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[Early Implementation Report]
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Foundations for Success:
Early Implementation Report

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[Early Implementation Report]
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The Foundations For Success Project
1.1 INTRODUCTION

In partnership with and through funding provided by the Canada Millennium Scholarship Foundation (hereafter “the Foundation”), three Ontario community colleges are implementing an applied research project entitled Foundations for Success, which investigates ways to improve the retention rates of Ontario college students deemed at risk of not completing their program of study.

Specifically, the Foundations for Success pilot project tests whether case manager-mediated access (both with and without financial incentives) to a combination of identified support services including academic support through tutoring, career development advice and peer mentoring increases the likelihood that students who are perceived as being at risk of dropping out of college will persist and successfully complete their program of study.

The evaluation of Foundations for Success will identify the impact of case-managed student support on retention for students in selected two-year college programs. It will also demonstrate the effect of awarding a financial incentive in terms of reinforcing case management support. The results of the study will provide policy-makers with evidence-based data on which to base future program initiatives aimed at reducing attrition and increasing program completion among at-risk post-secondary students.

This first section focuses on the research rationale and design of the pilot project. An explanation of the factors that influence retention rates, a brief description of the barriers to persistence in post-secondary education and an overview of what can be learned from Seneca College’s Enhancing Student Success in Post-Secondary Education project are covered. The rationale for Foundations for Success’s interventions and an overview of the planned research are discussed in the remaining sections.

1.2 RETENTION IN POST-SECONDARY EDUCATION

Ontario’s 24 community colleges report on a number of key performance indicators (KPIs), including graduation rates. In 2007, these KPI rates for graduation ranged by college from 53.7 to 77.4 percent. Over the past several years, these numbers have been relatively stable, and thus it is increasingly important that research and analysis take place to understand why students discontinue their studies.

One U.S. study argues that underprepared students demonstrated less persistence overall in a course of study, with a lower second-semester completion rate (64 percent) and even lower third-semester completion rate (47 percent) compared to college-ready students (persistence rate of 79 percent in the second semester and 61 percent in the third). While early leavers seldom report academic preparedness as a barrier responsible for them dropping out, some colleges would argue otherwise. One Ontario college reported that in post-admissions assessment, 47 percent of incoming students whose first language is English scored below the expected level of college English and 60 percent of incoming students who required math in their selected program of study scored below the required college math level.

The Pan-Canadian Study of College Students: The College Experience and Determinants of Learning, which tracked 29,000 students, reported that 75 percent of Canadian first-year college students are concerned about what their career will be after college. Furthermore, 72 percent of Canadian first-year college students indicate that they are concerned about having sufficient funding to complete their college education, and 45 percent of students never discussed paying for college with their parents.

The challenges facing students in higher education are known to college administrators, and student support services are present at institutions to respond to these needs. However, those students who would benefit most from participation in these services are often the same students who do not take advantage of them. Thus, the goal of Foundations for Success is to test a different service-delivery model and to target the project activities to students identified as more likely to abandon their studies before graduation.

The benefits that accrue to both society and the individual as a result of successively higher levels of education are well documented. A study conducted by the Kentucky Long-Term Research Center identified a number of social benefits, both individual and public, that accrue as a result of those who attain successively higher levels of education. These include: decreased reliance on public assistance, increased tax revenues, lower demands on the criminal justice system, greater civic participation, better health status through improved lifestyle choices, increased parenting skills, increased entrepreneurial activity, and increased access to and use of computers and the Internet.

Additional research confirms that there are both financial and human costs associated with attrition for students, taxpayers and institutions. For students, these include costs for lost tuition and fees and potential loss of employment prospects and earning potential. For institutions, these can include lost revenue from tuition and other fees, decreasing budgets resulting from lower grants and wasted resources, including empty seats in programs. The Okanagan College in British Columbia estimated that because of recruitment costs, the college loses $4,230 for each student who does not continue to their second year.

4. Ibid.
1.3 BARRIERS TO PERSISTENCE IN POST-SECONDARY EDUCATION

During the course of the Class of 2003 Pan-Canadian High School Follow-Up Survey,7 which explored barriers to post-secondary education in Canada, the following seven factors preventing students from persisting with their education were identified and ranked:

- lack of interest (27 percent);
- program not what the student expected (25 percent);
- financial issues (21 percent);
- undecided on career (13 percent);
- academic difficulty (11 percent);
- personal issues (ten percent); and
- employment (nine percent).

The research suggests that the cause of attrition is a function of initially uncertain or misdirected goals/expectations. Tinto’s Theory of Student Departure8 hypothesizes that college performance influences students’ decisions to leave or stay in school. If Tinto’s model is to be followed, any attempt at increasing retention is best administered through interventions early in or even prior to the student’s post-secondary career.

Students who are engaged with preparation activities such as introductory and orientation programs upon entering their post-secondary institutions have been found to persist longer than those who do not.9 Similarly, increased career counselling, at both the post-secondary and secondary school level, is a common recommendation among those developing retention strategies.10

According to the 2007 Pan-Canadian Study of First-Year College Students, conducted on behalf of Human Resources and Social Development Canada, nearly a quarter (24 percent) of all students are undecided about their future career path upon entering college—and this percentage actually increases slightly (26 percent) by the end of their first term. Indeed, the report states that “one-third of students confirmed that they are attending their college or institute to help decide on a career.”11 It is not surprising, therefore, to find a high degree of course exchange among this group. This does not, however, satisfactorily account for cases of complete post-secondary withdrawal.

Consideration must then be given to other factors associated with attrition, such as financial issues. Student debt and the cost of education remain significant contributors to attrition rates, and while numerous programs to relieve the financial burden and assist students in repaying loans are currently in place, The Price of Knowledge found that “far too few students eligible for such support take advantage of them or are even aware of them” and that “those who do use them find them complicated.”12

Financial issues can also play directly into another key factor in retention: students leaving school in order to join the workforce. The fact that students who take out loans to subsidize their education tend to persist longer than those who work13 should not be terribly surprising considering the additional demands that a job places on students. It is also reasonable to assume that when an opportunity to begin making money on a full-time basis (as opposed to losing it—at least in the short term) presents itself, this must naturally appear as an attractive alternative to a certain percentage of students already labouring under financial or academic pressure.

Employment can have a negative effect on the retention of more financially stable students as well. A 2006 study by Statistics Canada found that since 2000, job growth was “most substantial in positions not requiring post-secondary education”14 and that while the gap in average real earnings between individuals with post-secondary and non-post-secondary credentials is still significant, it is closing—particularly for young men.

1.4 THEORIES ON STUDENT RETENTION

This section presents research that has been conducted on the issue of student retention and summarizes the theoretical basis for the interventions included as part of the Foundations for Success project.

1.4.1 Student Support

A number of studies assert that support—from both staff and peers—is an important factor in student retention. Astin15 determined that the persistence or retention rate of students is greatly affected by the level and quality of their interactions with peers as well as faculty and staff. Tinto16 indicates that the factors associated with students dropping or “stopping” out include academic difficulty, adjustment problems, lack of clear academic and career goals, uncertainty, lack of commitment, poor integration with the college community, incongruence and isolation. Consequently, retention can be affected by enhancing student interaction with campus personnel.

Rendon17 indicates that two critical factors in students’ decisions to remain enrolled include successfully making the
Case managers or similar support personnel are thus vital because they provide students with the needed connection to the various campus services and supply the essential academic connection between these services and the students. Research clearly suggests that there is a positive relationship between utilization of campus support services and persistence to program completion. Unfortunately, research also shows that college students—especially those students who are most in need of support—underutilize academic support services. At-risk students, in particular, have trouble recognizing that they are experiencing academic difficulty and are often reluctant to seek help even if they do recognize their difficulty. Case managers are in the ideal position to connect students with tutors who can provide them with timely assistance before their academic performance is adversely affected.

Another major way that case managers can promote student retention is by connecting students to extra-curricular activities available on campus. The importance of student involvement in campus life for student retention is documented by findings demonstrating that students who are more socially integrated or involved in campus life and who feel they are part of the campus community are more likely to persist to graduation.

### 1.4.2 Improving Academic Performance

Retention programs that focus on improving academic performance through language remediation and tutoring are based on models such as Tinto’s Theory of Student Departure and Bean’s Student Attrition Model. Tinto, Bean and others hypothesize that college performance influences a student’s decision to leave or stay in school. Academically focused retention programs are based on the assumption that a student’s academic competence in areas such as reading, writing and mathematics is related to retention. Therefore, the higher students’ academic competence, the better their performance and the greater the likelihood of their staying in school. A recent longitudinal study by Ishitani and DesJardins supports this hypothesis. They found that the higher a student’s first-year grade point average (GPA), the less likely that student was to drop out of college.

### 1.4.3 Mentoring

The establishment of peer relations and the development of role models and mentors have been defined in the literature as important factors in student integration, both academically and socially. Wyckoff believes that students can serve as socializing agents and that interactions outside of the classroom exert a direct influence on students’ development and competence and influence their desire to remain in college. Mentoring has the potential to reduce students’ feelings of marginality by increasing their sense of personal significance and the feeling that they “matter.”

The availability of exemplary, caring role models is valuable for all students but may be especially critical to the retention and success of disadvantaged minority students and first-generation college students who do not have college role models at home. Tinto notes: “While role modeling seems to be effective in retention programs generally, it appears to be especially important among those programs concerned with disadvantaged minority students.” Mentoring can provide an important “validation” experience for first-generation students for whom the transition to college is not a normal or routine rite of passage.

Research on mentoring indicates that it has a positive impact on the personal and professional development of young adults. There is also a growing body of research in higher education that suggests an empirical link between student mentoring and student retention. For instance, Miller, Neuner and Glynn used an experimental research design in which students were randomly assigned to either an experimental group that received mentoring or a control group that did not. They found that students who received mentoring had higher retention rates than non-mentored students with similar pre-enrolment characteristics.
1.4.4 Career Clarification

Retention research suggests that student commitment to educational and career goals is perhaps the strongest factor associated with student persistence to degree completion; thus, effective advising can have an impact on student retention through its beneficial influence on students’ educational and career planning and decision-making. The need for student support in the academic planning and decision-making process is highlighted by research findings, which indicate that:

(a) three of every four students are uncertain or tentative about their career choice at college entry;36

(b) only eight percent of new students feel that they know “a great deal about their intended major”;37

(c) over half of all students who enter college with a declared major change their mind at least once before they graduate.38

Such findings strongly suggest that students’ final decisions about majors and careers do not occur before entering college but typically materialize during the college experience. Thus, it is not accurate to assume that students who enter college with “declared” majors have truly “decided” on their majors; instead, it is likely more accurate to conclude that most students entering college are actually undecided about their academic and career plans.

The relationship between effective educational decision-making and student retention is empirically documented by Astin,39 whose research indicates that prolonged indecision about an academic major and career goals is correlated with student attrition. Lenning, Beal and Sauer39 also report that students’ goal motivation/commitment correlates positively with persistence to graduation; this correlation has been found to hold true for both men and women.40 In fact, Levitz and Noel found “lack of certainty about a major and/or career” to be the top reason cited by high-ability students for their decision to drop out of college.41

College students clearly need support negotiating the challenging and sometimes confusing process of educational planning and decision-making. Moreover, if this support is delivered proactively to first-year students, they might make more thoughtful, accurate initial choices about majors and careers. This may serve not only to promote student retention but also to reduce the probability of prolonged student indecisiveness and premature decision-making, which can result in program changes at later stages in the college experience. Student indecisiveness and late changing of major may result in delayed progress toward degree completion by requiring students to complete additional courses to fulfill specific degree requirements of their newly chosen programs.

1.4.5 Financial Incentives

For low-income students, finances are a decisive issue. Students who face financial difficulties may need to find part- or full-time work, first to support themselves and their families and then to finance their education. Although employment generally harms persistence rates, the effect depends on the hours of work and the degree to which employment removes the student from the campus community. For example, Tinto finds that full-time employment is “clearly more harmful” than part-time work and off-campus work more detrimental than on-campus work. On-campus, part-time work was found to improve a student’s probability of graduating, possibly because this helps a student integrate socially and intellectually into the campus community. Astin states: “The largest negative effect on retention is working full time as a student.”42 Providing financial incentives to students effectively increases retention rates by reducing the number of hours students have to work, easing the financial burden on them and lessening the extent to which they are working off campus and therefore removed from the college environment.

1.5 WHAT CAN FOUNDATIONS FOR SUCCESS LEARN FROM ANOTHER SENeca COLLege PROJECT?

In 2004, Seneca College launched a research project to test the effects of selected active intervention strategies on post-secondary education retention among at-risk students in certain programs. “At-risk students” were defined as those who required math and English remediation in order to meet college-level requirements, demonstrated a lack of adaptability and sociability, or lacked exposure to career development activities.

The main objective of the Enhancing Student Success in Post-Secondary Education research project (conducted on behalf of Human Resources and Skills Development Canada) was to increase student success at the post-secondary level through the creation of a Learner Support Centre (LSC). Students were required to participate in selected academic support, mentorship and career development activities, which were facilitated through the newly developed centre. When offered in combination, these activities could improve at-risk students’ academic outcomes and ultimately improve their graduation rates.

The project findings indicate that the Experimental Group performed better on success measures at the end of the first semester and through the second semester. The findings also showed that members of the Experimental Group:

- were more likely to continue in Semester 2;
- were less likely to have withdrawn from the college for academic reasons;
- were less likely to change programs;
- were more likely to be enrolled full time;
- achieved a higher GPA; and
- had much greater needs in the areas of language skills and socialization than in math skills and career clarification.

In subsequent semesters, the difference between the three groups was less evident. The study demonstrated that there is a need to investigate innovative ways to address the needs of students not only as they begin college but throughout their program of study. The intervention strategy which appeared to have the most significant impact was peer mentoring.

Following the conclusion of the study, a number of limitations were identified. The most significant limitation was that case management intervention was offered only during the first semester. Another limitation of the Enhancing Student Success in Post-Secondary Education project was that there was no specific number of participation hours that students were expected to complete. Also, only two college programs (School of Accounting and Finance) participated in the study. These programs tend to attract a higher than average number of international students, as well as older students who typically have previous post-secondary education experience. This implies that students in the Enhancing Student Success in Post-Secondary Education project were not “average” college students. Foundations for Success has a much broader application: it addresses the above limitations by involving students from a variety of programs and provides case management for a longer period of time.

### Table 1.1: Major Components of the Enhancing Student Success in Post-Secondary Education Project

<table>
<thead>
<tr>
<th>Intervention</th>
<th>Description</th>
<th>Objective</th>
</tr>
</thead>
<tbody>
<tr>
<td>Language Skills Remediation</td>
<td>One-on-one tutoring through the Learner Support Centre</td>
<td>To qualify for entry into a college-level English course</td>
</tr>
<tr>
<td>Math Remediation</td>
<td>One-on-one tutoring through the Learner Support Centre</td>
<td>To qualify for entry into a college-level math course</td>
</tr>
<tr>
<td>Career Clarification</td>
<td>Use of selected tools and professional advising to confirm or alter career goals</td>
<td>Confirmation of current program or successful redirection where appropriate</td>
</tr>
<tr>
<td>Peer Mentoring</td>
<td>Weekly contact with trained peer mentors</td>
<td>Successful active relationship with a peer mentor for at least one semester</td>
</tr>
</tbody>
</table>

The LSC on campus became an integrated hub and served the following purposes:

- identified at-risk students;
- directed and supported first-semester students participating in the strategies;
- followed up and worked with students “required” to participate in intervention activities; and
- tracked participating students and collected required administrative data.

The goal of the project was to determine the effectiveness of case-managed directed participation in selected intervention strategies in terms of increasing the persistence rate of students who were deemed at risk for non-completion of their program of study. Students in the School of Accounting and Finance were asked to complete the FastTrack™ survey and a skills assessment comprised of Accuplacer® and a locally developed writing task. The specific interventions used for the Enhancing Student Success in Post-Secondary Education project are summarized in Table 1-1.

Following assessment, students were randomly assigned to one of the following three groups:

- **Group A—Experimental Group:** Students were strongly encouraged to participate in one or more of four intervention strategies based on the findings of the risk assessment.

- **Group B—Voluntary Participation:** Students were invited but not required to participate in the intervention strategies. Students did not receive case management encouragement to participate.

- **Group C—Control Group:** Students received no intervention of any kind. However, they were able to access services available at the college.
The Enhancing Student Success in Post-Secondary Education project evaluation has much in common with the evaluation of Foundations for Success in that both programs were developed with similar goals to investigate ways to increase retention. This similarity in goals has allowed many of the positive aspects from the earlier study to inform aspects of the Foundations for Success project. For example, the creation of a Learner Support Centre at all the colleges has provided Foundations for Success students with a support centre offering advising and redirecting at-risk students to appropriate services. Another important element that has helped inform the current study is the early identification of and intervention with at-risk students. Identifying and engaging these students in their first semester may lead to more students completing their program of study.
Design and Organizational Structure
This section provides an overview of the logic model and a brief description of the intervention groups, followed by an overview of the Foundations for Success project’s expected outputs, outcomes and final impact. The section concludes with the description of how the project is organized.

### 2.1 Logic Model for the Interventions

A logic model is intended to link outcomes (both short- and long-term) with project activities based on the theoretical assumptions of the project. The objectives, activities, outputs, outcomes and final intended results of Foundations for Success are outlined in the logic model below.

#### Figure 2.1: Logic Model

<table>
<thead>
<tr>
<th>Group</th>
<th>Activities</th>
<th>Outcomes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Control</td>
<td>Consistent with student risk profile, students take:</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Remedial English/Communication courses</td>
<td>• Students demonstrate a higher level of skill in English</td>
</tr>
<tr>
<td></td>
<td>• Peer tutoring and mentorship activities</td>
<td>• Students develop greater self-confidence</td>
</tr>
<tr>
<td></td>
<td>• Skills assessment and career exploration</td>
<td>• Students are better able to determine if their selected program is right for them (or whether to change programs)</td>
</tr>
<tr>
<td>Service</td>
<td>Financial fellowships are offered as an incentive to service plus students who participate in a minimum or program/campus activities and who maintain a minimum academic average</td>
<td><strong>Academic Outcomes:</strong></td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Higher academic average</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Greater number of courses taken</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Shorter period of time to complete studies</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• More semesters of school taken</td>
</tr>
<tr>
<td></td>
<td></td>
<td><strong>Intermediate Outcomes:</strong></td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Increased engagement within the college</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Higher level of reported program fit</td>
</tr>
<tr>
<td>Service Plus</td>
<td>Fellowships are provided to students who maintain a minimum academic average and participate in a minimum or program/campus activities</td>
<td><strong>Lower rate of discontinuing studies due to financial issues</strong></td>
</tr>
<tr>
<td></td>
<td></td>
<td><strong>Impact:</strong></td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Students are more likely to complete their college program</td>
</tr>
</tbody>
</table>

#### 2.2 THE INTERVENTION

All students in the Foundations for Success pilot project have been identified as being at risk for non-completion of their program of study based on three separate risk factors. Students who are selected to be eligible for the services provided by Foundations for Success are assigned to one of two groups. Both of these groups are eligible to receive case manager-mediated access to student support services. However, those in one of the two groups are also eligible to receive a financial incentive linked to participation in eligible services and activities.43 The next section provides additional information on the differences between the groups.44

##### 2.2.1 The Services Group

This group is the recipient of case manager-mediated access to student support services related to their individual risk factors. The process to reach out to these at-risk students occurs following students being assigned to this group. Students are contacted by the college first by mail and then by letter to advise them that they have been assigned a case manager who will meet with them on one to one to inform them of their risk factors. The case manager informs the students in these groups of project participation expectations and a priority is placed on participating in those activities that address their risk factors (e.g., if students lack English proficiency and have been placed in remedial English/communication courses, then the case manager will direct them to attend English tutoring). The case manager meets with each student regularly over the course of each semester and helps them arrange or access the combination of supports or assistance best suited to their needs. The case manager also monitors students’ academic progress. If students in the Services Group complete 12 hours of approved activities, obtain a 2.0 GPA or higher and meet this requirement for two consecutive semesters, the college will provide them with a certificate of achievement. Students will also receive a notation on their transcript upon completion of four semesters of participation.

##### 2.2.2 The Services Plus Group

The students assigned to the Services Plus Group receive the same information as students in the Services Group. In addition, students in the Services Plus Group are eligible to receive a financial incentive in the form of a fellowship if they complete 12 hours of approved activities, obtain a 2.0 GPA or higher and register full time in the subsequent semester. These fellowships, awarded by the Foundation, are provided directly to students at the start of each new semester (beginning in the second semester), once participation hours, enrolment and academic status have been verified by the participating colleges. The value of the fellowship is $750 per semester.

If the project requirements are not met in a specific semester, then the student is not eligible to receive the fellowship. Continuing students would still be able to access future fellowships, assuming that they meet the eligibility requirements in future semesters.

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43 There is also a third group of students—the Control Group—who do not have access to a case manager or to any support services put in place specifically for the Foundations for Success pilot project. They do, however, have access to all the support services normally provided by the participating colleges to their students. The Control Group serves as the counterfactual, and the outcomes for Control Group students will be compared to the outcomes for those in the treatment groups in order to estimate the impacts of the intervention.

44 A more detailed description of the program components that comprise the intervention is provided in Section 3. The process of selecting and assigning students is discussed in Section 4.
2.3 EXPECTED PROJECT OUTPUTS AND OUTCOMES

The primary goal of the outcome analysis is to determine whether students in the two groups (Services and Services Plus) are more likely to complete their college program than are students in the Control Group. It is expected that the two treatments described in the section above will produce a range of outputs, outcomes and impacts based on the theoretical principles of the project (see Section 1).

The primary research questions for this project are:

- Do case manager-mediated support services lead to increased probability of completing a college program?
- Do financial incentives in combination with case manager-mediated support services increase the probability of completing a college program more than case manager-mediated services alone?

Additional, secondary research questions related to the outputs, immediate outcomes and intermediate outcomes of the project will also be addressed. These are listed below.

**Outputs**

- Does case manager-mediated access to services result in an increased use of support services by at-risk students?
- Does the provision of a financial incentive to take part in service activities result in greater service use?

**Immediate Outcomes**

- Do Services and Services Plus Group students demonstrate greater success in English/communication courses relative to the Control Group?
- Do Services and Services Plus Group students report a higher level of self-confidence concerning their academic work?
- Do Services and Services Plus Group students report a higher level of program fit?
- Do Services Plus Group students report fewer financial difficulties associated with financing their education?
- Are Services and Services Plus Group students less likely to experience mandatory withdrawal from college?
- Does the provision of financial assistance linked to participation in approved activities (Services Plus Group) result in a decrease in the amount of employment undertaken by at-risk students?
- Does the provision of financial assistance linked to participation in approved activities (Services Plus Group) result in a decrease in the level of financial hardship experienced by at-risk students?

**Intermediate Outcomes**

- Do Services and Services Plus Group students show better academic performance, as indicated by their academic average, number of courses taken and length of time to complete their program?
- Are Services and Services Plus Group students more likely to continue in college from one semester to the next?
- Are Services and Services Plus Group students more engaged in the college community?

The study will also seek to answer the research questions posed above for specific subgroups of interest:

- Are there different impacts for ESL versus non-ESL students?
- Are there different impacts for men versus women?
- Are there different impacts for “first-generation students” versus students whose parent(s) attended a post-secondary institution?

Other subgroups of interest may be identified during the course of the implementation research (such as low-income versus higher-income students).

2.4 PROJECT ORGANIZATION

Foundations for Success is made possible through partnerships between the Canada Millennium Scholarship Foundation and three colleges. The Foundation is a non-governmental and independent organization with a primary focus on increasing access to post-secondary education, particularly among youth facing economic or social barriers, and reducing student debt loads. The three colleges participating in this pilot project are Confederation College (Thunder Bay), Mohawk College (Hamilton) and Seneca College (Greater Toronto). The project has also received the financial support of the Ontario Ministry of Training, Colleges and Universities.

The Foundation contracted R.A. Malatest & Associates Ltd. to undertake the evaluation of Foundations for Success. R.A. Malatest & Associates Ltd. developed the research design to answer key evaluation questions and is responsible for managing the ongoing data collection on outcomes and implementation.
2.4.1.2 Implementation Committee

The Implementation Committee is responsible for the consistency of the delivery of the interventions across all three colleges, accurate collection of college administrative data and meeting the overall operational goals. Membership of this group includes representatives from the three colleges who have responsibility for the implementation of this project and representatives of the Foundation and R.A. Malatest & Associates Ltd. The Implementation Committee, chaired by the Foundation’s pilot projects manager, meets weekly to discuss implementation issues and ensures that project goals are met. Decisions are reached by consensus, with all parties having an equal voice. The Foundation has also appointed a Foundations for Success project manager, housed at Seneca College, to liaise with the colleges to ensure consistency and ease of implementation.

2.4.1.3 The Research Committee

The Research Committee is responsible for reviewing the research design, research tools and protocols and all other material produced by R.A. Malatest & Associates Ltd., including research reports, relating to the project. Membership of the Review Committee includes up to two representatives with research experience from each of the three colleges with research experience, as well as representatives from the Foundation and R.A. Malatest & Associates Ltd. The Research Committee meets as needed and is chaired by the Foundation’s pilot projects manager. Decisions are reached by consensus, with all parties having an equal voice.
Table 2.2: Participating Organizations

<table>
<thead>
<tr>
<th>Organization</th>
<th>Responsibilities</th>
</tr>
</thead>
<tbody>
<tr>
<td>Abt Associates Inc.</td>
<td>Abt Associates Inc. is a subcontractor of R.A. Malatest &amp; Associates Ltd. and advises on the random assignment of students to the program and control groups. They also advised on the design report and analysis plan.</td>
</tr>
<tr>
<td>Canadian Career Development Foundation</td>
<td>The Canadian Career Development Foundation played an important role in the creation and development of the career clarification (Career Gear) workshop materials. They were instrumental in providing leadership and training to the workshop facilitators.</td>
</tr>
<tr>
<td>YMCA of Greater Toronto</td>
<td>The YMCA of Greater Toronto partners with Seneca College and Confederation College to deliver and interpret career clarification activities for students in the Services and Services Plus Groups.</td>
</tr>
</tbody>
</table>

The roles of each of these groups are summarized in Table 2.1.

2.4.2 Other Participating Organizations

In addition to R.A. Malatest & Associates Ltd. in their capacity as the evaluation contractor, other organizations have been involved with the development or evaluation of the project. These organizations are listed above in alphabetical order.
Foundations for Success
Interventions
The Foundations for Success interventions are composed of the following components: case management; peer mentoring; tutoring; career clarification; and student engagement activities. This section will examine the rationale behind these interventions, provide a description of them and, finally, discuss the challenges associated with delivering them.

The information presented in this and the following chapters of the report reflect data collected via a number of research activities. As part of the Early Implementation Report, R.A. Malatest & Associates Ltd. conducted numerous site visits during the initial stages of the project. In addition, they observed informed consent administration and Foundations for Success-designed career clarification workshops called Career Gear. Key informant interviews with case managers and senior project staff, as well as focus groups with students, were also undertaken to provide a comprehensive understanding of the project.

3.1 CASE MANAGEMENT

Research clearly suggests that there is a positive relationship between utilization of campus-support services and persistence to program completion. Unfortunately, research also shows that college students underutilize academic support—especially those students who are in most need of support. At-risk students, in particular, have trouble recognizing that they are experiencing academic difficulty and are often reluctant to seek help even if they do recognize their difficulty.45 Under the case management model, a case manager meets with Services and Services Plus Group students regularly and helps them to arrange or access the combination of supports or assistance best suited to their needs.

Foundations for Success case managers offer one-on-one advising to identified at-risk students. These case managers are assigned a “caseload” following random assignment, and they then follow students’ academic progress for two years. Their role involves understanding students’ needs and challenges based on their post-admissions test results, redirecting them to college services and, lastly, providing encouragement and support while the students attend college. Case managers are familiar with college services and act as a conduit for information on the various success strategies and support services offered at each college. Student-initiated contact with a case manager counts toward the completion of the required 12 hours of participation per semester.

3.1.1 Case Managers

Case managers have experience in working with college students and facilitate resolution of students’ concerns regarding required participation in identified interventions strategies. Job advertisements posted at the colleges stated that candidates should “provide support and direction to students,” demonstrate “strong interpersonal and communication skills to interact with the college’s multicultural/religious staff and students” and have “five years of progressive experience in assessing student needs with respect to retention and engagement, including transferable skills in assertiveness, decision-making and problem solving.”

Case managers at the three colleges were hired in the summer of 2007. Subsequently, a conference call with all project staff was held in August 2007 and face-to-face meetings were held in December 2007 and August 2008. Project goals and the importance of ensuring consistency of intervention application at all three sites were reviewed during these meetings. Case managers participated in discussions regarding challenges and possible solutions in contacting, building and maintaining relationships with students. Key informant interviews were held with the 11 case managers in November 2007. Case managers discussed the following topics in these interviews:

- the level of training received;
- difficulties of contacting students;
- managing student relationships;
- completion of interaction logs; and
- differences between the Services and Services Plus Group students.

3.1.2 Meeting with Students

The colleges contact students by letter to inform them of their placement into the Services and Services Plus Groups. Case managers follow up with a telephone call to book a face-to-face appointment with the students. The first meeting with students varies in length from 20 to 30 minutes depending on the student and is held at each of the colleges during regular business hours. Building a strong relationship at the initial meeting is critical in setting the tone for future meetings. In addition, case managers ensure that students understand what is expected of them and begin to develop a plan to help students achieve their academic goals through participation in Foundations for Success.

Students are directed to complete 12 hours of participation in project-directed activities per semester. The average duration of a college semester is 15 weeks; the 12-hour participation threshold was thus chosen because it reflects approximately one hour per week over the course of a semester, given that students would not be expected to participate during the first week of classes nor during the exam period. When determining the participation threshold, the Steering Committee agreed that asking students to participate for an average of one hour per week would not be overly rigorous or taxing. To assist students in achieving this goal, case managers distribute their participation hours throughout the semester, working within the framework of the students’ timetable and course load.

During the initial meeting with students, case managers review a document entitled the Foundations for Success Participation Agreement. This is a three-page document that reiterates information contained in the Foundations for Success informed consent form regarding data sharing and provides more detailed, itemized information about the Foundations for Success project’s rules and expectations. Students are asked to read and sign this document, which is kept in their files, to ensure their understanding of project expectations. Participants randomly assigned into the Services Plus Group are also reminded of the stipulations for receiving the fellowship.

Following the discussion and signing of the Participation Agreement, Mohawk College and Confederation College provide each student with a document entitled Personalized Learning Plan. The document is generated upon completion of the Partners in Education Inventory (PEI) section of the FastTrack™ survey and outlines the various support strategies by presenting each participant with information on the specific interventions for which they tested at risk. Students are classified as at risk in any one of three areas: lack of college-level language skills; program/career uncertainty; and lack of socialization skills. Students’ risk level is determined during the recruitment phase following the completion of the Accuplacer® assessment and FastTrack™ survey. Students are then encouraged to complete a number of activities, starting with an activity related to their risk status. It is important to note that at all three colleges, many students were identified as having multiple risk factors.

Students deemed at risk due to a lack of college-level language skills are asked to complete a minimum of four hours of language tutoring in Semester 1 or continue until they successfully complete the required remedial language courses. Students at risk due to program/career uncertainty are asked to complete two workshops and two tests during the first semester and one workshop and a one-on-one meeting with a career counsellor in the second semester. Students at risk due to lack of socialization skills are expected to meet with a mentor for at least one hour during Semester 1.

The case manager confirms participants’ contact information, timetable, availability for future meetings and subsequent meeting times. Ideally, case managers identify a regular time for future meetings to facilitate scheduling and build a routine. Case managers also document student-initiated interaction and students’ participation in eligible activities.

### 3.1.3 Hours of Participation

Case managers ensure students’ understanding of the interventions by reviewing and completing the Participation Summary. The summary details the exact nature of the intervention(s) the participant has to complete in order to be recognized as having completed 12 hours of approved activity. It is given to the student for future reference.

Most meetings with case managers last between 15 to 20 minutes. Interaction with case managers cannot be counted toward the participation requirement if the interaction is initiated by the participant. However, if the participant initiates the contact, this interaction does count (up to a maximum of two hours) toward the total participation requirement per semester. This maximum amount was set to discourage students who might try to complete the full 12 hours through case manager meetings.

### 3.2 PEER MENTORING

The importance of student involvement in campus life for student retention is documented by findings demonstrating that students who are more socially integrated or involved in campus life and who feel that they are part of the campus community are more likely to persist to graduation.46

With regard to this issue, the establishment of peer relations and the development of role models and mentors have been defined in the literature as important factors in student integration, both academically and socially. Wyckoff, for instance, believes that students can serve as socializing agents and that interactions outside of the classroom exert a direct influence on students’ development and competence and influence their interest to remain in college.47

Accordingly, one of the interventions offered through Foundations for Success is peer mentoring. Mentoring has the potential to reduce students’ feelings of marginality by increasing their sense of personal significance and the feeling that they “matter.”

#### 3.2.1 Mentors

Students enrolled full time in their second semester or beyond were identified as potential peer mentors based on their academic success (minimum cumulative GPA of 3.0). In addition to the GPA criterion, students were required to have satisfactory English speaking skills to be considered as a mentor.

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Recruitment of students eligible to become mentors was achieved through email and telephone campaigns. Other means of recruitment included classroom visits, online college announcements and various marketing materials posted throughout the campus. Potential candidates completed an application form and were interviewed by the mentoring staff to assess their suitability. Potential mentors are required to be able to commit to one hour per week to meet with a protégé.

Students selected to become mentors were required to attend all training sessions, which encompassed a total of approximately 14 hours and developed students’ skills in the following areas:

- Communication;
- Leadership;
- Teamwork;
- Conflict resolution;
- Problem-solving;
- Multicultural awareness; and
- Diversity.

Peer mentoring is typically a first-semester intervention. Students who had been protégés were eligible to become mentors in their second and subsequent semesters if they met the eligibility criteria stipulated by the peer mentoring office.

3.2.2 Students Identified as Likely to Benefit from Mentoring

Classification of students as being likely to benefit from mentoring is based on the following question in the PEI survey: “Q.59 I find it easy to make friends in new situations.” If students answer that they disagree/strongly disagree with this statement then they are deemed at risk and likely to benefit from peer mentoring.

SMILE (Student Mentoring in Life & Education) is a program developed by Seneca College. It has been adopted by Foundations for Success both at Seneca College and the other two colleges.

Students who are deemed likely to benefit from mentoring are assigned a year-long mentor in a similar program area. The mentor serves as a guide and a knowledgeable resource who assists the protégé in developing strategies to succeed in college. Mentors also direct mentored students to resources that are available at their college. The average time that a protégé spends with a mentor is approximately one hour per week, whether face to face, online or on the phone.

3.2.3 Hours of Participation

Upon completion of a protégé profile, participants were matched with a peer mentor within the first three weeks of the first semester. Students were directed by case managers to complete 12 hours of interaction with their mentor. However, after a review of mentoring practices and in consultation with the Implementation Committee, it was determined that students could benefit from the guidance and leadership of a mentor in less time than originally anticipated. The committee decided a minimum of one hour of interaction between protégé and mentor had to have occurred before participation in other college activities could be counted toward project participation hours. However, many students benefit from several hours of participation with their mentors.

3.3 Tutoring

Data taken from one Ontario college’s post-admissions testing results for 2004 to 2006 found that almost half (47 percent) of incoming students whose first language is English scored below the expected level of college English. This may have adverse effects in terms of retention. Academically focused retention programs are based on the assumption that academic competence in the areas of reading, writing and mathematics is related to retention. That is, the higher students’ academic competence, the better their performance and the greater the likelihood of their staying in school.

Foundations for Success offers peer tutoring as a means of improving academic competence. Students’ need for English/communication tutoring is determined on the basis of a post-admissions language placement assessment comprised of two parts: a reading comprehension task and a writing task. The Accuplacer® assessment results provide information about the student’s proficiency in reading, writing and mathematics, determine the appropriate level of study and, where appropriate, suggest enrolment in remedial courses.

3.3.1 Tutors

All peer tutoring positions are posted on the college website or in the tutoring centre. Tutors are college students with a GPA of 3.5 or higher and who have two faculty references. Candidates are interviewed by the staff in the tutoring centre and hired based on their subject expertise and ability to successfully perform the duties associated with tutoring.

Students selected to become peer tutors undergo training by the tutoring centre in the following areas: college systems; tutor/student expectations; tutoring procedures; learning styles; multiculturalism and diversity; communication skills; conflict resolution and problem-solving.
3.4 CAREER CLARIFICATION

Retention research suggests that student commitment to educational and career goals is perhaps the strongest factor associated with persistence to degree completion; thus, effective advising can have an impact on student retention through its beneficial influence on students' educational and career planning and decision-making. As such, those students randomly selected to the Services and Services Plus Groups are offered career clarification activities over two semesters if their responses to the Partners in Education Inventory indicate that they would benefit from program validation exercises.

Career clarification workshop facilitators received two days of training in August 2007, delivered by the Canadian Career Development Foundation. Representatives from the Canada Millennium Scholarship Foundation and R.A. Malatest & Associates Ltd., along with project staff and facilitators identified to conduct the training from the three colleges, attended the training. Over the course of the two days, the facilitators were briefed on the delivery methods of the workshops to ensure consistency of delivery at all colleges.

3.4.1 Students Identified as Likely to Benefit from Career Clarification Activities

Based on a decision by the Research Committee, students are classified as "at risk" with regard to career/program uncertainty based on their responses to the following FastTrack™ questions:

- "Q.27g. Could you benefit from extra help in selecting an appropriate career?"
- "Q.35. I am not sure what kind of work I will be doing after I graduate."
- "Q.49. I am not sure how the program I am in is related to my future career."
- "Q.58. I feel undecided about what my career will be after I finish college."

Students whose answers to these questions indicated a lack of clarity of program choice or career options are identified as at risk. The Steering and Research Committees determined that participants must give precise answers to the four specified questions in order to be directed to participate in career clarification activities.

Training occurs before the start of the semester, with regular meetings held throughout the semester. Tutor training may consist of any combination of the following:

- a three-hour group session;
- completion of several online modules;
- attending meetings held two or three times during the course of the semester; and
- consecutive days of training.

3.3.2 Students Identified as Likely to Benefit from Tutoring

Identification of students who would likely benefit from participation in tutoring activities is based on their performance on a post-admissions language assessment to determine placement in a college English/communication class. The first part of this test is a timed expository writing task, for which students are assigned a topic that they must discuss in a five-paragraph essay. Once students have completed the writing assessment, they begin the Accuplacer® reading comprehension assessment, which is untimed. The results of the completed essay and reading comprehension assessment determine their placement in an English/communication class.

Where students are assessed below the expected level of college English in the aforementioned test, they are directed by case managers to complete a minimum of four hours of English/communication tutoring throughout the semester. Tutoring services also include participation in conversation clubs, workshops and meetings with learning strategists.

Faculty conduct a diagnostic assessment of students’ writing ability during the first week of English/communication tutoring to ascertain whether there are any anomalies in placement. It is rare that students’ course assignment changes in the first week based on their level of English/communication proficiency.

Foundations for Success language skills remediation involves one-on-one tutoring through the colleges’ Academic Resource Centres. The goal of this language tutoring is success in the preliminary remedial English/communication class and progression into the required college-level language course.

3.3.3 Hours of Participation

Case managers advise students that a minimum of four hours of English/communication tutoring must occur before tutoring in other subject hours will be counted. However, if students demonstrate that they have received a grade of 70 percent or B in their remedial course, then tutoring in other program subjects can be undertaken and counted toward the 12-hour participation threshold. It is expected that students may continue to seek tutoring in a variety of program subjects throughout the duration of their program of study.

3.4.2 Career Clarification Activities

During their first semester, participants are expected to complete the first series of career clarification activities. This requires a total of seven hours over the course of a semester, including:

- three hours for the Career Gear 1 workshop;
- two hours for the Myers-Briggs Type Indicator and the Strong-Campbell Interest Inventory assessment; and
- a two-hour debriefing.

Case managers provide participants with the Career Gear Student Guide, which enables them to become familiar with the material prior to the workshop. Workshops are interactive and designed to maximize student participation. Facilitators use materials provided to them and employ methodologies discussed during training.

After students complete the Career Gear 1 workshop, they are asked to complete two online assessments: the Myers-Briggs Type Indicator and the Strong-Campbell Interest Inventory. Following the results, they are invited to a two-hour debriefing workshop, facilitated by project staff; this helps students understand their assessment results.

During their second semester, students participate in the Career Gear 2 workshop. This entails a total of four hours over the course of the semester, including:

- three hours for the Career Gear 2 workshop; and
- one hour for a one-on-one meeting with a career counsellor.

Both workshops were developed by the Canada Career Development Foundation and are facilitated by trained college staff. Seneca College and Confederation College have partnered with the YMCA of Greater Toronto to administer and interpret the two tests. Seneca College has also partnered with the YMCA of Greater Toronto to deliver the debriefing workshops and one-on-one counselling.

3.4.3 Hours of Participation

This intervention spans two semesters and requires student participation totalling seven hours in the first semester and four in the second. These participation hours count toward students’ overall 12-hour participation requirement. Students are able to participate in the career clarification activities in the first, second or third semesters as an eligible activity except where it has been suggested as a priority activity for Semester 1. In that case, students are directed to participate in career clarification activities beginning in Semester 1.

It should be noted that students randomly assigned into the Control Group also have access to tutoring and mentoring but are unable to access the career clarification activities. Instead, they may use the career counselling services available to all students on the college campus.

3.5 OTHER ELIGIBLE ACTIVITIES

Recognizing that some of the interventions to which students are directed in their first semester may not be applicable in the second and subsequent semesters, students enrolled in the Services or Services Plus Group are allowed to undertake other activities in order to meet the participation requirement outlined in the project participation agreement.

In order for participants to become eligible for the non-financial and financial incentives, they must complete 12 hours of activities. These activities may include, but are not limited to, the following:

- college-sanctioned sports activities;
- college-sanctioned volunteer activities;
- peer mentoring;
- tutoring;
- meeting with case managers; and
- participation in career clarification activities.

If participation in the suggested interventions does not reach the required 12 hours per semester, students must demonstrate their engagement in “college-sanctioned organizations” by participating in other eligible activities. Activities or clubs must have received approval from the college or be sanctioned by the governing student body in order to be recognized and counted toward project participation hours.

Engagement in college-sanctioned organizations is recognized through the use of confirmation communiqués from the activity leader/organizer, who sends an email to the case manager confirming students’ participation and the duration of their involvement. Upon receipt of this confirmation communiqué, the case manager then completes the Eligible Activity Log, recording the time spent in increments of 15 minutes. Activities must be easily quantifiable in order to be counted.

Activities might include participation (volunteering/helping out) in the following:

- academic support (study skills seminars, extra help from faculty, etc.);
- college-related activities (student ambassador, guide, etc.);
- program-related activities (meet-the-grad night, employer presentations to program areas, open house, etc.);
- career-related activities (resume-writing clinics, job search seminars etc.);
- athletics (intramural, varsity);
3.6 SUMMARY OF MAJOR COMPONENTS OF THE FOUNDATIONS FOR SUCCESS PROJECT

Table 3.1 summarizes the major components of the Foundations for Success project, along with the suggested participation thresholds for each component.

<table>
<thead>
<tr>
<th>Component</th>
<th>Rationale</th>
<th>Participation Requirement Semester 1</th>
<th>Participation Requirement Semester 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Case Management</td>
<td>To enhance student interaction with campus personnel and connect students to various on-campus services and extra-curricular programs</td>
<td>2 hours*</td>
<td>2 hours*</td>
</tr>
<tr>
<td>Tutoring</td>
<td>To enhance students’ academic competence in areas such as reading and writing</td>
<td>4 hours</td>
<td>4 hours**</td>
</tr>
<tr>
<td>Career Clarification Workshops</td>
<td>To help students think about their future careers and begin to develop their own plan to reach the future they want</td>
<td>7 hours</td>
<td>4 hours</td>
</tr>
<tr>
<td>Mentoring</td>
<td>To establish peer relations and help with the transition into college</td>
<td>1 hour</td>
<td>As needed</td>
</tr>
<tr>
<td>Student Engagement Activities</td>
<td>To engage students in the college community</td>
<td>Consultation with case manager</td>
<td>Consultation with case manager</td>
</tr>
</tbody>
</table>

* Maximum time allowed to be counted toward participation hours. Students may meet with case managers for as much time as needed throughout the semester, but may only claim two hours toward their participation hours.

** Dependent on student completion of remedial courses and readiness to enrol in a college-level language course. Students must continue to participate in tutoring until they successfully complete their remedial language course.

3.7 MONITORING IMPLEMENTATION ACTIVITIES

It is critical that the interventions are delivered consistently across all three colleges. Accordingly, the training for college staff engaged in Foundations for Success activities stresses the importance of consistency of implementation across all the colleges. This point has also been reiterated numerous times throughout the project in college meetings and project meetings. Case managers are encouraged to bring anomalous cases to the project management staff, who subsequently discuss them with the Implementation Committee. Once the committee has reached a consensus, a consistent message is disseminated to case managers and other staff. Other steps taken to ensure consistency include:

- consistency of training of staff mentors, tutors and Career Gear facilitators;
- standardized scripts are used when contacting students;
- potential variations are raised immediately with project management staff;
- consistency in delivery is discussed as an agenda item at implementation meetings with all three colleges; and
- project management staff bring concerns about consistency in delivery to the Implementation Committee for review to ensure information-sharing about this key issue.

The following activities were deemed to be excluded from the list of eligible activities that can count toward receiving the financial and non-financial incentives:

- student government; and
- clubs (faith based, political, program sponsored, ethnic, etc.).

The sole exception to this rule was made for participants who become paid tutors. In this case, participants can record a maximum of two hours toward their participation requirement.

Students can participate in any of the identified project activities, provided they complete the activity that addresses their relevant risk factor(s) first. For example, students who are identified as likely to benefit from meeting with a peer mentor in Semester 1 can also participate in career clarification activities in their first semester, as long as they meet with a peer mentor for at least one hour.

Finally, participants who become mentors in subsequent semesters can list up to six hours per semester toward their participation requirement. These hours are a combination of four hours for participation in mentor training and two hours for participation in mentorship activities.
In order to track students’ uptake of services, interaction logs were designed to track the frequency and duration of each of the college-sanctioned activities in which students are engaged.

Mohawk College developed a customized software system called DHP (the initials of the software designer) to track student participation at all colleges. The system was designed to allow R.A. Malatest & Associates Ltd. to request data on frequency, duration and usage of activities, including tutoring, mentoring, case management, career clarification and other college-sanctioned activities.

3.8 ENCOURAGING PARTICIPATION

Encouraging participant attendance and participation in directed interventions has been emphasized in weekly staff meetings. Several steps have been taken to encourage attendance and participation, including:

- emails to participants during winter/summer break to maintain contact;
- emails to participants prior to workshops and follow-ups with those who did not attend;
- meeting with participants at the workshop or the tutoring centre;
- inviting students to pizza lunches in order to interact with case managers and other students in the project;
- phone calls to students who miss appointments; and
- e-mails to students advising them of workshop/tutoring or other college activities.

3.9 CHALLENGES TO PROGRAM IMPLEMENTATION

This section describes the challenges faced during the implementation phase of the project.

3.9.1 International Students

Initially, international students were not eligible to participate, largely because the Canada Millennium Scholarship Foundation is forbidden by law to provide financial assistance to international students. As well, international students already had access to enhanced college resources. Only after recruitment was completed and the eligible students randomly assigned did the colleges realize that information regarding international students had been inadvertently included in the random assignment data transfer to R.A. Malatest & Associates Ltd.

These international students were randomly assigned across all three groups, so any confounding variable was spread across the groups as well. However, the primary concern was related to students in the Services Plus Group, who receive a $750 fellowship every semester: who would be responsible for awarding the fellowship to those students, should they meet the project requirements? The colleges agreed to absorb the cost of fellowships for those students, but they are excluded from research reporting. It should be noted; however, that relatively few international students have been inappropriately recruited for the Foundations for Success project (less than 40 in total).

3.9.2 Students Who Were Initially Eligible but Changed Status

All new full-time, first-year students who are enrolled in a non-highly selective two-year program are eligible to participate in the Foundations for Success project. Throughout the course of the year, however, some students change their status from full to part time. This change may be due to a variety of reasons, such as financial problems, family/personal issues or academic difficulties. Although part-time students are ineligible to receive the fellowship offered to the Services Plus Group and the participation certificate offered to both groups, they are still eligible to participate in project activities and their student data are tracked.

3.9.3 Students Who Change Campus

The interventions are only offered to students initially enrolled at the Fennell Campus at Mohawk College, Shuniah Campus at Confederation College and Newnham Campus at Seneca College. Students who, as a result of changing their program of study, attend classes at other campuses are still eligible to participate in Foundations for Success but may have difficulty accessing the interventions after switching campuses. Many of the services are offered at other campus locations; however, students have to travel to the campus where they began their studies in order to meet with their case manager.

3.9.4 Students Who Drop Out

Throughout the semester, a percentage of students drop out of college. A particular challenge is to determine the point at which students drop out, since students might simply stop attending classes without informing the college about their change in status. It is not mandatory that students inform the college that they will no longer be attending classes, and in many cases, it is not known until the end of the semester that students have actually dropped out. Case managers continue to contact students who have dropped out to invite them to participate in career clarification activities.
An Overview of Research Methodologies
This section describes the selection and recruitment of the research sample, including the process of identifying colleges and engaging participants. It also includes a description of the random assignment and notification process.

### 4.1 RECRUITING THE RESEARCH SITES (COLLEGES)

#### 4.1.1 Selection of the Colleges

The initial step in the recruitment process was to identify colleges with a suitable infrastructure for the pilot study. This was undertaken by the Canada Millennium Scholarship Foundation and representatives from Seneca College. As mentioned previously, a Seneca College pilot project, funded by Human Resources and Skills Development Canada in 2004, served as the basis for this larger project. As a result of its earlier experience, and in order to further explore research questions that emerged from the previous study, Seneca College has played a key role in Foundations for Success.

In addition to the participation of Seneca College, 11 colleges with a graduation rate below the Ontario provincial median of 62.1 percent were invited to submit an expression of interest to participate in the pilot project by December 20, 2006. Of the 11 colleges, seven submitted an expression of interest on time. Three weeks later, six colleges completed the Foundation’s questionnaire. One college withdrew its expression of interest before the questionnaire deadline.

A selection panel composed of representatives from the Foundation and Seneca College and two external evaluators reviewed the applications and short-listed four potential demonstration sites. A second questionnaire was required to seek clarification and to further probe the environment at each of the four short-listed colleges. The selection panel chose two colleges to participate in Foundations for Success—Mohawk College and Confederation College—as well as an alternative site. Two members of the selection panel undertook a site visit in March 2007 to meet with senior administrators in order to review admission processes, remedial programming and implementation capabilities. These individuals reported back to the selection panel by late March 2007, and a final decision on site selection was then made by the selection panel.

The colleges were selected based on a variety of factors:

- their 2004-05 key performance indicators for graduation were below the provincial median (62.1 percent);
- they were able to test students for their proficiency levels in English (or French) and mandate a developmental English (or French) course;
- they offered mentorship or tutoring services or were able to implement such programs by September 2007;
- the three colleges were selected in order to test the interventions at three distinctly different colleges who reflect the distinct communities they serve;
- colleges were selected in Ontario to ensure the ease of data collection and reduce implementation challenges; and
- the colleges were eager to better understand the challenges faced by students and the results of success strategies that aim to strengthen graduation rates.

#### 4.1.2 College Partners

The following section briefly describes the three colleges participating in this study.

##### 4.1.2.1 Mohawk College

Located in Hamilton, Ontario, Mohawk College of Applied Arts and Technology annually serves about 10,000 full-time, 3,000 apprenticeship and 300 international students, as well as 5,000 adult learners and 42,000 continuing education registrants. Mohawk College offers approximately 100 programs in applied arts, health sciences, business and engineering technology. It has several campuses spread throughout Hamilton and Brantford.

The Fennell Campus is located in the west end of the Hamilton Mountain district. About 60 percent of students at this campus reside in the City of Hamilton. The city is well known for its key economic engine, the steel industry. Hamilton also has one of the highest poverty rates in Ontario, with an economy that has been traditionally dominated by and dependent upon the steel industry. With the decline of steel, the need to diversify its economic drivers is more critical than ever. In recent years, however, education, health and government have come to play a major role in economic development.

Less well known is the fact that the city is culturally diverse. The number of immigrants settling in Hamilton between 1991 and 2001 grew by almost 60 percent over the previous decade, and the Hamilton Census Metropolitan Area (CMA) is recognized among Canadian cities as the third most popular destination for immigrants after the Vancouver and Toronto CMAs. In 2001, almost one-quarter (119,805) of Hamilton’s population was composed of immigrants. At the same time, the total visible minority population of Hamilton increased by over 11,000 people (27 percent) from 1996 to 2001. Mohawk College therefore shares a social responsibility to ensure that newcomers to Canada who require post-secondary education or bridging to acquire Canadian credentials are provided access.

Of equal significance to Mohawk College is the Aboriginal population of the region. In 2001, the last year for which figures are available, there were just under 2,000 Aboriginal youth aged 15 to 24 in the Hamilton CMA and the City of Brantford. Moreover, there are additional youth on the nearby Six Nations Reserve. This Aboriginal population provides a unique focus for Mohawk College enrolment, and ensuring greater access to post-secondary education for Aboriginal youth constitutes an important opportunity.
4.1.2.2 Confederation College

Confederation College is a small, northern college that has maintained a population of approximately 3,000 students for the past several years. The main campus is in Thunder Bay, with smaller campuses in six other communities in Northwestern Ontario (Dryden, Fort Frances, Geraldton/Greenstone, Kenora, Marathon and Sioux Lookout). Thunder Bay has a population of close to 120,000 and is the largest city in the Northwestern Ontario region. Dryden has a population of 10,000, Fort Frances 8,000, Geraldton/Greenstone approximately 6,000, Kenora 16,000, Marathon 4,500 and Sioux Lookout 5,300. Each is unique due to its diversity, location and industry.

Confederation College has a large population of Aboriginal students from Thunder Bay and the surrounding area, many of whom identify Ojibwa or Cree as their first language. It is difficult to determine the number of Aboriginal students attending Confederation College, due to problems in defining Aboriginal status and lack of self-identification by some students. The only measure, which is not comprehensive, is the number of students receiving external funding through an Aboriginal agency.

Ninety percent of full-time students are located at the Thunder Bay Campus. The remaining full-time students study at one of the regional campuses (seven percent) or are taught through distance education either on site or in their communities scattered throughout the north (three percent).

Confederation College offers 60 full-time programs at the Thunder Bay Campus and a variety of those are also offered on site and through distance education at the regional campuses. The programs offered throughout the campuses include the areas of applied arts, business, health sciences, Aboriginal studies, technology, aviation, apprenticeship, international programs and contract training.

4.1.2.3 Seneca College

Seneca College of Applied Arts and Technology is a polytechnic institution that has approximately 90,000 part-time and 17,000 full-time students. With more than 100,000 students, Seneca is one of Canada’s largest colleges, offering programs in more than 260 fields.

The college is located in the Greater Toronto Area and has several campuses. The three main campuses are: in the northeast section of Toronto; on the campus of York University; and northwest of Toronto in King City. Only students initially attending the Newnham Campus (the academic and administrative centre of Seneca College) are able to participate in Foundations for Success. Newnham Campus houses full-time and part-time programs in applied arts, business and technology, as well as the Seneca student residence.

Seneca offers programs leading to applied bachelor’s degrees, associate degrees, certificates, diplomas and university transfer in over 260 career fields in applied arts, business, health sciences, information arts, science and engineering and technology. The college is particularly adept in the areas of biotechnology and pharmaceutical studies, business, computer science and health sciences. Among the college’s more notable offerings are its applied bachelor’s degrees in financial services management, flight, integrated environmental site remediation and software development. Through the college’s joint programs and transfer options, students may earn both a diploma at the college and a degree at a partnered institution in Canada or around the world. Many of the college’s programs are integrated with a co-operative education component, while others offer a co-op option. Co-operative learning allows students to mix classroom instruction with “real world” work experience.

4.2 Recruiting the Students

The project objective was to recruit 2,700 participants—the size of sample required to be reasonably confident of detecting policy-relevant impacts on key outcomes. A sample of this size also provides some potential to estimate the differential impacts between the two program groups. In order to reach this target, recruitment of students was required during three periods of the project. The sections below describe Cohorts 1, 2 and 3.

Despite having three cohorts and three colleges, the recruitment process did not differ significantly across the three sites and over the three time periods. This consistency was made possible through effective training of the college staff responsible for participant recruitment. Site visits by R.A. Malatest & Associates Ltd. during the recruitment process confirmed this consistency.

4.2.1 Cohort 1 Students

Cohort 1 recruitment of participants took place between May and September 2007. During the first phase of recruitment, a total of 1,711 students were recruited. This was well short of the enrolment target. This cohort will be followed for four semesters of study.

4.2.2 Cohort 2 Students

In order to increase the sample size, a second cohort was recruited. Seneca College and Mohawk College offer many programs with a start date in January; Confederation College offers only a handful of such programs. Therefore, Cohort 2 was recruited from the former two colleges only. Between October 2007 and January 2008, 297 students were recruited at Seneca College and Mohawk College. Seneca College offers a summer semester for students that register in January. Thus, it is possible that many of these students will graduate at the same time as Cohort 1 students. Mohawk College does not have a summer semester; consequently, some Cohort 2 students may graduate after the end of the study. However, this will not prevent reporting on student persistence rates over three semesters, which is a key outcome measure for this pilot project.

50 The minimum detectable effect for this sample of students is 5.8 percent (expressed as a percentage point difference between the pooled treatment groups and control groups using graduation rate as the dependent variable). The calculations assume one-tailed tests that use an alpha-level criterion of p < 0.05 and 80 percent power. The minimum detectable effects (MDEs) are expressed as a percentage point difference between treatment and control groups when the graduation rate for the control group is 50 percent.

51 Ultimately, finding effects that are statistically significant with this sample will depend on the sizes of the impacts that are observed.
4.2.5.1 Late Recruitment
As it became clear that it would be difficult for the colleges to reach their recruitment targets by September 14, 2007, extensions were authorized by the Implementation Committee to enable colleges to reach the target sample of 2,700. The final deadline for recruitment was September 28, 2007. Case managers began contacting students in mid-October. This meant that students recruited after September began participating in the interventions much later than students recruited during the summer. Some students indicated that they had a difficult time completing 12 hours of participation by the end of the semester due to their late assignment to the Services and Services Plus Groups. Students recruited after September were hesitant about committing time at the expense of their social, personal, athletic, work and academic lives.

4.2.5.2 Contacting Students
Students were very difficult to contact via email and telephone. Case managers indicated that students often ignored their calls and emails. In fact, some students asked not to be contacted. Students also provided incorrect or outdated contact information on college documents.

4.2.5.3 Prior Assessment Results
The project focuses on students who are first-time attendees at one of the three community colleges. Students returning to college for a second time are ineligible to participate, as they may already be familiar with student support services on campus. In some colleges, the proportion of returning students could be as much as 25 percent or so.

4.2.5.4 Apathy
Some students were not interested in reading or listening to information about the project. Others were not interested in receiving case manager support or a financial incentive for participating.

4.2.5.5 Mistrust
Students did not trust that there were not conditions attached to their consent and participation. Other students did not trust the colleges with their academic information. These concerns were revealed in the questions asked by students during informed consent sessions.

### Table 4.1: Sample Size

<table>
<thead>
<tr>
<th>Group</th>
<th>Seneca Cohort 1</th>
<th>Seneca Cohort 2</th>
<th>Mohawk Cohort 1</th>
<th>Mohawk Cohort 2</th>
<th>Confederation Cohort 1</th>
<th>Confederation Cohort 2</th>
<th>Total Actual</th>
</tr>
</thead>
<tbody>
<tr>
<td>Control</td>
<td>182</td>
<td>55</td>
<td>242</td>
<td>45</td>
<td>145</td>
<td>N/A</td>
<td>669</td>
</tr>
<tr>
<td>Services</td>
<td>182</td>
<td>55</td>
<td>238</td>
<td>43</td>
<td>148</td>
<td>N/A</td>
<td>666</td>
</tr>
<tr>
<td>Services Plus</td>
<td>184</td>
<td>56</td>
<td>242</td>
<td>43</td>
<td>148</td>
<td>N/A</td>
<td>673</td>
</tr>
</tbody>
</table>
| Total         | 548             | 166             | 722             | 131             | 441                     | N/A                     | 2,008        

4.2.3 Cohort 3 Students
After the recruitment of two cohorts, the project had still not reached its target sample size of 2,700. Following a review of the budgetary envelope and staff availability, a third cohort was added. This cohort was recruited between June and September 2008 at all three colleges. This cohort will be followed for one full academic year and their persistence rates into their second year of study will be reported. The final number of students recruited from this cohort and data on their background characteristics were not available at the time of preparing this report. This cohort will be included in analyses conducted in subsequent Foundations for Success reports.

The sample sizes by participating college, cohort and treatment group, based on Cohorts 1 and 2 only, are presented in Table 4.1.

4.2.4 Eligibility Requirements
To be considered eligible to participate in the Foundations for Success project, students had to:

- be enrolled on a full-time basis;
- be starting a two-year identified program (see Appendix A) in fall 2007 (Cohort 1), winter 2008 (Cohort 2) or fall 2008 (Cohort 3);
- not be an international student;
- sign an informed consent form agreeing to participate in the study and allowing access to personal information for research purposes; and
- complete an Accuplacer® assessment and FastTrack™ survey.

The informed consent form advised students that they would be able to continue in Foundations for Success at any of the three participating colleges.

4.2.5 Challenges to Recruiting
There were a number of challenges that occurred during recruitment. These challenges were sometimes unique to an individual college. The following section describes those challenges encountered by the colleges.
4.2.5.6 Resistance to Authority
As documented by the project manager, participants felt that they would be free of parental and institutional scrutiny when entering college. However, some participants felt that the case managers would adopt a pseudo-parental role, talking to them about going to class, getting their homework done, etc.

4.2.5.7 Language
A substantial number of students at Seneca College did not possess the language skills required to understand the consent process. Many students asked to take the documents home and have them translated.

4.2.5.8 Consent Form Administration Process
Informed consent was obtained at the end of a sometimes lengthy process, which might have led to lower consent rates than would have otherwise been expected. In particular, when recruitment was done in the evenings, students may have been less likely to consent due to fatigue.

4.2.6 Identifying a Valid Sample
The recruitment process involved identifying a valid sample of college students that would be able to participate in a pilot project. The sample needed to be large enough to ensure that the study could detect impacts of the success strategies that are of sufficient size to be relevant to policy-makers. The sample size was derived following the identification of minimum detectable effects.

The steps for sample recruitment included:
- obtaining informed consent;
- administering assessment tools;
- randomly assigning students to the Services, Services Plus and Control Groups; and
- notifying participants.

4.2.7 Obtaining Informed Consent
Voluntary and informed consent of all participants involved in the research is an essential component of recruitment. The informed consent form was prepared by R.A. Malatest & Associates Ltd. and approved by the Colleges’ Research Ethics Board. It was drafted in appropriate language and administered by college staff in meetings with students. R.A. Malatest & Associates Ltd. was responsible for training college staff on the administration of the informed consent forms and for reviewing consistency in administration at the three colleges. All potential participants were provided with comprehensive information about the research to help them decide whether or not to participate in the pilot project.

Case managers followed the consent form protocol, which clearly outlined how to administer it. Case managers were expected to read the first page of the informed consent form aloud to students. In addition, they were responsible for explaining the following:
- the purpose of the study;
- random assignment;
- eligibility requirements;
- the three treatment groups; and
- project expectations.

The average time to administer the informed consent form was ten minutes. Nevertheless, students were permitted as long as it took to understand the form. Additional time was usually needed by students whose mother tongue was not English. At the end, students were given an opportunity to ask questions; in addition, case managers asked open-ended questions to ensure students’ understanding of the informed consent form and the pilot project.

In signing the informed consent form, students acknowledged that the colleges would collect specific data and then transfer them to R.A. Malatest & Associates Ltd. for the purpose of implementing and evaluating the research project. The type of data requested included:
- demographic characteristics;
- behavioural responses from the FastTrack™ survey;
- academic outcomes in high school; and
- academic records at the college.

Students’ signatures on the informed consent form authorized the colleges to transfer their survey data files and informed consent documents securely to R.A. Malatest & Associates Ltd. for the duration of the project.

At the end of the informed consent meeting, students were provided with documents to take home with them. These included an FAQ, a document outlining the project and, for Cohort 3 only, student testimonials.

In addition to recruiting students at the time of their post-admissions testing, college staff visited selected classrooms offering one of the targeted programs of study (see Appendix A) to explain the Foundations for Success project. There was a two-fold reason for this: 1) some students were missed during their post-admissions testing at the college, and 2) other students had not completed their post-admissions testing by this time. To provide an opportunity for all potential students to participate in the study, college staff distributed information about how they could sign up for Foundations for Success.
4.2.8 Recruitment Best Practices

The following approaches—none of which, it is important to note, involve solicitation or pressure—yielded the highest level of participation:

- giving students advance notice of the time requirements for the recruitment phase (i.e., for administering the informed consent form);
- speaking to small groups of students; and
- asking students questions about the program to confirm their knowledge.

4.2.9 Order of Testing

The process of administering the consent form at each of the colleges was slightly different; however, in all cases, the consent form was administered when students arrived to take their post-admissions testing. For logistical reasons, Accuplacer®, FastTrack™52 and consent forms were presented to the students in a different order at each college.

Mohawk College informed students at the time of booking their Assessment for Success that their program had been selected for a research project and asked them to plan to be on campus for a longer period of time. Students wrote their communications placement test and FastTrack™ survey in the test centre online. Afterward, students were taken on a brief tour en route to the informed consent room and shown key points of interest to new students.

At Confederation College, the process was reversed. The informed consent form was administered first, and the two online post-admissions assessments were administered afterward in the same room. Confederation College confirmed attendees for post-admissions testing and sent students an automated email inviting them to participate in the project. Case managers presented a PowerPoint deck that demonstrated the benefits of participation.

Seneca College informed students at the time of booking their English placement test that their program was selected for a research project and asked them to plan to be on campus for a longer period of time. Upon completion of Accuplacer® and the timed writing task, students were taken to a classroom adjacent to the test centre, where they completed the FastTrack™ survey. Afterward, students were informed of the pilot project and the consent form administration process was undertaken. The informed consent process occurred either in small groups or individually.

4.2.10 Monitoring

R.A. Malatest & Associates Ltd. was responsible for developing the consent forms, which were administered by college staff. As such, college staff at each of the colleges were responsible for the recruitment of students and for the administration of the consent forms. R.A. Malatest & Associates Ltd. documented the process of recruitment.

R.A. Malatest & Associates Ltd. found that there were differences in the initial approach, as project staff familiarized themselves with the informed consent script and process. Nevertheless, the recruitment of staff and administering of the informed consent form were deemed consistent across colleges. The researchers were satisfied that the students participating in the research were well informed about the study, their responsibilities and their privacy rights. This was evidenced by the number of students asking questions, the number able to answer questions posed to them by project staff and the number that took the informed consent information away with them.

Several visits were made to the colleges to observe the informed consent process with students. R.A. Malatest & Associates Ltd. were able to witness the number of students and duration of the sessions, hear the instructions provided and listen to the questions asked by the students. The purpose of the visits was to document consistency in administering consent forms and confirming that consent was informed.

4.3 RANDOM ASSIGNMENT

The evaluation method being used for Foundations for Success is a social experiment. Randomized experiments are recognized as the most effective tool for determining causal relationships between success strategies and outcomes. Randomization theoretically ensures that there are no systematic differences between the treatment groups before the success strategy starts; as a result, any observed differences between the treatment and control groups can be attributed to the success strategy.

The random assignment of participants to the Services, Services Plus and Control Groups was conducted by R.A. Malatest & Associates Ltd. with advice from Abt Associates Inc. The assignment was completed in blocks, based on the college and time of recruitment.

52 FastTrack™ is a student tracking data system. It is comprised of two questionnaires: the Partners in Education Inventory (PEI) and the Student Experience Survey (SEI).
4.3.1 Process

The blocks of data sent by the colleges to R.A. Malatest & Associates Ltd. included student number, date of assessment and gender. No other personal identifiers or academic or administrative information were provided. Initially, the researchers held back a portion of the students in each block to ensure that the enrolment target was not reached too quickly and that the final sample had representation from across the four months of post-admissions testing prior to the start of the Foundations for Success program. This “hold-back” sample was randomly assigned after it became clear that the initial target number of students would not be recruited in the fall 2007 semester.

Within each block, one-third of students were randomly assigned to the Services, Services Plus and Control Groups, respectively. Once assigned, the data blocks were returned to the colleges with the additional Group Assignment field added. A total of 2,008 students (Cohorts 1 and 2) were randomly assigned into treatment groups (see Table 4.1). As previously indicated, data on students enrolled in Cohort 3 were not available in time for inclusion in this report. The following figure illustrates the recruitment process used by Foundations for Success.

Figure 4.1: Flow Chart Summarizing the Recruitment of Students for Foundations for Success

All first-year entering students (two-year, non-highly selective programs only) at three Ontario colleges are tested on three requirements after admissions and invited to sign an informed consent form, making them eligible for the study.

Students deemed at risk on at least one item

Random assignment occurs

Students not deemed at risk (no further involvement in project)

Services Group
Case-managed access to academic, mentorship and career exploration support

Services Plus Group
Case-managed access to academic, mentorship and career exploration support and financial incentives

Control Group

4.3.2 Notification to Participants

The informed consent form was administered to all students in eligible programs. Students who signed the form but were later deemed ineligible to participate in Foundations for Success received letters from their respective colleges. This letter informed them that they were not eligible to participate and that any data collected on them by the project would be destroyed. In this letter, the colleges informed the students of the availability of student support services on campus and encouraged them to take advantage of them. Letters to those ineligible to participate were sent as soon as the results of post-admissions testing were reviewed.

Students who were eligible to participate and who were assigned to the Control Group received a letter from R.A. Malatest & Associates Ltd. informing them of their group assignment. The letter thanked them for their important role in the project, including their commitment to respond to follow-up surveys and to make their academic data available to R.A. Malatest & Associates Ltd., as mentioned in the informed consent form. Letters to those assigned to the Control Group were sent out by R.A. Malatest & Associates Ltd. as soon as the colleges were able to provide them with the students’ contact information.

Students in the Services and Services Plus Groups received letters from their respective colleges informing them of their group assignment. The letter outlined the next few steps in the process, including a phone call from their assigned case manager to organize an initial meeting. Letters to Services and Services Plus Group members were sent out within two weeks of their assignment data being returned to the colleges.

4.4 PROJECT WITHDRAWAL

The withdrawal process outlined in the informed consent form allows students to completely withdraw from the pilot project at any point. Data from students who have completely withdrawn from the project are removed from the data set. Students who choose this route are required to sign a one-page withdrawal form stating that they no longer wish to participate in the study. However, students also have the option of discontinuing their participation in the services provided by Foundations for Success while still allowing the project to track their academic outcomes and to retain these data in the research sample for purposes of analysis. Case managers present both options to students who express an interest in withdrawing.
Subsequently, 414 of the consenting students were found not to meet the project’s definition of being at risk of not completing their studies, based on their post-admissions test results, while the remaining 2,008 students were randomly assigned to one of the three Foundations for Success groups. More detailed data on this process by college and by cohort are presented in Table 4.2.

In the end, therefore, the intake of 5,097 students generated a research sample of 2,008 students. Despite the possibility of receiving a financial incentive for completing 12 hours of program activities, many students did not wish to add another requirement on top of their college studies and other obligations.

### 4.5 TRACKING THE RECRUITMENT OF ELIGIBLE STUDENTS

The recruitment of students to participate in Foundations for Success has proven to be more difficult than anticipated. While the earlier section (“Challenges to Recruitment”) highlights the reason behind the recruitment challenges, this section provides a quantitative overview of the recruitment process (see Figure 4.1).

Each college selected a series of non-highly selective two-year programs of study that could be part of Foundations for Success (see Appendix A). In total, there were 5,097 students in these programs from which Foundations for Success could draw. While Seneca College and Mohawk College mandate post-admissions testing of all their entering students, at Confederation College this process was introduced specifically for the purposes of Foundations for Success. Although it is mandatory, many students delay their post-admissions testing until after the start of the semester; others attempt not to complete this task at all. Of the 5,097 students, 3,893 completed their post-admissions testing within the time periods set aside for sample recruitment. Of these, 3,148 students participated in the informed consent process and 2,421 (77 percent) consented to participate in the project.

<p>| Table 4.2: Number of Students at Each Stage of Recruitment in the Foundations for Success Project for Cohorts 1 and 2 |
|--------------------------------------------------|--------------------------------------------------|--------------------------------------------------|--------------------------------------------------|--------------------------------------------------|--------------------------------------------------|--------------------------------------------------|--------------------------------------------------|--------------------------------------------------|</p>
<table>
<thead>
<tr>
<th></th>
<th>Confederation</th>
<th>Mohawk</th>
<th>Seneca</th>
<th>Total</th>
<th>Confederation</th>
<th>Mohawk</th>
<th>Seneca</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Number of Students in eligible Two-Year Programs (Non-International Students)</td>
<td>948</td>
<td>1,847</td>
<td>1,415</td>
<td>4,210</td>
<td>N/A</td>
<td>562</td>
<td>325</td>
<td>887</td>
</tr>
<tr>
<td>2. Number of Students in Two-Year Programs Assessed (Non-International Students)</td>
<td>846</td>
<td>1,489</td>
<td>1,004</td>
<td>3,339</td>
<td>N/A</td>
<td>249</td>
<td>305</td>
<td>554</td>
</tr>
<tr>
<td>3. Number of Students in Two-Year Programs Who listened to the Informed Consent Process</td>
<td>846</td>
<td>1,234</td>
<td>688</td>
<td>2,768</td>
<td>N/A</td>
<td>190</td>
<td>190</td>
<td>380</td>
</tr>
<tr>
<td>4. Number of Students Who Signed Consent Form</td>
<td>554</td>
<td>898</td>
<td>629</td>
<td>2,081</td>
<td>N/A</td>
<td>152</td>
<td>188</td>
<td>340</td>
</tr>
<tr>
<td>5. Number of Students Not Consenting</td>
<td>292</td>
<td>336</td>
<td>59</td>
<td>687</td>
<td>N/A</td>
<td>38</td>
<td>2</td>
<td>40</td>
</tr>
<tr>
<td>6. Number of Consenting Students Eligible to Participate (At Risk)</td>
<td>441</td>
<td>721</td>
<td>548</td>
<td>1,710</td>
<td>N/A</td>
<td>131</td>
<td>166</td>
<td>297</td>
</tr>
<tr>
<td>7. Number of Consenting Students Not Eligible to Participate (Not At Risk)</td>
<td>113</td>
<td>177</td>
<td>81</td>
<td>371</td>
<td>N/A</td>
<td>21</td>
<td>22</td>
<td>43</td>
</tr>
<tr>
<td>8. Number of Students Who Signed Participation Agreement (Non-Control Group)</td>
<td>213</td>
<td>318</td>
<td>271</td>
<td>802</td>
<td>N/A</td>
<td>64</td>
<td>55</td>
<td>119</td>
</tr>
<tr>
<td>9. Number of Students Who Did Not Sign Participation Agreement (Non-Control Group)</td>
<td>83</td>
<td>160</td>
<td>94</td>
<td>337</td>
<td>N/A</td>
<td>23</td>
<td>56</td>
<td>79</td>
</tr>
</tbody>
</table>
Baseline Characteristics of the Research Sample
Eligible students who consented were randomly assigned to one of the following treatment groups: Control, Services and Services Plus. Randomization theoretically ensures that there are no systematic differences between the treatment groups before the intervention starts. As a result, any observed differences that occur over time between the intervention and control groups can be attributed to the intervention.

The primary purpose of the present chapter is to establish whether random assignment was successful; in other words, whether the Control, Services and Services Plus Groups were equivalent at baseline. In addition, this chapter presents information about participant characteristics and differences between students at Confederation College, Mohawk College and Seneca College. Finally, the chapter will analyze the differences between the sample of college students in the Foundations for Success project and the general student population of the three colleges.

This chapter is organized as follows:

- the role of the baseline data in the current evaluation is summarized;
- items from the baseline survey are compared by treatment group; and
- the demographic characteristics of students recruited by the colleges are presented and compared to the general population of college students in eligible two-year programs at each of the three participating colleges.

Baseline characteristics of students recruited for the project in the fall 2007 (Cohort 1) and winter 2008 semesters (Cohort 2) are also documented in Appendix B.

5.1 ROLE OF THE BASELINE DATA

The random assignment nature of the Foundations for Success sample aimed to ensure groups with equivalent characteristics, both demographically and behaviourally, across the Control, Services and Services Plus Groups. The sample was not designed to ensure that the sample of students from each college or from each cohort would be equivalent. It was expected that students enrolling in the three colleges would show different demographic characteristics, and the data presented later in this section give an indication of the extent of these differences. As well, it is entirely possible that the cohort of students recruited in the winter 2008 semester will show different characteristics compared to the fall 2007 enrollees. These potential differences by college and cohort do not affect the success of the random assignment.

The role of the baseline survey is:

- to describe the characteristics of the sample at baseline;
- to establish the baseline equivalence of the three treatment groups prior to the interventions; and
- to create covariates for the impact analyses, as appropriate (depending on the findings of the baseline equivalence testing, covariates may be introduced into regression analysis to improve the precision of treatment impact estimates).

The baseline survey data come from the first part of the FastTrack™ survey, also known as the Partners in Education Inventory (PEI). The PEI is a questionnaire featuring 100+ questions that is administered prior to the start of the first term. It provides a comprehensive profile of new student characteristics in terms of their demographics, high school background, attitudes and behaviours prior to the implementation of program activities. The PEI allows institutions to add up to ten additional questions; these questions were used by R.A. Malatest & Associates Ltd. to gather additional data beneficial to answering the research questions. The PEI represents a pre-treatment baseline measurement, and items from it may be used as covariates in the analytic models that will be used to estimate the impact of treatment on student outcomes.

The second part of FastTrack™ is called the Student Experience Inventory (SEI). The SEI is administered between the seventh and ninth weeks of the semester. It provides a summary of students' attitudes regarding their confidence in success, occupational uncertainty and commitment to graduation and their institution. Since the SEI is administered well after treatment has gotten underway, and the responses to items on the SEI could have been influenced by treatment, items from the SEI will not be used as covariates in the impact models.

5.2 COMPARISON OF THE TREATMENT GROUPS

This section presents the impact of random assignment on the characteristics of the Control, Services and Services Plus Group members at baseline. The goal here is to determine whether the three treatment groups are statistically equivalent using selected demographic and attitudinal variables. No correction was made for multiple comparisons conducted between the three treatment groups; as a result, an alpha level of 0.05 is used to determine significant differences between the three treatment groups. It should be noted that based on the 112 statistical comparisons that were made as part of the current analysis, approximately five statistically significant differences would be expected by chance.

Student characteristics measured at baseline were tested for equivalence among the treatment and control groups. The models for testing the equivalence of student characteristics among treatment and control groups are similar to those specified for the impact analyses, except that the outcome measures are student characteristics measured at baseline and include no covariates, except for the indicator (dummy) variables for college and cohort which were included on the right-hand side of the model.
5.2.1 Demographic Characteristics

The majority of respondents speak English as a first language (70 percent). There are slightly more native English speakers in the Services Group (72.8 percent) than in the Control (70.9 percent) or Services Plus (66.3%) Groups.

The demographic profiles of the three colleges reflect the college community that these colleges serve. As such, we see that the number of native English-speaking students at Mohawk College and Confederation College is much higher than for students from the Greater Toronto Area.

Table 5.1 presents the results of the balance tests for baseline equivalence. The only statistically significant difference observed was with respect to East Asian first language status in the Services Plus Group versus the Control Group (p = .001).
The majority of students (67.7 percent) reported that their highest level of education to date was high school completion. Students in the Services Group were significantly less likely to have completed high school, with 7.2 percent not having completed high school compared to 4.2 percent in the Control Group who had not done so (p = 0.01). Students in the Services Plus Group were significantly more likely to have a university education (6.7 percent) compared to the Control Group (3.9 percent, p = 0.02).

The vast majority (77.8 percent) of students indicated that they were single and very few had children (7.4 percent reported that they were single parents). There were no statistically significant differences between the treatment groups for marital or parental status, with the exception of the 26+ age category (p = 0.04), with the Control Group having a higher proportion of students in this age category (12.0 percent) compared to both the Services (15.9 percent) and Services Plus (15.9 percent) groups.

Less than one out of ten (8.4 percent) students reported that they had a disability (that is, a long-term physical or mental condition that limits the kind or amount of paid work that they can do). This remains true when comparing treatment groups (8.4 percent in the Control Group, 8.0 percent in the Services Group and 8.8 percent in the Services Plus Group).

With respect to citizenship and immigration status, as mentioned earlier, 47.7 percent of students reported that both they and their parents were born in Canada. As Figure 5.2 and Table 5.3 illustrate, there were no statistically significant differences between the treatment groups in terms of their reported citizenship and immigration status.

### 5.2.2 Student Education

The majority of students (67.7 percent) reported that their highest level of education to date was high school completion. Students in the Services Group were significantly less likely to have completed high school, with 7.2 percent not having completed high school compared to 4.2 percent in the Control Group who had not done so (p = 0.01). Students in the Services Plus Group were significantly more likely to have a university education (6.7 percent) compared to the Control Group (3.9 percent, p = 0.02).

### 5.2.3 Educational Characteristics of Parents

As illustrated in Figure 5.4 and Table 5.5, there was virtually no difference in the reported percentages of students whose parents’ highest level of education was high school or greater.
5.2.4 Financing College, Expected Hours of Paid Work and Family Income

As mentioned earlier, participants were asked about the primary source of funding for their college studies, the number of paid hours of work they expected to do each week and their family income. As indicated in Table 5.6, all treatment groups reported similar percentages for each of the variable categories relating to sources of funding, expected hours of paid work and family income.

No significant differences could be detected between any of the treatment groups for the above responses.

Educational backgrounds of parents were not statistically different between the three treatment groups. As well, there were no significant differences between the treatment groups in terms of the percentage of students who were the first in their family to go to a post-secondary institution (Control 30.3 percent; Services 29.7 percent; Services Plus 32.5 percent).
Figure 5.5: Level of Agreement Regarding Academic Success and Commitment

A majority of students (82.2 percent) agreed or strongly agreed that they were well prepared to succeed in college. This is reflected in each of the treatment groups (Control 79.7 percent; Services 82.9 percent; Services Plus 84.1 percent).

Educational commitment measures students’ desire to graduate, which is an important influence on decisions to persist or drop out. In order to measure the strength of this attitude, responses from FastTrack™ explored the students’ intent to continue with their education. An overwhelming majority of students (87.8 percent) indicated that they were determined to continue on to the next semester. This holds true for each of the treatment groups.

Table 5.6: Source of Funding, Expected Hours of Paid Work and Family Income for Treatment Groups

<table>
<thead>
<tr>
<th>Largest Source of Funding</th>
<th>Treatment Groups</th>
<th>Statistical Tests (p value)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Control</td>
<td>Services</td>
</tr>
<tr>
<td>Government Student Loans</td>
<td>30.9%</td>
<td>33.2%</td>
</tr>
<tr>
<td>Money from Spouse/Parent</td>
<td>24.8%</td>
<td>26.3%</td>
</tr>
<tr>
<td>Personal Savings</td>
<td>10.5%</td>
<td>9.9%</td>
</tr>
<tr>
<td>Employment Income</td>
<td>9.9%</td>
<td>9.3%</td>
</tr>
<tr>
<td>Other/No Response</td>
<td>23.9%</td>
<td>21.3%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Expected Hours of Work</th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Less Than 8 Hours</td>
<td>28.6%</td>
<td>27.5%</td>
<td>28.5%</td>
</tr>
<tr>
<td>9-16 Hours</td>
<td>30.8%</td>
<td>29.9%</td>
<td>30.9%</td>
</tr>
<tr>
<td>17-24 Hours</td>
<td>22.1%</td>
<td>25.1%</td>
<td>23.6%</td>
</tr>
<tr>
<td>25-32 Hours</td>
<td>10.6%</td>
<td>12.5%</td>
<td>10.7%</td>
</tr>
<tr>
<td>33+ Hours</td>
<td>2.8%</td>
<td>1.7%</td>
<td>1.8%</td>
</tr>
<tr>
<td>Other/No Response</td>
<td>5.1%</td>
<td>3.5%</td>
<td>4.5%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Family Income</th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Under $24,999</td>
<td>23.5%</td>
<td>21.2%</td>
<td>23.2%</td>
</tr>
<tr>
<td>$25,000 to $54,999</td>
<td>16.3%</td>
<td>17.4%</td>
<td>17.5%</td>
</tr>
<tr>
<td>$55,000 to $74,999</td>
<td>6.7%</td>
<td>8.0%</td>
<td>5.7%</td>
</tr>
<tr>
<td>$75,000 or More</td>
<td>9.6%</td>
<td>11.1%</td>
<td>9.0%</td>
</tr>
<tr>
<td>Don’t Know/No Response</td>
<td>43.9%</td>
<td>42.4%</td>
<td>44.6%</td>
</tr>
<tr>
<td>Count</td>
<td>669</td>
<td>666</td>
<td>673</td>
</tr>
</tbody>
</table>

Source: 2007 PEI results—largest source of funding for college (additional question added to the PEI), expected hours of work (Q22, “How many hours per week do you expect to work while studying here?”), family income (additional question added to the PEI).

n=2,008 (Control=669, Services=666, Services Plus=673)
Students were also asked how often they completed homework assignments on time in high school. Almost half of the respondents (46.6 percent) indicated that they had usually completed homework assignments on time in high school, and 35.3 percent reported that they always done so.

No other significant differences were observed between groups in terms of their academic habits and preparation in high school.

The Services Plus group showed a higher level of confidence in succeeding academically, with 84.1 percent of Services Plus students indicating that they agreed with the statement "I think I am well prepared to be a successful student in college" compared to 79.7 percent of the Control Group (p = 0.03).

### 5.2.6 Academic Background and Preparation at College Entry

When students were asked how often they skipped classes in high school, 45.5 percent reported that they had never or almost never done so. Similar percentages were found in each of the treatment groups, as shown in Table 5.8. Members of the Services Plus Group were significantly more likely to report skipping class once a month (16.2 percent) compared to members of the Control Group (12.1 percent, p = 0.04).
5.2.7 Summary of Statistical Comparisons Between the Treatment Groups

Overall, as detailed in the preceding section, the demographic characteristics of individuals were similar across the control and treatment groups (with a number of exceptions which were noted). This suggests that the random assignment has resulted in the generation of experimental groups that share comparable baseline characteristics. As illustrated in the preceding pages, there were eight statistically significant differences between the treatment groups, specifically with respect to first language, age, student education, confidence in succeeding and frequency of missing classes in high school. As a result, we propose to introduce these variables as covariates in the regression models in order to improve the precision of treatment impact estimates.

5.3 Sample Characteristics vs. Eligible Population

As mentioned earlier, it was expected that the three participating colleges would differ in terms of the characteristics of their students. Furthermore, the recruitment process for Foundations for Success did not lead all those who were potentially eligible to take part to actually enrol in the study. As described in Section 4, of the 5,097 students enrolled in an eligible two-year program at one of the three participating colleges, 2,008 students signed the informed consent form, were deemed to be at risk of failing to complete their studies and were randomly assigned to one of the three groups. Since the Foundations for Success sample represents less than 50 percent of the students in eligible programs, there could well be important differences between the potential sample and the enrolled sample.

The data presented in the remainder of this section illustrate the extent to which the research samples enrolled from each of the three colleges differ in terms of a number of important student characteristics. In addition, data are also available on some of the characteristics of all students at each of the three colleges who were entering the two-year programs from which Foundations for Success participants were drawn. Where available, these data have been included in the tables for comparison purposes.

It is important to note that in the case of the latter data, no attempt has been made to formally assess the representativeness of the enrolled research sample. Indeed, some differences between the research sample and the larger population of students in the targeted programs from which it was drawn are to be expected. The Foundations for Success sample includes only those who were deemed to be at risk of failing to complete their programs of study. Data to assess the extent to which those who did not enrol in the pilot project may be similarly at risk is not available for analysis. Consequently, the data on the "college population" presented in the following tables includes all students in the selected two-year program—both those who would be deemed to be at risk and those who would not exhibit any of the three risk factors addressed in this study. Despite this limitation, the data have been provided to give the reader a general sense of how similar or different the research sample is from the population from which it was recruited. Ultimately, the external validity of the findings from the Foundations for Success pilot project and the extent to which they are generalizable to any larger population of policy interest will be a matter of judgement.

5.3.1 First Language

As demonstrated in Figure 5.6, differences were noted between the Foundations for Success sample and the general student body in eligible programs of study at the three colleges. More students in the general college population spoke English as their first language (90.1 percent at Confederation College, 65.1 percent at Seneca College and 83.4 percent at Mohawk College) compared to the Foundations for Success sample (84.8 percent, 47.8 percent and 80.9 percent, respectively). This suggests that students participating in Foundations for Success are less likely to speak English as their first language and thus had a more difficult time meeting the college’s English proficiency requirement at the time of enrolment. With the results of Accuplacer® responsible for determining one of the three risk factors for this project, this difference between the research sample and the college population is not surprising.

Figure 5.6: First Language
5.3.2 Citizenship/Immigration Status

A lower percentage of Foundations for Success students reported that they and both their parents were born in Canada (76.9 percent at Confederation College, 16.5 percent at Seneca College and 58.7 percent at Mohawk College) compared to the student population at each college (80.5 percent, 25 percent and 59.9 percent, respectively). A higher percentage of Seneca College students in the Foundations for Success sample (26.5 percent) reported they were landed immigrants/permanent residents in comparison to general Seneca College students (only 15.6 percent).

In all three colleges, the general population of students in eligible programs of study, as well as both of their parents, were more likely to have been born in Canada than was the case for students in the Foundations for Success research sample. Thus, there seems to be a link between the three selected risk factors and the demographic characteristic of students and their parents being born in Canada.

The differences between the three colleges once again reflect the communities they serve. For example, the multicultural nature of Toronto, coupled with the fact that more than 50 percent of Torontonians were born outside of Canada, is reflected in the citizenship status of students at Seneca College.

International/visa students were ineligible to participate in the Foundations for Success project.

5.3.3 Student Education

While first language and citizenship status demonstrated a significant difference between the Foundations for Success research sample and the general student body enrolled in the eligible programs, both groups have very similar education characteristics. Among the Foundations for Success sample, 65.3 percent at Confederation College, 64.0 percent at Seneca College and 72 percent at Mohawk College reported that their highest level of education was a high school diploma, and the results were very similar for the general student population in eligible programs (65.6 percent at Confederation College, 67.0 percent at Seneca College and 68.9 percent at Mohawk College).
5.3.4 Educational Characteristics of Parents

Parental educational status was also analyzed for both groups, given the importance of this characteristic in the student retention literature. Well over half of students reported that either their father (74.5 percent) or their mother (77.5 percent) had completed high school or more advanced schooling as their highest level of education. No substantial differences were found between the research sample and the general student population enrolled in an eligible program of study in terms of father’s highest education levels. However, a higher percentage of students in the non-sample college population reported that their mothers had completed high school or beyond as their highest level of education (80 percent at Confederation College, 83.7 percent at Seneca College and 84 percent at Mohawk College) compared to the Foundations for Success research sample (72.3 percent, 76.6 percent and 81.0 percent, respectively).
Table 5.11: Student Education

<table>
<thead>
<tr>
<th>Research Sample</th>
<th>Less Than High School</th>
<th>Completed High School</th>
<th>Partial College Studies</th>
<th>College Diploma/Certificate</th>
<th>Partial University Degree</th>
<th>University Degree</th>
<th>No Response</th>
<th>Count</th>
</tr>
</thead>
<tbody>
<tr>
<td>Confederation</td>
<td>4.5%</td>
<td>65.3%</td>
<td>10.9%</td>
<td>7.5%</td>
<td>3.6%</td>
<td>2.0%</td>
<td>6.1%</td>
<td>441</td>
</tr>
<tr>
<td>Seneca</td>
<td>5.2%</td>
<td>64.0%</td>
<td>7.4%</td>
<td>6.9%</td>
<td>5.5%</td>
<td>10.5%</td>
<td>0.6%</td>
<td>714</td>
</tr>
<tr>
<td>Mohawk</td>
<td>6.0%</td>
<td>72.0%</td>
<td>9.3%</td>
<td>5.6%</td>
<td>4.9%</td>
<td>1.6%</td>
<td>0.5%</td>
<td>853</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>College Population</th>
<th>Less Than High School</th>
<th>Completed High School</th>
<th>Partial College Studies</th>
<th>College Diploma/Certificate</th>
<th>Partial University Degree</th>
<th>University Degree</th>
<th>No Response</th>
<th>Count</th>
</tr>
</thead>
<tbody>
<tr>
<td>Confederation</td>
<td>4.7%</td>
<td>65.6%</td>
<td>11.2%</td>
<td>8.8%</td>
<td>6.3%</td>
<td>3.1%</td>
<td></td>
<td>1,013</td>
</tr>
<tr>
<td>Seneca</td>
<td>5.9%</td>
<td>67.0%</td>
<td>10.7%</td>
<td>7.3%</td>
<td>7.9%*</td>
<td></td>
<td>1,000</td>
<td></td>
</tr>
<tr>
<td>Mohawk</td>
<td>5.2%</td>
<td>68.9%</td>
<td>10.0%</td>
<td>8.0%</td>
<td>5.1%</td>
<td>2.8%</td>
<td>4,085</td>
<td></td>
</tr>
</tbody>
</table>

* The college was unable to distinguish between attaining some credits towards a university degree and receiving a university degree.

Source: 2007 PEI results—highest level of education (Q10, "Please indicate the highest level of education you have attained so far").
n=2,008 (Confederation College 441; Mohawk College 853; Seneca College 714)

---

Table 5.12: Parents’ Education

<table>
<thead>
<tr>
<th>Parents’ Education</th>
<th>Research Sample</th>
<th>College Population</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Confederation</td>
<td>Seneca</td>
</tr>
<tr>
<td>Father Completed High School or Beyond</td>
<td>66.7%</td>
<td>78.2%</td>
</tr>
<tr>
<td>Mother Completed High School or Beyond</td>
<td>72.3%</td>
<td>76.6%</td>
</tr>
<tr>
<td>Count</td>
<td>441</td>
<td>714</td>
</tr>
</tbody>
</table>

Source: 2007 PEI results—father’s/mother’s highest level of education (Q17/18, "Indicate the highest level of education attained by your father/mother").
n=2,008 (Confederation College 441; Mohawk College 853; Seneca College 714)
Conclusion
6.1 OVERVIEW OF FINDINGS

This chapter presents a short summary of what we have learned so far from the evaluation and what can be expected from the second and third reports.

6.1.1 Recruitment of Students

Students recruited into the pilot project had to complete an informed consent form and assessment. Students were then randomly assigned into the treatment groups. A total of 1,711 students were recruited into Cohort 1 between June and September 2007. In addition, 297 students were recruited into Cohort 2 at Mohawk and Seneca Colleges only. Given the current sample size for the Foundations for Success project, the minimum detectable effect for the full sample of 2,008 students is 5.8 percentage points (assuming as a final impact measure a binary variable measuring completion of students’ program). However, this sample size is being further increased (and the minimum detectable effect decreased) by the recruitment of a third cohort of students.

6.1.2 The Interventions

Based on field research conducted during the first year of the Foundations for Success pilot project, this evaluation report concludes that the interventions have been implemented consistently across the colleges. To ensure consistency, the following tools were utilized by: training of staff (case managers, mentors, tutors and Career Gear facilitators); common scripts used when contacting students; development of project documents; and discussions and problem-solving about consistency at implementation meetings with all three colleges.

6.1.3 Baseline Characteristics of Students

R.A. Malatest & Associates Ltd. used the responses on the Partners in Education Inventory (PEI) assessment tool to analyze the sample. The results indicate that with respect to baseline demographic characteristics, few significant differences exist between the treatment groups for all baseline characteristics considered. As a result, this report concludes that, overall, the random assignment of students was successful. Using an alpha of 0.05, there were a number of significant differences between the three treatment groups, specifically with respect to students’ first language, age, education, confidence in succeeding and frequency of missing classes in high school. As a result, we propose to introduce these variables as covariates in the regression models in order to improve the precision of treatment impact estimates. We also propose to include college and cohort in the final impact models.

6.2 DISSEMINATION OF FINDINGS

During the course of the evaluation, R.A. Malatest & Associates Ltd. provides the Canada Millennium Scholarship Foundation with regular reports on its progress. These updates take the form of both written and verbal reports that summarize the activities completed to date and any issues that arise throughout the project.

In addition, R.A. Malatest & Associates Ltd. will complete two further analytical reports during the course of the evaluation:

[●] Short- and Medium-Term Impacts Report: This report will present both qualitative and quantitative information on the first year of implementation. The report will also capture information on outputs and immediate outcomes from Foundations for Success, including persistence rates from first to second year. It will present information on the results of the Year 1 survey (ten months after baseline), focus groups and site visits. It is anticipated that this report will be published in early 2009.

[●] Final Report: This report will summarize the intermediate and final impact of Foundations for Success. In particular, project participation data, administrative data, student surveys and other data obtained during the course of the evaluation will be linked to make these determinations. The focus will be on answering the research questions that were presented in this report, including the effectiveness and the efficiency of case manager-facilitated access to services on improving the persistence rates of students deemed at risk of not completing their program of study. This report will also include a cost-benefit analysis of Foundations for Success. It is due to be published early in 2010.
APPENDICES

Appendix A: Program of Study
Appendix B: Cohort Analysis
APPENDIX A: Program of Study

Each college was responsible for submitting a list of non-highly selective two-year programs of study that could be included in a list of eligible programs. Students in these programs were invited to participate in Foundations for Success.

CONFEDERATION COLLEGE
- Aboriginal Law & Advocacy
- General Arts & Science—Diploma
- Broadcasting—Television
- Business—Accounting
- Business—Human Resources
- Business—Marketing
- Culinary Management
- Film Production
- Hotel Management
- International Business
- Developmental Service Worker
- Early Childhood Education
- Law & Security Administration
- Paramedic
- Police Foundations
- Practical Nursing
- Recreation & Leisure Service
- Aviation Technician—Aircraft Maintenance
- Aviation—Flight Management
- Forestry Technician
- Instrumentation Engineering Technician
- Mechanical Engineering Technician
- Power Engineering Technician

MOHAWK COLLEGE
- Recreation & Leisure Services
- Social Service Worker
- Educational Assistant
- Insurance
- Business Marketing
- Business
- Enterprise Business
- Business Accounting
- Financial Services
- Office Administration—Executive
- Office Administration—Legal
- Office Administration—Medical
- Tourism & Travel
- Architectural Technician
- Civil Engineering Technician
- Architectural Technology
- Civil Engineering Technology
- Transportation Engineering Technology
- General Arts & Science
- Journalism—Print & Broadcast
- Broadcasting—Radio & Communications Media

SENeca COLLEGE
- Early Childhood Education
- Building Systems Engineering Technician
- Civil Engineering Technician
- Environmental Technician
- Electronics Engineering Technician—Broadband Cable
- Electronics Engineering Technician—Computer
- Electronics Engineering Technician—Communications
- Fire Protection Engineering Technician
- Accounting
- Esthetician
- Fashion Merchandising
- Visual Merchandising
- General Arts & Science
- General Business
- International Business
- International Transportation & Customs
- Court & Tribunal Administration
- Court & Tribunal Agent
- Law Clerk
- Library Information Technician
- Real Property Administration
- Business Insurance
This section examines differences between Cohorts 1 and 2. Only Seneca College and Mohawk College incorporated a second cohort of students; therefore, Cohort 2 reflects the composition of Seneca College and Mohawk College students only.

**FIRST LANGUAGE**

Small differences were noted with respect to first language, with more students in Cohort 1 speaking English as their first language (71.5 percent) compared to those in Cohort 2 (60.9 percent). In contrast, students in Cohort 2 were more likely to have an East Asian first language (12.1 percent) compared to Cohort 1 (6.5 percent). These differences likely reflect at least to some extent the varying composition of the Cohort 1 and Cohort 2 sample by college.

**APPENDIX B: COHORT ANALYSIS**

<table>
<thead>
<tr>
<th>First Language</th>
<th>Cohort 1</th>
<th>Cohort 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>English</td>
<td>71.5%</td>
<td>60.9%</td>
</tr>
<tr>
<td>East Asian</td>
<td>6.5%</td>
<td>12.1%</td>
</tr>
<tr>
<td>French</td>
<td>2.9%</td>
<td>0.7%</td>
</tr>
<tr>
<td>Other European</td>
<td>2.5%</td>
<td>4.0%</td>
</tr>
<tr>
<td>Indo-Pakistani</td>
<td>1.9%</td>
<td>4.0%</td>
</tr>
<tr>
<td>Other</td>
<td>10.6%</td>
<td>15.9%</td>
</tr>
<tr>
<td>Missing</td>
<td>4.1%</td>
<td>2.4%</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>1,711</strong></td>
<td><strong>297</strong></td>
</tr>
</tbody>
</table>

Source: 2007 PEI results—first language (Q16, “Which language did you learn first?”). n=2,008 (Confederation College 441; Mohawk College 853; Seneca College 714)

<table>
<thead>
<tr>
<th>Citizenship/Immigration Status</th>
<th>Cohort 1</th>
<th>Cohort 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Student and Both Parents Born in Canada</td>
<td>50.1%</td>
<td>34.0%</td>
</tr>
<tr>
<td>Student and One Parent Born in Canada</td>
<td>10.7%</td>
<td>7.4%</td>
</tr>
<tr>
<td>Born in Canada but Parents Born Elsewhere</td>
<td>13.7%</td>
<td>18.2%</td>
</tr>
<tr>
<td>Not Born in Canada but Now a Canadian Citizen</td>
<td>13.1%</td>
<td>20.2%</td>
</tr>
<tr>
<td>Landed Immigrant/Permanent Resident</td>
<td>10.3%</td>
<td>19.5%</td>
</tr>
<tr>
<td>Don’t Know/No Response</td>
<td>2.0%</td>
<td>0.7%</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>1,711</strong></td>
<td><strong>297</strong></td>
</tr>
</tbody>
</table>

Source: 2007 PEI results—immigrant status (Q24, “How would you describe yourself?”). n=2,008 (Confederation College 441; Mohawk College 853; Seneca College 714)

<table>
<thead>
<tr>
<th>Overall</th>
<th>Less Than High School</th>
<th>Completed High School</th>
<th>Partial College Studies</th>
<th>College Diploma/Certificate</th>
<th>Partial University Degree</th>
<th>University Degree</th>
<th>No Response</th>
<th>Count</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cohort 1</td>
<td>4.6%</td>
<td>62.7%</td>
<td>8.8%</td>
<td>6.8%</td>
<td>4.6%</td>
<td>4.5%</td>
<td>2.0%</td>
<td>1,711</td>
</tr>
<tr>
<td>Cohort 2</td>
<td>9.8%</td>
<td>62.2%</td>
<td>9.8%</td>
<td>4.7%</td>
<td>6.4%</td>
<td>7.1%</td>
<td>0.0%</td>
<td>297</td>
</tr>
</tbody>
</table>

Source: 2007 PEI results—highest level of education (Q10, “Please indicate the highest level of education you have attained so far”). n=2,008 (Confederation College 441; Mohawk College 853; Seneca College 714)

**CITIZENSHIP/IMMIGRATION STATUS**

Students in Cohort 1 were more likely to have been born in Canada (50.1 percent) compared to those in Cohort 2 (34.0 percent). This likely reflects the fact that Confederation College was not represented in Cohort 2.

**STUDENT EDUCATION**

Cohort 2 students were less likely to have completed high school (9.8 percent) compared to Cohort 1 (4.6 percent). Students in Cohort 2 were also more likely to have completed a university degree (7.1 percent) compared to Cohort 1 (4.5 percent).
There were no substantial differences between the two cohorts in terms of the percentage of students who were the first in their family to go to a post-secondary institution (Cohort 1 31.0 percent; Cohort 2 30.0 percent).

Furthermore, there were no substantial differences between the two cohorts with respect to the largest anticipated source of funding college or expected hours of work. However, students in Cohort 2 were more likely to report family income in the range of $25,000 to $54,999 (26.6 percent) compared to Cohort 1 (15.4 percent).
Table B.6: Confidence in Academic Success and Educational Commitment

<table>
<thead>
<tr>
<th></th>
<th>Level of Confidence in Succeeding</th>
<th>Educational Commitment</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Agree</td>
<td>Neutral</td>
</tr>
<tr>
<td>Cohort 1</td>
<td>82.4%</td>
<td>12.7%</td>
</tr>
<tr>
<td>Cohort 2</td>
<td>81.5%</td>
<td>14.5%</td>
</tr>
</tbody>
</table>

Source: 2007 PEI results—level of confidence in succeeding (Q64, “I think I am well prepared to be a successful student in college”), likelihood of continuing studies (Q51, “I may not continue with my studies here next semester”).
n=2,008 (Confederation College 441; Mohawk College 853; Seneca College 714)

Table B.7: Academic Habits and Preparation in High School

<table>
<thead>
<tr>
<th></th>
<th>Cohort 1</th>
<th>Cohort 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Skipping Classes in High School</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Never</td>
<td>14.8%</td>
<td>15.2%</td>
</tr>
<tr>
<td>Almost Never</td>
<td>30.4%</td>
<td>27.3%</td>
</tr>
<tr>
<td>Once a Month</td>
<td>14.7%</td>
<td>14.1%</td>
</tr>
<tr>
<td>Two or Three Times a Month</td>
<td>19.8%</td>
<td>24.2%</td>
</tr>
<tr>
<td>Once a Week or More</td>
<td>17.3%</td>
<td>18.9%</td>
</tr>
<tr>
<td>No Response</td>
<td>2.9%</td>
<td>0.3%</td>
</tr>
<tr>
<td>Homework Completion in High School</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Always</td>
<td>34.7%</td>
<td>38.7%</td>
</tr>
<tr>
<td>Usually</td>
<td>46.9%</td>
<td>44.8%</td>
</tr>
<tr>
<td>Sometimes</td>
<td>12.6%</td>
<td>11.4%</td>
</tr>
<tr>
<td>Rarely</td>
<td>2.5%</td>
<td>3.4%</td>
</tr>
<tr>
<td>Never</td>
<td>0.6%</td>
<td>0.3%</td>
</tr>
<tr>
<td>No Response</td>
<td>2.7%</td>
<td>1.3%</td>
</tr>
<tr>
<td>Count</td>
<td>1,711</td>
<td>297</td>
</tr>
</tbody>
</table>

Source: 2007 PEI results—skipping classes in high school (Q14, “How often, on average, did you skip classes in high school?”), homework completion in high school (Q15, “How often did you complete homework assignments on time in high school?”).
n=2,008 (Confederation College 441; Mohawk College 853; Seneca College 714)