

# The Impact of Lowering Non-financial Barriers on Access to Post-secondary Education: Updated Final Report

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Human Resources and Skills Development Canada  
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**The Social Research and Demonstration**

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# Table of contents

<b>Executive Summary</b>	<b>1</b>
Introduction	1
The development of Life After High School	2
The design of Life After High School	3
The delivery of Life After High School	4
Participation in Life After High School	5
Data collection and evaluation	6
Impacts of LAHS	6
Interpreting the findings	13
Policy implications	14
<b>1. An introduction to Life After High School</b>	<b>16</b>
Why a randomized experiment randomized by school?	16
The intervention	17
Delivery of the information package	22
<b>2. Implementation of Life After High School</b>	<b>24</b>
School recruitment	24
Training facilitators for the first two workshops	25
Training program assistants	26
Program coordination	27
Delivery of Workshop 1	27
Delivery of Workshop 2	29
Preparing for and delivering Workshop 3	31
<b>3. Answering the project's research questions</b>	<b>40</b>
Impacts of offering students Life After High School	40
Interpreting the findings	56
Other results	57
Conclusion	65

<b>4. Lessons learned</b>	<b>66</b>
Implementation and delivery	66
Impacts	67
Overall	67

# Executive Summary

## Introduction

Life After High School is a research project supported by Canada Student Loans to develop, implement and test a new intervention to lower non-financial barriers on access to post-secondary education. The objective of the intervention is to increase the proportion of students who access post-secondary education and student financial aid. The overall goal of the project is to determine to what extent the intervention achieves this objective among graduating students from high schools with low post-secondary enrolment rates. The project involved the following three major design components:

- **Develop an intervention that provides labour market information about the economic benefits of post-secondary education — increased earnings and employment.** It should provide an awareness of “how” to get those promised benefits through step-by-step information about applying for post-secondary education and student financial aid in a series of three workshops.
- **Implement the intervention in British Columbia among students who could enrol in post-secondary education within 12 months.** The program was targeted at Grade 12 students in schools with low proportions of such students entering post-secondary education (called “low transition” schools).
- **Evaluate how effective the intervention is at nudging Grade 12 students** into: 1) learning more about the benefits of post-secondary education 2) learning more about expected costs of post-secondary education; 3) accurately understanding how to afford post-secondary education, and 4) actually applying (and being accepted) into at least one post secondary education program, supported by student aid where eligible.

This report is the final deliverable component of the project. Earlier submitted reports presented details on the three main intervention outputs from the project, which included:

- The “Life After High School” multi-media information package delivered to Grade 12 students.
- Delivery of training to facilitators on how to use the package.
- Facilitators’ delivery of the package to students over a sequence of three workshops.

The main purpose of the final report is to present the impacts of offering Life After High School to selected high schools with low postsecondary transition rates in BC, using administrative data files on secondary, post secondary, and financial aid information. In order that the results can be placed in context, the report also presents a detailed description of the Life After High School Project (Section 1) and its implementation (Section 2). Section 3 presents the impact results. The report then concludes with lessons learned (Section 4) during the implementation and analysis of the intervention.

## The development of Life After High School

The Life After High School project was focused on developing and testing an intervention that provided information about the benefits of post-secondary education and step-by-step practical assistance about how to apply for post-secondary education and student aid, so that students can become aware of their actual post-secondary opportunities. This information and assistance were provided in a sequence of three workshops, which for the most part was incorporated into the regular Grade 12 class schedule. The overarching goal was to see whether the resulting intervention increased post-secondary enrolment rates. Canada Student Loans hired the Social Research and Demonstration Corporation (SRDC) to carry out this work. SRDC began by investigating the policy and data environments of possible provinces and British Columbia was selected as the most promising location for the test.

SRDC worked with Professor Oreopoulos<sup>1</sup> to run the research project. Several experimental evaluation design options were evaluated by SRDC and Professor Oreopoulos and a clustered random assignment design, which randomly assigns schools rather than individuals, was identified as the most appropriate and least risky option. This design allowed for a more robust impact analysis for key outcomes, by taking advantage of historical data in addition to the randomization and calculating impacts using an approach known as difference-in-differences. The inclusion of funding from the Special Investment Fund enhanced the study design considerably. This allowed the number of program schools to increase from an initial estimate of between 9 to 24, and the number of control schools from 18 to 26.

Using a file supplied by the Student Transitions Project at the BC Ministry of Advanced Education, which provided the 2007/08 post-secondary enrolment rates of 2006/07 high school graduates, aggregated by school, SRDC identified schools with “low transition” rates to be approached for the project. Recruitment scripts were developed, and SRDC contacted principals at 82 schools identified as having the lowest transition rates to PSE. Responses were received from 77 schools. Of these, three were found ineligible, and 18 declined to participate in the project. Another four principals were unable to commit either way sufficiently for the project to know whether to include them. By late August 2010, a total of 52 school principals had agreed to participate. These 52 schools were randomized to program and control statuses and notifications to principals began on September 1, 2010.<sup>2</sup> Two school districts declined to participate, despite principal approval, leaving 24 program schools (and 26 control schools) participating in the study.

SRDC and Professor Oreopoulos also designed and developed the content, materials and Web site components of the three workshops that would deliver the intervention. Content developers and subcontractors were engaged from April 2010 to June 2011, working on a Web site that incorporated videos on the benefits of post-secondary enrolment, a financial calculator, and a “Choose Your Program” feature. This feature allowed students to choose programs by school, by area of interest, or

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<sup>1</sup> Department of Economics, University of Toronto.

<sup>2</sup> Notifications of assignment status were only undertaken for schools in districts where the school district (in addition to the school principal) had given permission for the project to proceed. Although school district research applications were largely processed over the summer vacation period, some still required the project to be reviewed at meetings taking place in September. Schools in these districts were notified of their program/control status shortly after district permissions were granted.

by region. Instead of browsing occupations of interest and finding related programs, this feature reversed the process and asked students to first pick subjects in which they were interested and/or doing well. The program then filtered to a range of programs with a list of associated occupations. With other planning tools, students often browse by occupation or program of interest, only to discover further along in the browsing process that they do not have the necessary prerequisites or grades to apply to these programs, leading to disappointment. Using the reverse flow avoided this. Given that the application was implemented in Grade 12, the starting point was what interested and was accessible to students, which is a less intimidating question than trying to narrow down which of many occupational fields to pursue.

## The design of Life After High School

Life After High School was essentially designed as a multi-media information package to be delivered to all Grade 12 students in program schools in a sequence of three workshops and in sufficient numbers to allow every Grade 12 student at the program schools to attend, with mandatory attendance expected. Each workshop was expected to be of 60-70 minutes in duration in computer-equipped classrooms.

In workshop 1, students in program schools were to be provided with information on the different types of post-secondary education, descriptions of some sample local college and university programs, occupational opportunities and other expected benefits. It also included an overview of how much post-secondary education costs when attended part time or full time, close to home or away from home, and how financial aid can help. The material was presented using a mix of video, printed material and a project Web site which was similar in context to that used by Oreopoulos and Dunn (2009), which had been found to raise students' educational aspirations, aid expectations, and interest for further information. In this workshop, students would also be directed to a financial aid calculator.

Workshop 2 ideally took place two to five weeks after workshop 1. This workshop assisted students in selecting and applying to at least one public post-secondary program. During workshop 1, students would have explored possible programs based on their interests, using the "Choose Your Program" feature discussed above. Once the student applied to their chosen program, the application fees were paid for by the project, during the workshop. Students absent from the workshop or unable to complete the application process during the workshop could also pay using their own funds and then submit a request for reimbursement.

Workshop 3 was designed to help students with application for financial aid. It was therefore designed to take place once the online aid application form became available. Again, a short video was to be shown during the workshop that walked students through the student aid application form and assessment of post-secondary education affordability. Students were initially supposed to complete the form online as far as possible during the workshop and save their submitted information. The program was supposed to issue a summary of the missing information in order to complete the application and included instructions on how to submit the form once completed. An information package including the parent form was sent to parents – who were encouraged to view a video made specifically to inform them about the project and to guide their completion of the application form. However, this workshop had to be redesigned to make use of paper application forms, due to the unavailability of online application forms on time. Nevertheless, the essential planned content of the workshop remained the

same, but additional material and videos had to be prepared due to the change from online to paper application.

## The delivery of Life After High School

Because of its multi-media feature, including a Web site, the workshops were to be delivered in high school computer labs. Program school educators were consulted on content and delivery approaches and establishing timetables for sessions. The program schools were offered two alternatives for delivery of the intervention as a balance between the need to preserve sufficient consistency of implementation for research purposes with flexibility and respect for school administration and counsellor preferences. Feedback from some of the larger schools pointed to potential logistical challenges associated with running enough sessions in their computer labs. Each computer room typically seats 30 students. Thus, in schools with 200 Grade 12 students, the program requirements implied at least 7 of each kind of workshop had to be run. Schools with 450 Grade 12 students would need to run 15 of each kind of workshop. This logistical concern did not hamper significantly larger schools' willingness to participate in the study.

School teams were trained to deliver the intervention and prepare packages of notification materials for distribution to students. The principal training session took place in Richmond BC on October 8<sup>th</sup>. Supplementary training took place in October (4<sup>th</sup> and 29<sup>th</sup>) and early November (4<sup>th</sup>) at school sites where staff was unable to attend the October 8<sup>th</sup> session. After the initial training, one school switched from internal facilitation (using its own staff) to external (SRDC-hired facilitators). Training for the third workshop was undertaken on school premises across the province, on May 2<sup>nd</sup>, 3<sup>rd</sup> (two training sessions), 4<sup>th</sup>, 5<sup>th</sup>, 6<sup>th</sup>, and 24<sup>th</sup>.

The first workshops were delivered by internal facilitators (school staff) at 8 schools and external facilitators at 16 schools, reflecting schools' preferences. Researchers monitored the delivery remotely and through site visits. By the time the second workshop sessions were drawing to a close, an additional school switched from internal to external facilitation.

The second workshop commenced in November 2010, and as designed, it assisted students in applying to post-secondary programs and paid the application fee for their first application. After consultation with the Provincial Application Service of BC (now called "Apply BC") and financial service providers, the intervention implemented a credit card-based payment system for PSE application fees. In addition to the training of the internal/external facilitators, SRDC supplied one or more on-site program assistants to each of the sessions of workshop 2 to ensure application payments were made smoothly and securely.

The third workshop was delivered, commencing May 9, 2011, and students were guided in these sessions through the process of applying for financial aid. Workshop 3 was re-designed to make use of the paper student aid application form, rather than the originally-proposed online form, as the latter was not available in time. StudentAidBC made available the paper copies of the student and parent forms at the beginning of May 2011 and the accompanying student guide text was supplied to SRDC at the end of April 2011. Given the new reliance on mailing in of applications, the process was further challenged by the threat of industrial action by Canada Post workers, and the suspension of delivery services from 14-27 June 2011. Increased liaison and coordination with schools and facilitators were



necessary to mitigate its effects on students' submission of completed forms. It became necessary for SRDC to provide additional brochures, web site content and production of alternate video instructions to support the revised model for workshop 3.

## Participation in Life After High School

Close to 200 sessions of workshop 1 were run and 4,440 students registered with the Life After High School Web site in these sessions. By the completion of the project, in June 2011, the number of students registered had increased to 4,758 very close to the estimated 4,809 graduating Grade 12 students at these schools at the time. Reports from facilitators indicated that nearly all students were able to make their way through the allocated tasks and choose a preferred program to take forward to workshop 2.

By the second workshop participation had declined, and of the approximately 220 sessions of workshop 2 that were delivered, 3,000 students successfully had applications to PSE paid for during the sessions, which can be interpreted as a rough estimate of those who attended workshop 2. This means that about 25 per cent of students who registered with Life After High School in workshop 1 did not complete a paid application. This may not all be due to non-participation. Some students attended, but chose not to complete an eligible application. Additionally, students faced computer login challenges, problems with online application forms (some pages froze during sessions) and a small proportion was not interested in applying to a BC public institution, because they had firm alternate plans. However, most of the shortfall was because students did not attend the workshop sessions.

Across program schools, there were various reasons for non-participation. Of the 24 program schools, 10 exceeded 80 per cent attendance (based on completed applications). Of the remaining 14 schools, the most common explanation for students missing sessions emerges from the approach to scheduling of the sessions. Some schools scheduled workshop 2 outside class time, which meant that participation relied on students' motivation to attend: running counter to the program intent for all students to go through the process. At all but one of the 24 schools, running Life After High School sessions during school time meant taking students away from previously scheduled classes. In some cases, the program message about mandatory participation had not reached school staff responsible for scheduling and at times mandatory attendance was not enforced. In other cases, there was a resistance to making attendance at Life After High School workshops compulsory, or at least during school time, because teachers resisted loss of their classes. All schools experienced a drop in participation between workshop 1 and 2. It also became apparent that to some degree, at all schools, students were electing to take time out from classes rather than attend Life After High School.

The drop off in participation continued in workshop 3. The feedback from schools indicated that although all students were aware of workshop 3, some elected not to attend when their class was scheduled, due to other priorities (e.g., exam preparation) or anticipation that the sessions would not be of specific use to them. An estimated 2,068 students attended workshop 3 and there was evidence from StudentAidBC that just 301 submitted the project's paper application forms – about 15 per cent of estimated attendees. The most likely scenario is that many students who attended workshop 3 abandoned their paper applications and submitted online applications instead in June when the online forms became available or later in the year when their post-secondary plans became clearer. Indeed,

observed post-secondary enrolment and student aid receipt rates that are presented later in the report substantiate this.

## Data collection and evaluation

Data was collected from several sources to support the evaluation of Life After High School. This included an educators' survey from both program and control schools, two focus group sessions, and administrative data consisting of high school records and post-secondary enrolment.

The educators' survey combined questions on the implementation of the program, student responses to it and some outcome measures. Very similar online questionnaires were developed for both program and control schools, with the exception that control schools were not asked questions dealing directly with the experience of the Life After High School program. This survey was formally launched (following school districts' approval of the content) on June 16, 2011 and remained open online throughout the summer. By the time the survey closed on September 30, 2011, 59 responses had been received (37 from program schools and 22 from control schools). The results are used primarily in evaluating the implementation of the project.

Two focus group sessions were run in two different program schools to collect student perspectives on the program, on May 24 and June 1, 2011, featuring 9 students at each, for a total of 18. This qualitative data is used to look at research questions that could not be addressed with available quantitative data. This includes the original research questions regarding students' schooling and labour market expectations, students' understanding of financial aid, students' awareness of post-secondary options and the role of post-secondary education in helping to pursue those options, and students' familiarity with and confidence in the process of applying to post-secondary education and receiving student financial aid.

For the main outcome in this report – enrolment in post-secondary education – the most reliable data are the records provided by BC Ministry of Advanced Education Student Transitions Project, which includes secondary school records for Grades 10 through 12 for program and control schools for four cohorts of Grade 12 students (i.e., Grade 12 students in the program year and 3 years prior), as well as post-secondary enrolment in BC public institutions and receipt of financial aid.

Although in general, administrative data contain accurate information on post-secondary enrolment, they are somewhat incomplete. First, attendance at private career colleges or vocational institutes and participation in apprenticeships, except those at community colleges, would not be covered by the available administrative data. Second, students that registered in post-secondary programs outside of BC would not be covered.

## Impacts of LAHS

Impacts were estimated for the full research sample as well as for selected subgroups. Four subgroups of interest were investigated: Aboriginal status; gender; implementation completion; and the propensity to graduate high school and attend postsecondary education.

Table ES 1 shows preliminary main impacts of Life After High School on enrolment in post-secondary education for the full sample. As shown, Life After High School had no discernible impacts on post-

**Table ES 1 Adjusted Impacts of Life After High School BC**

Outcomes	Control Group Means		Program Group Means		Mean Impacts	S.E.	
	Earlier Cohorts	2010/11 Cohort	Earlier Cohorts	2010/11 Cohort			
<b>Transition to PSE</b>							
Enrolled in a PSE program (%)	43.43	40.32	42.82	39.46	-0.24	1.20	
Enrolled in a University program (%)	21.70	20.51	18.84	18.74	1.09	0.88	
Enrolled in a Non-university PSE (%)	24.25	21.28	26.47	22.25	-1.25	1.08	
Enrolled in a College program (%)	23.19	20.45	25.60	21.59	-1.26	1.04	
Enrolled in Apprenticeship (%)	1.22	1.00	1.06	0.85	0.01	0.25	
<b>Financial Aid</b>							
Received Financial Aid (%)	8.74	8.56	7.67	9.47	1.98	0.67	***
Amount of Financial Aid (\$)	713.83	691.95	612.70	728.07	137.26	58.53	**
<b>Interaction of enrolment in PSE and financial Aid</b>							
PSE Program with Financial Aid	6.31	6.27	5.38	7.10	1.77	0.59	***
PSE Program without Financial Aid	37.12	34.05	37.44	32.36	-2.00	1.09	*
University Program with Financial Aid	3.97	3.78	2.98	4.14	1.35	0.54	**
University Program without Financial Aid	17.73	16.73	15.86	14.60	-0.26	0.81	
Non-University Program with Financial Aid	2.80	2.63	2.77	3.34	0.73	0.34	**
Non-University Program without Financial Aid	21.45	18.65	23.69	18.92	-1.97	1.01	*
College Program with Financial Aid	2.78	2.60	2.75	3.33	0.76	0.34	**
College Program without Financial Aid	20.41	17.85	22.85	18.26	-2.03	0.98	**
Apprenticeship with Financial Aid	0.02	0.03	0.04	0.02	-0.03	0.03	
Apprenticeship without Financial Aid	1.20	0.97	1.02	0.83	0.04	0.25	
<b>Sample size</b>	<b>19,195</b>	<b>6,249</b>	<b>17,015</b>	<b>5,755</b>			

secondary enrolment for the full cross-section of students in the program group. However, Life After High School increased the use of financial aid by 1.98 percentage points and the average amount of financial aid by \$137.26 for students from the program group. The increase in the use of financial aid was observed for students going on to both university and college.

The impacts of the Life After High School intervention did not differentiate by gender. However, both young men and young women used student financial aid more than they would have without the intervention. Among young men the intervention yielded an increase in the use of financial aid of 2.45 percentage points and, on average, the amount of financial aid they received was \$154 dollars higher. The use of financial aid by female participants was 1.48 percentage points higher than it would have in the absence of the program. The observed increases were more prevalent among young men going on to university and young women going on to college.

As shown in Table ES 3, Life After High School did not influence non-Aboriginal to take up of university education. However, it led to an increase in their rate of receipt of financial aid (1.94 percentage points) and the average amount of aid received in the year immediately following Grade 12, which was on average \$128.39 higher per student than it would have been without the intervention. It is noteworthy that both the proportion attending university and college with financial aid increased by 1.50 and 0.65 percentage points, respectively.

Life After High School had no impact on university enrolment among Aboriginal youth and it reduced college enrolment. Nevertheless, the use of financial aid and the amount of financial aid did increase. This increase in aid appears to have been used primarily to pursue college programs, since the program yielded a 2.02 percentage point increase in attending college programs while receiving financial aid, but no impact on university education while receiving financial aid and the notable decrease was in enrolment in college programs without financial aid (of 6.78 percentage points).

**Table ES 2 Adjusted Impacts of Life After High School BC, by Gender**

Outcomes	Male		Female		Subgroup Difference
	Mean Impacts	S.E.	Mean Impacts	S.E.	
<b>Transition to PSE</b>					
Enrolled in a PSE program (%)	-0.15	1.51	-0.43	1.82	-0.28
Enrolled in a University program (%)	1.66	1.06	0.49	1.24	-1.17
Enrolled in a Non-university PSE (%)	-1.63	1.37	-0.94	1.60	0.69
Enrolled in a College program (%)	-1.48	1.27	-1.12	1.56	0.36
Enrolled in Apprenticeship (%)	-0.11	0.48	0.13	0.13	0.23
<b>Financial Aid</b>					
Received Financial Aid (%)	2.45	0.82 ***	1.48	0.86 *	-0.97
Amount of Financial Aid (\$)	154.42	75.02 **	119.82	82.40	-34.60
<b>Interaction of Enrolment in PSE and Financial Aid</b>					
PSE Program with Financial Aid	2.07	0.74 ***	1.42	0.78 *	-0.66
PSE Program without Financial Aid	-2.23	1.46	-1.85	1.66	0.38
University Program with Financial Aid	1.84	0.61 ***	0.84	0.73	-1.00
University Program without Financial Aid	-0.18	1.01	-0.35	1.06	-0.17
Non-University Program with Financial Aid	0.56	0.43	0.89	0.51 *	0.33
Non-University Program without Financial Aid	-2.18	1.33 *	-1.82	1.47	0.36
College Program with Financial Aid	0.61	0.44	0.90	0.51 *	0.30
College Program without Financial Aid	-2.08	1.22 *	-2.02	1.44	0.06
Apprenticeship with Financial Aid	-0.03	0.05	-0.03	0.02	0.00
Apprenticeship without Financial Aid	-0.08	0.48	0.15	0.13	0.23

**Table ES 3 Adjusted Impacts of Life After High School BC, by Aboriginal Status**

Outcomes	Non-Aboriginal		Aboriginal		Subgroup Difference
	Mean Impacts	S.E.	Mean Impacts	S.E.	
<b>Transition to PSE</b>					
Enrolled in a PSE program (%)	-0.12	1.29	-1.56	2.65	-1.44
Enrolled in a University program (%)	0.99	0.96	2.02	2.01	1.03
Enrolled in a Non-university PSE (%)	-0.91	1.08	-4.62	2.38 *	-3.71
Enrolled in a College program (%)	-0.92	1.05	-4.77	2.27 **	-3.84 +
Enrolled in Apprenticeship (%)	0.06	0.25	-0.41	0.62	-0.46
<b>Financial Aid</b>					
Received Financial Aid (%)	1.94	0.73 ***	2.40	1.46 *	0.46
Amount of Financial Aid (\$)	128.39	67.30 *	221.88	134.19 *	93.48
<b>Interaction of Enrolment in PSE and Financial Aid</b>					
PSE Program with Financial Aid	1.76	0.66 ***	1.86	1.38	0.10
PSE Program without Financial Aid	-1.88	1.17	-3.42	2.89	-1.54
University Program with Financial Aid	1.50	0.59 **	-0.24	0.84	-1.74
University Program without Financial Aid	-0.51	0.86	2.26	1.85	2.77
Non-University Program with Financial Aid	0.62	0.37 *	1.96	1.15 *	1.34
Non-University Program without Financial Aid	-1.53	1.00	-6.58	2.49 ***	-5.05 ++
College Program with Financial Aid	0.65	0.37 *	2.02	1.18 *	1.37
College Program without Financial Aid	-1.57	0.99	-6.78	2.39	-5.21 ++
Apprenticeship with Financial Aid	-0.04	0.03	0.15	0.22	0.19
Apprenticeship without Financial Aid	0.10	0.25	-0.55	0.67	-0.65

Because the test of the intervention can be affected by the success in implementing the key features of the program model, the impacts of Life After High school was also evaluated against implementation completion. For various reasons, as discussed in Section 2, program schools differed in the way they

approached the implementation of Life After High School. Table ES 4 exploits data collected on the proportion of youth completing their applications with the support of Life After High School. High schools are divided into those located in districts with “high” and “low” implementation completion, using project-paid applications as the measure of how well the intervention was implemented in program schools. To score “high” the average project-paid application rate at the program schools in the district had to exceed 70 per cent. As Table ES 4 shows, there was no differentiation in impacts on postsecondary enrolment, based on implementation completion. However, the impacts observed on the receipt of financial aid occurred only in school districts where program schools averaged rates of application fees paid by Life After High School above 70 per cent.

**Table ES 4 Adjusted Impacts of LAHS BC, by Implementation Quality**

Outcomes	Lower Quality		Higher Quality		Subgroup Difference
	Mean Impacts	S.E.	Mean Impacts	S.E.	
<b>Transition to PSE</b>					
Enrolled in a PSE program (%)	-1.18	2.05	0.22	1.48	1.40
Enrolled in a University program (%)	0.25	1.57	1.49	1.03	1.24
Enrolled in a Non-university PSE (%)	-1.53	2.25	-1.06	1.10	0.46
Enrolled in a College program (%)	-2.19	2.12	-0.68	1.05	1.51
Enrolled in Apprenticeship (%)	0.53	0.44	-0.33	0.27	-0.86
<b>Financial Aid</b>					
Received Financial Aid (%)	1.31	0.93	2.41	0.86	*** 1.10
Amount of Financial Aid (\$)	12.31	93.26	213.90	68.99	*** 201.58
<b>Interaction of Enrolment in PSE and Financial Aid</b>					
PSE Program with Financial Aid	0.91	0.74	2.27	0.79	*** 1.36
PSE Program without Financial Aid	-2.09	1.67	-2.06	1.44	0.03
University Program with Financial Aid	0.64	0.65	1.76	0.73	** 1.12
University Program without Financial Aid	-0.39	1.06	-0.27	1.13	0.12
Non-University Program with Financial Aid	0.69	0.52	0.77	0.43	* 0.08
Non-University Program without Financial Aid	-2.22	1.99	-1.83	1.10	* 0.39
College Program with Financial Aid	0.72	0.52	0.81	0.43	* 0.10
College Program without Financial Aid	-2.90	1.89	-1.49	1.05	1.42
Apprenticeship with Financial Aid	-0.02	0.02	-0.03	0.04	-0.01
Apprenticeship without Financial Aid	0.55	0.44	-0.30	0.27	-0.85

**Table ES 4 Adjusted Impacts of LAHS BC, by Implementation Quality**

Outcomes	Lower Quality		Higher Quality		Subgroup Difference
	Mean Impacts	S.E.	Mean Impacts	S.E.	
<b>Academic Performance (Grade 12 School Year)</b>					
Graduation (%)	1.02	0.93	0.72	0.72	-0.30
Total number of courses taken	0.06	0.08	0.03	0.09	-0.03
Total number of courses failed	0.01	0.02	-0.01	0.02	-0.01
Total number of courses passed	0.06	0.09	0.04	0.08	-0.02
Number of As received	-0.11	0.10	-0.02	0.06	0.09
Number of Bs received	0.09	0.06	0.01	0.04	-0.08
Number of Cs (C+, C- or C) received	0.07	0.07	0.04	0.05	-0.03
Number of Fs received	0.01	0.02	-0.01	0.02	-0.01
Number of courses taken with no marks	0.00	0.01	0.00	0.02	0.00
Number of credits received	0.25	0.34	0.12	0.34	-0.13
Total Grade points received	-0.06	1.39	0.02	1.00	0.08
Credit Weighted GPA (1-4)	-0.05	0.03 *	-0.01	0.03	0.04

	Lower Quality	Higher Quality
<b>Number of observations</b>		
Control - Earlier Cohorts	7,151	12,236
Control - 2010/11	2,368	3,971
Program - Earlier Cohorts	5,998	11,244
Program - 2010/11	2,118	3,743

Life After High School was expected to generate its impact on those grade 12 students who are likely to qualify for a post-secondary program but who do not normally transition to post-secondary. Students who do not graduate high school are very unlikely to be accepted into postsecondary programs and it is obviously impossible to increase postsecondary enrolment among those who would have enrolled in postsecondary anyway. Thus, Table ES 5 presents results for three different groups of students based on their estimated propensity to graduate and enrol in post secondary education, in the absence of Life After High School. The propensities are derived by examining the influence that demographic characteristics, course choices and marks in the period before Grade 12 have on high school graduation and postsecondary enrolment in the control group cohorts, and calculating the propensity for program group members with equivalent characteristics to achieve these same outcomes. The “propensity” groups are examined: 1) those not likely to graduate high school; 2) those likely to graduate, but not likely to enrol in postsecondary education; and 3) those likely to graduate and enrol in postsecondary



education. As shown, Life After High School reduced enrolment among those in group one, had no enrolment impact among those in group two, but caused a shift in type of institutions that those in group three chose to enrol in, switching from college to university enrolment and increasing their use of financial aid.

## Interpreting the findings

The main results provide no evidence to support the main hypothesis underlying Life After High School, which is that “nudging” Grade 12 students to make applications to postsecondary education and for financial aid, will increase participation in post-secondary education. Rather, the effect is differentiated by different intensities of implementation. In general, students in schools offered the intervention were positively influenced to increase their use of financial aid. Aboriginal students and those who were least likely to graduate high school were less likely to enrol immediately than in the absence of the program. Nonetheless, the intervention did uniformly nudge those who would attend postsecondary education to make more use of student financial aid.

The reasons for the evidence on enrolment being unresponsive are not entirely clear, but several plausible explanations would include:

- Voluntarily delayed enrolment in postsecondary education;
- Increased immediate transition to non-public and out of province institutions;
- Rejection of submitted applications for programs or financial aid;
- Shortage of supply of postsecondary places; and/or
- The “nudge” theory does not hold at the level of implementation tested.

For instance, some students, although able to meet some postsecondary entry requirements, may have decided against making the immediate transition to post-secondary education for various reasons attributable to the program (e.g., retaking Grade 12 to improve course outcomes, not feeling prepared to tackle the chosen post secondary education option, for example because it has higher costs or requires moving away from home). Longer-term outcomes cannot be observed in the current data, which looks only at impacts on the immediate transition to postsecondary programs in the year immediately following the program year.

The intervention may have also raised expectations among students who were not at the time taking courses that would qualify them for postsecondary education, but who would have been encouraged to apply during Workshop 2. These students may have had to continue taking high school level courses to meet postsecondary entry requirements and postponed their pursuit of postsecondary enrolment by a year or more.

The program may have also raised the expectations about the affordability of studying outside BC, thus encouraging students to apply to and attend non-BC institutions or possibly even more expensive private institutions. Such programs are often eligible for student financial aid. The results for such students cannot be extrapolated from the current data, which only provides information for those enrolling in public BC institutions.

The program may have encouraged students to make more ambitious applications for programs (more ambitious in terms of their academic entry requirements, distance from home or raised costs) and in turn possibly also altered the content of their needs assessment for student financial aid. If either of these types of applications were unsuccessful (or if the offer of aid was less than anticipated) the student may have decided not to pursue postsecondary in 2011-12. These unintended outcomes – in situations where a normally less ambitious application would have been made – would mean the program reduced postsecondary education enrolment in the following year.

A shortage of postsecondary places in the programs students applied for at public institutions could also have affected enrolment. If the program induced increased applications to programs where places were in short supply, or altered the timings of application so that they were later than optimal for securing a place, it is plausible that Life After High School applicants could have crowded each other out. Possibly some may have been accepted into an institution but not in their chosen program, or may have been waitlisted, and decided to postpone entry.

Finally, it is plausible that the theory underlying Life After High School does not hold at the levels of implementation observed in BC. The program meant students at low-transition schools were more likely to apply, but those increased applications translated much less often than forecast by the theory into enrolment. The inertia in student decision-making that the program process was meant to overcome might still have been too great to permit any substantive change in outcomes. In other words, student might have completed school with offers from post-secondary institutions and/or offers of student aid – that they would not have had without the program - but still these were not sufficient inducements (or “nudges”) to change their immediate post-secondary school destination. Of course, the results are dependent on the program experience. Some students at program schools did not complete applications. The students overlooked or who failed to complete workshops may have been the ones more susceptible to the “nudge”. Possibly, with more complete implementation, more or different students would have applied and received such offers, and the impact among those students might have changed the results.

Unfortunately, access to quantitative data that would help to substantiate or refute the above suggested reasons for the observed results on enrolment is not available at the time of reporting. Adding to the explanation represents an important area for future research.

## **Policy implications**

The results imply that Life After High School did not increase enrolment in post-secondary education across the entire sample of students or for groups traditionally with low access to postsecondary education, such as Aboriginal students and boys. However, it increased access among those going to postsecondary programs to get student financial aid. The proportion of those enrolled who were supported by student financial aid rose from 18 per cent in previous years to 24 per cent at Life After High School schools in the program year. Over the same period at control schools, the proportion shifted little, from 20 to 21 per cent. These findings are indications that the program, even at the level implemented in the pilot schools, has the capacity to nudge students from low-transition schools participating in postsecondary education to do so supported by student financial aid. However, a follow up on the lowering of the immediate college enrolment rate among Aboriginal youth would be

necessary before consideration could be given to implementation on a wider scale. If any of the program's messaging or support is inadvertently negatively affecting the prospects of groups of students with low transition rates, such as Aboriginal youth, modifications would be in order.

Financial aid receipt increases consistently across the entire sample and population subgroups, but this impact is concentrated in schools with higher levels of the supported applications being completed. This is despite poor attendance in Workshop 3. This implies that future programs could be more effective if participation can be made truly mandatory such as through integration into the Grade 12 curriculum.

# 1. An introduction to Life After High School

Life After High School is a research project that developed and tested an intervention that provides information about the benefits of post-secondary education and step-by-step practical assistance about how to apply for post-secondary education and student aid so that students can become aware of their actual post-secondary opportunities. The overarching goal was to see whether the resulting intervention increased post-secondary enrolment rates. The program was designed to be delivered to Grade 12 high school students over a sequence of three workshops. This section of the report describes in detail the main features of the Life After High School intervention.

The overall project objective is to test whether the new intervention increases post-secondary enrolment among graduating students from high schools with low post-secondary enrolment rates. Fulfilling this objective involved three different project components:

- **Developing an intervention that provided labour market information about the economic benefits of post-secondary education** — increased earnings and employment. It was intended to promote awareness of “how” to get those promised benefits through step-by-step information about applying for post-secondary education and student financial aid.
- **Implementing the intervention in British Columbia (BC) among students who could enrol in post-secondary education within 12 months.** The program was targeted at Grade 12 students in schools with low proportions of such students entering post-secondary education (called “low transition” schools).
- **Evaluating how effective the intervention was at nudging Grade 12 students** into: 1) learning more about the benefits of post-secondary education 2) learning more about expected costs of post-secondary education; 3) accurately understanding how to afford post-secondary education, and 4) actually applying (and being accepted) into at least one post secondary education program, supported by student aid where eligible.

This report is the final deliverable component of the project. This report presents the current best estimate of the impact of interest to the project – students’ enrolment in post-secondary education in the year immediately following their Grade 12 year. It also summarizes the implementation results and addresses the remaining research questions as described in the project’s work plan.

This chapter describes the design features of Life After High School and the rationale for using a randomized experiment to evaluate the program.

## Why a randomized experiment randomized by school?

The central problem in program evaluation is that a single observation, such as a person or school, cannot both receive the treatment and not receive the treatment. As a result, to estimate the impact of the treatment, the researcher must find a method to estimate what would have happened to that observation in the absence of the treatment. Usually, this is done by finding similar comparison persons or schools that have not received the treatment. The impact of the program is determined by comparing the average outcomes of program group with the average outcomes of the comparison or

control group that did not receive the treatment. Random assignment to these groups eliminates all *systematic* differences between the treatment and the control groups. This occurs regardless of whether those potential differences are observed or unobserved.

Given this, there are two broad ways of proceeding. In one method, all students in a given school would receive the treatment and they would be compared to students in other schools, which did not have the treatment. In a second method, there would be program students and control students within the same school. The latter method has a greater ability for any given sample size to ensure that program group individuals resemble control group individuals. It can also, in principle, achieve greater statistical power because it controls for variation at the level of individuals rather at the level of (a much smaller number of) schools. However, there is considerable risk that the control group will receive the treatment if they are in the same schools as the treatment group. This might occur directly because control group members attend program classes or, indirectly, because they talk with program group members. The contamination risk is enhanced when the intervention under test comprises largely information. Information about labour markets and knowledge about how to complete applications for post-secondary education and student financial aid can easily be passed informally between program and control group students at the same school. There is also the possibility of a peer-group effect. Under this scenario, the intervention causes the program group members to go to post-secondary education which, in turn, causes their friends in the control group to imitate them and go to post-secondary education as well. These contamination effects are avoided if all the program group members are in one school and all of the control group members are in another.

One additional reason for separating program group and the control group by school is that ultimately the intervention is intended to be delivered school-wide, not to select sub-groups. Given the above arguments, schools rather than individuals were randomly assigned for the project's test of the "Life After High School" information package.

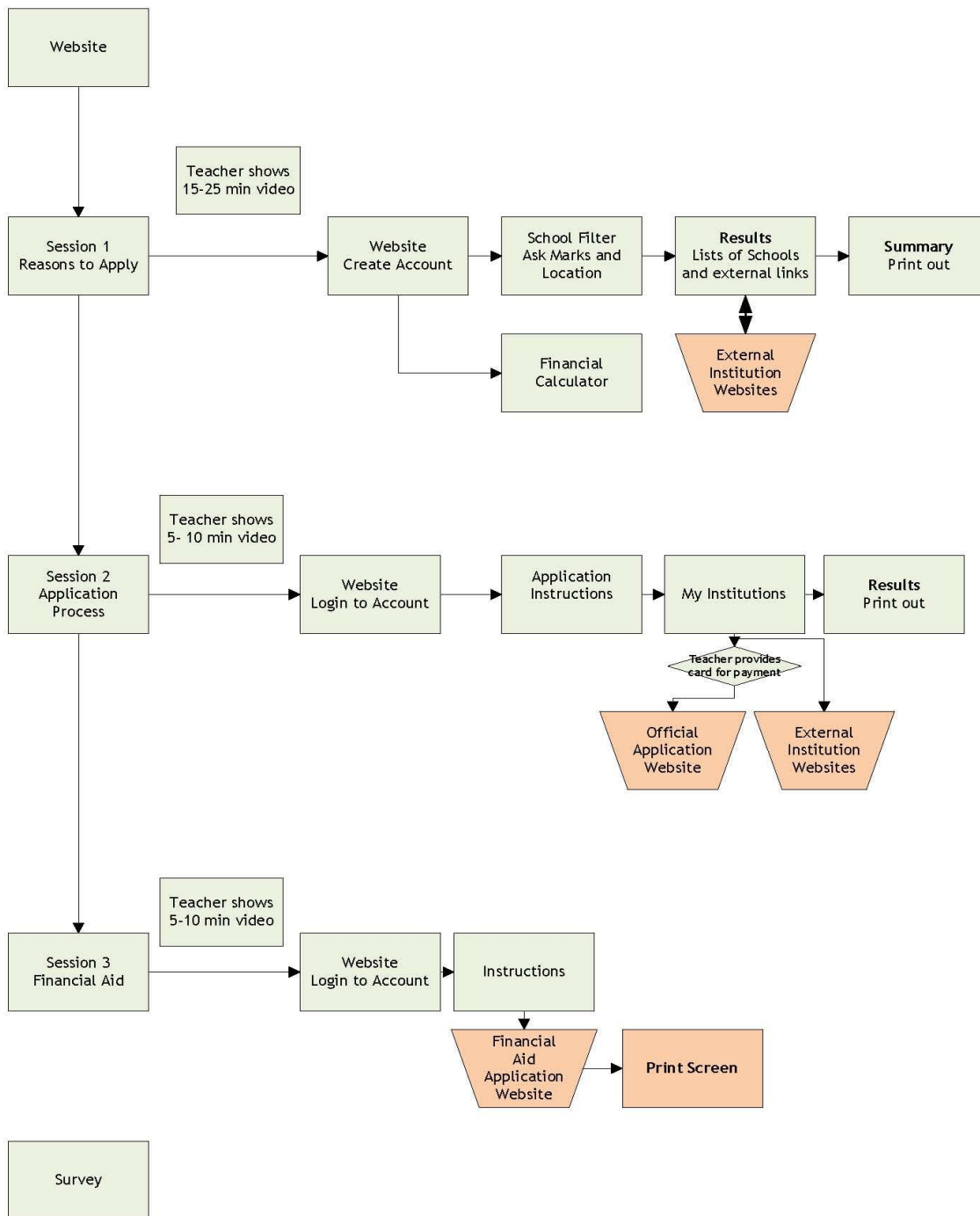
## The intervention

### Life After High School information package

Life After High School was planned and delivered as a multi-media information package during a sequence of three workshops. SRDC, working closely with Professor Oreopoulos, developed the intervention content and delivery plan, including subcontracting a firm to create the multi-media Web site and related printed components for each of the three workshops. The Web site material included scripts for those who facilitated and delivered the sessions. The Web site was launched at the beginning of the 2010/2011 school year.

The development of the sessions assumed integration as far as possible within each school's existing timetabled classroom activities devoted to planning and discussion of post secondary activities with senior students. Figure 1 provides a summary flowchart of the planned intervention. The subsequent sections describe the design and content of the Life After High School Web site as well as a detailed description of the three main workshop session components embedded within the Web site.

### Session and Website Flow



## The Life After High School Web site

The LAHS Web site was the component common to all three workshops provided to all Grade 12 students in the program schools. The Web site included a video (which could also be projected independently from a DVD) detailing what the program was about, rationales for considering PSE programs, as well as information on the costs and financial aid options available to students.

Students were able to explore PSE program options with a Choose Your Program feature, with options to explore by school, by area of interest, or by region. This feature presented an innovation on the more customary method of program exploration: instead of browsing occupations of interest and finding related programs, students could start by picking subjects they had an interest in and/or were doing well in. The program then listed a range of programs and associated occupations in these programs. Other planning tools often ask students to browse by occupation or program of interest, sometimes leading students to discover only further along in the browsing process that they do not have the necessary prerequisites or grades to apply to these programs. Adopting the reverse flow avoids this and the resulting disappointment while also providing undecided students with a less intimidating decision to make (i.e., what are their current interests) rather than trying to narrow down occupational fields to pursue.

The Web site also features a custom-designed financial aid calculator that will enable them to generate a rough estimate of how much grant and loan aid would be available to them if they enrolled in post-secondary education.

Depending on the workshop being delivered, students were directed by the facilitator to the various Web site features. More details on the components of each workshop are provided in the following sections. The Web site was password protected to reduce the risk of control group contamination.

## The Life After High School workshops

In the **first workshop** in the sequence of three, the facilitator directed students to logon to the website and join the session. Students received a multi-media presentation about the labour market benefits and costs of post-secondary education. Depending on audio-visual capabilities at the sites, students could view a video online or via a central projector in the classroom. The video discussed the expected benefits from post-secondary education in the labour market and elsewhere. It provided labour market information about occupational opportunities that post-secondary education presents. The presentation provided information about the distinctions between community colleges, universities and other post-secondary education options, alongside descriptions of some sample local college and university programs. It also included an overview of how much post-secondary education costs when attended part time or full time, close to home or away from home, and how financial aid can help. The material was similar in context to that used by Oreopoulos and Dunn (2009), which has been found to raise students' educational aspirations, aid expectations, and interest for further information. Students were also directed to a financial aid calculator.

Finally, materials were distributed to students that reiterate the main messages presented in the class, intended both for students and parents.

Students were presented with overviews of local community colleges and university programs and asked to think about college or university programs they would be interested in applying to.

The **second workshop**, intended to be held two to five weeks after the first, focused on guiding students through the online admissions process (using the standardized online application for British Columbia's post-secondary institutions located at <http://www.pas.bc.ca/>). Students were asked to choose one college or university (and corresponding program) in which they might be interested for the purpose of going through the application process. They were to arrive at the session having already chosen the program.

Students were supposed to have the ability to save their application form after establishing an online account through the workshop. An important component for this part of the Life After High School program involved waiving the application fee (a single application fee up to \$133 would be paid online for the student). The payment of the fees was preferred because it allowed all students to experience the process of applying to at least one post-secondary institution, without the deterrence of any financial cost.<sup>3</sup> This component may be especially important to marginal students who are initially doubtful about whether to enrol in post-secondary education. The application fee may act as a significant barrier to disadvantaged students' learning about their actual eligibility and likelihood of acceptance.

A high degree of payment flexibility is required for application fee payment. Even though all applications begin on the common portal established by the post-secondary application service of BC (now termed "Apply BC"), many divert part-way through to the institution's own Web site, including payment of the fee. The format and approach to payment varies. Several options were explored, including:

- (1) Development of a "proxy server" payment system for the registration sites actually hosted by the post-secondary application service of BC for their partnering PSE institutions, typically the smaller institutions and colleges;
- (2) Issuing each site (or each facilitator) with a credit card for use only for application fee purchases. The holder of the card would need to be accountable for all purchases and thus the number of payments made during sessions could be limited;
- (3) An alternative approach explored the feasibility of a series of capped-expenditure cards issued to each student for use only during the session. Security provisions would be necessary since the stock of such cards would have a high equivalent cash value.

On grounds of overall cost, accountability and simplicity, the favoured approach was a variant of (2). SRDC staff (1 or 2) attended each session of the second workshop at each site to assist session facilitators with the payment, all using a corporate credit card to enter payee information on each

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<sup>3</sup> One of the counselors contacted by SRDC as part of the preparation of this project described running similar sessions herself where all students were strongly encouraged to apply to at least one local post-secondary program. She had discontinued these sessions when increases in the application fees created a financial deterrent for students to submit their applications.



participant's behalf. The overarching issue in selecting payment method was balancing accountability for payments made on corporate cards (and the need to verify each transaction as genuine) with ease of transaction for the participant. A strong benefit of the on-site assistance was improved verification that applications were actually being submitted.

The **third workshop** was initially planned for the Spring of 2011, shortly after the BC student financial aid application form for the upcoming academic year became available. However, once it became apparent that the online forms would not be available on time to fit the project's schedule, some aspects of the delivery were changed (the changes are discussed more fully in section 2). This session was focus on guiding students through the financial aid application process. Again a short video was provided, together with counsellor support, to walk students through PSE affordability and the student aid application form. Students were supposed to complete the form as far as possible during the workshop and save their submitted information. The program was supposed to issue a summary of the missing information in order to complete the application, typically the entries that required parent involvement, and include instructions on how to submit the form once completed.

Materials related to the key messages of the workshop content were distributed at the end of the third workshop, again describing the financial aid application process and a discussion on how different types of students manage to afford to attend post-secondary education. Parents were also notified through the school's newsletter that their Grade 12 child would have partially completed the financial aid application form for post-secondary education, and that likely their input will be required to enter the remaining information (such as household income) before the form would be complete. Parents were also to be contacted through the school's automated message service to encourage them to complete the financial aid application, with information on who to contact with questions about completing the form (existing aid hotline).

It was likely that some students would not consider the training in school and aid application procedures immediately relevant. The advance materials and session content did nonetheless stress the importance of learning about the process and gaining experience of how to apply, for possible future application, in a later year.

## Training facilitators

At schools assigned to the program group, counsellors were trained to deliver the intervention described in the preceding sections. Training took place in early October in Richmond, BC. The main training session was a single day-long training session on October 8, 2010 while supplementary training occurred on school sites where staff were unable to attend the one-day training. The substitute teachers' fees, travel and accommodation costs of counsellors attending the training sessions were reimbursed by the project. Two members of the research team delivered the training.

Alternatively, a school could choose for one or more project-trained facilitators to visit the school and deliver the multi-media presentations for each workshop. Materials created for the project were couriered in advance to the school sites, or brought by the "roaming" facilitators. The "roaming" facilitators were recruited according to project and geographical requirements and included in the in the October 8<sup>th</sup> training session.

The final decision on the balance in numbers between internal and external facilitators was made based on each school's preferences, stated at the time the schools were recruited for the project and assigned to the program group.

## Delivery of the information package

Sessions of the three classroom workshops per Grade 12 student were to take place during school hours at program schools. However, as discussed in section 2, this was not always implemented. Marketing materials were sent at the start of the school year to the program schools to introduce the program to students, parents, and teachers. An information sheet was handed out to Grade 12 students containing general information about the purpose of the project and the intention to inform and assist them in applying to at least one post-secondary education institution and for financial aid. The material was also distributed to parents. Posters and a general information web page about the program were also made available to schools.

The main treatment involved school counsellors delivering sequenced sets of three 60-70 minute workshop sessions in computer-equipped labs.<sup>4</sup> A sufficient number were to be held such that all Grade 12 students at each program school would have had the opportunity to be present at each of the three types of workshop. So, for a school with 200 students and a maximum capacity of 30 in a single computer lab, seven sets of three workshops (21 sessions in total) would be conducted. This meant that schools with the largest numbers of Grade 12 students – around 480 at one school for example – about 50 sessions would be necessary. It was anticipated that students would attend sessions with the same set of peers on each occasion, although this was not a requirement. Attendance in one of each type of the three sequenced workshops was expected to be made mandatory for Grade 12 students.

The main implementation phase was expected to run from November 2010 to May 2011. The **first workshop** in the sequence of three would ideally be held in November, but delivery could begin in late October for sites facing logistical challenges processing all the required sessions in the time available. The **second workshop** ideally should have been held approximately two to four weeks after the first, in November. Because this session involved counsellors/facilitators guiding students in class through the application process for at least one college or university, the timing had to fit the availability of online application forms. During the second session, on-site staff would pay students' application fees for their first choice post-secondary institution. In the **third workshop**, counsellors/facilitators were supposed to guide students (and indirectly, their parents) through the application process for financial aid. The third workshop was planned to be held in the Spring, to coincide with the availability of the BC online student financial aid application form for the upcoming academic year.

In essence, the intervention was designed (a) to instruct students in why to consider post-secondary education and (b) to help them learn how to make post-secondary education part of their future through hands-on instruction in the process of applying. The principle guiding the intervention design was that engaging with the tasks should carry no risk, provided students were aware that either of

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<sup>4</sup> Most BC schools are equipped with computer labs featuring multiple workstations. Of the three proposed workshops, the second and third rely on individual access to the internet for each student in the class. Such access is much preferred, but not essential, for the first workshop.

their applications might be accepted or rejected. The intervention should leave students *at a minimum* better equipped with the experience, knowledge and confidence to apply for a second time, and — through either the first or a later attempt — might lead students to apply successfully and enrol in post secondary education, when in the absence of the intervention, they would not have done so.

## 2. Implementation of Life After High School

This chapter reports on the selection of schools that participated in the project and program, the implementation of Life After High School, and the extent of participation by students in each program school. Using results from the educator's survey, this section also presents a reaction to the implementation. In particular, the implementation assessment looks at whether Life After High School received a fair test and whether control group schools were simultaneously exposed to any other programs or services, similar to those offered by Life After High School.

### School recruitment

Between April and June 2010, principals at all 82 low-transition schools in British Columbia (all those meeting a specific threshold of post secondary-transition, with some specific exceptions listed below) were asked to commit to participation in the project. Commitment to participation meant being prepared to run the three workshops for all their Grade 12 students (although only program schools would have to honour this commitment) and involved agreement to an (early) summer of the graduating class (later dropped) and their educators, primarily counsellors, vice-principals, and principals, in May-June 2011.

The intended exclusions from selection were:

- Schools with a smaller graduating Grade 12 class of 74 students or fewer (in 2007);
- Schools without a computer lab with internet access (which in practice has not applied);
- Schools adjacent to the Alberta border (to minimize undetected increases in cross-border post-secondary attendance); and
- Schools more than 40 km commuting distance from a comprehensive PSE campus (which applies to about one in six of the province's low-transition schools).

Of the 82 schools contacted, SRDC engaged in discussions with 77, of which 74 were eligible to participate (by virtue of having Grade 12 students in the program year of 2010-11). In several cases, discussions were extensive and protracted, as principals sought the commitment of key staff members. Initially, 52 schools agreed to participate in the project. A total of 18 schools declined to participate. These 52 schools have approximately 9,755 Grade 12 students, which represents about 26 per cent of all Grade 12 graduates in BC.

From among the schools, 25 were selected at random as program schools. Random assignment was undertaken (by SRDC's computer program) using a district stratification design. These approaches maintain the principle requirement that the outcome of the assignment for any one school to program or control could not be forecast, and increased the chance that the resulting allocation would have desirable properties. Stratification of schools ensured that schools with particular characteristics (in this case, within the same school district) would not be over- or under-represented in either treatment or control groups. The project team undertook consultation with several experts with experience in school-level random assignment before adopting this approach.

One advantage was that when two districts dropped out at the board approval stage, despite SRDC receiving permission from the school principals to participate. Removing these districts in their entirety left an unbiased assignment (albeit one with 24 program schools and 26 control schools).

Notifications to schools of their assignment status began on September 1, 2010. Following this process, the target group for the program became the incoming (September 7, 2010 intake) Grade 12 students at these program schools.

Program school principals received a more detailed briefing on the project with their program assignment notification. Schools were asked to nominate their preferred delivery model, either internal or external facilitator delivery. Internal delivery required commitment of the school's counsellors or other staff to undergo training to deliver the intervention. External delivery required that the school made available sufficient Grade 12 class time to permit the delivery of the three sessions to all members of their incoming Grade 12 by visiting "facilitators."

The design and implementation of the study relied on securing cooperation at several levels of oversight within the public education system, from the Ministries of Education and Advanced Education, and approval of any required research protocols at the school district level as well as active participation of educators within each school.

## **Training facilitators for the first two workshops**

Once school selection was completed one of the next steps was training of facilitators to administer the workshops. Life After High School program training and delivery occurred between October 2010 and June 2011. The schools randomly assigned to the program group were given the choice of having their own staff trained to deliver the project workshops or hosting visits by facilitators hired independently by SRDC to deliver the sessions. Nine schools chose training for their own staff and fifteen chose to host visiting facilitators. Of the nine schools that chose training for their own staff, seven sent staff to the main day-long training session organized by SRDC, held on October 8<sup>th</sup> at conference facilities close to Vancouver Airport, Richmond BC. Substitute teacher fees, travel and accommodation costs of school staff attending the training session were reimbursed by the project. At this session, the 20 staff sent by the schools were trained alongside the eight other educators hired by SRDC to become external facilitators for the project. The project coordinator (who would schedule the sessions) and three members of the research team were also present, two of whom delivered the training. Training for two additional schools' staff took place on October 4<sup>th</sup> and 29<sup>th</sup> using the schools' own computer labs as the venues, following the same format.

The training covered the delivery of the first two workshops in detail and provided a briefing on the nature of the student aid application process. The facilitators received a binder containing the project facilitator manual, which provided the basis for the training. At its core were session outlines ("lesson plans") for the workshops and appendices featuring screen shots of the many Web site interfaces involved and the projects' forms. Those present were taken through the project rationale, the sequence of workshop activities and uses to be made of these resources. Hands-on experience with use of the Web site was made possible through laptops with wireless internet at every table. Leaflets for students and DVDs featuring workshop 1&2 videos were distributed to those present.

Logistically, it proved difficult (and somewhat costly) to bring everyone involved together for a single training session for workshops 1 & 2. Additional sessions were run successfully for those who missed the main training using schools' own facilities. [Although at one such training session, on November 4<sup>th</sup>, the school staff decided to switch to external facilitators.] Based on this experience, the training for workshop 3 follow a modified approach, with training taking place on school premises and trainers touring from school to school, for a total of 7 training sessions.

## Training program assistants

Workshop 2 required SRDC-hired staff on hand to make payments of online application fees for participating students. A team of approximately 26 "program assistants" was assembled comprising a variety of different personnel:

- Seven existing SRDC-hired facilitators
- Five existing school-based facilitators
- Nine additional SRDC-hired contract workers
- Five SRDC staff based at the SRDC Vancouver office.

These program assistants were issued with SRDC corporate credit cards, audit forms and other project stationery, plus a manual explaining the project and the 'program assistant' role, including screen shots of the application fee forms and setting out specific rules for transactions:

- Each student could have only one application fee paid. The fee paid had to be the application fee for a BC public post secondary institution.
- The fee could not exceed \$160.
- If the fee was paid online by SRDC program assistants using their corporate credit cards, the student for whom the fee was being paid had to complete a line on the Life After High School audit form in their presence.
- If a student had already completed an application prior to workshop 2 this could be paid off-line. The program assistants collected the evidence of payment and arranged for reimbursement of the fee to the student, using a reimbursement form.
- If a student did not complete their application during a session, due to technical or time issues, or because they were absent on the day workshop 2 was run, they could pay the fee themselves and claim reimbursement. Program assistants left a set of post-workshop reimbursement forms with addressed envelopes with the students and/or with a designated school liaison for students to use to mail to SRDC with their proof of fee payment.

The training sessions for program assistant procedures lasted one hour and were followed by 3.5 hours of self-study. Training was either in-person or by teleconference. These sessions were run on November 2<sup>nd</sup>, 15<sup>th</sup>, and 16<sup>th</sup>, 2010.

Given that the time available in sessions allowed for the completion of at most 15 transactions per program assistant, and classes contained places for 30 students, nearly all sessions were assigned

two program assistants (in addition to the facilitator running the class). Most commonly, the program assistant role at each session was filled by the SRDC-hired contract workers. At more remote schools, school staff were co-opted as program assistants to facilitate payments when SRDC staff could not be on site. SRDC-hired facilitators could also be sent to sessions to act as program assistants during periods when there were fewer sessions to facilitate.

In practice, program assistants became knowledgeable about the application process and were able to support the facilitator in assisting students with navigating the application process. There was a considerable benefit from having three trained staff in the room, since students proceeded through the majority of workshop 2 tasks at their own pace.

## Program coordination

SRDC appointed an experienced program manager to coordinate the schedules of schools, facilitators and program assistants. This “program coordinator” acted as a central point of contact during the active phase of session coordination, scheduling sessions and the staff to attend them by email and telephone. The program coordinator issued a timetable with frequent updates and communicated last-minute changes of plans and updates between team members. The job of the program coordinator also included the review of all submitted expense and fee payments for SRDC-hired personnel.

Internal and external facilitators and program assistants were encouraged to provide feedback on their sessions for the benefit of other team members and for implementation research. SRDC circulated a weekly summary of lessons learned from the previous weeks’ activities. These helped the project team members learn from each other about potential challenges in some application forms and tactics that could be used to overcome the challenges. It also allowed SRDC to update and add detail to procedures based on recent experience within the project.

## Delivery of Workshop 1

The main implementation phase for workshop 1 ran from October 18, 2010 to December 13, 2010. The sessions were very successful in achieving their objectives and were generally popular with the students who attended them. Close to 200 sessions of workshop 1 were run and 4,440 students registered with the Life After High School Web site in the sessions. By the completion of the project, in June 2011, the number of students registered had increased to 4,758 (Table 2), very close to the estimated number of graduating Grade 12 students at these schools (n=4,809). Reports from facilitators indicated that nearly all students were able to make their way through the allocated tasks and choose a preferred program to take forward to workshop 2.

The most common difficulties with the workshops were computer login challenges, problems with students searching for programs and scheduling difficulties. Some of the problems foreseen in pre-test sessions – such as student concerns over the privacy of their information, disinterest from students in the session, parent objections – did not materialize significantly. Surprisingly few calls or emails were made to the Life After High School toll free line or email address. Communications were either technical in nature (students asking how to do something) or provided positive feedback on the program. Here are examples of student and parent feedback on workshop 1:

- Student: I had walked into the classroom this morning with the intent to skip a boring lecture to find out that I had so many options in front of me with people willing to help and the instructor for me was very helpful, thank you.
- Parent: As a parent this helps so much... This is a great idea. I hope it continues as I have another coming up in Grade 8.

The login problems involved an unexpectedly high rejection rate of the students' first choice of username (their email address). Many had to persevere with alternate email addresses in order to register. Sometimes students registered with more than one email address, inflating slightly the count of student registrations per site (estimated at 2 per cent). The problems with program search usually concerned the Life After High School Web site presenting a paucity of programs matching students' interests and grades. Sometimes a problem arose when a high school course the student had taken was not an option to choose on the Life After High School web site program search tool. When this happened, the student could not indicate their interest or grades in such courses. Some of these problems were intractable: there are more than 3,000 high school courses so not all could be listed; similarly not every post-secondary program was included where there were multiple/duplicate programs locally. A handful of situations were investigated where students were not seeing programs they knew they wanted to apply for. Students were sometimes unable to access program choices because they had entered grade predictions for grade 12 that were too low for them to be admitted to the program. Facilitators were instructed to allow students to search for programs outside the Life After High School site, on the provincial Education Planner Web site and institution's own Web sites.

Schools were asked to schedule Life After High School sessions for *all* graduating Grade 12 students to attend. Schools (principals and counsellors) sometimes reported difficulties scheduling sufficient sessions in class time. Some scheduled sessions outside regular class time. Although only one school ran all its Life After High School sessions immediately after the school day had ended, six did this to some degree for sessions of workshop 1 or of workshop 2. Mandating students to attend Life After High School workshops often required students to miss their existing high school classes. Only when schools ran a taught "Graduation Transitions" course in Grade 12 was it straightforward for schools to schedule Life After High School sessions within existing allocated class time (because the program aligned with the learning outcomes of this taught course). Most often, whole classes were transferred out of another class (commonly English 12) into the workshop. Second most often, schools called students out in pre-defined (but non-class) groups (such as those defined by names falling within an alphabetical range). Some schools arranged for students to sign up to one of the session times, with varying degrees of coercion. Typically, when Life After High School class allocations involved a proportion of, but not all, students leaving their regular classes at any one time to attend Life After High School sessions, the program was more disruptive to regular school operations.

There were other types of scheduling challenges. Unusually disruptive weather in mid-late November created a number of challenges providing facilitators for sessions. Some facilitators were "snowbound" after visiting a school in a remote location and missed their scheduled sessions elsewhere. Schedules had to be rearranged quickly, requiring considerable additional travel from the available facilitators. Weather prevented 4 of 5 SRDC facilitators from reaching another school for scheduled workshop 1 sessions. The school had to postpone the classes at short notice. Given the difficulty scheduling



sessions, the postponement involved placing the workshop 1 sessions in the slots allocated for workshop 2 and then delaying workshop 2 to late February, the next available timeslot. A small number of additional sessions ran at some schools during February 2011 for students who missed workshop 1.

The best estimate of the participation rate in workshop 1 was 90 per cent.

**Table 1 Life After High School Workshop totals**

	Estimated Graduating Grade 12	Number of sessions			Registered with LAHS	Total applications paid by LAHS
		Workshop 1	Workshop 2	Workshop 3		
ALL 24 PROGRAM SCHOOLS	4809	198	218	165*	4,758	3,353

\* Includes estimates.

## Delivery of Workshop 2

The **second workshop** was intended to be held approximately two to five weeks after the first. The main implementation phase for workshop 2 ran from November 3, 2010 to February 21, 2011. Close to 220 sessions of workshop 2 were run and 3,000 students successfully had applications to PSE paid for during the sessions. Approximately 350 more students – those who faced technical challenges in the session or who missed the session entirely – had their applications paid for (or reimbursed) shortly afterwards. By the end of the school year, the project had paid application fees of \$163,000 (averaging \$49 per student). Like workshop 1, workshop 2 sessions were also very successfully achieving their objectives and popular with the students who attended them. Reports from facilitators indicated that most students were able to make their way through the allocated tasks and apply for their preferred program and request the transfer of their transcript information.

The most common problem with workshop 2 was reduced attendance. Compared to the relatively high registration of 4,758 students (which occurred primarily in workshop 1), only 3,353 students completed Life After High School paid applications (Table 1). Even allowing for multiple workshop 1 registrations, it seems that at least a quarter of the students who registered with Life After High School did not follow the program sufficiently far to lodge paid applications. The shortfall in applicants was 30 per cent of the estimated size of the graduating Grade 12. Some of this shortfall is not due to participation per se. Some students attended but did not complete eligible applications. Students faced computer login challenges, problems with online application forms (some pages froze during sessions) and a small proportion declined the opportunity to apply to a BC public institution, because they had firm alternate plans. However, the bulk of the shortfall arose because students did not attend the workshop sessions.

There is no single explanation for lower attendance at workshop 2. Rather different reasons emerge by school. Of the 24 program schools, 10 schools exceeded 80 per cent of eligible Grade 12 attendance (based on completed applications). Of the remaining 14 schools, the most ready explanation for students missing sessions emerged from the approach taken to schedule the sessions.

**There was no shortage of opportunities to attend.** In 218 workshop 2 sessions, some 6,000+ seats in workshop 2 classes were being offered to somewhat fewer than 5,000 students. There were two unconventional scheduling approaches. One school ran workshops 1 and 2 an hour or two apart on the same day when other post-secondary activities (outreach visits from local institutions) were taking place. Although this was a regular school day with mandatory attendance, only 65 per cent of potentially-eligible students applied through Life After High School. A counsellor at another school did not wish students to select a program using the Life After High School Web site. For this school, workshop 1 took the form of a Grade 12 assembly with presentations on the Grade 12 application process and recommendations for alternate means to select programs for workshop 2. When workshop 2 was run, 37 per cent of potentially eligible students made an application through Life After High School.

**Some schools scheduled workshop 2 outside class time.** Four schools relied at least in part on after-school sessions, which meant that participation relied on students' motivation to attend: running counter to the program intent for all students to go through the process. At all but one school (one that included Life After High School workshops as part of an existing Graduation Transitions taught class), running Life After High School sessions during school time meant taking students away from previously scheduled classes. In some cases, the program message about mandatory participation had not reached school staff responsible for scheduling. And in others, there was a resistance to making attendance at Life After High School workshops compulsory, or at least during school time, because teachers resisted loss of their classes. Evidence of the impact of scheduling comes from one school that switched from class-time sessions of workshop 1 to after-school sessions of workshop 2: this school had the most dramatic drop from workshop 1 to workshop 2 participation estimates – the number of attendees halved.

**Some schools did not enforce mandatory attendance.** In addition to the four running after-school sessions, another three required students to sign up for the “mandatory” classes. While neither of these approaches ruled out high attendance [indeed one school which required student sign-up saw 82 per cent of its Grade 12 apply], it made it easier for students to opt out of workshop 2. All four schools with below 50 per cent application rates for their Grade 12 had either voluntary sign up or after-school sessions for at least some of their students.

**Students were less motivated to attend workshop 2.** All schools experienced a drop in estimated participation rates between workshop 1 and workshop 2 which cannot be accounted for simply by duplicate registration and scheduling. Application rates at schools which transferred entire classes of students from their regularly scheduled classes to workshop 2 still ranged markedly, from 50 to 98 per cent, which implies that – to some degree at all schools – students were electing to take time out from classes rather than attend Life After High School.

Participation problems aside, there are several indicators that workshop 2 did still achieve program objectives. In all but three schools, post-secondary application rates to BC public institutions exceeded the historic (2007-8) transition rates for students from the schools enrolling in such programs. At eight schools, the application rates were 40 percentage points or more higher, and 20-39 percentage points higher at another nine schools. Four schools had rates 1-17 percentage points higher and three schools had lower application rates than historic transition rates. Furthermore school staff were pleased with

the outcome, commenting frequently on the higher rates of applications achieved and pointing out students who would not have applied without the help of the program.

The implementation of workshop 2 provided many lessons for future programming. The lessons include more emphasis on scheduling in early communications combined with school-level briefings to ensure school staff understand and support the program's implementation. This should reduce resistance to the devotion of class time from students to complete the workshops. Furthermore, the research team has identified a range of ways in which the online experience of students who attempted to apply to post-secondary institutions in BC could be streamlined or enhanced.

### **Preparing for and delivering Workshop 3**

The third workshop had three objectives:

- To familiarize grade 12 students with student financial aid and the types of aid available
- To inform students about the consequences of applying for aid
- To take students through the application process for StudentAidBC.

Although the original plan was to guide students through the online application process, this form was not going to be available before June 1, 2011 which did not allow time for sufficient workshop 3 sessions to run before final year provincial exams took place in the third week of June and school vacations began in the last week of June. StudentAidBC instead agreed to early release of the paper application form.

#### **Preparation**

Students were sent emails in April 2011 reminding them of the upcoming workshop and providing a link to the Service Canada Web site for those who had yet to obtain a Social insurance Number. Participating schools were contacted to finalize schedules and asked to send a pre-workshop package to each Grade 12 student's home address. These packages were to include:

- A cover letter customized to each school, reminding parents about the project and explaining the objectives of the third workshop and recommending next steps for parents, including referral to a section of the [lifeafterhighschool.ca](http://lifeafterhighschool.ca) Web site for parents which contained program information and an instructional video. Where known, which was in most cases, the letter also contained the dates the school had set for workshop 3 sessions for students at the school.
- A copy of Appendix 1 (the parent part of the application form) combined with a stamped envelope addressed to StudentAidBC.
- A copy/print-out of the Student Guide to StudentAidBC, so that students had the opportunity to read this before the workshop.

Schools had approved the content of parent letters in early April and been prepared for the task of forwarding the prepared, stamped letters to parents using parent address labels from their own databases.

The model underlying the advanced mailing was to allow parents the opportunity to complete the parent part of the aid application (Appendix 1) before the workshops began. While this was the model, the design anticipated that most parents would not follow the model. Most parents would not complete Appendix 1 before the workshop and some of those who did would not hand it to their child in time. The design included an expectation of the need to encourage parents to complete the application after the workshop.

Similarly, the lesson plan for workshop 3 anticipated that participants who completed their part of the form during the workshop and whose parents had also completed Appendix 1 would have applications ready to submit by the end of the workshop. However, the lesson plan set out the multitude of alternative outcomes that could be possible and the video and facilitator provided instructions accordingly. Students would likely be missing pieces of information from their own form requiring later completion. Students would need to remind parents to complete Appendix 1. To enable this, students were to be encouraged in the workshop to add their parents' email address to their own Life After High School account so that an automated reminder could be sent to parents after the workshop. Also, all students would be given an additional copy of Appendix 1 and another stamped-addressed envelope to take home, in case the previous mailing was lost in the mail, or was lost at the home.

Given the use of paper forms in the workshop, the workshop session was designed to make greater use of video tutorials. The video began with an introduction to student aid and proceeded with instructions on how to complete each section of the application form for full-time study. After the introduction, the video was divided into sections each describing a different section of the form (and each depicted a student hand-completing the paper form). Facilitators were instructed to pause the video after each section to allow students to complete the equivalent section of the form.

All video was available on the Web site and on new issues of the DVD – similar to those used in workshops 1 and 2. SRDC recommended facilitators use the DVDs rather than the online version of the video, to minimize technical challenges displaying and pausing the video tutorial components.

The Web site provided instructions on the application process and links to forms to be used in the process. Importantly, students whose circumstances required alternate aid resources to the application for full-time student could find the forms via these links (e.g., those planning to study part-time or students with a disability). The Web site provided a tool to look up the school and program codes required for the application form, a glossary of financial aid terms and a link to the Black Book for those needing to determine the value of a vehicle.

The StudentAidBC application number is a vital identifier in the application process. This number must appear on all components of a student's submission and the number is needed to obtain updates on application status. For applicants using paper forms, it takes the form of a unique number printed on each application form supplied. Life After High School participants would thus first receive their numbers in the workshop sessions, when the main form was handed out by facilitators. They would need to transfer it to all appendices at that point. Once the forms had been submitted however, the student would be left with no record of the number. Therefore, a space on the Life After High School Web site, within each student's own account, was set aside for recording the number for future use by the student.

A paper brochure describing how to complete applications (ostensibly a workshop 2 task) with the fee paid by Life After High School was made available to facilitators for workshop 3 sessions, for students attending workshop 3 who had not already completed an application to college or university. A worksheet was also provided for facilitators to issue to students who attended workshop 3, but who declined to complete the form (most commonly this situation arose with International students ineligible for BC student aid). The worksheet included post-secondary budgeting exercises and financial literacy resources.

## Delivery

SRDC made arrangements with StudentAidBC (SABC) for the delivery of printed student and parent application forms and electronic files of important supplementary material. One file – containing the text of the Student Guide – was to be printed in late April by SRDC to save time compared to SABC’s normal printing run. Because copies of the application form and Appendix 1 would be received from SABC on May 2<sup>nd</sup> and workshops were to begin on May 9<sup>th</sup>, the mailing exercise needed to be executed quickly. SRDC hired a communications and mailing company to prepare and dispatch the packages in the same sequence as the workshop schedule. Schools with the earliest sessions would receive their set of stamped and pre-sealed mailings first. Schools pre-printed the address labels so that as soon as they received the mailing packages from SRDC during the week of May 2<sup>nd</sup>, the parent labels could be secured and the mail sent. The labelling had to occur at the high schools, because SRDC did not have permission to hold student or parent address information.

A complication was the Student Guide which (unlike the forms) was not supplied to SRDC in pre-printed form. SRDC received the printer-ready proof only on April 29<sup>th</sup> and its printers rushed printing for the following week’s dispatch. This was still too late to be part of the mailing to the first four schools’ workshops and so letter packages were dispatched to these four schools which did not contain the Student Guide. The Guide was instead distributed by facilitators at the sessions in these four schools.<sup>5</sup>

The training of facilitators took place in six in-person regional training meetings were held during the week of May 2-6 and in a seventh meeting via videoconference on May 24<sup>th</sup>. All facilitators were trained on school premises, to permit SRDC facilitators and school facilitators to learn about the workshop content in the same environment as they would be delivering them, and in small enough groups to allow questions. This required SRDC to run many more training sessions than it had for workshops 1 & 2. One advantage of this approach was that SRDC trainers delivered some of the mailing materials directly to schools. Another was that localized training took up less time in facilitators’ schedules and was thus easier to attend (and several alternate training dates could be offered). The Web site, DVDs, sample materials, facilitator manuals and brochures were delivered at this time, being introduced and distributed via these sessions. Training went very smoothly.

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<sup>5</sup> School reports indicate that the majority of the 5,000 parent letters were dispatched as intended. There were two reports of parents at different schools not receiving the letter until after the scheduled session. A combination of tight timelines and postal delays could have accounted for these complaints. The UPS courier lost one of the 80 or so boxes of uncompleted forms in transit, which had to be replaced.

Workshops took place during May 9<sup>th</sup> to June 8<sup>th</sup>.<sup>6</sup> The planned sessions all ran as intended. Schools were instructed to run these workshops for all Grade 12 students. Final attendance numbers compiled from facilitator reports are estimated at 2,068.<sup>7</sup> As with workshop 2, some earlier Grade 12 attendees chose not to attend the third workshop. School liaison feedback is that although all students were aware of workshop 3, some elected not to attend when their class was scheduled, due to other priorities (e.g., exam preparation) or anticipation that the sessions would not be of specific use to them. Educators provided a wide variety of reasons for non-attendance in the survey. The reasons included:

- Students were absent from the scheduled English class that was transferred into Life After High School that day, or for the whole day due to illness or field trip.
- Students did not want or need to apply for a loan and so did not attend. Students who had not yet seriously considered their post secondary education did not attend.
- They felt they did not need financial help.
- Did not want to take on student debt at all.
- Concerns about providing income information in a public setting.
- Students were concerned they were missing final exam preparation classes.

The workshops, videos and materials were well received by those who attended and many complimentary communications about the utility of the program were received from the school teams involved. No concerns or complaints were received from schools or students.

A very small number of students – the best estimate is 13 – managed to both (a) bring to the session their parents' form fully-completed and (b) complete every component of their own form in the workshop sufficient to submit their application at the end of the workshop. Thus, nearly all students needed additional information they did not have with them in the workshop to complete their applications before submission. They were encouraged in videos, by facilitators and in later emails to complete and submit their applications as soon as possible after the workshop. The project team sent reminders to students by email and to their parents (those parents for whom emails were provided) to complete and submit their applications. Ongoing support was provided to students or parents who contacted [info@lifeafterhighschool.ca](mailto:info@lifeafterhighschool.ca) or the program's toll-free line for information on application processes.

It was the judgement of facilitators that roughly half of those who attended were likely to complete and submit their applications eventually. However, SABC tracked the number of paper forms distributed that were actually submitted. These total 301 – just 15 per cent of estimated attendees.

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<sup>6</sup> Provincial Grade 12 language arts exams took place between May 17<sup>th</sup> and May 20<sup>th</sup>. No sessions were scheduled on these days. All other exams took place during June 21-29. Summer vacation began June 30, 2011.

<sup>7</sup> This estimate assumes attendance at internally-facilitated schools matched attendance at externally-facilitated schools. It is probably an underestimate since facilitators internal to each school would be better placed to ensure students attended the sessions they ran.

There is little evidence on why so few paper forms were submitted. It is relatively easy to attribute some of the shortfall to the use of the paper system. If the initiation of an online application had been possible, it would have been easier to determine how many started an application and the point at which students ceased working on their application. In 2011, the paper system proved vulnerable to the threat of postal disruption. This threat presented a challenge for the return of completed forms.<sup>8</sup>

It remains possible (indeed likely) that many students who attended workshop 3 abandoned their paper applications and submitted online applications instead. They could have done this almost immediately, in June when the online forms became available or later in the year when their post-secondary plans became clearer. Unfortunately, data on applications made using non-project issued forms are not available.

### Did the study implement the intervention as designed?

Although there were many dimensions to the implementation of the program, one of the most fundamental goals was to secure the participation of all Grade 12 students. Data from different sources have been used earlier in this report to provide estimates of the attendance. However the educators' survey provides a consistent estimate across all three workshops and indicates the gradual decline in attendance from workshop 1 to workshop 3. Taking the responses of those educators who provided an estimate (in Table 2), median attendance was in the 80-89 per cent range for workshop 1, 70-79 per cent for workshop 2 and 50-69 per cent for workshop 3. According to these sources, full and complete attendance was only achieved in about a fifth of schools early on and by workshop 3, half of those prepared to venture an estimate thought workshop 3 was attended by half their students or fewer (Table 2).

Some of the reasons full attendance was difficult to achieve have been reviewed in earlier reports, but the educators responding to the survey questions about non-attendance at workshop 1 included reasons such as:

- Some teachers would not let students out of their class to attend.
- They were absent from their English class (or absent from school) on the day it was done.
- Students chose to be elsewhere because they thought that the program did not concern them. These students typically lacked focus and did not want to explore post secondary options. Simply put – they were too immature to think about this yet.

These reasons imply that future implementations of the program need to increase the briefing of all school staff with responsibility for grade 12 students in order to support truly mandatory attendance. This was difficult to enforce in the initial year of a research-based study.

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<sup>8</sup> The threat of Canada Post disruption loomed over much of the workshop period and service was completely suspended for two weeks from June 14<sup>th</sup>. Inevitably, this affected the project communication plan. While the disruption loomed, students could not be sent emails that encouraged them to mail in their applications. It was not at all clear until the end of June that mailed applications would reach their destination. These email communications resumed when the disruption was over.

**Table 2** Proportion of Grade 12 students attending workshops (program schools only)

Reported by school contact	Workshop 1 (%)	Workshop 2 (%)	Workshop 3 (%)
0-19%	0	0	17
20-39%	7	12	20
40-49%	0	11	5
50-69%	15	23	15
70-79%	17	5	8
80-89%	32	27	13
90% or more	22	18	7
Not sure	7	4	16

School principals, vice principals, and counsellors (n=37) weighted by school (all contacts from each school weighted to sum to 1.0).

In the focus groups, one student spoke about the subtleties of how the new program was promoted to and among students:

*School counsellors and staff “pushed it” but not pushed among the students and wasn’t pushed among students because they didn’t know what it was. I didn’t know what it was until half way through workshop 1. Students had to do workshop 1 in order to do workshop 2, workshop 3. One student hadn’t heard about it but was told about it after workshop 1 and went to the counsellor who made sure she could get caught up and then do workshops 2 and 3.*

The question of whether the program should be mandatory (versus merely recommended to students) was discussed in both focus groups. Roughly half the students thought the whole program should be mandatory with the rest favouring the ability to opt out. One group reached a collective decision that there should be a mandatory first workshop and then the following workshops should be optional; so students would see that there were a lot of options in that first session and know also that they could at least try them. Students suggested the program could be built into the province’s Graduate Transitions program.

In the absence of a strong “push” at some schools mandating attendance, participation rates relied on students volunteering to attend. Questions in the educators’ survey explored counsellors’, vice-principals’, and principals’ assessments of how interested the students were in the workshops. As shown in Table 3, educators tended to report that students were very or somewhat interested in the first two workshops but acknowledged an increasing lack of interest in workshop 3. Again, this implies that relying on students’ to volunteer to attend will reduce the proportion of students that experience the third workshop.



**Table 3 Grade 12 students' interest in attending workshops (program schools only)**

Reported by school contact	Workshop 1 (%)	Workshop 2 (%)	Workshop 3 (%)
Very interested	43	43	9
Somewhat interested	50	55	69
Not interested	0	0	20
Not sure	7	2	2

School principals, vice principals and counsellors (n=37) weighted by school (all contacts from each school weighted to sum to 1.0).

**Table 4 Suitability of workshops for Graduating Grade 12 students (program schools only)**

Reported by school contact	(%)
Thinking about all three workshops, were they suitable for graduating Grade 12 students to attend	
Yes, suitable for all of them	44
Yes, suitable for most of them	55
No, not suitable for most of them	0
Not sure	2

School principals, vice principals and counsellors (n=37) weighted by school (all contacts from each school weighted to sum to 1.0)

Further questions explored counsellors and administrators comfort with the delivery of the program. Just under half considered the program suitable for all graduating Grade 12 students (Table 4). This answer implies that some changes may be needed for the program to be mandatory in all schools. Virtually all judged the program suitable for most or all their students. About two-thirds agreed or strongly agreed that the program was easy to implement (Table 5) with one quarter disagreeing. Reasons among the latter group of respondents included the amount of work involved, especially making sure all students attended. Another commented on the difficulty getting those who attended to participate in response to the video.

**Table 5 Ease of workshop implementation (program schools only)**

Reported by school contact	(%)
Overall, implementation of Life After High School at my school was easy	
Strongly disagree	0
Disagree	25
Neither agree nor disagree	8
Agree	43
Strongly agree	18
Not sure	5

School principals, vice principals and counsellors (n=37) weighted by school (all contacts from each school weighted to sum to 1.0).

Notwithstanding the challenges of workshop attendance, for the most part all three workshops unfolded as designed, except for Workshop three that had to switch from online to paper applications for financial aid. Students that attended all three workshops were informed about the benefits of postsecondary education, were able to choose a program and complete a program application, learn about financial aid, and receive assistance in completing an aid application. However, implementation was not even across all schools and several had low fidelity to the model and lower than expected applications were completed in those districts.

### Was the study contaminated by any control-group interventions similar to the intervention?

In any program evaluation that will compare the experiences of a treatment group to a control group, it is important to understand whether the control group received similar programming to the treatment. Table 6 reports educators' responses to a question about whether there were classes or programs already existing at program and control schools to assist with post-secondary applications. The table reveals more than half the schools already had programs of some kind with this aim. Moderately more educators at control schools reported such programs than at program schools.

Interpreting these responses is difficult for several reasons. Firstly, educators' responses from control schools came from only 14 of the 26 schools, compared to 23 of 24 program schools. There is therefore considerable room for a selection bias in control school responses. Secondly, the number of responses overall is low, such that proportionate differences of this magnitude are not statistically significant. Thirdly, the programs already in place could be qualitatively different. The programs educators at control schools are already implementing might differ from those at program schools, and might differ from Life After High School. Furthermore, experience with Life After High School might lead educators at program schools to interpret the question differently. Follow up questions about the type of programs offered suggest that contamination of control group students is unlikely. Educators at both schools discuss existing programs such as Planning 10, Graduate Transitions and AVID which are equivalently in place at program and control schools.

**Table 6 Available classes or programs on PSE applications (program and control schools)**

Reported by school contact	Program schools (%)	Control schools (%)
[Besides Life After High School] are there any other classes or programs at your school that teach Grade 12 students about the process to apply for university, college or technical programs?		
Yes	54	71
No	35	25
Not sure	10	4

School principals, vice principals and counsellors (n=59) weighted by school (all contacts from each school weighted to sum to 1.0).

When the same question was asked about existing instruction in applying for student aid, programs to rival Life After High School were reported much less often (Table 7). The most-commonly cited examples in both groups of schools were counsellor-run workshops.

**Table 7 Available classes or programs on aid applications (program and control schools)**

Reported by school contact	Program schools (%)	Control schools (%)
[Besides Life After High School] are there any other classes or programs at your school that teach Grade 12 students about how to apply for student financial aid?		
Yes	20	29
No	72	58
Not sure	8	11

School principals, vice principals and counsellors (n=59) weighted by school (all contacts from each school weighted to sum to 1.0).

### 3. Answering the project's research questions

The main objective of the program and this report is to assess whether the Life After High School intervention influenced enrolment in post-secondary education. This chapter presents the experimental impact results, which were calculated using administrative data. It also presents other research findings, which were addressed with the educator's survey data and focus group. First the chapter presents the impact results, followed by other findings from the educator's survey and focus group of students.

#### Impacts of offering students Life After High School

In order to properly interpret the impact estimates some understanding of the sources of the estimates is required. This section is therefore in three parts. First it describes the administrative data used in the estimation of post-secondary impacts. Second, it describes the methodology for estimating Life After High School post-secondary impacts, and then it presents the impact results.

##### Administrative data sources

The impact analysis relies on data collected and made available by the BC Ministries of Education and Advanced Education. The BC Ministry of Education collects administrative data on students in Grades 10 to 12 in every school on a range of demographic and achievement variables. The BC Ministry of Advanced Education collects data on post-secondary enrolment and use of financial aid. These secondary and post-secondary data are linked at the Ministry of Advanced Education Student Transitions Project and made available to researchers subject to an approval process, for education research. Rich and high-quality analyses are made possible by the availability of these data. One set of data made available publicly in recent years includes the percentage of high-school graduates from each high school that immediately (and subsequently) enrolled in a public post-secondary education institution in BC. These data are central to the study.

The final data files for program and control schools were received from the Student Transitions Project at the BC Ministry of Advanced Education in mid-April 2013. During initial quality checks of earlier releases of the data, a number of inconsistencies and data problems were discovered and new files were re-issued on two occasions. The secondary and post-secondary files received for the analysis are anonymous linkable files. The secondary education files consist of high school records (Grades 10 to 12) for Grade 12 students from all program and control schools for the school year in which Life After High School was implemented (school year 2010/11), as well as for three prior cohorts of Grade 12 students, (i.e., Grade 12 students from school years 2007/08, 2008/09, and 2009/10). It also contains a limited amount of demographic information, such as age, gender, Aboriginal status and postal code (a proxy for economic status). The post-secondary education data includes information on enrolment in public post-secondary education institutions in BC and receipt of student financial aid.

Compared to surveys, administrative data has little attrition or response bias: equating to close to 100 per cent response rates. Researchers can be confident of equivalent coverage for program and control students. Outcomes are typically recorded more systematically and reliably in administrative records than in surveys. Since data are available for earlier cohorts of students from the same schools,

these data support the preferred analytical technique of difference-in-differences analysis that further increases the experiment's power.

Although administrative data have little attrition or response bias and contain accurate information, the data are somewhat incomplete. Information for students who attend private institutions or who are studying as apprentices, except those at public colleges, would not be covered by the available data. Additionally, the data files exclude potentially-useful information covering post-secondary applications and acceptances. These data omissions limit the amount of evidence that can be presented to explain the overall pattern of impacts on post-secondary enrolment.

The current files comprise data for 6,339 and 5,861 individual student records from control and program group schools, respectively, for the 2010/2011 school year (the year the program was administered). For prior cohorts, there are a total of 19,387 and 17,242 individual student records from control and program group schools. About 615 observations, evenly distributed across cohorts and schools, have missing course information and were omitted from the estimation of impacts.

## Methodology

The estimation technique used to measure the experimental impacts of Life After High School is difference-in-difference (or differencing), which can increase the precision of analysis. In a properly conducted random-assignment experiment, there are no selection effects in which participants receiving the program are *systematically* different in some unobserved way from a group of non-participants who might be used as a comparison group. Nonetheless, ex-ante differences between randomly-assigned units may appear due to chance variation in the random allocation, especially (as here) when the number of units (schools) allocated is small. Whereas the planned random assignment eliminates *systematic* differences between the treatment and control groups, differencing has the potential to remove the remaining observed and unobserved differences between the treatment group and the control group that were not removed by random assignment.

In the simplest form under this methodology, the post-secondary education transition rates are collected for program group schools for the cohort (or cohorts) prior to the intervention and subtracted from the transition rate for the program-group cohort that received the intervention. A similar subtraction (or difference) would be done for same years in the comparison group schools. The average difference in the control group is then subtracted from the average difference in the program group to estimate the impact of the intervention. Under the assumption that any ex-post systematic differences between schools in the program and control groups are time invariant, this "difference in differences" can remove the confounding influence of any other observed and unobserved factors between schools. In addition, difference in differences can often reduce the variability (variance) of the data and help detect impacts in small samples. For example, an unobserved common influence on students like a strong school library may influence achievement rates at a particular program school. There is a risk that the effect of the new program will be confused with the effect of the library. Differencing between years removes from the equation any effect the unwanted potential influence has – because the common library effect that persists year after year is removed by the differencing of one cohort's achievement from another's, while the *unique* one-year only program effect influences only the program cohort. A more technical definition of the exact model used to estimate the impacts presented below on Life After High School is provided in Text Box 1.

### Text Box 1: Difference-in-differences Econometric Model used for Estimating Impacts

The difference-in-difference econometric model used to estimate the experimental impacts of the LAHS-BC is outcome,  $Y$ , of individual student  $i$  of cohort  $t$  in school  $s$  and mathematically expressed as:

$$(1) Y_i = \alpha + \delta_i + \beta X_i + u_p P_i + v_c C_i + \mathbf{u} S_i + \mathbf{v} T_i + \varepsilon_i,$$

where ,

- $X_i$  is a vector of the student's characteristics,
- $P_i$  is a 0/1 indicator variable of belonging to the program schools and  $u_p$  is the average unobserved school heterogeneity among program group schools compared to that of control group schools,
- $C_i$  is a 0/1 indicator variable of belonging to the program group cohort and  $v_c$  is the unobserved cohort heterogeneity of the program cohort compared to that of the previous cohorts,
- $S_i$  is a 1x50 vector of 0/1 indicator variable of the school, and  $\mathbf{u}$  is a vector of the unobserved school heterogeneity,
- $T_i$  is a 1x3 vector of 0/1 indicator variable of the prior cohorts 2007/08, 2008/09, and 2009/10, and  $\mathbf{v}$  is a vector of the unobserved cohort heterogeneity before the program cohort,
- $\varepsilon_i$  is the unobserved individual heterogeneity.

For simplicity, it is assumed that  $E(\varepsilon_i|C_i) = E(\varepsilon_i|P_i) = E(\varepsilon_i|X_i) = E(\varepsilon_i|\mathbf{u}) = E(\varepsilon_i|\mathbf{v}) = 0$ . Since the program was randomly assigned by school and the program was delivered to one cohort,  $P_i$  is perfectly collinear with  $S_i$  and  $C_i$  is perfectly collinear with  $T_i$ .

To facilitate estimation, it is assumed that  $E(\mathbf{u}S_i|program\ schools) = E(\mathbf{u}S_i|control\ schools) = 0$  and  $E(\mathbf{v}T_i) = 0$ .

In equation (1),  $\delta_i$  is the impact of the program on student  $i$ . It can be shown that the estimated coefficient on the interaction term  $P_i C_i$  by regressing  $Y_i$  on  $X_i$ ,  $P_i$ ,  $C_i$ ,  $S_i$ ,  $T_i$ , and  $P_i C_i$  is an estimator of the average impact of the program,  $E(\delta_i)$ .

The student characteristics  $X_i$  are age, gender, aboriginal status, and academic performance during Grades 10 and 11. Academic performance variables include numbers of courses taken, passed, with A, B or C grade; credit-weighted grade point average (GPA) in each of Grades 10 and 11; grades obtained for Science 11, Social Studies 11, Mathematics 11, Language 11, Language Arts 11, Industrial Education 11, Home Economics 11, Civic Studies 11, Language 10, Career and Planning 10, Social Studies 10, Principles of Mathematics 10, Science 10, English 10, Essential of Mathematics 10, and Applied Mathematics 10. These academic performance variables were selected because they proved the most predictive of enrolment in PSE using observations of just the first three cohorts.

The main outcome of interest is the propensity to enrol in a PSE program. However, the propensity is not directly observable since a student can only either enrol or not enrol in a program. Similarly, the propensity to receive student financial aid is also not directly observed even though the receipt of financial aid is. For simplicity and robustness, it is assumed that the propensity follows a linear probability model such that the binary indicator variable is used directly.

The application of the linear probability model is associated with a heteroscedasticity issue in statistical testing. Another issue in making statistical inference is the potential peer effect among students within the same school, i.e.,  $E(\varepsilon_i \varepsilon_j | same\ school) \neq 0$ . Robust standard errors with schools as clusters are used to accommodate both heteroscedasticity and intra-school correlations like peer effects. In the actual estimations, the robust standard errors are not much different from estimated standard errors under a more customary, classical assumption.

Estimated impacts are generally robust to the exclusion of student characteristics. Inclusion of these student characteristics improves the precision of the estimates. The average group means adjusted to the average student characteristics are examined. The examination is to ensure that most of the predicted values are within the 0 to 1 range. The group means also provide information on ex-post systematic differences between groups.

## Impacts on post-secondary enrolment

The first panel of Table 8 shows impacts on post-secondary enrolment for the school year immediately following Grade 12 (i.e., 2011/12). Overall, Life After High School does not have an impact on post-secondary enrolment. As shown, 39.46 per cent of Grade 12 students from schools that were offered Life After High School were enrolled in a post-secondary education program in the 2011/12 school year compared to 40.32 per cent in control schools.<sup>9</sup> This is true for enrolment in public university and non-university programs (i.e., public college and apprenticeship programs). Among those in program schools, university enrolment in the 2011/12 school year was 18.74 per cent, college enrolment in that same year was 21.59 per cent, and 0.85 per cent enrolled in an apprenticeship program. Similar enrolment rates were observed for students from control schools – 20.51 per cent university enrolment, 20.45 per cent in college, and 1 per cent in apprenticeship programs.

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<sup>9</sup> While difference-in-difference impact is calculated by  $(Y_{1p} - Y_{0p}) - (Y_{1c} - Y_{0c})$ , it is mathematically equivalent to calculate by  $(Y_{1p} - Y_{1c}) - (Y_{0p} - Y_{0c})$ . That is, the between group difference among the experimental cohort, minus the group difference among the earlier cohorts. When a statistically significant impact is not discernable, it means that the difference between program and control group is statistically not different from zero and therefore  $(Y_{0p} - Y_{0c})$  can be ignored and the discussion of no impact can make reference to just  $Y_{1p}$  and  $Y_{1c}$ .

**Table 8 Adjusted Impacts of Life After High School BC**

Outcomes	<u>Control Group Means</u>		<u>Program Group Means</u>		Mean Impacts	S.E.
	Earlier Cohorts	2010/11 Cohort	Earlier Cohorts	2010/11 Cohort		
<b>Transition to PSE</b>						
Enrolled in a PSE program (%)	43.43	40.32	42.82	39.46	-0.24	1.20
Enrolled in a University program (%)	21.70	20.51	18.84	18.74	1.09	0.88
Enrolled in a Non-university PSE (%)	24.25	21.28	26.47	22.25	-1.25	1.08
Enrolled in a College program (%)	23.19	20.45	25.60	21.59	-1.26	1.04
Enrolled in Apprenticeship (%)	1.22	1.00	1.06	0.85	0.01	0.25
Received Financial Aid (%)	8.74	8.56	7.67	9.47	1.98	0.67***
Amount of Financial Aid (\$)	713.83	691.95	612.70	728.07	137.26	58.53**
<b>Interaction of Enrolment in PSE and Financial Aid</b>						
PSE Program with Financial Aid	6.31	6.27	5.38	7.10	1.77	0.59***
PSE Program without Financial Aid	37.12	34.05	37.44	32.36	-2.00	1.09*
University Program with Financial Aid	3.97	3.78	2.98	4.14	1.35	0.54**
University Program without Financial Aid	17.73	16.73	15.86	14.60	-0.26	0.81
Non-University Program with Financial Aid	2.80	2.63	2.77	3.34	0.73	0.34**
Non-University Program without Financial Aid	21.45	18.65	23.69	18.92	-1.97	1.01*
College Program with Financial Aid	2.78	2.60	2.75	3.33	0.76	0.34**
College Program without Financial Aid	20.41	17.85	22.85	18.26	-2.03	0.98**
Apprenticeship with Financial Aid	0.02	0.03	0.04	0.02	-0.03	0.03
Apprenticeship without Financial Aid	1.20	0.97	1.02	0.83	0.04	0.25



**Table 8 Adjusted Impacts of Life After High School BC**

Outcomes	<u>Control Group Means</u>		<u>Program Group Means</u>		Mean Impacts	S.E.
	Earlier Cohorts	2010/11 Cohort	Earlier Cohorts	2010/11 Cohort		
<b>Academic Performance (Grade 12 School Year)</b>						
Graduation (%)	89.09	87.61	89.15	88.47	0.80	0.59
Total number of courses taken	5.94	5.89	6.04	6.04	0.04	0.06
Total number of courses failed	0.18	0.20	0.20	0.21	0.00	0.02
Total number of courses passed	5.68	5.62	5.76	5.75	0.04	0.06
Number of As received	2.11	2.12	2.12	2.08	-0.05	0.05
Number of Bs received	1.68	1.65	1.71	1.73	0.04	0.04
Number of Cs (C+, C- or C) received	1.89	1.85	1.92	1.94	0.06	0.04
Number of Fs received	0.18	0.20	0.20	0.21	0.00	0.02
Number of courses taken with no marks	0.07	0.08	0.09	0.09	0.00	0.01
Number of credits received	23.74	23.57	24.17	24.17	0.17	0.26
Total Grade points received	67.74	67.23	68.75	68.21	-0.04	0.83
Credit Weighted GPA (1-4)	2.74	2.75	2.74	2.72	-0.03	0.02
<b>Sample size</b>	<b>19,195</b>	<b>6,249</b>	<b>17,015</b>	<b>5,755</b>		

### Impacts on financial aid

While Life After High School had no impact on post secondary enrolment, the second panel of Table 8 shows that it did have an impact on the receipt of student financial aid. There was a 1.98 percentage point increase on receipt of financial aid and a \$137.26 increase in the average amount of aid received by students from program schools. Furthermore, an interaction of post-secondary enrolment and financial aid shows that while enrolment in university with financial aid increased by 1.35 percentage points, enrolment in college without financial aid decreased by 2.03 percentage points. This suggests that some students may have switched from enrolling in college (without aid) to enrolling in university with financial aid. Since it is not clear that it the same students moving from college to university, an alternative explanation is that the program encouraged university enrolment of some while it simultaneously depressed college enrolment of others.

## Impacts on academic performance

Life After High School had no impacts on academic performance in Grade 12. On average, students in program and control group schools enrolled in similar number of classes, passed an equivalent number of those classes, had similar grade distributions, grade point averages and graduation rates. For example, in Grade 12 they were enrolled in about six courses and received a passing grade on almost all of these (0.20 courses received a F grade). The graduation rates in control and program schools were both around 88 per cent.

## Subgroup impacts

In addition to looking at overall impacts, the evaluation estimated impacts by gender, Aboriginal status, by a set of students' characteristics indicating propensity to attend PSE and by the level of implementation of the program prevailing in their school district. The first two groups are of particular interest, since they consist of segments of the population – boys and Aboriginal youth – who historically have lower post-secondary access rates. Because the extent to which the study hypothesis has been fairly tested can be affected by the extent to which the intervention was fully implemented, the impacts of Life After High School were also evaluated by districts with higher and lower program fidelity.

## Gender

The results in Table 9 show that Life After High School did not lead to differences in post-secondary enrolment by gender. The program induced a higher proportion of both boys and girls to receive financial aid than they would have in its absence. Among boys, the average amount received was \$154.42 higher than in the absence of the program. Note that this is an average across all program group students meaning that the average amount of the increase across the roughly one in ten actually receiving aid would be ten times higher. The difference in the amount of aid received by girls in the program group was not statistically significant.

The observed increase enrolment in university programs with financial aid (1.84 percentage points), with a simultaneous decrease in college program without financial aid among boys, suggest that the shift observed for the whole sample from college to university may be occurring primarily among boys.

Life After High School also increased the high school graduation rates among boys. When schools ran Life After High School, close to 2 percentage points more boys graduated than would have done in the absence of the program. The program's impact on boys was significantly different from the program's impact on girls by 2.09 percentage points (at the 10 percent level of significance).

**Table 9 Adjusted Impacts of Life After High School BC, by Gender**

Outcomes	Male		Female		Subgroup Difference
	Mean Impacts	S.E.	Mean Impact	S.E.	
<b>Transition to PSE</b>					
Enrolled in a PSE program (%)	-0.15	1.51	-0.43	1.82	-0.28
Enrolled in a University program (%)	1.66	1.06	0.49	1.24	-1.17
Enrolled in a Non-university PSE (%)	-1.63	1.37	-0.94	1.60	0.69
Enrolled in a College program (%)	-1.48	1.27	-1.12	1.56	0.36
Enrolled in Apprenticeship (%)	-0.11	0.48	0.13	0.13	0.23
Received Financial Aid (%)	2.45	0.82 ***	1.48	0.86 *	-0.97
Amount of Financial Aid (\$)	154.42	75.02 **	119.82	82.40	-34.60
<b>Interaction of Enrolment in PSE and Financial Aid</b>					
PSE Program with Financial Aid	2.07	0.74 ***	1.42	0.78 *	-0.66
PSE Program without Financial Aid	-2.23	1.46	-1.85	1.66	0.38
University Program with Financial Aid	1.84	0.61 ***	0.84	0.73	-1.00
University Program without Financial Aid	-0.18	1.01	-0.35	1.06	-0.17
Non-University Program with Financial Aid	0.56	0.43	0.89	0.51 *	0.33
Non-University Program without Financial Aid	-2.18	1.33 *	-1.82	1.47	0.36
College Program with Financial Aid	0.61	0.44	0.90	0.51 *	0.30
College Program without Financial Aid	-2.08	1.22 *	-2.02	1.44	0.06
Apprenticeship with Financial Aid	-0.03	0.05	-0.03	0.02	0.00
Apprenticeship without Financial Aid	-0.08	0.48	0.15	0.13	0.23

**Table 9 Adjusted Impacts of Life After High School BC, by Gender (continued)**

Outcomes	Male		Female		Subgroup Difference
	Mean Impacts	S.E.	Mean Impact	S.E.	
<b>Academic Performance (Grade 12 School Year)</b>					
Graduation (%)	1.81	0.87 **	-0.28	0.70	-2.09 +
Total number of courses taken	0.08	0.08	0.01	0.08	-0.07
Total number of courses failed	0.00	0.02	0.00	0.02	0.00
Total number of courses passed	0.05	0.08	0.04	0.07	-0.01
Number of As received	-0.03	0.07	-0.08	0.06	-0.05
Number of Bs received	0.02	0.05	0.06	0.05	0.04
Number of Cs (C+, C- or C) received	0.05	0.05	0.06	0.06	0.01
Number of Fs received	0.00	0.02	0.00	0.02	0.00
Number of courses taken with no marks	0.03	0.01 **	-0.03	0.01 *	-0.05 +++
Number of credits received	0.31	0.31	0.04	0.32	-0.27
Total Grade points received school year	0.19	1.08	-0.21	0.90	-0.40
Credit Weighted GPA (1-4)	-0.04	0.03	-0.01	0.02	0.03

### Aboriginal status

Life After High School had no impact on university enrolment among Aboriginal students in program schools, but had an adverse effect on college enrolment (Table 10). Compared to Aboriginal students in comparison schools, 4.77 percentage points fewer of them enrolled in college. The program’s impact was also 3.84 percentage points lower than the impact observed for non-Aboriginal students.

Despite fewer Aboriginal students enrolling in postsecondary education, there is a noticeable increase in the proportion who received student financial aid for post-secondary education and an increase in the average amount of aid received. On average, across all students, the amount of aid received by Aboriginal students increased by \$221.88. Again, this signals that student aid amounts per student in receipt of aid increased markedly more.

Looking at academic performance in high school, Life After High School had unintended negative impacts on the number of “A” grades received by Aboriginal students. As shown in Table 10, the

number of “A” grades received by Aboriginal students in program schools decreased by 0.18 percentage points, compared to Aboriginal students in control schools.

**Table 10 Adjusted Impacts of Life After High School BC, by Aboriginal Status**

Outcomes	Non-Aboriginal		Aboriginal		Subgroup Difference
	Mean Impacts	S.E.	Mean Impacts	S.E.	
<b>Transition to PSE</b>					
Enrolled in a PSE program (%)	-0.12	1.29	-1.56	2.65	-1.44
Enrolled in a University program (%)	0.99	0.96	2.02	2.01	1.03
Enrolled in a Non-university PSE (%)	-0.91	1.08	-4.62	2.38 *	-3.71
Enrolled in a College program (%)	-0.92	1.05	-4.77	2.27 **	-3.84 +
Enrolled in Apprenticeship (%)	0.06	0.25	-0.41	0.62	-0.46
Received Financial Aid (%)	1.94	0.73 ***	2.40	1.46 *	0.46
Amount of Financial Aid (\$)	128.39	67.30 *	221.88	134.19 *	93.48
<b>Interaction of Enrolment in PSE and Financial Aid</b>					
PSE Program with Financial Aid	1.76	0.66 ***	1.86	1.38	0.10
PSE Program without Financial Aid	-1.88	1.17	-3.42	2.89	-1.54
University Program with Financial Aid	1.50	0.59 **	-0.24	0.84	-1.74
University Program without Financial Aid	-0.51	0.86	2.26	1.85	2.77
Non-University Program with Financial Aid	0.62	0.37 *	1.96	1.15 *	1.34
Non-University Program without Financial Aid	-1.53	1.00	-6.58	2.49 ***	-5.05 ++
College Program with Financial Aid	0.65	0.37 *	2.02	1.18 *	1.37
College Program without Financial Aid	-1.57	0.99	-6.78	2.39 ***	-5.21 ++
Apprenticeship with Financial Aid	-0.04	0.03	0.15	0.22	0.19
Apprenticeship without Financial Aid	0.10	0.25	-0.55	0.67	-0.65

**Table 10 Adjusted Impacts of Life After High School BC, by Aboriginal Status**

Outcomes	Non-Aboriginal		Aboriginal		Subgroup Difference
	Mean Impacts	S.E.	Mean Impacts	S.E.	
<b>Academic Performance (Grade 12 School Year)</b>					
Graduation (%)	1.18	0.62 *	-3.21	2.21	-4.39 +
Total number of courses taken	0.05	0.06	-0.05	0.16	-0.11
Total number of courses failed	0.00	0.02	0.02	0.05	0.03
Total number of courses passed	0.06	0.05	-0.11	0.15	-0.16
Number of As received	-0.04	0.06	-0.18	0.09 **	-0.14
Number of Bs received	0.04	0.03	0.04	0.09	0.00
Number of Cs (C+, C- or C) received	0.06	0.04	0.04	0.14	-0.01
Number of Fs received	0.00	0.02	0.02	0.05	0.03
Number of course taken with no marks	0.00	0.01	0.03	0.02	0.03
Number of credits received	0.21	0.24	-0.21	0.65	-0.42
Total Grade points received school year	0.18	0.80	-2.26	2.06	-2.44
Credit Weighted GPA (1-4)	-0.02	0.02	-0.04	0.06	-0.01

Results for non-Aboriginal students, who make up about 90 percent of the student population in the study, are similar. Enrolment in university education for this group of students is similar to that of the comparison group, but 1.94 percentage points more of them received financial aid, and the average amount of aid increased by \$128.39. For this subgroup, the proportion who enrolled in university and college with financial aid went up by 1.50 and 0.65 percentage points, respectively. They also had higher graduation rates than their counterparts in the control group.

### Implementation quality

Using the proportion of Grade 12 students in program schools whose applications were paid for by Life After High School as a measure of how well the intervention was implemented, school districts whose program schools averaged a project-paid application rate of 70 per cent or higher were deemed “high implementation” districts. High and low implementation districts were compared to see if results differed in line with this measure of implementation. It should be noted that if other factors besides program fidelity vary between these groups of schools (like school board education policies) the

differences in program impact may not wholly be due to implementation differences. As Table 11 shows, there were no impacts on post-secondary enrolment independent of levels of implementation. However, impacts observed on the receipt of financial aid in the cross-section of the full sample were only evident in school districts with project-paid application rates of 70 per cent or higher. In “high implementation” districts, 2.41 percentage points more students received aid and the average amount of aid was \$213.90 higher than in the absence of the program. And in those districts, students shifted towards enrolment in university and college programs with financial aid, away from enrolment without aid.

**Table 11 Adjusted Impacts of LAHS BC, by Implementation Quality**

Outcomes	Lower Quality		Higher Quality		Subgroup Difference
	Mean Impacts	S.E.	Mean Impacts	S.E.	
<b>Transition to PSE</b>					
Enrolled in a PSE program (%)	-1.18	2.05	0.22	1.48	1.40
Enrolled in a University program (%)	0.25	1.57	1.49	1.03	1.24
Enrolled in a Non-university PSE (%)	-1.53	2.25	-1.06	1.10	0.46
Enrolled in a College program (%)	-2.19	2.12	-0.68	1.05	1.51
Enrolled in Apprenticeship (%)	0.53	0.44	-0.33	0.27	-0.86
<b>Financial Aid</b>					
Received Financial Aid (%)	1.31	0.93	2.41	0.86 ***	1.10
Amount of Financial Aid (\$)	12.31	93.26	213.90	68.99 ***	201.58
<b>Interaction of Enrolment in PSE and Financial Aid</b>					
PSE Program with Financial Aid	0.91	0.74	2.27	0.79 ***	1.36
PSE Program without Financial Aid	-2.09	1.67	-2.06	1.44	0.03
University Program with Financial Aid	0.64	0.65	1.76	0.73 **	1.12
University Program without Financial Aid	-0.39	1.06	-0.27	1.13	0.12
Non-University Program with Financial Aid	0.69	0.52	0.77	0.43 *	0.08
Non-University Program without Financial Aid	-2.22	1.99	-1.83	1.10 *	0.39
College Program with Financial Aid	0.72	0.52	0.81	0.43 *	0.10
College Program without Financial Aid	-2.90	1.89	-1.49	1.05	1.42
Apprenticeship with Financial Aid	-0.02	0.02	-0.03	0.04	-0.01
Apprenticeship without Financial Aid	0.55	0.44	-0.30	0.27	-0.85

**Table 11 Adjusted Impacts of LAHS BC, by Implementation Quality**

Outcomes	Lower Quality		Higher Quality		Subgroup Difference
	Mean Impacts	S.E.	Mean Impacts	S.E.	
<b>Academic Performance (Grade 12 School Year)</b>					
Graduation (%)	1.02	0.93	0.72	0.72	-0.30
Total number of courses taken	0.06	0.08	0.03	0.09	-0.03
Total number of courses failed	0.01	0.02	-0.01	0.02	-0.01
Total number of courses passed	0.06	0.09	0.04	0.08	-0.02
Number of As received	-0.11	0.10	-0.02	0.06	0.09
Number of Bs received	0.09	0.06	0.01	0.04	-0.08
Number of Cs (C+, C- or C) received	0.07	0.07	0.04	0.05	-0.03
Number of Fs received	0.01	0.02	-0.01	0.02	-0.01
Number of courses taken with no marks	0.00	0.01	0.00	0.02	0.00
Number of credits received	0.25	0.34	0.12	0.34	-0.13
Total Grade points received	-0.06	1.39	0.02	1.00	0.08
Credit Weighted GPA (1-4)	-0.05	0.03 *	-0.01	0.03	0.04

	Lower Quality	Higher Quality
<b>Number of observations</b>		
Control - Earlier Cohorts	7,151	12,236
Control - 2010/11	2,368	3,971
Program - Earlier Cohorts	5,998	11,244
Program - 2010/11	2,118	3,743

### Propensity to graduate and enrol in postsecondary education

If Life After High School were to have an impact on enrolment, the expectation is that it would affect in different ways students who are on the margin, those who are not quite ready for postsecondary education and those who intend to go on to post secondary, even without the program. It is reasonable to expect that any impacts observed for Life After High School would primarily affect students who would have a marginal likelihood to attend a postsecondary education program in the absence of the program. Among students who are not likely to graduate high school, the impact of Life After High School is expected to be negligible, since the change in behaviour required for them to complete their studies and become eligible for a postsecondary education is quite large. Among students who would be expected to attend a postsecondary program without an intervention, the expected effect of a



program like Life After High School would be on altering the type of program they attend and how it is financed.

These expected variations in impacts were investigated using an estimate of the propensity to graduate high school and attend a postsecondary education program. The propensity to graduate high school and attend a postsecondary program in the absence of treatment was measured using a multinomial logistic regression with the sample of students from earlier cohorts (i.e., 2007/08, 2008/09, and 2009/10), before Life After High School began. The dependent variable for the model was a categorical variable of three possible outcomes after Grade 12: did not graduate from high school; graduated from high school but did not attend a public postsecondary program in BC; graduated and attended a public postsecondary program in BC. Independent variables included gender, age, Aboriginal status, counts of courses taken and passed in Grades 10 and 11, grade point average in Grades 10 and 11, course marks for compulsory courses, selected popular courses, and several interaction terms with course marks. Using the generated propensity scores from this model, a “less likely to graduate high school” subgroup was defined as those with a propensity of not graduating high school greater than 30.9 per cent. The remaining sample was then split using the propensity of attending postsecondary education at 47.9 per cent, where “likely to graduate but not likely to attend post secondary” are students with a propensity of less than 47.9 percent and “likely to graduate and attend post secondary” are those with a propensity of 47.9 or higher.

Table 12 presents the impact results for these three subgroups. As shown, students in the “not likely to graduate” subgroup were actually adversely affected by Life After High School. Enrolment in university programs decreased by 1.82 percentage points and receipt of financial aid was also less than it would have been in the absence of the program. There was no impact on the subgroup “likely to graduate and not attend post secondary” on enrolment but there was an impact to increase their use of financial aid. This increase was primarily concentrated in financing of their college education. As expected, those “likely to graduate and attend postsecondary” did switch from college to university and increased their use of financial aid.

**Table 11 Adjusted Impacts of Life After High School BC by Propensity to Graduate High School and Attend PSE**

Outcomes	Not Likely to Graduate High School					Likely to Graduate but Not Likely to Attend PSE					Likely to Graduate and Likely to Attend PSE					Subgroup Differences			
	Control Group		Program Group		Mean Impacts	Control Group		Program Group		Mean Impacts	Control Group		Program Group		Mean Impacts				
	Earlier Cohorts	2010/11	Earlier Cohorts	2010/11		Earlier Cohorts	2010/11	Earlier Cohorts	2010/11		Earlier Cohorts	2010/11	Earlier Cohorts	2010/11					
<b>Transition to PSE</b>																			
Enrolled in a PSE program (%)	38.46	37.00	39.54	34.77	-3.30	*	41.67	37.13	40.89	37.87	1.52		46.51	44.38	45.54	42.23	-1.18		
Enrolled in a University program (%)	18.33	18.58	18.79	17.22	-1.82	**	18.85	18.56	17.94	17.78	0.13		25.52	22.96	19.71	20.07	2.92	*	+
Enrolled in a Non-university PSE (%)	22.04	20.36	22.60	19.19	-1.73		24.89	20.02	24.94	21.73	1.66		24.12	22.79	28.97	23.56	-4.08	**	++
Enrolled in a College program (%)	21.15	19.39	22.23	19.00	-1.48		23.76	19.51	24.10	20.97	1.12		23.08	21.67	27.93	22.88	-3.64	**	+
Enrolled in Apprenticeship (%)	1.26	1.13	0.68	0.67	0.11		1.27	0.69	1.08	0.88	0.39		1.16	1.27	1.13	0.86	-0.39		
Received Financial Aid (%)	6.55	7.41	6.05	4.89	-2.02	**	8.06	7.45	7.21	8.07	1.48	**	9.98	9.97	8.53	12.00	3.48	***	+++
Amount of Financial Aid (\$)	550.32	687.23	536.02	391.87	-281.05	**	659.99	597.58	582.06	670.33	150.68	**	809.73	788.40	662.88	869.30	227.75	**	+++
<b>Interaction of Enrolment and Financial Aid</b>																			
PSE Program with Financial Aid	4.33	4.75	3.79	3.28	-0.93		5.49	5.38	4.82	5.88	1.17	**	7.64	7.56	6.33	9.27	3.02	***	+++
PSE Program without Financial Aid	34.14	32.26	35.74	31.49	-2.37		36.18	31.74	36.07	31.98	0.35		38.86	36.82	39.21	32.96	-4.20	**	+
University Program with Financial Aid	2.49	2.45	2.21	2.22	0.04		2.99	2.88	2.52	2.82	0.41		5.36	5.03	3.62	5.95	2.66	***	+
University Program without Financial Aid	15.84	16.12	16.58	15.00	-1.86	***	15.86	15.68	15.41	14.96	-0.27		20.15	17.93	16.09	14.13	0.26		+
Non-University Program with Financial Aid	1.94	2.32	1.62	1.24	-0.76		2.71	2.63	2.50	3.31	0.89	*	3.09	2.73	3.33	3.87	0.90	*	+
Non-University Program without Financial Aid	20.11	18.04	20.98	17.94	-0.97		22.18	17.39	22.44	18.42	0.77		21.03	20.06	25.63	19.69	-4.98	***	++
College Program with Financial Aid	1.93	2.09	1.65	1.28	-0.53		2.68	2.63	2.45	3.31	0.91	*	3.09	2.72	3.32	3.86	0.90	*	
College Program without Financial Aid	19.22	17.30	20.58	17.72	-0.94		21.08	16.88	21.66	17.66	0.21		20.00	18.95	24.61	19.02	-4.54	***	++
Apprenticeship with Financial Aid	0.02	0.24	-0.03	0.13	-0.07		0.04	0.01	0.09	0.01	-0.05		0.00	-0.01	0.00	0.00	0.00		
Apprenticeship without Financial Aid	1.24	0.88	0.71	0.54	0.18		1.22	0.68	0.98	0.87	0.43		1.16	1.28	1.14	0.86	-0.40	*	

**Table 11 Adjusted Impacts of Life After High School BC by Propensity to Graduate High School and Attend PSE**

Outcomes	Not Likely to Graduate High School					Likely to Graduate but Not Likely to Attend PSE					Likely to Graduate and Likely to Attend PSE					Subgroup Differences
	Control Group		Program Group		Mean Impacts	Control Group		Program Group		Mean Impacts	Control Group		Program Group		Mean Impacts	
	Earlier Cohorts	2010/11	Earlier Cohorts	2010/11		Earlier Cohorts	2010/11	Earlier Cohorts	2010/11		Earlier Cohorts	2010/11	Earlier Cohorts	2010/11		
<b>Academic Performance (Grade 12 School Year)</b>																
Graduation (%)	75.41	71.33	77.47	75.94	2.54	91.49	89.40	90.73	90.07	1.42	90.16	90.04	90.45	89.86	-0.47	
Total number of courses taken	5.49	5.44	5.59	5.62	0.08	5.94	5.85	6.11	6.07	0.05	6.05	6.05	6.09	6.11	0.02	
Total number of courses failed	0.26	0.26	0.31	0.37	0.06	0.17	0.20	0.19	0.19	-0.03	0.18	0.18	0.17	0.19	0.01	* +
Total number of courses passed	5.18	5.13	5.19	5.13	-0.01	5.70	5.58	5.83	5.80	0.09	5.79	5.79	5.84	5.85	0.00	
Number of As received	1.97	1.96	2.00	1.94	-0.05	2.14	2.12	2.13	2.08	-0.03	2.13	2.16	2.14	2.10	-0.07	
Number of Bs received	1.45	1.44	1.54	1.51	-0.02	1.64	1.62	1.67	1.72	0.08	1.77	1.73	1.80	1.78	0.01	
Number of Cs (C+, C- or C) received	1.77	1.72	1.65	1.67	0.06	1.92	1.84	2.02	1.98	0.04	1.89	1.89	1.90	1.96	0.06	
Number of Fs received	0.26	0.26	0.31	0.37	0.06	0.17	0.20	0.19	0.19	-0.03	0.18	0.18	0.17	0.19	0.01	* ++
Number of courses taken with no marks	0.05	0.05	0.10	0.13	0.03	0.07	0.08	0.09	0.09	0.00	0.08	0.08	0.08	0.08	0.00	
Number of credits received	21.97	21.77	22.36	22.49	0.33	23.76	23.41	24.44	24.29	0.20	24.18	24.20	24.36	24.45	0.07	
Total Grade points received	61.37	61.07	62.44	61.02	-1.13	67.99	66.75	69.22	68.61	0.64	69.13	69.31	69.83	69.49	-0.51	
Credit Weighted GPA (1-4)	2.58	2.58	2.56	2.60	0.03	2.76	2.77	2.75	2.72	-0.03	2.76	2.77	2.77	2.74	-0.04	*

## Interpreting the findings

The results demonstrate that Life After High School produced no discernible impacts on postsecondary enrolment for the cross section of participants, but increased the use of financial aid. It also did not produce enrolment impacts for others who might be considered intended beneficiaries of such an approach, such as Aboriginal students or boys, who are known to traditionally have lower rates of access to postsecondary education. The reasons for these results are not known for sure, but plausible explanations as to why positive impacts were not observed for the full sample of participants in schools offered the program include the program inducing delays in enrolment, out of province enrolment and non-public enrolment, rejection of submitted applications for programs or financial aid and insufficient supply of postsecondary places. It is also possible that the “nudge” theory, which posits that increasing the number of students holding an acceptance letter and aid offer upon leaving Grade 12 will increase the chances that students will follow through and enrol, does not hold.

For instance, some students, although able to meet some postsecondary entry requirements, may have decided against making the immediate transition to post-secondary education for various reasons attributable to the program (e.g., retaking Grade 12 to improve course outcomes, not feeling prepared to tackle the chosen post secondary education option, for example because it has higher costs or requires moving away from home). This explanation could account for the program lowering the rates of immediate transition among some students with low propensities to graduate high school and Aboriginal students. Longer-term outcomes cannot be observed in the current data, which looks only at impacts on the immediate transition to postsecondary programs in the year immediately following the program year

The intervention may have also raised expectations among students who were not at the time taking courses that would qualify them for postsecondary education, but who would have been encouraged to apply during Workshop 2. These students may have had to continue taking high school level courses to meet postsecondary entry requirements and postponed their pursuit of postsecondary enrolment by a year or more.

The program may have also raised the expectations about the affordability of studying outside BC, thus encouraging students to apply to and attend non-BC institutions or possibly even more expensive private institutions. Such programs are often eligible for student financial aid. The results for such students cannot be extrapolated from the current data, which only provides information for those enrolling in public BC institutions.

The program may have encouraged students to make more ambitious applications for programs (more ambitious in terms of their academic entry requirements, distance from home or raised costs) and in turn possibly also altered the content of their needs assessment for student financial aid. If either of these types of applications were unsuccessful (or if the offer of aid was less than anticipated) the student may have decided not to pursue postsecondary in 2011-12. These unintended outcomes – in situations where a normally less ambitious application would have been made - would mean the program reduced postsecondary education enrolment in the following year.

A shortage of postsecondary places in the programs students applied for at public institutions could also have affected enrolment. If the program induced increased applications to programs where places

were in short supply, or altered the timings of application so that they were later than optimal for securing a place, it is plausible that Life After High School applicants could have crowded each other out. Possibly some may have been accepted into an institution but not in their chosen program, or may have been waitlisted, and decided to postpone entry.

Finally, it is plausible that the theory underlying Life After High School does not hold at the levels of implementation observed in BC. The program meant students at low-transition schools were more likely to apply, but those increased applications translated much less often than forecast by the theory into enrolment. The inertia in student decision-making that the program process was meant to overcome might still have been too great to permit any substantive change in outcomes. In other words, student might have completed school with offers from post-secondary institutions and/or offers of student aid – that they would not have had without the program - but still these were not sufficient inducements (or “nudges”) to change their immediate post-secondary school destination. Of course, the results are dependent on the program experience. Some students at program schools did not complete applications. The students overlooked or who failed to complete workshops may have been the ones more susceptible to the “nudge”. Possibly, with more complete implementation, more or different students would have applied and received such offers, and the impact among those students might have changed the results.

Unfortunately, access to quantitative data that would help to substantiate or refute the above suggested reasons for the observed results on enrolment is not available at the time of reporting. Adding to the explanation represents an important area for future research.

## Other results

The original research questions concerned the program’s impacts on the following:

- Students’ knowledge of post-secondary costs and potential benefits
- Students’ rate of applying to enrol in post-secondary education
- Students’ acceptance into post-secondary programs
- Students’ rate for applying for financial aid
- Students’ enrolment into post-secondary programs
- Students’ schooling and labour market expectations
- Students’ understanding of financial aid
- Students’ awareness of post-secondary options and the role of post-secondary education in helping to pursue those options
- Students’ familiarity with and confidence in the process of applying to post-secondary education and receiving student financial aid.

The intent of the following section is to provide additional results from other data sources that contribute to answering those of the above listed research questions that cannot be answered using the

administrative data. These results come from analysis of the educator’s survey and two focus groups of student participants.

### Students’ knowledge of post-secondary costs and potential benefits

Table 13 reports on educators’ assessments of whether the first workshop helped students understand the costs and benefits of post-secondary education. No one thought that it had not, although one respondent skipped the question and 12 per cent were not sure. At least three quarters agreed or agreed strongly that the class had helped the students understand the costs and benefits of post secondary education.

**Table 13 Educator’s assessment of Workshop 1 (program schools only)**

Reported by school contact	(%)
Proportion agreeing or disagreeing with statement: Students found that the first class helped them to understand the costs and benefits of post-secondary education	
Strongly disagree	0
Disagree	0
Neither agree nor disagree	9
Agree	47
Strongly agree	27
Not sure	12

School principals, vice principals and counsellors (n=37) weighted by school (all contacts from each school weighted to sum to 1.0).

### Students’ rate of applying to enrol in post-secondary education

The survey asked educators at program and control schools about the proportions of Grade 12 students applying to post-secondary education. Although the answers shed some light on one of the key Life After High School program activities (that students were to complete in workshop 2), the comparison between the groups of schools is subject to the same caveats as earlier sections relying on survey data. Low response leaves considerable room for a selection bias in control school responses.

Higher rates of applying were reported at program schools (Table 14). More than a quarter (26 per cent) of those from program schools said that 80 per cent or more of their Grade 12 students had applied, compared to just 7 per cent at control schools. And a further 37 per cent at program schools said between 50 and 79 per cent of their Grade 12 had applied, in contrast to just 12 per cent at control schools. It is perhaps also worthy of note that the proportion of educators “not sure” of the proportion of Grade 12 students applying was higher at program schools. Possibly Life After High School simultaneously increased application rates and reduced educators’ awareness of the extent to which their students were actually applying.

Data from the Life After High School payment system is included in the centre column of Table 14 and is broadly consistent with educators' assessments of the rates of application.

**Table 14 Application to PSE (program and control schools)**

	Program schools		Control schools
	(survey %)	(payment system %)	(survey %)
What proportion of the Grade 12 students from your school <u>applied</u> to attend a program at a university, college or technical school in the upcoming school year?			
0-9%	0	0	4
10-19%	3	0	14
20-29%	0	4	21
30-39%	0	4	27
40-49%	8	8	7
50-59%	11	13	0
60-69%	17	17	10
70-79%	9	13	2
80-89%	21	21	7
90-100%	5	21	0
Not sure	26	-	7

School principals, vice principals and counsellors (n=59) weighted by school (all contacts from each school weighted to sum to 1.0).  
Payment system counts of applicants paid by Life After High School as a proportion of graduating Grade 12.

A different perspective on the rate of applications is available from administrative data made available by ApplyBC, formerly the Post-secondary Applications Service of BC (PASBC). This centralized service is available to any student wishing to apply to a BC public post-secondary institution. Prospective students create a single account from which they can make multiple program applications to one or more institutions. Once an applicant has lodged his or her personal data in a centralized ApplyBC account it can be forwarded to each institution as the student applies to programs at each one (and in successive years). Thus, using ApplyBC saves the student time over making separate applications to multiple institutions. Furthermore, many BC institutions channel all their applications through ApplyBC. Others (notably UBC) run their own application system, which ApplyBC also feeds applicants into. All Life After High School participants were directed to initiate applications by opening ApplyBC accounts.

ApplyBC provided counts of new accounts opened by students from each high school participating in Life After High School and counts of applications made by students from each high school using their Apply BC accounts. Since these counts will vary by the size of the cohort of students at each school, regardless of the effect of any program, SRDC has divided the sum of the counts at program schools and control schools by the counts of Grade 12 student numbers in each cohort. Thus the second column in Figure 2 shows that for every 100 Grade 12 students at program schools in 2009/10 (the year before Life After High School), there were roughly 33 ApplyBC accounts opened. The proportion per 100 control group Grade 12 students was very similar: 31. However, in the year of Life After High School (2010/11) the rate of new accounts opening was little different at control schools (33 per 100) and much larger (58 per 100) at program schools. Figure 2 also shows the number of applications per Grade 12 student rose much more dramatically from 2009/10 to 2010/11 at program schools. The program-control differences in these changes of year-to-year rates are statistically significant in both cases. These too are “difference in differences” impact estimates although (given the non-individualized nature of the data) calculated using a different approach to that used to estimate enrolment impacts in the previous section.

**Figure 2 Post-secondary Application Service accounts opened and applications made in 2009-10 and 2010-11 at program and control schools**

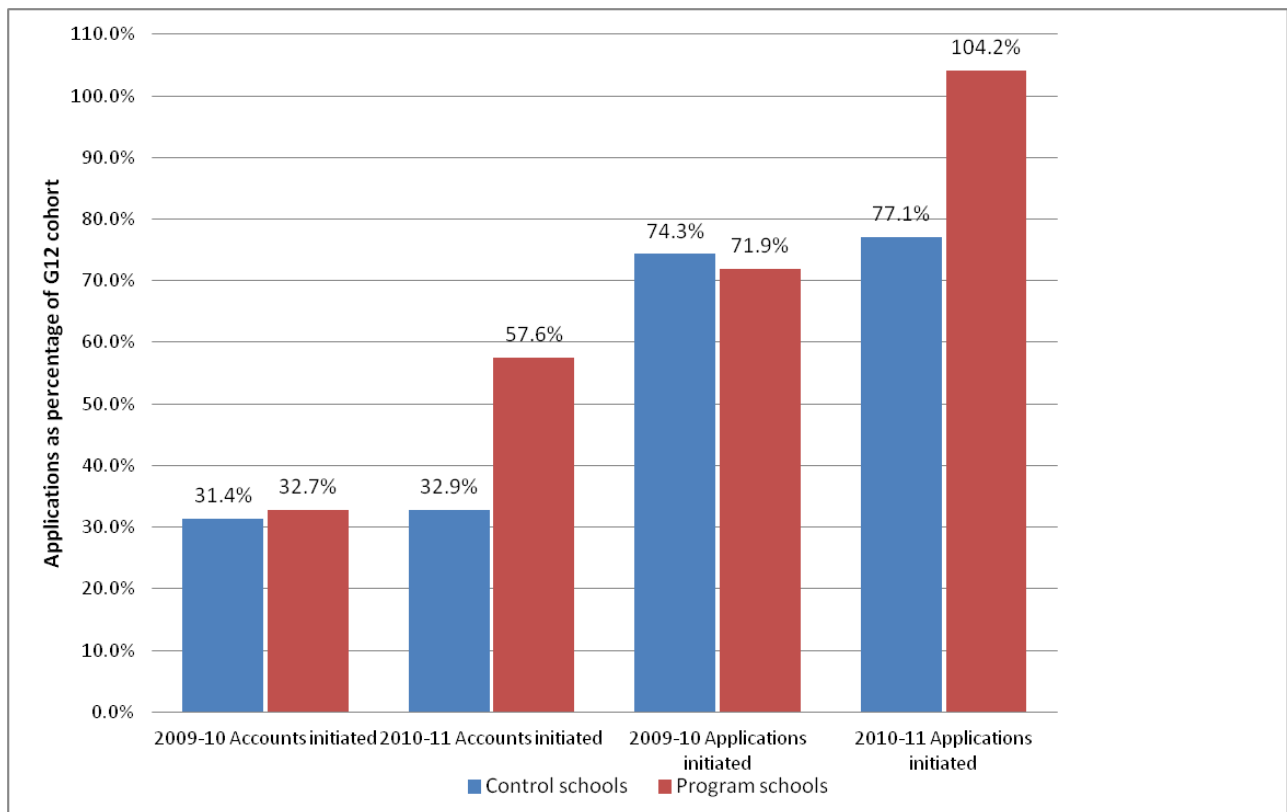




Figure 2 uses imperfect data to estimate the Life After High School impact on applications. ApplyBC supplied counts of all new accounts and applications matched to the participating high schools. Many more people than just the Grade 12 cohort subject to the Life After High School treatment could open such accounts and make applications (such as former students of these schools who graduated in earlier years) and each current or former student can make one or more applications. Therefore, it is hard to tell what is driving the increase. Are *more* applicants each making a similar number of applications as applicants in the previous year or are the same number of applicants simply making *more* applications? To accept that the increases in account opening and applications are impacts attributable to Life After High School requires assuming that the 2010-11 Grade 12 cohort's experience with Life After High School represented the *only* systematic difference between ApplyBC account holders at program schools and control schools. This assumption is certainly made plausible by the randomized allocation of schools to Life After High School and non-Life After High School status.

### Results from qualitative data

Answers concerning the remainder of the project's original research questions rely primarily on qualitative data as they are hard to gauge quantitatively in an online survey or administrative data. These questions concerned the Life After High School impact on the following:

- Students' schooling and labour market expectations
- Students' understanding of financial aid
- Students' awareness of post-secondary options and the role of post-secondary education in helping to pursue those options
- Students' familiarity with and confidence in the process of applying to post-secondary education and receiving student financial aid.

The main sources of qualitative data are several open-ended questions in the educators' survey and two focus groups conducted with participating students at two program schools. The educators and students who provided their subjective assessments of the program's impacts may not be representative of all schools and so may possibly provide a biased impression of program effects.

Table 15 includes all responses from educators to the open-ended survey question most likely to elucidate comments on other impacts of the program. There are indications that the program did stimulate considerably more activity (or "buzz") around post-secondary applications and aid application activity in the participating schools, including more planning by (and questions to counsellors from) students. No one reported changes that indicated negative consequences for students' awareness, understanding or familiarity with different aspects of the process.

**Table 15 Perceived changes caused by Life After High School (program schools only)**

**Briefly describe any changes you think Life After high School might have brought about for Grade 12 students this year compared to earlier years: were they doing more or less of other kinds of activities, asking more or fewer questions, what types of questions?**

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I dealt with fewer students voicing concerns about applying to post secondary schools. I think once they went through an application with help, it made it easier to do the next time they did an application.

It got more students thinking about post secondary plans and took away some of the anxieties that they may have had.

More students applied for post-secondary and spent time with our career counsellor as a result of this program

Actually created more questions about post secondary...that is the type of discussion that we would like to encourage.

Because they applied together there was more discussion among the students about their post secondary plans.

The Life After High School project helped us get way more students to apply for post secondary and it also helped us with the students that would have applied any way. It is difficult to put into words... The fact that every grade 12 had this opportunity was outstanding. It resulted in more students applying for post secondary as well as financial aid and it also brought out more questions.

Lots of visits to career facilitators and counsellors!

Our applications to [nearby university] were up compared to last year. Some students missed deadlines for submitting grades because they thought that this information went automatically from Life After High School to the university, even though it was explained that they must pay attention to correspondence and follow instructions from the institute.

Little to say here - I thought it was great program!!!!!!!!!! I have my fingers crossed that there will be a repeat for next year.

Taking the students through the application process meant fewer students were panicked as deadlines approached. The PSI selections process was much simpler. In the past we sent students home with instructions but many times those were lost or they forgot to do it.

The program definitely induced a buzz among our Grads, to the point where they were asking their teachers questions regarding post-secondary and then those questions were being re-directed to us in the Career Centre! Most of the questions were regarding what choices of schools, types of programs available, etc (not a lot of financial based questions).

Life After High School was a much clearer, streamlined process for kids. It was an excellent process that I really hope is available next year.

There was audible talk in the hallways after workshop 2. The Grade 11s began asking if they could do it next year.

The students who took part had excellent feedback as to the value of the on line searches and very helpful support for the Life After High School staff. This was our first year so we will get better!

I thought it was well organized and relatively easy to deliver. It is more information than any student has received in the past.

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Verbatim quotes from school principals, vice principals and counsellors' responses. All responses are included in full, apart from five educators who felt they could not comment.

The views of students themselves were collected in two program schools via focus groups in June 2011. These covered a wide range of topics including reaction to the program Web site and the presenters, mandatory attendance and suggestions for improving the program. However, students did talk about what they had learned through participation and their answers illustrate that students felt they had gained awareness and understanding across the diverse range of possible future activities. In Table 16, extracts from the focus group recordings are grouped under headings reflecting the four project questions being considered in this section.

Although the comments included are representative of those who attended focus groups, it is important to note that those who choose to attend such groups (run immediately after the third workshop) will likely be composed disproportionately of those favourably disposed to the program, probably because they feel they are getting something useful out of it. Thus the responses in Table 16 are better interpreted as example of what students *can* get out of Life After High Schools rather than necessarily of what *all* students will get out of it.

It is difficult to derive convincing impact estimates from surveys with varying response rates and from qualitative responses. The more convincing estimates are those presented from analysis of administrative data that has systematic and complete coverage on secondary school completion and postsecondary enrolment. Nonetheless, simultaneous analysis of the data from the sources represented above has helped to increase researchers' understanding of how and why certain impacts were achieved or not, and variations observed for different groups. Together with the data on quantified impacts, they provide valuable lessons for any future implementation of the Life After High School program.

**Table 16 Focus group discussion topics [program schools only]**

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**Schooling and labour market expectations:**

[Life After High School] showed you each program and what you could take and future careers you could have based on that, that gave you an idea about what you could do with something, made it more interesting and real, you could have a job out of it.

Had thought about what to do after high school but it was hard to start the process, this was a good way to start.

I didn't know at all what I wanted to do, but by the end of that first session I'd narrowed it down way more than I had done before; and then I liked where there was a large amount of time between the first workshop and the second workshop to have time to narrow things down further in my head to see what I could apply for.

**Understanding of financial aid:**

Learning about grants and loans – I never thought it would be that easy, it showed me my options flat-out – you're eligible for this and this, these are good careers to follow, it was awesome.

I knew I had to apply but I had no idea how to go about it, this was good way to start the process; no one in my family would know how to go about this; would have been on my own to figure it out, so much easier with help and the Web site;

I knew what I wanted to do but didn't know how to go about doing it; applying, financial aid, so many things at once, so it was really nice to have sessions 'do this, now do this, now get that done' – it was good.

**Awareness of post-secondary options:**

Didn't know I had so many options to go to different schools and different programs, didn't know much about PSE – didn't know what a diploma was, just knew about Bachelors, taught me the majority I now know about registration and so forth, thought it was awesome.

Liked all the options it gave, enter your Grade 10 transcript and then could see lots of options, liked that was shown different careers – not just jobs – so aerospace engineers and pipe-fitters both listed there and both good options, can make good money on both of them.

Word was starting to get out that there were options other than university; more students becoming aware of that; more students hearing about trade schools and colleges – and that you could take a year off and then go.

**Familiarity with applying for programs and aid:**

I found applying online through the PASBC Web site the most useful; I knew what I wanted to do but not where I wanted to go; so I used that to apply to different places; could do that a lot quicker and easier using the PAS Web site.

Once I had put in application, I realized I really don't want to do this but got me motivated to apply for what I really want to do.

I'm planning going out-of-province, had applied to a program elsewhere, got into the program okay – so Life After High School wasn't as helpful for me.

What was helpful was the email saying what to bring to the next session; they could finish getting missing pieces of information at home and then mail in the application from home.

I hadn't really thought about applying for anything, hadn't really looked into it (PSE), then this was like 'here it is, do it' – and I know now a lot of kids are going to school now because of the program.

## Conclusion

The Life After High School project was an experiment designed to test an intervention aimed at increasing post-secondary enrolment among BC youth. Low transition schools in BC were recruited to participate in the project and subsequently randomly assigned to either a program group or control group. Program schools received the multi-media information package delivered in a sequence of three workshops, while the control group schools did not. By using a random assignment design, outcomes for the 2010/11 cohort of Grade 12 students from program and control group schools have been compared to earlier cohorts and between schools to determine the effects of the program. Because prior to random assignment schools had very similar transition rates and only chance determined who received the program, the study's evaluation provides unbiased impacts of the program impact.

Results from the implementation research show that while Life After High School was applicable to all Grade 12 students and that there was interest in the program, there was a gradual decline in participation from workshop 1 to workshop 3. While an estimated 90 per cent of qualified students attended workshop 1, about one-quarter of them did not attend workshop 2 and still fewer of them attended workshop 3. The reasons for non-attendance varied across schools and included scheduling conflicts, a lack of enforcing mandatory participation as well as seemingly lack of interest of some students. Despite the drop in attendance and other challenges encountered in the delivery of the program (e.g., computer glitches and change in delivery of workshop 3) all three workshops were held at all 24 program schools and all qualified students were well aware of them.

The program's only encouraging result consistently showed an increase in the use of and (nearly always) amounts of student financial aid across subgroups, including Aboriginal students, non-Aboriginal students, boys, and girls

The apparent switching from college enrolment to university enrolment, with the help of student financial aid, observed across the entire sample and among boys, non-Aboriginals, and those who were already likely to graduate and enrol in some form of postsecondary is possibly encouraging, given the economic benefits of a university education compared to that of college. However, other explanations for the simultaneous decrease in college, without aid, and increase in university enrolment, with financial aid, cannot be ruled out.

These results were observed despite the fact that attendance at workshop 2 (where post-secondary education applications were processed) and workshop 3 (where aid applications were initiated) were not as high as they could have been. It is therefore plausible that a mandatory program that is enforced may strengthen the impacts observed so far. At the same time, the unintended adverse effects on immediate college enrolment among Aboriginal youth may indicate a requirement for an alternatively-focused program for Aboriginal youth.

## 4. Lessons learned

This section discusses what has been learned from the implementation and delivery of Life After High School in BC and the results of the program impacts.

### Implementation and delivery

The Life After High School delivery mechanism was three multi-media workshops that students were expected to attend in order to learn about the benefits of postsecondary education and to receive hands on help in applying to a postsecondary education program and for financial aid. As mentioned in Section 2, attendance at the Workshops was not as high as it could have been and declined substantially following Workshops 1 and 2. The exact reasons for the decline are not known; however, it is possible that students would have attended more workshops if they were scheduled in the Grade 12 timetable as separate, compulsory, classes. In several cases, the workshops competed with another course on the timetable and were therefore disruptive to the competing class and teacher, especially when some, but not all students, had to leave to attend Life After High School. Enforcing mandatory attendance is also easier when there is no competing course scheduled at the same time.

Additionally, teachers and counsellors were not always supportive of the project and in some cases did not follow project procedures to encourage participation from students. Securing full buy-in from principals, teachers, and counsellors and at least minimum awareness of staff tangentially affected would help in alleviating some of the problems encountered with competing courses and any negative attitudes towards the program. In any future implementation, more emphasis should be placed on scheduling early communications with school staff combined with school-level briefings to ensure educators understand and support the program's implementation. Indeed, schools where local counsellors were fully supportive of the program provided the most cooperation, throughout the implementation phase, and the reverse was also true where that was not the case.

Contingency plans for additional sessions should be in place from the outset, given the many scheduling challenges encountered, such as disruptive weather during the late fall and winter months and the rescheduling of sessions missed by students for other reasons. Rescheduling of postponed or missed workshops (due to bad weather) often proved quite difficult.

While the most common problem faced during Workshops 2 and 3 was reduced attendance, some students who did attend Workshop 2 faced computer login challenges and freezing of online application forms. Adequate internet capacity and speed and email access is necessary for a smooth postsecondary application process. While it may not be possible to alleviate all of the computer problems that were encountered, a less daunting and a less complicated application process, may also encourage students to return to the subsequent workshop. The online experience of students who attempt to apply to BC postsecondary institutions could be streamlined or enhanced by adoption of a common portal design, standardized process and multiple applications per fee, perhaps modelled on the systems in place in Ontario.

As originally designed, one of the objectives of Workshop 3 was to take students through the application process for StudentAidBC. However, this form is sometimes not made available online until

beginning of June. This timing does not allow sufficient time for scheduling of Workshop 3, since provincial examinations takes place during the third week of June and school closes for summer vacation during the last week of June. Ideally, Workshop 3 would take place in May or earlier and online aid application forms would also be ready in advance of this date, so that students could prepare by entering time-invariant information in advance. SRDC switched Life After High School to paper financial aid applications forms in order to complete the workshop on time. A very small number of students completed and submitted paper application forms; most choosing instead to complete the online form when it later became available. The online process is less cumbersome, especially as it relates to the retention of each student's unique StudentAid BC application number. The aid application can be further simplified and streamlined by integrating the collection of common information with other forms that must be completed, such as ApplyBC and parent tax returns. At present, these forms must duplicate the collection of several pieces of identical (or very similar) information.

## Impacts

When considering the entire cross-section of students or subgroups, the intervention had no positive impacts on postsecondary enrolment. The effectiveness of Life After High School on postsecondary enrolment may have been limited by the fact that attendance at Workshop 2, where applications had to be completed in order to avoid student or parent payment, were not as high as they could have been. Making the workshops part of the Grade 12 timetable, with no competing courses or activities would go a considerable way towards helping enforce attendance, closer to the mandatory participation in applications expected under the “nudge” theory.

The weak attendance in Workshop 3, signals that there is more work to be done to raise the interest of more Grade 12 students about the types of aid available for which they may qualify and the consequences of applying for aid. Despite low attendance in Workshop 3, the project's most consistent result, across the entire sample and for most subgroups is the increase in the proportion that received financial aid and the average amount they received. The two percentage point increase represents a raising of the numbers receiving aid by one fifth. This supports the notion from behavioural economics that relatively small differences in approach can have significant consequences.

While the impacts of Life After High School BC at this point are not promising, further analysis with additional data sources and data covering a longer period after high school may be needed to address several current unknowns. For example, future research using administrative data, but for a longer period of follow-up, could revisit the idea of whether Life After High School induced any delayed enrolment. Similarly, access to micro-level application and acceptance data may also be able to shed light on whether Life After High School may have raised the expectations of students not yet qualified for postsecondary education.

## Overall

The Life After High School project was created to test a hypothesis, that increasing the proportion of students who apply for postsecondary education and student financial aid before leaving high school will increase the proportion who enrol in postsecondary education. This first ever implementation of such a test has not provided evidence to support the hypothesis, given that there are no observed

impacts on post-secondary enrolment. Plausibly, incomplete implementation reduced the effectiveness of the test. Also plausibly, longer-term follow up – beyond the timeline of this report – could reveal more promising enrolment impacts two or three years after leaving high school compared to those seen in the year immediately following Grade 12. Nonetheless, the observed impacts on immediate take up of student financial aid have demonstrated that many students are susceptible to modest “nudges” of the kinds sought. There thus remains a justification and scope for further refinement of program models and their testing to determine the role to be played by “nudges” and changing defaults in removing barriers to postsecondary education.