatoires (du niveau régulier ou modifié) et 7 crédits parmi la gamme des cours au choix.

119 Information on New Brunswick high school graduation requirements retrieved March 7, 2007, from http://www.gnb.ca/0000/publications/servped/Secondaire_Renouvele_Enseignant.pdf (French).

Appendix 2: Data Sources for the *Future to Discover* Pilot Project

The nature of *Future to Discover* as a demonstration project–with operational activities as well as outcomes to evaluate–has lead to a complex research design drawing on multiple sources of data. This appendix describes the implementation research data collection (fieldwork, PROJECT MANAGEMENT INFORMATION SYSTEM [PMIS], Web site data, and surveys), the data for impact analysis (surveys, high school, post-secondary student records, and tax data) and benefit–cost analysis (PMIS, surveys, administrative records, operational budget estimates, and tax records).

BASELINE SURVEYS

Baseline surveys were administered to all participants and their parents in the *Future to Discover* project, in 2004 and 2005, prior to their random assignment. The survey content was described briefly in Chapter 3.

The baseline data provide a description of the research sample. At the same time, comparison of the mean values of these variables for the program and comparison groups allows the validity of the random assignment process to be assessed. Some results appear in Chapter 4.

In estimating impacts, the researchers will test the hypothesis that impacts differ as a function of various "subgroup" characteristics. For example, the experimental analysis may want to look at possible differences in impact by gender or parental background. Baseline data identify these important "subgroup" characteristics.

Information collected from the baseline surveys will also be used as covariates to improve the precision of the impact analyses. Participants in the program and comparison groups are expected to be similar on many characteristics because of random assignment. Nonetheless, statistically significant differences between these groups may arise by chance. Such differences are usually viewed as a problem in the statistical precision of impact estimates rather than as bias. The researchers plan to use baseline characteristics–which by definition are independent of experimental group assignment–as covariates in multivariate analyses that measure individual impacts to improve the precision of the impacts under investigation by lowering the standard errors of the impact estimates.

Sample identifiers from the baseline survey will be required for collecting administrative data and for linking the records of individual pilot project participants. For this purpose, the researchers collected each sample member's name, date of birth, gender, and (when available) social insurance numbers and personal education numbers. Follow-up surveys will also use contact information collected for students in the program and comparison groups, such as names, addresses, and telephone numbers of several persons to assist in the location of students in the event that they move to another address between baseline and follow-up survey.

FOLLOW-UP SURVEYS

A variety of measures needed for the individual impact analyses are not available from administrative data files. These will need to be collected in follow-up surveys of program and comparison group members. Follow-up surveys for *Explore Your Horizons* and *Learning Accounts* will be conducted roughly 30 and 66 months after the baseline survey.

Follow-up surveys will collect information on participants' orientation toward the future, educational and non-educational activities, knowledge of post-secondary education options, and post-secondary intentions.

The follow-up surveys will be crucial in answering research questions posed in the impact analysis, because both program and comparison group members will be surveyed. For example, in connection with *Explore Your Horizons*, the survey analysis will answer questions like: "What patterns of school engagement emerge over time for those offered *Explore Your Horizons* services and to what extent is their engagement different from patterns of engagement for the comparison group?" "Does the intervention increase participants' knowledge of post-secondary options and, if so, does it affect their post-secondary enrolment?"

Finally, the follow-up surveys will include one set of questions about the experience of the intervention that only program group members complete and another set about similar services received for both program and comparison group members. Among other things, the implementation questions provide researchers with a window on participants' awareness and use of the various components of the interventions. Members of the comparison group can be asked about their awareness of the interventions or comparable services being offered locally.

The two follow-up surveys are too far apart to ensure that adequate contact is maintained with the sample without additional efforts. Therefore additional telephone contacts are planned, simply to reconfirm contact details with all sample members. As a result, no gap in contact will last longer than 18 months. Participants will receive incentive payments for completing all surveys, but not for the 18- and 48-month tracking contacts.

DATA FROM INTERVENTION-RELATED INFORMATION SOURCES

A PMIS was developed and implemented for both *Explore Your Horizons* and *Learning Accounts* to support the day-to-day operations and management of the interventions in New Brunswick and Manitoba.

The PMIS keeps track of participants over the life of the project and also provides information for *Learning Accounts* management. The wealth of information the system collects about students in both interventions will be useful in implementation research, in the benefit–cost analysis and in impact analysis comparing the *Explore Your Horizons*, *Learning Accounts*, and *Explore Your Horizons* plus *Learning Accounts*. The PMIS cannot be used for comparisons with the comparison group, because no PMIS information will be collected for comparison group members.

Data items that should be collected for the evaluation on participants through this system include

- the start and end dates of intervention eligibility
- the extent of student and parent participation in various intervention components and
- eligibility for accumulation of *Learning Accounts* and disbursement of Learning Account funds.

The New Brunswick Department of Education and Manitoba Education, Citizenship and Youth (through the *Future to Discover* Offices) are responsible for entering and maintaining all information on the system developed and implemented by Sierra Systems.

Participants' access and use of the *Future to Discover* Web site is tracked by Allegro 168 Communications + Design and data files are made available to the Social Research and Demonstration Corporation (SRDC) in a way that permits linkage to other project data for each participant. These data reveal how intensively participants have made use of this particular component. Only students assigned to the *Explore Your Horizons* and *Explore Your Horizons* plus *Learning Accounts* program groups hold "access keys" granting them access to the Web site.

ADMINISTRATIVE DATA FILES

The researchers will collect a variety of administrative information, as specified in the consent form signed by the project participants. These will be used in impact and benefit-cost analyses. Some administrative data referring only to those who receive the interventions will be used in implementation research. But, cost information collected on services provided will need to be used in the benefit–cost analysis.

Data From Post-secondary Institutions

In order to measure the principal outcomes of the evaluation–successful enrolment in a post-secondary program within two years of leaving high school–the researchers will primarily seek to use administrative records from post-secondary institutions. Administrative data are in some respects far superior to survey responses, collected at a single point in time, to describe post-secondary experiences. The administrative data will capture experiences that occur throughout the follow-up period and are likely to be more accurate than respondent's recall. In addition, the data will be available for a larger portion of the sample than survey responses, due to survey attrition over time. The following information about post-secondary participation will be sought:

- the name of each institution attended
- program type for each program undertaken
- the field of study in which the person enrolled
- whether the person was enrolled full time or part time
- the type of credential awarded, if any

In New Brunswick the researchers will receive data from the Maritime Provinces Higher Education Commission (MPHEC). MPHEC manages post-secondary enrolment data for multiple provinces, which makes it a useful data source. In Manitoba data will be collected from individual post secondary education institutions. Students will nonetheless be asked in detail about participation in post secondary programs during the final follow-up survey to supplement the information from the administrative records, because of weakness in program and geographical coverage in administrative data.

Data From the Canada Revenue Agency

Individual income tax records can also provide information about enrolment in post-secondary education programs. Therefore, in addition to administrative records from post-secondary education institutions and from follow-up surveys, the impact study will also seek information from individual tax records from the Canada Revenue Agency (CRA) to determine the individual impacts on education tax credits. It is also possible that the interventions will produce impacts on employment and earnings. In the short term, the likely outcome is a net loss of earnings (since program group members may spend more time studying rather than working). This will represent much of the initial cost of any additional post-secondary enrolment. Over the longer-term, returns to increased education should yield higher program group earnings. A longer-term analysis than currently planned could analyze data from income tax records to determine these impacts.
The researchers will be most interested in obtaining the following data elements: education tax credits, deductions and exemptions, income, and earnings.

Data on High School Outcomes

High school graduation is an interim outcome in the evaluation of *Explore Your Horizons* and *Learning Accounts*. The expectation is that the interventions should encourage graduation among some participants who might otherwise not have done so. It is expected that each intervention will also increase high school grades and alter participants' choices of high school courses. Through data sharing agreements with the provincial education ministries, SRDC will collect data on courses taken, course marks, scores on provincial examinations, and high school graduation.

Data on Direct Student Financial Aid

Access to student financial assistance is another interim outcome, while the amounts received are relevant also in the benefit–cost analysis. Participants have consented to SRDC collecting from the provincial agencies responsible for student financial services data on types of award, the time period for which money was awarded, and the amounts. This process will necessarily involve detailed data assessments with the provincial agencies to specify the required data elements and data collection process.

DATA FROM THE CANADA MILLENNIUM SCHOLARSHIP FOUNDATION

The researchers will determine the impact of offering *Learning Accounts* on the eventual receipt and amounts of such aid. Data will be collected on the number and amounts of instalments into *Learning Accounts*, the number and amount of disbursements, as well as when disbursements were issued and for what academic periods. This information will be available only for individuals in *Learning Accounts* and *Explore Your Horizons* plus *Learning Accounts*. In impact and benefit-cost analyses, payments from the Learning Account will need be counted alongside other direct student aid in the form of grants that will be available for both treatment and comparison groups. The amount from Learning Accounts will be zero for comparison group members. Instalment information will be collected by the New Brunswick *Future to Discover* office, while disbursements will be made by the Canada Millennium Scholarship Foundation, so data will be sought from these two sources.

QUALITATIVE DATA COLLECTION AND ANALYSIS

Apart from the surveys, the primary data being collected by the researchers are qualitative in nature and used primarily in the implementation research. Some quantitative data (from the PMIS and Web usage statistics) are also collected for implementation research, but the analysis relies on many data that are qualitative in nature. The following section presents the qualitative data the researchers will collect for *Explore Your Horizons* and *Learning Accounts*.

Field Observations

As part of the *Future to Discover* pilot project, the researchers are observing some of the training of facilitators and post-secondary ambassadors. As well, observations of all of the *Explore Your Horizons* workshops–Orientation, Career Focusing, Lasting Gifts, and Future in Focus—are being conducted. Since the effectiveness of the Post-Secondary Ambassador (PSA) sessions is expected to depend on the peer element of the ambassador-student relationship, it was felt that it would be unwise to introduce a researcher observer into these workshops. Because field observations should only occur when there is reasonable certainty that the observer's presence will not affect the dynamics of the group, site visits to PSA sessions are not planned. However, researchers are collecting qualitative information from the post-secondary ambassadors through focus groups, in order to learn more about the PSA sessions and the Ambassadors' opinions about the sessions' strengths or weaknesses, facilitation challenges, and participant reactions to the content and structure of the sessions.

SRDC's Implementation Research Plan calls for observing a minimum of three of each of the six Career Focusing workshops (observations have been completed at time of writing this report), three sessions of each of the four Lasting Gifts workshops, and three sessions of each of the four Future in Focus workshops in New Brunswick. In Manitoba researchers are observing a minimum of two of each of the workshops. Including observations of the initial Orientation sessions, SRDC will have observed close to 80 *Future to Discover* sessions by the time the project has finished.

DEPTH INTERVIEWS

To provide a better understanding of peoples' experiences and personal perspectives including phenomena unanticipated by the researchers, semi-structured and unstructured depth interviews are included in the *Future to Discover* fieldwork plan. Depth interviews are used to help find answers to open-ended questions that are difficult or impossible for telephone surveys to obtain with closed-ended questions. Depth interviews are preferred to focus groups when the subject matter is sensitive or when peer pressure is likely to influence the answers that respondents provide.

The implementation research plan includes at least 20 depth interviews with facilitators and project staff.[120] The number and staff selection for these interviews will be determined by the findings from early interviews, ongoing research needs, and the frequency and timing of site visits. Project staff are asked questions to explore their understanding and observations of the students' activities and reactions to the various facets of *Future to Discover*. As well, facilitators and project staff are asked to give feedback on the anticipated outcomes of *Future to Discover* and any findings that surface.

In addition to staff interviews, a small number (about four in each province) of depth interviews with key stakeholders, such as policy-makers and senior education officials, are planned. The purpose of these interviews is to gain an insight on "top-down" perspectives of the intervention and to compare these with the "bottom-up" perspectives of project delivery staff and participants.[121]

120 The number of depth interviews with facilitators/teachers may be increased or reduced depending on the feasibility and desirability of focus groups or mini-groups as alternatives.

121 Teachers/facilitators and other professionals invited to depth interviews with SRDC will not be offered a monetary incentive, as it is felt that these occasions will be rare and will not impose excessively upon the interviewee.

Focus Groups and Mini-groups

Like depth interviews, focus groups collect in-depth information from participants. However, data is collected within a group context in which interactions occur among members of the group. These interactions may facilitate disclosure of information and the interactions can on occasion be the topic of research interest. Focus groups can provide a rich source of information about why some participants succeed in an intervention, and why others do not. They also help to illuminate differences in experiences between program and comparison group members.

Most often, focus groups have between 6 and 10 participants. However, participants in *Future to Discover* are teenagers, and it is likely that smaller "mini-groups" of about four or five participants may provide more effective environments for data collection. Teenagers are susceptible to peer pressure in a larger group and can "grandstand" for their peers or become intimidated and shy. The researchers plan to conduct four mini-groups in each province with students randomly assigned to *Explore Your Horizons*.[122] In these groups the researchers will explore the students' experiences with and opinions of the various *Explore Your Horizons* components.

The post-secondary ambassadors are located in widespread geographic regions of the two provinces, making focus groups logistically challenging. However, these ambassadors meet twice per year for training, and SRDC is conducting two focus groups in each province with ambassadors during their training week. The purpose of the focus groups is to learn more about their experiences in delivering the workshops, the feedback they receive from the students, and their opinions of the intervention as well as providing the opportunity to learn more about consistency (or variability) of the delivery of the workshops in each province.

Parents play a significant role in influencing their children's planning for post-secondary education. In order to learn more about this role, and about the parents' opinions about the *Future to Discover* interventions, SRDC is conducting a set of four focus groups with program group parents in New Brunswick and four in Manitoba.[123]

National Longitudinal Panel

Future to Discover is concerned with providing information and resources to students over a specific period of their high school lives, with the aim of changing the students' future orientation and behaviour in favour of accessing post-secondary education. The success of the interventions relies on influencing students' decisions about their post-secondary lives at the right time. A better knowledge of students' typical decision-making–especially among those students whose behaviour the project is most trying to influence–will be a great aid to understanding the eventual pattern of impacts. SRDC has thus established a "National Longitudinal Panel" (NLP) within the existing project sample to build this knowledge.

The NLP sample size is a total of 36 students from three provinces combined, since this activity includes students from SRDC's evaluations of all three Millennium Pilot Projects (including the BC AVID Pilot Project). With the help of *Future to Discover* baseline survey data, 24 students were selected for a sample list in both New Brunswick and Manitoba. SRDC is interviewing the NLP students in groups of three students or "triads." Each triad comes from the same project school site. The triads meet together with a researcher for a two-hour depth interview three times. In New Brunswick and Manitoba these interviews take place in spring 2006, 2007, and 2008. Projective techniques[124] are employed by the researchers to encourage students to share the rationales they have for particular beliefs, plans, or behaviours, to allow deeper probing of potentially sensitive issues, and in areas where teenaged students may experience difficulty expressing their views or expectations. The panel meets at the local schools for each triad group for logistical reasons. Anglophone and francophone students will be equally represented in New Brunswick.

The composition of each triad is homogeneous in terms of their participation in *Future to Discover.* For example, comparison group members will be grouped together; program group students are together in a different group. As well, the sample has been selected to encourage participation of students in *Future to Discover*'s lower-income/lower-education target group. Some heterogeneity of other characteristics (such as academic performance, family background) is appropriate, as with most qualitative research sampling, in order to gain a broader perspective of possible opinions and behaviours.

122 Only participants from a lower-income family can qualify for a Learning Account. SRDC therefore will not conduct group-based data collection with these students. *Future to Discover* recruitment, delivery, and research fieldwork are designed to avoid any potential stigma associated with participation in *Learning Accounts*.

123 Parents attending focus groups will be offered a financial incentive in appreciation for their time and their effort getting to and from the location of the groups.

124 Projective techniques involve asking the informant to react to some kind of visual or verbal stimulus.

Appendix 3: School Selection for the *Future to Discover* Pilot Project

This appendix contains a more detailed description of the process used to identify schools to participate in *Future to Discover.* Grade 9 students became eligible for sampling as part of recruitment into the project if their schools were selected through this process and their districts/divisions and schools also agreed to participate in the project (as described in Chapter 3). There were four objectives underlying the selection process, which was devised by the Social Research and Demonstration Corporation (SRDC) in consultation with project partners:

- To select schools in a way that would maximize the proportion of students belonging to the project's "designated group" (see Chapter 1) of students from low-income families who have parents with little or no post-secondary experience.
- To select schools where the number of students in Grade 9 would be sufficient to permit the creation of viable experimental groups (especially with respect to the number of students offered a place in *Explore Your Horizons*) at the school level. The project partners had agreed that given optimum "workshop" attendance for many *Explore Your Horizons* activities, around 25 to 30 students should be offered a place in *Explore Your Horizons* at each site. Similarly, for *Explore Your Horizons* to operate effectively in grades 10 through 12 for the same cohort of students recruited in Grade 9, all four grades (9 through 12) should be represented at the school.
- To select a sufficient number of school sites so that the research objectives of the project could be met. In other words, the samples from each school, once pooled at the provincial level or by linguistic sector in New Brunswick, had to be of sufficient size to detect impacts of a specified size (see Chapter 3).
- To select schools in an equitable way across provincial sectors and school districts and divisions.

The selection process adopted represented a compromise between these different objectives. For example, the second and fourth objectives prevented the project targeting only the schools serving the very lowest-income students in each province. There was also a research interest in delivery of the interventions at "smaller schools," and so an allowance was made for a low number of "smaller schools" to be selected if they met the other objectives for school selection.

SCHOOL INFORMATION USED FOR SCHOOL SELECTION

The following procedure was used to prepare information for the selection of schools:

- Schools were ranked according to the anticipated characteristics of their student populations. Different proxy data sources for these characteristics were used in New Brunswick compared with Manitoba (see Text Box A3.1). The rankings of schools based on these two different data sources were scaled so that the lowest-ranked schools had the fewest families with low income and/or no post-secondary qualifications in their catchments and the highest ranked schools had the most families with these characteristics.
- Schools were separately categorized based on an estimate of how well the recorded 2002–2003 student enrolment at the school[125] would fulfil the project requirement for approximately 25 to 30 students to be invited to attend *Explore Your Horizons* sessions, following recruitment and random assignment (in New Brunswick, these 25 to 30 would represent a combination of *Explore Your Horizons* and *Explore Your Horizons* plus *Learning Accounts* program group members). Many more than 25 to 30 students would need to be approached to participate at each school for two reasons: (i) some students at each school would decline the offer to participate in the project and (ii) some who accepted would be assigned systematically to experimental groups not offered *Explore Your Horizons* (to the comparison group or, in New Brunswick, the *Learning Accounts* only group). In New Brunswick schools with 142 or more Grade 9 students were expected to fulfil this project requirement. Those with 284 or more students had the potential to fulfil the requirement twice (to produce two *Explore Your Horizons* groups). New Brunswick schools with 86 to 141 Grade 9 students were classified as potential contributors to a "smaller school" sample that could provide between 15 and 24 *Explore Your Horizons* participants. In Manitoba schools with 100 or more Grade 9 students were expected to fulfil the requirement for 25 to 30 students while public schools with 61 to 99 Grade 9 students were expected to provide between 15 and 24 students and were included as potential contributors to the "smaller school" sample.

125 The 2002–2003 enrolment figures were the most up to date figures at the time the project was under design. It was assumed that enrolments would be similar in 2003–2004 and 2004–2005, the actual recruitment years.

Text Box A3.1: Data Sources Used to Rank Schools on Characteristics of Students' Families

In New Brunswick the data source was the 2000 Youth in Transition Survey/PISA census of the province's schools. The ranking was based on the proportion of fifteen-year-olds in the families surveyed whose parents' income was below $60,000 and whose parents had a highest education level of a high school diploma or less. Youth in Transition Survey (YITS) data covered all New Brunswick schools except 10 smaller schools.

In Manitoba and the 10 smaller New Brunswick schools, the ranking was based on small area data from the 2001 Census. The sum of (i) the proportion of census families in each school's Forward Sortation Area (FSA) with pre-tax incomes below $40,000 and (ii) the proportion of adults in the FSA with no college or university qualifications.

PROCESS FOR SELECTING SCHOOLS

Schools were selected following the following steps:

- In both provinces, the schools that could provide at least one *Explore Your Horizons* group of 25 to 30 were identified. Among these, schools with the highest ranked position(s) on family characteristics within each school district/division were selected, up to a maximum of one school per Manitoba division, two schools per New Brunswick anglophone district, and three schools per New Brunswick francophone district.[126]
- The number of Grade 9 students to be approached by the project at the selected schools was then tallied.[127] If the total number of students to be approached fell short of a predetermined target (2,000 in Manitoba, 2,030 per New Brunswick sector per year),[128] schools identified as able to contribute to the "smaller school" sample were added until all districts/divisions with eligible schools had contributed a maximum of two (in Manitoba divisions and New Brunswick anglophone districts) or three (New Brunswick francophone districts) schools. The smaller schools were added to Manitoba divisions with any such eligible schools, to New Brunswick anglophone districts with less than two schools already selected, and to New Brunswick francophone districts with less than three schools already selected. The "smaller schools" with the highest ranked positions on family characteristics were chosen first.
- If, following the above steps, the target student numbers had still not been reached, schools already selected but with student enrolment sufficient to support two *Explore your Horizons* groups were included "twice." That is, these schools contributed two "sites" to the project. This step was applied in two districts in the New Brunswick francophone sector.
- If, following the above steps, the target student numbers had still not been reached, schools with 40 to 85[129] Grade 9 students were then identified, and those with the highest ranking on family characteristics were mapped geographically. Schools within 35 kilometres of already-selected schools were identified, as were pairs of small schools within 35 kilometres of each other. Information from each pair of schools' family catchment was pooled. School pairs with the highest ranking based on the pooled averages were selected until the target was reached. The intent of this step was to find pairs of schools that could provide one or more *Explore Your Horizons* groups if the pairs of schools could be considered as a single site. This step was applied for one New Brunswick francophone school district.
- Finally, the list of selected schools was re-examined for each province (for each sector in New Brunswick). If no "smaller schools" had been included, the lowest ranked schools on family characteristics in each district/division were removed from the list (up to a maximum of one per district/division) and replaced with the two highest-ranking "smaller schools." If the addition of these two "smaller schools" left the total student numbers below the target, the third highest-ranking "smaller school" was added.

The resulting list of schools formed the contact list for seeking school interest to participate (and initial school division permissions in the case of Manitoba). As explained in Chapter 3, one Manitoba division declined to participate, resulting in a partial repeat of the above steps to locate additional schools. Subsequently, in one Manitoba division that had agreed to participate, two schools declined to participate and were replaced with two Grade 10 to 12 schools, requiring recruitment of Grade 9 students at a total of four feeder schools in the division.

126 New Brunswick had nine anglophone districts and five francophone school districts, requiring more schools per district to be selected from the latter for the same final achieved sample size.

127 Because the project could not accommodate more than 25 to 30 Explore Your Horizons students in each "workshop" the sample from each school would not necessarily include all Grade 9 students. Instead, only a set number of students would need to be approached, given assumptions about non-response and the assignment fractions to experimental groups. Each school thus contributed a set number of students "to be approached" to the total across all schools. This was usually 142 Grade 9 students in the case of each New Brunswick school and 100 students in the case of each Manitoba school, except in situations where there were fewer than this number, when the school's contribution was set at the total number of Grade 9 students according to the 2002–2003 enrolment data.

128 These targets were set at almost twice the desired cohort size to allow for up to 50 per cent of students approached to decline (or not respond to) the opportunity to participate.

129 In Manitoba it was 40 to 60 students.

Appendix 4: Random Assignment Outcomes Across New Brunswick Experimental Groups

This appendix contains 14 tables that illustrate the success of random assignment across each experimental contrast possible for New Brunswick experimental groups. The equivalent table for Manitoba appears in Chapter 4 (Table 4.23).

Chapter 4 reviewed how to read the tables, and the explanation is repeated here for simplicity. Each table presents an identical set of sample characteristics in terms of means and proportions (expressed as percentages), calculated separately for the members of each experimental group by linguistic sector. The difference between the experimental estimates appears alongside each contrast. This difference represents the "impact" of random assignment on that variable. Given that the variables are baseline characteristics, the "impact" is expected to be zero because random assignment occurred *after* the survey data were collected. Asterisks (*) next to an impact estimate indicate that the estimate is statistically significant, meaning that it is large enough to be interpreted as evidence that the assignment has generated an impact.

The final column indicates the standard error of the impact estimate, which is a measure of the statistical uncertainty associated with the impact estimate. One can be about 95 per cent confident that the actual impact lies within the range defined by the estimated impact, plus or minus two standard errors.

The tables show that random assignment has worked to create statistically equivalent groups. Nearly all the differences between the contrasted groups on observed characteristics at baseline are not statistically significantly different from zero. Because SRDC's computer program assigned groups independently of any and all respondent characteristics, the same conclusion can also be assumed for unobserved characteristics.

A few chance differences do occur, but impact estimates and standard errors are still genuinely attributable to the intervention as the intervention represents the only systematic difference between the groups. This random statistical variation is taken into account in the calculated confidence intervals around each impact estimate. Strategies to adopt in the presence of such chance differences are discussed in Chapter 4.

Table A4.1: Characteristics of Report Sample Members — Program and Comparison Groups, New Brunswick Francophone Lower-Income Families

Baseline Characteristic	LA Group	Comparison Group	Difference (Impact)	Standard Error
Household characteristics				
Number of adults in household	1.9	2.0	-0.1*	(0.1)
Signing parent male (%)	17.6	20.0	-2.4	(3.3)
Number of children in household	1.8	1.8	-0.1	(0.1)
Age of signing parent (years)	41.3	41.4	-0.1	(0.5)
Student characteristics				
Male (%)	46.2	48.6	-2.4	(4.3)
Aboriginal (ever mention %)	1.5	1.4	0.1	(1.0)
White (ever mention %)	98.9	99.3	-0.5	(0.8)
Age (years)	14.5	14.5	0.0	(0.1)
Has difficulty seeing, hearing, learning, etc. (%)	7.6	6.6	1.1	(2.2)
Average mark this year 80%+ (%)	35.8	30.5	5.4	(4.1)
Parent views on student's education				
Very important child gets PSE (%)	88.2	87.2	0.9	(2.8)
Parent hopes child will get vocational/apprentice qualifications (%)	7.6	7.6	0.0	(2.3)
Parent hopes child will get college diploma (%)	14.9	23.8	-8.9***	(3.4)
Parent hopes child will get university degree (%)	56.1	49.0	7.1*	(4.3)
Parent hopes child will get some kind of PSE (%)	95.8	96.9	-1.1	(1.6)
Something standing in child's way (%)	25.2	28.0	-2.8	(3.8)
Barrier to going this far is financial (%)	18.7	20.7	-2.0	(3.4)
Parents' highest level of education				
High School diploma (%)	27.5	27.9	-0.5	(3.8)
Trade/College/Apprenticeship (%)	39.7	40.3	-0.7	(4.2)
University degree (%)	8.0	4.8	3.2	(2.1)
Employment and income				
Family income in previous year ($)	29,866	30,713	-847	(1,197)
Signing parent is employed (%)	68.7	67.2	1.5	(4.0)
Student has ever worked (%)	93.5	93.0	0.5	(2.2)
Sample size (total = 552)	**262**	**290**		

Source: Calculations from parent and student baseline survey data.
Notes: Two-tailed t-tests were applied to differences in characteristics between the program and comparison groups.
Statistical significance levels are indicated as: * = 10 per cent; ** = 5 per cent; *** = 1 per cent.
Rounding may cause slight discrepancies in sums and differences.

Table A4.2: Characteristics of Report Sample Members — Program and Comparison Groups, New Brunswick Francophone Lower-Income Families

Baseline Characteristic	EYH/LA Group	Comparison Group	Difference (Impact)	Standard Error
Household characteristics				
Number of adults in household	2.0	2.0	0.0	(0.1)
Signing parent male (%)	18.6	20.0	-1.4	(3.4)
Number of children in household	1.9	1.8	0.0	(0.1)
Age of signing parent (years)	41.8	41.4	0.4	(0.5)
Student characteristics				
Male (%)	49.4	48.6	0.8	(4.3)
Aboriginal (ever mention %)	1.9	1.4	0.5	(1.1)
White (ever mention %)	98.9	99.3	-0.5	(0.8)
Age (years)	14.5	14.5	0.0	(0.1)
Has difficulty seeing, hearing, learning, etc. (%)	7.2	6.6	0.7	(2.2)
Average mark this year 80%+ (%)	34.8	30.5	4.3	(4.1)
Parent views on student's education				
Very important child gets PSE (%)	89.0	87.2	1.7	(2.8)
Parent hopes child will get vocational/apprentice qualification (%)	8.0	7.6	0.4	(2.3)
Parent hopes child will get college diploma (%)	18.6	23.8	-5.2	(3.5)
Parent hopes child will get university degree (%)	52.9	49.0	3.9	(4.3)
Parent hopes child will get some kind of PSE (%)	95.8	96.9	-1.1	(1.6)
Something standing in child's way (%)	27.8	28.0	-0.3	(3.8)
Barrier to going this far is financial (%)	16.4	20.7	-4.3	(3.3)
Parents' highest level of education				
High school diploma (%)	25.1	27.9	-2.8	(3.8)
Trade/College/Apprenticeship (%)	45.3	40.3	4.9	(4.2)
University degree (%)	4.2	4.8	-0.6	(1.8)
Employment and income				
Family income in previous year ($)	30,644	30,713	-69	(1,226)
Signing parent is employed (%)	65.8	67.2	-1.5	(4.0)
Student has ever worked (%)	91.6	93.0	-1.4	(2.3)
Sample size (total = 553)	**263**	**290**		

Source: Calculations from parent and student baseline survey data.
Notes: Two-tailed t-tests were applied to differences in characteristics between the program and comparison groups.
Statistical significance levels are indicated as: * = 10 per cent; ** = 5 per cent; *** = 1 per cent.
Rounding may cause slight discrepancies in sums and differences.

Table A4.3: Characteristics of Report Sample Members — Program and Comparison Groups, New Brunswick Francophone Lower-Income Families

Baseline Characteristic	EYH Group	Comparison Group	Difference (Impact)	Standard Error
Household characteristics				
Number of adults in household	1.9	2.0	-0.1	(0.1)
Signing parent male (%)	11.0	20.0	-9.0***	(3.3)
Number of children in household	1.9	1.8	0.1	(0.1)
Age of signing parent (years)	41.4	41.4	0.0	(0.5)
Student characteristics				
Male (%)	45.7	48.6	-2.9	(4.5)
Aboriginal (ever mention %)	2.9	1.4	1.5	(1.3)
White (ever mention %)	99.1	99.3	-0.3	(0.8)
Age (years)	14.5	14.5	0.0	(0.1)
Has difficulty seeing, hearing, learning, etc. (%)	4.8	6.6	-1.8	(2.1)
Average mark this year 80%+ (%)	41.7	30.5	11.2**	(4.4)
Parent views on student's education				
Very important child gets PSE (%)	87.1	87.2	-0.1	(3.0)
Parent hopes child will get vocational/apprentice qualifications (%)	5.7	7.6	-1.9	(2.3)
Parent hopes child will get college diploma (%)	21.9	23.8	-1.9	(3.8)
Parent hopes child will get university degree (%)	51.9	49.0	2.9	(4.5)
Parent hopes child will get some kind of PSE (%)	96.2	96.9	-0.7	(1.7)
Something standing in child's way (%)	28.1	28.0	0.1	(4.1)
Barrier to going this far is financial (%)	17.6	20.7	-3.1	(3.6)
Parents' highest level of education				
High school diploma (%)	28.6	27.9	0.6	(4.1)
Trade/College/Apprenticeship (%)	40.5	40.3	0.1	(4.5)
University degree (%)	4.3	4.8	-0.5	(1.9)
Employment and income				
Family income in previous year ($)	29,826	30,713	-887	(1,308)
Signing parent is employed (%)	62.9	67.2	-4.4	(4.3)
Student has ever worked (%)	93.3	93.0	0.3	(2.3)
Sample size (total = 500)	**210**	**290**		

Source: Calculations from parent and student baseline survey data.
Notes: Two-tailed t-tests were applied to differences in characteristics between the program and comparison groups.
Statistical significance levels are indicated as: * = 10 per cent; ** = 5 per cent; *** = 1 per cent.
Rounding may cause slight discrepancies in sums and differences.

Table A4.4: Characteristics of Report Sample Members — Program Groups, New Brunswick Francophone Lower-Income Families

Baseline Characteristic	EYH/LA Group	LA Group	Difference (Impact)	Standard Error
Household characteristics				
Number of adults in household	2.0	1.9	0.1	(0.1)
Signing parent male (%)	18.6	17.6	1.1	(3.4)
Number of children in household	1.9	1.8	0.1	(0.1)
Age of signing parent (years)	41.8	41.3	0.5	(0.5)
Student characteristics				
Male (%)	49.4	46.2	3.2	(4.4)
Aboriginal (ever mention %)	1.9	1.5	0.4	(1.1)
White (ever mention %)	98.9	98.9	0.0	(0.9)
Age (years)	14.5	14.5	0.0	(0.1)
Has difficulty seeing, hearing, learning, etc. (%)	7.2	7.6	-0.4	(2.3)
Average mark this year 80%+ (%)	34.8	35.8	-1.1	(4.2)
Parent views on student's education				
Very important child gets PSE (%)	89.0	88.2	0.8	(2.8)
Parent hopes child will get vocational/apprentice qualifications (%)	8.0	7.6	0.4	(2.4)
Parent hopes child will get college diploma (%)	18.6	14.9	3.7	(3.3)
Parent hopes child will get university degree (%)	52.9	56.1	-3.3	(4.4)
Parent hopes child will get some kind of PSE (%)	95.8	95.8	0.0	(1.8)
Something standing in child's way (%)	27.8	25.2	2.6	(3.9)
Barrier to going this far is financial (%)	16.4	18.7	-2.4	(3.3)
Parents' highest level of education				
High school diploma (%)	25.1	27.5	-2.4	(3.9)
Trade/College/Apprenticeship (%)	45.3	39.7	5.6	(4.3)
University degree (%)	4.2	8.0	-3.8*	(2.1)
Employment and income				
Family income in previous year ($)	30,644	29,866	778	(1,255)
Signing parent is employed (%)	65.8	68.7	-2.9	(4.1)
Student has ever worked (%)	91.6	93.5	-1.9	(2.3)
Sample size (total = 525)	**263**	**262**		

Source: Calculations from parent and student baseline survey data.
Notes: Two-tailed t-tests were applied to differences in characteristics between the program and comparison groups.
Statistical significance levels are indicated as: * = 10 per cent; ** = 5 per cent; *** = 1 per cent.
Rounding may cause slight discrepancies in sums and differences.

Table A4.5: Characteristics of Report Sample Members — Program Groups, New Brunswick Francophone Lower-Income Families

Baseline Characteristic	EYH Group	LA Group	Difference (Impact)	Standard Error
Household characteristics				
Number of adults in household	1.9	1.9	0.0	(0.1)
Signing parent male (%)	11.0	17.6	-6.6**	(3.3)
Number of children in household	1.9	1.8	0.1*	(0.1)
Age of signing parent (years)	41.4	41.3	0.1	(0.5)
Student characteristics				
Male (%)	45.7	46.2	-0.5	(4.6)
Aboriginal (ever mention %)	2.9	1.5	1.3	(1.3)
White (ever mention %)	99.1	98.9	0.2	(1.0)
Age (years)	14.5	14.5	0.0	(0.1)
Has difficulty seeing, hearing, learning, etc. (%)	4.8	7.6	-2.9	(2.3)
Average mark this year 80%+ (%)	41.7	35.8	5.8	(4.6)
Parent views on student's education				
Very important child gets PSE (%)	87.1	88.2	-1.0	(3.1)
Parent hopes child will get vocational/apprentice qualifications (%)	5.7	7.6	-1.9	(2.3)
Parent hopes child will get college diploma (%)	21.9	14.9	7.0**	(3.6)
Parent hopes child will get university degree (%)	51.9	56.1	-4.2	(4.6)
Parent hopes child will get some kind of PSE (%)	96.2	95.8	0.4	(1.8)
Something standing in child's way (%)	28.1	25.2	2.9	(4.1)
Barrier to going this far is financial (%)	17.6	18.7	-1.1	(3.6)
Parents' highest level of education				
High school diploma (%)	28.6	27.5	1.1	(4.2)
Trade/College/Apprenticeship (%)	40.5	39.7	0.8	(4.6)
University degree (%)	4.3	8.0	-3.7*	(2.3)
Employment and income				
Family income in previous year ($)	29,826	29,866	-40	(1,335)
Signing parent is employed (%)	62.9	68.7	-5.8	(4.4)
Student has ever worked (%)	93.3	93.5	-0.1	(2.3)
Sample size (total = 472)	**210**	**262**		

Source: Calculations from parent and student baseline survey data.
Notes: Two-tailed t-tests were applied to differences in characteristics between the program and comparison groups.
Statistical significance levels are indicated as: * = 10 per cent; ** = 5 per cent; *** = 1 per cent.
Rounding may cause slight discrepancies in sums and differences.

Table A4.6: Characteristics of Report Sample Members — Program Groups, New Brunswick Francophone Lower-Income Families

Baseline Characteristic	EYH/LA Group	EYH Group	Difference (Impact)	Standard Error
Household characteristics				
Number of adults in household	2.0	1.9	0.1	(0.1)
Signing parent male (%)	18.6	11.0	7.7**	(3.3)
Number of children in household	1.9	1.9	-0.1	(0.1)
Age of signing parent (years)	41.8	41.4	0.4	(0.5)
Student characteristics				
Male (%)	49.4	45.7	3.7	(4.6)
Aboriginal (ever mention %)	1.9	2.9	-1.0	(1.4)
White (ever mention %)	98.9	99.1	-0.2	(1.0)
Age (years)	14.5	14.5	0.0	(0.1)
Has difficulty seeing, hearing, learning, etc. (%)	7.2	4.8	2.5	(2.2)
Average mark this year 80%+ (%)	34.8	41.7	-6.9	(4.5)
Parent views on student's education				
Very important child gets PSE (%)	89.0	87.1	1.8	(3.0)
Parent hopes child will get vocational/apprentice qualifications (%)	8.0	5.7	2.3	(2.4)
Parent hopes child will get college diploma (%)	18.6	21.9	-3.3	(3.7)
Parent hopes child will get university degree (%)	52.9	51.9	0.9	(4.6)
Parent hopes child will get some kind of PSE (%)	95.8	96.2	-0.4	(1.8)
Something standing in child's way (%)	27.8	28.1	-0.3	(4.2)
Barrier to going this far is financial (%)	16.4	17.6	-1.3	(3.5)
Parents' highest level of education				
High school diploma (%)	25.1	28.6	-3.5	(4.1)
Trade/College/Apprenticeship (%)	45.3	40.5	4.8	(4.6)
University degree (%)	4.2	4.3	-0.1	(1.9)
Employment and income				
Family income in previous year ($)	30,644	29,826	818	(1,371)
Signing parent is employed (%)	65.8	62.9	2.9	(4.4)
Student has ever worked (%)	91.6	93.3	-1.7	(2.5)
Sample size (total = 473)	**263**	**210**		

Source: Calculations from parent and student baseline survey data.
Notes: Two-tailed t-tests were applied to differences in characteristics between the program and comparison groups.
Statistical significance levels are indicated as: * = 10 per cent; ** = 5 per cent; *** = 1 per cent.
Rounding may cause slight discrepancies in sums and differences.

Table A4.7: Characteristics of Report Sample Members — Program and Comparison Groups, New Brunswick Anglophone Lower-Income Families

Baseline Characteristic	LA Group	Comparison Group	Difference (Impact)	Standard Error
Household characteristics				
Number of adults in household	1.9	1.9	0.0	(0.1)
Signing parent male (%)	13.8	15.4	-1.6	(2.9)
Number of children in household	2.2	2.1	0.1	(0.1)
Age of signing parent (years)	40.3	40.7	-0.4	(0.5)
Student characteristics				
Male (%)	45.0	43.7	1.3	(4.1)
Aboriginal (ever mention %)	7.5	6.8	0.7	(2.1)
White (ever mention %)	95.4	94.9	0.5	(1.8)
Age (years)	14.6	14.5	0.0	(0.1)
Has difficulty seeing, hearing, learning, etc. (%)	9.6	10.3	-0.7	(2.5)
Average mark this year 80%+ (%)	39.8	36.8	3.0	(4.1)
Parent views on student's education				
Very important child gets PSE (%)	89.4	90.0	-0.7	(2.5)
Parent hopes child will get vocational/apprentice qualifications (%)	9.2	7.4	1.8	(2.3)
Parent hopes child will get college diploma (%)	12.1	16.7	-4.7	(2.9)
Parent hopes child will get university degree (%)	52.8	45.0	7.8*	(4.1)
Parent hopes child will get some kind of PSE (%)	97.9	98.4	-0.5	(1.1)
Something standing in child's way (%)	41.8	44.7	-2.9	(4.1)
Barrier to going this far is financial (%)	36.2	39.9	-3.7	(4.0)
Parents' highest level of education				
High school diploma (%)	33.0	35.7	-2.7	(3.9)
Trade/College/Apprenticeship (%)	50.7	40.8	9.9**	(4.1)
University degree (%)	3.9	5.5	-1.6	(1.8)
Employment and income				
Family income in previous year ($)	29,551	28,916	634	(1,208)
Signing parent is employed (%)	70.2	71.1	-0.8	(3.8)
Student has ever worked (%)	96.8	94.8	2.0	(1.7)
Sample size (total = 593)	**282**	**311**		

Source: Calculations from parent and student baseline survey data.
Notes: Two-tailed t-tests were applied to differences in characteristics between the program and comparison groups.
Statistical significance levels are indicated as: * = 10 per cent; ** = 5 per cent; *** = 1 per cent.
Rounding may cause slight discrepancies in sums and differences.

Table A4.8: Characteristics of Report Sample Members — Program and Comparison Groups, New Brunswick Anglophone Lower-Income Families

Baseline Characteristic	EYH/LA Group	Comparison Group	Difference (Impact)	Standard Error
Household characteristics				
Number of adults in household	1.8	1.9	-0.1*	(0.1)
Signing parent male (%)	16.9	15.4	1.5	(3.0)
Number of children in household	2.0	2.1	0.0	(0.1)
Age of signing parent (years)	41.0	40.7	0.2	(0.5)
Student characteristics				
Male (%)	50.4	43.7	6.6	(4.1)
Aboriginal (ever mention %)	7.4	6.8	0.6	(2.1)
White (ever mention %)	95.1	94.9	0.2	(1.8)
Age (years)	14.6	14.5	0.1	(0.1)
Has difficulty seeing, hearing, learning, etc. (%)	9.5	10.3	-0.8	(2.5)
Average mark this year 80%+ (%)	39.0	36.8	2.2	(4.1)
Parent views on student's education				
Very important child gets PSE (%)	91.6	90.0	1.5	(2.4)
Parent hopes child will get vocational/apprentice qualifications (%)	12.0	7.4	4.6*	(2.4)
Parent hopes child will get college diploma (%)	10.9	16.7	-5.8**	(2.8)
Parent hopes child will get university degree (%)	48.6	45.0	3.6	(4.1)
Parent hopes child will get some kind of PSE (%)	97.5	98.4	-0.9	(1.2)
Something standing in child's way (%)	38.4	44.7	-6.3	(4.1)
Barrier to going this far is financial (%)	34.5	39.9	-5.4	(4.0)
Parents' highest level of education				
High school diploma (%)	33.5	35.7	-2.2	(3.9)
Trade/College/Apprenticeship (%)	43.0	40.8	2.1	(4.1)
University degree (%)	6.3	5.5	0.9	(1.9)
Employment and income				
Family income in previous year ($)	28,151	28,916	-765	(1,171)
Signing parent is employed (%)	68.7	71.1	-2.4	(3.8)
Student has ever worked (%)	92.1	94.8	-2.7	(2.0)
Sample size (total = 595)	**284**	**311**		

Source: Calculations from parent and student baseline survey data.
Notes: Two-tailed t-tests were applied to differences in characteristics between the program and comparison groups.
Statistical significance levels are indicated as: * = 10 per cent; ** = 5 per cent; *** = 1 per cent.
Rounding may cause slight discrepancies in sums and differences.

Table A4.9: Characteristics of Report Sample Members — Program and Comparison Groups, New Brunswick Anglophone Lower-Income Families

Baseline Characteristic	EYH Group	Comparison Group	Difference (Impact)	Standard Error
Household characteristics				
Number of adults in household	2.0	1.9	0.1	(0.1)
Signing parent male (%)	15.8	15.4	0.3	(3.2)
Number of children in household	2.0	2.1	0.0	(0.1)
Age of signing parent (years)	41.7	40.7	1.0**	(0.5)
Student characteristics				
Male (%)	47.8	43.7	4.0	(4.4)
Aboriginal (ever mention %)	7.7	6.8	0.9	(2.3)
White (ever mention %)	95.1	94.9	0.2	(1.9)
Age (years)	14.5	14.5	0.0	(0.1)
Has difficulty seeing, hearing, learning, etc. (%)	11.3	10.3	1.0	(2.7)
Average mark this year 80%+ (%)	44.6	36.8	7.8*	(4.4)
Parent views on student's education				
Very important child gets PSE (%)	91.9	90.0	1.9	(2.5)
Parent hopes child will get vocational/apprentice qualifications (%)	5.4	7.4	-2.0	(2.2)
Parent hopes child will get college diploma (%)	9.9	16.7	-6.8**	(3.0)
Parent hopes child will get university degree (%)	53.2	45.0	8.1*	(4.4)
Parent hopes child will get some kind of PSE (%)	97.3	98.4	-1.1	(1.3)
Something standing in child's way (%)	44.6	44.7	-0.1	(4.4)
Barrier to going this far is financial (%)	41.4	39.9	1.6	(4.3)
Parents' highest level of education				
High school diploma (%)	32.4	35.7	-3.3	(4.2)
Trade/College/Apprenticeship (%)	44.6	40.8	3.8	(4.4)
University degree (%)	8.6	5.5	3.1	(2.2)
Employment and income				
Family income in previous year ($)	28,839	28,916	-77	(1,295)
Signing parent is employed (%)	66.2	71.1	-4.8	(4.1)
Student has ever worked (%)	89.9	94.8	-4.9**	(2.3)
Sample size (total = 533)	**222**	**311**		

Source: Calculations from parent and student baseline survey data.
Notes: Two-tailed t-tests were applied to differences in characteristics between the program and comparison groups.
Statistical significance levels are indicated as: * = 10 per cent; ** = 5 per cent; *** = 1 per cent.
Rounding may cause slight discrepancies in sums and differences.

Table A4.10: Characteristics of Report Sample Members — Program Groups, New Brunswick Anglophone Lower-Income Families

Baseline Characteristic	EYH/LA Group	LA Group	Difference (Impact)	Standard Error
Household characteristics				
Number of adults in household	1.8	1.9	-0.1	(0.1)
Signing parent male (%)	16.9	13.8	3.1	(3.0)
Number of children in household	2.0	2.2	-0.1	(0.1)
Age of signing parent (years)	41.0	40.3	0.7	(0.5)
Student characteristics				
Male (%)	50.4	45.0	5.3	(4.2)
Aboriginal (ever mention %)	7.4	7.5	-0.1	(2.2)
White (ever mention %)	95.1	95.4	-0.3	(1.8)
Age (years)	14.6	14.6	0.0	(0.1)
Has difficulty seeing, hearing, learning, etc. (%)	9.5	9.6	-0.1	(2.5)
Average mark this year 80%+ (%)	39.0	39.8	-0.8	(4.2)
Parent views on student's education				
Very important child gets PSE (%)	91.6	89.4	2.2	(2.5)
Parent hopes child will get vocational/apprentice qualifications (%)	12.0	9.2	2.8	(2.6)
Parent hopes child will get college diploma (%)	10.9	12.1	-1.1	(2.7)
Parent hopes child will get university degree (%)	48.6	52.8	-4.3	(4.2)
Parent hopes child will get some kind of PSE (%)	97.5	97.9	-0.3	(1.3)
Something standing in child's way (%)	38.4	41.8	-3.5	(4.1)
Barrier to going this far is financial (%)	34.5	36.2	-1.7	(4.0)
Parents' highest level of education				
High school diploma (%)	33.5	33.0	0.5	(4.0)
Trade/College/Apprenticeship (%)	43.0	50.7	-7.8*	(4.2)
University degree (%)	6.3	3.9	2.4	(1.9)
Employment and income				
Family income in previous year ($)	28,151	29,551	-1,400	(1,250)
Signing parent is employed (%)	68.7	70.2	-1.6	(3.9)
Student has ever worked (%)	92.1	96.8	-4.7**	(1.9)
Sample size (total = 566)	**284**	**282**		

Source: Calculations from parent and student baseline survey data.
Notes: Two-tailed t-tests were applied to differences in characteristics between the program and comparison groups.
Statistical significance levels are indicated as: * = 10 per cent; ** = 5 per cent; *** = 1 per cent.
Rounding may cause slight discrepancies in sums and differences.

Table A4.11: Characteristics of Report Sample Members — Program Groups, New Brunswick Anglophone Lower-Income Families

Baseline Characteristic	EYH Group	LA Group	Difference (Impact)	Standard Error
Household characteristics				
Number of adults in household	2.0	1.9	0.1*	(0.1)
Signing parent male (%)	15.8	13.8	1.9	(3.2)
Number of children in household	2.0	2.2	-0.1*	(0.1)
Age of signing parent (years)	41.7	40.3	1.4***	(0.5)
Student characteristics				
Male (%)	47.8	45.0	2.7	(4.5)
Aboriginal (ever mention %)	7.7	7.5	0.2	(2.4)
White (ever mention %)	95.1	95.4	-0.3	(1.9)
Age (years)	14.5	14.6	-0.1	(0.1)
Has difficulty seeing, hearing, learning, etc. (%)	11.3	9.6	1.7	(2.7)
Average mark this year 80%+ (%)	44.6	39.8	4.8	(4.5)
Parent views on student's education				
Very important child gets PSE (%)	91.9	89.4	2.5	(2.6)
Parent hopes child will get vocational/apprentice qualifications (%)	5.4	9.2	-3.8	(2.4)
Parent hopes child will get college diploma (%)	9.9	12.1	-2.1	(2.8)
Parent hopes child will get university degree (%)	53.2	52.8	0.3	(4.5)
Parent hopes child will get some kind of PSE (%)	97.3	97.9	-0.6	(1.4)
Something standing in child's way (%)	44.6	41.8	2.8	(4.5)
Barrier to going this far is financial (%)	41.4	36.2	5.3	(4.4)
Parents' highest level of education				
High School diploma (%)	32.4	33.0	-0.5	(4.2)
Trade/College/Apprenticeship (%)	44.6	50.7	-6.1	(4.5)
University degree (%)	8.6	3.9	4.7**	(2.1)
Employment and income				
Family income in previous year ($)	28,839	29,551	-712	(1,384)
Signing parent is employed (%)	66.2	70.2	-4.0	(4.2)
Student has ever worked (%)	89.9	96.8	-6.9***	(2.2)
Sample size (total = 504)	**222**	**282**		

Source: Calculations from parent and student baseline survey data.
Notes: Two-tailed t-tests were applied to differences in characteristics between the program and comparison groups.
Statistical significance levels are indicated as: * = 10 per cent; ** = 5 per cent; *** = 1 per cent.
Rounding may cause slight discrepancies in sums and differences.

Table A4.12: Characteristics of Report Sample Members — Program Groups, New Brunswick Anglophone Lower-Income Families

Baseline Characteristic	EYH/LA Group	EYH Group	Difference (Impact)	Standard Error
Household characteristics				
Number of adults in household	1.8	2.0	-0.2***	(0.1)
Signing parent male (%)	16.9	15.8	1.1	(3.3)
Number of children in household	2.0	2.0	0.0	(0.1)
Age of signing parent (years)	41.0	41.7	-0.8	(0.5)
Student characteristics				
Male (%)	50.4	47.8	2.6	(4.5)
Aboriginal (ever mention %)	7.4	7.7	-0.3	(2.4)
White (ever mention %)	95.1	95.1	0.0	(2.0)
Age (years)	14.6	14.5	0.1	(0.1)
Has difficulty seeing, hearing, learning, etc. (%)	9.5	11.3	-1.8	(2.7)
Average mark this year 80%+ (%)	39.0	44.6	-5.6	(4.5)
Parent views on student's education				
Very important child gets PSE (%)	91.6	91.9	-0.3	(2.5)
Parent hopes child will get vocational/apprentice qualifications (%)	12.0	5.4	6.6**	(2.6)
Parent hopes child will get college diploma (%)	10.9	9.9	1.0	(2.8)
Parent hopes child will get university degree (%)	48.6	53.2	-4.6	(4.5)
Parent hopes child will get some kind of PSE (%)	97.5	97.3	0.2	(1.4)
Something standing in child's way (%)	38.4	44.6	-6.2	(4.4)
Barrier to going this far is financial (%)	34.5	41.4	-6.9	(4.3)
Parents' highest level of education				
High school diploma (%)	33.5	32.4	1.0	(4.2)
Trade/College/Apprenticeship (%)	43.0	44.6	-1.6	(4.5)
University degree (%)	6.3	8.6	-2.2	(2.3)
Employment and income				
Family income in previous year ($)	28,151	28,839	-688	(1,339)
Signing parent is employed (%)	68.7	66.2	2.4	(4.2)
Student has ever worked (%)	92.1	89.9	2.2	(2.6)
Sample size (total = 506)	**284**	**222**		

Source: Calculations from parent and student baseline survey data.
Notes: Two-tailed t-tests were applied to differences in characteristics between the program and comparison groups.
Statistical significance levels are indicated as: * = 10 per cent; ** = 5 per cent; *** = 1 per cent.
Rounding may cause slight discrepancies in sums and differences.

Table A4.13: Characteristics of Report Sample Members — Program and Comparison Groups, New Brunswick Francophone (all income groups)

Baseline Characteristic	EYH Group	Comparison Group	Difference (Impact)	Standard Error
Household characteristics				
Number of adults in household	2.1	2.1	0.0	(0.0)
Signing parent male (%)	15.7	21.9	-6.2***	(2.3)
Number of children in household	1.8	1.8	0.0	(0.1)
Age of signing parent (years)	42.1	42.2	0.0	(0.3)
Student characteristics				
Male (%)	46.8	48.1	-1.3	(2.9)
Aboriginal (ever mention %)	1.6	1.1	0.4	(0.7)
White (ever mention %)	99.2	99.4	-0.2	(0.5)
Age (years)	14.5	14.5	0.0	(0.0)
Has difficulty seeing, hearing, learning etc (%)	4.1	6.3	-2.2*	(1.3)
Average mark this year 80%+ (%)	48.7	47.6	1.1	(2.9)
Parent views on student's education				
Very important child gets PSE (%)	90.9	89.3	1.6	(1.7)
Parent hopes child will get vocational/apprentice qualifications (%)	5.1	6.0	-0.9	(1.3)
Parent hopes child will get college diploma (%)	16.5	17.2	-0.7	(2.2)
Parent hopes child will get university degree (%)	61.2	58.9	2.3	(2.8)
Parent hopes child will get some kind of PSE (%)	96.7	98.1	-1.4	(0.9)
Something standing in child's way (%)	21.2	22.7	-1.5	(2.4)
Barrier to going this far is financial (%)	13.8	15.0	-1.2	(2.0)
Parents' highest level of education				
High School diploma (%)	20.6	19.2	1.4	(2.3)
Trade/College/Apprenticeship (%)	46.4	46.5	-0.1	(2.9)
University degree (%)	19.2	20.8	-1.6	(2.3)
Employment and income				
Family income in previous year ($)	60,644	59,926	718	(2,179)
Signing parent is employed (%)	80.2	81.0	-0.8	(2.3)
Student has ever worked (%)	92.6	93.3	-0.7	(1.5)
Sample size (total = 1,235)	**515**	**720**		

Source: Calculations from parent and student baseline survey data.
Notes: Two-tailed t-tests were applied to differences in characteristics between the program and comparison groups.
Statistical significance levels are indicated as: * = 10 per cent; ** = 5 per cent; *** = 1 per cent.
Rounding may cause slight discrepancies in sums and differences.

Table A4.14: Characteristics of Report Sample Members — Program and Comparison Groups, New Brunswick Anglophone (all income groups)

Baseline Characteristic	EYH Group	Comparison Group	Difference (Impact)	Standard Error
Household characteristics				
Number of adults in household	2.2	2.1	0.1	(0.0)
Signing parent male (%)	20.7	19.3	1.3	(2.3)
Number of children in household	2.0	2.0	0.0	(0.1)
Age of signing parent (years)	42.4	41.8	0.6*	(0.3)
Student characteristics				
Male (%)	48.4	48.7	-0.3	(2.9)
Aboriginal (ever mention %)	4.9	4.1	0.8	(1.2)
White (ever mention %)	96.8	96.8	-0.1	(1.0)
Age (years)	14.5	14.5	0.0	(0.0)
Has difficulty seeing, hearing, learning, etc. (%)	9.3	10.3	-1.0	(1.7)
Average mark this year 80%+ (%)	53.3	47.1	6.2**	(2.9)
Parent views on student's education				
Very important child gets PSE (%)	93.4	92.7	0.6	(1.5)
Parent hopes child will get vocational/apprentice qualifications (%)	5.7	7.0	-1.3	(1.4)
Parent hopes child will get college diploma (%)	8.2	11.8	-3.6**	(1.7)
Parent hopes child will get university degree (%)	58.8	56.0	2.9	(2.8)
Parent hopes child will get some kind of PSE (%)	97.9	98.5	-0.6	(0.8)
Something standing in child's way (%)	34.4	33.6	0.7	(2.7)
Barrier to going this far is financial (%)	29.4	28.8	0.6	(2.6)
Parents' highest level of education				
High school diploma (%)	25.1	24.6	0.5	(2.5)
Trade/College/Apprenticeship (%)	47.4	47.3	0.1	(2.9)
University degree (%)	20.3	18.8	1.5	(2.3)
Employment and income				
Family income in previous year ($)	59,235	58,884	351	(2,229)
Signing parent is employed (%)	76.9	80.3	-3.4	(2.3)
Student has ever worked (%)	92.0	92.9	-1.0	(1.5)
Sample size (total = 1,256)	**527**	**729**		

Source: Calculations from parent and student baseline survey data.
Notes: Two-tailed t-tests were applied to differences in characteristics between the program and comparison groups.
Statistical significance levels are indicated as: * = 10 per cent; ** = 5 per cent; *** = 1 per cent.
Rounding may cause slight discrepancies in sums and differences.

REFERENCES

Akos, P., Konold, T., & Niles, S. G. (2004). A career readiness typology and typal membership in middle school. Career Development Quarterly, September 2004. Retrieved December 19, 2006, from http://findarticles.com/p/articles/mi_m0JAX/is_1_53/ai_n7069456

Association of Universities and Colleges of Canada. (2002). *Aboriginal access to higher education* (One of a series of background documents prepared by the Association of Universities and Colleges of Canada, dealing with higher education-related issues raised in the federal government's innovation strategy). Retrieved January 11, 2006, from http://www.aucc.ca/_pdf/english/reports/2002/innovation/aboriginal_e.pdf

Barr-Telford, L., Cartwright, F., Prasil, S., & Shimmons, K. (2003). *Access, persistence and financing: First results from the Postsecondary Education Participation Survey (PEPS)* (Statistics Canada, Catalogue no. 81-595-MIE–No. 007). Ottawa: Minister of Industry.

Bezanson, L. (2002). Slide show prepared for the Canadian Career Development Foundation, Ottawa.

Burtless, G. (1995). The case for randomized field trials in economic and policy research. *Journal of Economic Perspectives, 9*(2), 63–84.

Bushnik, T., Barr-Telford, L., & Bussière, P. (2004). *In and out of high school: First results from the second cycle of the Youth in Transition Survey* (2002 Education, Skills and Learning Working papers Catalogue no. 81-595-MIE–No. 014). Ottawa: Statistics Canada.

Canada Millennium Scholarship Foundation. (2003). *The role of guidance in post-secondary planning*. Montreal: QC. Prepared by the Canadian Career Development Foundation, Ottawa, Ontario.

Canada Millennium Scholarship Foundation. (2005). *Embracing differences: Post-secondary education among Aboriginal students, students with children, and students with disabilities*. Montreal: QC. Prepared by Holmes, D., Ottawa, Ontario.

Canada Millennium Scholarship Foundation. (2007). *Future to Discover pilot project: Explore Your Horizons–A positioning paper*. Prepared by the Canadian Career Development Foundation, Ottawa, Ontario.

Canadian Career Development Foundation. (2006). *Future in Focus: Preliminary research report, February 2006*. Ottawa: Canadian Career Development Foundation.

Corak, M., Lipps, G., & Zhao, J. (2004). Family income and participation in post-secondary education (Discussion Paper Series, IZA DP No. 977). Bonn, Germany: Institut zur Zukunft der Arbeit (Institute for the Study of Labor).

Corbett, B. A., & Willms, J. D. (2002). *Canadian students' access to and use of information and communication technology.* Paper prepared for the 2002 Pan-Canadian Education Research Agenda Symposium, "Information Technology and Learning," April 30 – May 2, 2002, Crowne Plaza Montreal Centre Hotel, Montreal, Quebec.

Finnie, R., Lascelles, E., & Sweetman, A. (2005). *Who goes? The direct and indirect effects of family background on access to post-secondary education* (Statistics Canada, Catalogue no. 11F0019MIE–No. 237). Ottawa: Minister of Industry.

Foley, K. (2001). *Why stop after high school? A descriptive analysis of the most important reasons that high school graduates do not continue to PSE*. Montreal: Canada Millennium Scholarship Foundation.

Gándara, P., & Bial, D. (2001). Paving the way to postsecondary education: K-12 intervention programs for under-represented youth–Report of the National Postsecondary Education Cooperative Working Group on Access to Postsecondary Education. Washington, DC: National Postsecondary Education Cooperative Working Group on Access to Postsecondary Education.

Grubb, W. N. (2002). *Who am I: The inadequacy of career information in the information age*. Paper prepared for the OECD Career Guidance Policy Review. Retrieved January 11, 2007, from http://www.oecd.org/LongAbstract/ 0,2546,en_2649_34509_1954671_119666_1_1_1,00.html

Gueron, J. (2000). *The politics of random assignment: Implementing studies and impacting policy.* New York: MDRC.

Heckman, J. (2000). Policies to foster human capital. *Research in Economics, 54*(1), 3–56.

Human Resources Development Canada & Statistics Canada. (2002). *At a crossroads. First results of the 18- to 20-year-old cohort of the Youth in Transition Survey.* Ottawa, Ontario: Human Resources Development Canada

Ipsos-Reid. (2001). *Post-secondary Accessibility Study.* Edmonton, AB: Alberta Learning.

Jung-Beeman M., Bowden E. M., Haberman J., Frymiare J. L., Arambel-Liu S., Greenblatt, R., Reber, P. J., & Kounios, J. (2004). Neural activity when people solve verbal problems with insight. *PLoS Biology, 2*(4): E97.

Junor, S., & Usher, A. (2002). *The price of knowledge: Access and student finance in Canada*. Montreal: Canada Millennium Scholarship Foundation.

Junor, S., & Usher, A. (2004). *The price of knowledge 2004: Access and student finance in Canada*. Montreal: Canada Millennium Scholarship Foundation.

Kahne, J., & Bailey, K. (1999). The role of social capital in youth development: The case of "I Have a Dream" programs. *Educational Evaluation and Policy Analysis, 21*(3), 321–343.

Knighton, T., & Mirza, S. (2002). Postsecondary participation: The effects of parents' education and household income, *Education Quarterly Review, 8*(3) 25–32. Statistics Canada, Catalogue No. 81-003.

Lambert, M., Zemen, K., Allen, M., & Bussière, P. (2004). *Who pursues postsecondary education, who leaves and why: Results from the Youth in Transition Survey.* Statistics Canada, Catalogue No. 81-595 MIE–No. 026.

Looker, E. D. (2001). *Why don't they go on? Factors affecting the decisions of Canadian youth not to pursue post-secondary education*. Montreal: Canada Millennium Scholarship Foundation.

Looker, E. D., & Lowe, G. S. (2001). *Post-secondary access and student financial aid in Canada: Current knowledge and research gaps*. Canadian Policy Research Networks and University of Alberta (Background Paper). Ottawa: Canadian Policy Research Networks.

Manitoba Education, Citizenship and Youth. (2005). *Focus on the future: Your grad planner* [Electronic version] Winnipeg, MB: The Crown in Right of the Government of Manitoba as represented by the Minister of Education, Citizenship and Youth.

Mathematica Policy Research Inc. (2002). *The Quantum Opportunities Program Demonstration: Implementation Findings*. Prepared by Maxfield, M., Castner, L., Maralani, V., & Vencill, M.

Mathematica Policy Research, Inc. (2003). *The Quantum Opportunity Program Demonstration: Implementation and short-term impacts*. Prepared by Maxfield, M., Schirm, A., & Rodriguez-Planas, N.

Mathematica Policy Research Inc. (2004). *The impacts of regular Upward Bound: Results from the third follow-up data collection*. Prepared by Myers, D., Olsen, R., Seftor, N., Young, J., & Tuttle, C.

Meyer, B. (1995). Lessons from the US unemployment insurance experiments. *Journal of Economic Literature 33*, 91–131.

Miller, L., & Gallaway, C. (2004). *Post-secondary ambassador program: Development strategy*. Ottawa: PGF Consultants Inc.

Mohr, L. B. (1995). *Impact analysis for program evaluation* (2nd ed.). Thousand Oaks, CA: Sage Publications.

National Research Council and the Institute of Medicine. (2004). *Engaging schools: Fostering high school students' motivation to learn*. Washington, DC: The National Academies Press.

Newmann, F. M., Wehlage G. G. and Lamborn, S. D. (1992). The significance and sources of student engagement, in F. M. Newmann (Ed.) *Student Engagement and Achievement in American Secondary Schools*. New York: Teachers College Press.

Organisation for Economic Co-operation and Development. (2006). *Education at a Glance 2006: Draft OECD Briefing Note for Canada*. Retrieved December 1, 2006, from http://www.oecd.org/dataoecd/52/1/37392733.pdf

Orr, L. (1999). *Social experiments: evaluating public programs with experimental methods*. Thousand Oaks, CA: Sage Publications.

Patton, W., & Creed, P. A. (2001). Developmental issues in career maturity and career decision status. *Career Development Quarterly*. National Career Development Association (NCDA). Retrieved December 19, 2006, from http://findarticles.com/p/articles/mi_m0JAX/is_4_49/ai_80746786

Plante, J. & Beattie, D. (2004). *Connectivity and ICT integration in Canadian elementary and secondary schools: First results from the Information and Communications Technologies in Schools Survey, 2003–2004* (Statistics Canada, Catalogue no. 81-595-MIE–No. 017). Ottawa: Statistics Canada.

Salmi, J. and Hauptman, A. M. (2006). *Innovations in tertiary education financing: A comparative evaluation of allocation mechanisms* (Education Working Paper Series, No. 4) Washington, DC: The World Bank.

Shaienks, D., Eisl-Culkin, J., & Bussière, P. (2006). *Follow-up on education and labour market pathways of young Canadians aged 18 to 20–Results from YITS Cycle 3* (Research Paper 81-595-MIE–No. 045). Ottawa: Statistics Canada.

Statistics Canada. (2005). *Youth In Transition survey 2000 YITS Reading Cohort Cycle 1 User Guide* (Revised September 2005). Retrieved October 24, 2006, from www.statcan.ca/english/sdds/document/4435_D25_T1_V1_E.pdf

Statistics Canada. (2007). *The Daily*. Catalogue 11-001-XIE (Français 11-001-XIF) ISSN 0827-0465. *Why are youth from lower-income families less likely to attend university?* Retrieved February 14, 2007, from http://www.statcan.ca/Daily/English/070208/d070208.pdf

Tomkowicz, J. & Bushnik, T. (2003). *Who goes to post-secondary education and when: pathways chosen by 20-year-olds* (Research Paper 81-595-MIE - No.006). Ottawa: Statistics Canada.

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