

Executive Summary

Future to Discover
Pilot Project:
[Early Implementation Report]



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

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EXECUTIVE SUMMARY

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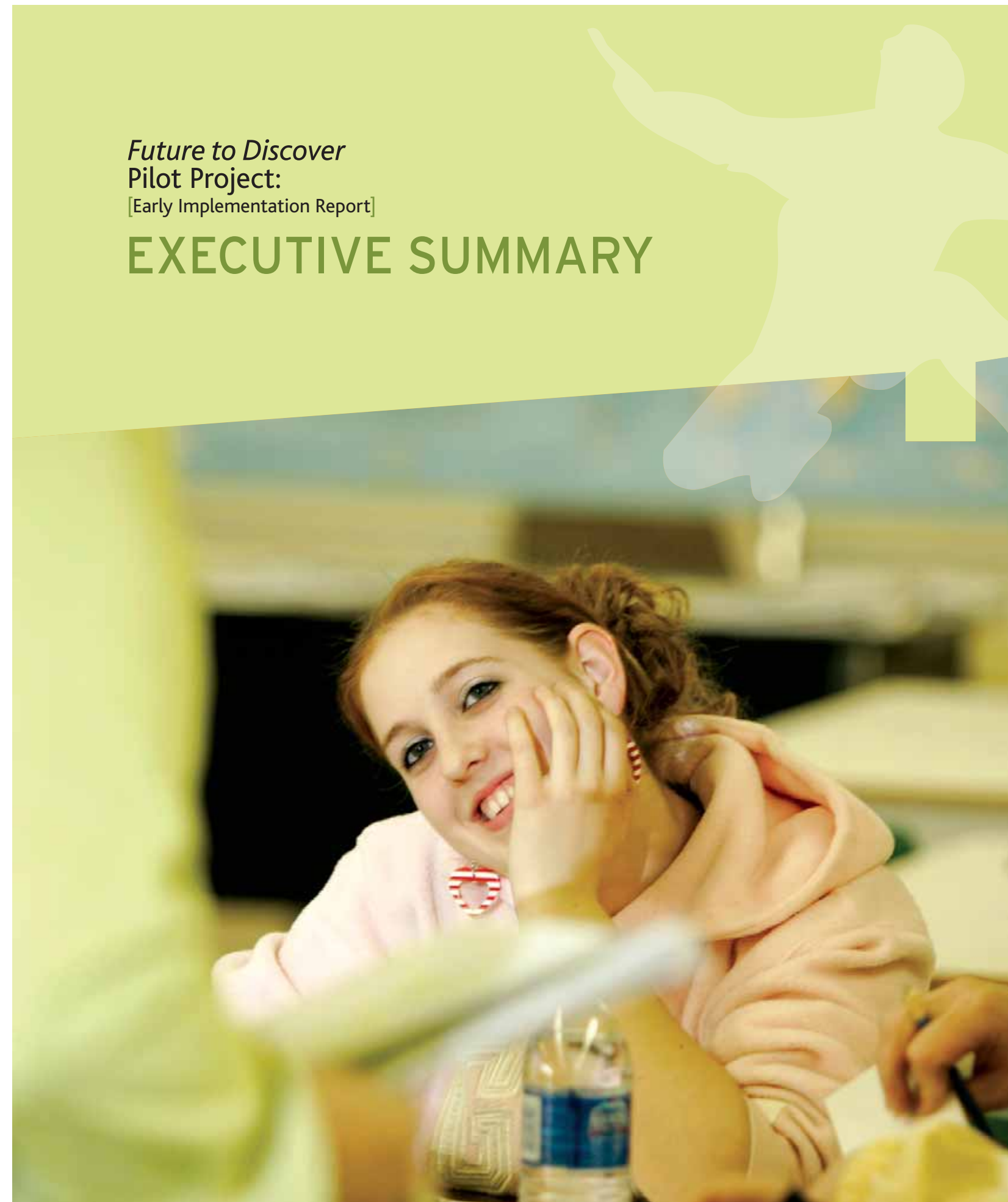
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What is *Future to Discover*?

The *Future to Discover* Pilot Project was established by the Canada Millennium Scholarship Foundation in partnership with the Governments of Manitoba and New Brunswick to determine what methods work best to increase access to post-secondary education. Although this project is intended to help high school students in general, it also includes a focus on a group of 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 attempting to address the following barriers to accessing post-secondary education:

- students' and parents' lack of knowledge or poor information about the opportunities for post-secondary studies and the economic and social advantages that such studies can bring
- inadequate financial resources.

The *Future to Discover* Pilot Project is testing two interventions that aim to alleviate these two barriers:

- **Explore Your Horizons**—A series of enhanced career education components, including a role model component and concise information on post-secondary education, which together aim to improve high school students' exploration and decision making about their post-secondary education and career options. This intervention is called *Future to Discover* in Manitoba, and *Explore Your Horizons* in New Brunswick. Despite the different names, the same package of components is being tested in both provinces. However, unless noted otherwise, *Future to Discover* refers to the larger *Future to Discover* Pilot Project, not *Explore Your Horizons* as delivered in Manitoba.



- **Learning Accounts**—A financial incentive program for students who have a family income below the provincial median. It is composed of an early guarantee of a grant worth up to \$8,000 conditional upon successful completion of high school and subsequent participation in post-secondary education. This intervention is being offered to some students participating in New Brunswick.

Because there is little existing evidence to determine whether or not interventions like *Explore Your Horizons* and *Learning Accounts* will be successful, the pilot project has been established to create such evidence. Both programs have been designed and implemented as practical working interventions that could be used by provincial governments in the future to increase access to post-secondary education.

The project uses a random assignment experimental design, which is considered one of the most rigorous means of determining program impacts, and collects data for each participant from many sources for at least five and a half years. The principal aim of the research is to determine the impacts of these two interventions on the successful completion of the first year of a participant's chosen post-secondary program.¹

However, many short-term and intermediate impacts are anticipated as a result of participation in *Explore Your Horizons* and *Learning Accounts*. These "interim" impacts will also be measured, and include: increased orientation towards future activities, increased awareness of post-secondary options, increased interest in high school and attendance at high school, differences in high school course choices, increased chances of high school graduation, change in perceived worth of post-secondary education, change in peer groups (their composition, future orientations, and future expectations), increased knowledge of post-secondary costs and financing, increased saving to meet the costs of post-secondary education, and increased certainty about the ability to cover post-secondary program costs.

In addition to the impact study, data are being collected to inform implementation research and a benefit–cost analysis. Implementation research includes field observations, depth interviews with staff, focus groups with participants and an examination of participation data from the Project Management Information System (PMIS). The benefit–cost analysis will use data from multiple sources to ascertain the relative benefits of *Future to Discover* from the perspectives of participants, governments, and society as a whole. *Future to Discover* will produce at least three research reports to disseminate findings after key project milestones have been achieved.



¹ The Canada Millennium Scholarship Foundation was created with a 10-year mandate to award bursaries to students enrolled in post-secondary programs. As a result, it may not be possible to track students to the completion of their post-secondary programs.

How did *Future to Discover* get started?

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. Tentative planning and design began in 2002, but the necessary partnerships, design, and work plan for the project took shape in 2003. The main phase of design and planning for the *Future to Discover* pilot project took place over the course of the 2003-2004 school year.

Future to Discover is one of six demonstration projects that fall under the umbrella of the Canada Millennium Scholarship Foundation's Millennium Pilot Projects. The Millennium Pilot Projects are testing the relative effectiveness and efficiency of interventions aimed at improving access to post-secondary studies for students from under-represented groups and encouraging persistence once enrolled. They are being implemented with the support of provinces and post-secondary institutions.

WHAT ARE THE INTERVENTIONS?

Explore Your Horizons

The selection of *Explore Your Horizons* components took into consideration research findings, advice from career development, curriculum, and transition to post-secondary education experts, and research design requirements. The following six career education components were selected for *Explore Your Horizons*: Career Focusing (Grade 9), Lasting Gifts (Grade 11), Future in Focus (Grade 12), Post-secondary Ambassadors (Grades 10-12), the *Future to Discover* Web site (Grades 10-12), and F2D Magazine (Grades 10-12) (see Table 1). The first three are a series of interactive workshop sessions, typically run on school premises but outside school hours by facilitators who are specially trained educators.

In Year 1 (the focus of the Early Implementation Report) participants were offered an orientation session and four of the six career education components.

Table 1: The Six Components of *Explore Your Horizons*

Component	Rationale	Grade 10	Grade 11	Grade 12
Career Focusing	To help high school students explore career options broadly based on their passions and interests. Students then refine their chosen options taking into account workplace needs, the required educational programs, and ability to meet academic prerequisites. In the final workshop, participants have the opportunity to share their educational and career development plans with their parents/guardians.	Six workshops of two hours (12 hours)		
Lasting Gifts	To help parents and their children learn how to research labour market information and better understand the process of career development. Developed by the Canadian Career Development Foundation, Lasting Gifts is composed of evening workshops intended to help parents become "career allies" for their children.		Four workshops of two hours (eight hours)	
Future in Focus	To help students manage transitions, create and/or access support groups, and build resilience to overcome challenges.			Four workshops of two hours (eight 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.	Two workshops of two hours (four hours)	Two workshops of two hours (four hours)	Two workshops of two hours (four hours)
<i>Future to Discover</i> Web site	To provide concise information about the benefits of post-secondary education and key information about attending these institutions. Features include scenarios of young people in a variety of post-secondary paths, information about labour-market trends such as earnings of Canadians by highest level of education, and information about post-secondary and career education with links to other career education Web sites. The Web site includes information on the above workshops and their schedules.	Accessible throughout <i>Explore Your Horizons</i> , the Web site is composed of six layers of information that directly tie into other components of <i>Explore Your Horizons</i> . Participants gain graduated access to these layers as they progress through the workshops.		
F2D Magazine	To provide concise information about the benefits of post-secondary education and key information about attending these institutions. This tool complements the Web site—including many of the same features—as not all participants have access to the Internet from their home.	Two issues	Two issues	Two issues

- The Orientation session is the very first *Explore Your Horizons* activity, and is provided at the start of Grade 10. Participants and their parents are invited to learn more about *Explore Your Horizons* and to sign a participation declaration.
- *Career Focusing* sessions are intended to help high school students explore career options and develop suitable educational and career plans. The developer of Career Focusing (Jobmatics) describes it as supporting participants' efforts to discover personally meaningful and realistic career options and to learn how to best prepare for post-secondary education and the labour market following high school graduation.
- *Post-secondary Ambassador* workshops are designed to establish connections in a classroom setting between groups of high school students and a small team of older students already enrolled in post-secondary education. The intent is that Post-secondary Ambassadors could both directly (through a set curriculum) and indirectly (as peer mentors and role models) promote career exploration and education planning.
- A members-only *Future to Discover* Web site is included as a supplementary medium to allow *Explore Your Horizons* participants to gain access to and explore detailed post-secondary and career education material.
- Since some students might have difficulty accessing the *Explore Your Horizons* workshops, a computer, or the Internet, the *F2D magazine* provides content similar to that found on the Web site but delivered by mail to all eligible participants. The developers of *F2D* anticipate that mailing a magazine to the home may promote parental discussions regarding children's plans for life after high school.

In Year 2 and Year 3 participants will be offered new interventions—Lasting Gifts in Grade 11 and Future in Focus in Grade 12. They will continue to receive workshops from the Post-secondary Ambassadors and concise information about post-secondary education via the *Future to Discover* Web site and magazine.

Learning Accounts

Learning Accounts is being tested with New Brunswick students only. Students are deemed eligible if their family's income (based on tax return data reported when the student is recruited in Grade 9) falls below the New Brunswick median for family income. An instalment of \$2,000 is added to the account of each participant 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 a New Brunswick high school. *Learning Accounts* participants accumulate the full \$8,000 in their accounts as long as they obtain their high school diplomas from a New Brunswick high school within four years of signing their participation declarations.²

Participants may withdraw \$2,000 per semester (to a maximum of \$4,000 per year) if they enrol in post-secondary education programs recognized by the (Canada Student Loans Program) within six years of signing their declaration. After four successful withdrawals (if the post-secondary education program is more than four semesters), students will have withdrawn the full \$8,000. Eligibility for *Learning Accounts* was determined at the time of recruitment and this eligibility is not affected by subsequent changes in parents' financial circumstances over the course of the intervention.



² Students may take an additional 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, and still qualify for *Learning Accounts* instalments and payments.

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Who is taking part?

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

All school districts in New Brunswick were invited to take part in the *Future to Discover* pilot project. In Manitoba, only school divisions with sufficiently large schools that were not also participating in another of the Canada Millennium Scholarship Foundation's Millennium Pilot Projects (*Making Education Work*) were invited. Within districts/divisions, the selection of high schools was based on research criteria, which included the size of the school's Grade 9 population and the anticipated proportion of students at each school from lower-income families where neither parent held a post-secondary credential. These "designated group" students have traditionally been less likely to access post-secondary education, so it is of particular importance whether or not the interventions have a positive impact on them. In New Brunswick, efforts were made to have an equal representation of students from both anglophone and francophone sectors.

During early spring 2004, Grade 9 students at the 30 selected schools in New Brunswick were informed about the project and were given the chance to opt out of the project. A year later, the project similarly approached a second "cohort" of Grade 9 students at the same schools in New Brunswick and 21 selected schools in Manitoba. Only a small proportion (72 out of a possible 15,578 students) chose to decline the chance to participate before being contacted for recruitment and interview by Statistics Canada.

From among the remaining 15,502 students, Statistics Canada selected a random sample at each school and approached individuals in these samples for in-person interviews to collect baseline information. During this

home visit, students completed a paper-based survey while interviewers surveyed their parents using computer-assisted personal interviewing technology. In New Brunswick, income information from parents was used to determine eligibility for random assignment into groups that included *Learning Accounts*. Students' and parents' consents to participate in the project were obtained at the same time. Students were found more likely to agree to participate in the project in New Brunswick (76 per cent of the first cohort recruited in 2004 and 80 per cent of the second cohort recruited in 2005) than in Manitoba (60 per cent of the only cohort recruited in 2005). In total the project recruited 5,429 students.

The interventions were only made available to a subset of project participants. Students were randomly assigned to one of several different program groups or comparison groups, as shown in Figure 1. The Statistics Canada interviewer explained the assignment approach to participants during the informed consent process. The proportions to be assigned reflected objectives for future analysis and incorporated stratification by linguistic sector and income level.

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 potential provincial "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.

Students with characteristics resembling the project's "designated group" volunteered in sufficient numbers to support later analysis of the interventions' impacts on this important sub-group. In New Brunswick, roughly eight in ten of the *Learning Accounts*-eligible groups had 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. Just one in ten of the *Learning Accounts*-ineligible groups met this definition. Three in ten Manitoba students had these characteristics.

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Figure 1: Random Assignment of *Future to Discover* Project Participants

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graph TD
    A[Project Participants] --> B[New Brunswick participants, Learning Accounts eligible]
    A --> C[New Brunswick participants, Learning Accounts ineligible, and Manitoba participants]
    B --> D[Random Assignment]
    C --> E[Random Assignment]
    D --> F[Comparison Group]
    D --> G[Learning Accounts only]
    D --> H[Explore Your Horizons plus Learning Accounts]
    D --> I[Explore Your Horizons only]
    E --> J[Explore Your Horizons only]
    E --> K[Comparison Group]
  
```

The baseline survey, completed when students were recruited in Grade 9, collected data on students' high school engagement and educational aspirations that identified other 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 make decisions about their future careers.

Random assignment worked to create statistically equivalent groups. The differences between the experimental groups on nearly all observed characteristics were statistically indistinguishable from zero. Figure 2 illustrates this finding for Manitoba project participants. 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.

Figure 2: Selected Baseline Characteristics of Students in Program and Comparison Groups (Manitoba)

Characteristic	Comparison group (%)	Program group (%)
Average mark this year 80%+	~40	~40
Has difficulty seeing, hearing, learning, etc. (%)	~10	~10
Age (years)	~15	~15
White (%)	~90	~90
Aboriginal (%)	~15	~15
Male (%)	~50	~50
Age of signing parent (years)	~40	~40
Number of children in household	~5	~5
Signing parent male (%)	~20	~20
Number of adults in household	~5	~5

Explore Your Horizons implementation and participation

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
- promote consistent delivery of *Explore Your Horizons* components across sites and schedules 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
- encourage participation in and maximize participant exposure to *Explore Your Horizons* components.

The evaluation of *Explore Your Horizons* implementation is measured through quantitative and qualitative data collection methods. The Project Management Information System (PMIS) yields information about participation rates, which are then linked to baseline survey data to provide profiles of participants attending and not attending sessions. Qualitative research methods including field observations, focus groups and depth interviews provide evidence of how the interventions are being delivered, participants’ reactions to the workshops, and consistency of delivery across sites and time and in relation to the original design. These same sources, in addition to training observations and analysis of meeting minutes, provide a better understanding of how participation was encouraged and consistency promoted.

The implementation research for Year 1 concluded that *Explore Your Horizons* was delivered as it was intended. Facilitators and Post-secondary Ambassadors made appropriate use of the available scripts and materials that were prepared for the workshops. Provincial Coordinators monitored Facilitators through field observations, frequent meetings, and by reviewing and checking 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. This means that components were delivered consistently across sites and time.

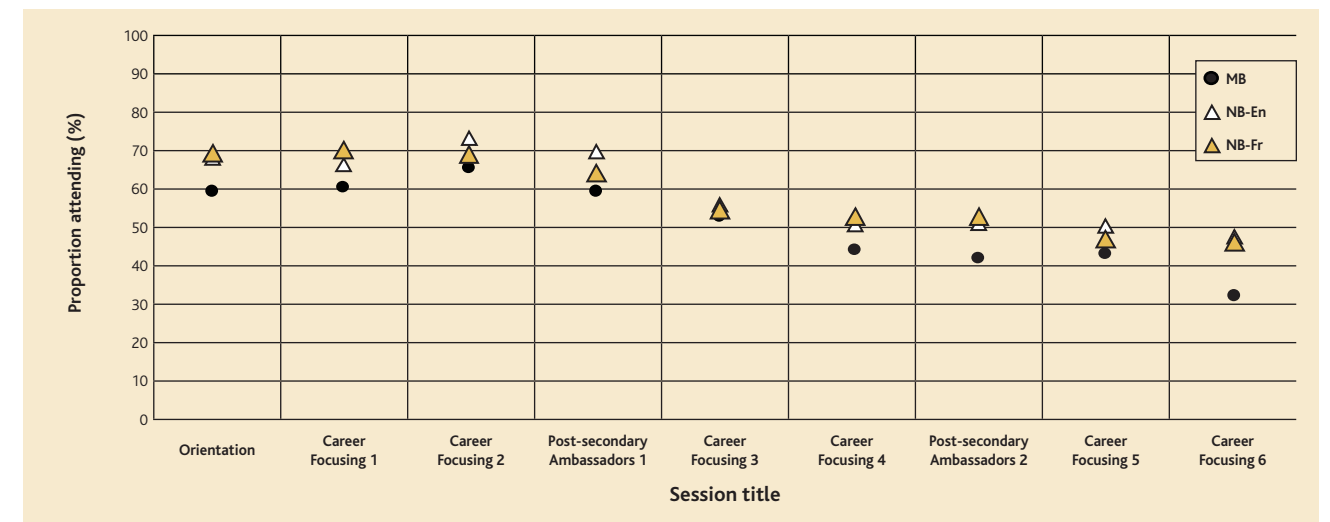
Facilitators and *Future to Discover* staff members were aware of implementation objectives and were prepared to carry out their tasks. Staff members received adequate training and were aware of the importance of following the implementation objectives. Principles of consistency and encouraging participation were understood and sought by staff.

Staff took steps to maximize participant exposure to *Explore Your Horizons* components, including holding make-up sessions and offering incentives for attendance, and together the project team brainstormed ways to attract non-attendees. 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 session. 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. Participation tended to decline during Year 1, as shown in Figure 3.

Figure 3: Attendance Rates at *Explore Your Horizons* Sessions During Year 1



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 percentage points for Career Focusing 3.

Participants from the “designated group”—those from families with lower income and lower levels of parental education—attended fewer sessions than participants from families with higher income or higher parental education. As seen in Table 2, this was particularly apparent in Manitoba and francophone New Brunswick, and less so among anglophones in New Brunswick.

Participants in New Brunswick who received both interventions attended more sessions than those in the group receiving only *Explore Your Horizons*. This was particularly true for 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 for roughly half the sessions.

The *Future to Discover* Web site was not used by most participants. Manitoba participants used it most often (27.5 per cent did so). The next most likely group to use it were the second cohort of students recruited in New Brunswick. 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.

Table 2: Intensity of Attendance at *Explore Your Horizons* Sessions

		All	“Designated Group”	Not in “Designated Group”	Difference	EYH+LA	EYH	Impact
MB	Attended 0 sessions	21.6	31.1	17.2	***			
	Attended 7+ sessions	39.8	28.2	45.0	***			
NB En	Attended 0 sessions	16.1	17.5	14.5		14.4	20.3	*
	Attended 7+ sessions	48.1	45.8	50.9		51.1	41.9	**
NB Fr	Attended 0 sessions	15.9	17.3	14.3		10.3	22.9	***
	Attended 7+ sessions	46.7	43.8	49.9	*	55.1	35.2	***

Source: Project Management Information System (PMIS).
 Notes: 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.
 EYH = Explore Your Horizons program group.
 EYH + LA = Explore Your Horizons plus *Learning Accounts* program group.
 An = Students in NB anglophone sector schools.
 Fr = Students in NB francophone sector schools.
 Percentages may not precisely sum due to rounding.
 Sample sizes vary by variable due to missing data.

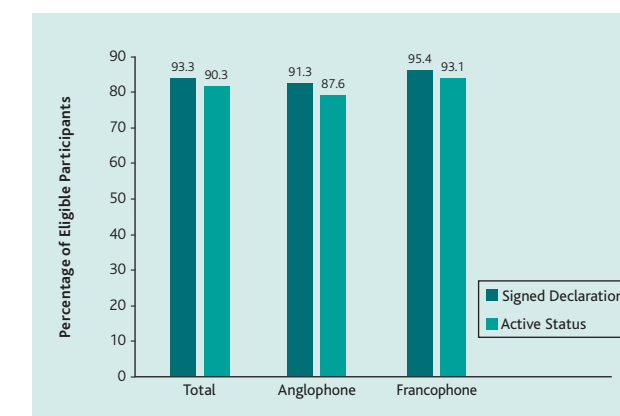
Learning Accounts implementation and participation

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 incomes 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 (Figure 4).

New Brunswick *Future to Discover* office staff are responsible for keeping records of ongoing *Learning Accounts* instalments and for notifying the Canada Millennium Scholarship 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 paperwork required to open their Learning Accounts. 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.

Figure 4: *Learning Accounts* Participation and Ongoing Eligibility (New Brunswick)



Future to Discover is a long-term research project

In order to assess the impacts of the *Explore Your Horizons* and *Learning Accounts* interventions, the evaluation of *Future to Discover* will include collecting survey and administrative data for each participant over a five-and-a-half-year period. Comparing outcomes for the participants randomly assigned to receive both interventions with those assigned to just one of the two interventions will indicate the additional benefit of offering *Learning Accounts* to *Explore Your Horizons* participants, as well as the benefit of offering *Explore Your Horizons* to *Learning Accounts* recipients. Different outcomes will be compared at different points in time:

- Short-term impacts will compare outcomes observed up to the point when students typically leave high school in order to determine the effectiveness of each of the *Future to Discover* interventions relative to each other and to the comparison group. These will include high school grades, graduation rate, and experiences of participants in the three program groups and the comparison group.
- Long-term impacts will compare outcomes observed up to the point when participants complete their second full year out of high school in order to determine whether *Future to Discover* was successful in increasing access to education after high school. These include the post-secondary education enrolment rates and experiences of participants after high school.

Implementation research will document future operations using program data and interviews to determine whether *Future to Discover* continues to be 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. These future analyses will be published in forthcoming research reports.

