Effects of Student and Family Background Characteristics on Post-Secondary Education Access, Persistence, and Completion, and Labour Market Outcomes in British Columbia

Final Report

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Ashley Pullman | Michael Dubois | Reuben Ford | Ruo Feng

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For more information on SRDC, contact

Social Research and Demonstration Corporation
55 Murray Street, Suite 400
Ottawa, Ontario K1N 5M3
613-237-4311 | 1-866-896-7732
info@srdc.org | www.srdc.org

Vancouver Office
890 West Pender Street, Suite 440
Vancouver, British Columbia V6C 1J9
604-601-4070

Remote offices:
Alberta, British Columbia, Manitoba,
Ontario, Quebec, and Saskatchewan
1-866-896-7732

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EXECUTIVE SUMMARY

BACKGROUND

Supporting young Canadians to realize their maximum potential is a widely embraced political aim, regardless of whether the ultimate objective is enhancing economic growth, fostering innovation and competitiveness, social inclusion, or the reduction of social and health disparities. Most individuals from disadvantaged backgrounds will have to embark on post-secondary education, which may encompass trades, college, or university, in order to excel in the global knowledge-driven economy. While many experience barriers on their journeys to completing their education and entering the labour market, policy makers lack information about the specific obstacles faced, where along the pathway they arise, and which students are most at risk of encountering them.

Uniquely among Canadian jurisdictions, British Columbia provides researchers access to administrative data on education that supports analysis of an extensive span of virtually all B.C. students' journeys. Rich data linking student records from kindergarten to postgraduate studies, as well as to student and parent tax records, allows researchers to explore the effect of early experiences and household socioeconomic status on later education pathways, decisions, and outcomes.

To identify trends along with possible education and labour market barriers over the early life course, this research examined how a set of early student, schooling, family, and neighbourhood characteristics related to: entering post-secondary education (PSE); completing a PSE credential; earnings levels among PSE graduates; and labour market entry and earnings reported among those who did not pursue further schooling following high school.

The empirical portion of the project involved developing a range of statistical models to analyze these relationships leveraging the B.C. Kindergarten to Grade 12 data (BCK-12), tax data (T1FF) from both students and their parents, the Post-Secondary Student Information System (PSIS), and the Registered Apprenticeship Information System (RAIS), which are linked through the Education and Labour Market Longitudinal Platform (ELMLP) by Statistics Canada.

In addition, the report presents two in-depth literature reviews. The first explored K-12 interventions and their impact on PSE and labour market outcomes, while the second examined a smaller pool of prior research on the impact of PSE educational exchange programs (e.g., study abroad programs) in PSE on participants' post-secondary success and subsequent labour market outcomes. The objective of these reviews was to understand whether these types of initiatives might reduce barriers to achieving optimal education and labour market outcomes.

QUANTITATIVE FINDINGS

Table 1 provides a simple summary of the project's main regression-adjusted findings. The rows list all explanatory variables, while the columns present a selection of the outcomes we studied: any PSE entry, PSE completion (for those who entered), third year post-graduation earnings (for those who completed PSE), and reporting earnings three years after high school (for those who did not attend PSE).[1] A "**+**" indicates that, for instance, male students (explanatory variable) are more likely than female students (omitted category) to enter any PSE. The number of symbols indicates the extent of the difference (i.e., the size of the coefficient). If no symbols appear in a given cell, it means no statistically significant differences were found.

Continuing the comparison of outcomes between male and female students, the former are: less likely to graduate while significantly more likely to earn more than their female counterparts when they graduate from PSE. This remains true in comparisons of earnings between male and female high school graduates who did not go to PSE, with the percentage point difference being, in that situation, larger.

Turning to the program of entry, relative to students entering bachelor's degree programs directly after high school, students pursuing all other credentials were less likely to finish a program after six years. Those entering certificate and other programs experienced the smallest gap relative to those entering bachelor's programs, while the largest arose for those entering associate degree, university transfer, and general arts and science programs at the college level. Based on the highest program completed within these six years, graduates of trades recorded the highest earnings three years out, followed by bachelor's degree holders, while those with associate degrees had the lowest recorded earnings.

Indigenous students were less likely to enter and complete PSE than non-indigenous students. For Indigenous students who graduated from PSE, as well as Indigenous students who instead entered the labour market after high school, both groups earned less than their non-Indigenous counterparts, even when controlling for a range of programs and student factors.

Students who spoke English at home in Grade 7 were less likely, by a significant margin, to enter PSE than students who spoke any other language at home, with Punjabi, Chinese, and Korean language speakers being the most likely to access higher education. Those who spoke Chinese, other Asian, or East European languages at home were also more likely than students who spoke English to complete PSE, while those who spoke Korean and West European languages were comparatively less likely to complete their studies. Following PSE, students who spoke English at

[1] In the full report, earnings one and two years after PSE and high school are reported, as well as labour market entry after high school; however, we exclude these outcomes from Table 1 to streamline the reporting of results and reduce repetitiveness where outcomes are similar.

home earned more than those who spoke French, South Asian languages, Korean, and Semitic languages at home. For those who did not go to PSE, all linguistic groups earned less than those who spoke English at home, except for those who spoke French and semitic languages.

Compared to those who were aged 12 in Grade 7, students who were younger when first entering this grade were more likely to enter PSE and those who were older were less likely. Older students in Grade 7 were also less likely to complete PSE and tended to earn less than those who entered aged 12. Among those who did not go to PSE, those aged 12 in Grade 7 earned more three years after their expected Grade 12 completion year than those who were younger or older at the time.

Students who were in French immersion in Grade 7 were more likely to enter PSE and complete it relative to other students. However, they reported lower earnings following PSE. Students in English Language Learning (ELL) courses in Grade 7 were less likely to enter PSE relative to students who were not ELL and recorded lower earnings following their completion of PSE. Similarly, students with Individual Education Plans in Grade 7 were less likely than those without to enter PSE and to complete it, and they reported earning less after PSE. Among those who did not go to PSE, students from each of these three groups earned less than their counterparts.

The association between the type of school attended in Grade 7 and outcomes is complex. Compared to students attending B.C. public schools in Grade 7, those in Catholic independent schools and other religious independent schools were all more likely to enter PSE. Students from Catholic and preparatory/International Baccalaureate independent schools were more likely to complete PSE than those from public schools. Aside from students at Catholic and other Christian independent schools, who did not record significantly different third year post-graduation earnings, students from all other schools reported lower earnings than those who attended public schools. Among students who did not attend PSE, students from all school types recorded lower third year earnings than those from public schools.

In terms of school mobility, students who were not in B.C. in Grade 6 or who changed schools between Grades 6 and 7 (voluntarily or not) were less likely to enter PSE than those who were in the same school across these two grades. However, differences in third-year post-PSE earnings were not statistically different by level of school mobility. Among those who did not go to PSE, those who experienced a compulsory change between Grades 6 and 7 recorded higher earnings three years after high school than those who did not; in contrast, students who changed voluntarily reported lower earnings than others.

Table 1 Findings overview

	Explanatory Variable	PSE entry	PSE Graduation	3rd year earnings post PSE	3rd year earnings post high school (no PSE)
PSE Program	**Program of entry (BA)**				
	Certificate or other		–		
	Diploma		– – –		
	Associate degree		– – – –		
	Trade		– – –		
	Highest program completed (BA)				
	Certificate or other			– – – –	
	Diploma			– –	
	Associate degree			– – – –	
	Trade			+ + +	
Student Characteristics	**Male/female (Female)**				
	Male	+	– –	+ + +	+ + + +
	Indigenous (No)				
	Indigenous	– – –	– – –	– –	– – – –
	Home language (English)				
	French	+ +		– –	
	Chinese	+ + +	+ +		– – – –
	Punjabi	+ + + +			– – – –
	South Asian	+ + +		– –	– – – –
	Korean	+ + +	–	– – –	– – – –
	Other Asian	+ + +	+		– –
	West European	+ + +	–		– –
	East European	+ + +	+		– –
	Semitic	+ + +		– – –	
	Other or missing	+ +	–	– – –	
	Age in Grade 7 (Age 12)				
	Age 10 or 11	+			– – – –
	Age 13 or 14	– –	–	– –	– –
Schooling Characteristics	**French immersion (No)**				
	Grade 7 French immersion	+ +	+	– –	– –
	English language (No)				
	Grade 7 ELL student	–			– – –
	IEP in Grade 7 (none)				
	IEP	– – –	– –	– – –	– – – –
	G7 school (Public)				
	Distance ed	– – – –		– –	– –
	Catholic independent	+ +	+		– – –
	Other Christian ind.	–			–
	Preparatory/IB ind.	–	+	– – –	– – – –
	Other non-religious ind.	+		– – –	– – – –
	Other religious ind.	+		– – –	– – – –
	G7 school change (none)				
	No G6 enrollment	–	–		
	Voluntary change	– –	–		–
	Compulsory change	–			+ +

	Explanatory Variable	PSE entry	PSE Graduation	3rd year earnings post PSE	3rd year earnings post high school (no PSE)
Academic Performance and Neighbourhood Characteristics	**Grade 7 FSA (Meet ex. in both)**				
	Did not write	−−−	−−	−−	−−−−
	Not yet meeting expectations in both	−−−−	−−−	−−	−−
	Meeting expectations in reading	−−−	−−	−	−−
	Meeting expectations in numeracy	−−	−		
	Exceeding expectations in reading	++	+	−−	−−−
	Exceeding expectations in numeracy	++	++	+	−−−
	Exceeding expectations in both	++	++	−−	−−−−
	Rural status (Urban)				
	Rural	−		++	+++
	Neighbourhood income (lowest)				
	2nd quintile	+	+		++
	3rd quintile	++	+		++
	4th quintile	++	+		++
	Highest quintile	+++	++		
Household Characteristics	**G7 household income (low)**				
	Middle income	++	+		++
	Highest	+++	++	+	++
	Lone-parent household (No)				
	Lone-parent household	−	−		

Notes: The explanatory variables included in the model are categorical and the reference group for each variable is in parentheses next to the bolded variable title. Adjusted percentage point difference: **±** = 0–4.9; **±±** = 5–9.9; **±±±** = 10–19; **±±±±** = >20. Blank cells denote no statistically significant difference.

PSE entry and graduation tended to be associated with higher standardized test scores (on the B.C. Grade 7 Foundation Skills Assessment), although the pattern was not as clear with respect to post-graduation earnings or the earnings of those who did not go to PSE.

By geographic characteristics, rural students were less likely to enter PSE than those who lived in urban areas but tended to earn more three years after completing PSE or (among those who did not pursue PSE) after high school. Grade 7 students from neighbourhoods with higher average incomes were more likely to enter PSE and finish it. Nonetheless, post-PSE earnings tended not to differ statistically by neighbourhood income.

Finally, students living in lone-parent or low-income households in Grade 7 were less likely to enter and complete PSE relative to those who did not. There were no significant differences in the third-year earnings reported between those from two- or lone-parent households either from those who graduated PSE or those who did not go to PSE. However, children who lived in low-income households earned less than their high-income counterparts following PSE or high school.

QUALITATIVE FINDINGS

The qualitative component of this study reviewed the literature to learn whether and how interventions implemented in K-12 improved PSE access and other later outcomes, as well as whether international exchange programs (i.e., study abroad) during PSE similarly lead to improved schooling and labour market outcomes.

Following the review of over 60 programs, we found three types of interventions had higher chances of success in improving PSE access. First, interventions reducing costs associated with PSE (e.g., application, tuition, or others) substantially increased the probability that low-income students would enter and graduate from PSE. Second, interventions that addressed and reduced the complexity of various application processes (i.e., to PSE or for various student financial aid programs), often through light touch "nudging" interventions or more involved coaching activities, could increase PSE access. Thirdly, personalized and hands-on interventions are typically found to be more effective than hands-off interventions, but the literature still does support more modest, less intensive initiatives given many report positive outcomes.

We reviewed over a dozen journal articles analyzing the relationship between various forms of study abroad programs—from short-term cultural immersions to full-fledged academic exchanges—on academic success and subsequent labour market transition. Overall, the evidence suggests these types of experiences support largely positive outcomes, albeit with a large degree of variability. The results from the studies vary, at times significantly, depending on the outcome of interest, the durability of the effects, and the context of the program. In addition, there was indication that more research on international exchange programs' impact on students schooling and labour market outcomes should be analyzed through a Canadian lens.

CONCLUSIONS

This report's empirical analysis identified various student groups who faced barriers to PSE entry and graduation, as well as those who had lower earnings either after high school or after completing a PSE credential. The subsequent literature review on policy and program interventions that support PSE access suggested possible ways to target students who face obstacles to success, defined as entering higher education or earning in the labour market.

By combining empirical analysis from the Canadian context with literature reviews from wider jurisdictions, the report has simultaneously identified differences in outcomes between groups and considered the interventions that hold promise to support students who had lower levels of success. In the absence of policy experiments, explicit policy prescriptions are difficult to recommend. As is the case with many educational outcomes, there are multifaceted reasons for

success — often a complex combination of circumstances and experiences throughout early childhood and into adulthood.

The analysis has answered the nine research questions set by ESDC. To draw out policy or program implications for Learning Branch the report further identifies the groups that stand to benefit most from development and implementation of further interventions and support, while noting that more research is needed to be confident that effects seen in the (largely non-Canadian) literature on interventions translates to Canada. This work yields the following implications:

- Ensure policies and programs that aim to increase access to PSE target students from low-income families, Indigenous students, students with a disability, and students in distance education/homeschooling programs.
- Optimize the type of PSE programs students first enter to match their diverse needs, experience and preferences, through investing in interventions that promote career exploration and experiences that "jump-start" higher education while in high school.
- Continue to support research on programming where PSE graduation rates are low and experiment to find policies and programs can decrease non-completion of PSE.
- There is evidence that educational exchange and study program abroad programs can increase post-secondary academic achievement, but there is a need to tackle access barriers to these programs that may exclude some groups of students that could most benefit from the opportunity.
- There is a need to recognize the difference between early barriers to PSE access and graduation that, if they can be overcome, have little to no impact on earnings, and other early barriers that persist even after enrollment and graduation and hold back students in the labour market.
- There are academically advantaged groups who are more likely to access and graduate PSE but have lower earnings once they enter the labour market. They may need benefit from more employment-focused services and supports while in – and following graduation from – PSE.
- We cannot provide much detailed insight on the activities of those who do not enter the labour market or PSE in the years following high school. There is a data shortfall with respect to information on interventions and programs that target NEET youth. Linking these to the data accessed for this study would provide more insight on outcomes across the full spectrum of school leavers, including those who may still be in need of most support.

- Students who do not transition to any PSE have low earnings if they enter the labour market after high school, suggesting a shortfall in high quality entry-level work experiences for young people leaving high school.

In this way, this work yields a uniquely up-to-date and comprehensive set of insights on young people's pathways through more than a decade of their experiences in education and into the labour market. Furthermore, it illustrates how different groups of young people facing barriers in their education transitions even into their 20s can be identified at a relatively early age in the K-12 system. This makes it easier to target interventions before it is too late. Finally, the report has also drawn attention to promising early interventions that could be tested and evaluated to support more young Canadians in realizing their maximum potential.

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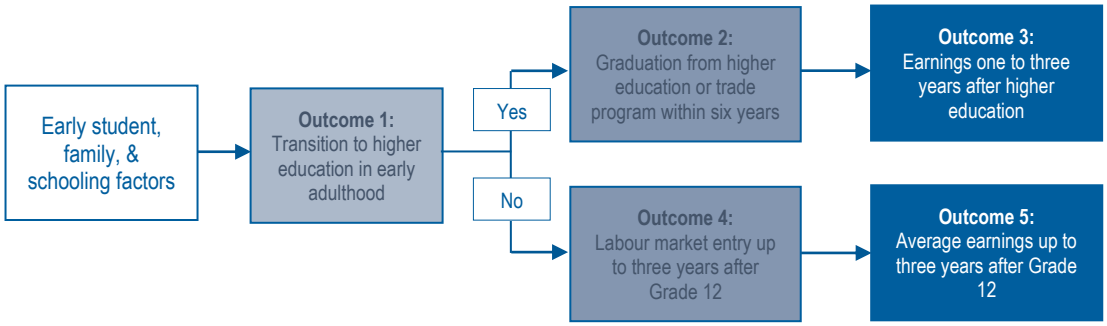
PROJECT OVERVIEW

The objective of this research project is to examine how a range of early student, schooling, family, and neighbourhood characteristics are related to post-secondary education (PSE) and labour market outcomes through a synthesis of prior research and new quantitative analyses. The empirical analysis examines how these early characteristics function as barriers to accessing higher education, later graduating, and entering the labour market. The literature review then studies promising policy and program interventions that may support students who are less likely to have positive outcomes.

As Figure 1 illustrates, this report examines five outcomes: 1) entry to higher education (i.e., entering a public college, university, or trade program in Canada); 2) completion of a PSE credential; 3) earnings among PSE graduates; 4) labour market entry among those who do not transition to PSE; and 5) average earnings for non-PSE goers up-to three years after Grade 12.

Figure 1 Visual overview of outcomes after compulsory schooling



Through the study of PSE entry, graduation, and labour market outcomes,[2] this empirical research provides a comprehensive and detailed analysis of the barriers young people face. Along with examining a range of early factors, we focus explicitly on how these outcomes differ for male and female students, as well as household income groups as of Grade 7. A key intent of this study is to better understand the degree to which early student and schooling factors are related to outcomes along the various pathways after high school.

[2] In this study, we use the term labour market outcomes to refer to earnings from employment and, among those who declare them in their tax return, being in the labour market as an employee or self-employed.

This study is informed by nine research questions originating from ESDC and one research question generated by SRDC. Analysis of PSE entry (outcome 1) answers the first three research questions:

1. What are the overall trends in PSE entry among students in BC? Do access rates increase for certain groups and decrease for others? What factors could help explain the increases or decreases?

2. What are the trends in PSE entry by student, family, neighbourhood, K-12 school program, school type, skill assessment measures and other relevant characteristics? Does a relationship exist between two or more characteristics? To what extent do neighbourhood characteristics such as low income, high population density, high ethnic concentration, and (if possible poor living environment and crime levels) influence the PSE entry rate for K-12 students, especially those from low-income and other underserved groups?

3. What are the overall barriers to PSE experienced by youth in BC? What are the barriers by student, family, neighbourhood, K-12 school program, school type, skill assessment measures and other relevant characteristics? What are the barriers to PSE experienced by specific underserved groups?

Next, analysis of PSE completion and graduate's labour market outcomes (outcomes 2 and 3) answers the next three questions:

4. What are the overall PSE graduation rates among students in BC? What are the PSE graduation rates by student, family, K-12 school program, school type, skill assessment measures and other relevant characteristics? Does a relationship exist between two or more characteristics? Do the barriers differ for specific underserved groups?

5. What are the overall labour market outcomes for graduates in BC? What are the labour market outcomes by student, family, K-12 school program, school type, skill assessment measures and other relevant characteristics? Does a relationship exist between two or more characteristics?

6. What K-12 programs, i.e., Special Needs, French Immersion, and English as a Second Language, lead to more favourable PSE and labour market outcomes?

Further research uncovers the labour market entry rates and average earnings reported among students who do not transition to PSE (**outcomes 4 and 5**), answering the following research question developed by SRDC:

7. What are the labour market outcomes of students who are not observed as transitioning to PSE in the initial years after high school and how do they differ by K-12 student, academic performance, schooling, family, and neighbourhood characteristics?

Along with the empirical research, this project also sought to better understand how policy and program interventions in the K-12 system, as well as participation in an educational exchange/ study abroad program in PSE, might reduce barriers to achieving positive education and labour market outcomes. While it was not possible to analyze empirically these questions with the project data available, the report includes two separate literature reviews to answer each question concerned with policy and program interventions.

8. Are there any interventions in the K-12 system that lead to better PSE and labour market outcomes? What factors could help explain why some interventions lead to better PSE and labour market outcomes?

9. If information is available, what is the relationship between participating in an educational exchange study/program abroad during post-secondary education studies and post-secondary academic achievement, and labour market outcomes?

Finally, we synthesize across the different analyses to answer:

10. What are the policy or program implications for the Learning Branch of the findings from answering the above research questions?

The next section presents key findings from a review of prior studies, which sets the broader context for our empirical research on factors associated with B.C. students transitions through the education system. It reviews what is known from recent literature about influences on access to PSE against diverse dimensions of socioeconomic status in comparable jurisdictions.

After the brief literature review, the report discusses the methodological approach used in the empirical portion of the project and then presents the empirical results organized by each research question. The final two sections summarize the findings from additional multi-part literature reviews conducted to 1) uncover interventions and policy that can support students who face barriers in accessing PSE; and 2) understand how studying abroad during higher education is associated with later outcomes. Finally, the conclusion answers the final research question by presenting the key policy or program implications from across all the results.

LITERATURE REVIEW

ACCESS TO PSE BY SOCIOECONOMIC STATUS

Equitable access to PSE is an important public policy goal in Canada. This brief literature review discusses the issue of access to PSE with a focus on students' socioeconomic status (SES). It first discusses family background effects, with special attention to household income and neighbourhood effects. It also incorporates some of the literature concerning student achievement as it relates to both family background and student characteristics.

Parental income and access to PSE

Decades of research have consistently shown that familial factors are associated with access to PSE. With much of the research coming from the United States (U.S.), these studies indicate that family/parental income is a critical determinant to attending PSE, and that students from high-income families are much more likely to attend than those from low-income families (Bailey & Dynarski, 2011; Belley & Lochner, 2007; Carneiro & Heckman, 2002; Chetty et al., 2017; Michelmore & Dynarski, 2017; Smith & Hirschl, 2021).

Gaps in PSE entry between low- and high-income students in the U.S. are large and have been growing in recent decades (Bailey & Dynarski, 2011; Carneiro & Heckman, 2002; Lochner & Monge-Naranjo, 2012; Page & Scott-Clayton, 2016; Winter, 2014). Among children born in the 1980s, those in the bottom quartile of family incomes are 50 percentage points less likely to attend PSE than those from the top quartile (29 per cent and 80 per cent, respectively) (Bailey & Dynarski, 2011).

Income gaps in PSE participation rates stem, in large part, from disparities in early skills, student achievement, and academic preparation (Belley & Lochner, 2007). Indeed, recent work finds a strong relationship between exposure to financial disadvantage in primary school — measured via eligibility for subsidized meals in every grade from kindergarten to Grade 8 — and academic achievement (Michelmore & Dynarski, 2017). Students considered financially disadvantaged in every primary school grade scored about one standard deviation below on standardized math test scores in the Grade 8 than students who were never disadvantaged (Michelmore & Dynarski, 2017).

In examining the barriers related to PSE access in the U.S., Bozick and DeLuca (2011) find students who reported financial barriers and came from low-income families also had low math

test scores, in this way linking family income characteristics, student achievement, and access to PSE (i.e., the income-achievement-PSE access relationship). However, gaps in access to PSE exist even among high-achieving youth according to where they land on the income distribution (Belley & Lochner, 2007; Jerrim et al., 2015), with access to financial aid playing an important role (see Dearden et al., 2014; Dynarski et al., 2021; Dynarski & Scott-Clayton, 2013; Page & Scott-Clayton, 2016).

In Canada, income is a significant correlate of young adults' PSE participation as well. Over the past two decades, a substantial body of literature finds that PSE access rates are much lower for those from lower income families (Belley et al., 2014; Corak et al., 2003; Drolet, 2005; Finnie & Pavlic, 2013; Finnie et al., 2011; Finnie & Mueller, 2008, 2019; Rahman et al., 2005). The Canadian literature finds the income-access gap to be reasonably consistent, indicating that youth from high-income families are about one to two times more likely to enroll in PSE than those from low-income families, depending on whether participation in university only is being considered or enrolling in a broader range of PSE destinations (Berger et al., 2009; de Broucker, 2005; Finnie & Childs, 2018; Ford et al., 2019a).

Research also finds that students from high-income backgrounds are more likely to enroll in universities and "higher-ranked and better resourced institutions" rather than colleges (Davies et al., 2014) relative to lower-income students—a finding that is consistent with the literature from the U.S. and Europe, which has found that students from lower-income backgrounds are less likely to enroll in four-year, selective colleges, and prestigious universities than their higher-income counterparts (Hoxby & Aver, 2012; Jerrim et al., 2015; Thomsen, 2015).

Motivating the early literature on the family income-PSE access relationship was how PSE tuition fee increases in the 1990s affected enrollment rates (Berger et al., 2009; Coelli, 2009; Corak et al., 2003; Drolet, 2005; Neill, 2009). More recent studies—many emerging from a series of work using Canada's longitudinal Youth in Transition Survey—show the advantage held by students from higher-income families in accessing PSE remained largely unchanged into the later 2000s and 2010s even as tuition stabilized (Finnie & Pavlic, 2013; Finnie et al., 2011, 2015; Finnie & Mueller, 2008, 2011, 2019; Ford et al., 2019a; Frenette, 2017).

As an example of research on change over time, Frenette (2017) demonstrates that the relative stability in the family income-access gap is attributable to increasing PSE enrollments from youth across the income distribution between 2001 and 2014. However, there has been a slight narrowing of the income-access gap between the top and bottom income quintiles during this time, signalling a notable difference from the U.S. context. At the national level, the gap between the top and bottom income quintiles in terms of overall access rates was roughly 33 percentage points in 2014, although notable differences exist by province (Finnie & Mueller, 2019; Ford et al., 2019a; Frenette, 2017).

Another important finding for Canada is that the effect of income is not particularly strong after accounting for parental education and other related socio-cultural factors (Drolet, 2005; Finnie, 2014; Finnie et al., 2015; Finnie & Mueller, 2008, 2019; Frempong et al., 2012; Mueller, 2019). Frenette (2008) finds that most of the family income-access gap is accounted for by differences in high school grades and parental influences. In contrast, only 12 per cent of the gap is attributable to self-reported financial barriers.

To this end, parental income is an important correlate of university attendance in Canada, but parental education, student achievement and standardized test scores, and other related socio-cultural factors diminish the influence of variation in income when all the factors are considered simultaneously in multivariate models. In particular, student achievement (i.e., high school grades, test scores) mediate the relationship between income and PSE participation.[3] That this factor decrease the role of family income on access to PSE is important because it suggests interventions focused on achievement could be possible solutions to improve equity of access.

Neighbourhood effects, school quality, and the urban-rural divide

A set of important socio-cultural factors that are associated with household income relate to the location where a child grows up. Higher income parents tend to live in higher income neighbourhoods, which affects the composition of the schools in that area. To better understand this factor, related research considers how educational outcomes connect to the neighbourhood where a student resides.

Many studies concur that neighbourhood context (often measured as an index of neighbourhood advantage taking into account neighbourhood levels of educational attainment, income, and/or employment) affects academic achievement (Chetty et al., 2016; Harding, 2011; Sharkey & Elwert, 2011; Sharkey & Faber, 2014; Wodtke et al., 2016, 2020; Wodtke & Parbst, 2017). It is widely hypothesized that differences in the schools that children have access to can explain the relationship between neighbourhood context and educational outcomes.

A study by Wodtke et al. (2020) sought to answer this exact question. Using U.S. data from the Early Childhood Longitudinal Study, the authors examine whether school quality mediates (that is, whether school quality explains neighbourhood effects on access) and/or moderates (that is, whether neighbourhood effects are different in size and significance according to school quality) the effect of neighbourhood disadvantage on children's early academic achievement.[4] Wodtke et

[3] See the following sources for comparable literature in the U.S. and European contexts: (Bernardi & Triventi, 2020; C. Chetty et al., 2017; Dynarski et al., 2013; Goodman et al., 2019; Heiskala et al., 2021; Lavecchia et al., 2015; Liu, 2019; Smith et al., 2019; Winter, 2014).

[4] Neighbourhood disadvantage is measured as a factor score based on neighbourhood income, unemployment, and other financial and employment-related characteristics. School quality is measured

al. confirm that living in a disadvantaged neighbourhood substantially reduces academic achievement. However, there is no evidence to suggest that neighbourhood effects are mediated or moderated by school quality (i.e., both have independent effects). Further, attending a higher quality school appears to have similar effects regardless of the level of neighbourhood disadvantage.[5] The findings are supported by earlier work by Wodtke and Parbst (2017) on the role of school poverty in explaining neighbourhood effects.

It is important to note that the findings mentioned above are debated in the literature. For instance, Owens and Candipan (2019) examine the characteristics of public schools in high- and low-income neighbourhoods in the U.S. and find that high-income neighbourhoods are served by schools with greater social, financial, and instructional resources. They also find that these schools have greater student achievement than those serving low-income neighbourhoods (see also Ainsworth, 2002; Levy, 2019; Owens, 2010; Rendon, 2014; Wodtke et al., 2020). Similarly, another study argues that living in concentrated poverty (measured as living in a neighbourhood where more than 40 per cent of residents live in poverty) has little direct effect on post-secondary matriculation but does significantly impact the odds of completing a bachelor's degree (Levy, 2019).

A notable finding from this body of literature is that exposure to neighbourhood disadvantage has different effects depending on the duration of exposure. Wodtke et al. (2016) draws on the Panel Study of Income Dynamics to examine how timing of exposure to disadvantaged neighbourhoods affects high school graduation and whether these effects vary across families with different income levels. They find that exposure to neighbourhood disadvantage up to and during adolescence has significant negative effects on academic achievement and graduating high school. However, early exposure to neighbourhood disadvantage matters less than prolonged exposure. That is, the effects of neighbourhood disadvantage are weaker for children who are relocated to more affluent neighbourhoods after early childhood.

Similarly, Chetty et al. (2016) analyze the Moving to Opportunity (MTO) program intervention, an experiment that offered randomly selected families housing vouchers to move from high-poverty housing projects to lower-poverty neighbourhoods, on children's long-term educational and economic outcomes. Using federal income tax data linked to the MTO project, they capture PSE attendance via tax credits and yearly income. They find that moving to a lower-poverty

as the estimate from a multilevel regression on test score growth from kindergarten to grade 1, which is a common approach in the literature. The authors decompose the total effect of neighbourhood context on academic achievement at the end of 3rd, 5th, and 8th grade into components due to mediation versus moderation.

5 The school environment does not mediate the effects of neighbourhood context because differences in the socioeconomic composition of neighbourhoods do not seem to be strongly linked with differences in school quality. At the same time, the school environment also does not interact with neighbourhood context because attending a high-quality school is similarly beneficial whether children reside in advantaged or disadvantaged neighbourhoods.

neighbourhood prior to age 13 increased college attendance and earnings and reduced rates of single-parenthood. However, moving as an older adolescent had slightly negative impacts, which the authors argue might have been due to disruption effects. In sum, several studies suggest that the duration of exposure to neighbourhood advantage/disadvantage is an important determinant of children's long-term outcomes.

Other authors debate the methods and interventions that some notable studies cited above use to estimate the effects of neighbourhood context. For instance, Ainsworth (2002) argues that attempts to measure the impact of neighbourhoods on children's outcomes are susceptible to bias because families choose where to live. As a result, the effect of unobservable factors common to geographically clustered households, such as the importance parents place on their children's education and other outcomes, may be mistakenly attributed to neighbourhood influences.[6]

In addition, the way neighbourhood "context" or "disadvantage" is measured varies between studies. Some studies use income (Owens & Candipan, 2019) or the share of a neighbourhood living in poverty (Levy, 2019), while others use more robust, multi-dimensional indexes consisting of several educational and economic characteristics (Wodtke et al., 2020). Thus, it is plausible that the inconsistent findings reported in the literature on the role of neighbourhood effects and school quality may be attributable to methodological differences between studies such as in the measurement of neighbourhood "context" or disadvantage." Nonetheless, there is substantial evidence to suggest that neighbourhood context does indeed affect youth's educational outcomes, with neighbourhood "context" and school quality both found to play an important role.

Many studies have sought to investigate other factors beyond school quality to help explain neighbourhood effects. One notable finding from several U.S. sources includes the role of peer influences (measured in various ways across studies, including academic orientation, antisocial behaviours, peers' educational performance, and enrollment rates among peers). For instance, Bobonis and Finan (2009), Goux and Maurin (2007), Levy (2019), and South et al. (2003) all find that peers have considerable influence on educational decisions and outcomes related to high school graduation and post-secondary participation. In some cases, peer effects are found to have independent and direct effects, while in other cases, they help to explain neighbourhood effects (Bobonis & Finan, 2009; Levy, 2019; South et al., 2003).

Finally, Harding (2011) develops a new account of the cultural context of schooling decisions in disadvantaged neighbourhoods based on the concept of cultural heterogeneity, defined as the presence of a wide array of competing and conflicting cultural models. He applies this concept to

[6] For a debate on the Moving to Opportunity intervention leveraged in Chetty et al. (2016) see Ludwig et al. (2008).

neighbourhood effects on enrollment into either two- or four-year college between the ages of 18 and 27. Using a nationally representative dataset that began tracking students from Grades 7 to 12 in the mid-1990s, he shows that adolescents in disadvantaged neighbourhoods exhibit greater heterogeneity in college goals and that adolescents in more heterogeneous neighbourhoods are less likely to act in line with the college goals that they articulate.[7]

Much less has been done in the Canadian context on the role of neighbourhood, school quality, and other related factors. These Canadian-based studies are important as U.S.-based findings may not extend to the Canadian context, which has different education systems, levels of inequality, and family and social support. Two Canadian studies do include explanatory variables for median neighbourhood income in investigating youths' PSE pathways in Toronto. The first finds that median neighbourhood income plays a small role in accessing PSE, but a stronger role when considering only university participation (Robson et al., 2019). The second investigates the pathways of students in special needs education and finds that median neighbourhood income plays a bigger role in promoting PSE participation among this group of students (Robson et al., 2014). The authors demonstrate that this is most likely due to the association between neighbourhood income and types of special needs education.

One additional study investigates how neighbourhood context affects educational attainment in Ontario using the first and third waves of the Ontario Child Health Study (Boyle et al., 2007). Using multilevel models and accounting for family- and student-level characteristics, the authors find that variance in educational attainment (measured as years of education) is largely attributable to family-level variance rather than neighbourhood variance. Moreover, economically-disadvantaged students did not benefit from living in more affluent areas, which is consistent with the finding that family-level variance explains a greater portion of educational outcomes than neighbourhood context.[8]

Foley (2019) examines the relationship between neighbourhoods and university participation among Canadian youth. The author measures neighbourhood quality as the fraction of neighbourhood adults with a bachelor's degree and identifies the effect of neighbourhood quality

[7] Harding contends that support for explanations of neighbourhood effects via subculture theories is unsupported empirically, which leads Harding to develop an alternative account of the cultural context of disadvantaged neighbourhoods on educational outcomes he calls cultural heterogeneity. Harding (2011) defines cultural heterogeneity as "the presence of a wide array of competing and conflicting cultural models."

[8] This is measured in two ways. One measure of affluence is derived from a factor loading of average household income, per cent of population in managerial occupations, and per cent of population with high school or university degrees. Another measure of socioeconomic disadvantage is derived from a factor loading of the per cent of families headed by lone parents and per cent of families living in rental accommodations – note: both are in the expected direction – that is, positive for affluence and negative for disadvantage – but the affluent measure is statistically significant, net of a rich set of family and child characteristics, while disadvantage is not.

using the variation of this measure within high schools. The study finds that neighbourhood quality is related to university participation, estimating a 16-percentage point effect for neighbourhoods where all residences have a bachelor's degree relative to neighbourhoods where none have a bachelor's degree. This effect differs according to socioeconomic background. That is, neighbourhood quality is found not to affect university participation for students on both ends of the socioeconomic distribution (i.e., the least and most advantaged). Instead, the effect of neighbourhood quality on university attendance is largest for youth with relatively high reading skills from the middle of the socioeconomic distribution. The author concludes that parents who have a bachelor's degree provide a family environment that orients youth toward university so that these youth attend university with above-average probability, net of reading skills. This conclusion is consistent with Carneiro and Heckman (2002), indicating that the SES gradient in educational attainment exists in part because less advantaged children do not have the resources that orient and encourage university participation.

Finally, another focus in this area of prior research examines urban-rural divides and distance to PSE institutions. There is a strong consensus in the literature across contexts that rural students are less likely to attend PSE and that distance to a PSE institution, especially for university, is negatively related to participation, which often goes hand and hand with living in a rural community. Importantly, the negative effect of distance can be compounded when considering the role of family income (Frenette, 2004); that is, the negative effect of distance becomes larger when families are financially constrained.[9]

[9] For additional work on this topic, see Byun et al., 2015; Frenette, 2002, 2004; Kirby and Sharpe, 2010; Means, 2018; Newbold and Brown, 2015; Parker et al., 2016; Spiess and Wrohlich, 2010; White and Lee, 2020; Zarifa et al., 2018.

QUANTITATIVE ANALYSIS METHODOLOGY

DATA

The empirical analysis in this report links four sets of administrative data available within Statistics Canada's Education and Labour Market Longitudinal Platform (ELMLP).

- **British Columbia Kindergarten to Grade 12 (BCK-12) data**, which provides records for students who were enrolled in a B.C. public or independent school from Kindergarten to Grade 12. For each year of enrollment, these records identify a range of student and program characteristics, such as home language and Foundational Skills Assessment (FSA) results. This study used BCK-12 data from the 2002-03 to the 2011-12 school years.

- **Student and Parent T1 Family Files (T1FF)**, which include income, earnings, and benefits (i.e., government transfers) information among tax filers in Canada (as well as for their spouse and children). To measure both the labour market outcomes of students and household income in Grade 7, the analysis linked BCK-12 data to separate files containing parental and student T1FF data. Across all T1FF sources, earnings information was not available for individuals who did not file taxes, and the parental T1FF data was only available for parents (or their spouse) who were Canadian citizens or residents. Among those in the study sample, parental T1FF data were available for the 2005 to 2011 tax years, when students in our sample were in Grade 7. At the time of undertaking the study, student tax data was available up to 2020 and records from 2008 onward were part of the analysis.

- **Post-secondary Student Information System (PSIS) data**, captures public college and university enrollment records from across Canada. For each program a student enrolls in, PSIS data provide information regarding the institution and program of enrollment, as well as special features of that program (e.g., credential level, field of study, full- or part-time enrollment status). As based on availability at the time, PSIS records from the 2008-09 to the 2020-21 academic school year were used in the analysis.

- **Registered Apprenticeship Information System (RAIS) data**, provides information on registered apprentices across Canada who enroll in classroom-based and on-the-job trades training. Data are compiled on an annual basis and records are available for each individual across every calendar year they are registered as an apprentice until they complete or withdraw. The study used records from 2008 to 2020 to align with the same window of PSE enrollment as captured in PSIS data.

By linking these datasets together in the ELMLP, this study generated a longitudinal data file to examine how a range of student, academic performance, schooling, family, and neighbourhood characteristics were associated with later PSE entry and completion, as well as with the labour market outcomes of PSE graduates and students who did not initially attend PSE after high school.

RESEARCH SAMPLES

From the available datasets, the study tracked multiple outcomes across several cohorts of B.C. students. Each student is allocated to a single distinct cohort based on their Grade 7 year or, if homeschooled, when they were aged 12. Due to data availability, it was only possible to track longer-term outcomes, such as earnings reported after PSE, for earlier Grade 7 cohorts with more years of higher education and labour market data. Therefore, we separated the analysis into three samples — PSE entry, PSE graduation, and labour market samples — each of which had additional subsamples described below.

PSE entry sample

The PSE entry analysis examined ten cohorts of students, ranging from the 2002-03 Grade 7 cohort to the 2011-12 Grade 7 cohort—which is the last cohort that could be identified based on PSIS and RAIS data availability.[10] As information from parental tax data was only widely available for the 2005 to 2011 cohorts, analysis with these data had a subsample of seven cohorts.

As Figure 2 shows, each Grade 7 cohort was followed through high school and up to three years after their expected Grade 12 year to measure who entered the Canadian higher education system. To allow for gap years, additional high school upgrading (i.e., taking additional or repeating high school classes to met PSE entry requirements), or any other type of short-term activity a person might engage in between leaving high school and entering higher education, students were identified as entering PSE if they made the transition up to nine years after starting Grade 7.

[10] Cohort years reflect school years. For example, students in the 2002-03 cohort started Grade 7 in September 2002. Below we describe this group as the 2002 cohort, with the year reflecting the September in which they started.

Figure 2 Grade 7 cohorts in the PSE entry sample

School Year	2002-03	2003-04	2004-05	2005-06	2006-07	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21
Cohort																			
2002	7	hs	hs	hs	hs	hs	+1	+2	+3	PSE entry									
2003		7	hs	hs	hs	hs	hs	+1	+2	+3	PSE entry								
2004			7	hs	hs	hs	hs	hs	+1	+2	+3	PSE entry							
2005				7	hs	hs	hs	hs	hs	+1	+2	+3	PSE entry						
2006					7	hs	hs	hs	hs	hs	+1	+2	+3	PSE entry					
2007						7	hs	hs	hs	hs	hs	+1	+2	+3	PSE entry				
2008							7	hs	hs	hs	hs	hs	+1	+2	+3	PSE entry			
2009								7	hs	hs	hs	hs	hs	+1	+2	+3	PSE entry		
2010									7	hs	hs	hs	hs	hs	+1	+2	+3	PSE entry	
2011										7	hs	hs	hs	hs	hs	+1	+2	+3	PSE entry

PSE graduation sample

As shown in Figure 3, the PSE graduation analysis included five Grade 7 cohorts. These only include students who entered PSE within three years of their expected Grade 12 year (as identified in the previously described PSE entry sample). The analysis excluded Grade 7 cohorts at risk of censored graduation outcomes due to data availability (i.e., the 2007 cohort or later). Additional models that included household factors as explanatory variables used data from the 2005 and 2006 Grade 7 cohorts — the only ones with available parental tax information in Grade 7.

The PSE graduation analysis tracked each student up to six years from when they first entered PSE to identify those who graduated from a public institution in Canada (using PSIS data) or completed an apprenticeship program (from RAIS data). Students in each Grade 7 cohort could enter PSE at any time in the three years after high school, with some opting for direct entry after high school, while others could take gap years. In all cases, we tracked PSE graduation up to six years after each individual student first entered PSE.

Figure 3 Grade 7 cohorts in the PSE graduation and labour market sample

School Year	2002-03	2003-04	2004-05	2005-06	2006-07	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21
Cohort																			
2002	7	hs	hs	hs	hs	hs	+1	+2	+3	+4	+5	+6	+7	+8	PSE grad				
2003		7	hs	hs	hs	hs	hs	+1	+2	+3	+4	+5	+6	+7	+8	PSE grad			
2004			7	hs	hs	hs	hs	hs	+1	+2	+3	+4	+5	+6	+7	+8	PSE grad		
2005				7	hs	hs	hs	hs	hs	+1	+2	+3	+4	+5	+6	+7	+8	PSE grad	
2006					7	hs	hs	hs	hs	hs	+1	+2	+3	+4	+5	+6	+7	+8	PSE grad

Labour market samples

The first labour market sample includes students who graduated with a PSE credential in the previously described sample and had available T1FF earnings information one, two, and/or three years after leaving PSE. To be included in this sample, students also must not have been

observed as attending PSE identified through declared tuition credits on their taxes in these years. The analysis included students from all five Grade 7 cohorts (i.e., 2002-03 to 2006-07) in Figure 3.

To answer research question 7, we constructed a second labour market sample consisting of students across all Grade 7 cohorts (i.e., 2002-3 to 2011-12) in the PSE entry sample who did not make the transition to PSE up to nine years after starting Grade 7. Analysis using this non-PSE attendance sample first included all non-PSE-attending students, even if they did not have available T1FF information one, two, or three years after their expected high school graduation year, to track labour market entry. Follow up analysis then examined a sub-sample of students who had available earnings data one, two, or three years after their expected high school graduation year.

Other sample exclusions

In addition to the outcome-specific exclusions discussed above, all samples excluded a small number of students who did not enter school in September of their first Grade 7 year and were aged either 9 or younger or 15 or older when first enrolled. We also excluded a very small number of students who were missing geographical/neighbourhood information in the BCK-12 data up to four years after their initial Grade 7 year. Finally, students missing household income data were excluded from the models that included indicators constructed from parental tax data.

All models also excluded students who likely left Canada. While the study did not have access to emigration or leaving data, we removed students who did not appear in any tax data from their Grade 7 year to 2020 and did not appear to enter higher education in the PSE entry analysis (approximately 2.4 per cent of the initial sample).

OUTCOME VARIABLES

Aligning with each outcome described in the introduction, the study measured five outcomes: PSE entry, PSE graduation, post-PSE earnings, post-high school labour market entry, and post-high school earnings.

Outcome 1: PSE entry

The analysis operationalized PSE entry as a categorical outcome variable based on the first observed program a student entered up to three years after their expected Grade 12 enrollment year:[11]

- Bachelor's degree
- Apprenticeship or trades program[12]
- College-level associate degree, university transfer, or general arts and science program
- Diploma
- Certificate or other program
- No PSE entry.

The final outcome category "no PSE entry" captured students who did not yet make the transition to higher education within the period observed, as well as a small group of students who only took qualifying, non-credit, or personal improvement programs at a college or university in the three years after their expected Grade 12 year.[13] As it was only possible to track enrollment in public institutions across Canada, students who entered programs outside of Canada or enrolled in private institutions within Canada were not observed as entering PSE.

Outcome 2: PSE graduation

A binary outcome variable (i.e., completer=1, non-completer=0) measured which students completed a PSE or apprenticeship program within six years of first entering the public higher

11 For those who enrolled in more than one program at the same time, we assigned the student the "highest" program attended in the following descending order: bachelor's degree, apprenticeship/trade program, associate degree/university transfer, diploma, and certificate or another program.

12 Apprenticeship and trades program enrollment information comes from RAIS and PSIS data. Those who enrolled in apprenticeship programs or trades-related certificate and diploma programs were included in this category.

13 In the analysis, certain post-secondary programs did not count towards PSE entry and graduation outcomes. These included enrollment in high school, pre-technology, basic skills, pre-university qualifying, non-credit, and personal improvement programs. Many students who take these programs go on to later enter qualifying PSE programs after the observation period employed in this study (i.e., five or more years after their Grade 12 year); nevertheless, the focus of this analysis on initial enrollment after high school in PSE programs that are intended to prepare students for labour market entry.

education system. Non-completers were students who left the PSE system entirely or were still enrolled after six years. Completers were students who had a graduation flag from a qualifying program within this same period.

To clarify how the analysis measured PSE completion, Figure 4 presents the enrollment spells of four hypothetical students who started their first observed PSE program in fall 2011. These students were identified as completers if they obtained any PSE credential within six years of this initial start date (i.e., by the end of 2017).

Figure 4 Hypothetical examples of PSE program enrollment

	Enrollment spell							*Outcome (by 2016-17)*
	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	
1	Start 1st program			1st program credential				Completer
2	Start 1st program		Start 2nd program		2nd program credential			Completer
3	Start 1st program			Restart 1st program			1st program credential	Non-completer
4	Start 1st program			Resume 1st program				Non-completer

- Student 1 represents a single-program enrollment spell scenario, where they started a program and completed it without any breaks.
- Student 2 had two program starts, but only one program completion. Even with a gap year in 2012, they would be a graduate in our analysis.
- Student 3 also had two program starts and one graduation record; however, because they did not earn a credential by 2017, they would be a non-completer by "year six" (even though they do eventually go on to graduate).
- Student 4 had one program start and intermittent enrollment records. Without any completion record, they would be a non-completer in our analysis.

Rather than measure completion across each program a student starts, our approach tracked any program completed within six years of entry to enumerate the substantive outcome of a student's PSE journey. Students who graduated from more than one program during this period are only included once in the analysis rather than two separate observations.[14] Instead of basing

[14] For the labour market outcome analysis, the last period of observation in PSE and the highest credential level obtained is selected.

the period in which to observe graduation on the program of entry (e.g., two years for those who enter certificate programs), six years was selected to allow for program changes, while still being a short enough period for the PSE outcome to be reasonably associated with the initial enrollment.

Outcome 3: Post-graduation earnings

Outcome three measured the post-graduation earnings of PSE graduates, operationalized as their inflation adjusted before-tax annual earnings across three years. Earnings were captured one, two, and three years after graduation, with each individual period of observation based on when a student graduated. For example, first-year earnings were measured in 2015 for student 1 and in 2016 for student 2 in Figure 4 (while students 3 and 4 are excluded from the analysis, given they are non-completers).

The measure of annual earnings combined T4 employment income, non-negative self-employment income, other employment income, and "Indian" exempt income (i.e., non-taxable income that meets the criteria defined under Section 87 of the Indian Act). This measure of earnings excluded people who had missing/no tax information, zero or non-positive earnings in that year, or continued/returned to school (as identified through declaring full- or part-time education within a tax return). Earnings were adjusted for inflation to ensure they were comparable across years.[15] We also undertook a natural log transformation of the earnings measure to minimize the influence of outliers.

Outcome 4: Labour market entry following High School

Across all ten Grade 7 cohorts in the PSE entry sample, many students did not attend PSE in the outcome one analysis. To provide additional insight into the outcomes of this group, outcome four examined who reported any earnings as a proxy for labour market entry. This analysis measured reported earnings as a binary indicator capturing students who filed taxes and declared any earnings (i.e., earnings reported=1) and students who did not file tax or declared zero earnings after their expected Grade 12 year (i.e., earnings reported=0). This analysis examined reported earnings one, two, and three years after their expected Grade 12 year, regardless of whether a student was a high school graduate or not.

[15] The values for adjustment came from the Consumer Price Index (CPI) (annual average, not seasonally adjusted) table 18-10-0005-01 maintained by Statistics Canada.

Outcome 5: Earnings reported following High School

Among non-PSE goers who did file taxes and reported earnings, the final analysis measured their inflation adjusted before-tax annual earnings one, two, and three years after their expected Grade 12 year. Each individual period of observation was based on when a student was expected to graduate from high school, in turn based on their Grade 7 cohort.

As many young individuals do not file their taxes annually and, when they do file, may not report earnings, the underlying sample differs in the year one, two, and three model. For example, a student who only reported earnings two years after their expected Grade 12 year was not included in the one- and three-year post-high school models.

Mirroring the sample measure of annual earnings above, inflation-adjusted log annual earnings were measured as a sum of T4 employment income, non-negative self-employment income, other employment income, and "Indian" exempt income (i.e., non-taxable income that meets the criteria defined under Section 87 of the Indian Act). These models excluded people who had missing/no tax information, zero, or non-positive earnings in that year.

EXPLANATORY VARIABLES

Across all models, the main explanatory variables can be grouped by characteristics that may influence all five outcomes: student, schooling, academic performance, neighbourhood, and household factors. Most of these measures were constructed from information collected when a student was in Grade 7. The PSE graduation analysis also included a variable measuring program of entry, while the post-graduation outcome analysis had a variable measuring highest credential earned within six years of PSE entry.

Student characteristics

- **Male** or female (reference group).
- **Indigenous** or non-Indigenous (reference group).[16]

[16] One limitation of the BCK-12 data is that it does not provide: 1) disaggregated information that could be used to identify different distinctions among Indigenous students (e.g., First Nations, Métis) nor 2) a time-based identification measure (rather the information included indicates whether a student was *ever* identified as Indigenous).

- **Home language** in Grade 7: English (reference group), French, Chinese, Punjabi, South Asian, Korean, Other Asian, West European, East European, Semitic (e.g., Persian, Arabic, Hebrew), or other or missing.[17]

- **Age** first observed in Grade 7 (as of September): aged 10 or 11, aged 12 (reference group), or aged 13 or 14.

Schooling characteristics

- **French immersion enrollment** in Grade 7: yes or no (reference group).

- **English language learning (ELL) programming** in Grade 7: yes or no (reference group).

- **Individualized Education Plan** (IEP)[18] in Grade 7: yes or no (reference group).

- **Type of school** a student attended in Grade 7: public (reference group), distance education or homeschooled, Catholic-affiliated independent schools, other Christian religious-affiliated independent schools, preparatory or International Baccalaureate independent schools, other non-religious independent schools, or other religious independent schools.

- A measure of mobility that registers whether a student attended **a new school in Grade 7**. Categories included: had no school change (i.e., same school as Grade 6) (reference group); was a new entry to the B.C. system in Grade 7;[19] "voluntarily" changed school (i.e., went to different school in Grade 7, but their *Grade 6 school included Grade 7*); or "compulsory" school change (i.e., went to a different school in Grade 7, but their *Grade 6 school did not include Grade 7*).[20]

- **Grade 7 cohort**: the 2002-03 (reference group) to 2011-12 cohort.

17 The language categories are derived from the information available in the BCK-12 data.

18 An Individual Education Plan is a document identifying students with special learning needs. It describes expected learning outcomes as well as applicable support services, adapted materials, instruction or assessment methods. While the B.C. K-12 data does not provide information on the individual IEP content, it does provide the categorization differentiating several groupings. Some of these groups have funding allocation attached to them to help provide supportive services in a school. Unfortunately, disaggregated analysis by these different IEP types was not possible due to low cell sizes in some of the later analysis (i.e., labour market outcome).

19 In a small number of cases, some students in this category were not enrolled in the B.C. system in Grade 6 but were enrolled in earlier years.

20 Students may change schools for multiple reason, such as if their family moves or they choose to attend special programing offered only at specific schools. The transition from Grade 6 to Grade 7 can also capture students who move from elementary to middle school. In B.C. only certain school districts and regions offer middle school, which can offer Grades 7 to 9 or Grades 6 to 8. In other cases, elementary schools offer Grade 7 and students making the transition to high school in Grade 8.

Academic performance

- **Grade 7 FSA score** categories: did not write numeracy and reading assessment; not yet meeting expectations in the numeracy and/or reading assessments; meeting expectations in only the reading assessment; meeting expectations in only the numeracy assessment; meeting expectations in both the numeracy and reading assessments (reference group); exceeding expectations in the reading assessment only; exceeding expectations in the numeracy assessment only; exceeding expectations in both the numeracy and reading assessments.

Neighbourhood and household characteristics

- **Rural or urban location in Grade 7**: urban (reference group) or rural.[21]
- **Average neighbourhood income in Grade 7 year**:[22] 1st quintile (lowest) (reference group), 2nd quintile, 3rd quintile, 4th quintile, or 5th quintile (highest).
- **Household income group in Grade 7**: low, middle (reference group) or, high. Income is operationalized as after-tax income (e.g., earnings and transfers) at the household level (i.e., for the one or two parents living with the child) and adjusted for family size.[23]
- **If the student lived in a single-parent household in Grade 7**: two-parent household (reference group) or lone-parent household.

PSE variables

- **Credential level at entry**: certificate or other program, diploma, university transfer/general studies, trades program, or bachelor's degree (reference group).

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21 We measured rural location using a student's postal code in Grade 7 (or plus or minus four years if missing). Students that had a zero in their forward sortation area were identified as living in a rural region.

22 The BCK-12 data includes yearly neighbourhood characteristic data for each student, as based on their postal code. It is a variable derived by the provincial government using public 2016 Census data on median household income. If a student had missing information, then information from the years immediately before or after Grade 7 was selected (plus or minus up to four years). If they were missing information from across all years, they were dropped from the analysis.

23 Parental income was measured through the T1FF variable AFTAZ which is the sum of after-tax income, RRSP income, and net capital gains/losses. Negative incomes were recoded as 0. We adjusted for household size through a square root adjustment with an elasticity of 0.5. For example, if the household income was $50,000 and had four people it was adjusted to $35,355 (i.e., 50,000/(√4)^0.5).

- **Credential level at graduation**: certificate or other program, diploma, associate degree, apprenticeship, or bachelor's degree (reference group).

ANALYTICAL APPROACH

Descriptive analysis

Each finding section below includes descriptive analysis that provides information on the distribution of students in each sample (e.g., how many students in the sample had an IEP) and the percentage with each outcome (e.g., the percentage of students with an IEP who entered a BA program). The purpose of these descriptive results is to investigate the "unadjusted" relationships between each explanatory and outcome variable.

Regression analysis

Outcome 1: PSE entry

When studying PSE entry as the outcome variable, the analysis used a multinomial logit specification, which is based on a likelihood function that generates conditional probabilities for each outcome category in comparison to a single reference category. This approach transformed each outcome into a nominal categorical dependent variable to examine the relationship between the explanatory variables and the likelihood of each outcome. To interpret the results across all outcome categories, we transformed the coefficients into average marginal effects to allow for the interpretation of the baseline category directly.

In the analysis below, we examined the full student sample, as well as six subsamples:

1. all male students,
2. all female students,
3. all students with household income data,
4. low-income students,
5. middle-income students, and
6. high-income students.

As discussed in the research sample section above, models with household income data were based on a reduced number of cohorts due to data availability.

Outcome 2: PSE completion

When studying PSE completion as the outcome variable, we used a series of linear probability models separated by the six sub-groups listed above. Linear probability models are widely used in applied work, mainly because they are computationally efficient to estimate and straightforward to interpret. This model specification determined the extent to which each of the explanatory factors influenced the binary outcome variable, which took the value of one if a student was a PSE completer and zero if a student was a non-completer within the observed time frame. Therefore, the coefficients captured the relationship between each factor included in the model and the probability of being a PSE completer controlling for all other factors and conditional on enrolling in PSE.

Outcomes 3 and 5: Post-graduation and High School earnings

When studying earnings as the outcome variable, we used an ordinary least squares regression (OLS) specification to determine the extent to which each of the explanatory indicators influences the continuous outcome variable (i.e., log earnings). It relates the outcome to each included explanatory variable, estimating the extent to which earnings differ for that group from a given reference group, holding all other variables constant. The log specification allows these effects to be interpreted as approximating the percentage difference in outcome associated with each of the variables included in the model.

As the post-graduation sample is based on a reduced number of cohorts (i.e., those with available long-term information), we examined the full sample of all graduates, as well as three subsamples: 1) all male graduates, 2) all female graduates, and 3) all graduates with household income data. When examining post-high school outcomes, separate analysis was run with the six sub-samples of students who did not transition to PSE in analysis: 1) male students, 2) female students, 3) students with household income data, 4) low-income student, 5) middle-income student, and 6) high-income students.

Outcome 4: Earnings reported following High School

When studying reported earnings among students who do not transition to PSE in early adulthood, we used a linear probability model specification. It took the value of one if an individual reported earnings in their tax return and zero if they reported zero or negative earnings or had no tax return.

Along with analysis that examined the full sample of all students, we ran separate analyses with the six sub-samples of students who did not transition to PSE in analysis: 1) male students, 2) female students, 3) students with household income data, 4) low-income students, 5) middle-income students, and 6) high-income students.

QUANTITATIVE RESULTS

The following results section discusses both the descriptive and regression results, organized as answers to each research question. As this is an observational study, the results should not be interpreted as causal relationships, but rather indications of the degree to which each explanatory variable is associated with each of the five outcomes. To aid in interpretation, we provide a visual overview of the main results in graphic form. All results are available in table format in Appendix C.

OUTCOME 1: PSE ENTRY

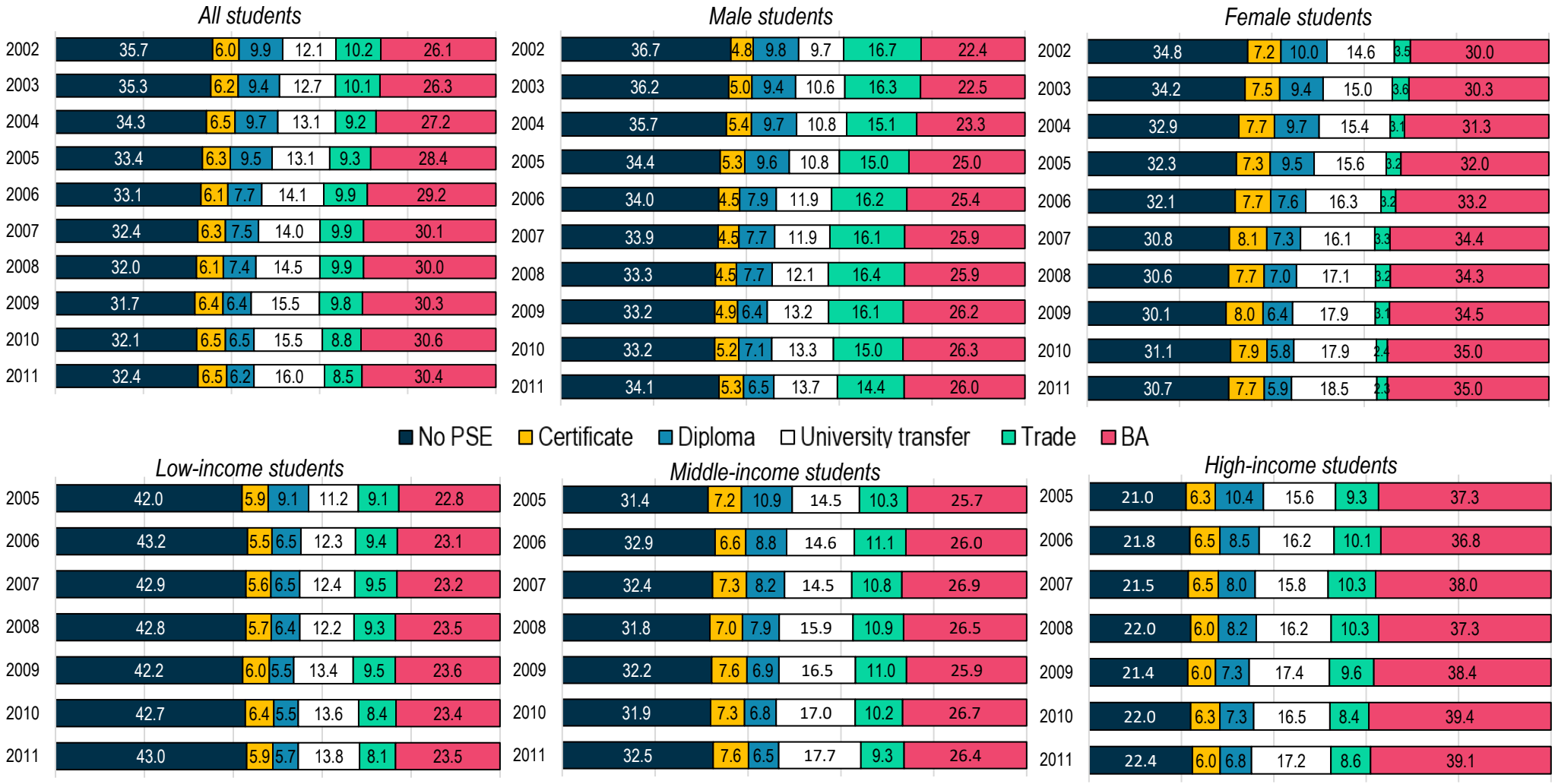
What are the overall trends in PSE entry among students in BC?

Among all students, the descriptive results show that the rate of PSE entry — up to three years after a student's expected Grade 12 year — increased slightly over several Grade 7 cohorts for which PSE entry information was available. As Figure 5 illustrates, the rate of entry was lowest (64.3 per cent) for the 2002 Grade 7 cohort. PSE access rates increased incrementally for the 2003 to 2009 Grade 7 cohorts—up to 68.3 per cent—and then decreased slightly (although by less than one percentage point) for the 2010 and 2011 cohorts.

During this same period, there were also shifts in the type of program students first entered. Rates of entry to BA programs grew from 26.1 per cent for the 2002 cohort to 30.4 per cent for the 2011 cohort. An increased share of students also enrolled in university transfer, associate degree, and general arts and science programs, which was approximately 4 percentage points higher for the last cohort compared to the first. In contrast, access to apprenticeship/trades-related (from 10.2 to 8.5 per cent) and diploma programs (from 9.9 to 6.2 per cent) decreased across the 10 cohorts.

Once a regression model controlled for factors related to the composition of students in each cohort, small but significant findings remained. In particular, students in the 2011 cohort were 3.8 adjusted percentage points less likely to enter a diploma program compared to the 2002 cohort.

Figure 5 Descriptive PSE entry by Grade 7 cohort, males and females, and household income group



Do access rates increase for certain groups and decrease for others? What factors could help explain the increases or decreases?

Variation between male and female students

Across every Grade 7 cohort, female students were more likely to transition to PSE compared to males. When pooling the results across all cohorts, 65.5 per cent of male students and 68.0 per cent of female students accessed PSE within three years of their expected Grade 12 year. Once a regression model controlled for other factors, the gap between male and female students decreased to less than one percentage point, although larger differences in the type of entry program remained. Male students were an adjusted 14 percentage points more likely to enter a trades-based program compared to female students, while they were 6.2 adjusted percentage points less likely to enter a BA.

As shown in Figure 5, descriptive trends in access rates differed slightly for male and female students. For the 2002 Grade 7 cohort, female students were 1.9 percentage points more likely to enter PSE compared to male students. For the 2011 cohort, this difference had increased to 3.4 percentage points. The share of female students who entered BA programs increased from 30.0 to 35.0 per cent across the 10 cohorts compared to a smaller increase of 22.4 to 26.0 per cent among male students.

The composition of male and female students had both similarities and differences (see Tables 4 and 6 in Appendix C). Some of these differences may have contributed to the lower PSE access rates of male students. The rate of being Indigenous, speaking a language other than English at home, receiving English-language support, attending a public or independent school, and experiencing school mobility around Grade 7 was remarkably similar between the two groups. However, a few key differences in the composition of male and female students also related to the likelihood of entering PSE:

- **French immersion programing**: Across all cohorts, 9 per cent of females were in French immersion in Grade 7 compared to 6 per cent of male students. Even after controlling for all other factors, students in French immersion were an adjusted 10 percentage points more likely to enter PSE (mainly through greater enrollment in BA programs) compared to students not in this stream.

- **Having an IEP:** In Grade 7, 12 per cent of male students had an IEP compared to 5 per cent of female students. In the final regression model, students with an IEP were 16 adjusted percentage points less likely to enter PSE compared to students without a designation.

- **Early academic performance:** While male students were more likely to be exceeding expectations in numeracy compared to female students (10 per cent compared to 8 per cent), a slightly higher percentage of male students did not write the Grade 7 FSA or were not meeting expectations in one or both skill areas (43 compared to 38 per cent). As will be discussed further below, this measure of academic achievement was one of the main correlates of PSE entry.

Variation among low-, middle-, and high-income students

Figure 5 shows there were large differences in PSE access rates among young people who lived in low-, middle-, and high-income households in Grade 7. Across the seven cohorts for which household income information was available, a 21-percentage point PSE access gap existed when comparing students from the low- and high-income groups: 57.3 per cent of students in low-income households, 67.9 per cent of students in middle-income households, and 78.3 per cent of students in high-income households accessed PSE within three years of their expected Grade 12 year. When a regression model controlled for a range of other factors—including early academic performance and neighbourhood characteristics — students in high-income households were still an adjusted 14 percentage points more likely to attend PSE than their low-income counterparts.

Across each cohort that had household income information, there was no indication that access rates to particular-higher education programs varied considerably over time for any of the three household income groups. For both the earliest and latest cohorts, access rates to all program streams (i.e., certificate, diploma, university transfer/general arts, trades, and bachelor's degree programs) was lower for students from low-income households compared to their middle- and high-income counterparts. In particular, students in high-income households were much more likely to enter BA programs compared to students in both other household income groups. In the final regression model, students in middle-income families were an adjusted 2.1 percentage points and students in high-income households were 9.2 percentage points more likely to enter BA programs compared to low-income students.

There are several factors that could help explain why students from low-income households continued to be less likely to transition to higher education:

- **Compositional factors differed for students from low- and high-income households**: compared to students from high-income households, the low-income group was more likely to live in a lone-parent household (42 compared to 4 per cent) and the lowest income neighbourhoods (23 compared to 8 per cent). A higher share were Indigenous (18 compared to 6 per cent). As will be discussed further below, these factors are associated with access to PSE, even after controlling for household income. Low-income children were also more likely to speak a language other than English at home (31 compared to 12 per cent); nevertheless, these other language groups all had higher access rates in the final regression

model (see Table 10 in Appendix C), even when they lived in low-income households (see Table 12 in Appendix C).

- **Program factors differed between students from low- and high-income households**: Compared to their high-income counterparts, a smaller share of students from low-income households were in French immersion (5 compared to 12 per cent of high-income children) or an independent school (9 compared to 15 per cent). In contrast, a higher share received English Language Learning (ELL) support (12 compared to 2 per cent) and/or had an Individual Education Plan (IEP) (11 compared to 7 per cent). Students in low-income households also experienced more school mobility than those in high-income households as a higher percentage entered a new school (26 compared to 18 per cent) in Grade 7.

- **Early academic performance differed between students from low- and high-income households**: A larger share of students from low-income households were not meeting expectations in both FSA domains in Grade 7 (15 compared to 8 per cent), while a smaller share were meeting expectations in both numeracy and reading (36 compared to 47 per cent), or exceeding expectations in one or both domains (11 per cent compared to 20 per cent).

What are the trends in PSE entry by student, family, neighbourhood, K-12 school program, school type, skill assessment measures and other relevant characteristics? Does a relationship exist between two or more characteristics?

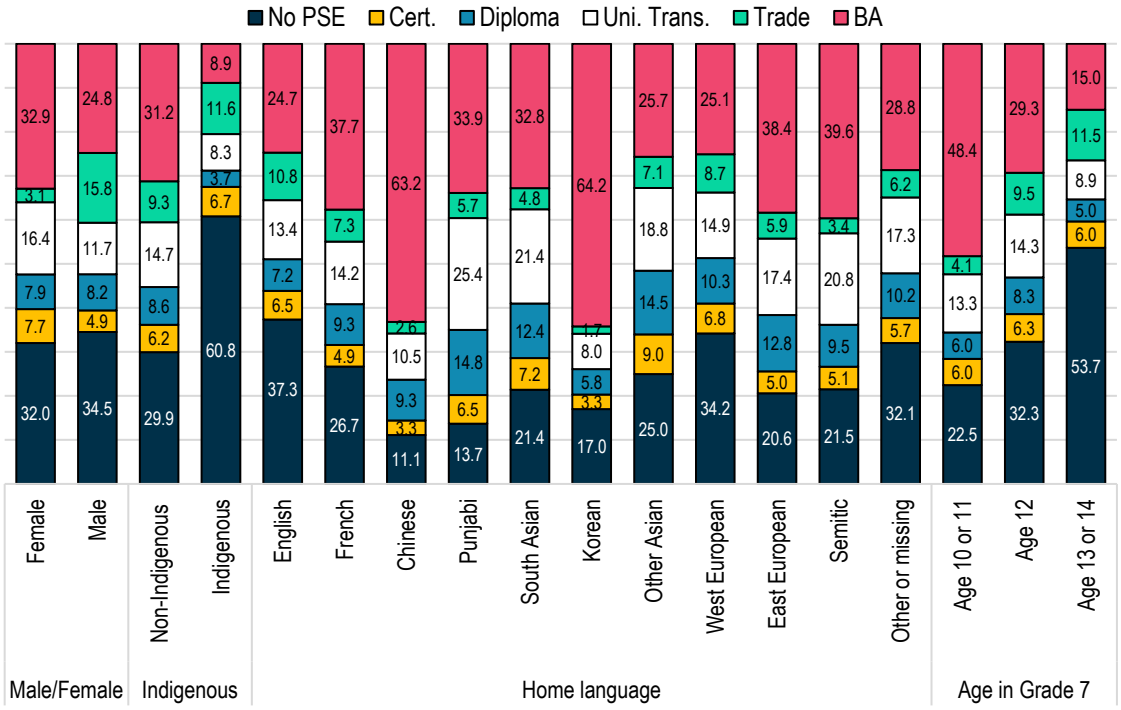
While the sections above and below discuss trends in PSE access by family and neighbourhood characteristics in greater depth, the next section describes how student, schooling, and academic factors relate to PSE access across all Grade 7 cohorts. Unlike the results above for males/females and by household income group, these findings do not explore change in PSE across cohorts. To understand whether a relationship exists between two or more characteristics, each section first discusses the descriptive results and then examines how differences in PSE access change when a regression model controls for other characteristics.

Student characteristics

Figures 6 and 7 show how unadjusted and adjusted PSE access rates differed for Indigenous and non-Indigenous students. Across all cohorts, 60.8 per cent of Indigenous students did not transition to PSE compared to 29.9 per cent of non-Indigenous students — a 31-percentage point gap that reduced by half (an adjusted 14 percentage points) once a regression model accounted for other factors. Among Indigenous students who did transition to PSE, the majority entered shorter and trades programs, with only 8.9 per cent entering BA programs (compared to 31.2 per cent of non-Indigenous students). While the rate of transitioning to PSE was similar

between male and female Indigenous students, it was much lower among Indigenous students from low-income households (31.3 per cent) compared to Indigenous students from high-income households (60.8 per cent) (see Tables 11, 13, and 15 in Appendix C).

Figure 6 PSE entry descriptive results, student characteristics



Source: Results from Table 2 in Appendix C.

In terms of language spoken at home in Grade 7, all language groups were more likely to enter PSE compared to English speakers. PSE access rates by language group varied considerably, with Chinese (88.9 per cent), Punjabi (86.3 per cent), and Korean (83.0 percent) speakers the most likely to have made the transition to PSE. Once a regression model controlled for other factors, the differences between English- and other-language groups reduced — suggesting that compositional differences between language groups helped explain why certain students were more likely to attend PSE. However, in many cases large differences remained even after controlling for other factors. For example, the 26-percentage point difference in PSE access between English and Chinese language speakers reduced to 19 adjusted percentage points in the final regression model.

Another notable finding when examining PSE access by a student's home language is the type of higher education program they were more or less likely to attend. A high percentage of Korean

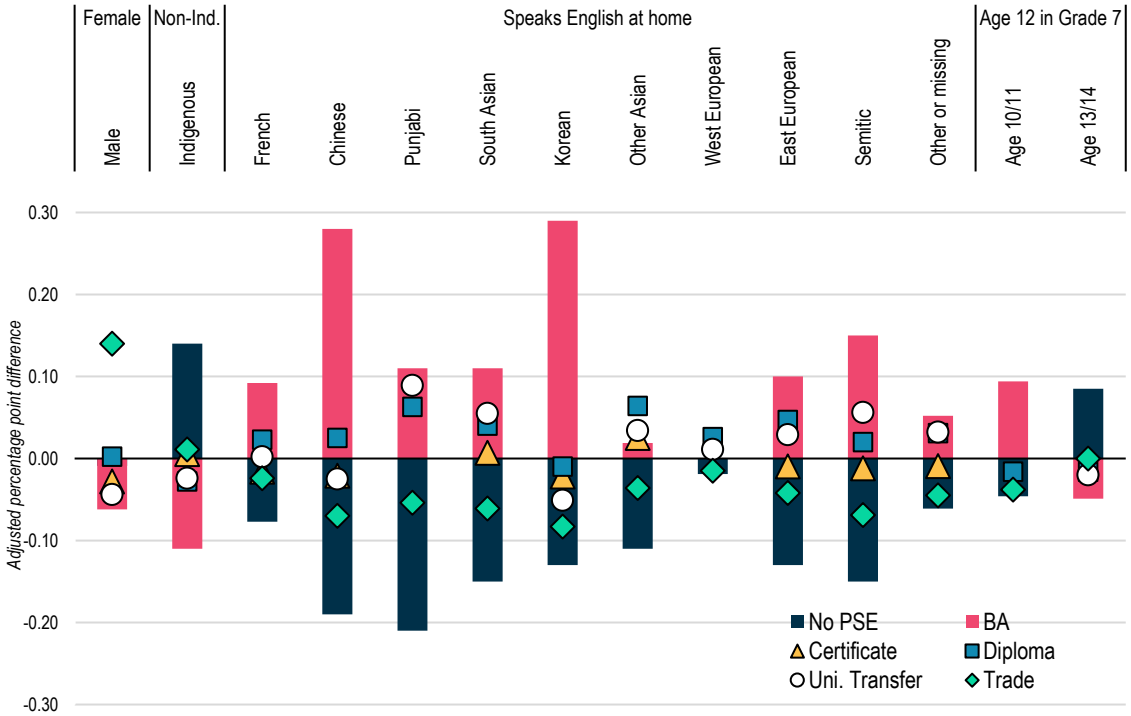
and Chinese (as well as Semitic and East European language) speakers entered BA programs, while Punjabi (as well as South Asian) language speakers were more likely to enter university transfer/associate degree programs. Punjabi and other Asian language speakers were also more likely to enter diploma programs. All language groups were less likely to enter trades programs compared to English speakers.

How to interpret the regression-adjusted graphs

The **regression-adjusted graphs** show statistically significant differences across each explanatory variable, controlling for all other observed factors in the model. Each bar or icon represents the regression-adjusted percentage point difference with a corresponding reference group, as identified at the top of the graph. A higher adjusted percentage means more students in that group had a particular outcome compared to their reference group, while a lower adjusted percentage means fewer students were observed with that particular outcome.

For example, Figure 7 shows the adjusted difference in PSE entry outcomes by different student characteristics. The black bar represents the percentage point difference in no PSE entry for each group compared to their reference category, the pink bar shows the difference in BA entry, and the different icons show differences across the other program levels. When an icon or bar is missing, it means there is no statistically significant difference between the two groups.

Figure 7 PSE entry regression results, student characteristics



Source: Results from Table 3 in Appendix C.

Age-appropriate grade placement was another factor associated with PSE access. The majority of students (95 per cent) in our sample were aged 12 (as of September) when they started Grade 7. However, a small percentage of students were older (aged 13 or 14), which may have been due to repeating an earlier grade or a situation where their guardian(s) decided to delay their entry to kindergarten (which can be deferred for up to one year in B.C.). Some students were also younger (aged 10 or 11), which may be due to skipping an earlier grade and/or enrolling in kindergarten when they were aged 4 (which is possible in B.C. if a child is born between October and December and will turn five that calendar year).

Students who were younger in Grade 7 were the most likely to transition to PSE (77.5 per cent), while students who were older were the least likely (46.3 per cent). The higher access rate among younger students was largely due to the high percentage who entered BA programs (48.3 per cent). The 19.1 percentage point difference in BA enrollment between students who were aged 10/11 or aged 12 in Grade 7 was reduced by more than half (to an 9.4 adjusted percentage point difference) in the final regression model. This suggests that other observed factors (such as level of academic performance) differed between the two age groups.

Schooling characteristics

Multiple schooling characteristics in Grade 7 were associated with later PSE entry, as the results in Figures 8 and 9 show. Among students in a Grade 7 French immersion program, 81.6 per cent entered PSE compared to 65.5 per cent of students in English-language programs — a 16-percentage point gap that was reduced to 10 percentage points in the final regression model. In particular, French immersion students were more likely to enter BA programs compared to students not in French immersion, although they were slightly less likely to enter trades programs.

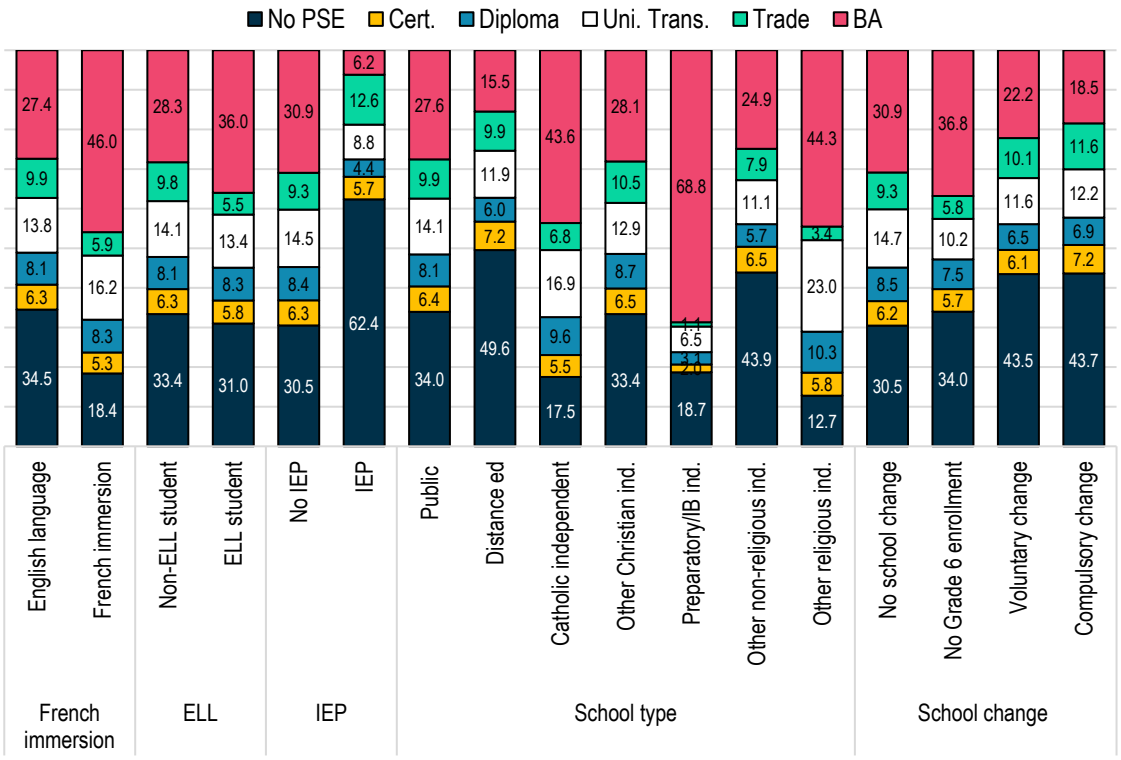
Overall, there was only a modest difference in PSE entry between students who did and did not receive English Language Learning (ELL) support in Grade 7. While ELL students were less likely to enter trades or diploma programs, they were slightly more likely to enter a BA program (36.0 per cent of ELL students compared to 28.3 per cent of non-ELL students). However, this difference was reduced in the final regression model (from a 7.7 unadjusted to a 1.3 adjusted difference). The female-only regression results (see Table 7 in Appendix C) showed that there was no statistically significant difference in BA enrollment between female students who did and did not receive Grade 7 ELL programing, although there was a small difference for males (see Table 5 in Appendix C).

Students with an Individual Education Plan (IEP) in Grade 7 were far less likely to enter PSE in the initial period after high school. Overall, 62.4 per cent of students with an IEP did not make the transition compared to 30.5 per cent of students without a designation in Grade 7. Only a small fraction of all students with an IEP entered BA programs (6.2 per cent compared to

30.9 per cent for students without an IEP). This difference in BA enrollment reduced from approximately 25 to 16 percentage points once a model controlled for all other factors.

The regression results also showed students with an IEP were slightly less likely to enter a diploma program (-1.2 adjusted percentage points) compared to students without an IEP. Nonetheless, there was no difference or even a small positive association with entering a certificate, university transfer/associate degree, or trades program and having an IEP. The male-only regression results found no statistically significant difference in entry to university transfer/associate degree and trades programs for males with and without an IEP, although the female-only results showed that female students with an IEP were slightly more likely to enter trades (1.4 adjusted percentage points) and certificate/other (1.1 adjusted percentage points) programs compared to their female counterparts without an IEP.

Figure 8 PSE entry descriptive results, schooling characteristics



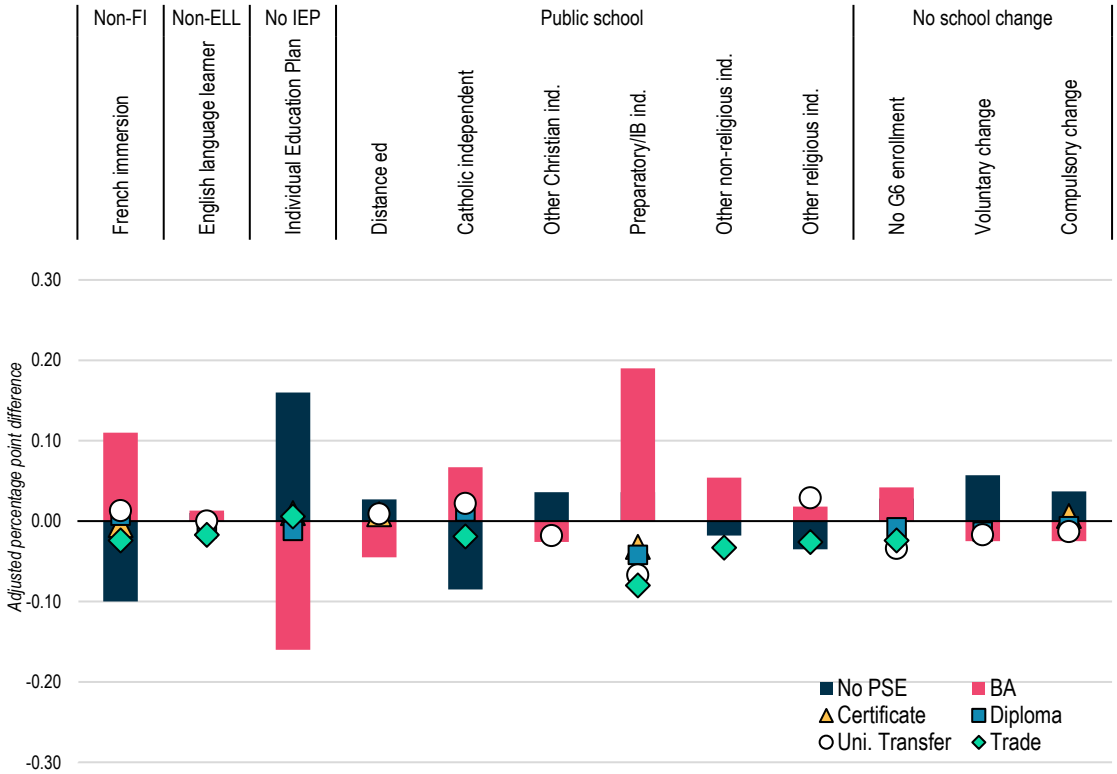
Source: Results from Table 2 in Appendix C.

PSE access rates varied considerably by the type of school a student attended in Grade 7, contrasting across students in public schools and those in different types of independent schools. Overall, PSE entry rates were highest among students who were enrolled in "other" religious (87.3 per cent), Catholic (82.5 per cent), and preparatory/International Baccalaureate (81.3 per

cent) independent schools and lowest among students in distance education/homeschooling programs (50.4 per cent) or other non-religious independent schools (56.1 per cent). The PSE access rate for students in public schools was 66.0 per cent overall.

Across the school type categories, the largest program difference was in entry to BA programs. BA enrollment was highest for students in preparatory/International Baccalaureate schools (68.8 per cent), although a high percentage of students in Catholic (43.6 per cent) and other non-religious independent (44.3 per cent) schools also entered BA programs. In contrast, only 15.5 per cent of students in distance education/homeschooling programs entered a BA program.

Figure 9 PSE entry regression results, schooling characteristics



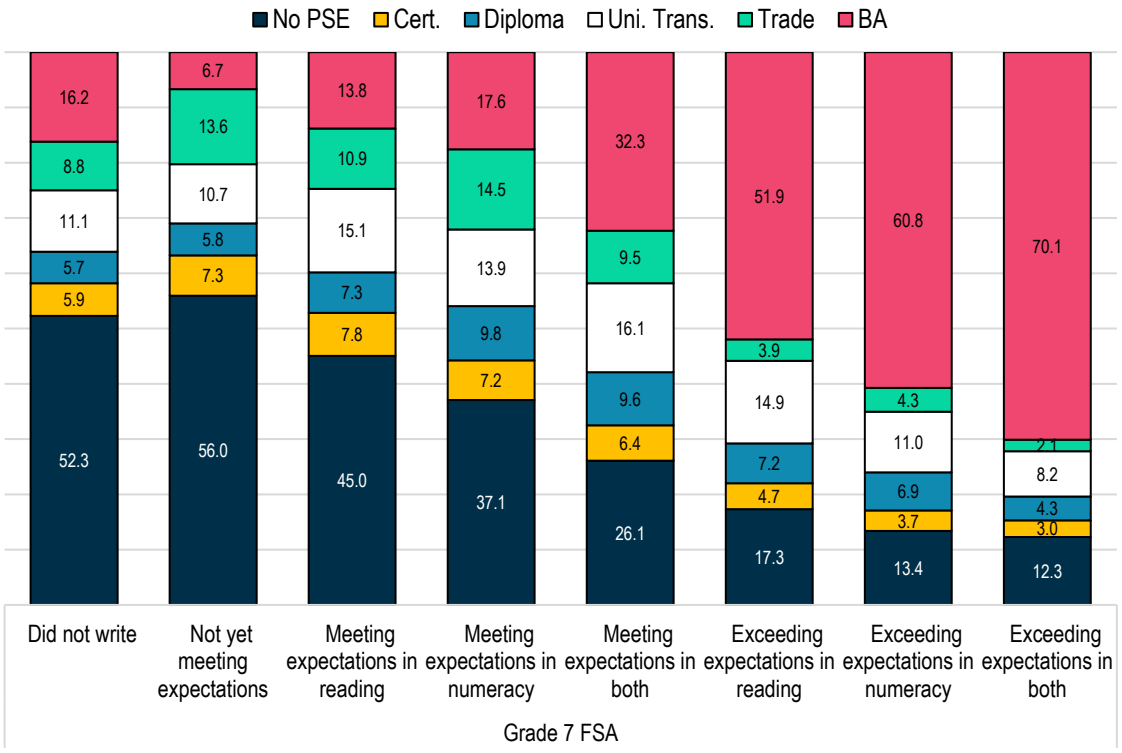
Source: Results from Table 3 in Appendix C.

With respect to mobility around Grade 7, students who remained in the same school between Grades 6 and 7 had the highest PSE access rates (69.5 per cent), closely followed by students who were not enrolled in the B.C. system in Grade 6 (66.0 per cent). Students who experienced either a voluntary (56.5 per cent) or compulsory school change (56.3 per cent) had lower access rates overall, with their lower enrollment in BA programs largely driving the difference. In the regression analysis, the unadjusted difference between students with no school change and those with a voluntary or compulsory change reduced considerably.

Academic performance

As Figures 10 and 11 illustrate, Grade 7 FSA results were strongly associated with PSE entry. In terms of overall entry rates, students who did not write the test (47.7 per cent) or were not meeting expectations in both assessments (44.0 per cent) had the lowest PSE transition rates. When they did enter, a comparably larger percentage entered certificate/other or trades-related programs. Students who were exceeding expectations in both domains (87.7 per cent) had the highest PSE access rate, with the majority (70.1 per cent) entering BA programs.

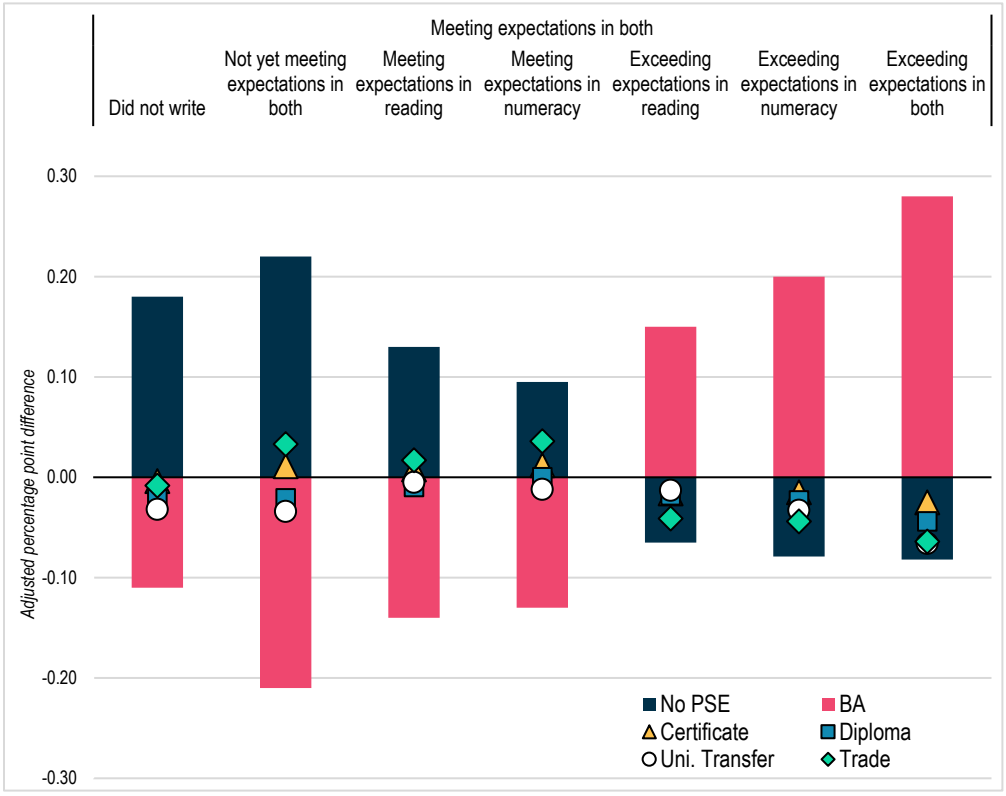
Figure 10 PSE entry descriptive results, academic performance



Source: Results from Table 2 in Appendix C.

The results change when a regression model controls for other factors related to which students may be more or less likely to have higher FSA benchmark scores; although large differences in access rates remain in the final analysis. This suggest that academic performance was a key factor driving entry into higher education, mainly through increased rates of BA enrollment. For example, the unadjusted 37.9 percentage point difference in BA enrollment between students meeting expectations in both domains and those exceeding expectations in both domains reduced to 28.0 percentage points in the final regression analysis.

Figure 11 PSE entry regression results, academic performance



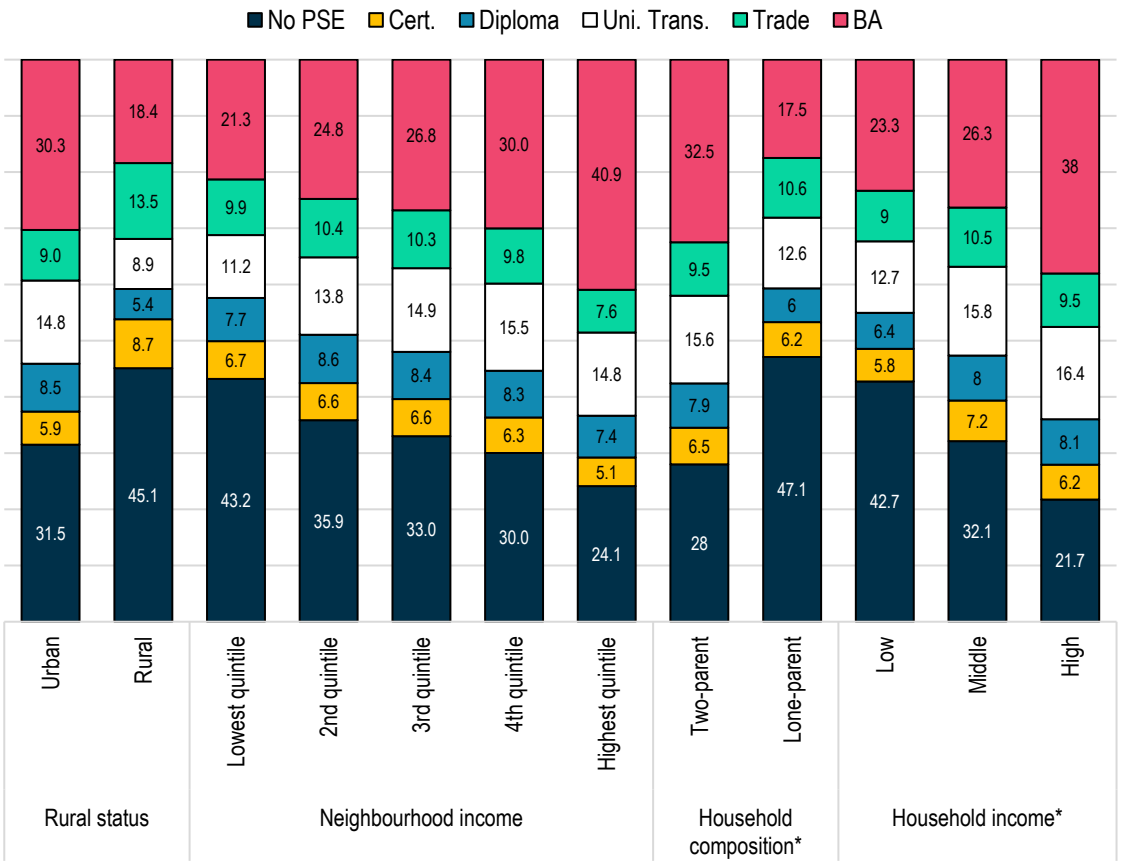
Source: Results from Table 3 in Appendix C.

To what extent do neighbourhood characteristics such as low income, high population density, high ethnic concentration, and (if possible poor living environment and crime levels) influence the PSE entry rate for K-12 students, especially those from low-income and other underserved groups?

Neighbourhood and household characteristics

Figures 12 and 13 examine PSE access with respect to neighbourhood and household characteristics. The categories consider differences between: rural and urban students; students from two- and lone-parent households; those who lived in neighbourhoods with different household income quintiles; and individual household income. Consistent information on other neighbourhood and household factors (e.g., crime level, ethnic concentration, living environment) were not available for all cohorts and were excluded from the analysis.

Figure 12 PSE entry descriptive results, neighbourhood and household characteristics



Source: Results from Tables 2 and 8 in Appendix C. *Results from a reduced sample size with available parental tax data.

Compared to students who lived in urban areas in Grade 7, a lower percentage of students in rural locations entered PSE (54.9 per cent compared to 68.5 per cent). This 13.6-percentage point gap reduced considerably — to 2.1 adjusted percentage points — once a regression model controlled for other factors. In this final model, rural students were less likely to enter a diploma or associate degree/university transfer program but were more likely to enter certificate or trades-related programs. There was no difference in BA enrollment between the two geographic groups in the final regression analysis.

Neighbourhood income in Grade 7 was also associated with PSE entry. Students who lived in the lowest income quintile neighbourhoods were far less likely to enter PSE compared to those in the highest income neighbourhoods (56.8 per cent compared to 75.9 per cent). This 19-percentage point gap reduced to 11 adjusted percentage points in the full sample regression model (see Table 3 in Appendix C) and to 6 percentage points in the reduced sample regression model that controlled for household income (see Table 10 in Appendix C), although other sample characteristic differences between the two models may also have contributed to the difference.

Figure 13 PSE entry regression results, neighbourhood and household characteristics

Source: Results from Tables 3 and 10 in Appendix C. *Results from a reduced sample size with available parental tax data.

Among students with parental income data in Grade 7, it was possible to identify who lived in lone- or two-parent families at that time. Those in lone-parent households had lower PSE access rates than students in two-parent households (52.9 per cent compared to 72.0 per cent). However, this 19-percentage point gap reduced to just 4 percentage points once a model controlled for other factors (see Table 10 in Appendix C). As will be discussed further next, one of the factors associated with both PSE entry and living in a lone-parent household was household income, with households headed by a single parent more likely to belong to the low-income household group.

What are the overall barriers to PSE experienced by youth in BC? What are the barriers by student, family, neighbourhood, K-12 school program, school type, skill assessment measures and other relevant characteristics? What are the barriers to PSE experienced by specific underserved groups?

The findings explored above highlight the range of student, program, schooling, academic performance, neighbourhood, and household factors that served as barriers to entering PSE in

early adulthood. Certain factors — such as academic performance — can be classified as more direct barriers. Lower achieving students may not have the high school grades needed to enter their preferred program. Other factors — such as student characteristics — function as more indirect barriers. That is, they do not identify extrinsic qualities related to students themselves, but rather the unobserved educational opportunities, experiences, circumstances, and perspectives they may be more or less likely to have.

The results showed that certain student groups were especially underserved by the higher education system. Those students least likely to attend were: Indigenous; had an IEP; lower Grade 7 FSA benchmark scores; and lived in low-income households. In many cases, a student may have belonged to more than one of these groups that had lower PSE entry rates. While prior research in Canada has documented the barriers such groups face in accessing PSE, our study also uncovered groups less frequently associated with facing access barriers:

- **Students in early distance education/homeschooling programs**: Compared to any other type of school/program a student could attend, those in Grade 7 distance education/ homeschooling programs were the least likely to enter PSE, with approximately half making the transition. Among those who did attend, only a small percentage entered BA programs.

- **Students who changed schools**: Mobility between Grades 6 and 7 was associated with lower PSE access by several percentage points. While a single grade transition does not fully capture the amount and type of mobility a student can encounter from K-12, there is enough evidence to warrant further investigation into how transitions may create barriers in accessing PSE (e.g., by reducing a student's sense of peer and school belonging).

In terms of the barriers experienced by certain under-served groups, our research focused specifically on variation across household income. The disaggregated results showed that many students in low-income households also had other barriers associated with lower PSE access rates; for example, they were more likely to be Indigenous, have an IEP, and not be meeting expectations in their Grade 7 assessments. Nevertheless, the results also showed that even when low-income students had characteristics associated with higher PSE access rates, they were still less likely to attend PSE compared to their counterparts in high-income households. For example:

- **Students in low-income households with stronger early academic performance were still less likely to enter PSE compared to those from high-income households**: For students from low-income households who were meeting expectations in both Grade 7 FSA domains, 67.5 per cent entered PSE compared to 82.1 per cent of students from high-income households. These students were academically equivalent but faced other barriers in accessing PSE.

- **Students in low-income households who were enrolled in Grade 7 programs or schools that had high PSE entry rates were still less likely to attend**: For students from low-income households in French immersion, 73.2 per cent accessed PSE compared to 86.6 per cent of students in high-income households. Even low-income students in preparatory/International Baccalaureate independent schools were less likely to attend than those from high-income households (74.3 per cent compared to 85.6 per cent).

OUTCOME 2: PSE COMPLETION

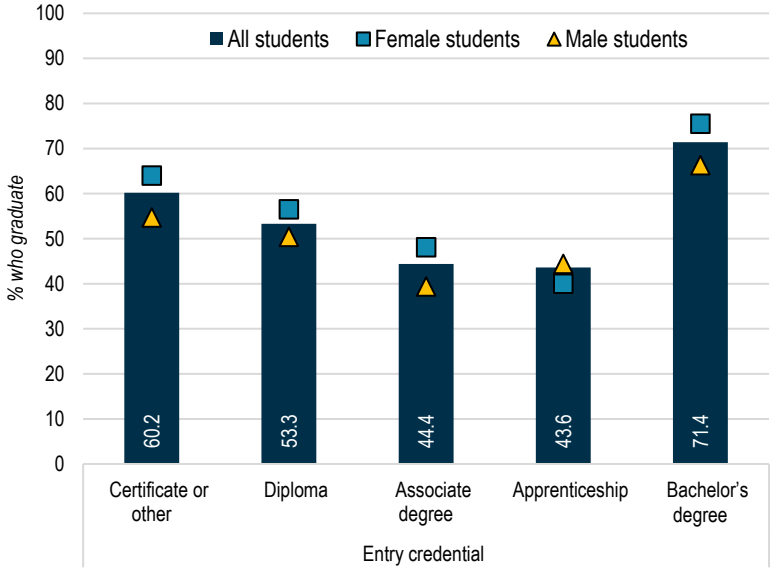
What are the overall PSE graduation rates among students in BC?

The next set of analyses examines PSE completion among students who entered higher education in the previous section. Across all programs of entry, 58 per cent of students in this sample had graduated within six-years of starting their first PSE program. Overall, completion rates were higher for female students (63.5 per cent) compared to male students (53.2 per cent).

As the descriptive and regression results in Figures 14 and 15 show, completion rates varied considerably by program of entry. Among students who entered BA programs, 71.4 per cent had graduated within six years. In contrast, only 43.6 per cent of students in trades-related programs and 44.4 per cent of those who first entered associate degree/university transfer had completed any program within six years.

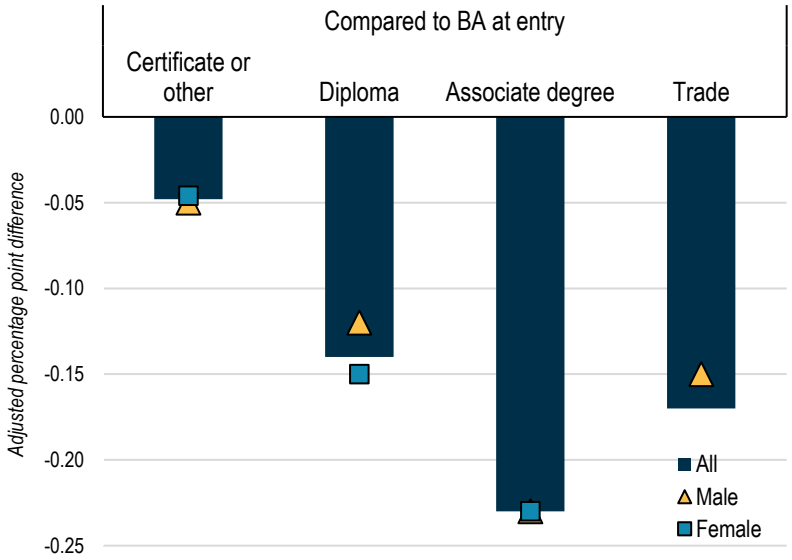
In the final regression analysis, sizable and statistically significant differences in completion rates by program of entry remained. Compared to students who entered BA programs, those who first enrolled in any other program were less likely to be completers six years after entry, although the difference between students who entered BA and certificate/other programs reduced to less than 5 percentage points.

Figure 14 PSE completion descriptive results, program of entry



Source: Results from Table 17 in Appendix C.

Figure 15 PSE completion regression results, program of entry



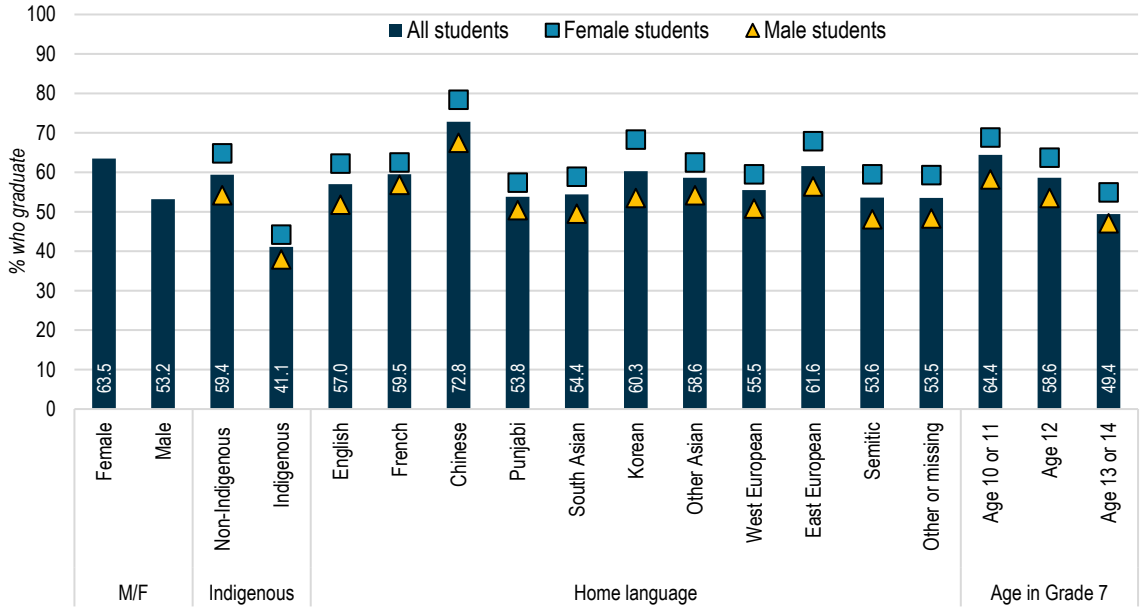
Source: Results from Table 18 in Appendix C.

What are the PSE graduation rates by student, family, K-12 school program, school type, skill assessment measures and other relevant characteristics? Does a relationship exist between two or more characteristics?

Student characteristics

As successful PSE completion is conditional on initial entry, fewer early Grade 7 indicators and student characteristics were statistically associated with graduation in the final regression analysis than in the equivalent analysis examining PSE entry. Controlling for program of entry often reduced the effect size of these earlier indicators, suggesting that it was a powerful sorting mechanism. Students with background characteristics associated with academic success (e.g., higher early assessment scores) were more likely to enter BA programs. Given this selection process, these BA entry students were more likely to graduate within six years compared to those who entered less selective programs (e.g., university transfer programs).

Figure 16 PSE completion descriptive results, student characteristics



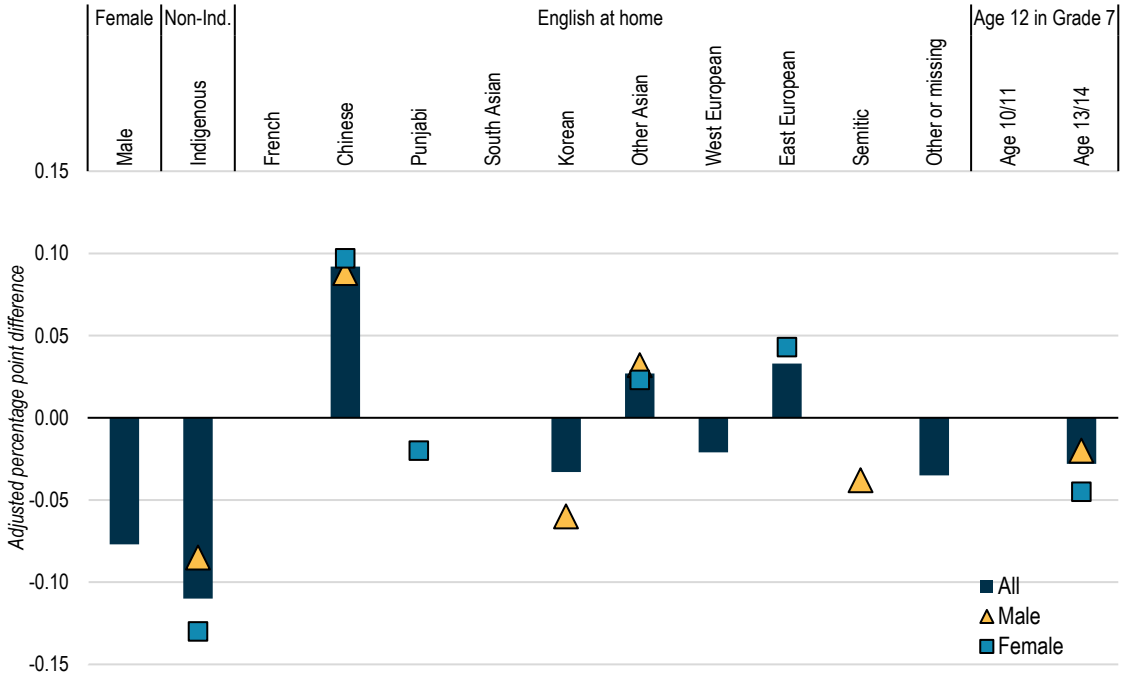
Source: Results from Table 17 in Appendix C.

Even when a regression model controlled for this powerful sorting mechanism, however, many of the student characteristics associated with PSE entry were also related to later completion. As the descriptive results in Figure 16 show and the regression results in Figure 17 confirm, Indigenous students were less likely to graduate than non-Indigenous students (41.1 per cent compared to 59.4 per cent). This unadjusted 18 percentage point gap reduced to 11 adjusted

percentage points in the final regression analysis. When we examined variation between male and female students, the regression results also show that the completion gap was larger between Indigenous and non-Indigenous females compared to the equivalent male gap.

While there was no statistically significant difference in PSE completion rates between students aged 12 and those aged 10 or 11 in Grade 7, those who were aged 13 or 14 were less likely to be completers (-9.2 unadjusted and -2.8 adjusted percentage points). The completion gap between those aged 12 and those aged 13 or 14 in Grade 7 was slightly smaller among males and slightly larger among females.

Figure 17 PSE completion regression results, student characteristics



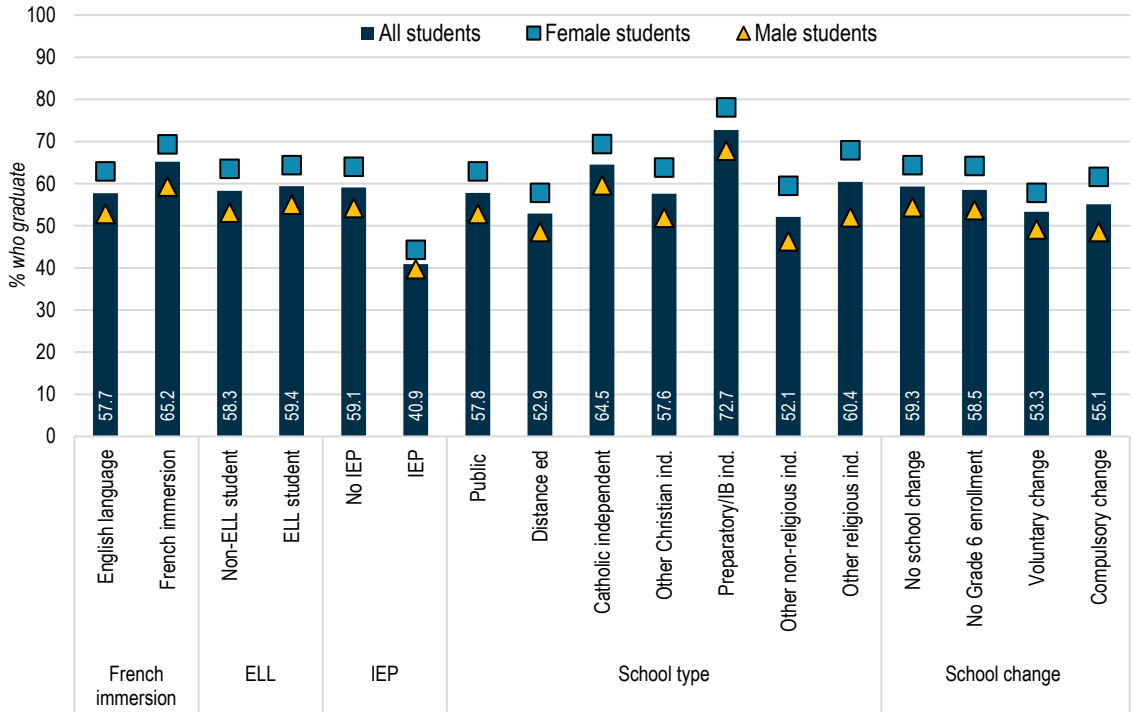
Source: Results from Table 18 in Appendix C.

There were differences in PSE completion rates across various language groups. Chinese language speakers were the most likely to be completers (72.8 per cent), while Punjabi and Semitic language speakers, as well as students with other/missing home languages, had the lowest completion rates (approximately 53 per cent). Once a regression model controlled for all other characteristics, Chinese language speakers were an adjusted 9.2 percentage points more likely to be completers compared to English speakers, while a few other groups (i.e., speakers of other Asian and eastern European languages) were also slightly more likely to complete a program within six years. In contrast, Korean and west European language speakers were less likely to be completers, especially Korean-speaking males compared to English-speaking males.

Schooling characteristics

Figures 18 and 19 illustrate how PSE graduation differed by early schooling characteristics in Grade 7. The results show that, compared to those in English-language programming, students in French immersion programs were slightly more likely to be completers (7.5 unadjusted and 2.9 adjusted percentage points). There was no statistically significant difference in completion rates between students who did and did not receive English language learning (ELL) support in Grade 7.

Figure 18 PSE completion descriptive results, schooling characteristics



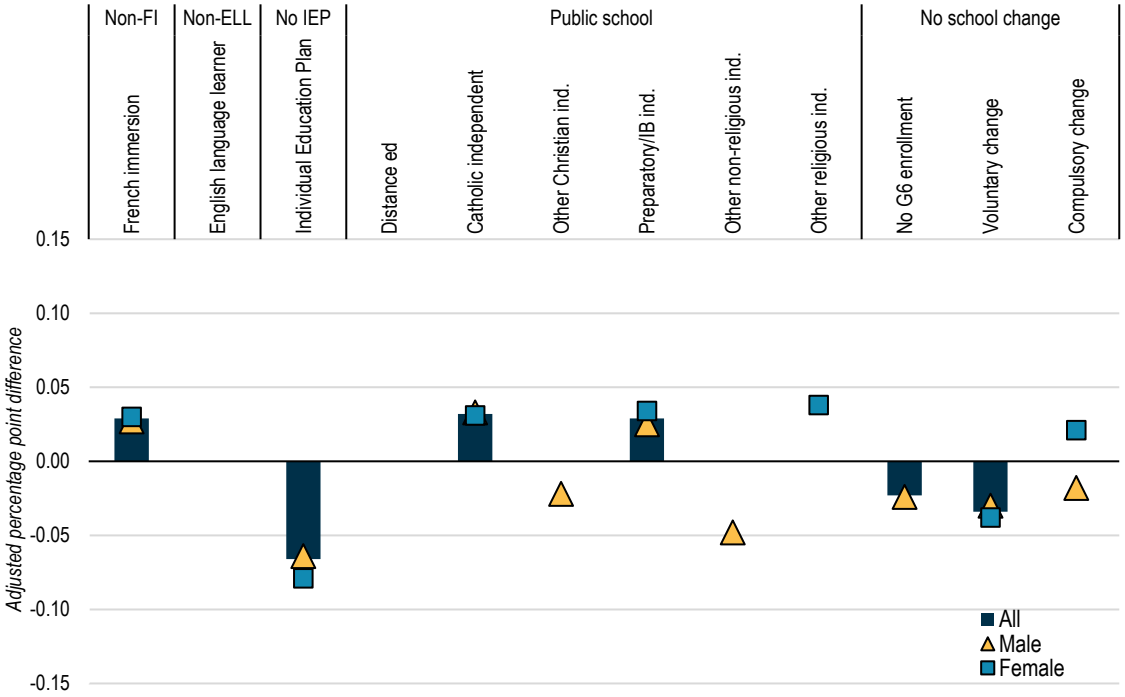
Source: Results from Table 17 in Appendix C.

Students with an Individual Education Plan (IEP) were less likely to be completers compared to students without one; however, other observed factors accounted for a large portion of the difference between these two groups as the 18.2 unadjusted gap reduced to 6.6 adjusted percentage points in the final regression analysis. Additional analysis separating male and female students showed that the completion gap between students with and without an IEP was slightly smaller for males and slightly larger for females.

The type of school a student attended in Grade 7 was also associated with PSE completion. Compared to students who attended a public school, those in Catholic (6.7 unadjusted and

3.2 adjusted percentage points) and preparatory/International Baccalaureate (14.9 unadjusted and 2.9 adjusted percentage points) independent schools were more likely to be completers. There was no statistically significant difference among the other school types overall. However, in the male-only model, males who attended other non-religious or Christian independent schools were slightly less likely to be completers compared to males who attended public schools. In the female only model, females who attended other religious independent schools were slightly more likely to be completers.

Figure 19 PSE completion regression results, schooling characteristics



Source: Results from Table 18 in Appendix C.

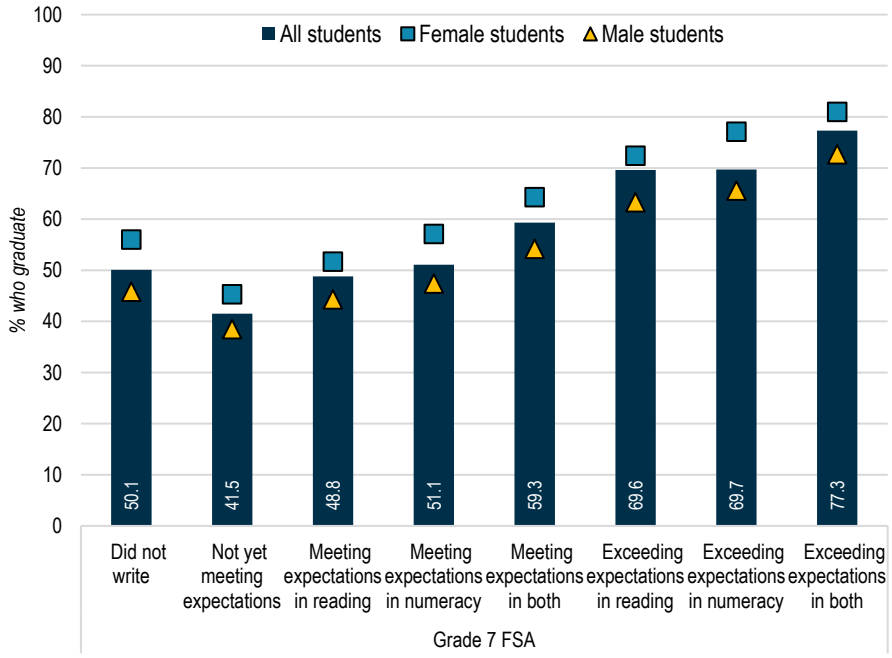
Student mobility around Grade 7 was also associated with PSE completion, even after controlling for other factors. Compared to students who did not change schools between Grades 6 and 7, those who changed school voluntarily were slightly less likely to be completers (-6.0 unadjusted and -3.4 adjusted percentage points). In addition, while there was only a small unadjusted difference (<1 percentage point) in completion rates between students who were not enrolled in the B.C. system in Grade 6 and those who did not change schools, a larger difference appeared in the regression model (-2.3 adjusted percentage points), suggesting that this group had other characteristics associated with higher completion rates, but had comparably lower rates than these background factors would predict. The regression analysis also showed that males who had a compulsory change in schools were slightly less likely to be completers compared to males who

did not change schools. In contrast, females who experienced a compulsory change in schools were slightly more likely to be completers compared to their female counterparts.

Academic performance

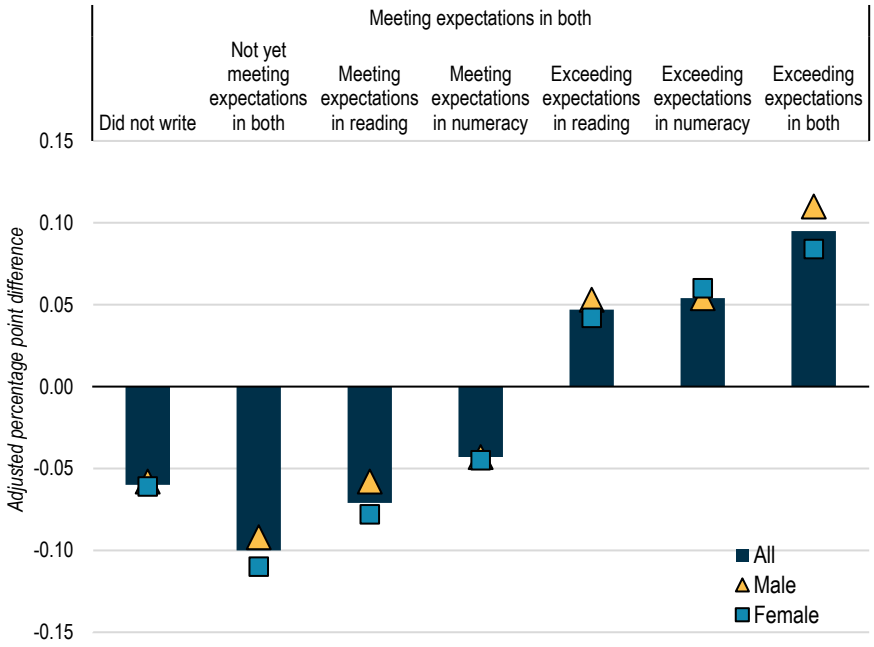
As the descriptive and regression results in Figures 20 and 21 demonstrate, early academic performance was associated with a successful PSE outcome. Compared to students who were meeting expectations in both reading and numeracy, those who did not write the assessment (-9.2 unadjusted and -6.0 adjusted percentage points) or were not meeting expectations in both assessments (-17.8 unadjusted and -10.0 adjusted percentage points) — as well as students who were only meeting expectations in reading (-10.5 unadjusted and -7.1 adjusted percentage points) or numeracy (-8.2 unadjusted and -4.3 adjusted percentage points) — were less likely to be graduates. In contrast, those who exceeded expectations in reading (10.3 unadjusted and 4.7 adjusted percentage points), numeracy (10.4 unadjusted and 5.4 adjusted percentage points), or both assessments (18.0 unadjusted and 9.5 adjusted percentage points) were more likely to be completers compared to students who were meeting expectations in both domains.

Figure 20 PSE completion descriptive results, academic performance



Source: Results from Table 17 in Appendix C.

Figure 21 PSE completion regression results, academic performance



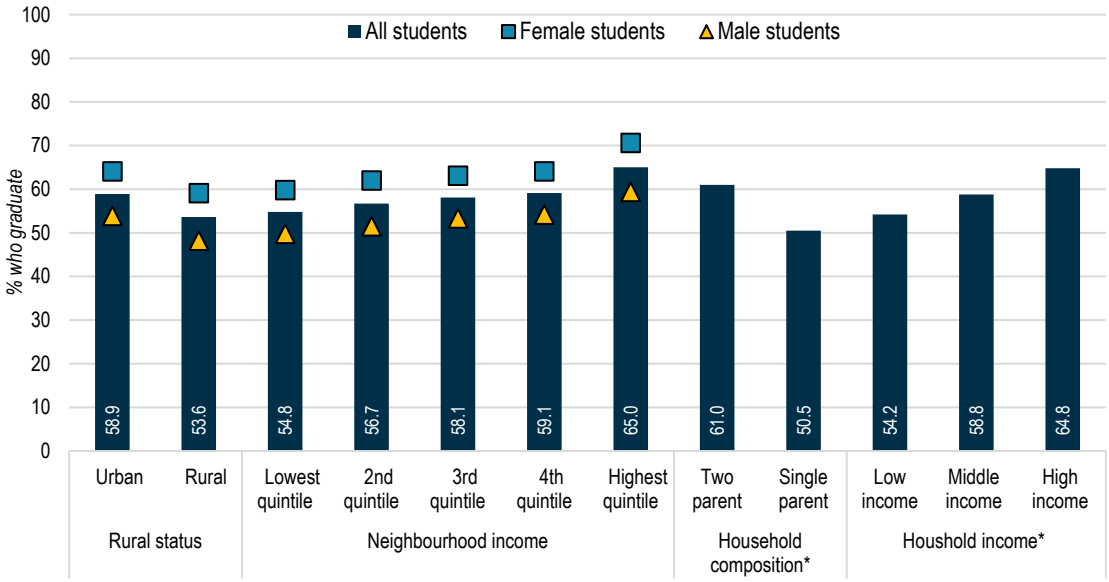
Source: Results from Table 18 in Appendix C.

Neighbourhood and household characteristics

Figure 22 visualizes the descriptive results across the neighbourhood and household characteristics, while Figure 23 shows the corresponding regression results. While there was a small descriptive difference in completion rates between rural and urban students, once a regression model controlled for all other factors there was no statistically significant difference. However, neighbourhood income continued to be associated with success in the final regression analysis. Compared to students who lived in low-income neighbourhoods, those in each higher-income neighbourhood were incrementally more likely to be completers, especially if they lived in locations within the highest income quintile (10.2 unadjusted and 5.6 adjusted percentage points).

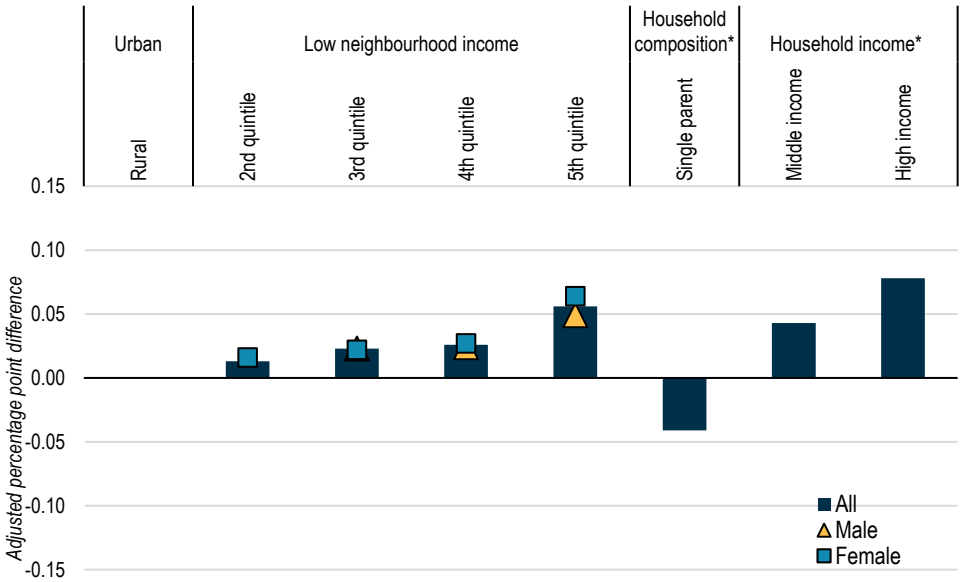
The results also showed that students from lone-parent households were less likely to be completers compared to those from two-parent households (-10.5 unadjusted and -4.1 adjusted percentage points). Disaggregated analysis by household income group showed that the adjusted completion gap between students from lone-parent and two-parent households was slightly smaller for those in middle-income households and slightly larger for those in high-income households compared to the full-sample results (see Table 20 in Appendix C).

Figure 22 PSE graduation descriptive results, neighbourhood and household characteristics



Sources: Results from Tables 17 and 19 in Appendix C. *Results from a reduced sample size with available parental tax data.

Figure 23 PSE graduation regression results, neighbourhood and household characteristics



Sources: Results from Tables 18 and 20 in Appendix C. *Results from a reduced sample size with available parental tax data.

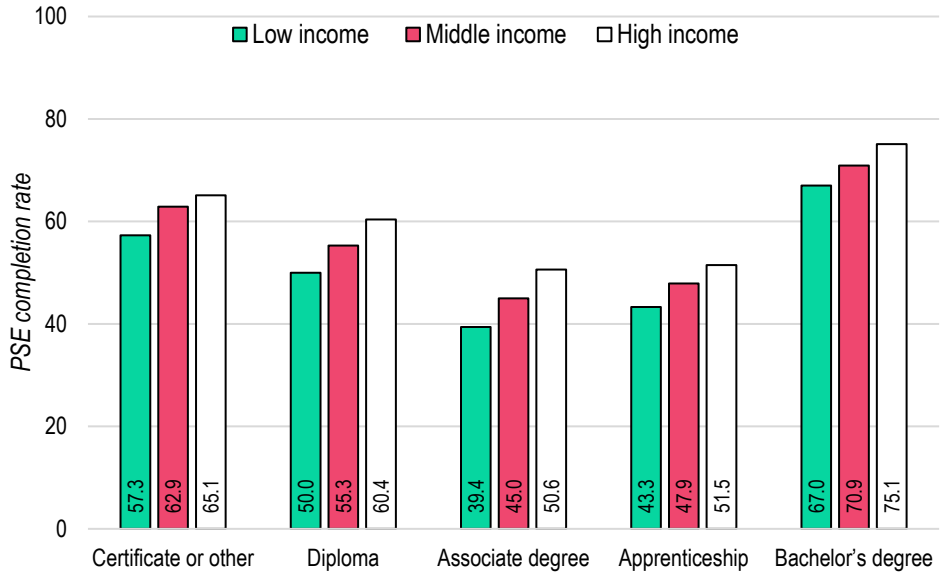
Both students from middle- and high-income households were more likely to be PSE completers compared to those from low-income households, with the high-income group having the biggest advantage — an association that still existed when a model controlled for all other indicators. In the final regression analysis, students who lived in high-income households were 7.8 adjusted percentage points more likely to complete PSE within six years compared to students from low-income households.

Do the barriers differ for specific underserved groups?

Along with examining how completion rates differed for males and females across all the descriptive and regression analysis, the results were also disaggregated by Grade 7 household income group — although this analysis had a reduced sample size due to data availability (see Tables 19 and 20 in Appendix C). Overall, students who lived in low-income households had lower PSE completion rates than their higher-income counterparts, even when they also belonged to a group that had comparably higher levels of success.

- **Even when low-income students entered more academically selective programs, they were still less likely to graduate**. As Figure 24 visualizes, a lower percentage of low-income students graduated from every program stream, even when they entered BA programs with higher graduation rates overall.

Figure 24 PSE graduation descriptive results, entry program and household-income group



Source: Results from Table 19 in Appendix C.

- **A higher percentage of Indigenous students completed PSE if they came from households with higher income.** Indigenous students from low-income households had lower overall completion rates compared to Indigenous students who lived in high-income households (40.0 per cent compared to 55.4 per cent).

- **For certain language groups, students from low-income households had high completion rates.** There was a large amount of variation when comparing completion rates between students who lived in low- and high-income households by the various language groups. Although there was an unadjusted 15.0 percentage point gap in completion rates for English speakers from low- and high-income households, it reduced to less than 7 percentage points for Chinese, Punjabi, Korean, and East European language speakers.

- **Students from low-income households who were in program streams associated with later success were still less likely to complete PSE**. For example, for low-income students in French immersion, 57.5 per cent completed PSE within six years compared to 70.7 per cent of French immersion students from high-income households.

- **Graduation rates were particularly low among students from low-income households who had a Grade 7 IEP**. Only 39.0 per cent of students from low-income households with a Grade 7 IEP were completers compared to 50.0 per cent of students with an IEP who lived in high-income households.

- **Across all Grade 7 school types, students from low-income households were less likely to complete PSE within six years compared to students in high-income households who attended the same type of school.** For example, only 50.0 per cent of students from low-income households who attended other Christian independent schools completed PSE compared to 63.5 per cent of those who attended the same school type but lived in high-income households.

- **Even when students from low-income households had high Grade 7 assessment scores, they were less likely to be completers compared to high achieving students from high-income households.** For example, 72.1 per cent of students in low-income households who were exceeding expectations in both FSA domains completed PSE within six years, compared to 80.0 per cent of those from high-income households.

- **Students in low-income households who lived in high-income neighbourhoods were less likely to be completers** compared to students who lived in high-income households in these same types of areas (59.7 compared to 69.4 per cent).

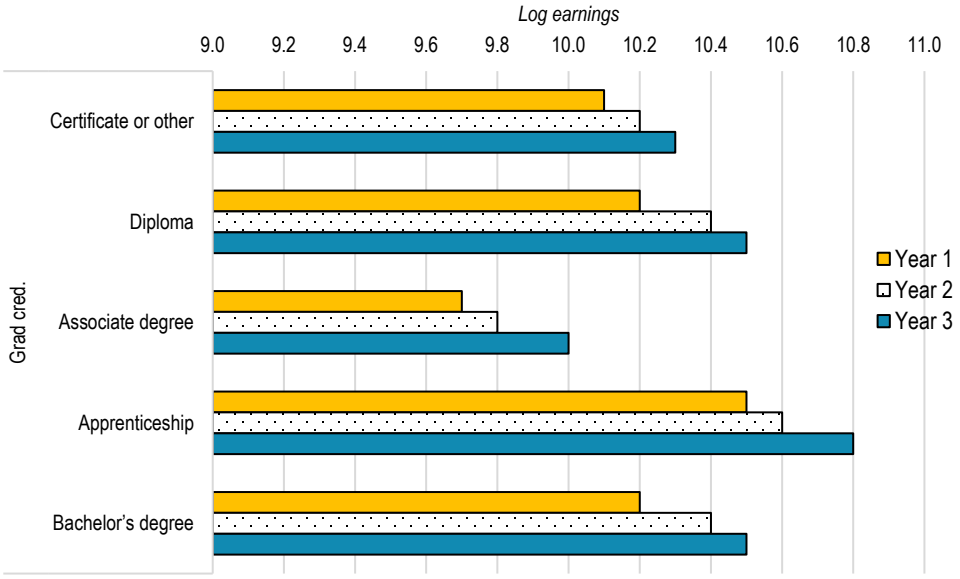
OUTCOME 3: POST-GRADUATION EARNINGS

What are the overall labour market outcomes for graduates in BC?

The next section examines how post-graduation earnings differed for those who were PSE completers in the previous analyses and entered the labour market full time (i.e., declared earnings in their tax return and did not return to school). Overall, male graduates had average log earnings of 10.2 (approximately $26,900) one year after leaving PSE, while female graduates had average log earnings of 10.1 (approximately $24,340).

A major driver of early earnings was the highest credential a student completed while in school. As the descriptive and regression results in Figures 25 and 26 demonstrate, compared to students with a BA, those who graduated with a certificate, diploma, or associate degree typically earned less one, two, and three years after PSE. The descriptive earnings gap was largest among associate degree holders and minimal for diploma graduates. Those who earned a trades qualification earned more than those with a BA across all three years.

Figure 25 Post-graduation earnings descriptive results, highest program completed



Source: Results from Table 21 in Appendix C.

Separate models for males and females also showed there were differences in post-PSE earnings by credential level for these two groups (see Tables 23 and 24 in Appendix C). For male students, there was no statistically significant difference in earnings one and two years after PSE between

those who graduated with a BA and with a diploma, although a modest gap (4.5 per cent) in earnings in favour of BA holders appeared in year three. Compared to the female-only model, the difference in earnings between males with a BA and trades credential was larger. For female students, the earnings difference between those graduating with a BA and a certificate was larger than for males. Females who graduated from certificate programs earned 18 per cent less in year one compared to females with a BA, a gap that increased to 30 per cent less by year three.

Figure 26 Post-graduation earnings regression results, highest program completed

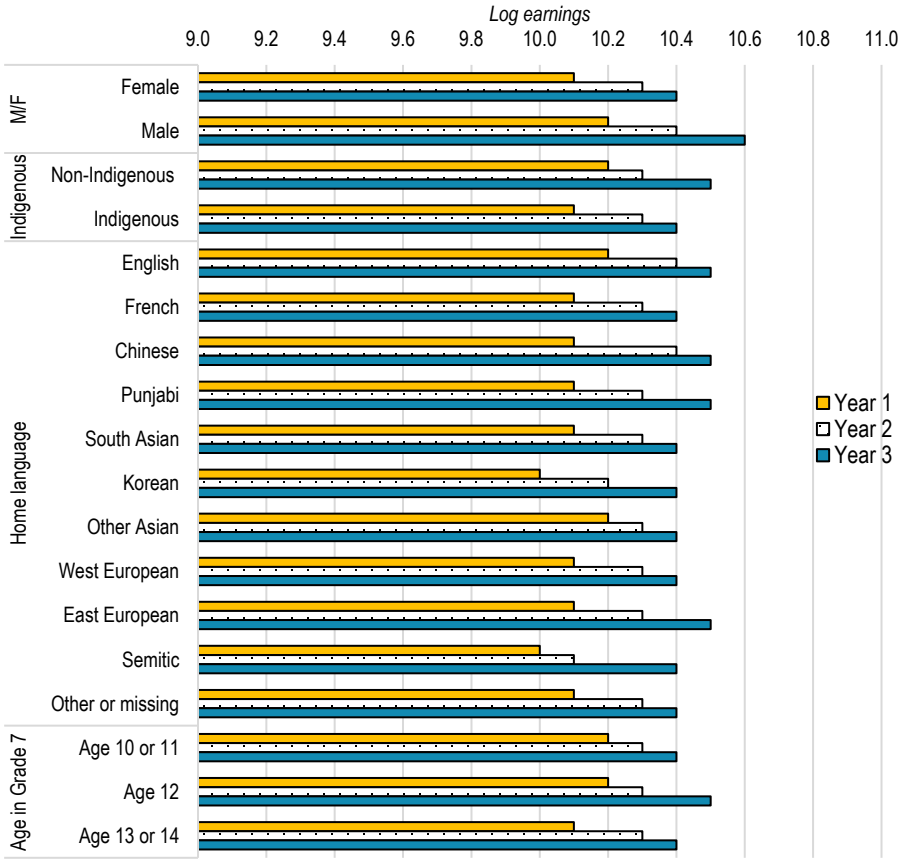
Source: Results from Table 22 in Appendix C.

What are the labour market outcomes by student, family, K-12 school program, school type, skill assessment measures and other relevant characteristics? Does a relationship exist between two or more characteristics?

Student characteristics

Several student characteristics were associated with level of post-PSE earnings, as the descriptive and regression results show in Figures 27 and 28. In the final regression analysis, males earned an adjusted 7.9 per cent more than females in their first year after PSE, a male-female earnings gap that increased to 19 per cent by year three.

Figure 27 Post-graduation earnings descriptive results, student characteristics



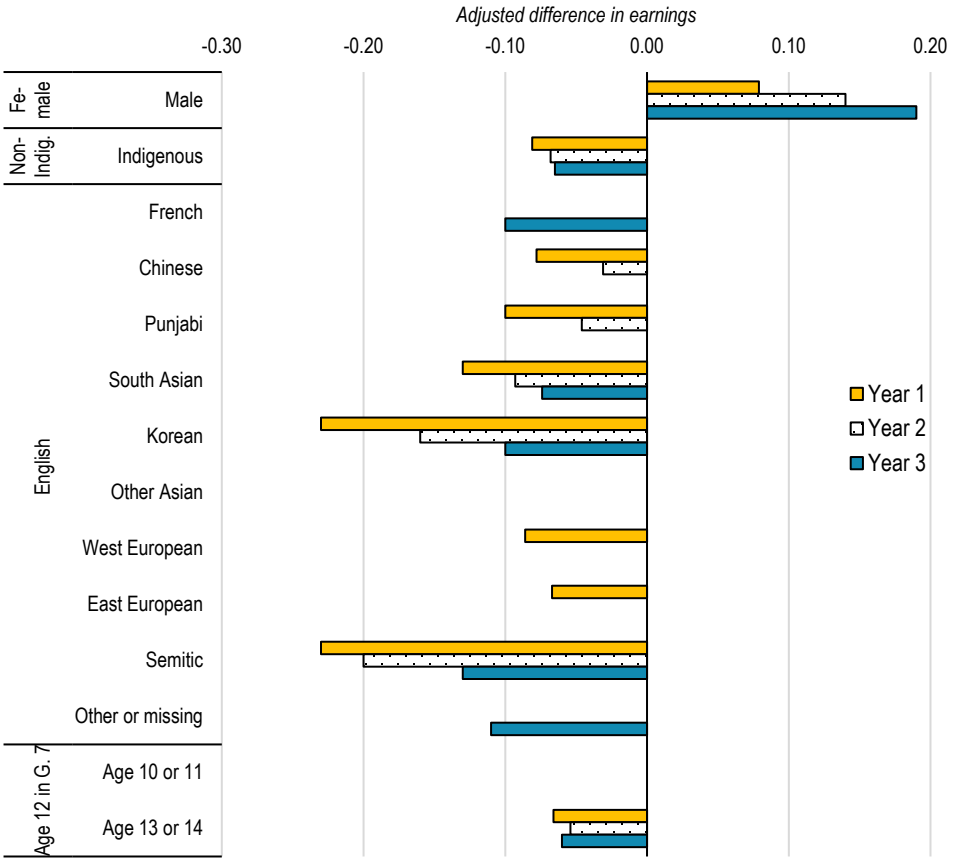
Source: Results from Table 21 in Appendix C.

Compared to non-Indigenous students, Indigenous students earned an adjusted 7 to 8 per cent less across all three years in the final regression analysis. When comparing results between the male- and female-only models (see Tables 23 and 24 in Appendix C), the earnings gap between Indigenous and non-Indigenous females was larger than the difference between males. In fact, there was no statistically significant difference in earnings between Indigenous and non-Indigenous males three years after graduation.

Compared to students who spoke English at home in Grade 7, most other language groups had statistically significant lower earnings one, two, and/or three years after completing PSE. The earnings gap was largest between English and Korean speakers in the final regression analysis, with the latter group earning an adjusted 23 per cent less in year one, which reduced to 10 per cent less by year three. There were also several differences in post-graduation earnings when examining female- and male-only results (see Tables 23 and 24 in Appendix C). For example, in the female-only model, Semitic-speaking females earned 28 per cent less than English-speaking

females in their first year (while it was 17 per cent less in the male-only model). In the male-only model, Korean speakers earned 26 per cent less in their first year than English speakers (while it was 20 per cent less in the female-only model).

Figure 28 Post-graduation earnings regression results, student characteristics



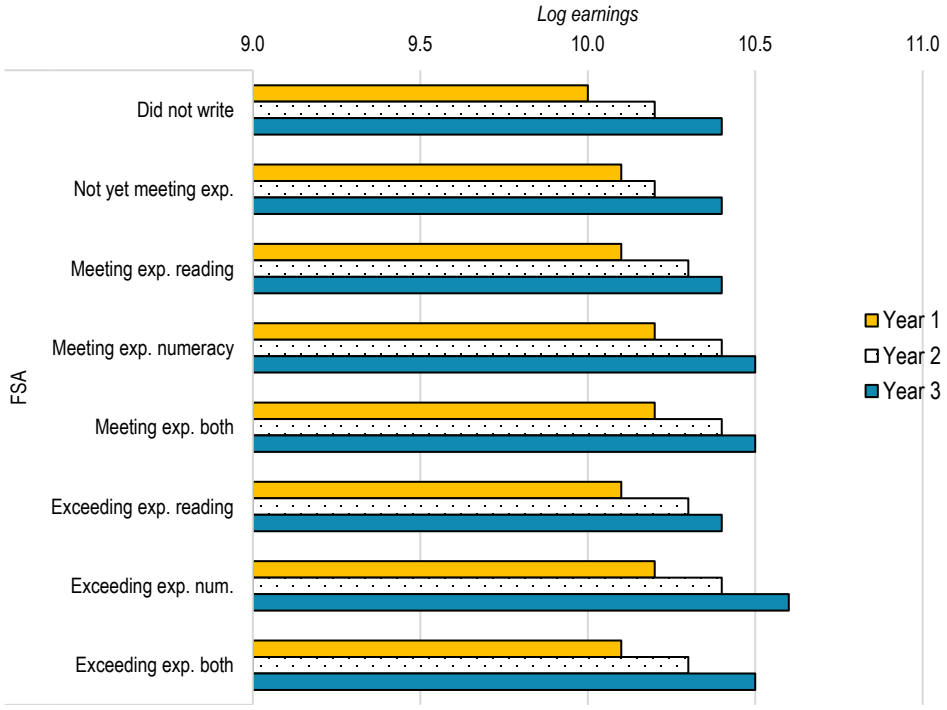
Source: Results from Table 22 in Appendix C.

While the final regression analysis found no difference in earnings between students aged 10, 11, or 12 in Grade 7, PSE graduates aged 13 or 14 earned slightly less post-graduation—ranging from 5.4 to 6.6 per cent less depending on the year after completion. The female-only results found the earnings gap between female students aged 12 and aged 13 or 14 to be slightly larger than the corresponding male-only gap (see Tables 23 and 24 in Appendix C).

Academic performance

Just as early academic performance was found important in influencing the previous outcomes, the descriptive and regression analysis in Figures 29 and 30 found a small association between Grade 7 FSA benchmark scores and earnings — although the measure of success was not always in favour of those who did well on these assessments. Compared to students who were meeting expectations in both assessments, those who did not write the assessment or were not meeting expectations in one or both domains, earned between 4 and 15 per cent less in the final regression analysis depending on the year and group.

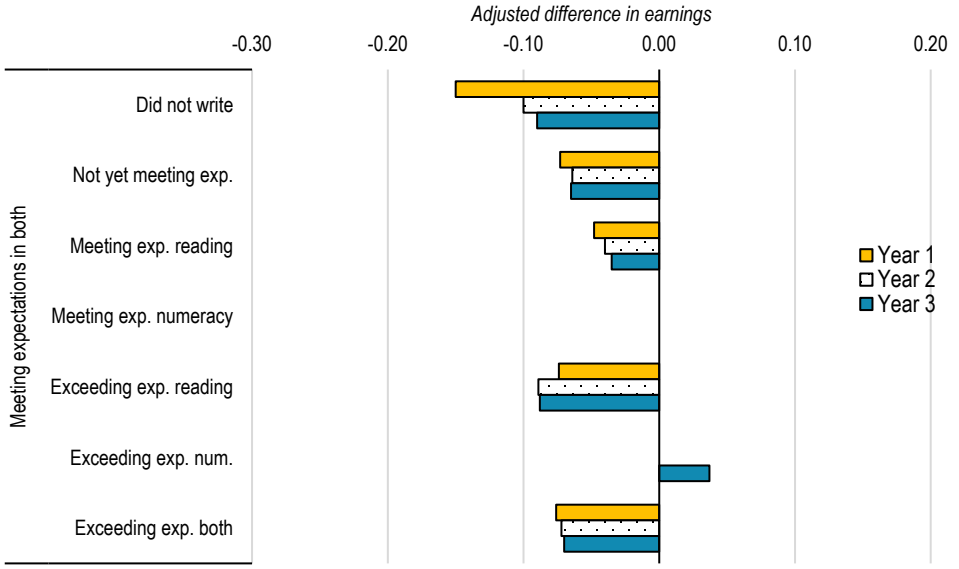
Figure 29 Post-graduation earnings descriptive results, academic performance



Source: Results from Table 21 in Appendix C.

Compared to students who were meeting expectations in both domains, certain groups of students who were exceeding expectations earned less in the final regression analysis. For example, students who were exceeding expectations in only reading or were exceeding expectations in both assessments earned 7.0 to 8.9 per cent less in the final regression analysis. Selection effects may be driving the results for these high-achieving students. That is, those who entered the labour market after completing their first credential and did not continue to higher PSE programs may be different in meaningful ways from their counterparts who continued to study in PSE.

Figure 30 Post-graduation earnings regression results, academic performance



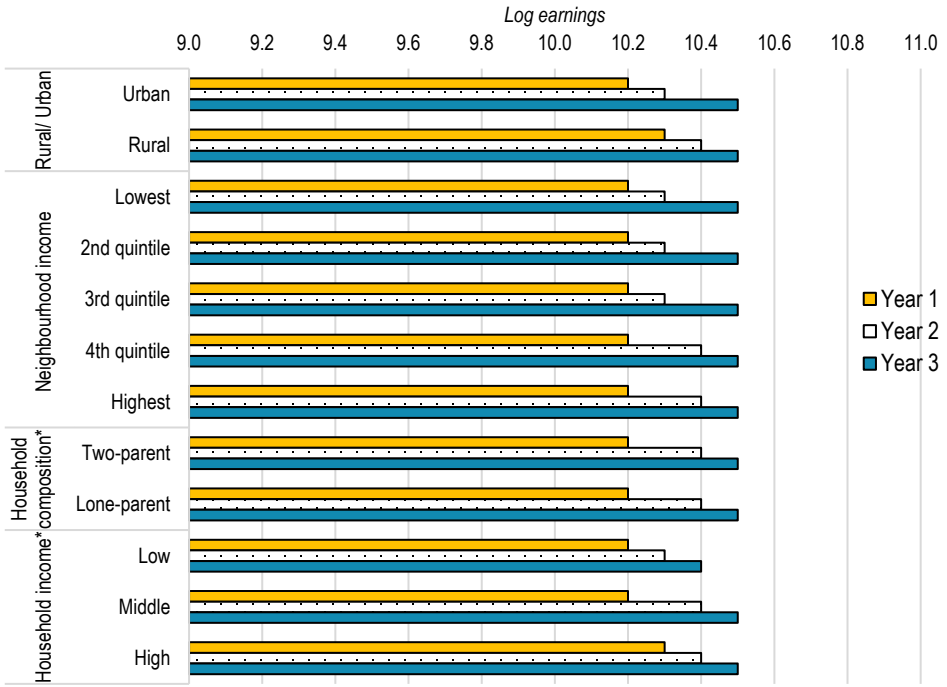
Source: Results from Table 22 in Appendix C.

Neighbourhood and household characteristics

Overall, few early neighbourhood and household characteristics were associated with post-graduation earnings once a regression model accounted for other factors. Students who lived in rural locations in Grade 7 earned 8.9 per cent more than those in urban locations one year after graduation in the final regression analysis, a difference that reduced to 5.3 per cent by year three. Compared to the female-only model, the gap in earnings between rural and urban males was larger, as there was only a small difference in earnings between rural and urban females (in favour of the former group) in year one (see Tables 23 and 24 in Appendix C).

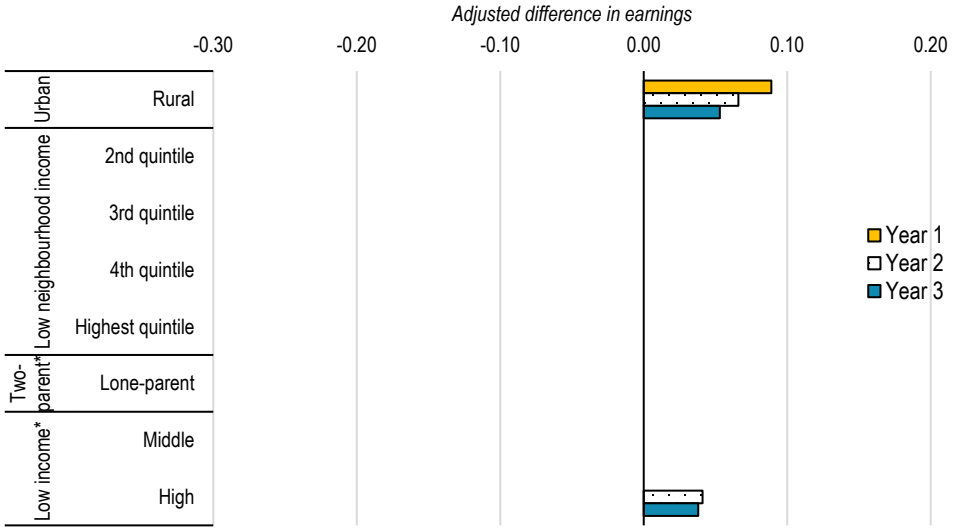
In the final regression analysis, there was no statistically significant difference in post-graduation earnings by neighbourhood income in Grade 7 and only minor variation by the other household characteristics. There was no difference in earnings between students from lone- and two-parent households. While the earnings between low- and middle-income students was similar, there was a small earnings gap between low- and high-income students (in favour of the latter group) two and three years after PSE graduation — although this amounted to less than a 5 per cent difference in average earnings once a model controlled for all other factors.

Figure 31 Post-graduation earnings descriptive results, neighbourhood and household characteristics



Sources: Results from Tables 21 and 25 in Appendix C. *Results from a reduced sample size with available parental tax data.

Figure 32 Post-graduation earnings regression results, neighbourhood and household characteristics

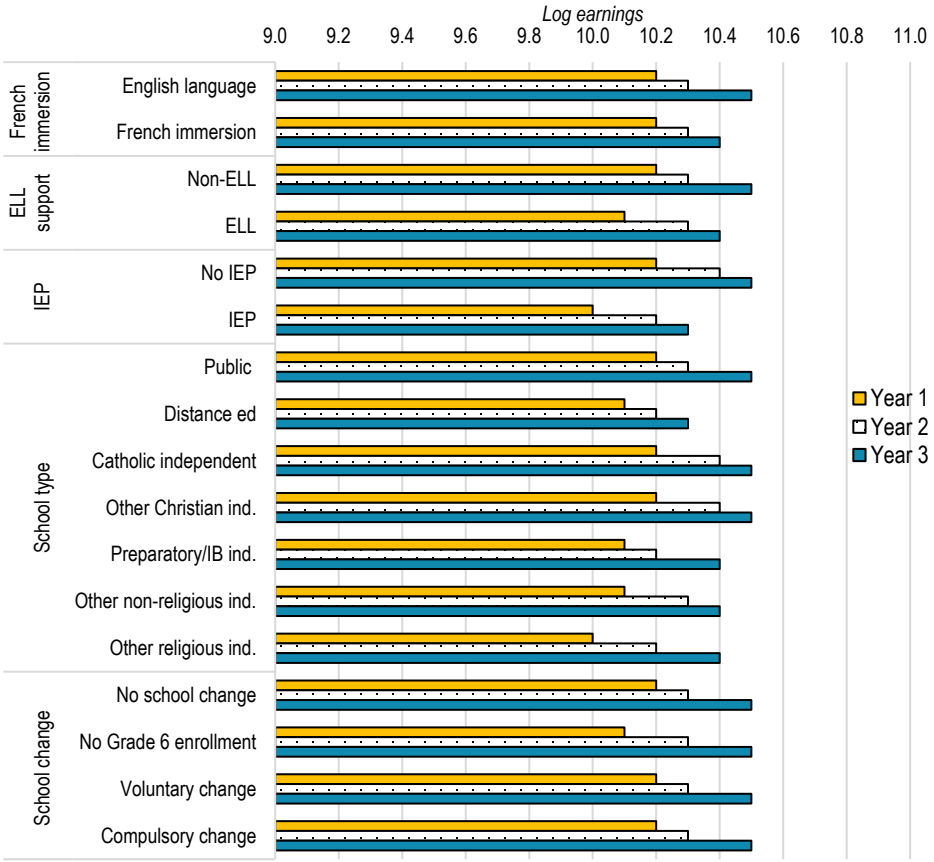


Sources: Results from Tables 22 and 27 in Appendix C. *Results from a reduced sample size with available parental tax data.

What K-12 programs, i.e., Special Needs, French Immersion, and English as a Second Language, lead to more favourable PSE and labour market outcomes?

Figures 33 and 34 illustrate how post-PSE earnings differed by various schooling characteristics in Grade 7. Compared to students without an IEP, students with an IEP in Grade 7 earned 14 to 18 per cent less one to three years after graduation, even after controlling for other characteristics and the highest credential obtained. There was also a small earnings gap (3.6 per cent) between ELL and non-ELL students' post-graduation in favour of the latter group in the final regression analysis in the first year following graduation, decreasing to no gap in years two and three.

Figure 33 Post-graduation earnings descriptive results, program and schooling characteristics



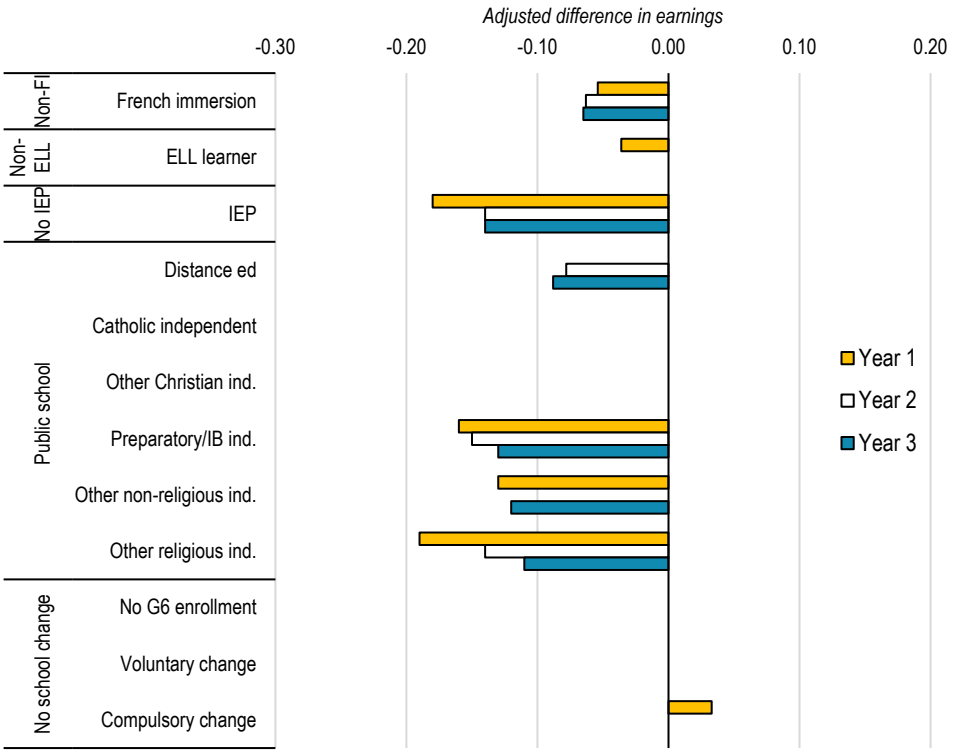
Source: Results from Table 21 in Appendix C.

Similar to the results above on post-graduation earnings by Grade 7 academic achievement, certain schooling and programing groups that had high success rates for PSE access and

graduation had slightly lower earnings, surprisingly, than their lower achieving counterparts once they entered the labour market. For example, once a regression model controlled for other factors, students who were enrolled in Grade 7 French immersion earned 5.4 to 6.5 per cent less than those without the experience of this type of programming one to three years after graduation.

Compared to students who attended public schools in Grade 7, students in distance education/homeschooling programs earned 8 to 9 per cent less two and three years after graduation. Students in preparatory, other non-religious, and other religious independent schools also earned less across all three years. The descriptive results showed that students who were enrolled in public schools had earnings that were slightly higher than those in these three types of independent schools (i.e., 10.2 log earnings in year one compared to 10.0 to 10.1). The regression results confirmed this difference was statistically significant after controlling for all factors and highest credential earned. One possible reason for this pattern was the low percentage of students from these independent school groups who went into trades programs, which yielded the highest overall earnings among all completers.

Figure 34 Post-graduation earnings regression results, program and schooling characteristics



Source: Results from Table 22 in Appendix C.

OUTCOME 4: LABOUR MARKET ENTRY AFTER HIGH SCHOOL

What are the labour market outcomes of students who are not observed as transitioning to PSE in the initial years after high school and how do they differ by K-12 student, academic performance, schooling, family, and neighbourhood characteristics?

Among those who did not make the transition to PSE, the next set of findings examine labour market entry after a student's expected Grade 12 year. As the previous two outcomes (i.e., PSE completion and post-graduation earnings) excluded these students, this analysis seeks to find out who among them was active in the labour market and — as explored in outcome five — how much they earned in these early years after high school.

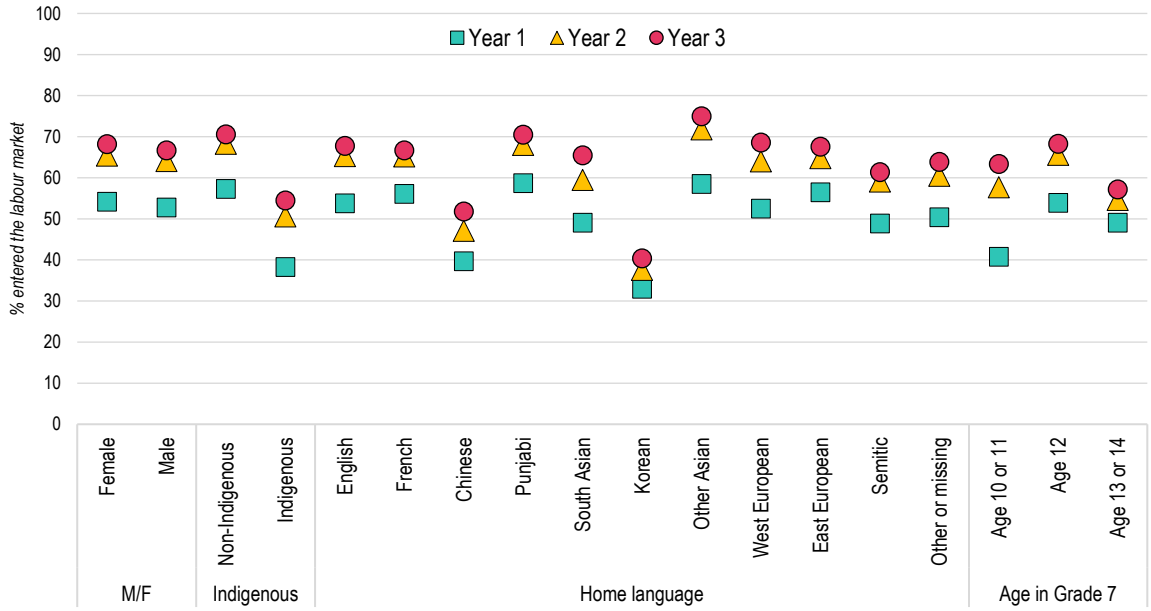
Student characteristics

As the descriptive rates in Figure 35 illustrate, 53 per cent of males and 54 per cent of females were active in the labour market one year after their expected Grade 12 year. This rate grew each year and by year three 67 per cent of males and 68 per cent of females filed a tax return and declared employment earnings. The regression results in Figure 36 showed that these small male/female differences were not statistically significant.

Indigenous students were less likely to be observed entering the labour market across all three years compared to non-Indigenous students. By year three, 70.6 per cent of non-Indigenous students had tax data that showed them to be active in the labour market compared to 54.5 per cent of Indigenous students. Plausibly part of this difference could be accounted for by differences in tax-filing for First Nations resident on-reserve. While disaggregated results for males and females were similar (see Tables 30 and 31 in Appendix C), the gap in entry between Indigenous and non-Indigenous students was largest for students from low-income households and smallest for those in high-income households (see Tables 35 to 37 in Appendix C).

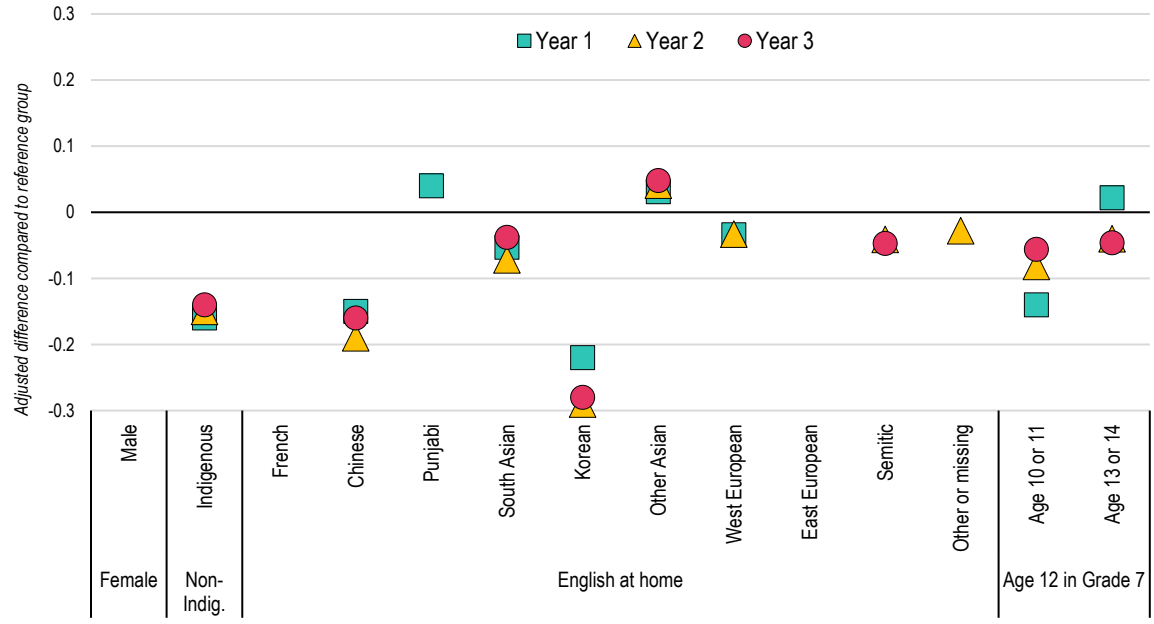
Compared to English speakers, Chinese, South Asian, Korean, West European, and Semitic language speakers were less likely to declare any employment earnings after high school, while Punjabi and other Asian language speakers were slightly more likely across all three years. The difference in labour market entry was particularly large between English and Korean or Chinese students. Three years after a student's expected Grade 12 year, 67.8 per cent of English speakers entered the labour market compared to 40.4 per cent of Korean and 51.8 per cent of Chinese language speakers. Notably a high percentage of these two groups entered higher education after high school, suggesting that further research disaggregated by language and population groups is needed to understand the destinations of those who do not enter the public Canadian PSE system.

Figure 35 Post-high school labour market entry descriptive results, student characteristics



Source: Results from Table 28 in Appendix C.

Figure 36 Post-high school labour market entry regression results, student characteristics



Source: Results from Table 29 in Appendix C.

Students aged 10 or 11 in Grade 7 were less likely to enter the labour market compared to those aged 12, although the gap narrowed over time. In year one, 40.8 per cent of students aged 10 or 11 had entered the labour market compared to 53.9 per cent of those aged 12. This 13 percentage point gap increased slightly to 14 adjusted percentage points in the final regression model, suggesting the observed factors could not explain the difference between the two age groups. Nonetheless, by year three, only a 5.6 percentage point gap existed, suggesting that younger students may just take more time to make the transition to employment after high school. Those aged 13 or 14 in Grade 7 were also slightly less likely to be active in the labour market (although the year one regression analysis found slightly higher labour market engagement). Three years after Grade 12, older students were an unadjusted 11 percentage points (and 4.6 adjusted percentage points) less likely to file a tax return and have employment income.

Schooling characteristics

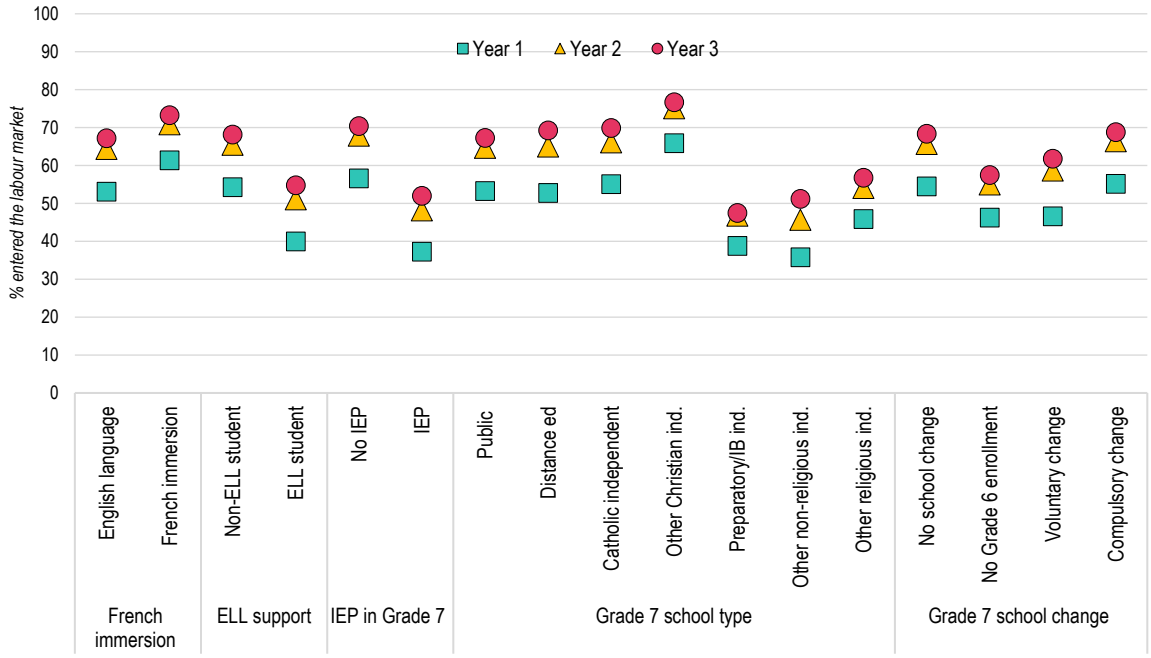
Multiple schooling characteristics were also associated with labour market entry after high school, as the descriptive results in Figure 37 and the regression results in Figure 38 show. One year after a student's expected Grade 12 year, 61.7 per cent of students in Grade 7 French immersion (who did not transition to PSE) reported employment earnings compared to 53.1 per cent of students in regular English language programing. While this difference was statistically significant in the final regression model, there was no difference two and three years after Grade 12 between the two groups. Disaggregated results for male and female students found differences in labour market entry between these two programing streams in year one, which were more pronounced for males than females (see Tables 30 and 31 in Appendix C).

One year after a student's expected Grade 12 year, only 40.0 per cent of students who received ELL support in Grade 7 had entered the labour market compared to 54.3 per cent of those who did not. This difference was statistically significant in the final regression analysis, with the difference between the two groups being similar across all three years. By year three, 54.8 per cent of ELL students had entered the labour market compared to 68.2 per cent of non-ELL students. The results for males and females (see Tables 30 and 31 in Appendix C) found that the labour market entry gap was larger for males than females. Disaggregated results by household income group found the difference in labour market entry between ELL and non-ELL students was largest for those from high-income households compared to students from middle- and low-income households (see Tables 35 to 37 in Appendix C).

Students with an IEP in Grade 7 were much less likely to enter the labour market across all three years compared to students without an IEP. By year three, 52.0 per cent of students with an IEP were active in the labour market compared to 70.4 per cent of students without a designation. Disaggregated results suggest the difference in labour market entry was larger for females than males (see Tables 30 and 31 in Appendix C), and for students from high-income households compared to those from middle- and low-income households (see Tables 35 to 37 in

Appendix C). Notably, female students and those from high-income households were less likely to have an IEP overall, which may mean that these groups had a higher needs designation that created greater barriers to labour market entry.

Figure 37 Post-high school labour market entry descriptive results, schooling characteristics

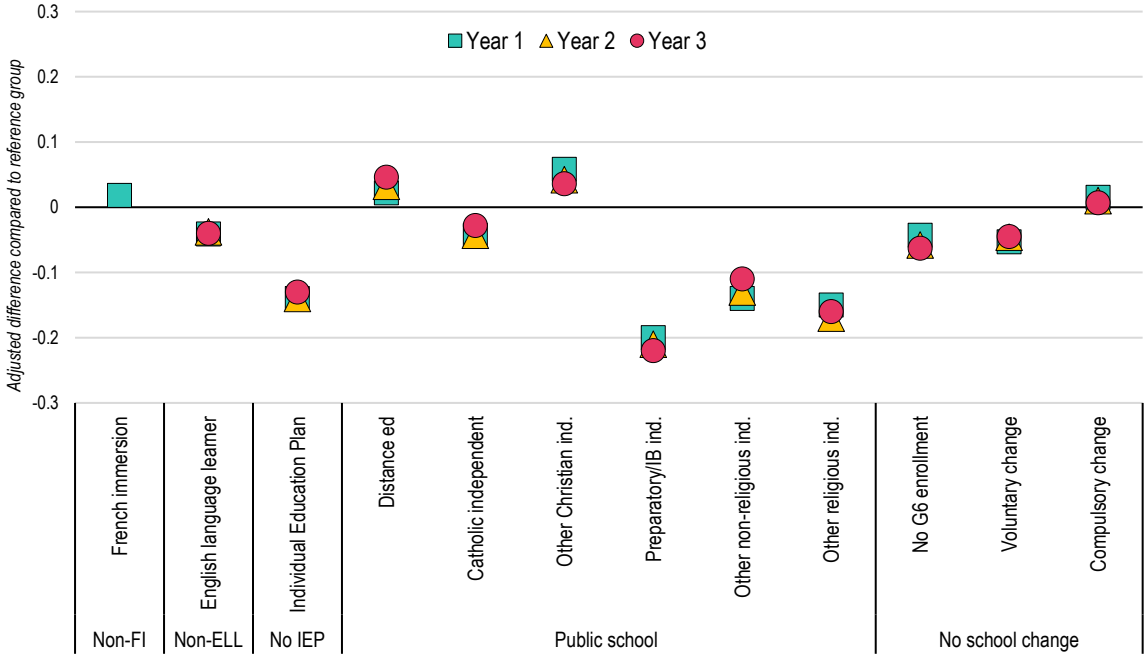


Source: Results from Table 29 in Appendix C.

Compared to students who attended a public school in Grade 7, students in a distance education/homeschooling program and other Christian independent schools were slightly more likely to report earnings across all three years. By year three, 67.3 per cent of students in public schools, 69.3 per cent of students in distance education/homeschooling programs, and 76.7 per cent of students in other Christian independent schools were active in the labour market. Students in all other types of independent schools were typically less likely to be employed, especially those who were enrolled in preparatory/International Baccalaureate schools. By year three, 47.5 per cent of students in these schools were active in the labour market. As these students were much more likely to enter PSE, selection effects could be driving the results.

There were also differences in early labour market entry by school mobility between Grades 6 and 7. Compared to students who did not change schools, those who were not enrolled in a B.C. school district in Grade 6 and those who changed schools voluntarily were less likely to enter the labour market across all three years. In contrast, students who experienced a compulsory change (i.e., their Grade 6 school did not offer Grade 7) had similar or even slightly higher rates of labour market entry compared to students who did not change schools.

Figure 38 Post-high school labour market entry regression results, schooling characteristics



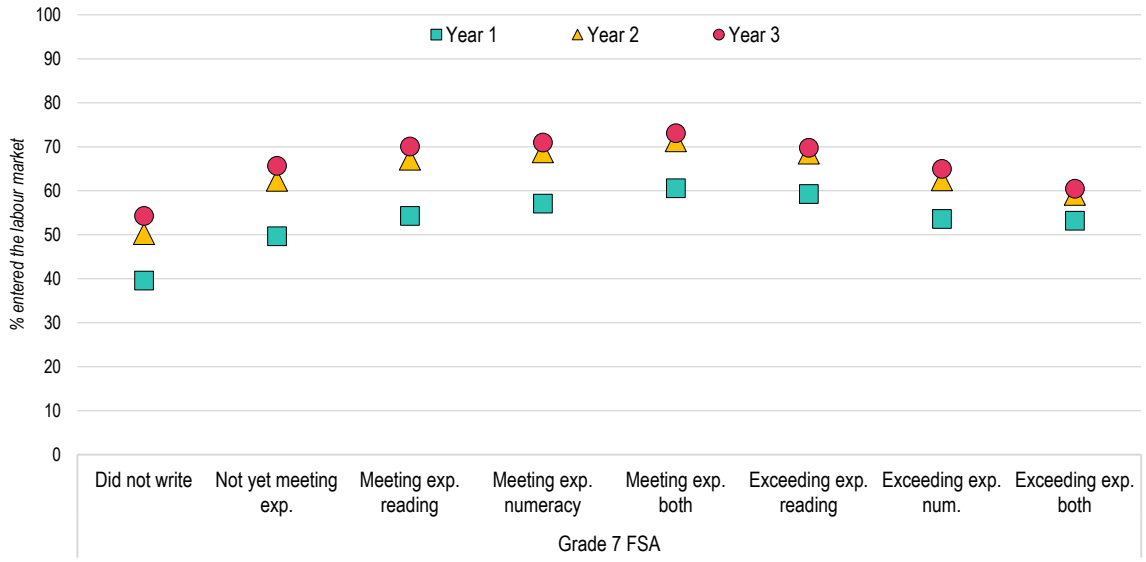
Source: Results from Table 29 in Appendix C.

Academic performance

Figures 39 and 40 visualize how early academic performance was associated with labour market entry among students who did not transition to PSE in the initial period after high school. Recall that the PSE entry analysis found a relatively linear association; that is, students with high levels of achievement were more likely to attend higher education compared to those who had lower benchmark scores. When examining labour market entry after high school, there is by contrast an inverted u-shaped relationship. That is, compared to students who were meeting expectations in both numeracy and reading, students with both lower and higher levels of achievement were less likely to enter the labour market, although the reasons for both groups likely differed.

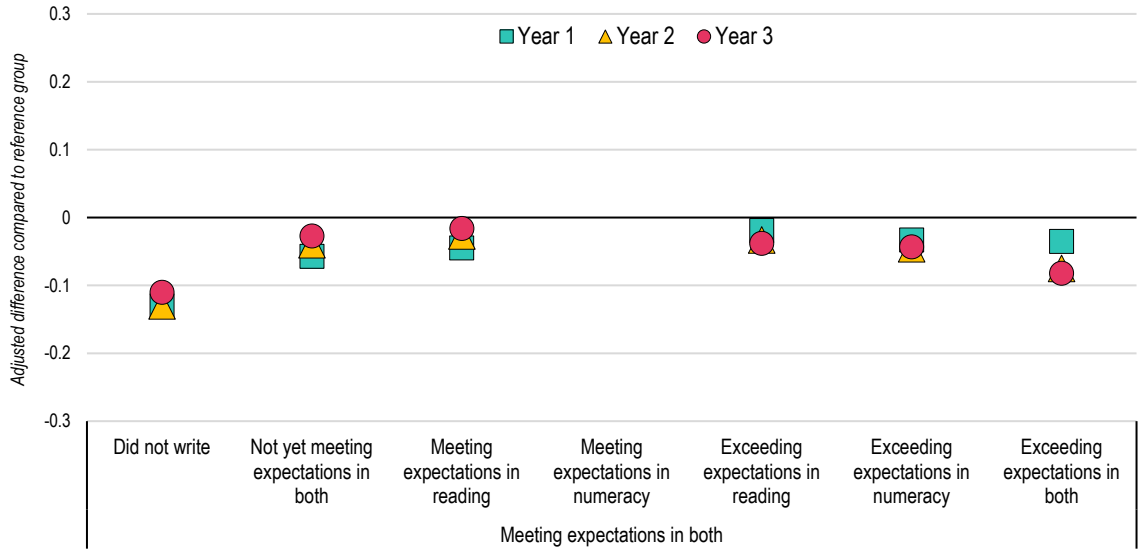
Once a regression model controlled for other factors, there were typically only small differences in the rate of labour market entry among the different benchmark groups (e.g., <5 adjusted percentage points). However, two sizable differences remained: 1) students who did not write the assessments were 11 percentage points less likely to report earnings by year 3 (compared to those who were meeting expectations in both domains); and 2) students who were exceeding expectations in both assessments were also an adjusted 8 percentage points less likely to report earnings in year three. It is possible that some of these high achieving students attended school abroad in this period and were therefore not captured as entering PSE.

Figure 39 Post-high school labour market entry descriptive results, academic performance



Source: Results from Table 28 in Appendix C.

Figure 40 Post-high school labour market entry regression results, academic performance

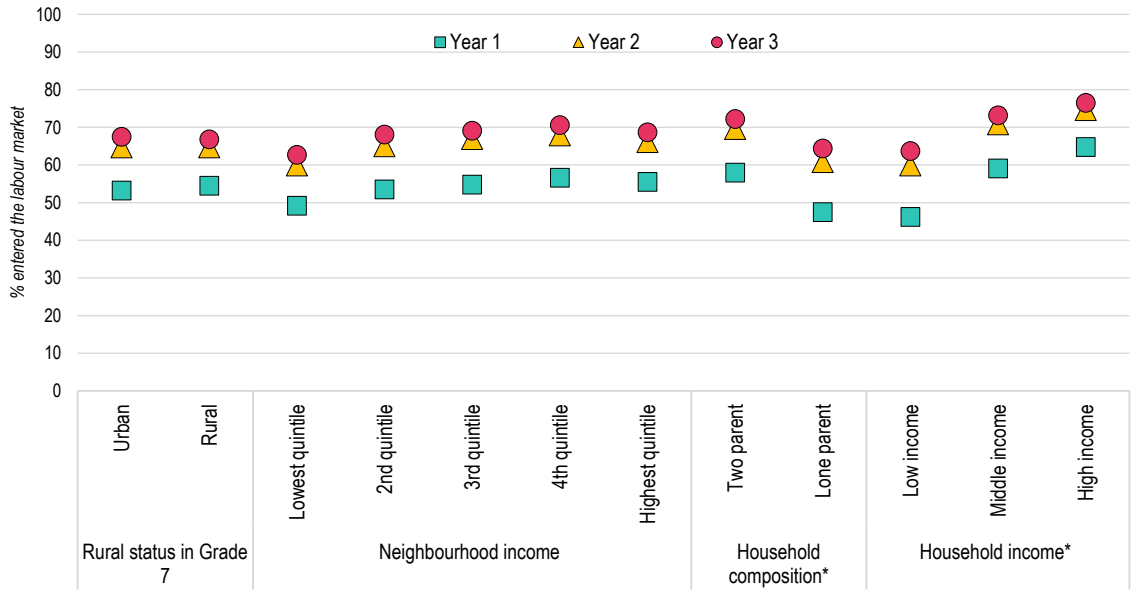


Source: Results from Table 29 in Appendix C.

Neighbourhood and household characteristics

Compared to students who lived in urban locations in Grade 7, rural students were slightly more likely to enter the labour market one year after high school (see Figures 41 and 42). In year two and three, the gap narrowed between the two groups and, while there was still a statistically significant result in favour of rural students in the final analysis, the descriptive results showed similar or even lower rates among rural students. This suggests that rural students were more likely to have observed factors associated with lower rates of labour market entry (which results in a slightly higher modelled rate).

Figure 41 Post-high school labour market entry descriptive results, neighbourhood and household characteristics



Sources: Results from Tables 28 and 32 in Appendix C. *Results from a reduced sample size with available parental tax data.

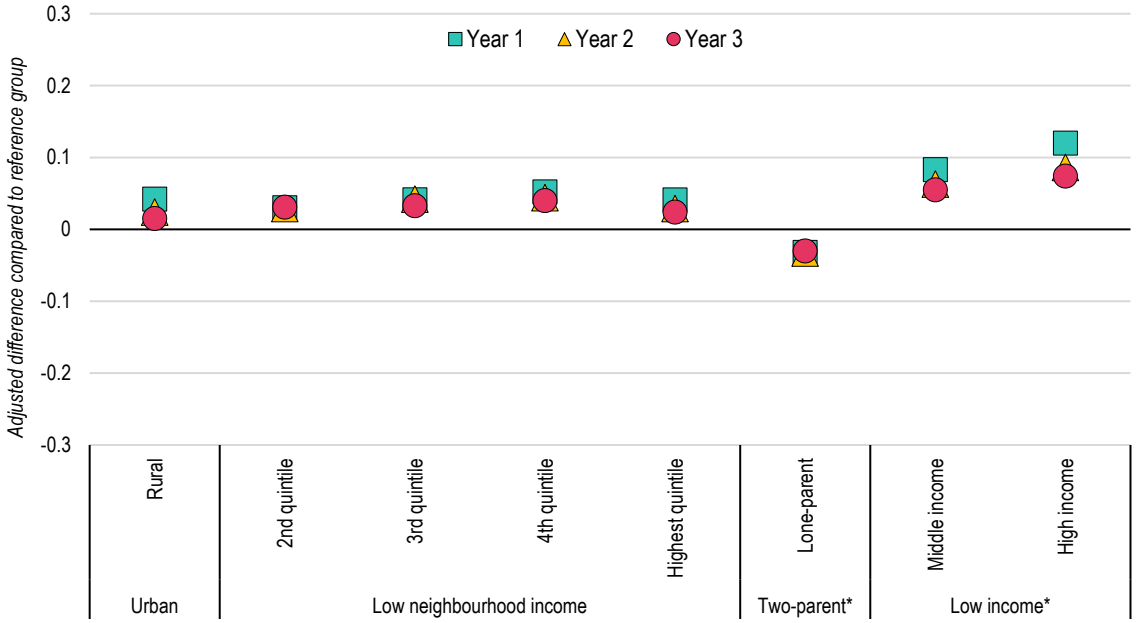
Compared to students who lived in low-income neighbourhoods, all other neighbourhood income groups were slightly more likely to enter the labour market after high school. In the final regression analysis, students from high-income neighbourhoods were an adjusted 2 to 4 per cent more likely to declare employment earnings compared to those in low-income neighbourhoods across all three years.

Both household composition and income in Grade 7 were associated with labour market entry among students who did not transition to PSE. One year after a student's expected Grade 12 year, 47.5 per cent of students from lone-parent households and 58.0 per cent of those from two-parent households declared any employment earnings, a difference that reduced to just a

3.2 adjusted percentage point gap in the final regression analysis, suggesting other observed differences between the two groups can account for some of the gap in labour market entry.

Compared to students who lived in low-income families in Grade 7, those from middle- and high-income families were more likely to report earnings across all three years. By year three, 63.7 per cent of students from low-income households were employed compared to 76.5 per cent of those from high-income families, a difference that reduced to 7.4 percentage points once a model controlled for other characteristics.

Figure 42 Post-high school labour market entry regression results, neighbourhood and household characteristics



Sources: Results from Tables 29 and 34 in Appendix C. *Results from a reduced sample size with available parental tax data.

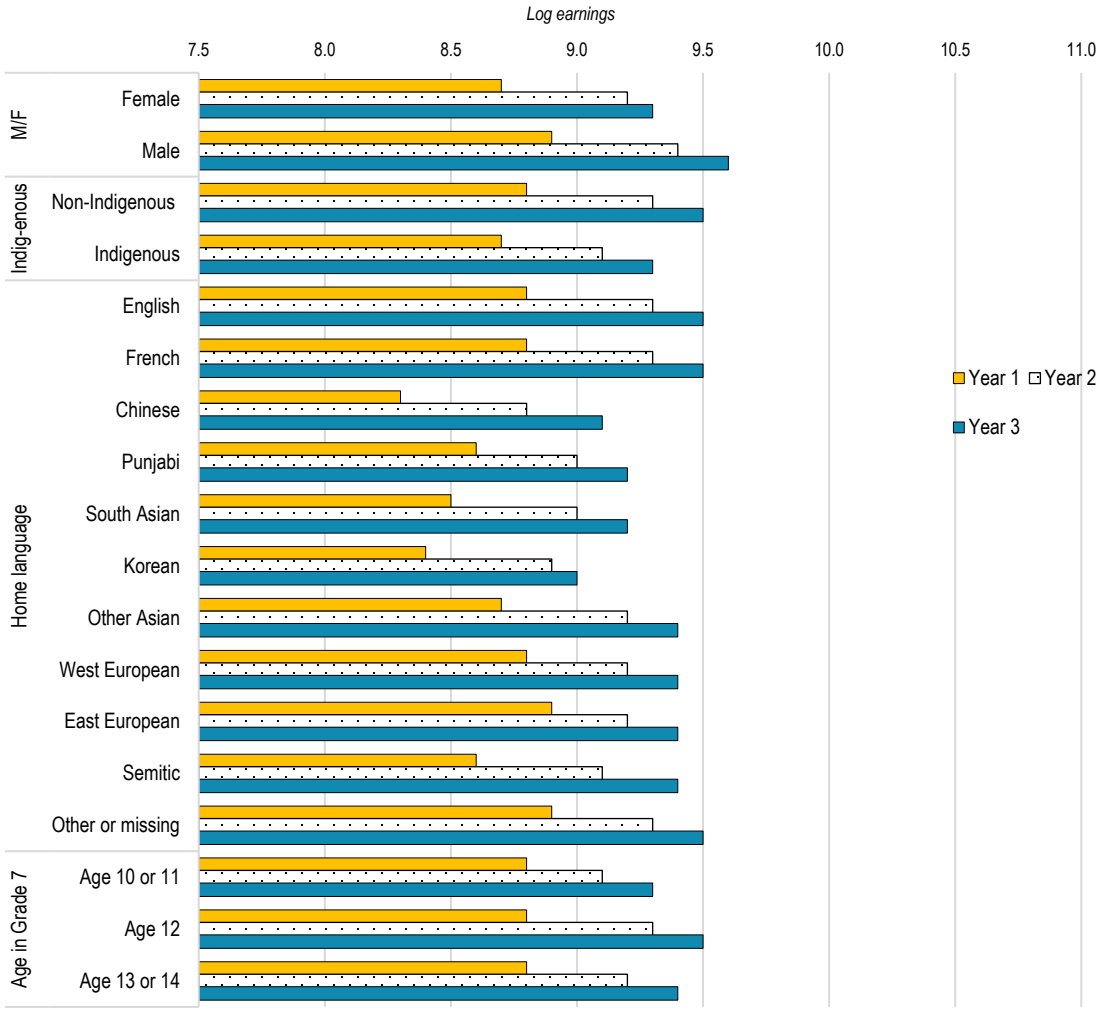
OUTCOME 5: POST-HIGH SCHOOL EARNINGS

Student characteristics

For students in the previous sample who declared employment income in their tax return, this final analysis examines their average annual earnings. As Figure 43 illustrates, one year after their expected Grade 12 year, males had average log earnings of 8.9 (approximately $7,330) and females had average log earnings of 8.7 (approximately $6,000). By year three, both groups had

higher earnings, with an average log earnings of 9.6 for males (approximately $14,760) and 9.3 for females (approximately $10,940). In the final regression analysis in Figure 44, male students made an adjusted 17 per cent more in year one, which grew to 31 per cent more by year three.

Figure 43 Post-high school earnings descriptive results, student characteristics

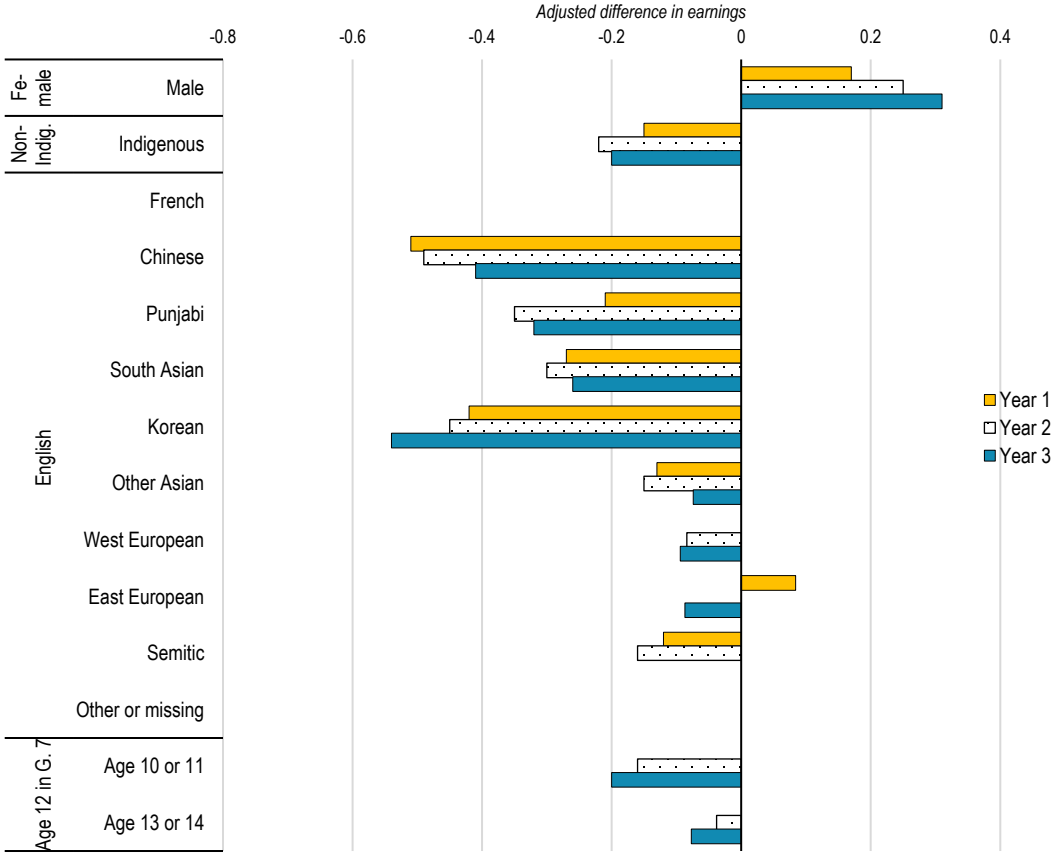


Source: Results from Table 38 in Appendix C.

Indigenous students earned between 15 and 22 adjusted per cent less than non-Indigenous students in all three years after high school. When examining disaggregated results, the earnings gap between Indigenous and non-Indigenous females was larger than the corresponding difference between males (see Tables 40 and 41 in Appendix C). Among students in high-income households, there was no statistically significant difference in earnings between Indigenous and non-Indigenous students in years one and three, although there was a 10 adjusted percentage

point difference in year two (see Table 47 in Appendix C). In contrast, the difference in earnings among low-income students was larger (ranging from 17 to 23 adjusted percent) than for the other household income groups across all three years (See Table 45 in Appendix C).

Figure 44 Post-high school earnings regression results, student characteristics



Source: Results from Table 39 in Appendix C.

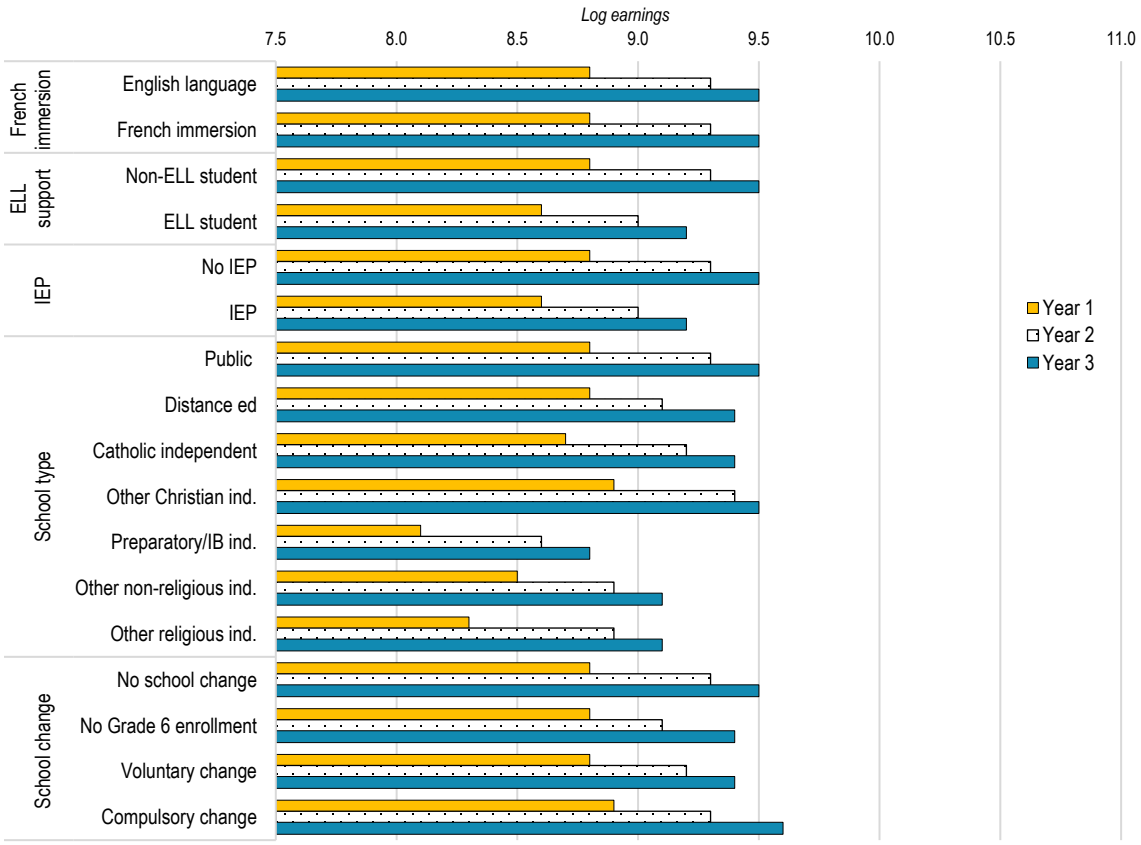
Compared with English speakers, most other language groups had lower earnings in the years after high school, although there was no statistically significant difference between those who spoke French or other/missing languages at home and English speakers. In particular, Chinese and Korean speakers earned substantially less across all three years—two groups that were also much less likely to enter the labour market in the previous analysis. In year one, Chinese speakers earned 51 adjusted per cent less and Korean speakers earned 42 adjusted per cent less than English speakers. By year three, Korean speakers earned 54 adjusted per cent less and Chinese speakers earned 41 adjusted per cent less.

Students who were slightly younger (aged 10 or 11) or slightly older (aged 13 or 14) in Grade 7 also earned less in the period initially following high school. While there was no statistically significant difference by age in year one, by year three students who were slightly younger earned an adjusted 20.0 per cent less and students who were older earned an adjusted 7.7 per cent less than those aged 12 in Grade 7.

Schooling characteristics

Overall, students who were enrolled in French immersion but did not transition to PSE had comparable post-high school earnings to students in regular English-language programming. Students who received ELL support, however, had lower earnings across all three years (see Figure 45). In the final regression analysis, ELL students earned between an adjusted 10 and an adjusted 12 per cent less than non-ELL students across all three years (see Figure 46).

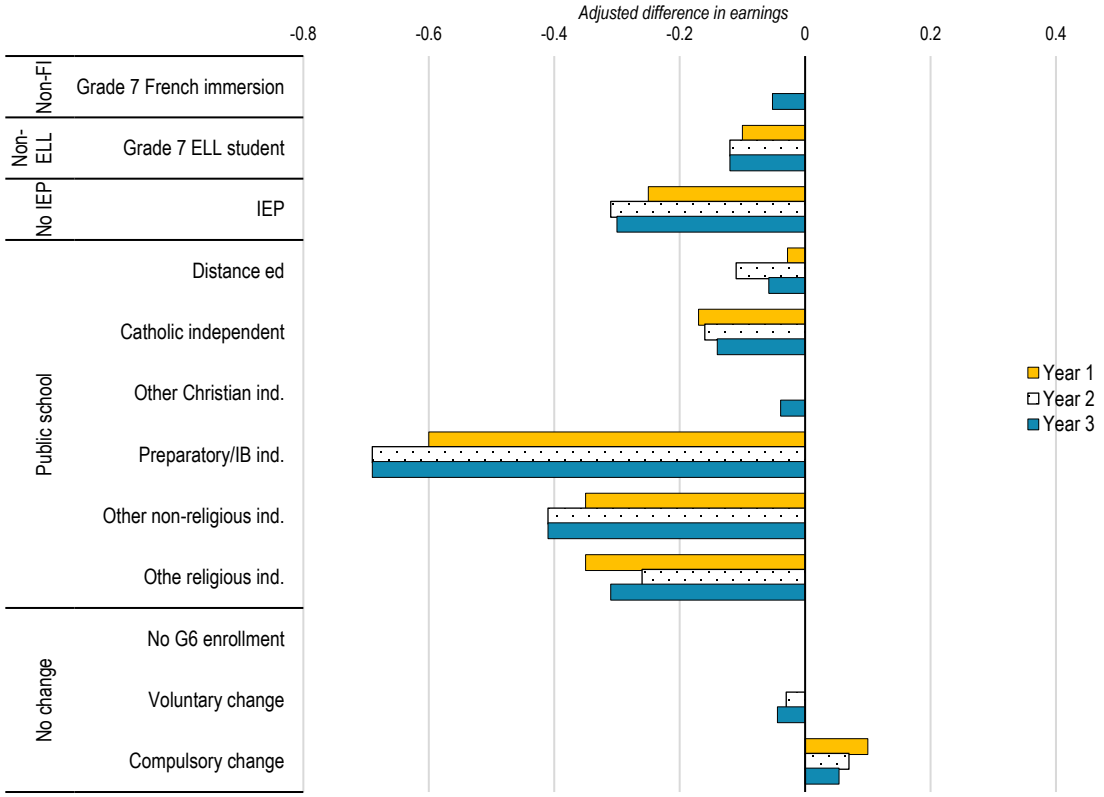
Figure 45 Post-high school earnings descriptive results, program and schooling characteristics



Source: Results from Table 38 in Appendix C.

While students with an IEP in Grade 7 were less likely to enter the labour market in the previous analysis, those who did made substantially less than those without an IEP. In the regression analysis, students with an IEP earned 25 to 31 adjusted per cent less than students without a destination across all three years. Disaggregated results showed a similar difference by IEP status for males and females, as well as for the low-, middle-, and high-income household groups (see Tables 42 to 47 in Appendix C).

Figure 46 Post-high school earnings regression results, program and schooling characteristics



Source: Results from Table 39 in Appendix C.

Compared to students who were enrolled in a public school in Grade 7, students who attended most other school types earned less when they entered the labour market after high school. In the final regression analysis, the largest difference was between students who attended public and preparatory/International Baccalaureate schools, with the latter group earning between 60 and 69 per cent less depending on the year. As discussed above, selection effects are likely driving this trend, as this group was much more likely to attend PSE in the initial period after high school. The regression results also showed that students who attended other non-religious

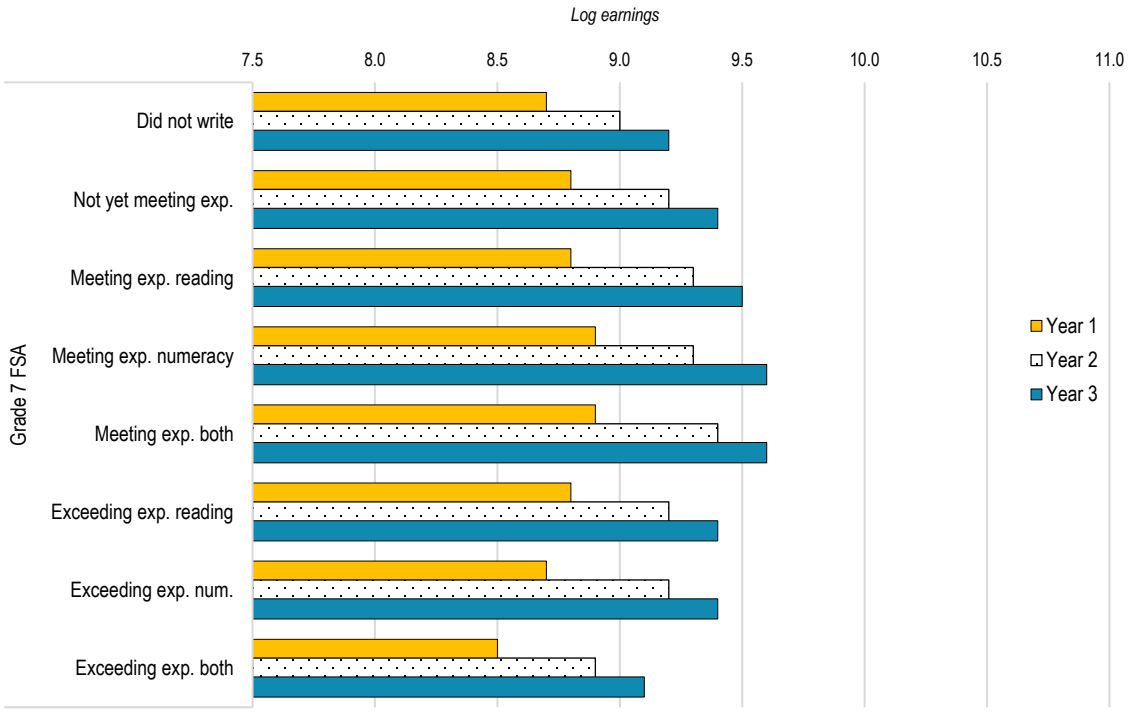
independent schools and other religious independent schools earned less than public school students during this period.

There was also a small association between school mobility between Grades 6 and 7 and post-high school earnings. Compared to students who did not change schools between Grades 6 and 7, students who had a voluntary change earned slightly less (between 3 and 4 adjusted per cent less in years two and three), while those who experienced a compulsory change of school earned more (between 7 and 5 adjusted per cent more in these same two years).

Academic performance

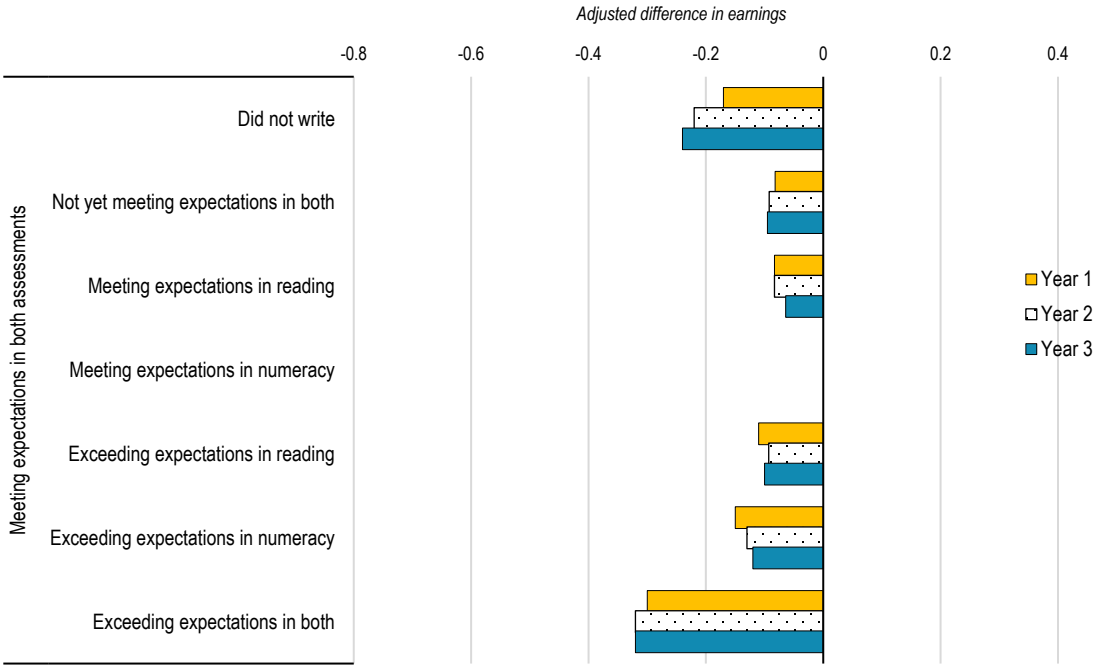
Similar to the results above on labour market entry after high school, the pattern of post-high school earnings relative to Grade 7 FSA benchmark scores exhibited an inverted-u shape relationship in both the descriptive and regression results in Figures 47 and 48. Earnings were highest among those who were meeting expectations in both domains (or just meeting expectations in numeracy) and lower among those who had both higher and lower benchmark scores.

Figure 47 Post-high school earnings descriptive results, academic performance



Source: Results from Table 38 in Appendix C.

Figure 48 Post-high school earnings regression results, academic performance



Source: Results from Table 39 in Appendix C.

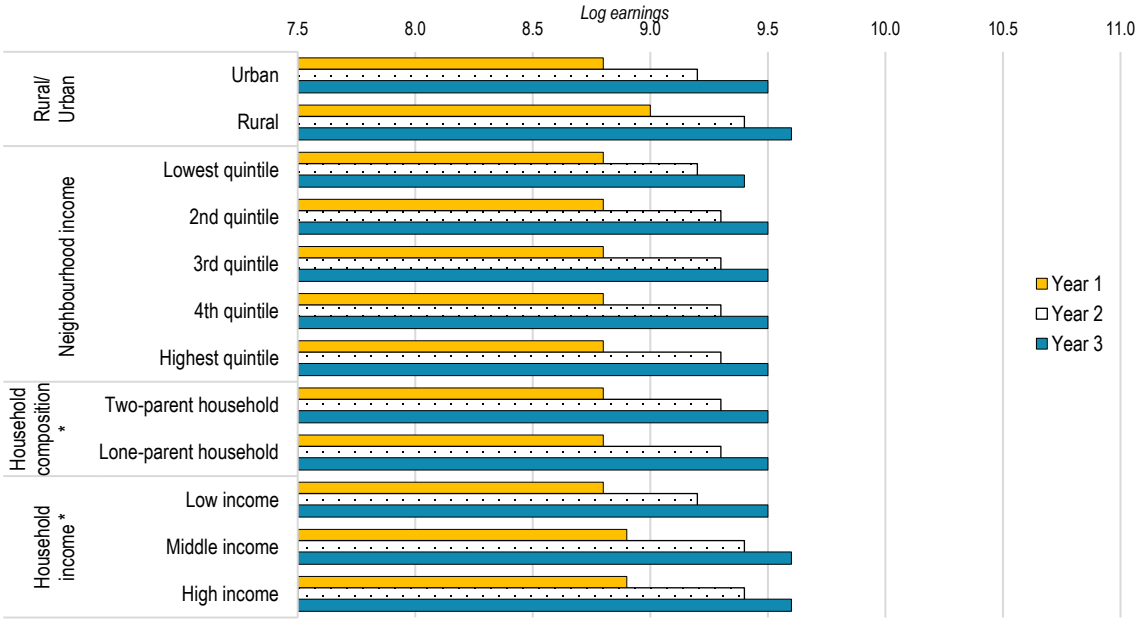
Neighbourhood and household characteristics

Compared to students in urban areas, those who lived in rural locations in Grade 7 earned more when they entered the labour market after high school. One year after a student's expected Grade 12 year, rural students earned an adjusted 16 per cent more than urban students, a difference that decreased slightly to an adjusted 12 per cent in the year three model (see Figures 49 and 50).

Overall, there were only small differences in post-high school annual earnings by neighbourhood income groups. Compared to students from the lowest quintile neighbourhoods, those in the 2nd to 4th quintile neighbourhoods earned approximately 6 adjusted per cent more in the year three model, while there was no statistically significant difference for students from the highest income neighbourhoods.

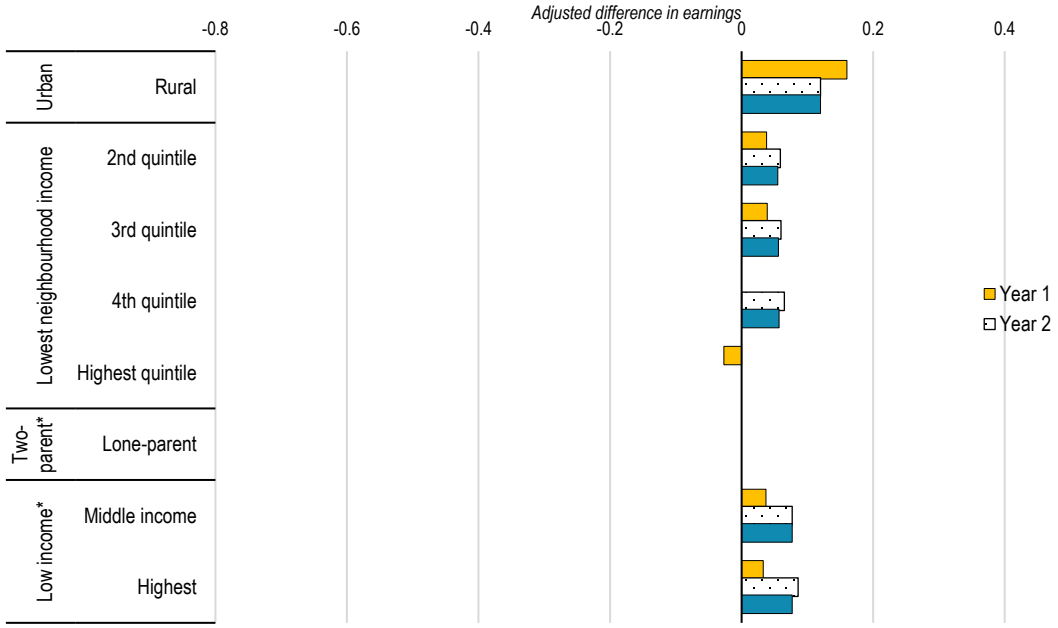
The results showed no difference in post-high school earnings between students who lived in lone- or two-parent households in Grade 7. There were, however, small differences by household income. Compared to students who came from low-income households, students from middle- and high-income households earned between 3 and 4 adjusted per cent more in the year one regression model and almost 8 adjusted per cent more in the year three model.

Figure 49 Post-high school earnings descriptive results, neighbourhood and household characteristics



Sources: Results from Tables 38 and 42 in Appendix C. *Results from a reduced sample size with available parental tax data.

Figure 50 Post-high school earnings regression results, neighbourhood and household characteristics



Sources: Results from Tables 39 and 44 in Appendix C. *Results from a reduced sample size with available parental tax data.

LITERATURE REVIEW ON POLICY AND PROGRAM INTERVENTIONS

INTERVENTIONS THAT SUPPORT PSE ACCESS

Are there any interventions in the K-12 system that lead to better PSE and labour market outcomes? What factors could help explain why some interventions lead to better PSE and labour market outcomes?

The report next provides an overview of studies on interventions that have shown promise in enhancing PSE access. These interventions reflect efforts to bridge the gap between K-12 education and the transition to higher education and often target equity-deserving students who are less likely to attend. Several of the interventions summarized were tested using experimental methods to produce causal estimates of impact on PSE and related outcomes. Many were found effective at boosting PSE enrollment and graduation.

Three themes generally emerge in the experimental literature on interventions that promote PSE participation.[24] The first theme is that reducing the costs associated with PSE (i.e., application costs, subsidizing tuition) substantially increases the probability that low-income students enter and graduate PSE (Castleman & Long, 2016; Dynarski, 2003; Kane, 2007; Page, Kehoe, Castleman, & Sahadewo, 2019; Page & Scott-Clayton, 2016; Scott-Clayton, 2011; Scott-Clayton & Zafar, 2016). The majority of this evidence comes from the U.S., although experimental literature in the Canadian context does indicate that early promises of grants increase PSE attendance and completion markedly for students from lower-income families (Ford et al., 2019b).

The second theme is that reducing complexities in the application process (both to attend and for various financial aid applications) improves program PSE access, matriculation, and graduation (Bill & Melinda Gates Foundation, 2015; Dynarski & Scott-Clayton, 2006; Dynarski, Scott-Clayton, & Wiederspan, 2013; Oreopoulos & Ford, 2019; French & Oreopoulos, 2017; Barone et al., 2017; Bettinger et al., 2010; Oreopoulos et al., 2017; Oreopoulos & Petronijevic, 2019; Page et al., 2020). These types of interventions might include “nudging” initiatives that remind students

[24] For more comprehensive reviews of the experimental literature and for precise causal estimates of specific programs and interventions, see Deming and Dynarski, 2009; Dynarski et al., 2013; Dynarski and Scott-Clayton, 2013; French and Oreopoulos, 2017; Oreopoulos and Ford, 2019; Oreopoulos and Petronijevic, 2019.

to apply for financial aid or more intensive coaching programs that guide students through the entire process of selecting, applying, and accessing a PSE program.

Finally, the third theme is that personalized and hands-on interventions are often more effective than hands-off interventions (i.e., nudging, mailing) (Avery et al., 2020; Hyman, 2020; Oreopoulos & Petronijevic, 2019). However, Oreopoulos and Pteronijevic (2019) note that nudging youth towards completing PSE applications (Bettinger et al., 2012; Oreopoulos & Ford, 2019; Page et al., 2016), renewing financial aid (Castleman & Page, 2016), choosing selective PSE institutions (Dynarski et al., 2018; Castleman & Sullivan, 2019), and choosing courses on time (Castleman & Page, 2015) can be very effective. While more cost-intensive interventions often produce greater effects in PSE access compared to less supportive programs, two reports indicate that these types of programs (e.g., the Pathways to Education) in Canada are net positive in terms of benefits over costs and, within two to three decades, pay for themselves (Government of Canada, 2019; Oreopoulos et al., 2017).

Next, we provide an overview of key findings across different types of interventions, from early interventions prior to high school, to multi-faceted and long-term interventions. Further details on each study are included in an annotated bibliography in Appendix A.

Early interventions (Pre-K to Grade 6)

Early intervention programs are designed to provide support and resources to young children, who are at risk of experiencing developmental, educational, social, or behavioural challenges, as well as their parents and caregivers. We reviewed two such programs that have shown promising results in improving PSE and labour market outcomes.

First, the HighScope Perry Preschool Study (Schweinhart, 2013) conducted in the U.S., targeted preschool-aged children living in poverty and at higher risk of adverse school outcomes. This program incorporated daily classes and home visits, with a focus on cognitive and social skill development. The program group went on to higher high school graduation rates, particularly among program females — 88 per cent who attended HighScope Perry Preschool graduated from regular high school, whereas only 46 per cent of females in the control group did. Employment outcomes also favoured the program group, who were more likely to be employed and earn more at both age 27 and 40.

Second, the Montreal Longitudinal and Experimental Study in Canada (Vanzella-Yang et al., 2023) targeted kindergarten boys with disruptive behaviour tendencies. Through a curriculum emphasizing social skills and self-control, along with parent training, students in this program were more likely to graduate from high school by age 24 (i.e., 45.6 per cent compared to 32.2 per cent for those in the control group). Intervention participants were also found to later have higher earnings and years of employment.

Dual credit/enrollment programs and technical education

Dual credit or dual enrollment programs allow high school students to take PSE courses while completing their high school diplomas, obtaining course credits that can count for both their high school and post-secondary credentials. This can provide a smoother transition to PSE and can lead to cost savings for students and their families. Across various contexts, there are differences in program curriculum as well as which students were targeted in previous initiatives.

Some programs, like the Achieving a College Education Plus Program (Deller, 2018; Luna & Fowler, 2011), operate in partnership with U.S. community colleges, targeting disadvantaged 10th graders to support high school completion and post-secondary engagement. Prior research found participants achieved significantly higher high school graduation and college enrollment rates compared to control group students. Other programs, like the early College High School Model (Edmunds et al., 2017; Song & Zeiser, 2019) that operates in 31 U.S. states and targets low-income and average-achieving students across Grades 9 to 12. Past research also found this program resulted in higher college enrollment within six years of high school graduation (84.2 per cent compared to 77.0 per cent), particularly in two-year colleges.

Other programs offer specific types of college- and university-level courses. For example, dual credit math programs in Tennessee offers high school students the chance to take advanced algebra (Hemelt et al., 2020). While prior research indicated no significant impact on *overall* college enrollment rates within a year of expected graduation, the program reduced the likelihood of students attending two-year colleges and increased their likelihood of enrolling in four-year universities.

Career and Technical Education programs also align high school courses with specific career fields, providing students with skills for college or the workforce. A study on these programs in Nebraska and South Dakota (Brodersen et al., 2021) found promising results, increasing on-time high school graduation, PSE enrollment within two years, and post-secondary awards. While bachelor's degree attainment was slightly lower (1 per cent lower compared to the control group), it could still represent a promising pathway for disadvantaged students otherwise less likely to attend PSE at all.

Policy-level changes

We also reviewed interventions that were implemented through wide-spread policy- and/or curriculum-level changes that targeted all students. One key area of interest is policy that changes high school math requirements. For example, the GY2000 policy in Sweden (Berggren & Jeppsson, 2021) reduced math requirements for certain upper secondary school programs and increased flexibility in course selection. This change led to higher PSE enrollment and

completion, especially for women. In contrast, a North Carolina policy change (Clotfelter et al., 2019) raised the minimum math course requirements for university admission. This change resulted in students taking a greater number of math courses and produced an increase in PSE enrollment within the North Carolina system of higher education, especially among students who were already more likely to be admitted based on their academic performance.

Other policy level changes target specific groups of students. For example, the Advanced Work Class program in Boston provides an accelerated curriculum for high-achieving students. Previous research found the program resulted in a 28 per cent increase in PSE enrollment after high school graduation (Cohodes, 2020), with effects that were particularly significant for Black and Latinx students. In another New Mexico program (Mihaly et al., 2023), high school graduates can earn biliteracy seals on their high school diploma by demonstrating proficiency in non-English languages. An evaluation showed that seal earners were more likely to enroll in college, particularly in four-year institutions, and enroll full time.

Other policy changes are intended to benefit all students. For example, the Project STAR (Student/Teacher Achievement Ratio) initiative in Tennessee (Dynarski et al., 2013) reduced class sizes in early grades, but also led to a 2.7 percentage point increase in college enrollment and a 1.6 percentage point increase in college completion. The impacts were more pronounced among Black students, those from low-income households, and students attending schools in high-poverty neighbourhoods/regions.

Academic support

Another set of interventions focus on increasing support to increase academic preparedness for PSE, as well as to increase high school marks and graduation rates. For example, the Career Academies program in California, Florida, and Georgia is an early outreach program that fosters small learning communities with career-oriented curricula and partnerships with employers to increase career awareness and internships. Prior research by Parsi et al. (2010) found that, while a similar percentage of program and control group participants completed PSE, male participants had an increase in their annual earnings compared to those in the control group.

The Advancement Via Individual Determination (AVID) program, which is active in both the U.S. and Canada (Kolbe et al., 2018), aims to enhance high school and college attendance for students deemed academically “in the middle”. It emphasizes parental involvement and uses a “WICOR” curriculum model (i.e., Writing, Inquiry, Collaboration, Organization, and Reading). While prior research from B.C. showed that the program positively impacted academic performance, there were no significant effects on PSE enrollment, persistence, or completion (Ford & Hui, 2018).

Lastly, College Possible operating in various U.S. cities, provides coaching and after-school support in areas such as test preparation and financial planning. Examination of the intervention

showed that both control and treatment groups had similar overall PSE enrollment rates; however, the treatment group had a 31.7 per cent higher probability of applying to four-year colleges (Avery, 2013).

Financial promises, aid, and literacy

Another set of interventions focus on removing financial barriers that may impact the likelihood of students from low-income households from attending PSE. For example, the Dell Scholars Program (Page et al., 2016) in the U.S. targets high-achieving, low-income high school seniors and offers financial support of up to $20,000 with individualized advising throughout students' post-secondary journey. While research found the program had a limited impact on college enrollment at four-year institutions, it significantly increased bachelor's degree attainment within six years (i.e., treatment group students had attainment rates that were 19.2 percentage points higher compared to the control group). Another intervention, the Twenty-First Century Scholars Program in Indiana, also offers four years of paid tuition and support services through middle and high school (e.g., mentoring and college application assistance). However, studies of this intervention have produced mixed results, with some showing larger impacts on PSE enrollment and others only showing modest changes (Toutkoushian et al., 2013).

Other interventions just offer financial support without any other additional advising or coaching. For example, the Oregon Promise Financial Aid Program offers financial awards to Oregon high school seniors. Compared to matched students, prior research found that enrollment in Oregon colleges was 21 percentage points higher among program recipients, and they were 11 percentage points more likely to persist through their first year of college (Hodara & Childress, 2022).

To increase a student's sense of self-determination, another set of interventions centre on establishing a "financial promise." These interventions typically promise financial support to eligible students who meet specific criteria, such as maintaining a certain grade point average (GPA) or completing certain coursework. For example, Washington's College Bound Scholarship (CBS) requires students in Grades 7 or 8 to pledge to graduate high school with a minimum GPA and fulfill certain criteria for free college tuition. Results showed that CBS recipients were indeed more likely to enroll in college and receive a four-year degree than comparison students (Fumia et al., 2018). Similarly, the Kalamazoo Promise Scholarship in Michigan provides tuition subsidies to students who are continuously enrolled after Grade 9. Research showed that it significantly increased college enrollment and completion, particularly for racialized and female students (Bartik, 2021).

Finally, other interventions aim to increase financial literacy and/or address misconceptions about the costs and benefits of PSE. One study from Italy (Barone et al., 2018) found that while this type of programming corrected misperceptions, it did not significantly impact intentions to

enroll in university, suggesting that addressing informational barriers alone may not be effective in systems with structural barriers. Another intervention in Italy (Azzolini et al., 2018) offered a combination of financial aid and literacy through asset building, offering a dedicated savings account with a matching multiplier for low-income students. It significantly increased university enrollment, academic performance, and university persistence compared to the control group, with stronger effects for students from vocational schools.

Light touch and behavioural nudges

Light-touch and behavioural interventions utilize various forms of outreach, including text messages and letters, to encourage students, particularly those from low-income backgrounds, to pursue PSE. We reviewed eleven interventions, most of which were conducted in the U.S.

Some interventions focused on nudges (i.e., text messages) promoting Free Application for Federal Student Aid applications with various degrees of personalization and follow-up. Monthly text messages related to college-going followed by advisor follow-ups yielded a decrease in enrollment in a national study (Avery et al., 2021). However, there was a significant effect on on-time full-time enrollment especially for lower achieving students in a Texas study, which the authors hypothesized may be due to the messaging coming from counsellors from each high school rather than the College Board. Two other interventions included personalized text messages related to the Student Aid applications filing process, resulting in a 1.7 to 3 per cent increase in on-time college enrollment (Bird et al., 2017).

Five interventions targeted “summer melt” (i.e., a phenomenon characterised by a failure of college-intending high school graduates to enroll in college in the summer after graduation) among low-income and first-generation high school seniors. Castleman and Page (2017) found that outreach via text messages for both students and parents resulted in a significant increase in PSE enrollment (5.7 percentage points among low-income students). Outreach via counsellors led to increases in PSE enrollment ranging from 9.5 to 13 percentage points (Castleman, Owen, & Page, 2015). Another intervention involved outreach from peer mentors with automated text messages, leading to an overall enrollment increase of 2.3 percentage points for treatment group students (Castleman et al., 2015).

Finally, three interventions involved sending out letters of encouragement and information. Sending letters to high school students encouraging them to consider going to college showed no impact on college enrollment overall but had a significant 3.3 percentage point increase in four-year enrollment among low-SES students (Hyman, 2020). Another similar intervention showed that encouragement letters were only effective when combined with mentoring, leading to a significant 6-percentage point increase in PSE attendance. Lastly, the Expanding College Opportunities Comprehensive intervention combined sending customized information letters on the college application process and no-paperwork application fee waivers for selective colleges.

Hoxby and Turner (2016) show that this intervention increased enrollment in these colleges by 5.3 percentage points.

Career/school group counseling and workshops

Another set of interventions we reviewed consisted of career or school counseling in group settings or workshop format. These were implemented in various countries and contexts, and targeted multiple potential barriers to PSE access such as academic preparation, information sharing, and application guidance.

In Canada, the Explore Your Horizons (EYH) intervention (Hui & Ford, 2018), which was part of the Future to Discover Project, targeted high school students from lower-income and first-generation families. It involved sessions led by specially-trained educators and current PSE students for both high school students and parents. Training included various aspects of career development, including personal, technical, and tactical skills. Results varied across provinces, with increased high school graduation, PSE enrollment, and economic returns in New Brunswick but not in Manitoba. Another Canadian intervention was Life After High School, which offered workshops on college/university applications and financial aid (Oreopoulos & Ford, 2019). This initiative significantly increased PSE enrollment rates by 5 percentage points compared to control schools, with differing impacts observed in universities and community colleges, and higher impacts for males and those attending urban schools.

In the U.S., Coaches for Counseling (Stephan & Rosenbaum, 2013) is a program that provides personalized assistance to disadvantaged high school seniors and shows promise in increasing PSE enrollment. Other programs use online tools during workshops that allow students to search for college information and contact counsellors. One program using Naviance (Mulhern, 2021) increased the likelihood of applying to colleges by 20 per cent, particularly benefiting Black, Hispanic, and low-SES students. The Ramp-Up to Readiness program (Lindsay et al., 2017) aimed to increase college readiness among Grade 10 to 12 students. After one year, there were no significant differences in students' commitment to college or their likelihood to complete student aid applications, but this was potentially due to implementation issues. The H&R Block College Financial Aid Application Assistance provided simplified financial aid application processes for disadvantaged students. Results showed a substantial increase in the likelihood of submitting aid applications and enrolling in college, especially among low-income students (Bettinger et al., 2012).

Finally, in Europe, an intervention in Finland aimed to provide high school seniors with information about the returns to college education delivered through a PowerPoint presentation (Kerr et al., 2020). However, the results show that this information alone did not have any impact on enrollment rates for disadvantaged students. On the other hand, the Berliner-Studienberechtigten-Panel (Best Up) program in Germany (Ehlert et al., 2020) conducted a

25-minute classroom workshop that provided detailed information on the financial aspects of pursuing college versus vocational education. This intervention significantly increased PSE application rates by 18.4 per cent, reduced the intention-application gap, and improved knowledge about financial aid options, particularly benefiting students from lower-income families.

One-on-one counseling/mentorship and pathway navigation

We reviewed eight interventions that consisted of more involved one-on-one counseling or mentorship focusing on several aspects of PSE enrollment and pathway navigation. In one study, simply increasing school counsellors who assist high school students in navigating challenges and exploring post-graduation options led to a 10-percentage point increase in four-year college enrollment (Hurwitz & Howell, 2014). Other interventions involving school counsellors included Bottom Line College Advising in New York, Massachusetts, and Illinois, which provided individualized counseling and guidance throughout high school and college (What Works Clearinghouse, 2021). Bottom Line increased college enrollment (81 per cent vs. 70 per cent control) and progression through college (80 per cent vs. 71 per cent control). The Texas GO Center Project (Cunha et al., 2018), which assisted low-income high school students in Texas through dedicated classrooms, full-time counsellors, and student peer outreach, resulted in a statistically significant increase in PSE enrollment rates, particularly in two- and four-year institutions, but without significant long-term impacts on PSE graduation rates.

Several interventions also involved one-on-one mentoring. Career Beginnings (2017), which operates in multiple U.S. states, offers one-on-one support, mentoring, workshops, and a 24-month follow-up. Results showed that 53.2 per cent of program students attended college and reported raised educational aspirations versus 48.5 per cent of the control group. In New Hampshire, mentoring and college coaching programs (which provide guidance and financial incentives to underrepresented and low-income high school seniors) produced a 6-percentage point increase in college enrollment, with stronger effects for female, visible minority, and low-income students (Carrell & Sacerdote, 2017). Philadelphia's Sponsor a Scholar program aids low-income, first-generation-family Grade 8 students, offering mentoring, tutoring, scholarships, and stipends (SAS, 2017). SAS students had higher grades in Grades 10 and 11, and significantly more attended college in year one (85 per cent versus 64 per cent) and year two (73 per cent versus 56 per cent) compared to non-SAS students.

However, two mentoring interventions have had more inconclusive effects on PSE access and outcomes. AdviseMI in Michigan (Camo-Biogradlija et al., 2022) provided college transition coaching for high school seniors but showed no evidence that it increased college enrollment rate of seniors compared to the control group. Success Boston Coaching (What Works Clearinghouse, 2020) offered one-on-one transition coaching to traditionally underrepresented students. It significantly increased college persistence rates but had inconclusive effects on college marks.

Multi-faceted & long-term interventions

Next, we review nine multi-faceted and long-term interventions that encompass comprehensive academic, financial, and other support for PSE access. To start, the College Bound (2017) St. Louis program is delivered to disadvantaged youth in Grade 9 from first-generation families. The program spans seven to nine years with a focus on high school completion and PSE access. It offers a wide array of support, including academic assistance through tutoring and college courses, mental health services, and comprehensive guidance on the college application process and career readiness. Results showed that 90 per cent of College Bound students enrolled in a college, significantly higher than non-College Bound students (75 per cent).

Other promising interventions include the Facilitating Long-term Improvements in Graduation and Higher Education for Tomorrow (FLIGHT), which targets disadvantaged middle and high school students (What Works Clearinghouse, 2018). This program provides individualized assistance and workshops during the school day to aid students in graduation, college application, and enrollment. Notably, it achieved a significant increase in college enrollment rates among its participants. Next, Knox Achieves in Tennessee (Carruthers & Fox, 2016) focused on low-income high school seniors and combined college coaching with a financial aid program. This initiative significantly boosted overall higher education enrollment rates and had a particularly positive effect on lower-income students. Another promising intervention is the SEO Scholars (2017), based in New York and San Francisco, which supports low-income Grade 9 students and has demonstrated positive results including higher grades, attendance, and college enrollment rates.

Several multi-faceted and long-term interventions also showed inconclusive or marginal effects on PSE access. GEAR UP (Linkow et al., 2021), operating across several states in the U.S., offers workshops, tutoring, mentoring, and family involvement to prepare students for college. While it demonstrated success in increasing college attendance, its impact on college access was inconclusive. Making Education Work (2013), located in Northern Manitoba, caters to youth in high schools serving Indigenous communities. However, not enough information has been made available on PSE enrollment percentages and no statistical analyses were performed. The Quantum Opportunity Program (Rodríguez-Plana, 2012) in the U.S. initially showed short-term success in increasing high school graduation rates and PSE attendance, especially among females. Nonetheless, long-term effects also include increased risky behaviours among males. Lastly, the TRIO Programs (Martinez et al., 2018) encompass various initiatives nationwide in the U.S., aiming to support students from Grade 6 to 12, particularly those from low-income, first-generation, and minority backgrounds. These programs vary in their specific outcomes, with some (e.g., Talent Search) increasing PSE enrollment rates but others (e.g., Upward Bound) showing no significant impact.

Finally, Pathways to Education (Government of Canada, 2019), operating across Canada, offers comprehensive support to disadvantaged youth in Grades 9 to 12. It significantly increased

enrollment and persistence in post-secondary education, along with positive effects on earnings and employment among program participants.

STUDYING ABROAD AND PSE OUTCOMES

If information is available, what is the relationship between participating in an educational exchange study/program abroad during post-secondary education studies and post-secondary academic achievement, and labour market outcomes?

Study abroad programs, encompassing a spectrum of experiences from short-term cultural immersions to full-fledged academic exchanges, offer students the opportunity to step outside their comfort zones and engage with diverse cultures, academic systems, and worldviews. In this section, we provide an overview of recent research examining the association between studying abroad program while attending higher education and PSE and labour market outcomes — literature that is further reviewed in the annotated bibliography in Appendix B. While the initial aim of the literature review was to gather Canadian research, most recent studies on study abroad come from the U.S. and Europe. However, given their geopolitical and demographic similarities, their findings on PSE and labour market outcomes may be relevant to the Canadian context. Importantly, none were tested experimentally, meaning their findings may be more susceptible to bias from selection effects.

Studying abroad and academic success

Several studies explore the impact of studying abroad on various aspects of PSE outcomes, including academic performance and completion. A large study conducted in the U.S. (Bhatt et al., 2022) found that students who studied abroad were 8 per cent more likely to graduate in four years and 14.8 per cent more likely in six years. They completed their degrees approximately 4.5 weeks faster on average and had higher grades and credit hours earned than students who did not study abroad. However, two studies, one from the United Kingdom (U.K.) (Nwosu, 2022) and another from the U.S. (Whatley, 2023), challenge the idea that study abroad programs directly improve academic performance. In the U.K. study, students who studied abroad had slightly lower grades in their third year of study, while in the U.S. study, study abroad participation was not significantly related to grades or degree completion. One possible explanation may relate to the process of transferring grades from overseas institutions, where students may not work as hard for grades that do count towards their final degree.

Study abroad programs may offer cross-cultural experiences and personal growth opportunities that influence PSE outcomes. Another study in the U.S. (Luo & Jamieson-Drake, 2015) showed that participating in study abroad programs significantly improved students' abilities in

understanding moral and ethical issues, communication skills, academic performance, and overall satisfaction. Further, a meta-analysis examined the effectiveness of study abroad on second language learning (Yang, 2016). It found that studying abroad had a positive effect on second language development. While we found no research examining the association, skill-based gains from studying abroad, including additional language development, might work to promote later labour market success, from securing a better job to receiving a promotion.

Other research examines how various outcomes associated with studying abroad vary among groups underrepresented in PSE. Bell and colleagues (2023) focused on racial-ethnic minority undergraduate students in the U.S. and found that, in general, studying abroad had positive effects on graduation rates, time to degree, credit hours earned, and grades across different racial and ethnic groups, although the magnitude of these effects varied. Black and Hispanic students benefited the most from studying abroad, with a 9.2 and 13.4 percentage point higher likelihood of graduating in four years compared to Black and Hispanic students who did not study abroad, respectively. Another U.S. study (Brundage et al., 2023) found that Black, Latinx, Native American, and/or Pacific Islander (BLNP) students who studied abroad had significantly higher graduation rates, with particularly notable improvements in four-year graduation rates. These studies suggest that studying abroad may be especially beneficial for historically marginalized and underserved student populations. The authors recommended implementing financial aid programs and promoting the economic and life-enrichment benefits of studying abroad to increase participation among these student groups.

An alternate form of study abroad that may contribute to more equitable access to international educational experiences is international virtual exchange programs, which use technology to connect students from different countries synchronously for peer-led discussions and collaborative projects. One study (Lee et al., 2022) found that both international virtual exchange and traditional study abroad programs had positive effects on grades, graduation rates, and first-year retention. International virtual exchange particularly benefited historically marginalized and under-resourced students, including first-generation college students, female students, Black students, Hispanic students, and financially disadvantaged students.

One important consideration is the duration of study abroad programs. For example, Bhatt and colleagues (2022) found an association between shorter study abroad programs (i.e., four weeks or fewer) and graduation rates, whereas longer programs (i.e., more than one semester) were less effective. DeJordy (2020) investigated a seemingly-successful short-term (2 week) study program intended to foster diverse social networks among students and achieve positive academic outcomes in a short time frame. The same effect was found for second language learning, where the positive effects of studying abroad were more effective for shorter-term programs (i.e., 11 to 13 weeks) than long-term exchanges (i.e., 14 weeks to 3.5 years; Yang, 2016).

In contrast, one study (Coker et al., 2018) found that while study abroad program duration was not associated with students' evaluations of their overall educational experience, students in longer (semester) programs demonstrated better outcomes in class participation, exposure to diverse perspectives, idea synthesis, reduced memorization, empathy, general education, critical thinking, and teamwork compared to students in short-term programs (i.e., three weeks or less). This may be due to the cumulative effect of experiential learning through longer program duration.

Studying abroad and labour market outcomes

The following studies explore the impact of studying abroad on labour market outcomes, including employability and income. A study conducted in the U.K. and Italy focused on undergraduate students and their level of international student mobility (d'Hombres & Schnepf, 2021). The authors found that international student mobility increased employability one year after graduation, with a more pronounced effect in Italy. However, the long-term employment benefits were less significant, with no significant benefit in the U.K. three years after graduation. In Italy, mobile students were more likely to enroll in postgraduate studies, while in the U.K., this relationship was not significant. These differences may be influenced by factors such as the rigidity of the Italian job market and the stratified U.K. higher education system, highlighting the need to consider the country's context when evaluating the advantages of studying abroad.

Studying abroad has also been associated with earnings in prior research. In a meta-analysis across 19 countries, Giorgio and colleagues (2022) examined the relationship between studying abroad and earnings. It found a modest earnings premium of around 3 per cent associated with studying abroad. However, it noted publication bias favouring positive results and variations in results based on methodology, timing, and study duration. Notably, shorter durations of study abroad were associated with smaller benefits compared to longer international experiences.

Two other studies looked at studying abroad and early career income. The first (Kommers, 2022), based in the U.S., revealed that students who studied abroad earned only slightly more than those who did not, with this difference not being statistically significant. Study abroad students were often from more privileged backgrounds and tended to perform better in high school, which may influence labour market outcomes meaning association with the experience of studying abroad could be spurious. A study conducted in Germany showed that studying abroad only had a significant positive impact on the annual income of graduates (Netz & Grüttner, 2021) – an impact that was smaller for graduates from non-academic backgrounds. These results suggest the need for more rigorous evaluation frameworks for such programs to produce more convincing results that can inform understanding of the effects of studying abroad on labour market outcomes among different groups of students, especially those from high- and low-income households.

CONCLUSION

What are the policy or program implications for the Learning Branch of the findings from answering the above research questions?

In this report, the empirical analysis identified various student groups who faced barriers to PSE entry and graduation, as well as those who had lower earnings either after high school or after completing a PSE credential. The subsequent literature review on policy and program interventions that support PSE access suggests possible ways to target students who face obstacles to success — be that entering higher education or the labour market.

By combining empirical analysis from the Canadian context with literature reviews from wider jurisdictions, it is possible to identify differences in outcomes between groups and consider what interventions may be needed to support and address students who had lower levels of success. As the empirical results are descriptive, explicit policy prescriptions are difficult to recommend. Our results identify the correlates of success but do not fully answer "why" a difference was observed. As is the case with many educational outcomes, there are multifaceted reasons for success — often a complex combination of circumstances and experiences throughout early childhood and into adulthood.

Therefore, to answer the last research question above, we highlight the groups that would benefit from further interventions and support, drawing on the relevant secondary literature reviews to identify promising policies that can inform policies and programs. Because many of these studies draw from the American context, the extent to which they can be applied to Canada is hard to predict owing to the multiple differences between the two jurisdictions, such as variation in curriculum, the cost of PSE, income distributions, and level of school funding, as well as population differences. To this end, there a need for more research on the effects of various interventions in Canada.

Implication 1: Ensure policies and programs that aim to increase access to PSE target students from low-income families, Indigenous students, students with a disability, and students in distance education/homeschooling programs.

Certain large-scale policies and programs that aim to increase PSE access are offered to all students, regardless of their background characteristics. For example, the review on interventions that support PSE access covered policy changes that took place over a large jurisdiction (e.g., an entire school board or state). These studies explored the effects of changing math requirements (Clotfelter, Hemelt, & Ladd, 2019), decreasing class sizes (Dynarski, Hyman,

& Schanzenbach, 2013), or implementing skill recognition practices (Mihaly, Arellano, & Prier, 2023). While these larger scale policy changes can increase PSE access incrementally, they are often unable to directly target students that face the largest barriers to accessing PSE. If they inadvertently generate higher entry rates only for students who do not face historical barriers to accessing PSE, then gaps in PSE access may instead widen.

In the empirical analysis portion of this report, PSE access rates were particularly low among: students who lived in low-income households in Grade 7 (57.3 per cent); homeschooling/ distance education students (49.9 per cent); Indigenous students (41.3 per cent), and students with an IEP/disability (40.1 per cent). In terms of trends over time for the first group, differences in PSE access rates between students from low- and high-income families were persistent with no indication that the gap between the two groups had narrowed over the six cohorts for which data was available, despite the establishment and refinement over time of PSE access programming and student aid.

The empirical analysis also made it clear that certain program and school factors are associated with reduced barriers to PSE. Students who can access French immersion or certain types of independent schools (e.g., preparatory or Catholic schools) were more likely to transition to PSE, even when controlling for factors (e.g., household income) that may be associated with an increased likelihood of access. However, many of the programs associated with higher PSE access rates can have disproportionately fewer students from the groups that were underrepresented in the transition to PSE, highlighting the pervasiveness of selection effects to certain programs and schools.

It is often for this reason that policies and programs need to directly target the students who are the least likely to attend PSE. Interventions with personalized coaching and guidance are often more effective than impersonal and light-touch approaches in supporting students academically while in high school, as well as through the PSE application and enrollment process. While many of the interventions we reviewed did focus on student groups who were underrepresented in accessing PSE, especially low-income students, less literature considered programs targeting students with disabilities and Indigenous students. In addition, all the school-based interventions we reviewed excluded students in homeschool or distance education programs. It is for these reasons that policies and programs that aim to increase access to PSE need to target these student groups.

Implication 2: To diversify the type of PSE programs students first enter, invest in interventions that promote career exploration and experiences that "jump-start" higher education while in high school.

In B.C., two-thirds of students in our analysis transitioned to higher education in the years directly following high school, into one or more of: a shorter-term diploma or certificate

program or an apprenticeship or BA degree that can take longer to complete. Pathways to PSE were clearly diverse in terms of the type of programs that students first engaged in; however, there was indication that certain program levels were becoming more or less prevalent over time.

While there were slightly more students making the transition to PSE soon after high school when comparing the earliest and most recent Grade 7 cohorts, some of the largest variation over time was in the type of programs students first entered. Across cohorts, students were less likely to enter diploma and trades-programs and more likely to enter university transfer and BA programs, although this varied considerably across different student groups. The two streams with decreased enrollment are often characterized as equipping students with industry- and occupationally-specific skills that can support later labour market integration. Indeed, those who completed a diploma or apprenticeship had comparably similar or even higher initial earnings to graduates from BA programs in the analysis, although graduation rates were comparably lower in these two program streams.

Investing in interventions that promote the exploration of PSE options can be a way to not only increase PSE access but diversify the type of programs students attend. As found across several studies in Appendix A, this can include programs like the Future to Discover Project that enhance career development programming (Hui & Ford, 2018) or the Achieving a College Education Plus Program that offer dual credit course opportunities in high school so students could try PSE-level courses (Deller, 2018; Luna & Fowler, 2011). These interventions can help broaden the experiences and mindsets of students, opening up future possibilities that they may not have previously considered.

While the increase in BA enrollment across the cohorts we studied is indeed a positive outcome — especially as these programs had the highest graduation rates and comparably high earnings once graduates entered the labour market — not all high school students identify with this pathway and may forgo PSE entry all together if higher education is viewed by them as synonymous with only obtaining a degree. In addition, students who entered university transfer programs (presumably aiming to later attain a BA) had lower graduation rates and earnings if they only followed this path sufficiently to obtain an associate degree. Programs and interventions that broaden mindsets into what higher education can offer may engage students who do not plan to attend and alter the direction of students who embark on less suitable or advantageous pathways.

Implication 3: Further research into why PSE graduation rates are low and what policies and programs can decrease non-completion is needed.

The empirical research found that 58 per cent of students entering PSE directly after high school graduated within six-years of starting their first program, regardless of the entry program

length or whether the student had transferred to a different school or stream. There was substantial variation by credential level at entry, with 71.4 per cent of students who entered BA programs graduating within six years compared to 43.6 per cent of students in trades-related programs and 44.4 per cent of those who first entered associate degree/university transfer programs.

Many of the early student, program, and background characteristics associated with PSE entry were also related to graduation: Indigenous students, students with an IEP, and students from low-income households were all less likely to be completers than their counterparts after six years, even when controlling for factors like program of entry and early academic achievement. Other groups who had lower PSE access rates, such as students in homeschooling and distance education programs, did not have overall lower graduation rates. This suggests that, for some groups, access barriers are the largest hurdle they face, while for others entry to PSE does not confer the same chances of success as experienced by other students when they attend higher education.

While our study identified which students were more or less likely to complete a credential after six years, further research is needed to understand why students leave prematurely. Nevertheless, there was some indication in our research that certain factors may play a role. For example, the regression results found that students with higher Grade 7 FSA scores were more likely to be completers. As also found in other studies (e.g., Denning et al., 2022), this suggests that academic preparedness prior to entering PSE continues to impact student achievement. In addition, students from higher-income families were more likely to complete their studies in our research, highlighting that financial barriers very likely play a role. While these factors are well known, further research is needed to explore less understood or less well known factors associated with PSE completion.

Some of the policy and program interventions aimed at PSE access also showed promise in supporting later success while studying in higher education. For example, a summer counseling intervention targeting low-income high school graduates intending to attend higher education had a positive impact on later PSE retention (Castleman, Page, & Schooley, 2014). Others, like the Texas GO Center and Explore Your Horizons projects, did not increase the likelihood of PSE graduation. This suggest that the long-term impacts of outreach interventions during high school may be limited without additional support for students once they are in higher education. To better understand the role of support during and after entry to PSE, further research on what interventions best support PSE success is needed, especially given the range of student supports offered at different higher education institutions.

Implication 4: There is evidence that educational exchange and study program abroad programs can increase post-secondary academic achievement, but access barriers to these programs may exclude certain student groups that could benefit from the opportunity.

Many of the studies in Appendix B provided descriptive evidence that international exchange and study abroad programs can offer cross-cultural experiences and personal growth opportunities that influence PSE and labour market outcomes. Most (but not all) studies found that students who took part in a study abroad program were more likely to go on to graduate, although results varied by length, type, and context (e.g., Bhatt et al., 2022; Lee et al., 2022). Other studies also provided supportive evidence that these programs increased short-term employability after graduation and yielded a modest increase in earnings. The mechanisms through which these programs lead to success may include increasing a student's range of skills and aptitudes, such as enhancing class engagement, critical thinking, and empathy (Coker et al., 2018).

Other studies in this area concede that students underrepresented in PSE and groups with lower graduation rates once they enter are actually less likely to access educational exchange and study abroad programs. For many programs, financial barriers play a role as the cost of enrollment can be high if they do not include scholarships and funding (e.g., airfare, accommodation abroad). However, one U.S. based study found that students who were historically underserved in these programs (i.e., Black, Latinx, Native American, and/or Pacific Islander students) were the most likely to experience later academic benefits from these programs, suggesting that studying abroad may be especially beneficial for historically marginalized and underserved student populations (Brundage et al., 2023).

In many cases, study abroad programs are a "high impact" experience from time spent in higher education. They tend to take place over a significant period of time, often resulting in new and close relationships with peers and instructors and require the application and learning of a range of skills — from personal reflection to cross-cultural communication. It is important to emphasize that other high impact interventions — such as longer-term co-op/internship programs — may also yield similar graduation and labour market outcomes. Future research that compares outcomes across high impact experiences while in higher education is needed before concluding that the association between study abroad experiences and later outcomes is unique to the international experience a student obtains or is seen across a range of high impact programs a student may be able to engage with while in PSE.

Implication 5: Certain early barriers to PSE access and graduation have little to no impact on earnings, while others persist into the labour market.

To what extent does disadvantage "follow" a student from high school, into higher education, and then into the labour market? For students who face barriers to PSE entry, is higher education an "equalizer" if they graduate and enter the labour market? Our research showed

that certain early student, program, and family factors had no association with labour market outcomes among students who had surpassed initial barriers to PSE entry and graduation, while others continued to be prevalent into the labour market. In this sense, PSE only equalized outcomes between certain advantaged and disadvantaged groups.

For students who were able to access PSE and graduate, their early household and compositional factors were often unrelated to their earnings — once a model controlled for other factors — and when they were related, the overall effect was small. For example, students who lived in low-income neighbourhoods in Grade 7 were less likely to enter PSE and graduate than students in high-income neighbourhoods. However, both the regression and descriptive results found that students from low- and high-income neighbourhoods earned approximately the same amount initially after entering the labour market.

For other student groups, however, a higher education credential did not reduce their barriers to success compared to other graduates. Indigenous students earned an adjusted 7 to 8 per cent less across all three years after PSE in the final regression analysis. Students with an IEP in Grade 7 earned 14 to 18 per cent less than students without an IEP in these three years as well. These results persisted even after controlling for other characteristics and the highest program obtained. The results suggest that along with existing interventions, policy and programs to support PSE access and graduation, these two groups would benefit from new types of support in transitioning to higher earning positions after graduation.

While our research did not uncover why Indigenous students and students with an IEP earned less after completing higher education, it may be due to both programming differences while in higher education as well as labour market barriers. In terms of the latter reason, program and field of study differences not included in our analysis may play a role. For example, Indigenous students are less likely to have a credential from (what are often higher-earning) STEM fields in Canada (Statistics Canada, 2023). However, a "pipeline" account focused just on human capital accumulation often cannot fully account for variation in employment type and earnings. For example, Indigenous people are over-represented in non-permanent and involuntary part-time positions in Canada (Lamb & Verma, 2021), showing that job quality and labour market opportunities differ between Indigenous and non-Indigenous people. Factors that are not currently measured in these data, such as discrimination or racism, are likely important.

Implication 6: Success does not always compound as some academically advantaged groups who were more likely to access PSE and graduate had lower earnings once they entered the labour market.

Some groups that were advantaged in terms of their overall PSE entry and graduation rates had lower earnings once they entered the labour market after higher education. In certain cases — such as the difference in earnings between male and female graduates — these lower levels of

labour market success are well documented in previous research (e.g., Finnie et al., 2019). However, in other cases, our research showed that lesser-known student and program groups who were advantaged in terms of school success earned less after graduating. This was most notable among students who spoke languages other than English at home. Some groups — such as Chinese language speakers — had considerably higher PSE access and graduation rates than English speakers but earned less in their first two years post-graduation.

There were also several surprising program and school factors that were associated with higher rates of PSE access and graduation, which identified students who earned less in the initial years after graduation:

- **French immersion students:** once a regression model controlled for other factors, students who were enrolled in Grade 7 French immersion earned 5.4 to 6.5 per cent less than those without the experience of this type of programming one to three years after graduation.
- **Students in academically focused independent schools:** Compared to students who attended public schools in Grade 7, students in preparatory/International Baccalaureate independent schools also earned an adjusted 16 to 13 per cent less across all three years.
- **Students with the highest Grade 7 FSA scores:** students who were exceeding expectations in both numeracy and reading assessments earned an adjusted 7 to 8 per cent less across all three years compared to students who were meeting expectations.

These results were surprising after all other previous outcomes showed these groups to have higher levels of success. While we can only speculate at this point, there are several possible reasons why these groups had lower earnings. In particular, there may be intra-group selection effects. People from these high achieving groups who entered the labour market and did not continue to further PSE programs may be different in meaningful ways from their high-achieving counterparts who continued. In this sense, early labour market experiences may not be reflective of longer-term outcomes — analysis that would include students who went on to complete graduate and professional degrees. Nevertheless, without further research, it is unknown if these early labour market differences are only due to selection effects.

The important implication from these findings is that it cannot be assumed that student groups who are high achieving in certain respects, will all go on to have better labour market integration and higher earnings. In this sense, advantage in one outcome does not equate advantage in all outcomes. In terms of policy and program implications, there may be a need for targeted employment services for academically advantaged students, such as those for language minorities on campus or gifted students. Many university and college programs that provide support attempt to identify students at risk of non-completion; however, when improving employment outcomes are the focus, it is necessary to reconsider which groups are and are not likely to earn more.

Implication 7: Information on interventions and programs that target NEET youth would provide more insight on the activity of those who do not enter the labour market or PSE in the years following high school.

In our study, around one-third of students did not enter PSE in the years initially following their expected high school graduation. When we followed up with these students, just over two-thirds had entered the labour market over these three years, as identified through their tax filings. This means that around one-in-ten students across all Grade 7 cohorts appeared as not in education or employment (NEET). There was indication that more recent Grade 7 cohorts had lower NEET rates. For example, for the 2011 Grade 7 cohort, 72.8 per cent had employment earnings by year three, compared to 65.2 per cent for the 2002 Grade 7 cohort. Even with this increase, a sizable portion still did not appear to be active in the labour market or attending Canadian higher education.

In our study, we found that the rate of being NEET in the period directly after high school varied by student and program characteristics, many of which were also associated with barriers to PSE entry and graduation. Indigenous students were less likely to be observed entering the labour market across all three years after high school compared to non-Indigenous students. By year three, 70.6 per cent of non-Indigenous students were observed as active in the labour market compared to 54.5 per cent of Indigenous students, although this may be partially due to lower rates of filing tax returns among Indigenous people (Earnscliffe Strategy Group, 2022). Students with an IEP in Grade 7 were much less likely to enter the labour market across all three years compared to students without an IEP. By year three, 52.0 per cent of students with an IEP were active in the labour market compared to 70.4 per cent of students without an IEP.

Given limitations in what was possible to observe in this study, it is feasible that some of the young people who appeared as NEET were actively studying abroad or at private institutions, traveling, working (but not filing taxes), or engaging in other programs we could not identify. It is reasonable to assume that a sizable proportion of those identified as NEET did seek support to transition to the labour market and/or further education. In B.C. and Canada, there are a range of programs that engage NEET youth through employment, health, and social services. With current data availability, however, we were unable to match student and labour market data to enrollment in these often publicly-funded programs targeting NEET youth. Without being able to track enrollment and outcomes from these programs, we are unable to determine the degree to which they support the young people in our study. Understanding who is more or less likely to engage in these programs is an important component to understanding the social and institutional touchpoints young people rely on in the years preceding high school — one that should be pursued through future data linkages and research.

Implication 8: Students who do not transition to PSE have low earnings if they enter the labour market after high school, suggesting a need to increase opportunities to higher quality work for young people after high school.

It is clear from our research that few students who pursued labour market entry directly after high school earned enough to fully support themselves without the help of parents, income, or social assistance. Three years after high school, males earned less than $15,000 and females earned less than $11,000 annually on average. While our research did not have information on the number of hours or months worked or the number and type of employers, the young people in our study did not have high earnings directly after high school. It is for this very reason that access to PSE is largely promoted. Namely, further education can enable access to higher paying jobs compared to just having a high school diploma. Even so, there will always be young people who do not pursue higher education initially after high school — a group that would benefit from interventions that make it feasible to earn enough to support themselves economically.

For some student and program groups, their average earnings after high school were extremely low. For example, most other language groups had lower earnings in the years after high school compared to English speakers. In particular, Chinese and Korean speakers earned approximately 55 to 40 adjusted per cent less (respectively) across all three years. Students with an IEP in Grade 7 also had lower earnings, on average an adjusted 25 to 31 per cent less than students without an IEP across all three years.

To better understand what factors contribute to low earnings after high school, further research is needed on the type of jobs and sectors of work open to high school graduates and the degree to which this contributes to their lower earnings. For example, young people without PSE experience may be more likely to be employed in the gig economy or sectors with lower wages. While our research was unable to explore the types of jobs young adults had, identifying lower and higher earning pathways after high school would be the first step in suggesting what policy and program interventions could help young people entering the labour market after high school earn more. Addressing inadequate labour market opportunities may require larger scale policy interventions, such as raising minimum wages or employment standards across sectors where high school graduates are overrepresented. It could also suggest what type of employment pathways generate the best opportunities without any PSE experience. Interventions and programs that successfully help young people engaged in the labour market but only able to find jobs with inadequate pay would raise the standard of living of this sizable group.

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APPENDIX A: INTERVENTIONS THAT SUPPORT PSE ACCESS ANNOTATED BIBLIOGRAPHY

Early Interventions (Pre-K to Grade 6)

1	**Preschool program for children living in poverty – *HighScope Perry Preschool Study***
References in Literature	Schweinhart, L. J. (2013). Long-term follow-up of a preschool experiment. *Journal of Experimental Criminology*, *9*(4), 389–409. https://doi.org/10.1007/s11292-013-9190-3
Location	US (Michigan)
Population	▪ Ages 3-4, living in poverty, assessed to be at high risk of school failure
Program content/ best practices	▪ Daily 2.5h classes on weekday mornings ▪ Weekly 1.5h home visits to each mother and child on weekday afternoons ▪ Mid-October to end of May ▪ Cognitively Oriented Curriculum: emphasis on cognitive and social skills development through individualized teaching and learning ▪ HighScope early childhood educational model: open framework of education based on natural development of young children
Methods of evaluation	▪ RCT ▪ Sample: 123 African American children randomly assigned to preschool program and control with no preschool ▪ Followed from age 3 through age 40
Outcomes	▪ Program group significantly outperformed control on highest level of schooling completed (77 vs 60% graduating from high school or obtaining GED certificate). ▪ 88% of program females graduated from regular high school vs 46% of females in control group. ▪ Program group were significantly more employed at 27 (69 vs 56%). This employment advantage was more pronounced among females at age 27 (80% vs. 55%) but among males at age 40 (70% vs. 55%). ▪ Program group had significantly higher earnings than control ($12,000 vs $10,000 at 27, $20,800 vs $15,300 at 40).

2	**Early prevention program for social skills and self-control – *Montreal Longitudinal and Experimental Study***
References in Literature	Vanzella-Yang, A., Algan, Y., Beasley, E., Côté, S., Vitaro, F., Tremblay, R. E., & Park, J. (2023). The social and economic impact of the Montreal Longitudinal and Experimental Study. *Criminal Behaviour and Mental Health*, *33*(2), 116–124. https://doi.org/10.1002/cbm.2278

Location	Canada (Montreal, QC)
Population	▪ Kindergarten, boys above 70th percentile on disruptiveness scale
Program content/ best practices	▪ Child training component: provide children with training of non-cognitive skills ▪ Year 1: 9 sessions on social skills (e.g., how to invite someone to play, how to ask "why) once a week for 45 min at school (during lunch or after school) ▪ Year 2: 10 sessions on self-control (e.g., anger management) ▪ Parent training in child rearing component: sessions on reducing coercive interactions. increasing consistency, improving family dynamics
Methods of evaluation	▪ Review (focus on experimental methods for reported outcomes)
Outcomes	▪ High school graduation rate 24.13% higher than control group ▪ Increased average yearly employment income by 20% compared to control, as well as increased years employed

Dual Credit/Enrollment Programs and Technical Education

3	**Achieving a College Education Plus Program (ACE)**
References in Literature	Deller, F. (2018). Early Intervention Programs for Low Income Students: What Can Evaluations Reveal? A Systematic Review (doctoral thesis). Retrieved from http://hdl.handle.net/1807/89837 Gaye Luna & Michael Fowler (2011) Evaluation of Achieving a College Education Plus: A Credit-Based Transition Program, Community College Journal of Research and Practice, 35:9, 673-688, DOI: 10.1080/10668920903527050 Glendale Community College. (2003). ACE Plus Program. Retrieved from: https://www.gccaz.edu/ace
Location	USA (Arizona) in 10 Community Colleges
Population	▪ Disadvantaged youth ▪ Low and middle achieving students ▪ Grades 10
Program content/ best practices	▪ Early outreach program that supports at risk students in completing high school while taking PSE courses. ▪ ACE students can acquire up to 24 transferable college credits that will allow a smooth transition to PSE. ▪ Includes: exposition to life in college, family engagement, tutoring/mentoring, financial support (scholarships to cover tuition)
Methods of evaluation	▪ RCT ▪ Sample: 60 ACE students matched to 60 non-ACE students

Outcomes	▪ Compared to a matched comparison group, ACE participants had statistically significant higher rates of: ▪ High school graduation (2.69 times higher): 80% graduate from high school compared to 61.7% in the control group. ▪ College enrollment (3.28 times higher): 83% of ACE students graduated compared to 61.7% in the control group. ▪ GPA of ACE students is 3.0 (B) during the ACE program ▪ No statistical differences related to gender, ethnicity, language spoken at home

4	**Early College High School Model**
References in Literature	Deller, F. (2018). Early Intervention Programs for Low Income Students: What Can Evaluations Reveal? A Systematic Review (doctoral thesis). Retrieved from http://hdl.handle.net/1807/89837 Early College High School Model. (2017, March 01). Retrieved March 26, 2017, from http://www.jff.org/initiatives/early-college-design Edmunds, J. A., Arshavsky, N., Lewis, K., Thrift, B., Unlu, F., & Furey, J. (2017). Preparing Students for College: Lessons Learned From the Early College. NASSP Bulletin, 101(2), 117-141. Mengli Song, Kristina L. Zeiser. (2019, September) Early College, Continued Success: Longer-Term Impact of Early College High Schools. Retrieved from https://www.air.org/sites/default/files/downloads/report/Early-College-Continued-Success-Longer-Term-Impact-of-ECHS-September-2019-rev.pdf
Location	USA (31 states)
Population	▪ Low income students ▪ Academically average students ▪ Grades 9 to 12
Program content/ best practices	▪ Program empowering disadvantaged students to complete high school and to participate in PSE. ▪ Partner with college and offer students opportunity to earn an associate's degree or up to 2 years of college credits during high school ▪ Includes: college preparatory courses, college credits courses, coaching in college applications ▪ Personalization: socio-emotional support, academic support ▪ Most Early College High Schools are located on a college campus
Methods of evaluation	▪ RCT ▪ Sample: 1044 EC students and 1414 control ▪ Data from administrative records and National Student Clearinghouse
Outcomes	▪ Admission to an Early College significantly increased college enrollment within 6 years of expected high school graduation (Year 10): 84.2% of EC students enrolled in college, 7 percentage points higher than control students (77.0%). ▪ The difference was due to more EC students enrolling in 2-year colleges (65.8% vs. 46.8%), while 4-year college enrollment rates were similar (57.6% for EC, 56.7% for control).

5	**Dual credit (DC) education programs**
References in Literature	Hemelt, S. W., Schwartz, N. L., & Dynarski, S. M. (2020). Dual-Credit Courses and the Road to College: Experimental Evidence from Tennessee. *Journal of Policy Analysis and Management*, *39*(3), 686–719. https://doi.org/10.1002/pam.22180 Miller, T., Kosiewicz, H., Wang, E. L., Marwah, E. V., Delhommer, S., & Daugherty, L. (2017). *Dual Credit Education in Texas: Interim Report*. RAND Corporation. https://www.rand.org/pubs/research_reports/RR2043.html U.S. Department of Education. (2017). *Transition to College intervention report: Dual Enrollment Programs* (WWC Intervention Report). https://ies.ed.gov/ncee/wwc/Docs/InterventionReports/wwc_dual_enrollment_022817.pdf
Location	US
Population	▪ High school
Program content/ best practices	▪ High school students are offered option to take college-level courses that award both college and high school credit
Methods of evaluation	▪ Experimental (Tennessee, randomized at school-level), quasi-experimental (Texas), review (experimental and quasi-experimental) ▪ Tennessee: 61766 students (11th and 12th grade) with data from Tennessee's State Longitudinal Data System (SLDS) and National Student Clearinghouse ▪ Texas: data from THECB and Texas Education Agency
Outcomes	▪ Tennessee: no sig effect of dual credit math course on overall rates of college enrollment within one year of expected on-time graduation, lower likelihood of attending 2-year institution and increase likelihood of attending 4-year university ▪ Texas: after controls, 67% of those who took DC enrolled in college in the academic year after graduating high school vs 50% of those who did not take DC ▪ Review: positive effects on degree attainment, college access and enrollment, credit accumulation, completing high school, and academic achievement in high school; potentially positive effects on staying in high school, college readiness, attendance in high school, and academic achievement in college

6	**Career and Technical Education (CTE)**
References in Literature	Brodersen, R. M., Gagnon, D., Liu, J., & Tedeschi, S. (2021). *The Impact of Career and Technical Education on Postsecondary Outcomes in Nebraska and South Dakota*. U.S. Department of Education, Institute of Education Sciences, National Center for Education Evaluation and Regional Assistance, Regional Educational Laboratory Central.
Location	US (Nebraska and South Dakota)
Population	▪ High school

Program content/ best practices	▪ Offering high school courses aligned to specific career fields ▪ Provide students with academic and technical skills to succeed in college or the workforce ▪ CTE concentrator: student who completed all courses aligned to specific career cluster
Methods of evaluation	▪ Quasi-experimental ▪ Data from Department of Education and National Student Clearinghouse ▪ Sample: students whose 4-year expected high school graduation was between 2012-2017, comparing 56382 CTE concentrators to 56382 non-CTE concentrators
Outcomes	▪ CTE concentrators were 7 percentage points more likely to graduate high school on time than non-CTE concentrators. ▪ CTE concentrators were 10 percentage points more likely to enroll in post-secondary education within two years. ▪ They were 3 percentage points more likely to earn a post-secondary award within five years. ▪ They were 4 percentage points more likely to earn an associate's degree but 1 percentage point less likely to earn a bachelor's degree or higher within five years.

Policy-Level Changes

7	**Decrease in math requirements (GY2000)**
References in Literature	Berggren, A., & Jeppsson, L. (2021). The Impact of Upper Secondary School Flexibility on Sorting and Educational Outcomes. *Economics of Education Review*, *81*, 102080. https://doi.org/10.1016/j.econedurev.2021.102080
Location	Sweden
Population	▪ Upper secondary school students (16-19 years)
Program content/ best practices	▪ Decrease math requirements for Natural Science and Social Science programs ▪ Increase proportion of elective classes compared to mandatory classes (i.e., Mathematics C was no longer mandatory), leading to greater flexibility in student course selection
Methods of evaluation	▪ Regression discontinuity model (RD-DD): impact of birth dates on when students started upper secondary school when intermediate mathematics was required or not, comparing students born in January 1984, just after the threshold, with those born in December 1983, just before the threshold. ▪ Data source: Swedish registry data provided by Statistics Sweden ▪ Data linkage: Registers connected through personal identification numbers ▪ Sample: All individuals born in Sweden from January 1982 to December 1988 who finished elementary school ▪ Limited to first-time enrollees in the Social Science program in upper secondary school
Outcomes	▪ Increased PSE enrollment ▪ Increased PSE completion ▪ Modest increase in expected earnings in middle age ▪ General outcomes driven by increases for women: 2.5% increase in PSE enrollment, 5.6% in PSE completion, and 1.2% increase in expected earnings in middle age

8	**Increase in math requirements for college admission**
References in Literature	Clotfelter, C. T., Hemelt, S. W., & Ladd, H. F. (2019). Raising the Bar for College Admission: North Carolina's Increase in Minimum Math Course Requirements. *Education Finance and Policy*, *14*(3), 492–521. https://doi.org/10.1162/edfp_a_00258
Location	US (North Carolina)
Population	▪ High school
Program content/ best practices	▪ Increase in minimum number of math courses to be eligible for admission to University of North Carolina from three to four
Methods of evaluation	▪ Instrumental variable model (IV): IV was whether a student had taken Algebra II by Grade 11 ▪ Data source: Student-level administrative data from Department of Public Instruction and University of North Carolina General Administration ▪ Linked with University of North Carolina (UNC) records
Outcomes	▪ Increased PSE enrollment. ▪ Largest increases were observed in the groups of students that universities were already predominantly admitting, based on student achievement (8th grade math test scores). ▪ Increased enrollment at historically Black universities, primarily among students in the lower deciles of student achievement.

9	**Advanced Work Class (AWC)**
References in Literature	Cohodes, S. R. (2020). The Long-Run Impacts of Specialized Programming for High-Achieving Students. *American Economic Journal: Economic Policy*, *12*(1), 127–166. https://doi.org/10.1257/pol.20180315
Location	US (Boston)
Population	▪ Grade 4-6
Program content/ best practices	▪ Accelerated curriculum for high-achieving students. ▪ Curriculum includes full novels and texts, unlike typical classrooms that often use excerpts. Students write responses to these texts. ▪ Math instruction is accelerated in fifth and sixth grades to prepare them for calculus in their senior year of high school. This acceleration begins with pre-algebra in seventh grade and algebra in eighth grade. ▪ Admission to the program is based on scores from a standardized exam taken in third grade, with thresholds adjusted annually based on seat availability and scores. Typically, the top 11 to 17 per cent of third-grade test-takers are accepted into the program, with more slots available as additional AWC programs are introduced in schools.

Methods of evaluation	▪ Fuzzy regression discontinuity model (RD-DD) by comparing students just above and just below AWC eligibility thresholds ▪ Data source: Boston Public Schools ▪ Linked with Massachusetts Department of Elementary and Secondary Education (DESE)
Outcomes	▪ 28% increase in PSE enrollment after high school graduation: effect comes from increased enrollment at both four- and two-year institutions, each accounting for around half of enrollment gains ▪ Increased estimated earnings of $1,750 ▪ Race: Black and Latinx students driving these increases, with 65% increase in enrollment (driven by increases in 4-year universities) and increased estimated earnings of $8,200

10	**Biliteracy seals**
References in Literature	Mihaly, K., Arellano, B., & Prier, S. (2023). Biliteracy Seals in a Large Urban District in New Mexico: Who Earns Them and How Do They Impact College Outcomes? U.S. Department of Education, Institute of Education Sciences, National Center for Education Evaluation and Regional Assistance, Regional Educational Laboratory Southwest. https://ies.ed.gov/ncee/rel/Products/Publication/100913
Location	US (New Mexico)
Population	▪ High school
Program content/ best practices	▪ High school graduates can obtain a biliteracy seal on their diploma by demonstrating a minimum level of proficiency in speaking, reading, and writing in one or more non-English languages by high school graduation
Methods of evaluation	▪ Quasi-experimental: matching graduates who earned a biliteracy seal to those who did not earn a seal in the same year and in the same high school using demographic characteristics and Grade 8 GPA ▪ Data source: Integrated Post-secondary Education Data System ▪ Sample: three cohorts of students who were in Grade 12 and attended one of 13 high schools in the large urban district in New Mexico in 2017/18–2019/20
Outcomes	▪ Increased college enrollment within one year of high school graduation: 85% of seal earners pursued college enrollment vs 72% of matched non-seal earners ▪ Among those who enrolled in college, increased enrollment in 4-year college and enrolling full time

11	**Project STAR (the Tennessee Student/Teacher Achievement Ratio experiment)**
References in Literature	Dynarski, S., Hyman, J., & Schanzenbach, D. W. (2013). Experimental Evidence on the Effect of Childhood Investments on Postsecondary Attainment and Degree Completion. *Journal of Policy Analysis and Management*, *32*(4), 692–717.
Location	US (Tennessee)

Population	▪ Kindergarten through 3rd grade
Program content/ best practices	▪ Small class (13-17 students)
Methods of evaluation	▪ RCT ▪ Sample: 79 schools in 42 school districts, with oversampling of urban schools ▪ Students and teachers randomly assigned to either small class (13-17 students) or regular class (22-25 students) ▪ Data from participating school districts and National Student Clearinghouse
Outcomes	▪ Small class increased enrollment by 2.7 percentage points ▪ Increased college completion by 1.6 percentage points ▪ Shifted students toward high-earning fields like STEM, business, economics ▪ Results might be explained by test scores at time of experiment, which was a predictor of PSE outcomes ▪ Enrollment impacts are most pronounced among Black students, students from low-income households, and students attending high-poverty schools, suggesting that reducing class sizes during early childhood can contribute to narrowing income and racial disparities in post-secondary achievement.

Academic Support

12	**Career Academies**
References in Literature	Deller, F. (2018). Early Intervention Programs for Low Income Students: What Can Evaluations Reveal? A Systematic Review (doctoral thesis). Retrieved from http://hdl.handle.net/1807/89837 Kemple, James J. and Cynthia J. Willner, Career Academies: Long-Term Impacts on Labor Market Outcomes, Educational Attainment, and Transitions to Adulthood, MDRC, June 2008. Parsi, Ace, David Plank, and David Stern, Costs of California Multiple Pathway Programs, Policy Analysis for California Education (PACE), 2010.
Location	USA (California, Florida, Georgia)
Population	▪ Disadvantaged youth ▪ Grades 9-12
Program content/ best practices	▪ Early outreach program aiming for small learning communities in low-income high schools and to help students complete high school and transition to PSE. ▪ Organization in small learning communities (150 to 200 students): more student-centered learning style. ▪ Combining academic, career, and technical curricula around a career theme (e.g., health sciences, media arts). ▪ Partnerships with potential employers: career awareness, internship.

Methods of evaluation	▪ RCT ▪ Sample: 9 high schools, students randomly assigned to treatment or control groups ▪ Data from administrative records and follow-up surveys ▪ Demographics: 50% Hispanic, 30% African American
Outcomes	▪ 11% increase in average annual earnings over the previous 8 years post Career Academies program ($25,499 in annual earnings for the Career Academy group versus $22,944 for the control group). ▪ Labour market outcomes particularly significant among young men but not significant among young women compared to those in control. ▪ 95% of Career Academy participants completed PSE, and the proportion was the same in the control group. ▪ Educational attainment outcomes similar for young men and women, both not significantly differing from control group.

13	**Advancement Via Individual Determination (AVID)***
References in Literature	Ford, R. and Hui, S.-w. (2018) BC AVID Pilot Project: long-term postsecondary outcomes. Ottawa: Social Research and Demonstration Corporation. Ford, R., Frenette, M., Dunn, E., Nicholson, C., Hui, S.-w., Kwakye, I. and Dobrer, S. (2014) BC AVID Post-secondary Impacts Report. Ottawa: Social Research and Demonstration Corporation. McCann, Christyn M. "An Analysis of Educational Achievement: An Evaluation of the Advancement Via Individual Determination Program in a Midsized Gulf Coast School District." Unpublished Doctor of Education Thesis, University of Houston, December, 2015. Retrieved from: https://uh-ir.tdl.org/bitstream/handle/10657/2136/MCCANN-DISSERTATION-2015.pdf Swail, W., Quinn, K., Landis, K., & Fung, M. (2012). A blueprint for success: case studies of successful pre-college outreach programs. Washington, DC. Educational Policy Institute. Retrieved from: https://educationalpolicy.org/publications/ Kolbe, T., Kinsley, P., Feldman, R. C., & Goldrick-Rab, S. (2018). From the (Academic) middle to the top: An evaluation of the AVID/TOPS college access program. *Journal of Education for Students Placed at Risk (JESPAR)*, *23*(4), 304–335. https://doi.org/10.1080/10824669.2018.1530114
Location	USA (country-wide) and Canada (BC)
Population	▪ Originally Grade 8-9 students deemed academically "in the middle". ▪ More recently shifted to include programming applicable for all students.
Program content/ best practices	▪ AVID program aims to boost the likelihood of high school attendance and college attendance, emphasizing parental involvement. ▪ Lasts over a year and follows the WICOR curriculum model: Writing, Inquiry, Collaboration, Organization, and Reading. ▪ Students are recruited based on GPA and state test scores. ▪ Provides college-level courses, critical thinking skills, and study-skills training. ▪ Offers social services like counseling, social skills development, and college awareness. ▪ Includes career counseling and support with financial aid and applications.

Methods of evaluation	▪ RCT ▪ Sample: 791 AVID group and 450 in control across 21 B.C. high schools
Outcomes	▪ Impacts on academic achievement. ▪ No significant impact on post-secondary enrollment, persistence, or completion. ▪ No significant differences among boys and girls.

14	**Breakthrough Saint Paul Program***
References in Literature	Breakthrough (2017) Retrieved March 24, 2017, from http://www.breakthroughcollaborative.org/ Deller. F. (2018). Early Intervention Programs for Low Income Students: What Can Evaluations Reveal? A Systematic Review (doctoral thesis). Retrieved from http://hdl.handle.net/1807/89837 Mueller, D., Maxfield, J., & Karcher-Ramos, M. (2011). Evaluation of Breakthrough Saint Paul participant outcomes. Minnesota: Wilder Research
Location	USA (Minnesota) in Saint Paul Public Schools
Population	▪ Disadvantaged students ▪ Highly motivated ▪ Grade 7, 8, 9
Program content/ best practices	▪ Breakthrough is an early education program aiding disadvantaged students in achieving success in post-secondary education. ▪ Utilizes a "students-teaching-students" model where Breakthrough students serve as educators. ▪ Features tutoring, in-class instruction, electives, and over 75 in-class hours. ▪ Focuses on math, science, reading, writing, critical thinking, grade/attendance monitoring, and study/test-taking skills. ▪ Promotes parental involvement and offers social services like social skills development, college awareness, and career counseling.
Methods of evaluation	▪ Quasi-experimental ▪ Sample: 135 Breakthrough students and matched comparison group
Outcomes	▪ Breakthrough students are reported to be 7 times more likely to graduate from PSE versus students considered to be in the same economic situation. ▪ Seven in ten Breakthrough 7 and 8 Graders had B- on average in honors classes, while five in ten 9 graders reached this threshold. ▪ 81% of Breakthrough students attended college.

15	**College Possible***
References in Literature	Avery, Christopher (2013). Evaluation of the College Possible Program: Results from a Randomized Controlled trial. NBER working paper series College Possible. (2017) Retrieved March 26, 2017, from http://www.collegepossible.org/ Deller. F. (2018). Early Intervention Programs for Low Income Students: What Can Evaluations Reveal? A Systematic Review (doctoral thesis). Retrieved from http://hdl.handle.net/1807/89837
Location	USA (Chicago, Portland, Minnesota, Milwaukee, Omaha and Philadelphia)
Population	▪ High school students with below median family income, mostly of colour ▪ Motivated students ▪ Academically average students but GPA > 2.0 (from Grade 11) ▪ High school juniors and seniors
Program content/ best practices	▪ College Possible is a non-profit organization helping disadvantaged students complete high school and pursue post-secondary education. ▪ The 2-year program includes SAT/ACT prep, college admissions aid, and financial planning. ▪ It offers up to 320 hours of near-peer coaching and follows a research-based curriculum. ▪ After-school sessions twice a week promote peer support and a commitment to college success.
Methods of evaluation	▪ RCT ▪ Sample: 238 students with 134 randomly selected for the treatment group.
Outcomes	▪ College Possible students have a higher probability (increase of 31.7%) to apply to a four-year college compared to non College Possible students. ▪ Both the control and treatment groups had similar overall enrollment rates: two-thirds enrolling in the fall after high school graduation. ▪ Control group slightly favoured four-year colleges (34%) over two-year colleges (29%), while the treatment groups showed a strong preference for four-year (45%) compared to two-year colleges (19%).

Financial Promises, Aid, and Literacy

16	**Dell Scholars Program**
References in Literature	Page, L., Castleman, B., & Sahadewo, G. A. (2016) More than Dollars for Scholars: The Impact of the Dell Scholars Program on College Access, Persistence and Degree Attainment.
Location	USA
Population	▪ High-achieving low-income high school seniors

Program content/ best practices	▪ Combination of financial support (up to $20,000 of scholarship) and individualized advising, both at college entrance and throughout the duration of post-secondary enrollment. ▪ Individual advising through a web-based platform to track and communicate with students, collecting data at key checkpoints in their academic journey. If students show signs of academic, financial, or situational challenges, they receive personalized support from program staff. Students are also encouraged to reach out for guidance when needed.
Methods of evaluation	▪ Quasi-experimental (regression discontinuity and difference-in-difference) ▪ Sample: Dell applicants and matched students in Beginning Postsecondary students Survey (BPS)
Outcomes	▪ Dell Scholars targets motivated, high-achieving disadvantaged students, so may have limited impact due to motivation already being high. ▪ College enrollment at 4-year institutions increased by 2.8 percentage points (insignificant). ▪ Obtaining a bachelor's degree within 6 years increased significantly by 19.2 percentage points. Additional analyses suggest that this effect is likely driven by both the financial and advising support.

17	**Indiana Twenty-First Century Scholars***
References in Literature	Toutkoushian, R. K., Hossler, D., DesJardins, S. L., McCall, B., & González Canché, M. G. (2013). Effect of twenty-first century scholars program on college aspirations and completion. In Paper presented at the meetings of the Association for Education Finance and Policy Deller, F. (2018). Early Intervention Programs for Low Income Students: What Can Evaluations Reveal? A Systematic Review (doctoral thesis). Retrieved from http://hdl.handle.net/1807/89837 Indiana 21st Century Community Learning Centers Statewide Evaluation Report (2017 & 2018). Retrieved from: https://www.doe.in.gov/sites/default/files/21stcclc/2019-state-evaluation.pdf Indiana Twenty-First Century Scholars (2017). Retrieved March 26, 2017 from https://secure.in.gov/21stcenturyscholars/index.htm
Location	USA (Indiana)
Population	▪ Low income students or youth in foster care ▪ Grades 7, 8 ▪ Indiana residence
Program content/ best practices	▪ Indiana's 21st Century Scholars program aims to boost low-income students' high school graduation and post-secondary education enrollment through four years of paid tuition. ▪ 16 regional offices offer support services like tutoring/mentoring, college visits, application assistance, and parent activities. ▪ High school participants must meet 12 requirements, divided by grade: ▪ Grade 9: Create a graduation plan, engage in extracurricular or service activities, attend "Paying for College 101." ▪ Grade 10: Assess job interests, gain workplace experience, understand college costs. ▪ Grade 11: Explore college campuses, take ACT/SAT exams, search for scholarships. ▪ Grade 12: Submit college applications, watch "College Success 101," file FAFSA. ▪ In college, students must fulfill yearly activities to retain their scholarship.

Methods of evaluation	▪ Quasi-experimental ▪ Sample: program attendees and matched comparison group
Outcomes	▪ 23,928 students served of whom 62% attended 30 or more days in 2018. ▪ Earlier study found that students who completed the program and got the scholarship were more likely to enroll in college compared to the comparison group (85% versus 56%; 4.77 times higher likelihood). Among program attendees, females and white students had a higher likelihood of college enrollment. ▪ Later (2013) found that 57% of non-program students enrolled in PSE compared to 60% program participants, and non-program participants had higher enrollments in 4-year colleges and higher graduation rates. Few race/ethnicity and gender effects, but among program participants, first generation and older students were less likely to enroll in college than their peers.

18	**Information Barriers, Social Inequality, and Plans for Higher Education**
References in Literature	Barone, C. & Schizzerotto, A., Abbiati, G. & Argentin, G. (2017). Information Barriers, Social Inequality, and Plans for Higher Education: Evidence from a Field Experiment. European Sociological Review. jcw062. 10.1093/esr/jcw062.
Location	Italy (Milano, Vicenza, Bologna, Salerno)
Population	▪ Disadvantaged high school seniors in their final year of high school.
Program content/ best practices	▪ Class-wide info sessions (3 sessions, 5 hours total) in the last year of high school. ▪ Aimed to correct misconceptions about higher education costs and benefits. ▪ Provided personalized info on costs, job prospects, and program success rates. ▪ Delivered by professional educators to disadvantaged students in Italy.
Methods of evaluation	▪ RCT ▪ Sample: 62 high schools across various upper-secondary streams in four Italian provinces, including Milan, Vicenza, Bologna, and Salerno ▪ 31 pairs of schools matched by stream and province, one randomly assigned to treatment and the other to control
Outcomes	▪ Info sessions corrected misperceptions about college costs and profitability. ▪ Students shifted preferences towards more rewarding educational options. ▪ No increase in intentions to enroll in university. ▪ No evidence of improved access to higher education. ▪ Suggested that addressing informational barriers alone may not be effective in a system with significant structural barriers like Italy's course tracking system. ▪ Treatment encouraged underprivileged students who did not plan to attend university to consider vocational education instead of labour market entry: increased preference for vocational tertiary education by 3.3%. Effect was minor for high-status students but more significant for working-class students (4.9%) and children of the middle class (8.9%). Among students in industry-focused technical and vocational schools, the effect was even stronger at 9.6%.

19	**Percorsi: Financial aid through asset building**
References in Literature	Azzolini, D., Martini, A., Rettore, E., Romano, B., Schizzerotto, A., & Vergolini, L. (2018). *Testing a Social Innovation in Financial Aid for Low-Income Students: Experimental Evidence from Italy*. IZA Institute of Labor Economics. https://www.ssrn.com/abstract=3209722
Location	Italy
Population	▪ Grade 12-13, low-income
Program content/ best practices	▪ Dedicated savings account opened in youth's family name ▪ Families need to deposit between 5-50 euros per month up to 6 years and up to 2000 euros ▪ Savings supplemented with 4:1 matching multiplier if spent on expenses related to college, 2:1 if related to high school
Methods of evaluation	▪ RCT ▪ Sample: 716 participants randomly assigned to treatment (300) or control group
Outcomes	▪ Treatment group significantly higher university enrollment (8.7% increase), academic performance (9% by first semester, 8% by first year), and university persistence (8.9% increase) than control group ▪ Effects larger for students coming from vocational schools vs technical or general secondary schools

20	**Washington's College Bound Scholarship (CBS)**
References in Literature	Fumia, D., Bitney, K., & Hirsch, M. (2018). *The Effectiveness of Washington's College Bound Scholarship Program*. Washington State Institute for Public Policy.
Location	US (Washington)
Population	▪ Grade 7-8, low income
Program content/ best practices	▪ Eligible students must make a pledge in 7th or 8th grade to graduate high school with a minimum 2.0 GPA, avoid felony convictions, and file FAFSA or WASFA. ▪ CBS covers full tuition, fees, and provides a book stipend at public institutions in Washington and equivalent funding for private institutions. ▪ Pledge eligible: either be free- or reduced-price lunch, below 65% of state median family income, live with family that receives TANF or SNAP benefits, in foster care.
Methods of evaluation	▪ Quasi-experimental using difference-in-difference design. ▪ The program established two distinct groups for evaluation: a treatment group comprised of low-income students eligible to make the pledge and a comparison group made up of students ineligible to make the pledge. ▪ To measure the program's impact, researchers assess the difference in outcomes between the eligible group before and after CBS implementation, subtracting the corresponding change in the ineligible group.

Outcomes	▪ CBS recipients less likely to be White, have lower math scores in grade 8, less likely to receive free lunch in earlier grades but more likely in later grades ▪ CBS recipients more likely to enroll in 2-year college than control but equally likely to enroll in 3- and 4-year college. ▪ CBS recipients more likely to receive a 4-year degree.

21	**Kalamazoo Promise Scholarship**
References in Literature	Bartik, T. J., Hershbein, B., & Lachowska, M. (2021). The Effects of the Kalamazoo Promise Scholarship on College Enrollment and Completion. *Journal of Human Resources*, *56*(1), 269–310. https://doi.org/10.3368/jhr.56.1.0416-7824R4
Location	US (Michigan)
Population	High school
Program content/ best practices	▪ College tuition subsidies to graduates of Kalamazoo Public Schools ▪ Pays 100% tuition and fees for any PSE institutions in Michigan ▪ To qualify: continuously enrolled in KPS since at least 9th grade, living in school district and graduate of KPS, admitted to any public college in state
Methods of evaluation	▪ Quasi-experimental using difference-in-differences design ▪ Data from KPS and administrative records with National Student Clearinghouse
Outcomes	▪ Increased enrollment at any PSE institution within 6 months of high school by 7.1 percentage points. Within 6- or 12-months, increased enrollment by 9 percentage points. ▪ Insignificant effect of degree completion over a 4-year horizon, but large positive effect over 6-year horizon (12 percentage points). ▪ Larger PSE enrollment and completion effect for racialized students (mostly Black or Hispanic) compared to White students. ▪ Effects larger for women than for men.

22	**Oregon Promise Financial Aid Program**
References in Literature	Hodara, M., & Childress, L. (2022). *What Were the Reach and Impact of the Oregon Promise Financial Aid Program in Its First Two Years?* U.S. Department of Education, Institute of Education Sciences, National Center for Education Evaluation and Regional Assistance, Regional Educational Laboratory Northwest.
Location	US (Oregon)
Population	▪ High school seniors

Program content/ best practices	▪ Min award $1000 and maximum was average tuition cost for 12 credits per term at community college in Oregon ▪ Eligibility: resided in Oregon for at least 12 months prior to enrollment, high school cGPA of 2.5+, completed high school, attempted no more than 90 college credits through dual-credit programs
Methods of evaluation	▪ Quasi-experimental ▪ Sample: high school seniors with final GPA close to 2.5 cutoff (and compare eligible applicants vs those who did not apply)
Outcomes	▪ Students who received an award were 21 percentage points more inclined to enroll in college within six months, 18 percentage points more likely to do so within two years ▪ 11 percentage points more likely to persist through their first year of college ▪ 7 percentage points more likely to still be enrolled in college or have completed their college education by the 2019/20 academic year compared to a group of peers with similar GPAs who did not apply for the award

Light Touch and Behavioural Nudges

23	**Nudging at a National Scale***
References in Literature	Bird, K. A., Castleman, B., Goodman, J., & Lamberton, C. (2017) Nudging at a National Scale: Experimental Evidence from a FAFSA Completion Campaign (No. 54; p. 34). Nudging at a National Scale: Experimental Evidence from a FAFSA Completion Campaign
Location	USA (National)
Population	▪ First-generation college-intending high school seniors from low-income families
Program content/ best practices	▪ National and state-level campaign targeting lower-income and first-generation high school seniors. ▪ Focused on encouraging FAFSA completion for maximum aid. ▪ Treatment group received varied messages, emphasizing planning and step-by-step guidance. ▪ Control group received the same number of messages but with general financial aid information.
Methods of evaluation	▪ RCT ▪ Sample: 70,000 students in treatment and 115,793 students in control
Outcomes	▪ Small but statistically significant increase in enrollment at any higher education institutions of +1.7 percentage points for treatment vs control group. ▪ There was no evidence that differing approaches to message framing, delivery, or timing or access to one-on-one counselling affected the efficacy of the campaign. ▪ No differences by student characteristics.

24	**Outreach including parents**
References in Literature	Castleman, B., & Page, L. (2017) Parental Influences on Postsecondary Decision Making: Evidence From a Text Messaging Experiment.
Location	USA
Population	▪ Low-income college intending high school graduates; first-generation college-intending high school graduates
Program content/ best practices	▪ Utilized text messages during the summer after graduation for both students and parents. ▪ Messages reminded students of college enrollment tasks and offered counselor assistance. ▪ A total of 14 texts were sent over the summer.
Methods of evaluation	▪ RCT ▪ Sample: high school seniors randomly assigned to control, student-only outreach, or parent and student outreach ▪ 48% Hispanic, 33% Black
Outcomes	▪ Among low-income college-intending high school graduates, enrollment in any post-secondary education (PSE) increased significantly by 5.7 percentage points, with a 5.1 percentage point increase at 2-year institutions. However, the 0.5 percentage point increase at 4-year institutions was not statistically significant. ▪ Among first-generation college-intending high school graduates, enrollment at any higher education (HE) institution increased significantly by 4.5 percentage points. Enrollment at 2-year institutions decreased slightly by 0.3 percentage points, while enrollment at 4-year institutions increased significantly by 4.8 percentage points. ▪ The program successfully increased enrollment of low-income students by nearly 6 percentage points and first-generation students by almost 5 percentage points.

25	**College Counselling to Counter Summer Melt**
References in Literature	Castleman, B., Arnold, K., & Wartman, K. L. (2012) Stemming the Tide of Summer Melt: An Experimental Study of the Effects of Post-High School Summer Intervention on Low-Income Students' College Enrollment
Location	USA
Population	▪ All graduates from high schools with predominantly non-White and low-income students
Program content/ best practices	▪ College counselling provided during the summer to low-income students. ▪ Individualized and proactive outreach from counsellors during the summer focusing on financial aid package, information barriers & social/emotional barriers to enrollment. ▪ Delivered over two months in the fall following high school graduation.
Methods of evaluation	▪ RCT ▪ Sample: randomly assigned students from 7 high schools

Outcomes	▪ The interventions had a significant and consistent impact on post-secondary education (PSE) enrollment. ▪ Overall PSE enrollment increased by a significant 13 percentage points. ▪ Enrollment in 2-year institutions decreased by 4 percentage points, while enrollment in 4-year institutions increased significantly by 14 percentage points.

26	**College Matriculation Support***
References in Literature	Castleman, B., Owen, L., and Page, L. (2015) Stay late or start early? Experimental evidence on the benefits of college matriculation support from high schools versus colleges
Location	USA (New Mexico)
Population	▪ Hispanic high school graduates admitted to the University of New Mexico
Program content/ best practices	▪ High school-university partnership for college-intending students. ▪ Proactive outreach by counsellors during the summer. ▪ Emphasis on assisting with summer tasks like financial aid and procedural steps over two months.
Methods of evaluation	▪ RCT ▪ Sample: high school graduates admitted to University of New Mexico, randomly assigned to control, treatment in APS, and treatment in UNM ▪ Data from Albuquerque Public Schools (APS) and NSC
Outcomes	▪ “Summer melt", a phenomenon characterised by a failure of college-intending high school graduates to matriculate in college anywhere in the year following high school, was notably higher among Hispanic males. ▪ Among treated males, PSE enrollment increased significantly by 9.5 percentage points. ▪ However, there were no effects among females.

27	**Summer College Matriculation Support**
References in Literature	Castleman, B. L., & Page, L. C. (2015). Summer nudging: Can personalized text messages and peer mentor outreach increase college going among low-income high school graduates? *Journal of Economic Behavior & Organization*, *115*, 144–160. https://doi.org/10.1016/j.jebo.2014.12.008
Location	USA
Population	▪ Low-income college-intending high school graduates

Program content/ best practices	▪ Two interventions designed to mitigate "summer melt" — a phenomenon characterised by a failure of college-intending high school graduates to enroll in college in the summer after graduation). ▪ Automated and personalized text messaging campaign to remind students of tasks required by intended college and to connect them with counsellor-based support (10 texts sent over the summer). ▪ Near-aged peer mentors to provide summer outreach and support.
Methods of evaluation	▪ Quasi-experimental ▪ Sample: students from class of 2013 indicated as college-intending ▪ Administrative data and NSC
Outcomes	▪ For students receiving the text messaging campaign, overall post-secondary enrollment increased by 1.9 percentage points, with a 3 percentage point increase in 2-year institutions but a 1.8 percentage point decrease in 4-year institutions. ▪ Among students who received peer-mentor interventions, overall enrollment increased by 2.3 percentage points. There was a slight decrease of 0.4 percentage points in 2-year institutions but a significant increase of 4.5 percentage points in 4-year institutions.

28	**Summer counseling intervention**
References in Literature	Castleman, B. L., Page, L. C., & Schooley, K. (2014). The Forgotten Summer: Does the Offer of College Counseling After High School Mitigate Summer Melt Among College-Intending, Low-Income High School Graduates? *Journal of Policy Analysis and Management*, *33*(2), 320–344. https://doi.org/10.1002/pam.21743
Location	USA (Massachusetts, Georgia)
Population	▪ Lowest-income college-intending high school graduates
Program content/ best practices	▪ Proactive outreach from counsellors during the summer (2 months)
Methods of evaluation	▪ RCT ▪ Sample: students from educational agencies randomly assigned to treatment or control
Outcomes	▪ In Massachusetts, enrollment in any PSE increased by a statistically significant 12.3 percentage points. Similarly in Georgia, enrollment in any PSE increased by a statistically significant 8.5 percentage points. ▪ In addition to the significant improvements in college enrollment, the authors report that the program had an impact on persistence several semesters into college.

29	**The Expanding College Opportunities Comprehensive (ECO-C) Intervention**
References in Literature	Hoxby, C. and Turner, S. (2016). Expanding College Opportunities for High-Achieving, Low Income Students. Journal of Human Capital, 10(4), p. 482–519.
Location	USA
Population	High school seniors that ▪ scored in the top decile of test-takers of the SAT or ACT; ▪ had estimated family income in the bottom third of the income distribution for families with a twelfth grader; and ▪ did not attend a "feeder" high school (i.e., a high school in which more than 30 students in each cohort typically score in the top decile on college assessment exams).
Program content/ best practices	▪ Combined intervention with two educational and one financial element. ▪ Customized information on the application process with timely reminders. ▪ Customized information on net costs for low-to-middle income students at various colleges. ▪ No-paperwork application fee waivers for selective colleges. ▪ Families preferred paper mailings for information materials and resources. ▪ Materials were designed to stand out from college promotions and other for-profit firms to address family suspicion.
Methods of evaluation	▪ Quasi-experimental ▪ Data from College Board and ACT
Outcomes	▪ Enrollment in peer colleges increased significantly by 5.3 percentage points. ▪ The ECO-C Intervention reduces the college behaviour gap between low-income and high-income students with similar achievements. ▪ The intervention effectively encourages high-achieving, low-income students to apply and get admitted to more colleges (12% increase), particularly those with high graduation rates and ample instructional resources (31% increase). ▪ No differences by student characteristics.

30	**Transcript and letter of encouragement**
References in Literature	Carrell, Scott and Sacerdote, Bruce (2017). Why Do College-Going Interventions Work? American Economic Journal: Applied Economics 2017, 9(3): 124–151 https://doi.org/10.1257/app.20150530
Location	USA (New Hampshire)
Population	▪ High school seniors “on the verge” (at the margin) of failing to apply to college (i.e., those who expressed interest in attending college but have made little or no progress on filing an application)
Program content/ best practices	▪ Students are contacted through letters, emails, and phone calls by their local community college admissions office. ▪ Some students who agree have their transcripts shared with admissions offices at public colleges and universities, allowing admissions officers to reach out to qualified prospective students.

Methods of evaluation	▪ RCT ▪ Sample: 20 high schools randomly assigned to control, mentoring, or transcript only treatment
Outcomes	▪ The transcript-only treatment was not effective. Some possible explanations for this include a low take-up rate for the intervention (14%), and the fact that most students who received the treatment still failed to apply to the schools that reached out to them. ▪ Mentoring treatment led to a significant 6-percentage point increase in college attendance. ▪ Gender: mentoring treatment led to a 15-percentage point increase in college attendance for women. The treatment had smaller effects on men, and the gender difference in treatment effects is partly due to differences in self-reported labor market opportunities.

31	**Light-touch college-going intervention: Receiving an encouragement letter**
References in Literature	Hyman, J. (2020). Can Light-Touch College-Going Interventions Make a Difference? Evidence from a Statewide Experiment in Michigan. *Journal of Policy Analysis and Management*, *39*(1), 159–190. https://doi.org/10.1002/pam.22155
Location	US (Michigan)
Population	▪ Grade 11-12
Program content/ best practices	▪ Students receive a single page letter with the Michigan Department of Education letterhead congratulating their ACT score and encouraging them to consider going to college ▪ Randomly assigned differences in what was highlighted in the letter: “learn how to make college affordable”, “learn how to apply to college”, “learn which college is right for you”, or all three bolded
Methods of evaluation	▪ Experimental ▪ Sample: 49156 11th-grade public school students in Michigan during 2013-2014 who scored at least 20 on ACT ▪ Groups: half treatment, half control ▪ Data matched to National Student Clearinghouse (NSC) for PSE outcomes
Outcomes	▪ No impact on college enrollment among those who received a letter ▪ Letter content, timing, and website effects may have been underpowered. Among low SES students, college choice letter led to significant 3.3-percentage point increase in 4-year enrollment, as well as letters mailed in October (2.1 percentage point increase) and November (1.7 percentage points increase) ▪ Results on college persistence inconclusive ▪ 1.8% increase in PSE enrollment for lower SES students compared to the control mean of 76.4%, which may reflect larger proportion of BIPOC students who are lower SES (but no effect of race) ▪ Increase in PSE enrollment among lower SES driven by increases in attendance at 4-year institutions

32	**Customized nudging for FAFSA**
References in Literature	Page, L. C., Castleman, B. L., & Meyer, K. (2020). Customized Nudging to Improve FAFSA Completion and Income Verification. *Educational Evaluation and Policy Analysis*.
Location	US (Texas)
Population	▪ High school seniors
Program content/ best practices	▪ Weekly personalized text messages related to college financial aid application and their FAFSA filing process specifically
Methods of evaluation	▪ RCT ▪ Sample: 66 high schools with ~17,000 students ▪ Data from participating school districts, Apply Texas system, and National Student Clearinghouse
Outcomes	▪ 3% increase in on-time college enrollment. ▪ 5% rise in 4-year college enrollment and a -2% effect on 2-year college enrollment. ▪ No significant variations in effects based on student factors like economic disadvantage.

33	**Digital messaging with personalized follow up**
References in Literature	Avery, C., Castleman, B. L., Hurwitz, M., Long, B. T., & Page, L. C. (2021). Digital messaging to improve college enrollment and success. *Economics of Education Review*, *84*, 102170. https://doi.org/10.1016/j.econedurev.2021.102170
Location	US (15 states)
Population	▪ High school seniors
Program content/ best practices	▪ National study: Students receive monthly text messages related to college-going from spring of junior year to summer after high school graduation, then matched students to advisors for follow-up ▪ Texas study: Weekly messages from school counsellors directly and additional custom texts about FAFSA status
Methods of evaluation	▪ RCT ▪ National sample: 745 high schools with ~70,000 students ▪ Texas sample: 72 schools ▪ Data from participating school districts and National Student Clearinghouse

Outcomes	▪ National: 1 percentage point significant decrease in college enrollment in treatment vs control group. ▪ Texas: 2 percentage points non-sig decrease in enrollment in treatment vs control, but larger sig effect on on-time full-time enrollment. ▪ Authors posit that decrease in enrollment rates especially in the national study may be due to the outreach framed as coming from a College Board representative instead of their own high school counselor in the Texas study. Also, it is possible that the messaging was better integrated in college-going communication and activities in the Texas study compared to the national study. Finally, in the national study, advice may not have been always relevant or in line with local advice, causing students to lose trust in the advisor's guidance and leading to student confusion. ▪ No significant variations by race. ▪ Large and consistent impacts for lower achieving students who did not qualify for free/reduced-price lunch (8 percentage points on-time enrollment, 5 percentage points in following year).

Career/School Group Counseling and Workshops

34	**Explore Your Horizons (EYH)***
References in Literature	Hui, T. S., & Ford, R. (2018). Education and Labour Market Impacts of the Future to Discover Project: Technical Report. Toronto: Higher Education Quality Council of Ontario. Retrieved from http://www.heqco.ca/SiteCollectionDocuments/Formatted_FTD_long%20report_FINAL.pdf
Location	Canada (New Brunswick, Manitoba) in 51 high schools, including 15 Francophone.
Population	▪ High school students in Manitoba and New Brunswick, with a focus on those from lower-income families and first-generation families (FGF).
Program content/ best practices	▪ EYH is part of the Future to Discover Project, which spans three years (grades 10-12) and aims to enhance career education for high school students. ▪ It aims to reduce barriers, such as academic preparation and lack of information, often faced by underrepresented students in pursuing post-secondary education (PSE). ▪ The program provides knowledge, access, and career development opportunities in PSE. ▪ Sessions are held for both students and parents, accommodating parents' schedules and involving them in supporting their children's career exploration. ▪ Facilitators, mostly with a career counseling or education background, lead sessions, and some workshops are conducted by current PSE students. ▪ The program focuses on individualized PSE plans tailored to students' interests. ▪ It encompasses various aspects of career development, including personal, technical, and tactical skills.
Methods of evaluation	▪ RCT ▪ Eligible students needed to be enrolled in a participating high school in Manitoba or New Brunswick in Grade 9 from 2003-05 for pilot selection ▪ Both lower and higher-income family students were included in the program test ▪ Randomly assigned to: control group, EYH only, LA only, both

Outcomes	▪ EYH in New Brunswick, alone or with a Learning Accounts (LA) initiative, raised high school graduation and post-secondary education (PSE) enrollment rates, especially for low-income and FGF students. ▪ No significant effect on university completion rates was observed. ▪ EYH in New Brunswick resulted in positive economic returns, increasing the income of low-income family participants by an average of $1,669 compared to a control group. ▪ However, there were no lasting impacts on PSE participation or economic outcomes for participants in Manitoba.

35	**Coaches for counselling***
References in Literature	Stephan, J. L. & Rosenbaum, J. E. (2013). Can High Schools Reduce College Enrollment Gaps With a New Counseling Model? *Educational Evaluation and Policy Analysis, 35*(2), 200-219.
Location	USA (Chicago)
Population	▪ Disadvantaged High school seniors (primarily African American, Latino, and low-income)
Program content/ best practices	▪ One coach per high school to provide help in completion of Free Application for Federal Student Aid, scholarship, and college applications (over one year).
Methods of evaluation	▪ Quasi-experimental ▪ Sample: all graduating seniors from Chicago Public Schools (CPS) from 4 cohorts (2004-2007) ▪ Administrative data from CPS, National Student Clearinghouse
Outcomes	▪ Coaches can positively impact the types of colleges students attend by guiding them to complete crucial actions, resulting in a 3.3 percentage point increase in higher education enrollment. ▪ The study indicates that targeted social resources can enhance the transition from high school to college for disadvantaged students. ▪ Latino students, low SES, non-AP are more likely to enroll in less-selective 4-year colleges vs 2-year if they attended a coach school. ▪ No significant effects between attending a coach school and students with typically better enrollment outcomes: White, African American, higher SES, AP students. ▪ Among African American students, lower SES youth more likely to enroll in less-selective 4-year colleges vs 2-year if they attended a coach school.

36	**Information on returns to education**
References in Literature	Kerr, S. P., Pekkarinen, T., Sarvimäki, M., & Uusitalo, R. (2020). Post-secondary education and information on labor market prospects: A randomized field experiment. *Labour Economics*, *66*, 101888. https://doi.org/10.1016/j.labeco.2020.101888
Location	Finland (nationwide)

Population	▪ High school seniors
Program content/ best practices	▪ An information intervention offered to 97 randomly chosen high schools (among those meeting selection criteria) in Finland. ▪ PowerPoint presentation with information on the returns to college education.
Methods of evaluation	▪ RCT ▪ Sample: 97 high schools randomly assigned to treatment and 266 to control
Outcomes	▪ Rigorous evidence of zero effect from information alone ▪ The intervention did not have any impact on enrollment rates of disadvantaged students

37	**The Berliner-Studienberechtigten-Panel (Best Up)**
References in Literature	Ehlert, Martin; Finger, Claudia; Rusconi, Alessandra; Solga, Heike (2017): Applying to college: Do information deficits lower the likelihood of college-eligible students from less-privileged families to pursue their college intentions?: Evidence from a field experiment. Social Science Research, ISSN 1096-0317, Elsevier, Amsterdam, Vol. 67, p. 193-212, http://dx.doi.org/10.1016/j.ssresearch.2017.04.005
Location	Germany (Berlin)
Population	▪ College-eligible students from first generation families (i.e., students whose parents do not have a college degree) with college intentions.
Program content/ best practices	▪ A 25-minute classroom workshop offered detailed information on the financial aspects of college vs. vocational education (e.g., wages, career prospects, unemployment risks, lifetime earnings) and financial strategies. ▪ This workshop was conducted one year before students graduated.
Methods of evaluation	▪ RCT ▪ Sample: 9 treatment schools, 19 control
Outcomes	▪ Boosted college application rates by 18.4% compared to a basic information treatment (information flyer only). ▪ Increased application rates for students with one parent holding a higher education degree by 17.4%. ▪ Reduced the intention-application gap by 33% (the gap between the number of students with stated intentions to apply and the number of students who actually applied). ▪ Improved knowledge about financial aid options, particularly for students from lower-income families, compared to the control group.

38	**Naviance: Online platform for college counselling and choice**
References in Literature	Mulhern, C. (2021). Changing College Choices with Personalized Admissions Information at Scale: Evidence on Naviance. *Journal of Labor Economics*, *39*(1), 219–262. https://doi.org/10.1086/708839
Location	US
Population	▪ Grade 11-12
Program content/ best practices	▪ Scattergrams with student's GPA and SAT/ACT scores compared to those of prior applicants from same school to a specific college and their admission decisions ▪ Contains college and career search tools, info about colleges, portal to contact counsellors and request college materials
Methods of evaluation	▪ Regression discontinuity model (RD-DD) ▪ Sample: 10-15 high schools from Mid-Atlantic school district ▪ Data from Naviance linked to self-reported admissions data from graduates
Outcomes	▪ 20% increase in likelihood to apply to colleges with visible admissions info ▪ Largest increase of likelihood to apply to colleges with admissions info among students who are most similar to previous admits, Black, Hispanic, and low SES students (free or reduced-price lunch) ▪ Black and Hispanic students are 55% more likely to enroll in a college

39	**Ramp-Up to Readiness™ (Ramp-Up)**
References in Literature	Lindsay, J., Davis, E., Stephan, J., & Proger, A. (2017). *Impacts of Ramp-Up to Readiness™ after one year of implementation*. U.S. Department of Education, Institute of Education Sciences, National Center for Education Evaluation and Regional Assistance, Regional Educational Laboratory Midwest.
Location	US (Minnesota, Wisconsin)
Population	▪ Grade 10-12
Program content/ best practices	▪ School guidance intervention for middle school and high school students consisting of a guidance curriculum for students, a set of tools to help students set college goals and track progress, and professional development for implementation teams and teachers. ▪ Goal: increase student knowledge and skills along 5 dimensions of college readiness (academic, admissions, career, financial, personal/social). ▪ 5 core components: structural supports, professional development, curriculum delivery, curriculum content, post-secondary planning tools.
Methods of evaluation	▪ RCT ▪ Sample: 49 public high schools ▪ 24 randomly assigned to Ramp-Up program and 24 to continue with usual and implement program the following year

Outcomes	▪ No significant differences in self-reported commitment to college, likelihood to complete FAFSA, and submitting one college application among groups after one year of implementation ▪ Seemed to be implementation issue: only 12% had adequate scores (i.e., implementation fidelity scores between 60-89%) for all 5 key components of program

40	**H&R Block College Financial Aid Application Assistance***
References in Literature	Bettinger, E., Long, B. T., Oreopoulos, P., & Sanbonmatsu, L (2012) The Role of Application Assistance and Information In College Decisions: Results From The H&R Block FAFSA Experiment
Location	USA (Ohio and North Carolina)
Population	▪ 17-year olds from low-income families (accessed via their parents who received tax-filing assistance at H&R Block)
Program content/ best practices	▪ Simplified financial aid application process. ▪ Financial aid info and one-time assistance with FAFSA from H&R Block tax professionals. ▪ Intervention aimed to address low awareness and take-up rates of government financial aid due to complex application process.
Methods of evaluation	▪ RCT ▪ Sample: 26,162 individuals randomly assigned to treatment and control
Outcomes	▪ Individuals who received information and assistance in completing the FAFSA were substantially more likely to submit aid application, enroll in college, and receive financial aid. ▪ Compared to the control group, among low-income 17-year olds whose parents/families received treatment: ▪ Enrollment at any institution increased by 8 percentage points; ▪ Enrollment at 2-year institutions increased by 4.7 percentage points; and ▪ Enrollment at 4-year institutions 3.7 percentage points.

41	**Life After High School***
References in Literature	Ford, R., Kwakye, I., Hui, S., & Oreopoulos, P. (2016). *Long-term impacts of supporting all students leaving high school to apply to college or university*. Social Research and Demonstration Corporation (SRDC). Oreopoulos, P. and Ford, R. (2019). Keeping College Options Open: A Field Experiment to Help All High School Seniors Through the College Application Process *Journal of Policy Analysis and Management*, 38(2): 299-329.
Location	Canada (BC, Ontario)
Population	▪ All youth in Grade 12 classes in schools whose graduates exhibit low rates of post-secondary transition

Program content/ best practices	▪ Three workshops per student in Grade 12 dedicated to college/university application and financial aid. ▪ All students encouraged to apply, regardless of their post-secondary plans. ▪ Website with program choices and application links. ▪ Facilitated sessions with video tutorials. ▪ Online applications completed during class with fee waivers. ▪ Reminders to students and parents to complete the process if not finished in class.
Methods of evaluation	▪ RCT ▪ Sample: 50 B.C. and 86 Ontario high schools
Outcomes	▪ Post-secondary enrollment rates of high school graduates increase significantly by 5 percentage points for program schools compared to control schools. ▪ In BC, impact concentrated in universities. ▪ In Ontario. Impact concentrated in community colleges. ▪ College enrollment increased by 5.4 percentage points for males and 4.4 percentage points for females. ▪ The effects were consistent across urban and rural high schools, with a 5.6 percentage point increase in enrollment for urban schools and a 4.6 percentage point increase for rural schools.

One-On-one Counseling/Mentorship and Pathway Navigation

42	**Increasing school counsellors**
References in Literature	Hurwitz, M., & Howell, J. (2014). Estimating Causal Impacts of School Counselors With Regression Discontinuity Designs. *Journal of Counseling & Development*, *92*(3), 316–327. https://doi.org/10.1002/j.1556-6676.2014.00159.x
Location	US
Population	▪ High school
Program content/ best practices	▪ School counsellors help students navigate high school challenges and provide insight into options after graduating
Methods of evaluation	▪ Regression discontinuity model (RD-DD) ▪ Data from National Center for Education Statistics' Schools and Staffing Survey (SASS)
Outcomes	▪ One additional high school counselor may increase a high school's 4-year college enrollment by 10 percentage points

43	**Career Beginnings**
References in Literature	Career Beginnings (2017) Retrieved March 25, 2017, from http://hartfordconsortium.org/programs/career-beginnings Cave, G., & Quint, J. (1990). Career Beginnings Impact Evaluation: Findings from a Program for Disadvantaged High School Students. Deller, F. (2018). Early Intervention Programs for Low Income Students: What Can Evaluations Reveal? A Systematic Review (doctoral thesis). Retrieved from http://hdl.handle.net/1807/89837
Location	USA (California, Florida, Georgia, Indiana, New York, Ohio) in 24 sites
Population	▪ Low-income, academically average ▪ Disadvantaged youth ▪ Motivated youth ▪ Grades 9,10
Program content/ best practices	▪ Career Beginnings is a free program that aids students in completing high school and accessing post-secondary education. ▪ Services include one-on-one in-school support, mentoring, in-school workshops, and a 24-month follow-up program to smoothen the transition to college.
Methods of evaluation	▪ RCT ▪ Sample: 1574 student applicants for the program (approximately 200 per site) and randomly assigned them to program and control group
Outcomes	▪ 53.2 per cent of the program's students attended college and reported raised educational aspirations versus 48.5 per cent of the control groups. ▪ Women in program tend to go to college sooner than men in program and women/men in control.

44	**Mentoring/college coaching***
References in Literature	Carrell, Scott and Sacerdote, Bruce (2017). Why Do College-Going Interventions Work? American Economic Journal: Applied Economics 2017, 9(3): 124–151. https://doi.org/10.1257/app.20150530 Carrell, S. E., & Sacerdote, B. (2013) Late interventions matter too: the case of college coaching in New Hampshire
Location	USA (New Hampshire)
Population	▪ Non-White and low-income high school seniors "on the verge" (at the margin) of failing to apply to college (i.e., those who expressed interest in attending college but have made little or no progress on filing an application)

Program content/ best practices	▪ Dartmouth undergraduates are matched with students. ▪ They visit weekly until all college application steps are completed. ▪ They help initiate financial aid applications and complete all sections except parental income. ▪ The program includes paying application fees and offers a $100 cash bonus to some participants.
Methods of evaluation	▪ RCT ▪ Sample: 20 high schools randomly assigned to control, mentoring, or transcript only treatment
Outcomes	▪ Mentoring increased college enrollment, particularly among women, non-white, and low-income high school seniors. ▪ Overall, college enrollment was 6.0 percentage points higher for mentoring students, with even more significant effects for women (14.6 percentage points), non-white students (17.1 percentage points for any institution, 15.4 percentage points for 4-year institutions), and low-income students (20.2 percentage points for any institution, 17.3 percentage points for 4-year institutions). ▪ However, mentoring did not affect college persistence rates for women. ▪ The impact of mentoring was stronger for students anticipating needing help (12.6 percentage points) and negligible for those with parental assistance. ▪ Combining outreach or information activities with small financial incentives could improve enrollment rates for disadvantaged students. ▪ Lack of organizational skills or procrastination did not explain enrollment differences, and a $100 cash bonus had no measurable impact.

45	**Sponsor a Scholar (SAS) program***
References in Literature	Deller, F. (2018). Early Intervention Programs for Low Income Students: What Can Evaluations Reveal? A Systematic Review (doctoral thesis). Retrieved from http://hdl.handle.net/1807/89837 Johnson, A. W. (1999). Sponsor-a-Scholar: long-term impacts or a youth mentoring program on student performance. Sponsor a Scholar (2017). Retrieved March 26, 2017, from http://www.philadelphiafutures.org/sponsor-a-scholar-overview
Location	USA (Philadelphia)
Population	▪ Low income, first-generation-family student ▪ Grade 8 ▪ Live in Philadelphia ▪ Attending a school that is part of the School District of Philadelphia ▪ GPA of 3 or more
Program content/ best practices	▪ SAS program supports disadvantaged high school students in achieving success in high school and post-secondary education. ▪ Provides a stipend of $750 per semester for up to four years of post-secondary education. ▪ Students are matched with a mentor for monthly meetings from 9th grade to one year after high school. ▪ Offers academic services like tutoring, college visits, study-skills training, and test-taking skills. ▪ Scholarships of $6,000 are provided by sponsors after high school graduation.

Methods of evaluation	▪ Quasi-experimental ▪ Sample: program attendees and matched comparison group of high school students
Outcomes	▪ SAS students had modestly significant higher grades than non-SAS students at grade 10 (79% versus 77%) and at grade 11 (78% versus 76%), but effects disappeared by grade 12. ▪ College attendance was more significant among SAS students compared to non-SAS students. Year 1 college: (85% versus 64%); Year 2 college: (73% versus 56%).

46	**AdviseMI**
References in Literature	Jacob, B., Camo-Biogradlija, J., Chong, S., & Rajaram, H. (2022). *Re-imagining AdviseMI To Boost College Enrollment*. Youth Policy Lab, University of Michigan.
Location	US (Michigan)
Population	▪ High school, low college-going rates and low adult educational attainment rates
Program content/ best practices	▪ Recent college graduates are placed in high schools to serve as college advisers ▪ Along with high school counsellors and other staff, advisers help students navigate college exploration, retake college admission tests, apply to colleges that are a good match, complete the FAFSA, secure financial aid, and matriculate to college
Methods of evaluation	▪ Quasi-experimental ▪ Sample: AdviseMI schools and control group of schools with above-average free- and reduced-price lunch rates, below-average college-going rates, and min 50 seniors ▪ Administrative data from Michigan Department of Education and Michigan's Center for Education Performance (CEPI)
Outcomes	▪ No evidence that program increases college enrollment rate of seniors compared to control group, such that enrollment rates were did not differ significantly among groups. ▪ Limitation: no available data on college application and acceptance rates of control group, so cannot rule out that AdviseMI is increasing college application and acceptance rates but not enrollment.

47	**Success Boston Coaching**
References in Literature	What Works Clearinghouse, Institute of Education Sciences, & U.S. Department of Education. (2020). *Success Boston Coaching: Intervention Report*.
Location	US (Boston)
Population	▪ High school seniors and first-year college students, traditionally underrepresented students (low-income, first-generation students, students of colour)

Program content/ best practices	▪ One-on-one transition coaching through nonprofit coaching partners in person, phone, email, social media, or text ▪ Support for academics, financial aids, career planning, managing life responsibilities ▪ Nudges for financial aid deadlines ▪ Coaching partners may offer tutoring and scholarship/subsidies
Methods of evaluation	▪ Quasi-experimental ▪ Sample: graduates of Boston Public Schools who participated in program matched with similar students ▪ 42% African American, 16% Asian, 8% White, 34% unspecified ▪ 60% female, 40% male ▪ 77% low-income
Outcomes	▪ Students in the program had significantly higher college persistence (enrolled in 2nd year of higher education), with the intervention group having 9 percentage points higher than matched students. ▪ Inconclusive effect on cGPA: one study found a significant 7 percentage point increase among the intervention group compared to the matched group, but another study found non-significant results.

48	**Bottom Line (BL) College Advising***
References in Literature	What Works Clearinghouse, Institute of Education Sciences, & U.S. Department of Education. (2021). *Bottom Line: Intervention Report*.
Location	USA (New York, Massachusetts and Illinois)
Year	2015-2016
Population	▪ Low-income, first-generation junior or senior high school students with minimum GPA of 2.5 ▪ Majority are students of colour
Program content/ best practices	▪ Individualized counseling offering comprehensive assistance for college and financial aid support ▪ Monthly one-hour individual meetings throughout high school and college ▪ Clear direction on college applications, with emphasis on targeting institutions where success is probable and financial burden is minimized
Methods of evaluation	▪ RCT ▪ Comparison group received existing college access support services ▪ Sample: 70% female, 24% Asian, 32% Black, 44% Other or unknown
Outcomes	▪ Increased college enrollment: 81% vs 70% control ▪ Increased progression through college: 80% vs 71% control

49	**Texas GO Center Project**
References in Literature	Cunha, J. M., Miller, T., & Weisburst, E. (2018) Information and College Decisions: Evidence From the Texas GO Center Project.
Location	USA (Texas)
Population	▪ Low-income high school students in selected schools
Program content/ best practices	▪ A dedicated classroom for the college application process with a full-time counsellor and active outreach run by selected student peers. ▪ GO Centers are equipped with computers, internet access, and printed materials to aid students in the college application process. ▪ Each center is staffed by a full-time employee who assists students in researching colleges, signing up for exams, applying for financial aid, and submitting applications. ▪ Faculty advisors recruit G-Force members, a group of college-bound high school seniors, who receive training to foster a "college-going culture" within their schools, creating enthusiasm for the college application process and addressing students' concerns. G-Force members establish individual relationships with student-advisees.
Methods of evaluation	▪ Quasi-experimental ▪ Sample: GO Center schools matched to schools
Outcomes	▪ The program had a statistically significant impact on post-secondary education (PSE) enrollment rates: ▪ Overall PSE enrollment increased by 3.5 percentage points. ▪ Enrollment in 2-year institutions increased by 1.8 percentage points. ▪ Enrollment in 4-year institutions increased by 2.2 percentage points. ▪ However, the intervention did not significantly improve PSE graduation rates in the long term. This suggests that long-term impacts of outreach interventions may be limited without additional support for disadvantaged students once they are in college. ▪ Higher impact on enrollment for low-income students vs high-income. ▪ GO Centers largely Hispanic students, so results by race are noisy.

Multi-Faceted and Long-Term Interventions

50	**College Bound St. Louis program***
References in Literature	College Bound (2017). Retrieved March 26, 2017, from http://collegeboundstl.org/ https://www.collegeboundstl.org/wp-content/uploads/2019/12/College-Bound-Annual-Report-2018-2019.pdf Deller, F. (2018). Early Intervention Programs for Low Income Students: What Can Evaluations Reveal? A Systematic Review (doctoral thesis). Retrieved from http://hdl.handle.net/1807/89837 Le, V. N., Mariano, L. T., Faxon-Mills, S., & Education, R. A. N. D. (2013). Evaluation of the College Bound Program: Early Findings.
Location	USA (St. Louis, MO.)

Population	▪ Disadvantaged youth ▪ Grades 9 ▪ Youth from first generation families
Program content/ best practices	▪ College Bound is a long-term program for disadvantaged students, spanning 7-9 years, with a goal of high school completion and post-secondary education. ▪ Academic support includes one-on-one tutoring, math workshops/camps, and free college courses in math, sociology, and science. ▪ Mental health services offer therapy and social-emotional learning to enhance coping and resilience skills. ▪ The Graduate Positioning System (GPS) provides guidance on the college application process, college workshops, campus visits, and assistance with financial aid/scholarships. ▪ Career readiness involves connecting students to internships and jobs, facilitating networking, and offering coaching.
Methods of evaluation	▪ Quasi-experimental ▪ Sample: program attendees and matched comparison group
Outcomes	▪ CB youth took an average of 3.28 Advanced Placement or honors courses versus 2.78 for non-CB students ($p < 0.01$). ▪ Among post-secondary students, 90 per cent of CB students enrolled in a college, significantly higher than the non-CB participation rate (75 per cent).

51	**Facilitating Long-term Improvements in Graduation and Higher Education for Tomorrow (FLIGHT)**
References in Literature	What Works Clearinghouse, Institute of Education Sciences, U.S. Department of Education. (2018, December). Transition to College intervention report: Facilitating Long-Term Improvements in Graduation and Higher Education for Tomorrow (FLIGHT)/Take Stock in Children (TSIC)®. Retrieved from https://whatworks.ed.gov
Location	USA
Population	"Disadvantaged middle and high school students". Eligible students must: ▪ be in middle or high school grades, in public schools; ▪ be eligible for free or reduced-price lunch; ▪ have a minimum 2.0 GPA and no D or F grades in the previous year; ▪ perform at grade level or above in reading and math (as indicated by standardized testing); ▪ have no out-of-school suspensions and no more than 6 incidents of in-school suspensions for the prior year; and ▪ have no more than 10 unexcused absences in the previous year.

Program content/ best practices	▪ FLIGHT offers individualized assistance and group workshops during the school day to support disadvantaged middle and high school students in graduation, college application, and enrollment. ▪ Features include frequent meetings with adult mentors, case managers ("student advocates") working closely with mentors and school staff, continued mentoring during the college transition, and workshops for students and parents. ▪ Year-end student reports provide comprehensive snapshots of students' progress, including grades, test scores, attendance, office referrals, program participation, and graduation readiness.
Methods of evaluation	▪ RCT ▪ Sample: randomly assigned 150 students from Florida school districts to the FLIGHT intervention group and 165 students to the comparison group ▪ 47% Hispanic, 53% Other
Outcomes	▪ No discernible effects on high school attendance or high school academic achievement outcomes (no affirmative evidence of effects). ▪ FLIGHT has a positive effect on college access and enrollment. 97% of students in the intervention group enrolled in college in the first semester following their graduation from high school, compared to 83% of students in the comparison group (n=180 students).

52	**GEAR UP**
References in Literature	From Dreams to Plans to College. Effective practices in five diverse programs: Vancouver, West Valley (Spokane), Toppenish, Cape Flattery, and Tekoa. Washington State GEAR UP Evaluation Report Series, Volume 1 (June 2011). Retrieved from: https://gearup.wa.gov/sites/default/files/resources/From_Dreams_to_Plans_to_College.pdf Impact. The GEAR UP program is working for students in Washington State. (2011). Retrieved from: https://gearup.wa.gov/about/impact Linkow, T., Miller, H., Parsad, A., Price, C., & Martinez, A. (2021). *Study of College Transition Messaging in GEAR UP: Impacts on Enrolling and Staying in College*. National Center for Education Evaluation at IES. Swail W., Quinn K., Landis K., Fung M. (2012). A blueprint for success: case studies of successful pre-college outreach programs. Washington, DC. Educational Policy Institute. Retrieved from: https://educationalpolicy.org/publications/
Location	US (Arizona, California. Rural, Urban and Suburban areas) Messaging study: US
Population	▪ Any student in Grade 7-9. ▪ GEAR UP + Messaging: high school seniors

Program content/ best practices	▪ Program duration: Over 1 year. ▪ Instructional approaches include workshops, assessment, testing, tutoring, mentoring, and involving families as partners in preparing students for college. ▪ Academic services encompass grade and attendance monitoring, college-level courses (e.g., AP), academic enrichment, study skills training, and test-taking skills (e.g., SAT/ACT preparation). ▪ Social services provide personal counseling, social skills development, college awareness (admissions, financial aid), campus visits, college fairs, and career counseling. ▪ Messaging: reminders about key milestones, positive mindset prompts, and success strategies for the transition period during which students are beginning and adjusting to college.
Methods of evaluation	▪ Quasi-experimental ▪ Sample: program attendees and matched comparison group ▪ GEAR-Up + Messaging: RCT with 81 high schools randomly assigned to regular GEAR UP or GEAR Up plus messaging
Outcomes	▪ GEAR UP participants had more college attendance (2 or 4 year) 69% versus 41%. ▪ More GEAR UP students went to college (4 year) 26% versus 12%. ▪ No differences of GEAR Up vs GEAR Up and messaging.

53	**Knox Achieves***
References in Literature	Carruthers, C. K. & Fox, W. F. (2016). Aid for all: College coaching, financial aid, and post-secondary persistence in Tennessee
Location	USA (Tennessee)
Population	▪ Lowest-income high school seniors (eligible for Free and Reduced Lunch)
Program content/ best practices	▪ Combining a college coaching (outreach) and a financial aid program, offered to students for making a seamless, immediate transition between high school and one of the state's public community colleges. ▪ Each student was paired with a volunteer mentor, who helped students apply for federal aid during their senior year of high school and guided them into community college after graduation. To keep receiving aid in college, students had to maintain enrollment, stay in touch with mentors, and complete a semester-based community service project. Knox Achieves supported students for up to five continuous community college semesters.
Methods of evaluation	▪ Quasi-experimental ▪ Sample: program attendees and school-wide outcomes
General outcomes	▪ The program boosted overall higher education enrollment by 25.7 percentage points, with a significant increase of 25.2 percentage points at 2-year institutions and 3 percentage points at 4-year institutions. ▪ Effects stronger among lower-income students for on-time high school graduation, college enrollment overall, and credit accumulation.

54	**Making Education Work**
References in Literature	ProActive Information Services (2013) Making Education Work Outcomes Report, Winnipeg: ProActive Information Services
Location	Canada (Northern Manitoba)
Population	▪ Youth in high schools serving majority Indigenous students
Program content/ best practices	▪ MEW is an in-school elective program with components such as curriculum development, career guidance, tutoring/mentoring, cultural and personal development, community service, and parental involvement. ▪ The curriculum was developed collaboratively with input from teachers, coordinators, community leaders, Elders, and First Nations organizations. ▪ Students were encouraged to engage in extracurricular activities, field trips, and career-oriented experiences to enhance their personal development and skills.
Methods of evaluation	▪ Quasi-experimental ▪ Sample: program attendees and matched comparison group
Outcomes	▪ The authors concluded that MEW students more likely to be involved in PSE (38 MEW students enrolled in PSE vs 16 students in comparison group). However, unclear what percentage this constituted the sample, or whether statistical analyses were done.

55	**Pathways to Education (Pathways)**
References in Literature	Evaluation of Pathways to Education, final report (2019, February). Employment and Social Development Canada (ESDC). Retrieved from: https://www.canada.ca/en/employment-social-development/corporate/reports/evaluations/pathways-education-report.html Oreopoulos, P., Brown, R. S., & Lavecchia, A. M. (2017). Pathways to education: An integrated approach to helping at-risk high school students. Journal of Political Economy, 125(4), 947-984. Pathways to Education. (2017.). Retrieved March 26, 2017, from https://www.pathwaystoeducation.ca/
Location	Canada (selected cities): 20 sites across Canada
Population	▪ Disadvantaged youth in Grades 9 through 12 ▪ Resident in selected low-income communities across Canada

Program content/ best practices	▪ Pathways is a comprehensive support program for disadvantaged students with four key pillars: advocacy, financial support, tutoring, and social support. ▪ Advocacy is provided by a Student/Parent Support Worker who offers guidance and connections. ▪ Financial support includes short-term assistance (e.g., lunch vouchers) and long-term bursaries for post-secondary education. ▪ Tutoring covers five core subjects and is available in small groups or one-on-one, with mandatory participation for struggling students. ▪ Social support involves group mentoring, social skills development, problem-solving, career planning, and extracurricular activities with volunteer mentors.
Methods of evaluation	▪ Quasi-experimental ▪ Sample: program eligible students compared to students not in the program and adolescents from other Toronto public housing sites
Outcomes	▪ Significant positive effects on enrollment and persistence in post-secondary education institutions, earnings and employment. ▪ Program eligibility increased adult annual earnings by 19 per cent, employment by 14 per cent and reduced social assistance (welfare) receipt by more than a third. ▪ 58 per cent of Pathways students enrolled in post-secondary education versus 47 per cent among 19-year-olds in the lowest income quintile in 2015.

56	**SEO Scholars Program**
References in Literature	Coleman, S., Palmiter, A., Turner, T., Vile, J., Warburton, S., & Reisner, E. (2012). Preparing for college success: Evaluation of the educational impact of the SEO Scholars Program. Deller, F. (2018). Early Intervention Programs for Low Income Students: What Can Evaluations Reveal? A Systematic Review (doctoral thesis). Retrieved from http://hdl.handle.net/1807/89837 SEO Scholars (2017). Retrieved March 26, 2017 from http://www.seoscholars.org/
Location	USA (New York, San Francisco)
Population	▪ Low income ▪ Grade 9 ▪ Minimum grade point average of 2.0
Program content/ best practices	▪ SEO Scholars is an 8-year, out-of-school program for students from disadvantaged high schools. ▪ It offers classroom instruction, tutoring, mentoring, assessment, and testing. ▪ Academic services include reading/writing and mathematics/science instruction, critical thinking skill development, study-skills training, and test-taking skills. ▪ Social services focus on social skills development, confidence building, college awareness (e.g., admissions, financial aid), and career counseling and information.
Methods of evaluation	▪ Quasi-experimental ▪ Sample: program attendees and matched comparison group

Outcomes	▪ High school outcomes: SEO students outperformed non-SEO students on GPA, school attendance, type of diploma earned and SAT scores. ▪ PSE: program participants were significantly more inclined to enroll in out-of-state colleges, four-year institutions, more selective colleges, and private colleges. ▪ 100% of SEO scholars complete a FAFSA (student aid application). ▪ 90% of SEO scholars graduate from a 4 years college program.

57	**The Quantum Opportunity Program (QOP)**
References in Literature	Rodríguez-Plana, Núria (2012). Longer-Term Impacts of Mentoring, Educational Services, and Learning Incentives: Evidence from a Randomized Trial in the United States. American Economic Journal: Applied Economics 2012, 4(4): 121–139. http://dx.doi.org/10.1257/app.4.4.121
Location	USA (initially Philadelphia, Oklahoma City, San Antonio and Saginaw, Michigan)
Population	▪ "Low-performing" (i.e., grade 8 GPA below the 67th percentile) students entering ninth grade in the participating QOP high schools
Program content/ best practices	▪ This after-school program provided 750 hours of intervention activities over four years of high school. ▪ Activities included 250 hours each of developmental activities (social and employment-readiness skills), community services (community membership development), and educational services (academic improvement). ▪ Financial incentives were offered, including hourly rewards and grant aid averaging $1,000 per successful participant. ▪ The program also included case managers with expertise in social services to establish lasting connections with each youth.
Methods of evaluation	▪ RCT ▪ Sample: 9 schools, students randomly selected into treatment or comparison group ▪ Follow-up evaluation at 19, 21, 24 years
Outcomes	▪ QOP increased high school graduation rates in the short term, particularly among females, but this advantage diminished in the medium to long term. ▪ QOP led to higher post-secondary education attendance rates in the short, medium, and long term, with stronger effects among females. ▪ For women, QOP improved long-term employment outcomes, with a 10 percentage point increase in employment by their mid-twenties. ▪ In the short and medium term, QOP had no effect on risky behaviours, but in the long run, especially among males, there was increased engagement in risky behaviours. Authors hypothesized that this might be due to differences in self-discipline, gratification delay, or discount rates between young men and women. Additionally, anecdotal evidence suggests that mentors often acted as advocates for QOP participants, negotiating on their behalf with various institutions when issues arose. It's suggested that male participants might respond differently to sanctions or that mentors may have been overly protective, potentially affecting risky behaviours.

58-66	**TRIO Programs** Initiatives include: ▪ Educational Opportunity Center ▪ Educational Talent Search Program ▪ Federal TRIO Veterans Upward Bound ▪ Student Support Services (SSS) ▪ Talent Search ▪ TRiO McNair Scholars ▪ Upward Bound ▪ Upward Bound Math Science
References in Literature	▪ Martinez, A., Linkow, T., Miller, H., & Parsad, A. (2018). Study of Enhanced College Advising in Upward Bound: Impacts on Steps Toward College (NCEE 2019-4002). Washington, DC: National Center for Education Evaluation, Institute of Education Sciences, U.S. Department of Education. ▪ Swail, W., Quinn, K., Landis, K., & Fung, M. (2012). A blueprint for success: case studies of successful pre-college outreach programs. Washington, DC. Educational Policy Institute. Retrieved from: https://educationalpolicy.org/publications/ ▪ U.S. Department of Education, Office of Planning, Evaluation and Policy Development, Policy and Program Studies Service (2006). A Study of the Effect of the Talent Search Program on Secondary and Postsecondary Outcomes in Florida, Indiana and Texas: Final Report from Phase II of the National Evaluation, Washington, D.C. ▪ U.S. Department of Education, Office of Planning, Evaluation and Policy Development, Policy and Program Studies Service, The Impacts of Regular Upward Bound on Postsecondary Outcomes Seven to Nine Years After Scheduled High School Graduation, Washington, D.C., 2009.
Location	▪ USA. (nationwide: rural & urban areas)
Population	▪ Grade 6 to 12 ▪ Low income students ▪ Minorities from first generation families ▪ Honorably discharged military veterans (for Federal TRIO Veterans Upward Bound)
Program content/ best practices	▪ Talent Search & Upward Bound programs aim to increase high school attendance and post-secondary education likelihood. ▪ Program duration is over one year. ▪ Instructional approaches include assessment, testing, counseling, tutoring workshops, and online tutoring. ▪ Academic services cover mathematics, science, reading, writing instruction, academic enrichment courses, and remedial instruction. ▪ Social services involve peer mentoring, social skills development, college awareness, campus visits, college fairs, career counseling, and information. ▪ About half of Talent Search participants received 10 or fewer hours of services per year.
Methods of evaluation	▪ Quasi-experimental ▪ Sample: program attendees and matched comparison group

Outcomes	▪ Talent Search participants were more likely to enroll in a public college or university in their state, with initial enrollment rates higher by 14, 6, and 18 percentage points in Florida, Indiana, and Texas, respectively. This effect may be due to the program simplifying application tasks and helping students choose colleges. ▪ Upward Bound had no significant impact on post-secondary outcomes, including enrollment, financial aid application or receipt, or the completion of bachelor's or associates degrees. ▪ High attrition rates and a lengthy intervention period with many out-of-school activities may explain this lack of impact.

APPENDIX B: STUDYING ABROAD AND PSE OUTCOMES ANNOTATED BIBLIOGRAPHY

Studying Abroad and PSE Outcomes

	Studying abroad among racial-ethnic minority undergraduates
References in Literature	Bell, A., Bhatt, R., Rubin, D. L., & Shiflet, C. (2023). Effects of education abroad on indices of student success among racial–ethnic minority college students. *Journal of Diversity in Higher Education*, *16*(2), 226–235. https://doi.org/10.1037/dhe0000327
Location	US
Population	Racial–ethnic minority group undergraduate students
Methodology	▪ Data sources: Consortium for Analysis of Student Success through International Education (CASSIE). ▪ Sample: 221,981 students (with 30,649 reported by their respective institutions to have studied abroad at least once) from 36 institutions across 19 states in the U.S. ▪ Outcome variable(s): likelihood of graduating in 6 years, likelihood of graduating in 4 years, number of semesters to degree completion, number of credit hours to degree completion, GPA at graduation. ▪ Key explanatory variable(s): studied abroad at least once from freshman year to 6 years later (reported by students' institutions). Program characteristics and length not reported in the present study. ▪ Analysis: exact and nearest-neighbour matching comparing minority students who studied abroad to those who didn't, matching them based on factors like gender, academic performance, financial aid, and major.
Results & Conclusions	▪ In general, studying abroad had positive effects on graduation rates, time to degree, credit hours earned, and GPA across various racial and ethnic groups, although the magnitude of these effects varied. ▪ White students: Those who studied abroad were 3.7 percentage points more likely to graduate in 6 years and 8.6 percentage points more likely in 4 years compared to those who did not study abroad. They also graduated slightly earlier, with more credit hours, and with a higher GPA. ▪ Black students: Studying abroad increased the likelihood of graduating in both 6 years (9.6 percentage points) and 4 years (9.2 percentage points). They graduated slightly faster and with more credit hours and a higher GPA. ▪ Hispanic students: Those who studied abroad were more likely to graduate in 6 years (7.4 percentage points) and 4 years (13.4 percentage points). They graduated slightly faster, with more credit hours and a higher GPA. ▪ Asian students: Studying abroad increased the likelihood of graduating in 6 years (3.2 percentage points) and 4 years (6 percentage points). They also graduated slightly earlier but with more credit hours and a higher GPA.

	▪ Multiracial students: Studying abroad increased the likelihood of graduating in 6 years (8.8 percentage points) but didn't significantly impact 4-year graduation. They graduated slightly faster and with a higher GPA. ▪ Native Hawaiian/Pacific Islander Students: The low sample size made statistical significance challenging, but studying abroad was associated with a higher credit hour average upon graduation. ▪ American Indian/Alaskan Native Students: Due to a small sample size, most findings were not statistically significant. However, studying abroad was associated with a higher GPA upon graduation.
Limitations	▪ Cannot establish a causal link between studying abroad and student success due to unobserved variables. ▪ Data used only include administrative records, lacking psychological factors like risk-taking, global-mindedness, and perseverance that influence study abroad and success. ▪ Reported effects are conservative; a less constrained approach might show larger effects for studying abroad. ▪ Sample is diverse but lacks data from many private institutions, limiting generalization. ▪ Focuses on first-time bachelor's degree-seeking students, so its findings do not apply to other student groups like associate-seeking, transfer, or nontraditional students.
Policy implications	▪ To increase study abroad participation of racial-ethnic minority students: ▪ Implement financial aid programs that specifically target minority students to make studying abroad more accessible. ▪ Encourage open discussions about experiences of racism at study abroad destinations and use them as opportunities for constructive learning. ▪ Disseminate information highlighting the economic and life-enrichment benefits of studying abroad to help students and their families understand the value of the investment. ▪ Create more opportunities for minority students to study in destinations related to their heritage cultures. ▪ Improve academic advising services to ensure that studying abroad doesn't lead to extended time-to-degree, addressing concerns that may discourage students. ▪ Encourage conversations with family members about how studying abroad can enhance academic success, while dispelling misconceptions.

	College completion and studying abroad
References in Literature	Bhatt, R., Bell, A., Rubin, D. L., Shiflet, C., & Hodges, L. (2022). Education Abroad and College Completion. *Research in Higher Education*, *63*(6), 987–1014. https://doi.org/10.1007/s11162-022-09673-z
Location	US
Population	Undergraduate students

Methodology	▪ Data sources: Consortium for Analysis of Student Success through International Education. ▪ Sample: 221,981 students (with 30,649 reported by their respective institutions to have studied abroad at least once) from 36 institutions across 19 states in the U.S. ▪ Outcome variable(s): likelihood of graduating in 6 years, likelihood of graduating in 4 years, number of semesters to degree completion, number of credit hours to degree completion, GPA at graduation. ▪ Key explanatory variable(s): studied abroad at least once from freshman year to 6 years later (reported by students' institutions), number of study abroad programs, duration of program (5.4 per cent studied abroad for less than 2 weeks, 43.9 per cent for 2–8 weeks, 8.2 per cent for 8 weeks to one semester, 38.7 per cent participated in semester-long programs, and 3.8 per cent participated in programs longer than a single semester). ▪ Analysis: OLS regression; exact and nearest-neighbour matching comparing students who studied abroad to those who didn't, matching them based on factors like gender, academic performance, financial aid, and major.
Results & Conclusions	▪ Graduation: Students who studied abroad were 8 per cent more likely to graduate within 6 years compared to those who did not. The difference was even larger for 4-year graduation, with a 14.8 per cent higher likelihood. Among students who graduated within 6 years, those who studied abroad completed their degrees approximately 4.5 weeks faster on average than those who did not. ▪ GPA and credits: Students who studied abroad had, on average, a 0.12 higher GPA upon graduation and earned about 1.7 more credit hours in their college careers. ▪ Number of programs: Students who studied abroad once had similar outcomes to those who studied abroad multiple times, suggesting that the benefits of study abroad apply to all participants. Those with multiple study abroad experiences had slightly larger effects, though of small magnitude. ▪ Program duration: Shorter study abroad programs (less than two weeks to 2-4 weeks) had a positive impact on graduation rates, ranging from 3.1 per cent to 5.9 per cent higher likelihood of graduating within 6 years. Longer programs (more than one semester) had a diminished effect on graduation rates, and they slightly delayed degree completion. Program duration did not significantly affect final GPA, and the variation in credit hours earned was inconsequential.
Limitations	▪ Cannot establish that studying abroad directly causes student success, as other unobserved factors may be at play. ▪ Data lacks information on key psychological factors influencing study abroad and success. ▪ Does not include data from small liberal arts institutions and only has data from three private institutions, limiting generalizability. ▪ Focuses on traditional first-year bachelor's degree-seeking students, leaving out other student groups. ▪ Does not explore which types of study abroad programs are most effective. ▪ Study doesn't investigate variations in the relationship between study abroad and success among different student subgroups.
Policy implications	▪ The study's findings support promoting study abroad by highlighting its positive impact on degree completion without significantly extending graduation time. ▪ This evidence is crucial post-pandemic and can help reassure students and parents about the value of international education. It can be a persuasive argument when weighing the financial costs and potential health risks. ▪ Justifies resource allocation and underscores the need for equitable access, positioning study abroad as a key strategy for improving student outcomes and institutional planning.

	Studying abroad among underrepresented students
References in Literature	Brundage, T. L., Christensen, G., Althauser, A. K., & Sharma, S. (2023). Assessing Impact of Study Abroad on Graduation Rates of Underrepresented Students. *Journal of College Student Development*, *64*(2), 239–245. https://doi.org/10.1353/csd.2023.0021
Location	US (West Coast)
Population	Undergraduate students
Methodology	▪ Data sources: student database at a large public research institution on the US West Coast. ▪ Sample: 15,620 unique records, excluding international students. 2,282 students who identified as Black, Latinx, Native American, and/or Pacific Islander (BLNP) defined as historically underserved. ▪ Outcome variable(s): graduation status (binary) at end of each student's 4th, 5th, and 6th year of enrollment. ▪ Key explanatory variable(s): whether a student has participated in an university international education program (binary). Program characteristics were not considered. ▪ Analysis: nearest-neighbour (NN) matching comparison of students who studied abroad to those who didn't, based on race, sex, first-generation status, high school GPA, SAT scores, area of study (STEM vs. non-STEM), and first-year college GPA.
Results & Conclusions	▪ Graduation: Students who studied abroad had on average 15.65 percentage points higher 4-6-year graduation rates compared to their peers who did not study abroad. ▪ Focusing on BLNP population: those who studied abroad had significantly higher graduation rates. 8.41 percentage points higher 4-year graduation rates for study abroad participants, and 11.81 percentage points higher 5- and 6-year graduation rates for those who studied abroad compared to those who did not.
Limitations	▪ Relies on data from a single institution, which might not be generalizable. ▪ Some suggested variables could not be included due to data constraints. ▪ Future research should expand to multiple institutions and explore the impact of studying abroad on intercultural competencies, student engagement, and their connection to academic success.
Policy implications	▪ Institutions should prioritize expanding access to international education programs and integrate them into the broader higher education curriculum. ▪ Short-term study abroad programs can be particularly effective, as they are more accessible and replicate community-building efforts. These programs can support specific student populations. ▪ Provide training for academic advisers to help students incorporate study abroad opportunities into their academic plans effectively. ▪ Foster partnerships between offices of minority affairs and study abroad to ensure that students receive the necessary support to participate in study abroad programs. ▪ Develop financial aid and scholarship programs specifically for study abroad to make it more financially feasible for students. ▪ Share information about the positive impact of studying abroad on graduation rates within the higher education community to encourage its wider adoption. ▪ Continuous assessment of study abroad benefits, which is especially important for historically marginalized and underserved student populations, particularly in the post-COVID-19 educational landscape.

	Studying abroad, skills, and college outcomes
References in Literature	Luo, J. & Jamieson-Drake, D. (2015). Predictors of Study Abroad Intent, Participation, and College Outcomes. *Research in Higher Education*, *56*(1), 29–56. https://doi.org/10.1007/s11162-014-9338-7
Location	US
Population	Undergraduate students
Methodology	▪ Data sources: Cooperative Institutional Research Program (CIRP) Freshman Survey, Senior Survey of graduating students. ▪ Sample: 3584 respondents to the CIRP Freshman Survey from three entering cohorts (2005, 2006, 2007). ▪ Outcome variable(s): 25 areas of skill development reduced by principal components factor analysis with varimax rotation. Five factors identified, accounting for roughly 58 per cent of the total variance: Intellectual Development (α = .88), Leadership Skills and Personal Development (α = .78), Understanding Moral and Ethical Issues (α = .81), Science Literacy (α = .76), and Communication Skills (α = .45). ▪ Key explanatory variable(s): studied abroad participation, student demographic characteristics. ▪ Analysis: regression analyses.
Results & Conclusions	▪ Participating in study abroad programs had a significantly positive impact on students' abilities to understand moral and ethical issues, communication skills, academic performance, and overall satisfaction. ▪ College activities (research with faculty, involvement in religious or spiritual groups, and participation in student government) also positively contributed to college outcomes while studying abroad. ▪ Parental income was negatively related to understanding moral and ethical issues, but parental education was positively correlated with communication skills.
Limitations	▪ Utilized a large sample of three entering cohorts, but the sample size for examining college outcomes was relatively small. ▪ Findings are specific to an elite private university and may not apply universally to all institutions. ▪ The study did not explore the impact of specific study abroad program characteristics. ▪ The data collected focused on traditional matriculating freshmen and may not represent non-traditional student experiences.
Policy implications	▪ Encourage students to maintain or develop their intent to study abroad upon entering college. Highlighting the potential benefits of study abroad and its links to educational and professional goals can help students make informed decisions. ▪ Design study abroad programs that accommodate students involved in campus organizations and clubs, ensuring they can participate without major disruptions to their academic or extracurricular schedules. ▪ Facilitate interactions between students who have studied abroad and international students on campus, fostering intercultural awareness. Curricular programs focusing on global issues from interdisciplinary perspectives can also promote international engagement.

	▪ Recognizing the diverse needs of ethnic-minority students is crucial. Study abroad professionals and student affairs professionals should provide tailored support, addressing factors like financial resources, support networks, and cultural constraints. ▪ Emphasize skill development opportunities offered by study abroad, such as understanding moral and ethical issues and communication skills. Encouraging students to proactively plan and seek financial and psychological support can maximize the benefits.

	Studying abroad and academic achievement
References in Literature	Nwosu, C. (2022). Does study abroad affect student academic achievement? *British Educational Research Journal*, *48*(4), 821–840. https://doi.org/10.1002/berj.3796
Location	UK (London)
Population	Undergraduate students
Methodology	▪ Data sources: administrative data from university ▪ Sample: 4162 students who attended a university in London between academic years 2014/2015 and 2017/2018 ▪ Outcome variable(s): final grades ▪ Key explanatory variable(s): studied abroad participation; study abroad students (group A) compared to the other three groups (all students who did not study abroad (group B), students who applied but did not sojourn (group C) and students who did not apply to study abroad (group D)) ▪ Analysis: fixed effects regression model
Results & Conclusions	▪ Students who studied abroad (group A) had significantly lower grades (0.79 points) by their third year of study compared to their grades in previous years and compared to their peers who did not study abroad (group B). ▪ When comparing SA students to those who applied but didn't study abroad (group C), the difference becomes much smaller and non-significant. This underscores the importance of considering self-selection into study abroad programs to avoid potential bias. ▪ Students who did not apply to study abroad (group D) had average predicted grades 0.79 points higher than study abroad students.
Limitations	▪ SES not included in analysis, which could account for unobserved differences.
Policy implications	▪ Results challenge the idea that study abroad programs directly improve academic performance. ▪ One possible explanation is the process of transferring grades from overseas institutions, where students may not work as hard for grades that do not count towards their final degree. ▪ However, this study does not undermine the overall value of study abroad programs, which offer cross-cultural experiences and personal growth opportunities beyond just grades.

	Studying abroad and academic achievement
References in Literature	Whatley, M. (2023). A Quasi-Experimental Approach to Understanding Study Abroad's Impact on Academic Success Among Community College Students. *The Journal of Higher Education*, *94*(4), 498–525. https://doi.org/10.1080/00221546.2022.2134684
Location	US (Southeast)
Population	Community college students
Methodology	▪ Data sources: administrative data from college ▪ Sample: 4,929 students from small, rural community college in the US Southeast ▪ Outcome variable(s): GPA, per cent credits passed, degree completion ▪ Key explanatory variable(s): studying abroad ▪ Analysis: propensity score matching (PSM) and difference-in-differences (DID) analysis
Results & Conclusions	▪ Propensity score matching: ▪ Study abroad is associated with higher final cumulative GPA, with an increase ranging from 0.176 to 0.234 points. ▪ Students who study abroad tend to pass a higher percentage of the credits they attempt, with an improvement of between 2.937 and 4.298 percentage points compared to their counterparts who did not study abroad. ▪ However, when it comes to degree completion, the relationship between study abroad participation and completion is significant only when using a strict one-to-one matching approach. In this case, study abroad participants have a likelihood of completion that is two times higher than non-participants. ▪ Difference-in-differences: ▪ No significant relationship between study abroad and a student's term GPA or the percentage of attempted credits passed each term. ▪ Academic achievement tended to decline over time for both groups, possibly due to the increasing difficulty of classes or reduced effort as students progressed in their studies.
Limitations	▪ Results are specific to one community college and may not be fully generalizable to students in different institutional contexts. ▪ While propensity score models address selection bias related to observed student characteristics, they cannot account for differences in unobserved student characteristics. ▪ Dataset lacks information on students who transfer to other institutions, potentially leading to underreported credential completion rates for study abroad participants, which could affect the observed relationship between study abroad participation and credential completion.
Policy implications	▪ Relationship between study abroad participation and academic success, particularly credential completion, is not statistically significant in this study. While study abroad does not appear to significantly enhance academic outcomes, it also does not negatively impact them. ▪ Importance of accounting for selection bias when examining the effects of study abroad on student outcomes. ▪ Future research in this area should consider expanding to multiple institutions or sectors of higher education, exploring outcomes for specific demographic groups, and considering heterogeneity of the study abroad experience itself. ▪ While study abroad may not have substantial academic benefits, it remains valuable for developing intercultural effectiveness and global perspective-taking, which are crucial for students' success after graduation and their ability to interact positively with others in a global context.

	Short-term vs semester-long programs
References in Literature	Coker, J. S., Heiser, E., & Taylor, L. (2018). Student Outcomes Associated with Short-term and Semester Study Abroad Programs. *Frontiers: The Interdisciplinary Journal of Study Abroad*, *30*(2), Article 2. https://doi.org/10.36366/frontiers.v30i2.414
Location	US (Elon University, North Carolina)
Population	Undergraduate students
Methodology	▪ Data sources: Elon Experiences Transcripts (EETs) and the National Survey of Student Engagement (NSSE) ▪ Sample: 1,858 students from 5 graduating classes ▪ Outcome variable(s): student participation in educationally purposeful activities in final (e.g., asked questions in class), ability to view things from a different perspective, student relationships with others, perceived learning, personal development, overall college experience ▪ Key explanatory variable(s): students separated into 5 groups (no study abroad, semester, short-term (three-week), two short-terms, and semester plus short-term) ▪ Analysis: Kruskal-Wallis test (i.e., one-way ANOVA on ranks)
Results & Conclusions	▪ Both short-term and semester-long programs showed a positive correlation with students' evaluations of their overall educational experience and their inclination to return to the same institution. ▪ Only students in semester programs showed better results in class participation, diverse perspectives, idea synthesis, less reliance on memorization, empathy, broader general learning, critical thinking, and teamwork. ▪ No evidence that two short-term experiences led to better outcomes than one short-term experience. ▪ No evidence that additional short-term experience is better than semester-long experience alone.
Limitations	▪ Did not explore certain factors that could affect the relationship between these associations, such as the choice of the destination country and the academic quality of the host university.
Policy implications	▪ The association between partaking in a study abroad program and self-reporting positive education experiences may be a mechanism that supports positive PSE outcomes (e.g., graduation). That is, students who engage in international experiences enjoy their time in school more, which supports their later success.

	Short-term study abroad programs, social network benefits, and class success
References in Literature	DeJordy, R., Milevoj, E., Schmidtke, J. M., & Bommer, W. H. (2020). The success of short-term study abroad programs: A social networks perspective. *Journal of International Education in Business*, *13*(1), 73–86. https://doi.org/10.1108/JIEB-08-2019-0039
Location	Spain (Barcelona)
Population	Undergraduate students (in an introductory management class)

Methodology	▪ Sample: 68 students in an introductory management class who spent two weeks in Barcelona, Spain as part of a summer course ▪ Outcome variable(s): performance on class assignments, total class points, perceived improvement, overall student satisfaction with the study abroad experience, and intercultural sensitivity ▪ Key explanatory variable(s): student demographics (sex, age and years of work experience), student social network one week before departure ▪ Analysis: social network analysis
Results & Conclusions	▪ Demographic and relational data did not significantly affect students' overall grades or student enjoyment. ▪ Students with more work experience believed they improved more, and those with a larger advice network (both receiving and seeking advice) perceived greater improvement. ▪ Communication network centrality influenced intercultural sensitivity: students who communicated more with a diverse group of people were more comfortable interacting with individuals from other cultures, while those who primarily communicated within their class were less willing to engage with other cultures.
Limitations	▪ The sample size was relatively small, with only 64 out of 84 students participating in the short-term study program responding to all surveys. This limited statistical power may have affected the ability to detect certain relationships. ▪ Since survey participation was voluntary, there was no outcome data for approximately 17 per cent of the students. Non-responders to the follow-up survey were different in terms of work experience and slightly more likely to be male, which could potentially affect the representativeness of the sample. ▪ The study did not assess students' foreign language ability, which could be important as the class took place in Spain. Language proficiency might influence the development of certain networks and student outcomes. ▪ There could be other individual characteristics, such as personality factors, that impact students' enjoyment of the experience and their willingness to engage in new experiences. These factors were not measured in the study. ▪ Individual characteristics might interact with relational data to influence student outcomes. However, the study's limited statistical power prevented a thorough examination of such relationships.
Policy implications	▪ Student demographics had little influence on outcomes, suggesting that all students can benefit from short-term study abroad. However, the study emphasized the importance of student networks in achieving positive outcomes. ▪ Programs should focus on fostering diverse types of networks among students. Instead of letting students choose their groups, faculty selection or random assignment can encourage network development. ▪ Multiple student projects and various activities can promote network growth: assignments related to various aspects of the host country's culture (e.g., food, history, art, values, norms) can create domain “experts” and in turn facilitate the development of advice networks, where students seek guidance from these experts; events that encourage class-wide interaction or rotating team memberships can expand and diversify students’ social networks.

	International virtual exchange and student success
References in Literature	Lee, J., Leibowitz, J., Rezek, J., Millea, M., & Saffo, G. (2022). Impact of International Virtual Exchange on Student Success. *Journal of International Students*, *12*(S3), 77–95. https://doi.org/10.32674/jis.v12iS3.4593
Location	US (North Carolina)
Population	Undergraduate students
Methodology	▪ Data: administrative data from university ▪ Sample: 365,424 observations of 47,127 students enrolled between 2008 and 2020 ▪ Outcome variable(s): GPA, first-year retention, and graduation rate (within 5 years) ▪ Key explanatory variable(s): participation in international virtual exchange, study abroad (both summer and semester-long), or foreign language course ▪ Analysis: propensity score matching
Results & Conclusions	▪ Descriptive: study abroad students have a higher average semester GPA (3.307), and international virtual exchange students have a slightly higher GPA (3.002), compared to non-participants (2.968). ▪ GPA: participating in study abroad boosts GPA by 0.067 points, while virtual exchange increases it by 0.03 points, both significantly. However, the foreign language program only led to a 0.003 point increase, which was not statistically significant. Female virtual exchange participants saw a GPA increase of about 0.06, but male participants experience a GPA decline, though not statistically significant. ▪ Graduation: virtual exchange, study abroad, and foreign language programs are linked to significant increases in graduation rates of 13, 27, and 13 percentage points, respectively. ▪ Retention: virtual exchange, study abroad, and foreign language boost first-year freshman retention rates by 3.1, 11, and 2.1 percentage points, respectively. Only effects for study abroad were significant. ▪ First-generation college students, female students, Black students, Hispanic students, and financially disadvantaged students tend to see the largest improvements in academic outcomes after participating in virtual exchange.
Limitations	▪ Students with higher GPAs may be more likely to participate in study abroad, virtual exchange, or foreign language programs. Additional analysis examining the outcomes of students with lower levels of academic achievement would be beneficial.
Policy implications	▪ Virtual exchange and study abroad programs have a positive impact on student success. ▪ Virtual exchange benefits students from marginalized and under-resourced backgrounds, especially for students who historically haven't taken part in traditional study abroad programs, contributing to more equitable access to international educational experiences.

	Studying abroad and second language learning
References in Literature	Yang, J.-S. (2016). The Effectiveness of Study-Abroad on Second Language Learning: A Meta-Analysis. *Canadian Modern Language Review*, *72*(1), 66–94. https://doi.org/10.3138/cmlr.2344
Location	Global

Population	Undergraduate students
Methodology	▪ Sample: 11 studies ▪ Outcome variable(s): second language development ▪ Key explanatory variable(s): studying abroad ▪ Analysis: meta-analysis and meta-regression
Results & Conclusions	▪ Summary effects: effect sizes ranged from 0.5 to 7.8, with a mean weighted effect size of 0.75. medium effect. ▪ Length of programs: seven were coded as short-term (from 11 weeks up to 13 weeks), and four were coded as long-term (more than 14 weeks to up to 3.5 years). Average effect size for long-term (0.46) is smaller than that for short-term SA residence (0.98).
Limitations	▪ Publication bias and heterogeneity between studies.
Policy implications	▪ Studying abroad has a medium effect on second language development. ▪ Shorter term (less than 13 weeks) programs seem to have a greater impact on second language learning than longer term exchanges.

Studying Abroad and Labour Market Outcomes

	International student mobility (ISM)
References in Literature	d'Hombres, B. & Schnepf, S. V. (2021). International mobility of students in Italy and the UK: Does it pay off and for whom? *Higher Education*, *82*(6), 1173–1194. https://doi.org/10.1007/s10734-020-00631-1
Location	UK and Italy
Population	Undergraduate students
Methodology	▪ Data sources: UK Higher Education Statistics Agency (HESA), Italian National Institute of Statistics (ISTAT) ▪ Sample: around 118,000 graduates from 136 universities in the UK, 20,000 graduates from 20 universities in Italy ▪ Outcome variable(s): employment status (binary) 1 and 4 years after graduation for Italy and after 6 months and 3 years for UK, uptake of postgraduate studies (binary) 6 months after graduation ▪ Key explanatory variable(s): participation in international student program, SES (low = neither parents hold tertiary education) ▪ Analysis: propensity score matching (PSM) comparing graduates with and without study abroad experience, matched on sociodemographic variables, upper secondary school leaving results, and family background (parental education)

Results & Conclusions	▪ Employment: Around one year after graduation, international student programs enhance employability by 6.3 percentage points in Italy and 2.3 percentage points in the UK. However, the long-term impact is less pronounced, with a 3.6 percentage point employment advantage in Italy after four years and no significant benefit in the UK after three years post-graduation. ▪ Postgraduate studies: in Italy, mobile students were 8.3 percentage points more likely to have enrolled in postgraduate studies compared to the comparison group. UK mobility was not significantly linked to postgraduate studies. ▪ Neither in the UK nor in Italy are the employment returns significantly different across the two socio-economic groups of students. ▪ In UK, there is no difference in postgraduate study participation by socio-economic background when measured by parental education. However, when measured by parental occupation, students' who engage in an international student program and are from non-professional backgrounds are 3.3 percentage points more likely to pursue further studies than their non- international student program peers. Among students with parents in professional occupations, international study participation does not show a significant difference. ▪ In Italy, disadvantaged graduates who engage in an international student program have an 11 to 12 percentage point higher postgraduate study uptake compared to their non-international student program peers, whereas this difference is around 5 to 6 percentage points for graduates from highly educated family backgrounds.
Limitations	▪ Results hinge on the assumption that omitted variables are not simultaneously related to international experience and the outcome, which may not always hold true. ▪ High non-response rates for socio-economic status and secondary school results in the UK data could affect results, though robustness checks suggest otherwise. ▪ Data collection occurred at slightly different times in each country, a common challenge in cross-national studies due to the lack of comparable data across Europe.
Policy implications	▪ The differences in international study experience benefits between Italy and the UK can be attributed to factors such as the rigidity of the Italian job market and the highly stratified UK higher education system. This underscores the importance of considering the country context when assessing the advantages of international study mobility. ▪ Engaging in an international student program seems to help students with lower parental socio-economic backgrounds increase their chances of higher education credentials, potentially reducing social inequalities.

	Studying abroad and income
References in Literature	Kommers, S. (2022). Stop commercializing the value of studying abroad: The lack of an effect of study abroad on early career income of U.S. graduates. In X. Zhao, M. Kung, K. Bista, & Y. Ma (eds), Home and abroad: International student experiences and graduate employability (p. 17-30). STAR Scholars.
Location	US
Population	Undergraduate students

Methodology	▪ Data sources: Baccalaureate and Beyond Longitudinal Study (BandB:08/12) collected by the National Center for Education Statistics (NCES) ▪ Sample: 8,380 college graduates ▪ Outcome variable(s): Job income (graduates' self-reported annual salary from their current or most recent primary job) ▪ Key explanatory variable(s): studied abroad as of their final year (longer than 1 month) ▪ Analysis: propensity score analysis along with regression analyses
Results & Conclusions	▪ Descriptive: ▪ Students who studied abroad earned only slightly more ($1,069/year) than those who did not, four years after college completion, which was not statistically significant. ▪ Those who studied abroad were typically from more privileged backgrounds, with a higher proportion being White, first-generation college students, and coming from higher-income families. Additionally, students who studied abroad tended to perform better in high school. ▪ Regressions: ▪ While controlling for other factors, studying abroad had a minor effect on income, with students who studied abroad earning, on average, $1,085 more annually. However, this was not significant. ▪ Male/female: Being female was associated with a lower income, with an average difference of $10,172 per year. ▪ Post-bachelor's degree: Students who obtained a post-bachelor's degree earned $4,082 less annually compared to those who did not pursue additional degrees. ▪ Employment status: Students who were enrolled in a degree program while employed had a significantly lower income of $8,613 per year compared to those who were not enrolled while employed. ▪ Job requiring a bachelor's degree: Holding a job that required a bachelor's degree was associated with a higher income, with an average difference of $10,193 per year. ▪ STEM field: Working in a STEM field resulted in an average income increase of $6,559 per year. ▪ Full-time employment: Students who were employed full-time earned an additional $22,259 per year on average.
Limitations	▪ While studying abroad did not lead to a higher job income for students in the first four years after graduation, this may be explained by the fact that students who studied abroad tended to enroll in additional degrees more often, which could delay their entry into the workforce and, subsequently, their income growth.
Policy implications	▪ Need for a more nuanced and holistic understanding of the impact of studying abroad on career perspectives. Instead of solely using income as an outcome measure, researchers should consider factors such as the types of careers and fields that students enter after studying abroad. Some students may gravitate toward work with an intercultural or global focus, which may be less financially rewarding but personally fulfilling. ▪ Higher education institutions should consider how to incorporate international experiences into students' academic programs. This can help students translate their intercultural skills into their future careers and address global challenges effectively, benefiting both those who have studied abroad and those who do not have the opportunity.

	Studying abroad and income
References in Literature	Netz, N. & Grüttner, M. (2021). Does the effect of studying abroad on labour income vary by graduates' social origin? Evidence from Germany. *Higher Education*, *82*(6), 1195–1217. https://doi.org/10.1007/s10734-020-00579-2
Location	Germany
Population	Undergraduate students
Methodology	▪ Data sources: Graduate Panel of the German Centre for Higher Education Research and Science Studies (DZHW) ▪ Sample: graduates from 2005 graduation cohort ▪ Outcome variable(s): graduates' gross annual labour income measured at one, five, and 10 years after graduation ▪ Key explanatory variable(s): studied abroad participation (at least two months outside Germany to complete a study period, an internship, a language course, or another study-related stay) ▪ Analysis: propensity score matching (PSM) and random effects (RE) growth curve models
Results & Conclusions	▪ Descriptive: graduates who studied abroad tend to earn more annually, with the income gap increasing over the first 10 years. This trend is more significant for graduates from an academic background, becoming apparent at five and 10 years after graduation. ▪ PSM and RE models: studying abroad significantly boosts annual income for graduates with an academic background, with increasing effects over their early careers (€3,751 at 1 year, €6,544 at 5 years, and €10,636 at 10 years after graduation). However, for graduates from a non-academic background, the impact is much smaller and remains relatively consistent (€883 at 1 year, €2,191 at 5 years, and €1,509 at 10 years after graduation).
Limitations	▪ Data only cover graduates' employment history for the first 10 years, potentially missing long-term career effects. ▪ Unobserved differences among graduates from various backgrounds and international student experiences may still affect the results, despite attempts to address selection bias. ▪ Does not pinpoint specific mechanisms behind the observed outcomes, highlighting the need for further research in this area.
Policy implications	▪ Students from higher social origins are not only more likely to study abroad but also tend to benefit more in terms of their labour income from their study abroad experience. This suggests that international study programs may inadvertently contribute to the reproduction of social inequality in the German labour market. ▪ Future research should delve into the mechanisms that drive these outcomes. ▪ Essential to assess whether existing policies have contributed to increasing or decreasing inequality in access to study abroad opportunities and to identify which policies are effective in promoting equitable access and meaningful outcomes.

	Studying abroad and earnings
References in Literature	Giorgio, D. P., European Commission, & IZA (2022). Studying abroad and earnings: A meta-analysis. *Journal of Economic Surveys*, *36*(4), 1096–1129. https://doi.org/10.1111/joes.12472
Location	19 countries
Population	Undergraduate students
Methodology	▪ Sample: 17 studies published between 2003 and 2020 ▪ Outcome variable(s): wages ▪ Key explanatory variable(s): studying abroad ▪ Analysis: meta-analysis and meta-regression
Results & Conclusions	▪ Summary effects: weighted mean estimate of the effect sizes is 0.029 with a standard deviation of 0.245, meaning that wage premium associated with studying abroad is around 3 per cent. ▪ Evidence of publication bias favouring positive results, with different statistical methods producing conflicting conclusions about the average effect. Various methods suggest little to no effect, while the trim-and-fill approach finds a smaller positive effect of studying abroad on wages even after adjusting for publication bias. ▪ Heterogeneity of results given econometric methodology used in studies, time after graduation at which earnings were observed, geographical area, study time period, and time spent studying abroad. ▪ Shorter durations of study abroad seem to be linked to smaller benefits in terms of future wage increases when compared to longer international experiences (over a month).
Limitations	▪ Results are specific to one community college and may not be fully generalizable to students in different institutional contexts. ▪ While propensity score models address selection bias related to observed student characteristics, they cannot account for differences in unobserved student characteristics. ▪ Dataset lacks information on students who transfer to other institutions, potentially leading to underreported credential completion rates for study abroad participants, which could affect the observed relationship between study abroad participation and credential completion.
Policy implications	▪ Relationship between study abroad participation and academic success, particularly credential completion, is not statistically significant. While study abroad does not appear to significantly enhance academic outcomes, it also does not negatively impact them. ▪ Importance of accounting for selection bias when examining the effects of study abroad on student outcomes. ▪ Future research in this area should consider expanding to multiple institutions or sectors of higher education, exploring outcomes for specific demographic groups, and considering heterogeneity of the study abroad experience itself. ▪ While study abroad may not have substantial academic benefits, it remains valuable for developing intercultural effectiveness and global perspective-taking, which are crucial for students' success after graduation and their ability to interact positively with others in a global context.

APPENDIX C: QUANTITATIVE RESULTS

OUTCOME 1: PSE ENTRY

Table 2 PSE entry descriptive results, all students

N = 478,150	Sample Total	Proportion with outcome					
		No PSE	Cert.	Diploma	Uni. Trans.	Trade	BA
Male/Female							
Female	0.49	32.0	7.7	7.9	16.4	3.1	32.9
Male	0.51	34.5	4.9	8.2	11.7	15.8	24.8
Indigenous							
Non-Indigenous	0.89	29.9	6.2	8.6	14.7	9.3	31.2
Indigenous	0.11	60.8	6.7	3.7	8.3	11.6	8.9
Home language							
English	0.79	37.3	6.5	7.2	13.4	10.8	24.7
French	0.01	26.7	4.9	9.3	14.2	7.3	37.7
Chinese	0.07	11.1	3.3	9.3	10.5	2.6	63.2
Punjabi	0.04	13.7	6.5	14.8	25.4	5.7	33.9
South Asian	0.01	21.4	7.2	12.4	21.4	4.8	32.8
Korean	0.01	17.0	3.3	5.8	8.0	1.7	64.2
Other Asian	0.03	25.0	9.0	14.5	18.8	7.1	25.7
West European	0.01	34.2	6.8	10.3	14.9	8.7	25.1
East European	0.01	20.6	5.0	12.8	17.4	5.9	38.4
Semitic	0.01	21.5	5.1	9.5	20.8	3.4	39.6
Other or missing	0.01	32.1	5.7	10.2	17.3	6.2	28.8
Age in Grade 7							
Age 10 or 11	0.01	22.5	6.0	6.0	13.3	4.1	48.4
Age 12	0.95	32.3	6.3	8.3	14.3	9.5	29.3
Age 13 or 14	0.05	53.7	6.0	5.0	8.9	11.5	15.0
French immersion in Grade 7							
English language	0.92	34.5	6.3	8.1	13.8	9.9	27.4
French immersion	0.08	18.4	5.3	8.3	16.2	5.9	46.0
English language support in Grade 7							
Non-ELL student	0.94	33.4	6.3	8.1	14.1	9.8	28.3
ELL student	0.06	31.0	5.8	8.3	13.4	5.5	36.0
IEP in Grade 7							
No IEP	0.91	30.5	6.3	8.4	14.5	9.3	30.9
IEP	0.09	62.4	5.7	4.4	8.8	12.6	6.2
Grade 7 school type							
Public	0.88	34.0	6.4	8.1	14.1	9.9	27.6
Distance ed	0.02	49.6	7.2	6.0	11.9	9.9	15.5
Catholic independent	0.04	17.5	5.5	9.6	16.9	6.8	43.6
Other Christian ind.	0.04	33.4	6.5	8.7	12.9	10.5	28.1
Preparatory/IB ind.	0.02	18.7	2.0	3.1	6.5	1.1	68.8
Other non-religious ind.	0.01	43.9	6.5	5.7	11.1	7.9	24.9
Other religious ind.	0.01	12.7	5.8	10.3	23.0	3.4	44.3
Grade 7 school change							
No school change	0.77	30.5	6.2	8.5	14.7	9.3	30.9
No Grade 6 enrollment	0.02	34.0	5.7	7.5	10.2	5.8	36.8
Voluntary change	0.09	43.5	6.1	6.5	11.6	10.1	22.2
Compulsory change	0.11	43.7	7.2	6.9	12.2	11.6	18.5

N = 478,150	Sample Total	*Proportion with outcome* No PSE	Cert.	Diploma	Uni. Trans.	Trade	BA
Grade 7 FSA							
Did not write	0.11	52.3	5.9	5.7	11.1	8.8	16.2
Not yet meeting expectations	0.11	56.0	7.3	5.8	10.7	13.6	6.7
Meeting expectations in reading	0.09	45.0	7.8	7.3	15.1	10.9	13.8
Meeting expectations in numeracy	0.10	37.1	7.2	9.8	13.9	14.5	17.6
Meeting expectations in both	0.43	26.1	6.4	9.6	16.1	9.5	32.3
Exceeding expectations in reading	0.06	17.3	4.7	7.2	14.9	3.9	51.9
Exceeding expectations in numeracy	0.05	13.4	3.7	6.9	11.0	4.3	60.8
Exceeding expectations in both	0.04	12.3	3.0	4.3	8.2	2.1	70.1
Rural status in Grade 7							
Urban	0.87	31.5	5.9	8.5	14.8	9.0	30.3
Rural	0.13	45.1	8.7	5.4	8.9	13.5	18.4
Neighbourhood income in Grade 7							
Lowest quintile	0.20	43.2	6.7	7.7	11.2	9.9	21.3
2nd quintile	0.20	35.9	6.6	8.6	13.8	10.4	24.8
3rd quintile	0.20	33.0	6.6	8.4	14.9	10.3	26.8
4th quintile	0.20	30.0	6.3	8.3	15.5	9.8	30.0
Highest quintile	0.20	24.1	5.1	7.4	14.8	7.6	40.9
Grade 7 cohort							
2002	0.11	35.7	6.0	9.9	12.1	10.2	26.1
2003	0.10	35.3	6.2	9.4	12.7	10.1	26.3
2004	0.10	34.3	6.5	9.7	13.1	9.2	27.2
2005	0.10	33.4	6.3	9.5	13.1	9.3	28.4
2006	0.10	33.1	6.1	7.7	14.1	9.9	29.2
2007	0.10	32.4	6.3	7.5	14.0	9.9	30.1
2008	0.10	32.0	6.1	7.4	14.5	9.9	30.0
2009	0.10	31.7	6.4	6.4	15.5	9.8	30.3
2010	0.09	32.1	6.5	6.5	15.5	8.8	30.6
2011	0.09	32.4	6.5	6.2	16.0	8.5	30.4

Table 3 PSE entry regression results, all students

	No PSE	Cert.	Diploma	Uni. Trans.	Trade	BA
Male/female (Female)						
Male	-0.0090***	-0.028***	0.0023**	-0.044***	0.14***	-0.062***
	(0.0013)	(0.00069)	(0.00075)	(0.00097)	(0.0011)	(0.0011)
Indigenous (No)						
Indigenous	0.14***	0.0054***	-0.028***	-0.024***	0.011***	-0.11***
	(0.0020)	(0.0011)	(0.0018)	(0.0020)	(0.0013)	(0.0028)
Home language (English)						
French	-0.077***	-0.016***	0.023***	0.0021	-0.024***	0.092***
	(0.0088)	(0.0044)	(0.0060)	(0.0069)	(0.0057)	(0.0086)
Chinese	-0.19***	-0.021***	0.025***	-0.025***	-0.070***	0.28***
	(0.0025)	(0.0014)	(0.0019)	(0.0020)	(0.0014)	(0.0029)
Punjabi	-0.21***	0.00080	0.063***	0.089***	-0.054***	0.11***
	(0.0026)	(0.0018)	(0.0024)	(0.0030)	(0.0016)	(0.0033)
South Asian	-0.15***	0.0070*	0.040***	0.055***	-0.061***	0.11***
	(0.0051)	(0.0035)	(0.0042)	(0.0051)	(0.0028)	(0.0059)
Korean	-0.13***	-0.022***	-0.0099**	-0.051***	-0.083***	0.29***
	(0.0058)	(0.0029)	(0.0032)	(0.0037)	(0.0023)	(0.0062)
Other Asian	-0.11***	0.025***	0.064***	0.034***	-0.036***	0.019***
	(0.0038)	(0.0027)	(0.0031)	(0.0033)	(0.0023)	(0.0037)
West European	-0.019***	0.0053	0.026***	0.011*	-0.015***	-0.0074
	(0.0055)	(0.0031)	(0.0036)	(0.0043)	(0.0035)	(0.0048)
East European	-0.13***	-0.0097**	0.047***	0.029***	-0.042***	0.10***
	(0.0057)	(0.0033)	(0.0044)	(0.0050)	(0.0035)	(0.0059)
Semitic	-0.15***	-0.012***	0.020***	0.056***	-0.069***	0.15***
	(0.0060)	(0.0036)	(0.0046)	(0.0060)	(0.0031)	(0.0068)
Other or missing	-0.061***	-0.0093*	0.031***	0.032***	-0.045***	0.052***
	(0.0070)	(0.0038)	(0.0051)	(0.0061)	(0.0039)	(0.0071)
Age in Grade 7 (Age 12)						
Age 10 or 11	-0.046***	0.0029	-0.016***	0.0022	-0.038***	0.094***
	(0.0082)	(0.0046)	(0.0046)	(0.0064)	(0.0050)	(0.0078)
Age 13 or 14	0.085***	0.0030	-0.016***	-0.020***	-0.0022	-0.049***
	(0.0031)	(0.0018)	(0.0019)	(0.0025)	(0.0018)	(0.0032)
French immersion (No)						
Grade 7 French immersion	-0.10***	-0.0050***	0.0068***	0.013***	-0.024***	0.11***
	(0.0028)	(0.0014)	(0.0015)	(0.0018)	(0.0019)	(0.0020)
English language (No)						
Grade 7 ELL student	0.010**	0.0022	-0.0091***	0.00037	-0.017***	0.013***
	(0.0032)	(0.0017)	(0.0018)	(0.0024)	(0.0023)	(0.0028)
IEP in Grade 7 (none)						
IEP	0.16***	0.010***	-0.012***	-0.00062	0.0058***	-0.16***
	(0.0023)	(0.0014)	(0.0019)	(0.0023)	(0.0014)	(0.0037)
G7 school (public)						
Distance ed	0.027***	0.0086**	0.0045	0.0090*	-0.0047	-0.045***
	(0.0051)	(0.0031)	(0.0038)	(0.0046)	(0.0033)	(0.0053)
Catholic independent	-0.085***	0.0021	0.012***	0.022***	-0.019***	0.067***
	(0.0034)	(0.0020)	(0.0022)	(0.0028)	(0.0022)	(0.0031)
Other Christian ind.	0.036***	0.0016	0.0039	-0.018***	0.0033	-0.026***
	(0.0035)	(0.0019)	(0.0022)	(0.0025)	(0.0023)	(0.0030)
Preparatory/IB ind.	0.036***	-0.032***	-0.042***	-0.067***	-0.080***	0.19***
	(0.0064)	(0.0025)	(0.0025)	(0.0033)	(0.0021)	(0.0058)
Other non-religious ind.	-0.018**	-0.0043	-0.00010	0.0015	-0.033***	0.054***
	(0.0068)	(0.0038)	(0.0052)	(0.0065)	(0.0037)	(0.0077)
Other religious ind.	-0.035**	0.0094	0.0041	0.029***	-0.026***	0.018*
	(0.011)	(0.0055)	(0.0049)	(0.0066)	(0.0067)	(0.0077)

	No PSE	Cert.	Diploma	Uni. Trans.	Trade	BA
G7 school change (none)						
No G6 enrollment	0.028***	-0.0032	-0.0078**	-0.034***	-0.024***	0.042***
	(0.0043)	(0.0024)	(0.0026)	(0.0031)	(0.0027)	(0.0041)
Voluntary change	0.057***	-0.0015	-0.013***	-0.017***	-0.00075	-0.025***
	(0.0022)	(0.0012)	(0.0013)	(0.0017)	(0.0014)	(0.0021)
Compulsory change	0.037***	0.0065***	-0.0064***	-0.013***	0.0012	-0.025***
	(0.0020)	(0.0012)	(0.0013)	(0.0016)	(0.0013)	(0.0020)
Grade 7 FSA (Meet ex. in both)						
Did not write	0.18***	-0.0038**	-0.022***	-0.032***	-0.0082***	-0.11***
	(0.0025)	(0.0013)	(0.0015)	(0.0019)	(0.0015)	(0.0022)
Not yet meeting expectations in both	0.22***	0.011***	-0.021***	-0.034***	0.033***	-0.21***
	(0.0024)	(0.0013)	(0.0014)	(0.0017)	(0.0016)	(0.0018)
Meeting expectations in reading	0.13***	0.0079***	-0.0097***	-0.0050**	0.017***	-0.14***
	(0.0025)	(0.0014)	(0.0015)	(0.0019)	(0.0017)	(0.0021)
Meeting expectations in numeracy	0.095***	0.012***	0.000073	-0.012***	0.036***	-0.13***
	(0.0023)	(0.0014)	(0.0014)	(0.0018)	(0.0015)	(0.0019)
Exceeding expectations in reading	-0.065***	-0.016***	-0.018***	-0.013***	-0.041***	0.15***
	(0.0026)	(0.0014)	(0.0016)	(0.0021)	(0.0016)	(0.0028)
Exceeding expectations in numeracy	-0.079***	-0.015***	-0.023***	-0.033***	-0.044***	0.20***
	(0.0030)	(0.0017)	(0.0017)	(0.0023)	(0.0016)	(0.0033)
Exceeding expectations in both	-0.082***	-0.025***	-0.044***	-0.066***	-0.064***	0.28***
	(0.0036)	(0.0018)	(0.0018)	(0.0024)	(0.0017)	(0.0040)
Rural status (Urban)						
Rural	0.021***	0.022***	-0.018***	-0.048***	0.023***	0.000013
	(0.0019)	(0.00096)	(0.0014)	(0.0018)	(0.0011)	(0.0020)
Neighbourhood income (lowest)						
2nd quintile	-0.037***	-0.00038	0.0045***	0.013***	0.0070***	0.013***
	(0.0020)	(0.0011)	(0.0012)	(0.0016)	(0.0013)	(0.0019)
3rd quintile	-0.057***	0.00050	0.0051***	0.018***	0.0072***	0.026***
	(0.0021)	(0.0012)	(0.0013)	(0.0016)	(0.0013)	(0.0019)
4th quintile	-0.079***	-0.0015	0.0083***	0.022***	0.0039**	0.046***
	(0.0021)	(0.0012)	(0.0013)	(0.0017)	(0.0014)	(0.0019)
Highest quintile	-0.11***	-0.0092***	0.0031*	0.019***	-0.0097***	0.11***
	(0.0022)	(0.0012)	(0.0013)	(0.0017)	(0.0014)	(0.0021)
Grade 7 cohort (2002)						
2003	0.012***	0.0044**	-0.0056**	0.0030	0.00054	-0.014***
	(0.0027)	(0.0015)	(0.0019)	(0.0021)	(0.0018)	(0.0025)
2004	0.0036	0.0072***	-0.0029	0.0062**	-0.0075***	-0.0065**
	(0.0027)	(0.0015)	(0.0019)	(0.0021)	(0.0018)	(0.0025)
2005	-0.010***	0.0042**	-0.0065***	0.0053*	-0.0076***	0.015***
	(0.0027)	(0.0015)	(0.0019)	(0.0021)	(0.0018)	(0.0026)
2006	-0.014***	0.0025	-0.024***	0.016***	-0.0012	0.021***
	(0.0027)	(0.0015)	(0.0018)	(0.0022)	(0.0018)	(0.0026)
2007	-0.011***	0.0057***	-0.026***	0.015***	0.0029	0.013***
	(0.0027)	(0.0015)	(0.0018)	(0.0022)	(0.0018)	(0.0026)
2008	-0.0075**	0.0059***	-0.026***	0.019***	0.0066***	0.0012
	(0.0029)	(0.0016)	(0.0019)	(0.0023)	(0.0019)	(0.0027)
2009	-0.012***	0.0086***	-0.036***	0.027***	0.0040*	0.0091***
	(0.0029)	(0.0016)	(0.0018)	(0.0023)	(0.0019)	(0.0027)
2010	-0.0068*	0.0098***	-0.036***	0.027***	-0.0049**	0.011***
	(0.0029)	(0.0016)	(0.0018)	(0.0023)	(0.0019)	(0.0027)
2011	-0.0055	0.0090***	-0.038***	0.031***	-0.0087***	0.012***
	(0.0029)	(0.0016)	(0.0018)	(0.0023)	(0.0019)	(0.0028)
Observations	478,150					

Notes: This table shows the results of a multinomial logistic regression model measuring program of entry up to three years after a student's expected Grade 12 year. The explanatory variables included in the model are categorical and the reference group for each variable is in parentheses next to the bolded variable title. Standard errors are in parentheses under each coefficient. * p < 0.05, ** p < 0.01, *** p < 0.001.

Table 4 PSE entry descriptive results, male students

N = 244,740	Sample Total	*Proportion with outcome* No PSE	Cert.	Diploma	Uni. Trans.	Trade	BA
Indigenous							
Non-Indigenous	0.89	31.3	4.9	8.9	12.4	15.5	27.0
Indigenous	0.11	61.5	4.9	2.8	6.1	18.2	6.4
Home language							
English	0.79	38.5	5.0	7.0	10.9	17.8	20.8
French	0.01	28.8	4.0	9.6	12.0	12.0	32.8
Chinese	0.07	11.9	3.3	10.8	10.9	4.2	58.8
Punjabi	0.04	16.3	6.0	17.4	21.5	10.2	28.5
South Asian	0.01	23.4	6.4	14.5	17.4	8.5	30.1
Korean	0.01	17.9	3.2	7.0	7.0	2.6	61.9
Other Asian	0.03	28.0	7.0	15.9	17.1	11.6	20.4
West European	0.01	35.4	5.2	10.1	12.4	15.0	22.2
East European	0.01	23.0	4.0	13.9	15.7	10.2	33.6
Semitic	0.01	24.8	4.8	11.0	18.1	6.2	35.2
Other or missing	0.01	32.5	4.6	11.7	15.7	10.2	25.4
Age in Grade 7							
Age 10 or 11	0.01	23.7	4.6	6.9	11.5	6.9	45.8
Age 12	0.93	33.4	4.9	8.5	12.0	15.8	25.4
Age 13 or 14	0.06	53.0	5.1	5.1	7.8	15.6	13.6
French immersion in Grade 7							
English language	0.94	35.5	5.0	8.2	11.6	16.0	23.7
French immersion	0.06	18.9	4.4	9.3	14.4	11.6	41.4
English language support in Grade 7							
Non-ELL student	0.94	34.7	4.9	8.2	11.7	16.2	24.2
ELL student	0.06	31.5	5.2	9.4	11.9	8.6	33.5
IEP in Grade 7							
No IEP	0.88	30.8	4.9	8.8	12.3	15.7	27.4
IEP	0.12	61.5	4.8	4.1	8.0	15.9	5.7
Grade 7 school type							
Public	0.88	35.3	5.0	8.2	11.7	16.2	23.6
Distance ed	0.02	49.4	5.3	5.8	10.3	15.3	13.7
Catholic independent	0.04	18.7	4.9	10.4	15.3	11.5	39.3
Other Christian ind.	0.04	32.8	4.3	8.7	10.8	17.6	25.9
Preparatory/IB ind.	0.01	18.9	2.2	3.8	6.3	1.6	67.4
Other non-religious ind.	0.01	41.8	7.0	6.5	10.9	12.4	22.4
Other religious ind.	0.01	14.4	5.8	13.7	21.6	7.2	38.1
Grade 7 school change							
No school change	0.76	31.7	4.8	8.8	12.5	15.5	26.6
No Grade 6 enrollment	0.02	34.8	5.1	7.9	9.1	9.3	33.8
Voluntary change	0.10	44.0	4.8	6.3	9.5	15.7	19.8
Compulsory change	0.11	44.9	5.6	6.1	9.1	19.1	15.1
Grade 7 FSA							
Did not write	0.12	54.7	4.7	5.3	9.0	13.2	13.0
Not yet meeting expectations	0.12	55.2	5.1	5.4	8.2	20.8	5.2
Meeting expectations in reading	0.07	45.5	5.5	6.8	11.5	20.1	10.6
Meeting expectations in numeracy	0.12	36.9	5.7	9.7	11.4	21.2	15.2
Meeting expectations in both	0.42	27.0	5.1	10.1	13.8	16.0	28.0
Exceeding expectations in reading	0.04	19.0	4.0	8.1	14.0	8.5	46.6
Exceeding expectations in numeracy	0.07	13.7	3.5	7.7	10.8	6.2	58.1
Exceeding expectations in both	0.03	12.8	2.9	4.6	8.3	3.7	67.8
Rural status in Grade 7							
Urban	0.87	32.8	4.7	8.8	12.5	14.8	26.4
Rural	0.13	46.3	6.4	4.7	6.5	21.9	14.2

N = 244,740	Sample Total	*Proportion with outcome* No PSE	Cert.	Diploma	Uni. Trans.	Trade	BA
Neighbourhood income in Grade 7							
Lowest quintile	0.20	44.5	5.1	7.6	9.0	15.7	18.0
2nd quintile	0.20	37.1	5.1	8.4	11.4	16.9	21.1
3rd quintile	0.20	34.4	5.1	8.7	12.3	17.0	22.5
4th quintile	0.20	31.3	5.0	8.6	12.9	16.4	25.9
Highest quintile	0.20	25.2	4.3	7.9	13.2	12.8	36.7
Grade 7 cohort							
2002	0.11	36.7	4.8	9.8	9.7	16.7	22.4
2003	0.10	36.2	5.0	9.4	10.6	16.3	22.5
2004	0.10	35.7	5.4	9.7	10.8	15.1	23.3
2005	0.10	34.4	5.3	9.6	10.8	15.0	25.0
2006	0.10	34.0	4.5	7.9	11.9	16.2	25.4
2007	0.10	33.9	4.5	7.7	11.9	16.1	25.9
2008	0.10	33.3	4.5	7.7	12.1	16.4	25.9
2009	0.10	33.2	4.9	6.4	13.2	16.1	26.2
2010	0.09	33.2	5.2	7.1	13.3	15.0	26.3
2011	0.09	34.1	5.3	6.5	13.7	14.4	26.0

Table 5 PSE entry regression results, male students

	No PSE	Cert.	Diploma	Uni. Trans.	Trade	BA
Indigenous (No)						
Indigenous	0.14***	0.0056***	-0.041***	-0.021***	0.013***	-0.10***
	(0.0029)	(0.0015)	(0.0029)	(0.0028)	(0.0024)	(0.0041)
Home language (English)						
French	-0.061***	-0.0061	0.023**	0.0032	-0.040***	0.082***
	(0.013)	(0.0058)	(0.0082)	(0.0090)	(0.010)	(0.012)
Chinese	-0.19***	-0.0063**	0.039***	0.0023	-0.12***	0.27***
	(0.0036)	(0.0020)	(0.0027)	(0.0028)	(0.0024)	(0.0040)
Punjabi	-0.19***	0.012***	0.086***	0.078***	-0.079***	0.094***
	(0.0038)	(0.0025)	(0.0035)	(0.0038)	(0.0029)	(0.0044)
South Asian	-0.13***	0.015**	0.061***	0.045***	-0.095***	0.11***
	(0.0073)	(0.0047)	(0.0061)	(0.0066)	(0.0051)	(0.0079)
Korean	-0.11***	-0.010**	0.0025	-0.035***	-0.14***	0.29***
	(0.0084)	(0.0038)	(0.0047)	(0.0049)	(0.0042)	(0.0085)
Other Asian	-0.083***	0.021***	0.077***	0.044***	-0.061***	0.0021
	(0.0055)	(0.0033)	(0.0044)	(0.0045)	(0.0041)	(0.0049)
West European	-0.0082	0.0031	0.024***	0.010	-0.022***	-0.0063
	(0.0078)	(0.0039)	(0.0049)	(0.0056)	(0.0063)	(0.0063)
East European	-0.11***	-0.0059	0.054***	0.034***	-0.066***	0.091***
	(0.0081)	(0.0041)	(0.0061)	(0.0066)	(0.0063)	(0.0078)
Semitic	-0.12***	-0.0037	0.033***	0.059***	-0.11***	0.14***
	(0.0088)	(0.0047)	(0.0066)	(0.0081)	(0.0058)	(0.0093)
Other or missing	-0.062***	-0.0063	0.047***	0.037***	-0.070***	0.054***
	(0.0098)	(0.0046)	(0.0073)	(0.0079)	(0.0071)	(0.0093)
Age in Grade 7 (Age 12)						
Age 10 or 11	-0.029*	0.0029	-0.010	0.0057	-0.065***	0.096***
	(0.013)	(0.0065)	(0.0074)	(0.0094)	(0.0090)	(0.012)
Age 13 or 14	0.075***	0.0031	-0.014***	-0.017***	-0.0057	-0.042***
	(0.0038)	(0.0019)	(0.0025)	(0.0029)	(0.0030)	(0.0037)
French immersion (No)						
Grade 7 French immersion	-0.10***	0.0014	0.015***	0.019***	-0.035***	0.10***
	(0.0045)	(0.0019)	(0.0022)	(0.0025)	(0.0035)	(0.0029)
English language (No)						
Grade 7 ELL student	0.0028	0.0060**	-0.0062*	0.00087	-0.028***	0.025***
	(0.0044)	(0.0020)	(0.0025)	(0.0030)	(0.0041)	(0.0036)
IEP in Grade 7 (none)						
IEP	0.15***	0.0083***	-0.019***	0.0016	0.0026	-0.15***
	(0.0028)	(0.0015)	(0.0024)	(0.0025)	(0.0024)	(0.0041)
G7 school (Public)						
Distance ed	0.015*	0.0052	0.0050	0.017**	-0.012*	-0.029***
	(0.0070)	(0.0038)	(0.0055)	(0.0062)	(0.0057)	(0.0071)
Catholic independent	-0.078***	0.0072**	0.015***	0.024***	-0.029***	0.061***
	(0.0048)	(0.0027)	(0.0031)	(0.0036)	(0.0038)	(0.0041)
Other Christian ind.	0.026***	-0.0063**	0.0031	-0.016***	0.0065	-0.013***
	(0.0050)	(0.0023)	(0.0030)	(0.0033)	(0.0040)	(0.0040)
Preparatory/IB ind.	0.051***	-0.017***	-0.037***	-0.049***	-0.13***	0.19***
	(0.0092)	(0.0037)	(0.0038)	(0.0045)	(0.0036)	(0.0080)
Other non-religious ind.	-0.042***	0.015**	0.0065	0.020*	-0.056***	0.057***
	(0.0090)	(0.0054)	(0.0075)	(0.0086)	(0.0064)	(0.010)
Other religious ind.	-0.030	0.010	0.0096	0.038***	-0.031*	0.0034
	(0.016)	(0.0069)	(0.0069)	(0.0091)	(0.012)	(0.0099)

	No PSE	Cert.	Diploma	Uni. Trans.	Trade	BA
G7 school change (none)						
No G6 enrollment	0.031***	0.0024	-0.0077*	-0.026***	-0.041***	0.041***
	(0.0060)	(0.0030)	(0.0036)	(0.0040)	(0.0047)	(0.0054)
Voluntary change	0.057***	-0.00083	-0.016***	-0.017***	-0.0053*	-0.018***
	(0.0031)	(0.0015)	(0.0018)	(0.0022)	(0.0025)	(0.0028)
Compulsory change	0.039***	0.0079***	-0.012***	-0.018***	0.0031	-0.019***
	(0.0028)	(0.0015)	(0.0018)	(0.0021)	(0.0022)	(0.0027)
Grade 7 FSA (Meet ex. in both)						
Did not write	0.18***	-0.0039*	-0.027***	-0.034***	-0.016***	-0.10***
	(0.0034)	(0.0016)	(0.0020)	(0.0023)	(0.0026)	(0.0029)
Not yet meeting expectations in both	0.21***	0.0013	-0.028***	-0.039***	0.050***	-0.19***
	(0.0033)	(0.0016)	(0.0019)	(0.0022)	(0.0027)	(0.0022)
Meeting expectations in reading	0.13***	0.0025	-0.016***	-0.011***	0.028***	-0.13***
	(0.0038)	(0.0019)	(0.0024)	(0.0028)	(0.0030)	(0.0030)
Meeting expectations in numeracy	0.080***	0.0046**	-0.0050**	-0.021***	0.059***	-0.12***
	(0.0031)	(0.0015)	(0.0018)	(0.0021)	(0.0026)	(0.0023)
Exceeding expectations in reading	-0.062***	-0.0084***	-0.014***	0.0039	-0.069***	0.15***
	(0.0043)	(0.0022)	(0.0028)	(0.0035)	(0.0030)	(0.0046)
Exceeding expectations in numeracy	-0.081***	-0.0076***	-0.020***	-0.019***	-0.073***	0.20***
	(0.0039)	(0.0020)	(0.0023)	(0.0028)	(0.0028)	(0.0041)
Exceeding expectations in both	-0.085***	-0.013***	-0.047***	-0.044***	-0.11***	0.29***
	(0.0052)	(0.0026)	(0.0026)	(0.0035)	(0.0031)	(0.0057)
Rural status (Urban)						
Rural	0.027***	0.016***	-0.024***	-0.048***	0.038***	-0.0090**
	(0.0026)	(0.0012)	(0.0021)	(0.0025)	(0.0020)	(0.0028)
Neighbourhood income (lowest)						
2nd quintile	-0.041***	-0.00015	0.0025	0.013***	0.014***	0.012***
	(0.0029)	(0.0014)	(0.0017)	(0.0021)	(0.0023)	(0.0025)
3rd quintile	-0.060***	0.00068	0.0068***	0.016***	0.016***	0.020***
	(0.0029)	(0.0014)	(0.0018)	(0.0021)	(0.0024)	(0.0025)
4th quintile	-0.083***	0.00042	0.0096***	0.019***	0.012***	0.042***
	(0.0030)	(0.0015)	(0.0018)	(0.0021)	(0.0024)	(0.0026)
Highest quintile	-0.12***	-0.0035*	0.0059**	0.023***	-0.011***	0.10***
	(0.0031)	(0.0015)	(0.0019)	(0.0022)	(0.0024)	(0.0027)
Grade 7 cohort (2002)						
2003	0.012**	0.0031	-0.0053*	0.0053	-0.0020	-0.013***
	(0.0038)	(0.0019)	(0.0026)	(0.0028)	(0.0031)	(0.0034)
2004	0.0093*	0.0071***	-0.0027	0.0066*	-0.013***	-0.0077*
	(0.0038)	(0.0019)	(0.0027)	(0.0028)	(0.0031)	(0.0034)
2005	-0.0070	0.0050**	-0.0066*	0.0048	-0.015***	0.018***
	(0.0038)	(0.0019)	(0.0026)	(0.0028)	(0.0031)	(0.0035)
2006	-0.011**	-0.0018	-0.023***	0.018***	-0.0013	0.019***
	(0.0038)	(0.0019)	(0.0026)	(0.0028)	(0.0032)	(0.0035)
2007	-0.0036	-0.0017	-0.024***	0.016***	0.0044	0.0085*
	(0.0039)	(0.0019)	(0.0026)	(0.0028)	(0.0032)	(0.0035)
2008	-0.0010	-0.00059	-0.023***	0.016***	0.011***	-0.0030
	(0.0040)	(0.0020)	(0.0026)	(0.0029)	(0.0034)	(0.0035)
2009	-0.0062	0.0028	-0.038***	0.025***	0.0071*	0.0084*
	(0.0041)	(0.0020)	(0.0026)	(0.0030)	(0.0034)	(0.0036)
2010	-0.0048	0.0058**	-0.031***	0.027***	-0.0040	0.0072*
	(0.0041)	(0.0021)	(0.0026)	(0.0030)	(0.0034)	(0.0036)
2011	0.0028	0.0066**	-0.037***	0.030***	-0.0097**	0.0069
	(0.0042)	(0.0021)	(0.0026)	(0.0030)	(0.0034)	(0.0037)
Observations	244,740					

Notes: This table shows the results of a multinomial logistic regression model measuring program of entry up to three years after a student's expected Grade 12 year. The explanatory variables included in the model are categorical and the reference group for each variable is in parentheses next to the bolded variable title. Robust standard errors are in parentheses under each coefficient.
* p < 0.05, ** p < 0.01, *** p < 0.001.

Table 6 PSE entry descriptive results, female students

N = 233,410	Sample Total	*Proportion with outcome* No PSE	Cert.	Diploma	Uni. Trans.	Trade	BA
Indigenous							
Non-Indigenous	0.89	28.4	7.6	8.3	17.1	2.8	35.7
Indigenous	0.11	60.1	8.4	4.6	10.5	5.1	11.3
Home language							
English	0.79	36.1	8.1	7.5	15.9	3.6	28.8
French	0.01	24.4	4.9	9.8	16.3	2.4	42.3
Chinese	0.07	10.3	3.3	7.7	10.0	0.9	67.9
Punjabi	0.04	10.7	7.1	11.9	29.9	0.5	39.8
South Asian	0.01	19.3	8.1	10.0	25.9	1.2	35.9
Korean	0.01	15.7	3.3	4.7	9.0	0.7	66.9
Other Asian	0.03	21.7	11.0	13.0	20.6	2.3	31.3
West European	0.01	32.9	8.7	10.5	17.5	2.6	28.0
East European	0.01	18.0	6.0	11.6	19.2	1.6	44.0
Semitic	0.01	18.2	6.1	8.1	23.2	0.5	44.4
Other or missing	0.01	31.6	6.9	8.6	19.0	1.7	32.8
Age in Grade 7							
Age 10 or 11	0.01	21.5	7.0	5.4	14.5	1.6	50.0
Age 12	0.96	31.3	7.7	8.0	16.6	3.1	33.3
Age 13 or 14	0.03	55.1	7.8	5.0	10.9	3.8	17.5
French immersion in Grade 7							
English language	0.91	33.4	7.8	8.0	16.3	3.2	31.3
French immersion	0.09	18.1	5.9	7.5	17.5	1.9	49.1
English language support in Grade 7							
Non-ELL student	0.94	32.1	7.7	8.0	16.5	3.2	32.5
ELL student	0.06	30.4	6.5	7.1	15.1	1.9	39.0
IEP in Grade 7							
No IEP	0.95	30.2	7.7	8.1	16.7	3.0	34.4
IEP	0.05	64.4	7.6	5.2	10.7	4.9	7.2
Grade 7 school type							
Public	0.88	32.6	7.8	11.2	16.6	0.0	31.9
Distance ed	0.02	49.7	9.3	10.1	13.5	0.0	17.5
Catholic independent	0.04	16.3	6.3	10.7	18.6	0.0	48.1
Other Christian ind.	0.04	34.0	8.8	11.9	15.0	0.0	30.4
Preparatory/IB ind.	0.02	18.5	1.8	3.2	6.6	0.0	69.9
Other non-religious ind.	0.01	47.0	6.0	8.3	11.3	0.0	28.0
Other religious ind.	0.01	11.8	5.9	7.9	24.3	0.0	50.0
Grade 7 school change							
No school change	0.77	29.1	7.5	8.1	17.0	2.9	35.3
No Grade 6 enrollment	0.02	33.2	6.2	7.0	11.5	2.0	40.1
Voluntary change	0.09	42.9	7.6	6.8	13.9	3.9	24.9
Compulsory change	0.12	42.4	8.9	7.6	15.4	3.8	22.0
Grade 7 FSA							
Did not write	0.10	49.4	7.4	6.0	13.8	3.2	20.2
Not yet meeting expectations	0.10	56.9	9.8	6.3	13.6	4.9	8.6
Meeting expectations in reading	0.10	44.6	9.6	7.8	17.8	4.1	16.3
Meeting expectations in numeracy	0.08	37.5	9.7	9.8	17.8	3.9	21.4
Meeting expectations in both	0.45	25.1	7.7	9.2	18.5	3.0	36.6
Exceeding expectations in reading	0.09	16.5	5.0	6.7	15.4	1.6	54.7
Exceeding expectations in numeracy	0.04	12.8	4.0	5.5	11.3	1.2	65.3
Exceeding expectations in both	0.04	11.9	3.1	4.0	8.1	0.7	72.2
Rural status in Grade 7							
Urban	0.87	30.3	7.1	8.2	17.1	2.8	34.5
Rural	0.13	43.8	11.2	6.2	11.3	4.8	22.7

N = 233,410	Sample Total	*Proportion with outcome* No PSE	Cert.	Diploma	Uni. Trans.	Trade	BA
Neighbourhood income in Grade 7							
Lowest quintile	0.20	41.9	8.3	7.9	13.5	3.8	24.7
2nd quintile	0.20	34.6	8.2	8.7	16.3	3.5	28.7
3rd quintile	0.20	31.5	8.2	8.1	17.6	3.2	31.4
4th quintile	0.20	28.7	7.7	8.1	18.3	2.8	34.4
Highest quintile	0.20	23.1	6.0	6.9	16.4	2.2	45.4
Grade 7 cohort							
2002	0.11	34.8	7.2	10.0	14.6	3.5	30.0
2003	0.10	34.2	7.5	9.4	15.0	3.6	30.3
2004	0.10	32.9	7.7	9.7	15.4	3.1	31.3
2005	0.10	32.3	7.3	9.5	15.6	3.2	32.0
2006	0.10	32.1	7.7	7.6	16.3	3.2	33.2
2007	0.10	30.8	8.1	7.3	16.1	3.3	34.4
2008	0.10	30.6	7.7	7.0	17.1	3.2	34.3
2009	0.10	30.1	8.0	6.4	17.9	3.1	34.5
2010	0.09	31.1	7.9	5.8	17.9	2.4	35.0
2011	0.09	30.7	7.7	5.9	18.5	2.3	35.0

Table 7 PSE entry regression results, female students

	No PSE	Cert.	Diploma	Uni. Trans.	Trade	BA
Indigenous (No)						
Indigenous	0.14***	0.0058***	-0.019***	-0.026***	0.010***	-0.11***
	(0.0027)	(0.0018)	(0.0023)	(0.0030)	(0.00098)	(0.0039)
Home language (English)						
French	-0.092***	-0.027***	0.024**	0.0011	-0.0073	0.10***
	(0.012)	(0.0066)	(0.0087)	(0.011)	(0.0050)	(0.013)
Chinese	-0.20***	-0.036***	0.010***	-0.054***	-0.021***	0.30***
	(0.0035)	(0.0021)	(0.0026)	(0.0029)	(0.0013)	(0.0042)
Punjabi	-0.24***	-0.010***	0.036***	0.10***	-0.029***	0.14***
	(0.0034)	(0.0027)	(0.0033)	(0.0046)	(0.00092)	(0.0050)
South Asian	-0.16***	-0.0010	0.018**	0.065***	-0.025***	0.10***
	(0.0071)	(0.0052)	(0.0056)	(0.0079)	(0.0020)	(0.0088)
Korean	-0.15***	-0.036***	-0.024***	-0.067***	-0.028***	0.30***
	(0.0080)	(0.0044)	(0.0044)	(0.0057)	(0.0019)	(0.0090)
Other Asian	-0.13***	0.031***	0.050***	0.024***	-0.010***	0.037***
	(0.0052)	(0.0042)	(0.0043)	(0.0050)	(0.0021)	(0.0057)
West European	-0.031***	0.0075	0.029***	0.011	-0.0084**	-0.0085
	(0.0076)	(0.0049)	(0.0053)	(0.0065)	(0.0029)	(0.0072)
East European	-0.14***	-0.013*	0.039***	0.023**	-0.018***	0.11***
	(0.0081)	(0.0053)	(0.0063)	(0.0077)	(0.0028)	(0.0088)
Semitic	-0.18***	-0.020***	0.0067	0.052***	-0.028***	0.16***
	(0.0080)	(0.0054)	(0.0062)	(0.0090)	(0.0020)	(0.010)
Other or missing	-0.059***	-0.012	0.013	0.027**	-0.020***	0.051***
	(0.010)	(0.0061)	(0.0069)	(0.0093)	(0.0031)	(0.011)
Age in Grade 7 (Age 12)						
Age 10 or 11	-0.062***	0.0018	-0.021***	-0.0019	-0.011**	0.094***
	(0.010)	(0.0066)	(0.0058)	(0.0090)	(0.0036)	(0.011)
Age 13 or 14	0.10***	0.0024	-0.019***	-0.025***	0.0024	-0.061***
	(0.0052)	(0.0032)	(0.0031)	(0.0044)	(0.0020)	(0.0055)
French immersion (No)						
Grade 7 French immersion	-0.10***	-0.011***	-0.000015	0.0075**	-0.010***	0.12***
	(0.0036)	(0.0022)	(0.0020)	(0.0026)	(0.0016)	(0.0029)
English language (No)						
Grade 7 ELL student	0.020***	-0.0027	-0.013***	0.00055	-0.0053**	0.000044
	(0.0046)	(0.0028)	(0.0028)	(0.0038)	(0.0021)	(0.0044)
IEP in Grade 7 (none)						
IEP	0.17***	0.011***	0.0022	-0.0079	0.014***	-0.19***
	(0.0041)	(0.0026)	(0.0032)	(0.0044)	(0.0014)	(0.0068)
G7 school (Public)						
Distance ed	0.041***	0.013*	0.0038	0.00088	0.0021	-0.061***
	(0.0074)	(0.0049)	(0.0054)	(0.0069)	(0.0029)	(0.0079)
Catholic independent	-0.092***	-0.0031	0.0089**	0.019***	-0.0078***	0.075***
	(0.0047)	(0.0031)	(0.0031)	(0.0042)	(0.0019)	(0.0047)
Other Christian ind.	0.047***	0.0094**	0.0048	-0.021***	0.00050	-0.040***
	(0.0050)	(0.0032)	(0.0031)	(0.0039)	(0.0020)	(0.0045)
Preparatory/IB ind.	0.020*	-0.048***	-0.047***	-0.087***	-0.022***	0.19***
	(0.0087)	(0.0035)	(0.0033)	(0.0048)	(0.0021)	(0.0083)
Other non-religious ind.	0.0088	-0.025***	-0.0069	-0.019	-0.010**	0.052***
	(0.010)	(0.0052)	(0.0074)	(0.0097)	(0.0031)	(0.012)
Other religious ind.	-0.038*	0.0093	-0.0020	0.022*	-0.026***	0.035**
	(0.015)	(0.0087)	(0.0071)	(0.0097)	(0.0035)	(0.012)

	No PSE	Cert.	Diploma	Uni. Trans.	Trade	BA
G7 school change (none)						
No G6 enrollment	0.025***	-0.0096**	-0.0077*	-0.043***	-0.0069**	0.042***
	(0.0062)	(0.0036)	(0.0038)	(0.0048)	(0.0023)	(0.0062)
Voluntary change	0.058***	-0.0023	-0.0097***	-0.017***	0.0039**	-0.033***
	(0.0032)	(0.0019)	(0.0019)	(0.0027)	(0.0013)	(0.0032)
Compulsory change	0.036***	0.0053**	-0.0012	-0.0088***	-0.00056	-0.031***
	(0.0028)	(0.0018)	(0.0018)	(0.0025)	(0.0010)	(0.0029)
Grade 7 FSA (Meet ex. in both)						
Did not write	0.17***	-0.0042*	-0.017***	-0.030***	-0.00010	-0.12***
	(0.0037)	(0.0021)	(0.0022)	(0.0029)	(0.0014)	(0.0034)
Not yet meeting expectations in both	0.24***	0.020***	-0.015***	-0.029***	0.015***	-0.23***
	(0.0035)	(0.0022)	(0.0021)	(0.0027)	(0.0015)	(0.0028)
Meeting expectations in reading	0.14***	0.013***	-0.0046*	0.00082	0.0062***	-0.16***
	(0.0033)	(0.0020)	(0.0021)	(0.0028)	(0.0013)	(0.0030)
Meeting expectations in numeracy	0.11***	0.020***	0.0054*	-0.0022	0.0095***	-0.14***
	(0.0037)	(0.0023)	(0.0023)	(0.0030)	(0.0016)	(0.0032)
Exceeding expectations in reading	-0.073***	-0.023***	-0.021***	-0.025***	-0.013***	0.16***
	(0.0031)	(0.0018)	(0.0020)	(0.0028)	(0.0011)	(0.0036)
Exceeding expectations in numeracy	-0.067***	-0.024***	-0.029***	-0.052***	-0.013***	0.18***
	(0.0049)	(0.0028)	(0.0027)	(0.0039)	(0.0018)	(0.0055)
Exceeding expectations in both	-0.081***	-0.036***	-0.042***	-0.088***	-0.020***	0.27***
	(0.0048)	(0.0025)	(0.0025)	(0.0034)	(0.0014)	(0.0055)
Rural status (Urban)						
Rural	0.016***	0.028***	-0.012***	-0.049***	0.0074***	0.0092**
	(0.0026)	(0.0015)	(0.0019)	(0.0026)	(0.00094)	(0.0029)
Neighbourhood income (lowest)						
2nd quintile	-0.033***	-0.00060	0.0067***	0.014***	-0.00022	0.013***
	(0.0029)	(0.0018)	(0.0017)	(0.0024)	(0.0012)	(0.0028)
3rd quintile	-0.055***	0.00032	0.0033	0.021***	-0.0021	0.033***
	(0.0029)	(0.0018)	(0.0018)	(0.0025)	(0.0012)	(0.0028)
4th quintile	-0.076***	-0.0035	0.0071***	0.026***	-0.0046***	0.051***
	(0.0030)	(0.0018)	(0.0019)	(0.0025)	(0.0012)	(0.0029)
Highest quintile	-0.10***	-0.015***	0.000074	0.014***	-0.0074***	0.11***
	(0.0031)	(0.0019)	(0.0019)	(0.0026)	(0.0012)	(0.0031)
Grade 7 cohort (2002)						
2003	0.012**	0.0058*	-0.0060*	0.00080	0.0031*	-0.016***
	(0.0038)	(0.0023)	(0.0027)	(0.0032)	(0.0016)	(0.0038)
2004	-0.0024	0.0073**	-0.0031	0.0059	-0.0022	-0.0055
	(0.0038)	(0.0023)	(0.0027)	(0.0032)	(0.0015)	(0.0038)
2005	-0.013***	0.0035	-0.0065*	0.0058	-0.00045	0.011**
	(0.0038)	(0.0023)	(0.0027)	(0.0033)	(0.0016)	(0.0039)
2006	-0.017***	0.0070**	-0.025***	0.013***	-0.0012	0.024***
	(0.0038)	(0.0023)	(0.0026)	(0.0033)	(0.0016)	(0.0039)
2007	-0.019***	0.013***	-0.027***	0.013***	0.0013	0.018***
	(0.0039)	(0.0024)	(0.0026)	(0.0033)	(0.0016)	(0.0039)
2008	-0.014***	0.013***	-0.029***	0.023***	0.0015	0.0055
	(0.0040)	(0.0025)	(0.0027)	(0.0035)	(0.0017)	(0.0040)
2009	-0.018***	0.015***	-0.035***	0.028***	0.00057	0.0097*
	(0.0041)	(0.0025)	(0.0026)	(0.0035)	(0.0017)	(0.0040)
2010	-0.0087*	0.014***	-0.042***	0.027***	-0.0061***	0.015***
	(0.0041)	(0.0025)	(0.0026)	(0.0035)	(0.0016)	(0.0041)
2011	-0.014***	0.012***	-0.040***	0.033***	-0.0078***	0.017***
	(0.0041)	(0.0025)	(0.0026)	(0.0036)	(0.0016)	(0.0041)
Observations	233,410					

Notes: This table shows the results of a multinomial logistic regression model measuring program of entry up to three years after a student's expected Grade 12 year. The explanatory variables included in the model are categorical and the reference group for each variable is in parentheses next to the bolded variable title. Robust standard errors are in parentheses under each coefficient.
* p < 0.05, ** p < 0.01, *** p < 0.001.

Table 8 PSE entry descriptive results, students with parental T1FF data (2005-06 to 2011-12 cohorts)

N = 299,660	Sample Total	*Proportion with outcome* No PSE	Cert.	Diploma	Uni. Trans.	Trade	BA
Household income in Grade 7							
Low income	0.33	42.7	5.8	6.4	12.7	9.0	23.3
Middle income	0.33	32.1	7.2	8.0	15.8	10.5	26.3
High income	0.33	21.7	6.2	8.1	16.4	9.5	38.0
Lone-parent household in Grade 7							
Two-parent household	0.78	28.0	6.5	7.9	15.6	9.5	32.5
Lone-parent household	0.22	47.1	6.2	6.0	12.6	10.6	17.5
Male/Female							
Female	0.49	30.8	8.0	7.2	17.5	3.0	33.5
Male	0.51	33.5	5.0	7.7	12.6	16.1	25.1
Indigenous							
Non-Indigenous	0.89	28.8	6.4	8.0	15.7	9.4	31.7
Indigenous	0.11	58.7	6.9	3.6	9.0	11.9	9.9
Home language							
English	0.78	36.5	6.6	6.8	14.1	11.1	24.9
French	0.01	25.2	5.0	8.8	15.1	6.9	39.6
Chinese	0.07	11.1	3.5	7.6	11.6	2.7	63.5
Punjabi	0.05	13.0	7.1	12.8	25.6	6.2	35.3
South Asian	0.01	20.1	7.7	10.8	22.7	4.7	34.0
Korean	0.01	14.7	3.2	5.3	8.8	2.1	66.0
Other Asian	0.03	23.8	9.3	13.0	20.6	7.2	26.0
West European	0.01	33.5	7.3	9.7	15.8	8.7	25.2
East European	0.01	20.3	5.3	10.9	17.9	6.2	39.7
Semitic	0.01	21.2	5.3	8.8	20.8	3.5	39.9
Other or missing	0.01	30.2	6.0	10.1	19.8	6.0	28.2
Age in Grade 7							
Age 10 or 11	0.01	23.7	5.9	5.9	12.9	4.3	47.8
Age 12	0.95	31.4	6.5	7.6	15.2	9.6	29.7
Age 13 or 14	0.04	52.1	6.1	5.0	9.8	12.1	15.0
French immersion in Grade 7							
English language	0.92	33.5	6.5	7.5	14.8	10.0	27.7
French immersion	0.08	18.2	5.4	7.5	16.9	6.0	46.0
English language support in Grade 7							
Non-ELL student	0.94	32.3	6.4	7.5	15.0	10.0	28.8
ELL student	0.06	30.1	6.4	7.8	14.8	5.7	35.3
IEP in Grade 7							
No IEP	0.91	29.5	6.5	7.8	15.4	9.4	31.4
IEP	0.09	59.9	6.0	4.4	10.1	12.8	6.8
Grade 7 school type							
Public	0.88	32.7	6.5	7.5	15.0	10.0	28.3
Distance ed	0.02	49.4	7.2	5.7	12.5	9.7	15.4
Catholic independent	0.04	16.9	5.7	8.9	17.4	6.4	44.8
Other Christian ind.	0.04	32.5	6.5	8.0	13.7	10.6	28.7
Preparatory/IB ind.	0.01	18.1	2.0	3.2	6.3	1.4	69.0
Other non-religious ind.	0.01	43.8	6.2	5.3	11.5	8.8	24.8
Other religious ind.	0.01	11.5	6.3	9.6	25.0	3.8	43.8
Grade 7 school change							
No school change	0.79	29.6	6.3	7.8	15.6	9.4	31.2
No Grade 6 enrollment	0.02	33.3	6.3	6.8	11.3	6.4	35.9
Voluntary change	0.08	42.1	6.3	6.2	12.4	10.1	22.9
Compulsory change	0.11	42.6	7.2	6.5	12.9	11.9	18.9

N = 299,660	Sample Total	*Proportion with outcome* No PSE	Cert.	Diploma	Uni. Trans.	Trade	BA
Grade 7 FSA							
Did not write	0.13	48.0	6.3	6.0	13.1	9.1	17.5
Not yet meeting expectations	0.12	53.6	7.5	5.7	11.6	13.8	7.7
Meeting expectations in reading	0.09	44.3	7.9	6.6	15.9	11.3	14.1
Meeting expectations in numeracy	0.10	34.3	7.4	9.5	15.5	14.2	19.2
Meeting expectations in both	0.42	24.7	6.5	8.8	17.1	9.5	33.5
Exceeding expectations in reading	0.06	17.6	4.9	6.5	15.6	4.3	51.0
Exceeding expectations in numeracy	0.05	12.7	3.8	6.2	11.5	4.3	61.6
Exceeding expectations in both	0.04	12.3	3.2	4.2	8.2	2.2	69.9
Rural status in Grade 7							
Urban	0.87	30.5	6.1	7.8	15.8	9.1	30.7
Rural	0.13	44.4	8.5	5.6	9.3	13.7	18.6
Neighbourhood income in Grade 7							
Lowest quintile	0.15	42.6	6.8	6.9	12.0	9.8	21.9
2nd quintile	0.19	35.0	6.7	7.9	14.8	10.2	25.4
3rd quintile	0.21	32.5	6.8	7.7	15.7	10.4	26.9
4th quintile	0.23	29.9	6.6	7.8	16.0	10.0	29.7
Highest quintile	0.22	24.7	5.4	7.0	15.5	8.2	39.1
Grade 7 cohort							
2005	0.14	31.5	6.5	10.1	13.8	9.6	28.6
2006	0.15	32.6	6.2	7.9	14.4	10.2	28.7
2007	0.15	32.3	6.4	7.6	14.2	10.2	29.3
2008	0.15	32.2	6.2	7.5	14.8	10.2	29.1
2009	0.14	31.9	6.5	6.5	15.7	10.0	29.3
2010	0.14	32.2	6.7	6.5	15.7	9.0	29.8
2011	0.14	32.6	6.5	6.3	16.2	8.6	29.7

Table 9 PSE entry regression results, students with parental T1FF data (2005-06 to 2011-12 cohorts), without controlling for household income and lone parent status

	No PSE	Cert.	Diploma	Uni. Trans.	Trade	BA
Male/female (Female)						
Male	-0.0053***	-0.031***	0.0036***	-0.047***	0.15***	-0.067***
	(0.0016)	(0.00089)	(0.00092)	(0.0013)	(0.0014)	(0.0015)
Indigenous (No)						
Indigenous	0.14***	0.0070***	-0.028***	-0.026***	0.011***	-0.10***
	(0.0024)	(0.0015)	(0.0021)	(0.0026)	(0.0016)	(0.0034)
Home language (English)						
French	-0.084***	-0.017**	0.022**	0.0067	-0.032***	0.11***
	(0.011)	(0.0055)	(0.0073)	(0.0090)	(0.0069)	(0.011)
Chinese	-0.19***	-0.020***	0.012***	-0.019***	-0.071***	0.28***
	(0.0031)	(0.0018)	(0.0022)	(0.0026)	(0.0017)	(0.0036)
Punjabi	-0.21***	0.0059**	0.047***	0.083***	-0.050***	0.12***
	(0.0030)	(0.0023)	(0.0027)	(0.0035)	(0.0020)	(0.0039)
South Asian	-0.15***	0.0099*	0.031***	0.060***	-0.064***	0.11***
	(0.0061)	(0.0043)	(0.0047)	(0.0063)	(0.0034)	(0.0071)
Korean	-0.13***	-0.023***	-0.0098*	-0.050***	-0.079***	0.29***
	(0.0081)	(0.0040)	(0.0043)	(0.0053)	(0.0035)	(0.0084)
Other Asian	-0.11***	0.026***	0.054***	0.046***	-0.037***	0.018***
	(0.0045)	(0.0032)	(0.0035)	(0.0042)	(0.0028)	(0.0044)
West European	-0.018*	0.0057	0.022***	0.0085	-0.019***	0.0000030
	(0.0070)	(0.0041)	(0.0044)	(0.0056)	(0.0045)	(0.0062)
East European	-0.12***	-0.0089*	0.034***	0.026***	-0.043***	0.11***
	(0.0072)	(0.0042)	(0.0051)	(0.0064)	(0.0044)	(0.0074)
Semitic	-0.14***	-0.012**	0.018***	0.049***	-0.070***	0.15***
	(0.0073)	(0.0043)	(0.0053)	(0.0073)	(0.0038)	(0.0083)
Other or missing	-0.062***	-0.0066	0.029***	0.047***	-0.050***	0.043***
	(0.0085)	(0.0047)	(0.0059)	(0.0078)	(0.0047)	(0.0085)
Age in Grade 7 (Age 12)						
Age 10 or 11	-0.029**	-0.0016	-0.014*	-0.011	-0.035***	0.090***
	(0.011)	(0.0058)	(0.0058)	(0.0082)	(0.0065)	(0.010)
Age 13 or 14	0.083***	0.0019	-0.011***	-0.022***	-0.0014	-0.050***
	(0.0041)	(0.0024)	(0.0025)	(0.0035)	(0.0024)	(0.0043)
French immersion (No)						
Grade 7 French immersion	-0.10***	-0.0062***	0.0042*	0.015***	-0.025***	0.11***
	(0.0034)	(0.0018)	(0.0018)	(0.0023)	(0.0023)	(0.0025)
English language (No)						
Grade 7 ELL student	0.012**	0.0045*	-0.0059**	-0.0011	-0.017***	0.0079*
	(0.0039)	(0.0021)	(0.0022)	(0.0030)	(0.0029)	(0.0035)
IEP in Grade 7 (none)						
IEP	0.16***	0.012***	-0.011***	0.0022	0.0056**	-0.17***
	(0.0028)	(0.0017)	(0.0023)	(0.0029)	(0.0018)	(0.0045)
G7 school (public)						
Distance ed	0.056***	0.0086*	-0.0011	0.0044	-0.0081*	-0.060***
	(0.0062)	(0.0038)	(0.0041)	(0.0055)	(0.0038)	(0.0062)
Catholic independent	-0.079***	0.0021	0.012***	0.019***	-0.022***	0.067***
	(0.0042)	(0.0026)	(0.0027)	(0.0036)	(0.0027)	(0.0039)
Other Christian ind.	0.041***	0.0010	0.0039	-0.017***	0.0038	-0.032***
	(0.0044)	(0.0025)	(0.0026)	(0.0033)	(0.0029)	(0.0037)
Preparatory/IB ind.	0.025**	-0.032***	-0.036***	-0.074***	-0.074***	0.19***
	(0.0093)	(0.0038)	(0.0037)	(0.0050)	(0.0034)	(0.0085)
Other non-religious ind.	-0.011	-0.0087	-0.0061	0.0043	-0.029***	0.051***
	(0.0086)	(0.0048)	(0.0062)	(0.0086)	(0.0048)	(0.0099)
Other religious ind.	-0.039**	0.0098	0.00085	0.041***	-0.019*	0.0060
	(0.013)	(0.0064)	(0.0055)	(0.0085)	(0.0083)	(0.0089)

	No PSE	Cert.	Diploma	Uni. Trans.	Trade	BA
G7 school change (none)						
No G6 enrollment	0.030***	-0.0015	-0.011***	-0.039***	-0.020***	0.041***
	(0.0059)	(0.0033)	(0.0033)	(0.0043)	(0.0037)	(0.0056)
Voluntary change	0.055***	-0.0021	-0.0093***	-0.019***	-0.0018	-0.023***
	(0.0029)	(0.0016)	(0.0017)	(0.0023)	(0.0019)	(0.0028)
Compulsory change	0.036***	0.0053***	-0.0029	-0.015***	0.0020	-0.025***
	(0.0025)	(0.0015)	(0.0017)	(0.0021)	(0.0016)	(0.0026)
Grade 7 FSA (Meet ex. in both)						
Did not write	0.15***	-0.0018	-0.014***	-0.023***	-0.0057**	-0.10***
	(0.0029)	(0.0016)	(0.0017)	(0.0023)	(0.0018)	(0.0027)
Not yet meeting expectations in both	0.21***	0.012***	-0.017***	-0.033***	0.034***	-0.21***
	(0.0030)	(0.0017)	(0.0017)	(0.0022)	(0.0019)	(0.0023)
Meeting expectations in reading	0.13***	0.0083***	-0.010***	-0.0031	0.019***	-0.15***
	(0.0031)	(0.0017)	(0.0018)	(0.0025)	(0.0020)	(0.0026)
Meeting expectations in numeracy	0.085***	0.012***	0.0033	-0.0078**	0.033***	-0.12***
	(0.0030)	(0.0018)	(0.0018)	(0.0024)	(0.0020)	(0.0025)
Exceeding expectations in reading	-0.056***	-0.015***	-0.016***	-0.014***	-0.039***	0.14***
	(0.0032)	(0.0017)	(0.0020)	(0.0028)	(0.0021)	(0.0036)
Exceeding expectations in numeracy	-0.075***	-0.015***	-0.022***	-0.038***	-0.045***	0.19***
	(0.0038)	(0.0022)	(0.0021)	(0.0030)	(0.0021)	(0.0042)
Exceeding expectations in both	-0.075***	-0.024***	-0.037***	-0.075***	-0.065***	0.28***
	(0.0045)	(0.0023)	(0.0023)	(0.0031)	(0.0021)	(0.0050)
Rural status (Urban)						
Rural	0.029***	0.019***	-0.0083***	-0.055***	0.024***	-0.0083**
	(0.0023)	(0.0013)	(0.0017)	(0.0024)	(0.0014)	(0.0026)
Neighbourhood income (lowest)						
2nd quintile	-0.036***	-0.00042	0.0049**	0.015***	0.0062***	0.010***
	(0.0028)	(0.0015)	(0.0016)	(0.0022)	(0.0018)	(0.0026)
3rd quintile	-0.054***	0.0010	0.0039*	0.019***	0.0083***	0.022***
	(0.0027)	(0.0015)	(0.0016)	(0.0022)	(0.0018)	(0.0025)
4th quintile	-0.075***	-0.000042	0.0074***	0.021***	0.0056**	0.041***
	(0.0027)	(0.0015)	(0.0016)	(0.0022)	(0.0018)	(0.0025)
Highest quintile	-0.10***	-0.0076***	0.0021	0.019***	-0.0061***	0.097***
	(0.0028)	(0.0016)	(0.0017)	(0.0022)	(0.0018)	(0.0026)
Grade 7 cohort (2005)						
2006	0.0027	-0.0024	-0.020***	0.0087***	0.0063***	0.0045
	(0.0029)	(0.0016)	(0.0019)	(0.0023)	(0.0019)	(0.0028)
2007	0.0066*	0.0011	-0.022***	0.0077**	0.010***	-0.0036
	(0.0029)	(0.0017)	(0.0019)	(0.0024)	(0.0019)	(0.0028)
2008	0.012***	0.00054	-0.022***	0.012***	0.012***	-0.015***
	(0.0030)	(0.0017)	(0.0019)	(0.0024)	(0.0020)	(0.0028)
2009	0.0082**	0.0029	-0.033***	0.020***	0.0098***	-0.0083**
	(0.0030)	(0.0017)	(0.0019)	(0.0024)	(0.0020)	(0.0028)
2010	0.012***	0.0045**	-0.032***	0.020***	0.00084	-0.0049
	(0.0030)	(0.0017)	(0.0019)	(0.0024)	(0.0020)	(0.0028)
2011	0.014***	0.0030	-0.035***	0.024***	-0.0030	-0.0038
	(0.0030)	(0.0017)	(0.0019)	(0.0025)	(0.0019)	(0.0029)
Observations	299,660					

Notes: This table shows the results of a multinomial logistic regression model measuring program of entry up to three years after a student's expected Grade 12 year. The explanatory variables included in the model are categorical and the reference group for each variable is in parentheses next to the bolded variable title. Robust standard errors are in parentheses under each coefficient.
* p < 0.05, ** p < 0.01, *** p < 0.001.

Table 10 PSE entry regression results, students with parental T1FF data (2005-06 to 2011-12 cohorts), controlling for household income and lone parent status

	No PSE	Cert.	Diploma	Uni. Trans.	Trade	BA
G7 household income (low)						
Middle income	-0.068***	0.011***	0.0093***	0.017***	0.0087***	0.021***
	(0.0021)	(0.0011)	(0.0012)	(0.0016)	(0.0014)	(0.0019)
Highest	-0.14***	0.0071***	0.013***	0.026***	0.0035*	0.092***
	(0.0023)	(0.0013)	(0.0014)	(0.0019)	(0.0015)	(0.0022)
Lone-parent household (No)						
Lone-parent household	0.040***	-0.0022	-0.0028*	-0.0011	0.0019	-0.036***
	(0.0020)	(0.0012)	(0.0014)	(0.0018)	(0.0014)	(0.0022)
Male/female (Female)						
Male	-0.0026	-0.032***	0.0033***	-0.047***	0.15***	-0.069***
	(0.0016)	(0.00089)	(0.00092)	(0.0012)	(0.0014)	(0.0014)
Indigenous (No)						
Indigenous	0.11***	0.0088***	-0.025***	-0.022***	0.012***	-0.085***
	(0.0024)	(0.0015)	(0.0022)	(0.0026)	(0.0016)	(0.0034)
Home language (English)						
French	-0.078***	-0.017**	0.021**	0.0064	-0.032***	0.099***
	(0.011)	(0.0055)	(0.0072)	(0.0089)	(0.0070)	(0.011)
Chinese	-0.20***	-0.020***	0.013***	-0.018***	-0.072***	0.30***
	(0.0030)	(0.0018)	(0.0022)	(0.0027)	(0.0017)	(0.0036)
Punjabi	-0.22***	0.0044*	0.047***	0.084***	-0.051***	0.13***
	(0.0030)	(0.0022)	(0.0027)	(0.0036)	(0.0020)	(0.0039)
South Asian	-0.16***	0.0092*	0.032***	0.063***	-0.064***	0.12***
	(0.0059)	(0.0043)	(0.0048)	(0.0064)	(0.0033)	(0.0071)
Korean	-0.16***	-0.023***	-0.0086*	-0.048***	-0.080***	0.32***
	(0.0073)	(0.0040)	(0.0044)	(0.0054)	(0.0035)	(0.0083)
Other Asian	-0.12***	0.026***	0.055***	0.048***	-0.038***	0.032***
	(0.0043)	(0.0032)	(0.0035)	(0.0042)	(0.0028)	(0.0045)
West European	-0.036***	0.0066	0.024***	0.012*	-0.019***	0.012
	(0.0068)	(0.0041)	(0.0045)	(0.0057)	(0.0045)	(0.0063)
East European	-0.12***	-0.0091*	0.035***	0.028***	-0.043***	0.11***
	(0.0071)	(0.0042)	(0.0051)	(0.0064)	(0.0044)	(0.0073)
Semitic	-0.16***	-0.012**	0.020***	0.053***	-0.071***	0.17***
	(0.0067)	(0.0043)	(0.0054)	(0.0074)	(0.0038)	(0.0084)
Other or missing	-0.083***	-0.0064	0.030***	0.051***	-0.050***	0.058***
	(0.0081)	(0.0048)	(0.0060)	(0.0079)	(0.0047)	(0.0087)
Age in Grade 7 (Age 12)						
Age 10 or 11	-0.029**	-0.0016	-0.013*	-0.011	-0.035***	0.090***
	(0.010)	(0.0058)	(0.0058)	(0.0082)	(0.0065)	(0.0100)
Age 13 or 14	0.076***	0.0023	-0.010***	-0.021***	-0.0012	-0.045***
	(0.0040)	(0.0024)	(0.0026)	(0.0035)	(0.0024)	(0.0043)
French immersion (No)						
Grade 7 French immersion	-0.087***	-0.0069***	0.0028	0.012***	-0.025***	0.10***
	(0.0034)	(0.0018)	(0.0018)	(0.0023)	(0.0023)	(0.0025)
English language (No)						
Grade 7 ELL student	0.0024	0.0051*	-0.0051*	0.00076	-0.017***	0.014***
	(0.0039)	(0.0021)	(0.0022)	(0.0031)	(0.0029)	(0.0035)
IEP in Grade 7 (none)						
IEP	0.15***	0.013***	-0.010***	0.0038	0.0060***	-0.16***
	(0.0028)	(0.0017)	(0.0023)	(0.0029)	(0.0018)	(0.0044)

	No PSE	Cert.	Diploma	Uni. Trans.	Trade	BA
G7 school (public)						
Distance ed	0.056***	0.0070	-0.0014	0.0042	-0.0089*	-0.057***
	(0.0061)	(0.0037)	(0.0041)	(0.0056)	(0.0038)	(0.0062)
Catholic independent	-0.065***	0.0017	0.011***	0.017***	-0.021***	0.056***
	(0.0043)	(0.0026)	(0.0027)	(0.0036)	(0.0027)	(0.0039)
Other Christian ind.	0.052***	0.000087	0.0026	-0.019***	0.0033	-0.039***
	(0.0045)	(0.0024)	(0.0026)	(0.0033)	(0.0028)	(0.0036)
Preparatory/IB ind.	0.043***	-0.032***	-0.037***	-0.075***	-0.074***	0.17***
	(0.0094)	(0.0038)	(0.0037)	(0.0049)	(0.0035)	(0.0084)
Other non-religious ind.	-0.012	-0.0080	-0.0061	0.0045	-0.029***	0.050***
	(0.0086)	(0.0048)	(0.0062)	(0.0087)	(0.0048)	(0.0098)
Other religious ind.	-0.033*	0.0098	0.00050	0.040***	-0.018*	0.0014
	(0.013)	(0.0064)	(0.0055)	(0.0085)	(0.0083)	(0.0087)
G7 school change (none)						
No G6 enrollment	0.0095	0.00069	-0.0087*	-0.035***	-0.019***	0.052***
	(0.0057)	(0.0034)	(0.0034)	(0.0044)	(0.0038)	(0.0057)
Voluntary change	0.040***	-0.00086	-0.0078***	-0.016***	-0.0010	-0.014***
	(0.0029)	(0.0016)	(0.0018)	(0.0024)	(0.0019)	(0.0029)
Compulsory change	0.033***	0.0054***	-0.0026	-0.015***	0.0021	-0.023***
	(0.0025)	(0.0015)	(0.0017)	(0.0021)	(0.0016)	(0.0026)
Grade 7 FSA (Meet ex. in both)						
Did not write	0.14***	-0.00083	-0.013***	-0.020***	-0.0051**	-0.098***
	(0.0029)	(0.0016)	(0.0018)	(0.0023)	(0.0018)	(0.0027)
Not yet meeting expectations in both	0.20***	0.014***	-0.015***	-0.028***	0.035***	-0.20***
	(0.0029)	(0.0017)	(0.0017)	(0.0023)	(0.0020)	(0.0023)
Meeting expectations in reading	0.12***	0.0089***	-0.0088***	-0.00066	0.019***	-0.14***
	(0.0030)	(0.0017)	(0.0018)	(0.0025)	(0.0020)	(0.0026)
Meeting expectations in numeracy	0.076***	0.013***	0.0043*	-0.0062*	0.032***	-0.12***
	(0.0029)	(0.0018)	(0.0018)	(0.0024)	(0.0020)	(0.0026)
Exceeding expectations in reading	-0.050***	-0.015***	-0.016***	-0.014***	-0.039***	0.13***
	(0.0033)	(0.0017)	(0.0020)	(0.0028)	(0.0021)	(0.0035)
Exceeding expectations in numeracy	-0.068***	-0.015***	-0.021***	-0.038***	-0.044***	0.19***
	(0.0039)	(0.0022)	(0.0021)	(0.0030)	(0.0021)	(0.0042)
Exceeding expectations in both	-0.062***	-0.024***	-0.037***	-0.074***	-0.064***	0.26***
	(0.0047)	(0.0023)	(0.0023)	(0.0031)	(0.0022)	(0.0050)
Rural status (Urban)						
Rural	0.028***	0.019***	-0.0083***	-0.055***	0.024***	-0.0065*
	(0.0023)	(0.0013)	(0.0017)	(0.0024)	(0.0014)	(0.0026)
Neighbourhood income (lowest)						
2nd quintile	-0.022***	-0.0014	0.0035*	0.012***	0.0056**	0.0017
	(0.0027)	(0.0016)	(0.0017)	(0.0023)	(0.0018)	(0.0026)
3rd quintile	-0.032***	-0.00043	0.0016	0.015***	0.0075***	0.0080**
	(0.0027)	(0.0016)	(0.0017)	(0.0022)	(0.0018)	(0.0026)
4th quintile	-0.043***	-0.0018	0.0042*	0.015***	0.0048**	0.021***
	(0.0027)	(0.0016)	(0.0017)	(0.0022)	(0.0018)	(0.0026)
Highest quintile	-0.063***	-0.0093***	-0.0015	0.012***	-0.0064***	0.068***
	(0.0028)	(0.0016)	(0.0017)	(0.0023)	(0.0018)	(0.0027)

	No PSE	Cert.	Diploma	Uni. Trans.	Trade	BA
Grade 7 cohort (2005)						
2006	0.0036	-0.0024	-0.020***	0.0086***	0.0063***	0.0038
	(0.0029)	(0.0016)	(0.0019)	(0.0023)	(0.0019)	(0.0027)
2007	0.0065*	0.0011	-0.022***	0.0077***	0.010***	-0.0035
	(0.0029)	(0.0017)	(0.0019)	(0.0024)	(0.0019)	(0.0028)
2008	0.0069*	0.00073	-0.021***	0.013***	0.012***	-0.011***
	(0.0029)	(0.0017)	(0.0019)	(0.0024)	(0.0020)	(0.0028)
2009	0.0032	0.0031	-0.032***	0.021***	0.0098***	-0.0047
	(0.0030)	(0.0017)	(0.0019)	(0.0024)	(0.0020)	(0.0028)
2010	0.0070*	0.0047**	-0.032***	0.020***	0.00082	-0.0012
	(0.0030)	(0.0017)	(0.0019)	(0.0024)	(0.0020)	(0.0028)
2011	0.0089**	0.0031	-0.034***	0.025***	-0.0031	0.00013
	(0.0030)	(0.0017)	(0.0019)	(0.0025)	(0.0019)	(0.0029)
Observations			299,660			

Notes: This table shows the results of a multinomial logistic regression model measuring program of entry up to three years after a student's expected Grade 12 year. The explanatory variables included in the model are categorical and the reference group for each variable is in parentheses next to the bolded variable title. Robust standard errors are in parentheses under each coefficient.

* p < 0.05, ** p < 0.01, *** p < 0.001.

Table 11 PSE entry descriptive results, students with low household income (2005-06 to 2011-12 cohorts)

N = 99,890	Sample Total	*Proportion with outcome*					
		No PSE	Cert.	Diploma	Uni. Trans.	Trade	BA
Lone-parent household in Grade 7							
Two-parent household	0.58	35.4	5.7	7.2	13.7	8.1	29.9
Lone-parent household	0.42	52.6	6.0	5.4	11.3	10.3	14.4
Male/Female							
Female	0.49	41.4	7.3	6.2	15.0	3.5	26.6
Male	0.51	43.9	4.4	6.6	10.5	14.4	20.1
Indigenous							
Non-Indigenous	0.82	37.1	5.8	7.2	14.0	8.8	27.1
Indigenous	0.18	68.7	6.0	2.6	6.7	10.3	5.7
Home language							
English	0.69	52.8	6.0	5.0	10.8	11.0	14.4
French	0.00	35.7	4.8	7.1	14.3	7.1	31.0
Chinese	0.12	12.9	3.5	7.8	12.1	2.9	60.9
Punjabi	0.05	16.4	7.5	12.4	25.2	6.6	31.9
South Asian	0.02	24.7	7.6	11.8	22.9	4.7	29.4
Korean	0.02	14.3	3.8	5.5	8.9	2.1	65.8
Other Asian	0.04	28.3	8.2	13.0	18.6	7.4	24.5
West European	0.02	44.7	7.1	9.4	14.1	7.6	16.5
East European	0.01	29.7	6.3	11.7	18.0	8.1	27.0
Semitic	0.02	25.1	5.6	8.9	22.3	3.9	34.1
Other or missing	0.01	37.6	4.8	8.8	20.0	5.6	23.2
Age in Grade 7							
Age 10 or 11	0.01	31.0	6.9	5.2	13.8	5.2	37.9
Age 12	0.94	41.7	5.9	6.6	13.0	9.0	23.9
Age 13 or 14	0.05	61.8	4.9	3.8	7.8	10.2	11.5
French immersion in Grade 7							
English language	0.95	43.5	5.9	6.4	12.5	9.2	22.5
French immersion	0.05	26.8	5.9	7.4	16.0	6.3	37.7
English language support in Grade 7							
Non-ELL student	0.88	44.0	5.9	6.3	12.6	9.6	21.6
ELL student	0.12	32.9	5.5	7.1	13.3	5.2	35.9
IEP in Grade 7							
No IEP	0.89	39.1	6.0	6.8	13.4	8.8	25.8
IEP	0.11	70.1	4.9	3.2	7.2	10.7	3.8
Grade 7 school type							
Public	0.91	43.0	5.9	6.4	12.7	9.1	23.0
Distance ed	0.02	57.6	6.3	5.2	9.9	8.9	12.6
Catholic independent	0.02	26.4	5.8	9.1	14.9	7.7	36.1
Other Christian ind.	0.02	40.8	6.3	7.1	12.6	9.2	23.5
Preparatory/IB ind.	0.01	25.7	1.4	2.9	7.1	1.4	61.4
Other non-religious ind.	0.01	57.9	6.3	3.2	8.4	10.5	14.7
Other religious ind.	0.01	16.9	7.0	9.9	28.2	4.2	32.4
Grade 7 school change							
No school change	0.74	39.5	5.8	6.8	13.6	8.8	25.4
No Grade 6 enrollment	0.04	34.1	5.8	6.6	11.1	5.8	36.6
Voluntary change	0.11	52.8	5.4	5.3	10.2	9.2	17.1
Compulsory change	0.11	56.8	6.4	4.9	9.5	11.3	11.2

N = 99,890	Sample Total	*Proportion with outcome* No PSE	Cert.	Diploma	Uni. Trans.	Trade	BA
Grade 7 FSA							
Did not write	0.16	56.4	5.6	5.1	10.1	8.1	14.7
Not yet meeting expectations	0.15	62.9	6.3	4.5	9.3	11.4	5.7
Meeting expectations in reading	0.10	54.6	6.6	5.3	13.5	9.8	10.3
Meeting expectations in numeracy	0.11	40.3	6.7	8.6	13.9	11.6	18.9
Meeting expectations in both	0.36	32.5	6.1	7.8	15.1	9.2	29.3
Exceeding expectations in reading	0.04	26.2	4.7	6.1	15.1	4.5	43.9
Exceeding expectations in numeracy	0.05	15.6	3.2	5.5	9.7	3.8	62.3
Exceeding expectations in both	0.02	15.6	2.5	4.1	8.2	2.5	66.7
Rural status in Grade 7							
Urban	0.86	40.4	5.6	6.8	13.5	8.5	25.2
Rural	0.14	56.7	7.1	4.2	7.6	12.4	11.9
Neighbourhood income in Grade 7							
Lowest quintile	0.23	50.7	6.0	5.7	10.4	9.0	18.2
2nd quintile	0.22	43.9	5.8	6.8	12.9	9.4	21.1
3rd quintile	0.21	41.2	6.2	6.8	13.3	9.6	22.9
4th quintile	0.19	39.4	6.1	6.7	13.8	9.1	25.0
Highest quintile	0.15	35.2	5.0	6.2	13.5	7.7	32.5
Grade 7 cohort							
2005	0.14	42.0	5.9	9.1	11.2	9.1	22.8
2006	0.15	43.2	5.5	6.5	12.3	9.4	23.1
2007	0.15	42.9	5.6	6.5	12.4	9.5	23.2
2008	0.15	42.8	5.7	6.4	12.2	9.3	23.5
2009	0.14	42.2	6.0	5.5	13.4	9.5	23.6
2010	0.14	42.7	6.4	5.5	13.6	8.4	23.4
2011	0.14	43.0	5.9	5.7	13.8	8.1	23.5

Table 12 PSE entry regression results, students with low household income (2005-06 to 2011-12 cohorts)

	No PSE	Cert.	Diploma	Uni. Trans.	Trade	BA
Lone-parent household (No)						
Lone-parent household	0.047***	0.00020	-0.0024	-0.0031	0.0026	-0.045***
	(0.0029)	(0.0016)	(0.0017)	(0.0023)	(0.0018)	(0.0026)
Male/female (Female)						
Male	-0.0029	-0.029***	0.0045**	-0.041***	0.12***	-0.054***
	(0.0029)	(0.0015)	(0.0015)	(0.0020)	(0.0023)	(0.0023)
Indigenous (No)						
Indigenous	0.13***	0.0076***	-0.025***	-0.029***	0.0016	-0.082***
	(0.0040)	(0.0021)	(0.0031)	(0.0037)	(0.0024)	(0.0049)
Home language (English)						
French	-0.11***	-0.010	0.0049	0.019	-0.020	0.12***
	(0.022)	(0.011)	(0.011)	(0.016)	(0.014)	(0.020)
Chinese	-0.26***	-0.0095**	0.030***	0.014***	-0.063***	0.29***
	(0.0054)	(0.0029)	(0.0033)	(0.0041)	(0.0029)	(0.0054)
Punjabi	-0.28***	0.021***	0.060***	0.10***	-0.039***	0.13***
	(0.0062)	(0.0042)	(0.0046)	(0.0060)	(0.0037)	(0.0061)
South Asian	-0.21***	0.022**	0.051***	0.083***	-0.060***	0.11***
	(0.011)	(0.0070)	(0.0072)	(0.0094)	(0.0053)	(0.0098)
Korean	-0.21***	-0.0045	0.0092	-0.021**	-0.074***	0.30***
	(0.011)	(0.0060)	(0.0056)	(0.0067)	(0.0049)	(0.010)
Other Asian	-0.17***	0.026***	0.064***	0.050***	-0.029***	0.056***
	(0.0077)	(0.0048)	(0.0052)	(0.0060)	(0.0046)	(0.0062)
West European	-0.037**	0.013*	0.035***	0.017*	-0.025***	-0.0028
	(0.011)	(0.0064)	(0.0068)	(0.0081)	(0.0068)	(0.0084)
East European	-0.15***	0.0080	0.050***	0.051***	-0.024**	0.068***
	(0.014)	(0.0078)	(0.0088)	(0.011)	(0.0085)	(0.011)
Semitic	-0.20***	0.00098	0.034***	0.085***	-0.062***	0.14***
	(0.011)	(0.0061)	(0.0067)	(0.0095)	(0.0055)	(0.0098)
Other or missing	-0.11***	-0.0099	0.033***	0.074***	-0.053***	0.065***
	(0.013)	(0.0063)	(0.0079)	(0.011)	(0.0065)	(0.011)
Age in Grade 7 (Age 12)						
Age 10 or 11	-0.055**	0.0068	-0.0057	0.0040	-0.030**	0.080***
	(0.019)	(0.010)	(0.0098)	(0.014)	(0.011)	(0.016)
Age 13 or 14	0.079***	-0.0042	-0.013***	-0.020***	-0.0050	-0.038***
	(0.0066)	(0.0034)	(0.0037)	(0.0051)	(0.0037)	(0.0061)
French immersion (No)						
Grade 7 French immersion	-0.11***	0.0026	0.012***	0.021***	-0.016***	0.085***
	(0.0072)	(0.0034)	(0.0033)	(0.0044)	(0.0048)	(0.0047)
English language (No)						
Grade 7 ELL student	-0.000014	0.00062	-0.0057*	0.00079	-0.017***	0.021***
	(0.0055)	(0.0027)	(0.0027)	(0.0037)	(0.0037)	(0.0040)
IEP in Grade 7 (none)						
IEP	0.16***	0.0070**	-0.010**	-0.0045	-0.0017	-0.15***
	(0.0051)	(0.0027)	(0.0035)	(0.0045)	(0.0028)	(0.0071)
G7 school (Public)						
Distance ed	0.024*	0.0052	0.0044	0.0032	-0.015*	-0.022*
	(0.010)	(0.0060)	(0.0069)	(0.0089)	(0.0059)	(0.0099)
Catholic independent	-0.085***	0.0057	0.022***	0.0096	-0.0066	0.054***
	(0.0099)	(0.0058)	(0.0061)	(0.0073)	(0.0063)	(0.0079)
Other Christian ind.	0.0075	0.0055	0.0086	-0.0028	-0.0052	-0.014
	(0.0092)	(0.0051)	(0.0054)	(0.0067)	(0.0055)	(0.0071)
Preparatory/IB ind.	0.011	-0.035***	-0.027***	-0.048***	-0.062***	0.16***
	(0.020)	(0.0070)	(0.0079)	(0.011)	(0.0079)	(0.017)

	No PSE	Cert.	Diploma	Uni. Trans.	Trade	BA
Other non-religious ind.	-0.024	-0.0060	-0.0091	0.0076	-0.011	0.042**
	(0.014)	(0.0072)	(0.0096)	(0.014)	(0.0081)	(0.016)
Other religious ind.	-0.035	0.019	0.0063	0.049***	-0.0014	-0.038***
	(0.023)	(0.011)	(0.0084)	(0.013)	(0.014)	(0.011)
G7 school change (none)						
No G6 enrollment	0.0031	0.0026	-0.0066	-0.028***	-0.016***	0.045***
	(0.0078)	(0.0042)	(0.0038)	(0.0050)	(0.0048)	(0.0062)
Voluntary change	0.048***	-0.0042	-0.0048	-0.017***	-0.0023	-0.019***
	(0.0046)	(0.0024)	(0.0026)	(0.0034)	(0.0028)	(0.0040)
Compulsory change	0.036***	0.0046	-0.0018	-0.019***	0.0036	-0.024***
	(0.0046)	(0.0025)	(0.0029)	(0.0036)	(0.0028)	(0.0044)
Grade 7 FSA (Meet ex. in both)						
Did not write	0.16***	-0.0022	-0.014***	-0.031***	-0.0097***	-0.10***
	(0.0048)	(0.0025)	(0.0026)	(0.0034)	(0.0029)	(0.0039)
Not yet meeting expectations in both	0.20***	0.0058*	-0.015***	-0.031***	0.015***	-0.18***
	(0.0047)	(0.0025)	(0.0026)	(0.0034)	(0.0030)	(0.0035)
Meeting expectations in reading	0.13***	0.0012	-0.0094**	-0.000057	0.0054	-0.12***
	(0.0052)	(0.0027)	(0.0030)	(0.0040)	(0.0033)	(0.0043)
Meeting expectations in numeracy	0.075***	0.0100***	0.0037	-0.0053	0.016***	-0.100***
	(0.0051)	(0.0028)	(0.0028)	(0.0037)	(0.0032)	(0.0038)
Exceeding expectations in reading	-0.049***	-0.015***	-0.013***	-0.0017	-0.036***	0.11***
	(0.0071)	(0.0034)	(0.0039)	(0.0055)	(0.0042)	(0.0069)
Exceeding expectations in numeracy	-0.057***	-0.012**	-0.017***	-0.031***	-0.036***	0.15***
	(0.0084)	(0.0040)	(0.0037)	(0.0053)	(0.0043)	(0.0074)
Exceeding expectations in both	-0.060***	-0.023***	-0.026***	-0.050***	-0.055***	0.21***
	(0.011)	(0.0048)	(0.0047)	(0.0066)	(0.0052)	(0.011)
Rural status (Urban)						
Rural	0.020***	0.013***	-0.0063*	-0.044***	0.018***	-0.0015
	(0.0041)	(0.0021)	(0.0027)	(0.0038)	(0.0024)	(0.0042)
Neighbourhood income (lowest)						
2nd quintile	-0.021***	-0.0021	0.0044	0.012***	0.0056*	0.0013
	(0.0042)	(0.0022)	(0.0023)	(0.0032)	(0.0026)	(0.0035)
3rd quintile	-0.035***	0.00033	0.0042	0.012***	0.0077**	0.011**
	(0.0043)	(0.0023)	(0.0024)	(0.0032)	(0.0027)	(0.0036)
4th quintile	-0.047***	0.00036	0.0048	0.015***	0.0051	0.022***
	(0.0045)	(0.0024)	(0.0025)	(0.0033)	(0.0028)	(0.0038)
Highest quintile	-0.054***	-0.0067**	0.00066	0.014***	-0.0040	0.050***
	(0.0049)	(0.0025)	(0.0026)	(0.0036)	(0.0030)	(0.0040)
Grade 7 cohort (2005)						
2006	0.00097	-0.0030	-0.023***	0.015***	0.0039	0.0067
	(0.0052)	(0.0027)	(0.0031)	(0.0038)	(0.0032)	(0.0043)
2007	0.0020	-0.0020	-0.022***	0.014***	0.0062	0.0017
	(0.0052)	(0.0027)	(0.0031)	(0.0038)	(0.0033)	(0.0043)
2008	0.0025	0.0013	-0.022***	0.013***	0.0070*	-0.0018
	(0.0053)	(0.0028)	(0.0032)	(0.0038)	(0.0034)	(0.0043)
2009	-0.0019	0.0033	-0.033***	0.022***	0.0083*	0.00096
	(0.0054)	(0.0028)	(0.0031)	(0.0039)	(0.0034)	(0.0044)
2010	0.0018	0.0073*	-0.032***	0.024***	-0.00063	-0.00038
	(0.0054)	(0.0029)	(0.0031)	(0.0039)	(0.0033)	(0.0044)
2011	0.0048	0.0023	-0.031***	0.025***	-0.0039	0.0023
	(0.0054)	(0.0028)	(0.0031)	(0.0039)	(0.0033)	(0.0044)
Observations			99,890			

Notes: This table shows the results of a multinomial logistic regression model measuring program of entry up to three years after a student's expected Grade 12 year. The explanatory variables included in the model are categorical and the reference group for each variable is in parentheses next to the bolded variable title. Robust standard errors are in parentheses under each coefficient.

* p < 0.05, ** p < 0.01, *** p < 0.001.

Table 13 PSE entry descriptive results, students with middle household income (2005-06 to 2011-12 cohorts)

N = 99,890	Sample Total	*Proportion with outcome* No PSE	Cert.	Diploma	Uni. Trans.	Trade	BA
Lone-parent household in Grade 7							
Two-parent household	0.81	30.6	7.4	8.2	16.0	10.3	27.5
Lone-parent household	0.19	38.8	6.6	7.1	14.8	11.5	21.2
Male/Female							
Female	0.49	30.4	9.2	7.8	18.7	3.2	30.7
Male	0.51	33.8	5.3	8.1	13.0	17.5	22.2
Indigenous							
Non-Indigenous	0.90	29.9	7.2	8.4	16.4	10.2	27.9
Indigenous	0.10	53.3	7.7	4.1	10.4	13.2	11.2
Home language							
English	0.76	37.4	7.4	7.1	14.6	12.1	21.4
French	0.00	28.3	4.3	10.9	17.4	6.5	32.6
Chinese	0.06	9.3	3.9	7.9	12.2	2.6	64.1
Punjabi	0.07	11.9	7.5	13.2	26.0	6.5	34.8
South Asian	0.01	17.8	8.2	11.6	24.0	4.8	34.2
Korean	0.01	14.7	2.7	5.3	9.3	2.7	65.3
Other Asian	0.04	22.4	10.5	13.5	21.4	7.3	24.9
West European	0.01	29.0	8.0	10.9	16.7	10.9	25.4
East European	0.01	18.6	5.4	10.9	18.6	6.2	40.3
Semitic	0.01	18.3	5.6	9.9	19.7	4.2	43.7
Other or missing	0.01	26.8	7.3	11.0	19.5	6.1	30.5
Age in Grade 7							
Age 10 or 11	0.01	24.6	7.0	5.3	14.0	3.5	45.6
Age 12	0.96	31.4	7.2	8.1	16.1	10.4	26.8
Age 13 or 14	0.04	51.2	7.4	5.4	9.5	13.6	13.0
French immersion in Grade 7							
English language	0.92	33.1	7.3	8.0	15.6	10.8	25.2
French immersion	0.08	20.4	6.0	8.0	18.1	7.2	40.3
English language support in Grade 7							
Non-ELL student	0.95	32.5	7.2	7.9	15.7	10.7	25.9
ELL student	0.05	25.4	8.5	8.8	17.3	6.7	33.1
IEP in Grade 7							
No IEP	0.92	29.8	7.3	8.3	16.3	10.2	28.2
IEP	0.08	58.2	6.5	4.5	10.7	13.8	6.3
Grade 7 school type							
Public	0.88	32.4	7.2	8.0	15.9	10.7	25.8
Distance ed	0.02	48.2	8.3	6.1	11.8	11.0	14.0
Catholic independent	0.04	18.8	6.8	9.4	19.1	6.8	39.0
Other Christian ind.	0.04	34.3	7.5	8.0	12.3	12.9	24.9
Preparatory/IB ind.	0.01	23.2	3.6	3.6	7.1	1.8	60.7
Other non-religious ind.	0.01	41.7	6.7	6.7	13.3	8.3	25.0
Other religious ind.	0.01	8.3	7.1	9.5	26.2	3.6	44.0
Grade 7 school change							
No school change	0.80	30.0	7.1	8.3	16.4	10.3	27.9
No Grade 6 enrollment	0.01	37.0	8.0	7.0	12.0	9.0	27.0
Voluntary change	0.08	38.8	7.2	6.8	13.9	10.5	22.9
Compulsory change	0.11	42.3	7.9	7.0	13.1	12.2	17.4

N = 99,890	Sample Total	*Proportion with outcome* No PSE	Cert.	Diploma	Uni. Trans.	Trade	BA
Grade 7 FSA							
Did not write	0.12	46.6	7.0	6.5	14.2	10.2	15.5
Not yet meeting expectations	0.12	50.0	8.6	6.5	12.7	14.6	7.6
Meeting expectations in reading	0.10	43.4	9.0	6.7	16.5	11.6	12.8
Meeting expectations in numeracy	0.10	34.1	8.0	9.9	15.6	15.3	16.9
Meeting expectations in both	0.42	25.5	7.1	9.2	17.7	10.1	30.4
Exceeding expectations in reading	0.06	19.1	5.9	7.2	16.5	5.1	46.1
Exceeding expectations in numeracy	0.05	13.4	4.4	6.5	12.8	5.0	58.2
Exceeding expectations in both	0.03	13.0	3.7	4.7	8.7	2.8	67.1
Rural status in Grade 7							
Urban	0.87	30.6	6.9	8.3	16.7	9.9	27.5
Rural	0.13	42.6	9.4	6.2	9.2	14.6	17.9
Neighbourhood income in Grade 7							
Lowest quintile	0.16	38.2	7.6	7.9	13.2	10.2	22.9
2nd quintile	0.21	32.5	7.3	8.5	15.8	11.0	25.0
3rd quintile	0.23	31.9	7.5	8.1	16.2	10.8	25.4
4th quintile	0.23	31.1	7.5	8.0	16.6	10.6	26.1
Highest quintile	0.18	28.0	6.1	7.3	16.5	9.8	32.3
Grade 7 cohort							
2005	0.14	31.4	7.2	10.9	14.5	10.3	25.7
2006	0.15	32.9	6.6	8.8	14.6	11.1	26.0
2007	0.15	32.4	7.3	8.2	14.5	10.8	26.9
2008	0.15	31.8	7.0	7.9	15.9	10.9	26.5
2009	0.14	32.2	7.6	6.9	16.5	11.0	25.9
2010	0.14	31.9	7.3	6.8	17.0	10.2	26.7
2011	0.14	32.5	7.6	6.5	17.7	9.3	26.4

Table 14 PSE entry regression results, students with middle household income (2005-06 to 2011-12 cohorts)

	No PSE	Cert.	Diploma	Uni. Trans.	Trade	BA
Lone-parent household (No)						
Lone-parent household	0.027***	-0.0081***	-0.0020	-0.0021	0.0012	-0.016***
	(0.0035)	(0.0022)	(0.0023)	(0.0030)	(0.0023)	(0.0034)
Male/female (Female)						
Male	0.0018	-0.040***	0.0019	-0.054***	0.16***	-0.069***
	(0.0028)	(0.0016)	(0.0016)	(0.0022)	(0.0025)	(0.0025)
Indigenous (No)						
Indigenous	0.10***	0.0049	-0.029***	-0.024***	0.012***	-0.066***
	(0.0045)	(0.0028)	(0.0039)	(0.0047)	(0.0030)	(0.0057)
Home language (English)						
French	-0.071***	-0.022*	0.028*	0.032	-0.048***	0.081***
	(0.021)	(0.010)	(0.014)	(0.018)	(0.012)	(0.021)
Chinese	-0.21***	-0.022***	0.016***	-0.016**	-0.081***	0.31***
	(0.0056)	(0.0035)	(0.0041)	(0.0049)	(0.0032)	(0.0066)
Punjabi	-0.23***	0.0017	0.052***	0.085***	-0.056***	0.15***
	(0.0046)	(0.0035)	(0.0042)	(0.0054)	(0.0031)	(0.0060)
South Asian	-0.17***	0.0036	0.036***	0.064***	-0.070***	0.14***
	(0.0099)	(0.0071)	(0.0080)	(0.010)	(0.0058)	(0.012)
Korean	-0.13***	-0.041***	-0.015	-0.041***	-0.090***	0.32***
	(0.017)	(0.0075)	(0.0090)	(0.012)	(0.0072)	(0.018)
Other Asian	-0.12***	0.029***	0.060***	0.045***	-0.044***	0.030***
	(0.0073)	(0.0053)	(0.0059)	(0.0067)	(0.0046)	(0.0070)
West European	-0.055***	0.0017	0.029***	0.0081	-0.011	0.028**
	(0.012)	(0.0071)	(0.0080)	(0.0098)	(0.0082)	(0.011)
East European	-0.14***	-0.013	0.033***	0.028**	-0.050***	0.14***
	(0.012)	(0.0071)	(0.0085)	(0.011)	(0.0073)	(0.012)
Semitic	-0.16***	-0.018*	0.023*	0.035*	-0.082***	0.20***
	(0.015)	(0.0088)	(0.011)	(0.014)	(0.0074)	(0.017)
Other or missing	-0.075***	-0.0054	0.032**	0.036**	-0.052***	0.065***
	(0.015)	(0.0088)	(0.011)	(0.013)	(0.0088)	(0.015)
Age in Grade 7 (Age 12)						
Age 10 or 11	-0.012	0.0031	-0.023*	-0.012	-0.051***	0.095***
	(0.019)	(0.011)	(0.010)	(0.015)	(0.011)	(0.018)
Age 13 or 14	0.078***	0.0081	-0.0100*	-0.033***	0.0020	-0.045***
	(0.0074)	(0.0047)	(0.0047)	(0.0062)	(0.0045)	(0.0075)
French immersion (No)						
Grade 7 French immersion	-0.094***	-0.0087*	0.0058	0.017***	-0.018***	0.098***
	(0.0060)	(0.0034)	(0.0033)	(0.0042)	(0.0042)	(0.0044)
English language (No)						
Grade 7 ELL student	0.0052	0.014***	-0.0065	-0.0013	-0.012*	0.0011
	(0.0075)	(0.0039)	(0.0041)	(0.0055)	(0.0053)	(0.0062)
IEP in Grade 7 (none)						
IEP	0.16***	0.012***	-0.018***	0.00095	0.0058	-0.16***
	(0.0051)	(0.0033)	(0.0042)	(0.0053)	(0.0033)	(0.0078)
G7 school (Public)						
Distance ed	0.067***	0.011	-0.0021	-0.011	-0.00029	-0.064***
	(0.0099)	(0.0062)	(0.0066)	(0.0084)	(0.0065)	(0.0090)
Catholic independent	-0.071***	0.0072	0.012*	0.028***	-0.025***	0.049***
	(0.0076)	(0.0050)	(0.0050)	(0.0067)	(0.0050)	(0.0069)
Other Christian ind.	0.047***	0.0039	0.0012	-0.035***	0.015**	-0.032***
	(0.0077)	(0.0045)	(0.0046)	(0.0056)	(0.0051)	(0.0063)
Preparatory/IB ind.	0.054*	-0.033***	-0.030**	-0.067***	-0.079***	0.15***
	(0.024)	(0.0099)	(0.010)	(0.013)	(0.0089)	(0.022)

	No PSE	Cert.	Diploma	Uni. Trans.	Trade	BA
Other non-religious ind.	-0.017	-0.0068	-0.0047	0.014	-0.041***	0.056**
	(0.017)	(0.0099)	(0.012)	(0.018)	(0.0089)	(0.019)
Other religious ind.	-0.069**	0.016	0.0024	0.051***	-0.011	0.0098
	(0.023)	(0.011)	(0.0096)	(0.015)	(0.015)	(0.014)
G7 school change (none)						
No G6 enrollment	0.034*	0.0019	-0.0053	-0.036***	-0.019*	0.024
	(0.014)	(0.0082)	(0.0085)	(0.011)	(0.0085)	(0.013)
Voluntary change	0.035***	-0.00071	-0.0084**	-0.012**	-0.0056	-0.0077
	(0.0052)	(0.0030)	(0.0031)	(0.0043)	(0.0034)	(0.0049)
Compulsory change	0.036***	0.0054*	-0.0012	-0.020***	-0.00079	-0.020***
	(0.0044)	(0.0027)	(0.0029)	(0.0037)	(0.0029)	(0.0044)
Grade 7 FSA (Meet ex. in both)						
Did not write	0.14***	-0.0019	-0.014***	-0.019***	-0.0055	-0.095***
	(0.0051)	(0.0028)	(0.0032)	(0.0042)	(0.0033)	(0.0046)
Not yet meeting expectations in both	0.19***	0.016***	-0.017***	-0.036***	0.034***	-0.19***
	(0.0050)	(0.0030)	(0.0029)	(0.0038)	(0.0034)	(0.0036)
Meeting expectations in reading	0.13***	0.013***	-0.013***	-0.0046	0.017***	-0.14***
	(0.0052)	(0.0030)	(0.0031)	(0.0042)	(0.0036)	(0.0043)
Meeting expectations in numeracy	0.085***	0.013***	0.00096	-0.014***	0.036***	-0.12***
	(0.0052)	(0.0032)	(0.0031)	(0.0041)	(0.0035)	(0.0042)
Exceeding expectations in reading	-0.057***	-0.014***	-0.014***	-0.013**	-0.038***	0.14***
	(0.0056)	(0.0032)	(0.0037)	(0.0050)	(0.0038)	(0.0063)
Exceeding expectations in numeracy	-0.079***	-0.016***	-0.024***	-0.033***	-0.045***	0.20***
	(0.0068)	(0.0040)	(0.0038)	(0.0056)	(0.0039)	(0.0076)
Exceeding expectations in both	-0.085***	-0.026***	-0.036***	-0.077***	-0.065***	0.29***
	(0.0080)	(0.0043)	(0.0044)	(0.0058)	(0.0042)	(0.0093)
Rural status (Urban)						
Rural	0.032***	0.022***	-0.0060*	-0.068***	0.025***	-0.0047
	(0.0041)	(0.0023)	(0.0029)	(0.0043)	(0.0026)	(0.0044)
Neighbourhood income (lowest)						
2nd quintile	-0.028***	-0.0029	0.0024	0.013***	0.011***	0.0045
	(0.0047)	(0.0027)	(0.0028)	(0.0038)	(0.0031)	(0.0042)
3rd quintile	-0.033***	-0.00015	0.0013	0.011**	0.010**	0.011**
	(0.0047)	(0.0027)	(0.0028)	(0.0038)	(0.0031)	(0.0042)
4th quintile	-0.044***	0.0010	0.0043	0.015***	0.0081**	0.016***
	(0.0047)	(0.0028)	(0.0029)	(0.0039)	(0.0031)	(0.0043)
Highest quintile	-0.064***	-0.010***	-0.00074	0.015***	0.0026	0.057***
	(0.0050)	(0.0029)	(0.0031)	(0.0041)	(0.0033)	(0.0046)
Grade 7 cohort (2005)						
2006	0.0057	-0.0061*	-0.019***	0.0039	0.0064	0.0095*
	(0.0051)	(0.0029)	(0.0035)	(0.0041)	(0.0034)	(0.0047)
2007	0.011*	0.0014	-0.024***	0.0024	0.0098**	-0.00047
	(0.0052)	(0.0030)	(0.0034)	(0.0042)	(0.0035)	(0.0047)
2008	0.0066	0.00055	-0.027***	0.015***	0.011**	-0.0064
	(0.0052)	(0.0031)	(0.0035)	(0.0043)	(0.0035)	(0.0048)
2009	0.0071	0.0052	-0.038***	0.020***	0.010**	-0.0041
	(0.0053)	(0.0031)	(0.0034)	(0.0043)	(0.0035)	(0.0048)
2010	0.0084	0.0028	-0.038***	0.024***	0.0042	-0.0018
	(0.0053)	(0.0031)	(0.0034)	(0.0043)	(0.0035)	(0.0048)
2011	0.011*	0.0057	-0.041***	0.030***	-0.0063	0.0013
	(0.0054)	(0.0032)	(0.0034)	(0.0044)	(0.0035)	(0.0049)
Observations			99,890			

Notes: This table shows the results of a multinomial logistic regression model measuring program of entry up to three years after a student's expected Grade 12 year. The explanatory variables included in the model are categorical and the reference group for each variable is in parentheses next to the bolded variable title. Robust standard errors are in parentheses under each coefficient.

* p < 0.05, ** p < 0.01, *** p < 0.001.

Table 15 PSE entry descriptive results, students with high household income (2005-06 to 2011-12 cohorts)

N = 99,880	Sample Total	Proportion with outcome					
		No PSE	Cert.	Diploma	Uni. Trans.	Trade	BA
Lone-parent household in Grade 7							
Two-parent household	0.96	21.5	6.2	8.1	16.4	9.6	38.2
Lone-parent household	0.04	28.2	6.2	7.2	16.2	9.0	33.6
Male/Female							
Female	0.49	20.5	7.4	7.7	18.7	2.4	43.3
Male	0.51	22.9	5.1	8.5	14.2	16.3	33.0
Indigenous							
Non-Indigenous	0.94	20.6	6.1	8.2	16.6	9.2	39.3
Indigenous	0.06	39.2	8.2	5.7	13.6	14.2	19.3
Home language							
English	0.88	23.1	6.4	7.9	16.3	10.2	36.1
French	0.01	16.1	4.3	9.9	13.9	6.3	49.6
Chinese	0.03	8.6	3.0	6.4	9.1	1.8	71.1
Punjabi	0.03	8.7	5.4	12.3	25.2	4.7	43.6
South Asian	0.01	12.3	7.0	7.8	20.7	4.3	47.8
Korean	0.003	17.7	2.4	5.1	6.1	3.1	65.6
Other Asian	0.01	14.7	8.8	12.1	24.7	6.3	33.5
West European	0.01	20.5	6.3	8.6	17.4	7.6	39.6
East European	0.01	12.2	3.4	10.2	16.4	3.7	54.0
Semitic	0.003	7.9	3.0	6.4	14.9	1.8	65.9
Other or missing	0.004	15.9	7.0	11.5	18.9	6.1	40.4
Age in Grade 7							
Age 10 or 11	0.01	16.7	4.2	5.6	12.5	4.2	56.9
Age 12	0.96	21.2	6.2	8.1	16.6	9.4	38.4
Age 13 or 14	0.03	37.8	6.3	6.6	13.3	13.0	23.0
French immersion in Grade 7							
English language	0.88	22.9	6.4	8.2	16.4	10.2	35.9
French immersion	0.12	13.4	4.8	7.2	16.6	5.1	52.9
English language support in Grade 7							
Non-ELL student	0.98	21.7	6.2	8.1	16.4	9.6	38.0
ELL student	0.02	24.6	6.4	8.2	16.4	6.4	38.0
IEP in Grade 7							
No IEP	0.93	20.1	6.1	8.2	16.6	9.1	39.8
IEP	0.07	44.5	7.6	6.4	14.1	15.3	12.3
Grade 7 school type							
Public	0.85	22.1	6.5	8.2	16.7	10.1	36.5
Distance ed	0.01	38.9	7.1	6.3	17.5	8.7	22.2
Catholic independent	0.06	12.2	5.0	8.6	17.2	5.7	51.4
Other Christian ind.	0.05	26.6	5.7	8.7	15.2	9.5	34.2
Preparatory/IB ind.	0.02	14.4	2.3	2.7	5.9	1.4	73.4
Other non-religious ind.	0.01	26.8	5.6	7.0	14.1	7.0	38.0
Other religious ind.	0.01	11.3	3.8	7.5	18.9	1.9	58.5
Grade 7 school change							
No school change	0.82	20.5	6.0	8.2	16.6	9.1	39.5
No Grade 6 enrollment	0.01	26.3	6.3	6.3	11.6	7.4	42.1
Voluntary change	0.06	27.2	6.6	7.1	14.6	11.0	33.7
Compulsory change	0.10	28.1	7.5	7.8	16.2	11.9	28.5

N = 99,880	Sample Total	*Proportion with outcome* No PSE	Cert.	Diploma	Uni. Trans.	Trade	BA
Grade 7 FSA							
Did not write	0.09	35.0	6.7	7.1	16.8	9.6	24.9
Not yet meeting expectations	0.08	40.6	8.3	6.9	14.7	17.4	12.0
Meeting expectations in reading	0.08	32.6	8.2	8.2	18.1	12.7	20.4
Meeting expectations in numeracy	0.08	26.0	7.6	10.1	17.4	16.3	22.5
Meeting expectations in both	0.47	17.9	6.2	9.1	18.0	9.2	39.5
Exceeding expectations in reading	0.09	12.5	4.4	6.3	15.2	3.7	58.0
Exceeding expectations in numeracy	0.06	10.0	3.8	6.4	11.7	4.1	63.9
Exceeding expectations in both	0.05	10.5	2.9	3.9	7.9	1.8	73.2
Rural status in Grade 7							
Urban	0.89	20.8	5.9	8.2	17.0	9.0	39.2
Rural	0.11	29.8	9.2	6.7	11.7	14.3	28.2
Neighbourhood income in Grade 7							
Lowest quintile	0.08	27.7	7.5	8.3	14.2	11.4	31.2
2nd quintile	0.14	24.6	7.3	8.8	16.2	10.3	32.7
3rd quintile	0.19	23.4	6.8	8.3	17.6	10.7	33.2
4th quintile	0.26	22.1	6.1	8.5	16.9	10.1	36.3
Highest quintile	0.33	18.0	5.2	7.3	15.9	7.7	45.9
Grade 7 cohort							
2005	0.14	21.0	6.3	10.4	15.6	9.3	37.3
2006	0.15	21.8	6.5	8.5	16.2	10.1	36.8
2007	0.15	21.5	6.5	8.0	15.8	10.3	38.0
2008	0.15	22.0	6.0	8.2	16.2	10.3	37.3
2009	0.14	21.4	6.0	7.3	17.4	9.6	38.4
2010	0.14	22.0	6.3	7.3	16.5	8.4	39.4
2011	0.14	22.4	6.0	6.8	17.2	8.6	39.1

Table 16 PSE entry regression results, students with high household income (2005-06 to 2011-12 cohorts)

	No PSE	Cert.	Diploma	Uni. Trans.	Trade	BA
Lone-parent household (No)						
Lone-parent household	0.037***	-0.0033	-0.0068	0.0028	-0.012**	-0.017*
	(0.0060)	(0.0040)	(0.0047)	(0.0060)	(0.0047)	(0.0075)
Male/female (Female)						
Male	-0.0060*	-0.026***	0.0032*	-0.048***	0.16***	-0.084***
	(0.0025)	(0.0015)	(0.0016)	(0.0022)	(0.0026)	(0.0028)
Indigenous (No)						
Indigenous	0.095***	0.012***	-0.018***	-0.0094	0.024***	-0.10***
	(0.0045)	(0.0029)	(0.0042)	(0.0053)	(0.0032)	(0.0070)
Home language (English)						
French	-0.060***	-0.020*	0.024*	-0.023	-0.030**	0.11***
	(0.014)	(0.0079)	(0.012)	(0.013)	(0.010)	(0.017)
Chinese	-0.10***	-0.024***	-0.0084	-0.060***	-0.074***	0.27***
	(0.0066)	(0.0039)	(0.0048)	(0.0058)	(0.0035)	(0.0086)
Punjabi	-0.14***	-0.011*	0.029***	0.067***	-0.059***	0.11***
	(0.0055)	(0.0045)	(0.0059)	(0.0082)	(0.0038)	(0.0094)
South Asian	-0.099***	0.0071	-0.0064	0.031*	-0.057***	0.13***
	(0.013)	(0.010)	(0.010)	(0.015)	(0.0082)	(0.018)
Korean	-0.000032	-0.035**	-0.025	-0.098***	-0.059***	0.22***
	(0.026)	(0.011)	(0.013)	(0.015)	(0.014)	(0.029)
Other Asian	-0.078***	0.024**	0.031***	0.067***	-0.043***	-0.0019
	(0.0093)	(0.0077)	(0.0081)	(0.011)	(0.0060)	(0.012)
West European	-0.022	0.0048	0.0030	0.012	-0.019*	0.022
	(0.012)	(0.0082)	(0.0085)	(0.012)	(0.0087)	(0.014)
East European	-0.076***	-0.024***	0.023*	0.0034	-0.057***	0.13***
	(0.012)	(0.0067)	(0.0097)	(0.012)	(0.0070)	(0.015)
Semitic	-0.13***	-0.026*	-0.010	-0.0068	-0.077***	0.25***
	(0.019)	(0.011)	(0.015)	(0.020)	(0.0096)	(0.026)
Other or missing	-0.055**	0.011	0.029	0.019	-0.035**	0.030
	(0.019)	(0.013)	(0.015)	(0.019)	(0.013)	(0.023)
Age in Grade 7 (Age 12)						
Age 10 or 11	-0.019	-0.013	-0.013	-0.027*	-0.025*	0.097***
	(0.016)	(0.0085)	(0.010)	(0.014)	(0.012)	(0.018)
Age 13 or 14	0.073***	0.0035	-0.0083	-0.012	-0.00053	-0.055***
	(0.0072)	(0.0045)	(0.0049)	(0.0069)	(0.0044)	(0.0086)
French immersion (No)						
Grade 7 French immersion	-0.068***	-0.013***	-0.0068*	0.00046	-0.037***	0.12***
	(0.0045)	(0.0026)	(0.0028)	(0.0036)	(0.0034)	(0.0042)
English language (No)						
Grade 7 ELL student	0.032**	0.0038	0.00038	0.0055	-0.019*	-0.023
	(0.010)	(0.0062)	(0.0069)	(0.0095)	(0.0085)	(0.012)
IEP in Grade 7 (none)						
IEP	0.13***	0.020***	-0.0023	0.016**	0.014***	-0.18***
	(0.0045)	(0.0030)	(0.0041)	(0.0054)	(0.0032)	(0.0081)
G7 school (Public)						
Distance ed	0.078***	0.0020	-0.0080	0.026*	-0.016*	-0.083***
	(0.012)	(0.0071)	(0.0082)	(0.012)	(0.0076)	(0.013)
Catholic independent	-0.048***	-0.0062	0.0045	0.011*	-0.028***	0.067***
	(0.0055)	(0.0034)	(0.0039)	(0.0053)	(0.0038)	(0.0062)
Other Christian ind.	0.080***	-0.0056	0.0016	-0.016**	-0.00053	-0.059***
	(0.0067)	(0.0036)	(0.0042)	(0.0054)	(0.0044)	(0.0063)
Preparatory/IB ind.	0.040***	-0.031***	-0.045***	-0.093***	-0.076***	0.20***
	(0.011)	(0.0047)	(0.0047)	(0.0064)	(0.0043)	(0.011)

	No PSE	Cert.	Diploma	Uni. Trans.	Trade	BA
Other non-religious ind.	0.012	-0.012	-0.0040	-0.0068	-0.039***	0.050**
	(0.014)	(0.0082)	(0.011)	(0.014)	(0.0081)	(0.017)
Other religious ind.	0.00084	-0.016	-0.010	-0.0000049	-0.052***	0.077***
	(0.023)	(0.011)	(0.011)	(0.016)	(0.013)	(0.022)
G7 school change (none)						
No G6 enrollment	0.034**	0.0014	-0.016	-0.043***	-0.023**	0.047**
	(0.013)	(0.0079)	(0.0083)	(0.011)	(0.0082)	(0.015)
Voluntary change	0.031***	0.0035	-0.011**	-0.017***	0.0057	-0.013*
	(0.0053)	(0.0033)	(0.0034)	(0.0048)	(0.0037)	(0.0060)
Compulsory change	0.027***	0.0061*	-0.0043	-0.0066	0.0031	-0.025***
	(0.0041)	(0.0025)	(0.0028)	(0.0038)	(0.0028)	(0.0048)
Grade 7 FSA (Meet ex. in both)						
Did not write	0.11***	0.0012	-0.012***	-0.0086	-0.0027	-0.089***
	(0.0051)	(0.0029)	(0.0034)	(0.0046)	(0.0033)	(0.0056)
Not yet meeting expectations in both	0.19***	0.020***	-0.013***	-0.017***	0.057***	-0.23***
	(0.0058)	(0.0034)	(0.0035)	(0.0047)	(0.0040)	(0.0050)
Meeting expectations in reading	0.12***	0.012***	-0.0031	0.0015	0.034***	-0.16***
	(0.0053)	(0.0031)	(0.0035)	(0.0046)	(0.0038)	(0.0051)
Meeting expectations in numeracy	0.071***	0.015***	0.0082*	0.00096	0.046***	-0.14***
	(0.0052)	(0.0032)	(0.0035)	(0.0047)	(0.0037)	(0.0053)
Exceeding expectations in reading	-0.045***	-0.017***	-0.022***	-0.025***	-0.042***	0.15***
	(0.0043)	(0.0026)	(0.0031)	(0.0043)	(0.0030)	(0.0057)
Exceeding expectations in numeracy	-0.064***	-0.016***	-0.023***	-0.049***	-0.050***	0.20***
	(0.0049)	(0.0032)	(0.0035)	(0.0049)	(0.0029)	(0.0068)
Exceeding expectations in both	-0.051***	-0.025***	-0.045***	-0.090***	-0.068***	0.28***
	(0.0054)	(0.0031)	(0.0033)	(0.0045)	(0.0028)	(0.0071)
Rural status (Urban)						
Rural	0.030***	0.021***	-0.012***	-0.055***	0.027***	-0.011*
	(0.0039)	(0.0022)	(0.0031)	(0.0044)	(0.0026)	(0.0050)
Neighbourhood income (lowest)						
2nd quintile	-0.012*	0.0021	0.0034	0.011*	-0.0023	-0.0021
	(0.0058)	(0.0035)	(0.0039)	(0.0053)	(0.0040)	(0.0064)
3rd quintile	-0.022***	-0.0014	-0.0014	0.022***	0.0029	-0.00023
	(0.0056)	(0.0033)	(0.0037)	(0.0050)	(0.0038)	(0.0061)
4th quintile	-0.033***	-0.0058	0.0025	0.014**	-0.0011	0.023***
	(0.0054)	(0.0032)	(0.0037)	(0.0049)	(0.0037)	(0.0060)
Highest quintile	-0.060***	-0.011***	-0.0060	0.0076	-0.018***	0.087***
	(0.0054)	(0.0032)	(0.0036)	(0.0048)	(0.0037)	(0.0060)
Grade 7 cohort (2005)						
2006	0.0038	0.0017	-0.017***	0.0076	0.0086**	-0.0046
	(0.0046)	(0.0028)	(0.0033)	(0.0042)	(0.0032)	(0.0052)
2007	0.0060	0.0038	-0.020***	0.0066	0.015***	-0.011*
	(0.0046)	(0.0028)	(0.0033)	(0.0043)	(0.0033)	(0.0053)
2008	0.012*	0.000037	-0.015***	0.012**	0.018***	-0.026***
	(0.0047)	(0.0029)	(0.0034)	(0.0043)	(0.0034)	(0.0053)
2009	0.0047	0.00048	-0.026***	0.021***	0.011**	-0.011*
	(0.0047)	(0.0029)	(0.0034)	(0.0044)	(0.0033)	(0.0053)
2010	0.011*	0.0035	-0.025***	0.012**	-0.0014	-0.0010
	(0.0048)	(0.0029)	(0.0034)	(0.0044)	(0.0033)	(0.0054)
2011	0.012*	0.00097	-0.030***	0.020***	0.00049	-0.0030
	(0.0048)	(0.0029)	(0.0034)	(0.0045)	(0.0033)	(0.0054)
Observations	99,880					

Notes: This table shows the results of a multinomial logistic regression model measuring program of entry up to three years after a student's expected Grade 12 year. The explanatory variables included in the model are categorical and the reference group for each variable is in parentheses next to the bolded variable title. Robust standard errors are in parentheses under each coefficient.

* p < 0.05, ** p < 0.01, *** p < 0.001.

OUTCOME 2: PSE COMPLETION

Table 17 PSE graduation descriptive results, all students

N = 163,130	Sample Total	*Proportion who graduate*		
		All students	Female students	Male students
Entry credential				
Certificate or other	0.09	60.2	64.0	54.7
Diploma	0.14	53.3	56.5	50.4
Associate degree	0.20	44.4	48.1	39.4
Apprenticeship	0.15	43.6	40.0	44.4
Bachelor's degree	0.42	71.4	75.5	66.3
Male/Female				
Female	0.50	63.5	-	-
Male	0.50	53.2	-	-
Indigenous				
Non-Indigenous	0.94	59.4	64.8	54.2
Indigenous	0.06	41.1	44.2	37.9
Home language				
English	0.76	57.0	62.2	51.8
French	0.01	59.5	62.5	56.8
Chinese	0.09	72.8	78.4	67.5
Punjabi	0.05	53.8	57.4	50.4
South Asian	0.01	54.4	58.9	49.5
Korean	0.02	60.3	68.3	53.5
Other Asian	0.03	58.6	62.5	54.2
West European	0.02	55.5	59.5	50.8
East European	0.01	61.6	67.9	56.4
Semitic	0.01	53.6	59.5	48.1
Other or missing	0.01	53.5	59.3	48.3
Age in Grade 7				
Age 10 or 11	0.01	64.4	68.8	58.2
Age 12	0.96	58.6	63.7	53.5
Age 13 or 14	0.03	49.4	54.9	47.1
French immersion in Grade 7				
English language	0.92	57.7	62.9	52.8
French immersion	0.08	65.2	69.3	59.3
English language support in Grade 7				
Non-ELL student	0.94	58.3	63.5	53.1
ELL student	0.06	59.4	64.4	55.0
IEP in Grade 7				
No IEP	0.96	59.1	64.0	54.2
IEP	0.04	40.9	44.3	39.7
Grade 7 school type				
Public	0.88	57.8	62.9	52.8
Distance ed	0.01	52.9	57.8	48.5
Catholic independent	0.05	64.5	69.4	59.6
Other Christian ind.	0.03	57.6	63.8	51.9
Preparatory/IB ind.	0.02	72.7	78.1	67.8
Other non-religious ind.	0.01	52.1	59.5	46.3
Other religious ind.	0.01	60.4	67.9	52.0

N = 163,130	Sample Total	*Proportion who graduate*		
		All students	Female students	Male students
Grade 7 school change				
No school change	0.78	59.3	64.4	54.4
No Grade 6 enrollment	0.03	58.5	64.2	53.7
Voluntary change	0.09	53.3	57.8	49.1
Compulsory change	0.11	55.1	61.6	48.5
Grade 7 FSA				
Did not write	0.05	50.1	56.0	45.8
Not yet meeting expectations	0.07	41.5	45.3	38.5
Meeting expectations in reading	0.06	48.8	51.7	44.3
Meeting expectations in numeracy	0.12	51.1	57.1	47.4
Meeting expectations in both	0.52	59.3	64.3	54.2
Exceeding expectations in reading	0.08	69.6	72.4	63.3
Exceeding expectations in numeracy	0.07	69.7	77.1	65.6
Exceeding expectations in both	0.04	77.3	81.0	72.7
Rural status in Grade 7				
Urban	0.89	58.9	64.1	53.9
Rural	0.12	53.6	59.1	48.2
Neighbourhood income in Grade 7				
Lowest quintile	0.24	54.8	59.8	49.8
2nd quintile	0.23	56.7	62.0	51.5
3rd quintile	0.20	58.1	63.1	53.3
4th quintile	0.17	59.1	64.1	54.2
Highest quintile	0.17	65.0	70.6	59.4
Grade 7 cohort				
2002	0.20	57.7	63.5	52.0
2003	0.20	57.7	62.8	52.8
2004	0.20	57.9	63.4	52.3
2005	0.20	59.2	63.7	54.7
2006	0.20	59.1	64.0	54.4

Table 18 PSE graduation regression results, all students

	All	Male	Female
Entry credential (BA)			
Certificate or other	-0.048***	-0.050***	-0.046***
	(0.0045)	(0.0071)	(0.0058)
Diploma	-0.14***	-0.12***	-0.15***
	(0.0038)	(0.0055)	(0.0053)
Associate degree	-0.23***	-0.23***	-0.23***
	(0.0034)	(0.0052)	(0.0045)
Trade	-0.17***	-0.15***	-0.27***
	(0.0041)	(0.0050)	(0.0084)
Male/female (Female)			
Male	-0.077***		
	(0.0025)		
Indigenous (No)			
Indigenous	-0.11***	-0.085***	-0.13***
	(0.0053)	(0.0075)	(0.0074)
Home language (English)			
French	0.012	0.036	-0.012
	(0.016)	(0.023)	(0.023)
Chinese	0.092***	0.088***	0.097***
	(0.0042)	(0.0063)	(0.0056)
Punjabi	-0.0096	-0.000085	-0.020*
	(0.0059)	(0.0084)	(0.0083)
South Asian	-0.010	-0.020	-0.00015
	(0.011)	(0.016)	(0.015)
Korean	-0.033***	-0.060***	0.00039
	(0.0097)	(0.014)	(0.014)
Other Asian	0.027***	0.032**	0.023*
	(0.0079)	(0.011)	(0.011)
West European	-0.021*	-0.024	-0.017
	(0.0097)	(0.014)	(0.014)
East European	0.033**	0.022	0.043**
	(0.010)	(0.015)	(0.014)
Semitic	-0.024	-0.038*	-0.0089
	(0.012)	(0.018)	(0.018)
Other or missing	-0.035*	-0.036	-0.036
	(0.014)	(0.020)	(0.020)
Age in Grade 7 (Age 12)			
Age 10 or 11	0.0030	-0.0042	0.0076
	(0.013)	(0.021)	(0.016)
Age 13 or 14	-0.028***	-0.020*	-0.045***
	(0.0066)	(0.0082)	(0.011)
French immersion (No)			
Grade 7 French immersion	0.029***	0.027***	0.030***
	(0.0043)	(0.0070)	(0.0055)
English language (No)			
Grade 7 ELL student	0.000079	0.0037	-0.0038
	(0.0056)	(0.0079)	(0.0079)
IEP in Grade 7 (none)			
IEP	-0.066***	-0.064***	-0.079***
	(0.0061)	(0.0072)	(0.012)
G7 school (public)			
Distance ed	0.024	0.023	0.026
	(0.012)	(0.017)	(0.018)
Catholic independent	0.032***	0.033***	0.031***
	(0.0055)	(0.0081)	(0.0076)

	All	Male	Female
Other Christian ind.	-0.0094	-0.022*	0.0040
	(0.0065)	(0.0092)	(0.0092)
Preparatory/IB ind.	0.029***	0.025*	0.034**
	(0.0081)	(0.012)	(0.011)
Other non-religious ind.	-0.029	-0.048*	-0.0062
	(0.015)	(0.021)	(0.023)
Other religious ind.	0.0055	-0.031	0.038*
	(0.015)	(0.022)	(0.019)
G7 school change (none)			
No G6 enrollment	-0.023**	-0.024*	-0.019
	(0.0078)	(0.011)	(0.011)
Voluntary change	-0.034***	-0.030***	-0.038***
	(0.0042)	(0.0059)	(0.0060)
Compulsory change	0.0018	-0.018**	0.021***
	(0.0040)	(0.0058)	(0.0055)
Grade 7 FSA (Meet ex. in both)			
Did not write	-0.060***	-0.058***	-0.061***
	(0.0059)	(0.0080)	(0.0087)
Not yet meeting expectations in both	-0.10***	-0.092***	-0.11***
	(0.0052)	(0.0070)	(0.0076)
Meeting expectations in reading	-0.071***	-0.058***	-0.078***
	(0.0052)	(0.0082)	(0.0068)
Meeting expectations in numeracy	-0.043***	-0.043***	-0.045***
	(0.0040)	(0.0053)	(0.0062)
Exceeding expectations in reading	0.047***	0.053***	0.042***
	(0.0044)	(0.0080)	(0.0052)
Exceeding expectations in numeracy	0.054***	0.054***	0.060***
	(0.0046)	(0.0061)	(0.0068)
Exceeding expectations in both	0.095***	0.11***	0.084***
	(0.0054)	(0.0085)	(0.0069)
Rural status (Urban)			
Rural	-0.0016	-0.0045	0.0011
	(0.0040)	(0.0057)	(0.0056)
Neighbourhood income (lowest)			
2nd quintile	0.013***	0.0098	0.016**
	(0.0035)	(0.0050)	(0.0049)
3rd quintile	0.023***	0.023***	0.022***
	(0.0037)	(0.0053)	(0.0051)
4th quintile	0.026***	0.024***	0.027***
	(0.0039)	(0.0056)	(0.0054)
Highest quintile	0.056***	0.049***	0.064***
	(0.0040)	(0.0058)	(0.0055)
Grade 7 cohort (2002)			
2003	-0.0064	0.0033	-0.016**
	(0.0038)	(0.0054)	(0.0052)
2004	-0.0065	-0.0037	-0.0094
	(0.0038)	(0.0055)	(0.0052)
2005	0.011**	0.023***	-0.0018
	(0.0038)	(0.0055)	(0.0052)
2006	0.0097*	0.020***	-0.0010
	(0.0038)	(0.0055)	(0.0052)
Intercept	0.70***	0.61***	0.72***
	(0.0042)	(0.0060)	(0.0055)
R^2	0.085	0.065	0.091
Observations	163,130	82,300	80,830

Notes: This table shows the results of an LPM model measuring program completion up to six years after a student entered PSE. The explanatory variables included in the model are categorical and the reference group for each variable is in parentheses next to the bolded variable title. Robust standard errors are in parentheses under each coefficient. * p < 0.05, ** p < 0.01, *** p < 0.001.

Table 19 PSE graduation descriptive results, students with parental T1FF data (2005-06 to 2006-07 cohorts)

N = 58,110	Sample Total	Proportion who graduate			
		All students	Low income	Middle income	High income
Entry credential					
Certificate or other	0.09	61.6	57.3	62.9	65.1
Diploma	0.13	54.9	50.0	55.3	60.4
Associate degree	0.21	45.0	39.4	45.0	50.6
Apprenticeship	0.15	47.2	43.3	47.9	51.5
Bachelor's degree	0.42	71.3	67.0	70.9	75.1
Household income in Grade 7					
Low income	0.33	54.2	-	-	-
Middle income	0.33	58.8	-	-	-
High income	0.33	64.8	-	-	-
Lone-parent household in Grade 7					
Two-parent household	0.83	61.0	57.3	59.4	65.0
Lone-parent household	0.17	50.5	47.8	55.0	59.1
Male/Female					
Female	0.49	63.9	58.5	63.2	70.1
Male	0.51	54.7	49.9	54.4	59.7
Indigenous					
Non-Indigenous	0.94	60.2	55.5	59.5	65.3
Indigenous	0.06	45.6	40.0	46.6	55.4
Home language					
English	0.74	57.9	49.4	56.9	64.4
French	0.01	58.1	50.0	60.0	61.5
Chinese	0.10	73.0	70.2	76.6	76.9
Punjabi	0.06	55.0	53.9	53.7	60.0
South Asian	0.01	54.7	50.0	57.1	63.6
Korean	0.01	64.1	61.0	69.2	66.7
Other Asian	0.03	58.8	54.7	62.7	65.0
West European	0.01	57.0	50.0	56.7	68.2
East European	0.01	63.8	62.1	66.7	63.6
Semitic	0.01	54.2	48.8	61.5	66.7
Other or missing	0.01	56.8	52.4	53.3	62.5
Age in Grade 7					
Age 10 or 11	0.01	63.6	57.1	64.3	70.6
Age 12	0.97	59.4	54.4	58.9	64.9
Age 13 or 14	0.03	52.0	48.1	52.1	59.6
French immersion in Grade 7					
English language	0.91	58.6	54.0	58.2	64.0
French immersion	0.09	65.7	57.5	64.6	70.7
English language support in Grade 7					
Non-ELL student	0.94	59.2	53.3	58.7	64.9
ELL student	0.06	60.5	60.4	59.3	60.7
IEP in Grade 7					
No IEP	0.95	59.9	55.0	59.4	65.4
IEP	0.05	44.5	39.0	45.6	50.0
Grade 7 school type					
Public	0.88	58.9	54.2	58.6	64.4
Distance ed	0.01	50.6	48.1	50.0	55.6
Catholic independent	0.05	64.9	59.3	63.7	68.7
Other Christian ind.	0.04	58.0	50.0	57.3	63.5
Preparatory/IB ind.	0.01	71.8	68.8	69.2	75.5
Other non-religious ind.	0.01	56.7	50.0	55.6	63.6
Other religious ind.	0.01	57.8	52.9	58.8	63.6

N = 58,110	Sample Total	*Proportion who graduate* All students	Low income	Middle income	High income
Grade 7 school change					
No school change	0.80	60.3	55.3	59.5	65.6
No Grade 6 enrollment	0.02	60.7	61.7	47.1	65.0
Voluntary change	0.08	54.4	50.0	55.7	60.0
Compulsory change	0.10	54.8	46.0	56.1	61.8
Grade 7 FSA					
Did not write	0.07	52.7	48.9	53.5	58.6
Not yet meeting expectations	0.07	44.0	39.5	45.4	49.5
Meeting expectations in reading	0.06	52.1	47.0	52.7	58.3
Meeting expectations in numeracy	0.14	54.0	52.5	53.0	58.3
Meeting expectations in both	0.50	60.6	56.1	59.6	65.3
Exceeding expectations in reading	0.07	69.9	62.8	71.2	73.4
Exceeding expectations in numeracy	0.07	70.8	68.8	72.5	71.4
Exceeding expectations in both	0.03	77.6	72.1	76.8	80.0
Rural status in Grade 7					
Urban	0.89	59.7	55.0	59.2	65.0
Rural	0.11	55.4	47.7	55.7	63.4
Neighbourhood income in Grade 7					
Lowest quintile	0.19	56.3	52.6	57.8	62.7
2nd quintile	0.23	57.4	52.7	58.0	63.0
3rd quintile	0.22	58.5	54.9	58.3	62.6
4th quintile	0.19	59.5	54.0	58.7	63.5
Highest quintile	0.18	65.4	59.7	62.4	69.4
Grade 7 cohort					
2005	0.48	59.5	54.9	58.6	64.9
2006	0.52	59.0	53.6	58.9	64.7

Table 20 PSE graduation regression results, students with parental T1FF data (2005-06 to 2006-07 cohorts)

	All	All	Low	Middle	High
G7 household income (low)					
Middle income	-	0.043***			
		(0.0051)			
Highest	-	0.078***			
		(0.0056)			
Lone-parent household (No)					
Lone-parent household	-	-0.041***	-0.044***	-0.028**	-0.054**
		(0.0058)	(0.0078)	(0.0100)	(0.019)
Entry credential (BA)					
Certificate or other	-0.041***	-0.034***	-0.018	-0.025*	-0.057***
	(0.0075)	(0.0075)	(0.013)	(0.013)	(0.013)
Diploma	-0.12***	-0.12***	-0.12***	-0.12***	-0.11***
	(0.0065)	(0.0065)	(0.012)	(0.011)	(0.011)
Associate degree	-0.22***	-0.22***	-0.22***	-0.22***	-0.22***
	(0.0056)	(0.0056)	(0.0099)	(0.0097)	(0.0094)
Trade	-0.14***	-0.13***	-0.11***	-0.14***	-0.15***
	(0.0070)	(0.0070)	(0.012)	(0.012)	(0.013)
Male/female (Female)					
Male	-0.074***	-0.077***	-0.078***	-0.069***	-0.082***
	(0.0042)	(0.0041)	(0.0073)	(0.0073)	(0.0070)
Indigenous (No)					
Indigenous	-0.088***	-0.075***	-0.075***	-0.078***	-0.069***
	(0.0087)	(0.0087)	(0.013)	(0.015)	(0.018)
Home language (English)					
French	-0.016	-0.018	-0.053	0.019	-0.020
	(0.027)	(0.027)	(0.053)	(0.048)	(0.042)
Chinese	0.091***	0.11***	0.12***	0.12***	0.083***
	(0.0069)	(0.0071)	(0.011)	(0.012)	(0.016)
Punjabi	-0.012	-0.0056	0.021	-0.020	-0.017
	(0.0091)	(0.0092)	(0.015)	(0.015)	(0.020)
South Asian	-0.016	-0.0062	-0.0085	-0.0094	0.024
	(0.018)	(0.018)	(0.027)	(0.029)	(0.043)
Korean	-0.017	0.010	0.013	0.030	-0.036
	(0.017)	(0.018)	(0.021)	(0.040)	(0.059)
Other Asian	0.023	0.040**	0.037*	0.064**	0.0051
	(0.013)	(0.013)	(0.018)	(0.021)	(0.035)
West European	-0.016	-0.0032	-0.017	-0.0016	0.018
	(0.016)	(0.016)	(0.027)	(0.028)	(0.030)
East European	0.039*	0.044**	0.094**	0.050	-0.027
	(0.017)	(0.017)	(0.029)	(0.026)	(0.033)
Semitic	-0.024	-0.00016	-0.020	0.050	0.066
	(0.020)	(0.020)	(0.025)	(0.041)	(0.054)
Other or missing	-0.019	-0.0060	0.0062	-0.022	-0.00016
	(0.023)	(0.023)	(0.034)	(0.040)	(0.050)
Age in Grade 7 (Age 12)					
Age 10 or 11	0.0016	0.0038	-0.021	0.022	0.010
	(0.022)	(0.022)	(0.041)	(0.040)	(0.034)
Age 13 or 14	-0.014	-0.012	-0.016	-0.016	-0.0016
	(0.013)	(0.013)	(0.022)	(0.023)	(0.022)
French immersion (No)					
Grade 7 French immersion	0.029***	0.025***	0.013	0.030*	0.028**
	(0.0069)	(0.0069)	(0.015)	(0.012)	(0.010)

	All	All	Low	Middle	High
English language (No)					
Grade 7 ELL student	0.00061	0.0076	0.014	-0.018	-0.0039
	(0.0093)	(0.0093)	(0.012)	(0.019)	(0.030)
IEP in Grade 7 (none)					
IEP	-0.060***	-0.057***	-0.055***	-0.046**	-0.072***
	(0.010)	(0.010)	(0.017)	(0.017)	(0.019)
G7 school (public)					
Distance ed	-0.023	-0.024	-0.0060	-0.036	-0.027
	(0.019)	(0.019)	(0.032)	(0.030)	(0.039)
Catholic independent	0.027**	0.019*	0.022	0.022	0.015
	(0.0092)	(0.0092)	(0.021)	(0.016)	(0.013)
Other Christian ind.	-0.021	-0.029**	-0.044	-0.022	-0.024
	(0.011)	(0.011)	(0.024)	(0.018)	(0.017)
Preparatory/IB ind.	0.023	0.018	0.036	0.012	0.013
	(0.016)	(0.016)	(0.035)	(0.039)	(0.020)
Other non-religious ind.	0.0031	0.0028	0.026	0.056	-0.058
	(0.027)	(0.027)	(0.045)	(0.051)	(0.045)
Other religious ind.	-0.015	-0.019	-0.029	-0.00026	-0.0093
	(0.023)	(0.023)	(0.038)	(0.040)	(0.042)
G7 school change (none)					
No G6 enrollment	-0.021	-0.010	0.018	-0.11**	-0.047
	(0.014)	(0.015)	(0.018)	(0.037)	(0.034)
Voluntary change	-0.035***	-0.029***	-0.032**	-0.019	-0.035*
	(0.0076)	(0.0076)	(0.012)	(0.013)	(0.014)
Compulsory change	-0.012	-0.011	-0.030*	0.0046	-0.0087
	(0.0069)	(0.0068)	(0.012)	(0.011)	(0.012)
Grade 7 FSA (Meet ex. in both)					
Did not write	-0.049***	-0.045***	-0.063***	-0.032*	-0.036*
	(0.0086)	(0.0086)	(0.013)	(0.015)	(0.017)
Not yet meeting expectations in both	-0.10***	-0.096***	-0.10***	-0.095***	-0.085***
	(0.0083)	(0.0082)	(0.013)	(0.014)	(0.017)
Meeting expectations in reading	-0.052***	-0.047***	-0.044**	-0.053***	-0.042**
	(0.0090)	(0.0090)	(0.015)	(0.016)	(0.016)
Meeting expectations in numeracy	-0.033***	-0.029***	-0.023*	-0.036**	-0.033**
	(0.0063)	(0.0063)	(0.010)	(0.011)	(0.012)
Exceeding expectations in reading	0.042***	0.040***	0.026	0.063***	0.030**
	(0.0077)	(0.0077)	(0.016)	(0.014)	(0.011)
Exceeding expectations in numeracy	0.054***	0.053***	0.048***	0.082***	0.030*
	(0.0079)	(0.0078)	(0.014)	(0.014)	(0.013)
Exceeding expectations in both	0.087***	0.081***	0.071**	0.082***	0.084***
	(0.010)	(0.010)	(0.022)	(0.019)	(0.014)
Rural status (Urban)					
Rural	-0.00036	-0.00052	-0.0097	-0.0035	0.014
	(0.0068)	(0.0068)	(0.012)	(0.011)	(0.012)
Neighbourhood income (lowest)					
2nd quintile	0.011	0.0041	0.0046	0.0026	0.0033
	(0.0062)	(0.0062)	(0.0096)	(0.010)	(0.013)
3rd quintile	0.018**	0.0069	0.012	0.0084	-0.0017
	(0.0063)	(0.0063)	(0.010)	(0.011)	(0.013)
4th quintile	0.021**	0.0051	0.0050	0.0065	0.0011
	(0.0066)	(0.0067)	(0.011)	(0.011)	(0.013)
Highest quintile	0.059***	0.039***	0.039**	0.032**	0.039**
	(0.0067)	(0.0068)	(0.012)	(0.012)	(0.013)
Grade 7 cohort (2005)					
2006	-0.0023	-0.0027	-0.012	0.0066	-0.0013
	(0.0039)	(0.0039)	(0.0069)	(0.0068)	(0.0067)

	All	All	Low	Middle	High
Constant	0.075	0.080	0.083	0.072	0.069
	58110	58110	19370	19370	19370
R^2	0.075	0.080	0.083	0.072	0.069
Observations	58,110	58,110	19,370	19,370	19,370

Notes: This table shows the results of an LPM model measuring program completion up to six years after a student entered PSE. The explanatory variables included in the model are categorical and the reference group for each variable is in parentheses next to the bolded variable title. Robust standard errors are in parentheses under each coefficient. * p < 0.05, ** p < 0.01, *** p < 0.001.

OUTCOME 3: POST-GRADUATION EARNINGS

Table 21 Post-PSE earning descriptive results, all graduates

	Sample Total (84,390)	*Mean log earnings of all students*			*Mean log earnings of male students*			*Mean log earnings of female students*		
		Year 1 (84,390)	Year 2 (78,030)	Year 3 (69,540)	Year 1 (38,290)	Year 2 (35,320)	Year 3 (31,480)	Year 1 (46,100)	Year 2 (42,710)	Year 3 (38,060)
Grad credential										
Certificate or other	0.22	10.1	10.2	10.3	10.1	10.3	10.5	10.0	10.1	10.2
Diploma	0.15	10.2	10.4	10.5	10.2	10.4	10.6	10.2	10.3	10.4
Associate degree	0.02	9.7	9.8	10.0	9.7	9.9	10.1	9.7	9.8	10.0
Apprenticeship	0.03	10.5	10.6	10.8	10.5	10.7	10.8	10.1	10.2	10.2
Bachelor's degree	0.59	10.2	10.4	10.5	10.2	10.4	10.6	10.2	10.3	10.5
Male/Female										
Female	0.55	10.1	10.3	10.4	-	-	-	-	-	-
Male	0.45	10.2	10.4	10.6	-	-	-	-	-	-
Indigenous										
Non-Indigenous	0.96	10.2	10.3	10.5	10.2	10.4	10.6	10.1	10.3	10.4
Indigenous	0.04	10.1	10.3	10.4	10.2	10.4	10.5	10.0	10.2	10.2
Home language										
English	0.75	10.2	10.4	10.5	10.3	10.4	10.6	10.2	10.3	10.4
French	0.01	10.1	10.3	10.4	10.2	10.4	10.5	10.1	10.3	10.3
Chinese	0.11	10.1	10.4	10.5	10.1	10.4	10.5	10.2	10.3	10.5
Punjabi	0.04	10.1	10.3	10.5	10.1	10.3	10.5	10.1	10.3	10.4
South Asian	0.01	10.1	10.3	10.4	10.2	10.4	10.5	10.0	10.2	10.3
Korean	0.01	10.0	10.2	10.4	10.0	10.3	10.4	10.0	10.2	10.4
Other Asian	0.03	10.2	10.3	10.4	10.1	10.3	10.4	10.2	10.4	10.5
West European	0.01	10.1	10.3	10.4	10.2	10.4	10.6	10.0	10.2	10.3
East European	0.01	10.1	10.3	10.5	10.2	10.4	10.6	10.1	10.3	10.4
Semitic	0.01	10.0	10.1	10.4	10.1	10.3	10.5	9.9	10.0	10.2
Other or missing	0.01	10.1	10.3	10.4	10.2	10.3	10.4	10.1	10.3	10.3
Age in Grade 7										
Age 10 or 11	0.01	10.2	10.3	10.4	10.3	10.5	10.6	10.1	10.2	10.4
Age 12	0.96	10.2	10.3	10.5	10.2	10.4	10.6	10.1	10.3	10.4
Age 13 or 14	0.03	10.1	10.3	10.4	10.1	10.4	10.5	10.0	10.1	10.3
French immersion										
English language	0.91	10.2	10.3	10.5	10.2	10.4	10.6	10.1	10.3	10.4
French immersion	0.09	10.2	10.3	10.4	10.2	10.4	10.5	10.1	10.3	10.4
ELL support										
Non-ELL student	0.94	10.2	10.3	10.5	10.2	10.4	10.6	10.1	10.3	10.4
ELL student	0.06	10.1	10.3	10.4	10.1	10.3	10.5	10.0	10.2	10.4

	Sample Total (84,390)	*Mean log earnings of all students*			*Mean log earnings of male students*			*Mean log earnings of female students*		
		Year 1 (84,390)	Year 2 (78,030)	Year 3 (69,540)	Year 1 (38,290)	Year 2 (35,320)	Year 3 (31,480)	Year 1 (46,100)	Year 2 (42,710)	Year 3 (38,060)
IEP in Grade 7										
No IEP	0.97	10.2	10.4	10.5	10.2	10.4	10.6	10.1	10.3	10.4
IEP	0.03	10.0	10.2	10.3	10.0	10.3	10.4	9.9	10.1	10.2
Grade 7 school type										
Public	0.87	10.2	10.3	10.5	10.2	10.4	10.6	10.2	10.3	10.4
Distance ed	0.01	10.1	10.2	10.3	10.2	10.4	10.5	10.0	10.1	10.2
Catholic independent	0.05	10.2	10.4	10.5	10.2	10.4	10.6	10.2	10.3	10.5
Other Christian ind.	0.03	10.2	10.4	10.5	10.3	10.5	10.6	10.2	10.3	10.3
Preparatory/IB ind.	0.02	10.1	10.2	10.4	10.2	10.4	10.6	10.0	10.1	10.2
Other non-religious ind.	0.00	10.1	10.3	10.4	10.2	10.5	10.5	10.0	10.2	10.2
Other religious ind.	0.01	10.0	10.2	10.4	10.0	10.3	10.5	9.9	10.1	10.3
Grade 7 school change										
No school change	0.80	10.2	10.3	10.5	10.2	10.4	10.6	10.1	10.3	10.4
No Grade 6 enrollment	0.02	10.1	10.3	10.5	10.2	10.4	10.6	10.1	10.2	10.4
Voluntary change	0.08	10.2	10.3	10.5	10.2	10.4	10.6	10.1	10.2	10.4
Compulsory change	0.10	10.2	10.3	10.5	10.3	10.4	10.6	10.2	10.3	10.3
Grade 7 FSA										
Did not write	0.04	10.0	10.2	10.4	10.0	10.3	10.4	10.0	10.2	10.3
Not yet meeting exp.	0.05	10.1	10.2	10.4	10.1	10.3	10.5	10.0	10.1	10.2
Meeting exp. reading	0.05	10.1	10.3	10.4	10.3	10.4	10.5	10.1	10.2	10.3
Meeting exp. numeracy	0.10	10.2	10.4	10.5	10.2	10.4	10.6	10.1	10.3	10.4
Meeting exp. both	0.53	10.2	10.4	10.5	10.2	10.4	10.6	10.2	10.3	10.4
Exceeding exp. reading	0.09	10.1	10.3	10.4	10.2	10.4	10.5	10.1	10.2	10.4
Exceeding exp. num.	0.08	10.2	10.4	10.6	10.3	10.5	10.7	10.2	10.3	10.5
Exceeding exp. both	0.05	10.1	10.3	10.5	10.2	10.4	10.6	10.1	10.2	10.4
Rural status in Grade 7										
Urban	0.89	10.2	10.3	10.5	10.2	10.4	10.6	10.1	10.3	10.4
Rural	0.11	10.3	10.4	10.5	10.4	10.5	10.7	10.2	10.3	10.4
Neighbourhood income										
Lowest quintile	0.22	10.2	10.3	10.5	10.2	10.4	10.6	10.1	10.3	10.4
2nd quintile	0.22	10.2	10.3	10.5	10.2	10.4	10.6	10.2	10.3	10.4
3rd quintile	0.20	10.2	10.3	10.5	10.2	10.4	10.6	10.2	10.3	10.4
4th quintile	0.17	10.2	10.4	10.5	10.2	10.4	10.6	10.2	10.3	10.4
Highest quintile	0.18	10.2	10.4	10.5	10.2	10.5	10.6	10.1	10.3	10.4
Grade 7 cohort										
2002	0.20	10.1	10.3	10.5	10.2	10.4	10.6	10.1	10.3	10.4
2003	0.19	10.2	10.3	10.5	10.2	10.4	10.6	10.1	10.3	10.4
2004	0.20	10.2	10.3	10.5	10.2	10.4	10.6	10.1	10.3	10.4
2005	0.20	10.2	10.4	10.5	10.2	10.4	10.6	10.2	10.3	10.4
2006	0.20	10.2	10.4	10.5	10.3	10.5	10.6	10.2	10.3	10.4

Table 22 Post-PSE earnings regression results, all graduates

	Year 1	Year 2	Year 3
Grad credential (BA)			
Certificate or other	-0.16***	-0.18***	-0.21***
	(0.0080)	(0.0084)	(0.0090)
Diploma	-0.028**	-0.045***	-0.073***
	(0.0089)	(0.0089)	(0.0094)
Associate degree	-0.54***	-0.55***	-0.50***
	(0.025)	(0.025)	(0.025)
Apprenticeship	0.18***	0.16***	0.14***
	(0.013)	(0.013)	(0.014)
Male/female (Female)			
Male	0.079***	0.14***	0.19***
	(0.0066)	(0.0068)	(0.0071)
Indigenous (No)			
Indigenous	-0.081***	-0.068***	-0.065***
	(0.016)	(0.017)	(0.019)
Home language (English)			
French	-0.063	-0.022	-0.10*
	(0.044)	(0.041)	(0.052)
Chinese	-0.078***	-0.031**	-0.010
	(0.012)	(0.012)	(0.012)
Punjabi	-0.100***	-0.046**	-0.028
	(0.017)	(0.017)	(0.018)
South Asian	-0.13***	-0.093*	-0.074*
	(0.035)	(0.036)	(0.036)
Korean	-0.23***	-0.16***	-0.10**
	(0.031)	(0.032)	(0.032)
Other Asian	-0.032	0.0050	-0.010
	(0.019)	(0.019)	(0.020)
West European	-0.086**	-0.055	-0.041
	(0.028)	(0.028)	(0.029)
East European	-0.067*	-0.011	0.0063
	(0.029)	(0.029)	(0.029)
Semitic	-0.23***	-0.20***	-0.13**
	(0.040)	(0.044)	(0.045)
Other or missing	-0.069	-0.047	-0.11*
	(0.039)	(0.042)	(0.054)
Age in Grade 7 (Age 12)			
Age 10 or 11	-0.013	-0.025	-0.043
	(0.037)	(0.037)	(0.040)
Age 13 or 14	-0.066***	-0.054**	-0.060**
	(0.020)	(0.020)	(0.020)
French immersion (No)			
Grade 7 French immersion	-0.054***	-0.063***	-0.065***
	(0.011)	(0.012)	(0.013)
English language (No)			
Grade 7 ELL student	-0.036*	-0.023	-0.034
	(0.017)	(0.017)	(0.018)
IEP in Grade 7 (none)			
IEP	-0.18***	-0.14***	-0.14***
	(0.019)	(0.019)	(0.020)

	Year 1	Year 2	Year 3
G7 school (public)			
Distance ed	-0.048	-0.078*	-0.088*
	(0.035)	(0.035)	(0.039)
Catholic independent	-0.0084	0.0057	0.0054
	(0.014)	(0.015)	(0.016)
Other Christian ind.	0.019	0.012	-0.020
	(0.017)	(0.018)	(0.019)
Preparatory/IB ind.	-0.16***	-0.15***	-0.13***
	(0.026)	(0.028)	(0.029)
Other non-religious ind.	-0.13*	-0.031	-0.12*
	(0.054)	(0.046)	(0.054)
Other religious ind.	-0.19***	-0.14**	-0.11*
	(0.049)	(0.050)	(0.049)
G7 school change (none)			
No G6 enrollment	-0.010	-0.029	-0.0072
	(0.023)	(0.024)	(0.025)
Voluntary change	0.0046	-0.0091	-0.0070
	(0.012)	(0.013)	(0.013)
Compulsory change	0.033***	0.0013	-0.012
	(0.0098)	(0.011)	(0.011)
Grade 7 FSA (Meet ex. in both)			
Did not write	-0.15***	-0.10***	-0.090***
	(0.018)	(0.018)	(0.019)
Not yet meeting expectations in both	-0.073***	-0.064***	-0.065***
	(0.014)	(0.015)	(0.016)
Meeting expectations in reading	-0.048***	-0.040**	-0.035*
	(0.013)	(0.014)	(0.015)
Meeting expectations in numeracy	-0.0061	-0.0035	0.014
	(0.010)	(0.011)	(0.011)
Exceeding expectations in reading	-0.074***	-0.089***	-0.088***
	(0.012)	(0.012)	(0.013)
Exceeding expectations in numeracy	0.0065	0.016	0.037**
	(0.013)	(0.013)	(0.013)
Exceeding expectations in both	-0.076***	-0.072***	-0.070***
	(0.017)	(0.018)	(0.019)
Rural status (Urban)			
Rural	0.089***	0.066***	0.053***
	(0.010)	(0.011)	(0.011)
Neighbourhood income (lowest)			
2nd quintile	0.00014	0.010	0.011
	(0.0094)	(0.0096)	(0.010)
3rd quintile	0.013	0.0099	0.020
	(0.0098)	(0.010)	(0.011)
4th quintile	0.0017	0.017	0.022
	(0.010)	(0.011)	(0.011)
Highest quintile	-0.018	0.0045	0.021
	(0.011)	(0.011)	(0.012)
Grade 7 cohort (2002)			
2003	0.0059	-0.00056	-0.0062
	(0.010)	(0.010)	(0.011)
2004	0.031**	0.025*	0.021*
	(0.010)	(0.010)	(0.010)
2005	0.055***	0.048***	0.019
	(0.010)	(0.010)	(0.011)
2006	0.10***	0.063***	-0.0093
	(0.0100)	(0.010)	(0.011)

	Year 1	Year 2	Year 3
Constant	10.2***	10.3***	10.5***
	(0.011)	(0.011)	(0.011)
R^2	0.025	0.026	0.032
Observations	84,390	78,030	69,530

Notes: This table shows the results of an OLS model measuring post-PSE earnings among graduates with earnings data who did not return to PSE. The explanatory variables included in the model are categorical and the reference group for each variable is in parentheses next to the bolded variable title. Robust standard errors are in parentheses under each coefficient. * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$.

Table 23 Post-PSE earnings regression results, male graduates

	Year 1	Year 2	Year 3
Grad credential (BA)			
Certificate or other	-0.13***	-0.13***	-0.12***
	(0.012)	(0.012)	(0.013)
Diploma	-0.016	-0.024	-0.045**
	(0.014)	(0.014)	(0.014)
Associate degree	-0.53***	-0.57***	-0.49***
	(0.044)	(0.046)	(0.042)
Apprenticeship	0.23***	0.22***	0.21***
	(0.014)	(0.015)	(0.015)
Indigenous (No)			
Indigenous	-0.054*	-0.058*	-0.048
	(0.024)	(0.026)	(0.027)
Home language (English)			
French	-0.033	-0.031	-0.12
	(0.063)	(0.058)	(0.074)
Chinese	-0.12***	-0.072***	-0.068***
	(0.018)	(0.018)	(0.019)
Punjabi	-0.13***	-0.079**	-0.055*
	(0.025)	(0.024)	(0.026)
South Asian	-0.068	-0.054	-0.078
	(0.052)	(0.054)	(0.053)
Korean	-0.26***	-0.20***	-0.18***
	(0.044)	(0.047)	(0.046)
Other Asian	-0.12***	-0.12***	-0.12***
	(0.030)	(0.030)	(0.029)
West European	-0.075	-0.024	-0.034
	(0.040)	(0.041)	(0.040)
East European	-0.076	-0.0021	0.0054
	(0.043)	(0.040)	(0.043)
Semitic	-0.17**	-0.14*	-0.094
	(0.062)	(0.065)	(0.063)
Other or missing	-0.081	-0.085	-0.17*
	(0.055)	(0.065)	(0.072)
Age in Grade 7 (Age 12)			
Age 10 or 11	0.026	0.037	-0.042
	(0.061)	(0.058)	(0.069)
Age 13 or 14	-0.064*	-0.033	-0.062*
	(0.025)	(0.024)	(0.025)
French immersion (No)			
Grade 7 French immersion	-0.041*	-0.067**	-0.078***
	(0.019)	(0.021)	(0.022)
English language (No)			
Grade 7 ELL student	-0.012	0.00076	-0.017
	(0.025)	(0.025)	(0.026)
IEP in Grade 7 (none)			
IEP	-0.18***	-0.14***	-0.18***
	(0.023)	(0.022)	(0.025)
G7 school (public)			
Distance ed	0.012	-0.032	-0.060
	(0.051)	(0.050)	(0.049)
Catholic independent	-0.0019	-0.00029	-0.022
	(0.021)	(0.021)	(0.023)
Other Christian ind.	0.037	0.025	0.025
	(0.026)	(0.026)	(0.026)

	Year 1	Year 2	Year 3
Preparatory/IB ind.	-0.085*	-0.11*	-0.043
	(0.037)	(0.043)	(0.041)
Other non-religious ind.	-0.077	0.017	-0.080
	(0.076)	(0.066)	(0.074)
Other religious ind.	-0.19*	-0.10	-0.097
	(0.078)	(0.071)	(0.070)
G7 school change (none)			
No G6 enrollment	0.033	0.0022	0.023
	(0.033)	(0.036)	(0.037)
Voluntary change	0.015	0.0085	-0.0029
	(0.017)	(0.018)	(0.018)
Compulsory change	0.033*	0.0094	0.0027
	(0.015)	(0.016)	(0.016)
Grade 7 FSA (Meet ex. in both)			
Did not write	-0.18***	-0.11***	-0.083**
	(0.026)	(0.026)	(0.027)
Not yet meeting expectations in both	-0.051*	-0.046*	-0.048*
	(0.020)	(0.021)	(0.021)
Meeting expectations in reading	0.025	-0.019	-0.029
	(0.021)	(0.022)	(0.023)
Meeting expectations in numeracy	-0.0023	-0.0027	0.011
	(0.014)	(0.015)	(0.015)
Exceeding expectations in reading	-0.093***	-0.087***	-0.086***
	(0.023)	(0.024)	(0.025)
Exceeding expectations in numeracy	0.016	0.046**	0.061***
	(0.017)	(0.017)	(0.018)
Exceeding expectations in both	-0.044	-0.024	-0.0043
	(0.026)	(0.028)	(0.028)
Rural status (Urban)			
Rural	0.13***	0.12***	0.11***
	(0.016)	(0.016)	(0.017)
Neighbourhood income (lowest)			
2nd quintile	-0.0044	0.0078	-0.0030
	(0.014)	(0.015)	(0.015)
3rd quintile	0.028	0.035*	0.036*
	(0.015)	(0.015)	(0.015)
4th quintile	0.014	0.015	0.020
	(0.016)	(0.016)	(0.016)
Highest quintile	0.024	0.042*	0.047**
	(0.016)	(0.017)	(0.017)
Grade 7 cohort (2002)			
2003	0.0067	-0.0078	-0.0067
	(0.015)	(0.016)	(0.015)
2004	0.016	0.011	0.0016
	(0.015)	(0.016)	(0.015)
2005	0.036*	0.042**	0.0099
	(0.016)	(0.015)	(0.016)
2006	0.10***	0.057***	-0.016
	(0.015)	(0.016)	(0.016)
Constant	10.3***	10.4***	10.6***
	(0.016)	(0.017)	(0.017)
R^2	0.027	0.023	0.024
Observations	38,290	35,320	31,480

Notes: This table shows the results of an OLS model measuring post-PSE earnings among graduates with earnings data who did not return to PSE. The explanatory variables included in the model are categorical and the reference group for each variable is in parentheses next to the bolded variable title. Robust standard errors are in parentheses under each coefficient. * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$.

Table 24 Post-PSE earnings regression results, female graduates

	Year 1	Year 2	Year 3
Grad credential (BA)			
Certificate or other	-0.18***	-0.24***	-0.30***
	(0.011)	(0.011)	(0.013)
Diploma	-0.030*	-0.051***	-0.081***
	(0.012)	(0.012)	(0.013)
Associate degree	-0.54***	-0.54***	-0.51***
	(0.030)	(0.029)	(0.032)
Apprenticeship	-0.088**	-0.18***	-0.22***
	(0.033)	(0.038)	(0.045)
Indigenous (No)			
Indigenous	-0.099***	-0.072***	-0.075**
	(0.022)	(0.022)	(0.025)
Home language (English)			
French	-0.091	-0.0071	-0.082
	(0.062)	(0.058)	(0.074)
Chinese	-0.037*	0.0070	0.041*
	(0.016)	(0.016)	(0.017)
Punjabi	-0.077**	-0.020	-0.0095
	(0.024)	(0.023)	(0.026)
South Asian	-0.19***	-0.12*	-0.068
	(0.046)	(0.049)	(0.048)
Korean	-0.20***	-0.11*	-0.033
	(0.044)	(0.045)	(0.045)
Other Asian	0.038	0.11***	0.075**
	(0.025)	(0.024)	(0.027)
West European	-0.100**	-0.082*	-0.051
	(0.038)	(0.039)	(0.040)
East European	-0.061	-0.018	0.0063
	(0.038)	(0.042)	(0.040)
Semitic	-0.28***	-0.26***	-0.16*
	(0.051)	(0.060)	(0.065)
Other or missing	-0.056	-0.0093	-0.062
	(0.055)	(0.052)	(0.079)
Age in Grade 7 (Age 12)			
Age 10 or 11	-0.033	-0.057	-0.040
	(0.046)	(0.047)	(0.049)
Age 13 or 14	-0.078*	-0.100**	-0.073*
	(0.031)	(0.033)	(0.035)
French immersion (No)			
Grade 7 French immersion	-0.061***	-0.061***	-0.059***
	(0.014)	(0.015)	(0.016)
English language (No)			
Grade 7 ELL student	-0.056*	-0.042	-0.047
	(0.023)	(0.024)	(0.025)
IEP in Grade 7 (none)			
IEP	-0.18***	-0.16***	-0.096**
	(0.034)	(0.035)	(0.034)
G7 school (public)			
Distance ed	-0.094	-0.11*	-0.10
	(0.048)	(0.050)	(0.059)
Catholic independent	-0.013	0.012	0.029
	(0.020)	(0.020)	(0.021)
Other Christian ind.	0.0063	0.0044	-0.051
	(0.023)	(0.024)	(0.027)

	Year 1	Year 2	Year 3
Preparatory/IB ind.	-0.21***	-0.18***	-0.19***
	(0.035)	(0.037)	(0.042)
Other non-religious ind.	-0.19*	-0.073	-0.16*
	(0.077)	(0.063)	(0.077)
Othe religious ind.	-0.19**	-0.17*	-0.12
	(0.064)	(0.069)	(0.067)
G7 school change (none)			
No G6 enrollment	-0.051	-0.055	-0.030
	(0.032)	(0.033)	(0.033)
Voluntary change	-0.0056	-0.024	-0.010
	(0.016)	(0.018)	(0.018)
Compulsory change	0.033*	-0.0037	-0.020
	(0.013)	(0.014)	(0.015)
Grade 7 FSA (Meet ex. in both)			
Did not write	-0.13***	-0.089***	-0.096***
	(0.025)	(0.025)	(0.028)
Not yet meeting expectations in both	-0.093***	-0.081***	-0.086***
	(0.020)	(0.021)	(0.024)
Meeting expectations in reading	-0.086***	-0.048**	-0.032
	(0.017)	(0.017)	(0.019)
Meeting expectations in numeracy	-0.0088	-0.0055	0.014
	(0.016)	(0.016)	(0.017)
Exceeding expectations in reading	-0.068***	-0.094***	-0.093***
	(0.013)	(0.014)	(0.016)
Exceeding expectations in numeracy	0.0019	-0.0099	0.025
	(0.019)	(0.021)	(0.020)
Exceeding expectations in both	-0.099***	-0.11***	-0.11***
	(0.022)	(0.023)	(0.025)
Rural status (Urban)			
Rural	0.055***	0.022	0.0024
	(0.013)	(0.014)	(0.016)
Neighbourhood income (lowest)			
2nd quintile	0.0025	0.010	0.021
	(0.012)	(0.013)	(0.014)
3rd quintile	-0.0014	-0.014	0.0036
	(0.013)	(0.014)	(0.014)
4th quintile	-0.0097	0.016	0.020
	(0.014)	(0.014)	(0.015)
Highest quintile	-0.055***	-0.029	-0.0042
	(0.014)	(0.015)	(0.016)
Grade 7 cohort (2002)			
2003	0.0049	0.0057	-0.0058
	(0.014)	(0.014)	(0.015)
2004	0.044**	0.037**	0.037**
	(0.013)	(0.014)	(0.014)
2005	0.070***	0.054***	0.028
	(0.014)	(0.014)	(0.015)
2006	0.11***	0.068***	-0.0051
	(0.013)	(0.014)	(0.016)
Constant	10.2***	10.4***	10.5***
	(0.014)	(0.014)	(0.015)
R^2	0.023	0.023	0.027
Observations	46,090	42,710	38,060

Notes: This table shows the results of an OLS model measuring post-PSE earnings among graduates with earnings data who did not return to PSE. The explanatory variables included in the model are categorical and the reference group for each variable is in parentheses next to the bolded variable title. Robust standard errors are in parentheses under each coefficient. * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$.

Table 25 Post-PSE earning descriptive results, all graduates with parental T1FF data (2005-06 to 2006-07 cohorts)

	Sample Total (n=30,780)	Average earnings Year 1 (n=30,780)	Year 2 (n=28,180)	Year 3 (n=23,080)
Grad credential				
Certificate or other	0.22	10.1	10.2	10.3
Diploma	0.15	10.2	10.4	10.5
Associate degree	0.02	9.7	9.9	10.0
Apprenticeship	0.04	10.5	10.7	10.8
Bachelor's degree	0.58	10.3	10.4	10.5
Household income in Grade 7				
Low income	0.25	10.2	10.3	10.4
Middle income	0.33	10.2	10.4	10.5
High income	0.43	10.3	10.4	10.5
Lone-parent household in Grade 7				
Two-parent household	0.86	10.2	10.4	10.5
Lone-parent household	0.14	10.2	10.4	10.5
Male/Female				
Female	0.54	10.2	10.3	10.4
Male	0.46	10.3	10.4	10.6
Indigenous				
Non-Indigenous	0.95	10.2	10.4	10.5
Indigenous	0.05	10.1	10.3	10.4
Home language				
English	0.72	10.2	10.4	10.5
French	0.01	10.2	10.4	10.5
Chinese	0.12	10.2	10.4	10.5
Punjabi	0.06	10.1	10.3	10.4
South Asian	0.01	10.1	10.2	10.4
Korean	0.01	10.0	10.3	10.5
Other Asian	0.03	10.2	10.4	10.4
West European	0.01	10.1	10.3	10.4
East European	0.01	10.2	10.4	10.5
Semitic	0.01	10.1	10.3	10.4
Other or missing	0.01	10.2	10.3	10.2
Age in Grade 7				
Age 10 or 11	0.01	10.3	10.4	10.4
Age 12	0.97	10.2	10.4	10.5
Age 13 or 14	0.02	10.1	10.3	10.4
French immersion in Grade 7				
English language	0.90	10.2	10.4	10.5
French immersion	0.10	10.2	10.3	10.4
English language support in Grade 7				
Non-ELL student	0.94	10.2	10.4	10.5
ELL student	0.06	10.1	10.3	10.4
IEP in Grade 7				
No IEP	0.97	10.2	10.4	10.5
IEP	0.03	10.0	10.2	10.3
Grade 7 school type				
Public	0.87	10.2	10.4	10.5
Distance ed	0.01	10.2	10.3	10.3
Catholic independent	0.05	10.2	10.4	10.5
Other Christian ind.	0.04	10.3	10.4	10.5
Preparatory/IB ind.	0.02	10.1	10.3	10.4
Other non-religious ind.	0.00	10.0	10.2	10.3
Other religious ind.	0.01	10.1	10.3	10.4

	Sample Total (n=30,780)	Average earnings Year 1 (n=30,780)	Year 2 (n=28,180)	Year 3 (n=23,080)
Grade 7 school change				
No school change	0.81	10.2	10.4	10.5
No Grade 6 enrollment	0.02	10.1	10.3	10.4
Voluntary change	0.07	10.2	10.4	10.4
Compulsory change	0.10	10.3	10.4	10.5
Grade 7 FSA				
Did not write	0.06	10.1	10.3	10.4
Not yet meeting expectations	0.05	10.1	10.3	10.3
Meeting expectations in reading	0.05	10.2	10.3	10.4
Meeting expectations in numeracy	0.13	10.2	10.4	10.5
Meeting expectations in both	0.51	10.2	10.4	10.5
Exceeding expectations in reading	0.08	10.2	10.3	10.4
Exceeding expectations in numeracy	0.08	10.3	10.5	10.6
Exceeding expectations in both	0.04	10.2	10.4	10.5
Rural status in Grade 7				
Urban	0.90	10.2	10.4	10.5
Rural	0.10	10.3	10.4	10.5
Neighbourhood income in Grade 7				
Lowest quintile	0.18	10.2	10.4	10.5
2nd quintile	0.22	10.2	10.4	10.5
3rd quintile	0.21	10.2	10.4	10.5
4th quintile	0.19	10.2	10.4	10.5
Highest quintile	0.19	10.2	10.4	10.5
Grade 7 cohort				
2005	0.49	10.2	10.4	10.5
2006	0.51	10.2	10.4	10.5

Table 26 Post-PSE earnings regression results, all graduates with parental T1FF data (2005-06 to 2006-07 cohorts) without controlling for household income and lone parent

	Year 1	Year 2	Year 3
Grad credential (BA)			
Certificate or other	-0.18***	-0.19***	-0.20***
	(0.013)	(0.014)	(0.016)
Diploma	-0.047***	-0.036*	-0.060***
	(0.014)	(0.014)	(0.016)
Associate degree	-0.56***	-0.56***	-0.46***
	(0.042)	(0.042)	(0.040)
Apprenticeship	0.18***	0.16***	0.14***
	(0.019)	(0.020)	(0.024)
Male/female (Female)			
Male	0.071***	0.12***	0.19***
	(0.011)	(0.011)	(0.012)
Indigenous (No)			
Indigenous	-0.065**	-0.072**	-0.079*
	(0.024)	(0.027)	(0.031)
Home language (English)			
French	-0.016	0.043	-0.017
	(0.075)	(0.058)	(0.077)
Chinese	-0.053**	-0.020	-0.011
	(0.018)	(0.019)	(0.022)
Punjabi	-0.15***	-0.10***	-0.083**
	(0.027)	(0.026)	(0.031)
South Asian	-0.12*	-0.14*	-0.069
	(0.053)	(0.061)	(0.060)
Korean	-0.23***	-0.17**	-0.060
	(0.055)	(0.060)	(0.059)
Other Asian	-0.040	-0.0042	-0.028
	(0.031)	(0.029)	(0.034)
West European	-0.11*	-0.069	-0.050
	(0.047)	(0.045)	(0.053)
East European	-0.021	0.0089	0.037
	(0.043)	(0.044)	(0.050)
Semitic	-0.15**	-0.13*	-0.10
	(0.058)	(0.064)	(0.075)
Other or missing	-0.078	-0.072	-0.27*
	(0.056)	(0.066)	(0.11)
Age in Grade 7 (Age 12)			
Age 10 or 11	0.034	-0.014	-0.079
	(0.059)	(0.069)	(0.085)
Age 13 or 14	-0.15***	-0.048	-0.050
	(0.040)	(0.035)	(0.039)
French immersion (No)			
Grade 7 French immersion	-0.055**	-0.076***	-0.060**
	(0.018)	(0.019)	(0.022)
English language (No)			
Grade 7 ELL student	-0.028	-0.051	-0.065*
	(0.026)	(0.027)	(0.032)
IEP in Grade 7 (none)			
IEP	-0.17***	-0.14***	-0.14***
	(0.031)	(0.030)	(0.031)

	Year 1	Year 2	Year 3
G7 school (public)			
Distance ed	0.00087	-0.0089	-0.12
	(0.051)	(0.051)	(0.069)
Catholic independent	-0.031	-0.032	-0.026
	(0.023)	(0.024)	(0.028)
Other Christian ind.	0.023	0.0090	-0.022
	(0.027)	(0.029)	(0.034)
Preparatory/IB ind.	-0.15**	-0.15**	-0.11
	(0.049)	(0.053)	(0.061)
Other non-religious ind.	-0.19	-0.15	-0.15
	(0.11)	(0.091)	(0.097)
Othe religious ind.	-0.065	-0.015	0.016
	(0.075)	(0.081)	(0.084)
G7 school change (none)			
No G6 enrollment	-0.066	-0.044	-0.053
	(0.044)	(0.044)	(0.051)
Voluntary change	-0.019	-0.021	-0.014
	(0.021)	(0.021)	(0.024)
Compulsory change	0.028	-0.0076	-0.010
	(0.016)	(0.017)	(0.020)
Grade 7 FSA (Meet ex. in both)			
Did not write	-0.13***	-0.079**	-0.037
	(0.025)	(0.025)	(0.028)
Not yet meeting expectations in both	-0.050*	-0.019	-0.076**
	(0.022)	(0.022)	(0.027)
Meeting expectations in reading	0.0024	-0.019	-0.029
	(0.020)	(0.022)	(0.025)
Meeting expectations in numeracy	-0.0018	0.018	0.024
	(0.016)	(0.016)	(0.018)
Exceeding expectations in reading	-0.079***	-0.10***	-0.12***
	(0.021)	(0.023)	(0.026)
Exceeding expectations in numeracy	0.017	0.048*	0.047
	(0.022)	(0.022)	(0.025)
Exceeding expectations in both	-0.024	0.021	0.014
	(0.032)	(0.032)	(0.037)
Rural status (Urban)			
Rural	0.075***	0.060***	0.060**
	(0.017)	(0.018)	(0.020)
Neighbourhood income (lowest)			
2nd quintile	0.0018	0.0097	0.0028
	(0.016)	(0.017)	(0.019)
3rd quintile	0.015	-0.0047	-0.0036
	(0.016)	(0.017)	(0.019)
4th quintile	0.0086	0.036*	0.023
	(0.017)	(0.018)	(0.020)
Highest quintile	0.0059	0.020	0.025
	(0.018)	(0.019)	(0.020)
Grade 7 cohort (2005)			
2006	0.042***	0.0089	-0.032**
	(0.010)	(0.011)	(0.012)
Constant	10.3***	10.4***	10.5***
	(0.017)	(0.019)	(0.020)
R^2	0.025	0.027	0.031
Observations	30,770	28,180	23,080

Notes: This table shows the results of an OLS model measuring post-PSE earnings among graduates with earnings data who did not return to PSE. The explanatory variables included in the model are categorical and the reference group for each variable is in parentheses next to the bolded variable title. Robust standard errors are in parentheses under each coefficient. * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$.

Table 27 Post-PSE earnings regression results, all graduates with parental T1FF data (2005-06 to 2006-07 cohorts), with controlling for household income and lone parent

	Year 1	Year 2	Year 3
G7 household income (low)			
Middle income	0.0067	0.019	0.024
	(0.014)	(0.015)	(0.016)
Highest	0.029	0.041**	0.038*
	(0.015)	(0.015)	(0.017)
Lone-parent household (No)			
Lone-parent household	0.0081	0.012	0.012
	(0.016)	(0.016)	(0.018)
Grad credential (BA)			
Certificate or other	-0.17***	-0.19***	-0.20***
	(0.013)	(0.014)	(0.016)
Diploma	-0.046**	-0.034*	-0.058***
	(0.014)	(0.014)	(0.016)
Associate degree	-0.56***	-0.56***	-0.46***
	(0.042)	(0.042)	(0.040)
Apprenticeship	0.18***	0.17***	0.14***
	(0.019)	(0.020)	(0.024)
Male/female (Female)			
Male	0.071***	0.12***	0.19***
	(0.011)	(0.011)	(0.013)
Indigenous (No)			
Indigenous	-0.063**	-0.070**	-0.077*
	(0.024)	(0.027)	(0.031)
Home language (English)			
French	-0.016	0.043	-0.018
	(0.075)	(0.058)	(0.077)
Chinese	-0.044*	-0.0081	-0.00013
	(0.019)	(0.020)	(0.022)
Punjabi	-0.14***	-0.093***	-0.076*
	(0.027)	(0.026)	(0.031)
South Asian	-0.11*	-0.13*	-0.062
	(0.053)	(0.061)	(0.060)
Korean	-0.21***	-0.15*	-0.043
	(0.055)	(0.060)	(0.059)
Other Asian	-0.033	0.0053	-0.020
	(0.032)	(0.029)	(0.035)
West European	-0.11*	-0.063	-0.045
	(0.047)	(0.045)	(0.053)
East European	-0.016	0.015	0.042
	(0.043)	(0.044)	(0.051)
Semitic	-0.14*	-0.11	-0.092
	(0.058)	(0.064)	(0.075)
Other or missing	-0.072	-0.065	-0.26*
	(0.056)	(0.066)	(0.11)
Age in Grade 7 (Age 12)			
Age 10 or 11	0.035	-0.013	-0.077
	(0.059)	(0.069)	(0.085)
Age 13 or 14	-0.15***	-0.047	-0.050
	(0.040)	(0.035)	(0.039)
French immersion (No)			
Grade 7 French immersion	-0.056**	-0.079***	-0.062**
	(0.018)	(0.019)	(0.022)

	Year 1	Year 2	Year 3
English language (No)			
Grade 7 ELL student	-0.024	-0.045	-0.059
	(0.027)	(0.027)	(0.032)
IEP in Grade 7 (none)			
IEP	-0.17***	-0.15***	-0.14***
	(0.031)	(0.030)	(0.031)
G7 school (public)			
Distance ed	0.0045	-0.0046	-0.12
	(0.051)	(0.051)	(0.069)
Catholic independent	-0.033	-0.035	-0.029
	(0.023)	(0.024)	(0.028)
Other Christian ind.	0.022	0.0076	-0.023
	(0.028)	(0.029)	(0.034)
Preparatory/IB ind.	-0.15**	-0.15**	-0.12
	(0.049)	(0.053)	(0.061)
Other non-religious ind.	-0.19	-0.15	-0.15
	(0.11)	(0.091)	(0.097)
Othe religious ind.	-0.067	-0.019	0.012
	(0.075)	(0.081)	(0.084)
G7 school change (none)			
No G6 enrollment	-0.062	-0.038	-0.045
	(0.044)	(0.044)	(0.051)
Voluntary change	-0.018	-0.019	-0.012
	(0.021)	(0.021)	(0.024)
Compulsory change	0.028	-0.0071	-0.0100
	(0.016)	(0.017)	(0.020)
Grade 7 FSA (Meet ex. in both)			
Did not write	-0.13***	-0.079**	-0.036
	(0.025)	(0.025)	(0.028)
Not yet meeting expectations in both	-0.049*	-0.018	-0.076**
	(0.022)	(0.022)	(0.027)
Meeting expectations in reading	0.0030	-0.018	-0.028
	(0.020)	(0.022)	(0.025)
Meeting expectations in numeracy	-0.0010	0.019	0.025
	(0.016)	(0.016)	(0.018)
Exceeding expectations in reading	-0.079***	-0.10***	-0.12***
	(0.021)	(0.023)	(0.026)
Exceeding expectations in numeracy	0.017	0.048*	0.047
	(0.022)	(0.022)	(0.025)
Exceeding expectations in both	-0.025	0.020	0.013
	(0.032)	(0.032)	(0.037)
Rural status (Urban)			
Rural	0.075***	0.060***	0.061**
	(0.017)	(0.018)	(0.020)
Neighbourhood income (lowest)			
2nd quintile	0.000099	0.0075	0.00072
	(0.016)	(0.017)	(0.019)
3rd quintile	0.012	-0.0079	-0.0062
	(0.016)	(0.017)	(0.019)
4th quintile	0.0047	0.031	0.019
	(0.017)	(0.018)	(0.020)
Highest quintile	0.00042	0.014	0.021
	(0.018)	(0.019)	(0.021)
Grade 7 cohort (2005)			
2006	0.042***	0.0086	-0.032**
	(0.010)	(0.011)	(0.012)

	Year 1	Year 2	Year 3
Constant	10.2***	10.4***	10.5***
	(0.021)	(0.022)	(0.023)
R^2	0.026	0.027	0.031
Observations	30,770	28,180	23,070

Notes: This table shows the results of an OLS model measuring post-PSE earnings among graduates with earnings data who did not return to PSE. The explanatory variables included in the model are categorical and the reference group for each variable is in parentheses next to the bolded variable title. Robust standard errors are in parentheses under each coefficient. * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$.

OUTCOME 4: LABOUR MARKET ENTRY AFTER HIGH SCHOOL

Table 28 Post-high school labour market entry descriptive results, all students who do not attend PSE

	Sample Total (159,190)	*All students (n=159,190)*			*Male students (n=84,480)*			*Female students (n=74,720)*		
		Year 1	Year 2	Year 3	Year 1	Year 2	Year 3	Year 1	Year 2	Year 3
Male/Female										
Female	0.47	54.2	65.4	68.2	-	-	-	-	-	-
Male	0.53	52.8	64.1	66.7	-	-	-	-	-	-
Indigenous										
Non-Indigenous	0.80	57.3	68.3	70.6	56.3	67.2	69.5	58.4	69.5	71.9
Indigenous	0.20	38.3	50.6	54.5	38.2	50.7	54.9	38.4	50.4	54.2
Home language										
English	0.89	53.8	65.3	67.8	53.2	64.6	67.1	54.5	66.1	68.7
French	0.00	56.1	65.2	66.7	52.8	63.9	66.7	60.0	66.7	66.7
Chinese	0.02	39.7	47.1	51.8	39.0	48.0	52.5	40.5	45.4	50.3
Punjabi	0.02	58.7	68.0	70.5	58.4	69.1	70.2	59.2	66.0	70.9
South Asian	0.01	49.1	59.5	65.5	48.5	59.1	65.2	50.0	60.0	66.0
Korean	0.01	33.0	37.6	40.4	36.1	42.6	44.3	29.8	31.9	36.2
Other Asian	0.02	58.5	71.8	75.0	56.5	70.1	73.4	61.4	75.0	77.3
West European	0.01	52.5	64.0	68.6	52.0	62.6	67.5	53.1	65.5	70.8
East European	0.01	56.5	64.8	67.6	54.0	63.5	68.3	60.0	66.7	66.7
Semitic	0.01	48.9	59.1	61.4	46.2	59.6	63.5	52.8	58.3	58.3
Other or missing	0.01	50.4	60.5	63.9	51.6	60.9	65.6	49.1	60.0	60.0
Age in Grade 7										
Age 10 or 11	0.00	40.8	57.7	63.4	35.5	54.8	61.3	45.0	60.0	65.0
Age 12	0.92	53.9	65.6	68.3	53.2	64.9	67.5	54.7	66.4	69.1
Age 13 or 14	0.08	49.1	54.6	57.2	50.1	56.4	59.2	47.0	51.4	53.6
French immersion										
English language	0.96	53.1	64.4	67.2	52.6	63.9	66.5	53.7	65.1	67.9
French immersion	0.04	61.4	70.9	73.3	59.8	70.1	73.7	62.3	71.5	73.1
ELL support										
Non-ELL student	0.94	54.3	65.5	68.2	53.5	64.7	67.3	55.1	66.4	69.2
ELL student	0.06	40.0	51.1	54.8	41.8	53.5	57.6	37.8	48.3	51.5
IEP in Grade 7										
No IEP	0.84	56.6	67.9	70.4	56.6	67.9	70.3	56.6	68.0	70.6
IEP	0.16	37.3	48.2	52.0	39.0	50.0	53.7	33.6	44.2	48.1

	Sample Total (159,190)	*All students (n=159,190)*			*Male students (n=84,480)*			*Female students (n=74,720)*		
		Year 1	Year 2	Year 3	Year 1	Year 2	Year 3	Year 1	Year 2	Year 3
Grade 7 school type										
Public	0.90	53.3	64.7	67.3	52.6	64.0	66.6	54.1	65.5	68.2
Distance ed	0.02	52.8	65.0	69.3	52.4	63.6	68.9	53.2	66.5	69.7
Catholic independent	0.02	55.1	66.1	69.9	55.0	65.5	70.2	55.2	66.9	69.7
Other Christian ind.	0.04	65.9	75.1	76.7	66.4	74.9	76.3	65.7	75.3	77.0
Preparatory/IB ind.	0.01	38.8	46.8	47.5	37.7	47.8	46.4	38.6	45.7	48.6
Other non-religious ind.	0.01	35.8	45.7	51.2	36.9	46.4	52.4	34.2	44.3	49.4
Other religious ind.	0.00	45.9	54.1	56.8	45.0	55.0	55.0	44.4	50.0	55.6
Grade 7 school change										
No school change	0.70	54.5	65.7	68.4	53.9	65.1	67.7	55.3	66.5	69.3
No Grade 6 enrollment	0.02	46.3	55.0	57.5	48.1	55.7	59.5	44.2	54.1	55.8
Voluntary change	0.12	46.6	58.7	61.8	46.1	58.4	61.2	47.2	59.1	62.4
Compulsory change	0.15	55.2	66.4	68.8	54.4	65.5	67.8	56.2	67.4	69.9
Grade 7 FSA										
Did not write	0.18	39.6	50.2	54.3	39.5	49.8	54.4	39.7	50.7	54.2
Not yet meeting exp.	0.18	49.7	62.3	65.7	51.4	63.7	67.0	47.8	60.6	64.3
Meeting exp. reading	0.12	54.3	67.1	70.1	54.0	67.2	69.6	54.4	67.1	70.5
Meeting exp. numeracy	0.11	57.1	68.8	71.0	56.9	68.4	70.9	57.3	69.5	71.2
Meeting exp. both	0.34	60.6	71.3	73.1	59.0	70.0	71.5	62.2	72.8	74.8
Exceeding exp. reading	0.03	59.3	68.5	69.8	58.5	67.5	68.0	59.8	69.1	70.9
Exceeding exp. num.	0.02	53.6	62.4	65.0	52.5	62.9	65.2	56.2	62.8	64.5
Exceeding exp. both	0.01	53.2	59.1	60.5	52.3	58.9	59.8	54.0	59.3	61.9
Rural status in Grade 7										
Urban	0.83	53.2	64.7	67.5	52.3	63.9	66.7	54.2	65.7	68.5
Rural	0.17	54.5	64.7	66.8	55.1	64.9	67.0	53.9	64.4	66.7
Neighbourhood income										
Lowest quintile	0.26	49.2	59.9	62.7	48.3	59.3	62.4	50.1	60.6	63.1
2nd quintile	0.22	53.5	65.0	68.1	53.0	64.3	67.5	54.0	65.8	68.9
3rd quintile	0.20	54.8	66.9	69.1	54.0	66.0	67.7	55.8	68.0	70.7
4th quintile	0.18	56.6	67.9	70.6	55.9	67.3	69.9	57.3	68.5	71.3
Highest quintile	0.15	55.5	66.1	68.7	55.3	65.8	68.0	55.7	66.5	69.4
Grade 7 cohort										
2002	0.11	60.9	64.7	65.2	60.3	62.9	63.6	61.4	66.6	66.9
2003	0.11	51.6	62.5	66.2	50.0	61.4	65.8	53.4	63.9	66.9
2004	0.11	49.1	63.6	66.2	48.1	63.4	65.5	50.4	63.7	66.9
2005	0.10	49.9	63.4	67.1	49.4	63.1	67.6	50.4	63.8	66.5
2006	0.10	51.1	64.2	67.1	50.8	63.8	66.9	51.4	64.7	67.2
2007	0.10	52.1	64.2	67.1	51.4	63.8	66.6	53.0	64.6	67.7
2008	0.10	53.8	65.4	67.6	54.1	64.4	65.9	53.5	66.5	69.5
2009	0.09	54.7	65.5	67.2	53.4	64.8	66.5	56.3	66.7	68.2
2010	0.09	54.3	66.2	69.0	53.7	65.7	68.2	54.9	66.7	69.9
2011	0.09	57.4	68.3	72.8	57.7	68.6	72.0	56.9	68.1	73.7

Table 29 Post-high school labour market entry regression results, all students who do not attend PSE

	Year 1	Year 2	Year 3
Male/female (Female)			
Male	0.00093	0.0030	0.0013
	(0.0025)	(0.0024)	(0.0023)
Indigenous (No)			
Indigenous	-0.16***	-0.15***	-0.14***
	(0.0033)	(0.0032)	(0.0032)
Home language (English)			
French	0.020	0.0068	0.0013
	(0.020)	(0.019)	(0.019)
Chinese	-0.15***	-0.19***	-0.16***
	(0.0086)	(0.0087)	(0.0086)
Punjabi	0.040***	0.0079	0.0085
	(0.0094)	(0.0090)	(0.0089)
South Asian	-0.053***	-0.072***	-0.038**
	(0.015)	(0.014)	(0.014)
Korean	-0.22***	-0.29***	-0.28***
	(0.015)	(0.015)	(0.015)
Other Asian	0.031***	0.041***	0.048***
	(0.0090)	(0.0083)	(0.0081)
West European	-0.034***	-0.033***	-0.0073
	(0.010)	(0.0099)	(0.0096)
East European	0.0047	-0.024	-0.017
	(0.015)	(0.015)	(0.014)
Semitic	-0.027	-0.041*	-0.047**
	(0.017)	(0.017)	(0.017)
Other or missing	-0.019	-0.028*	-0.025
	(0.014)	(0.014)	(0.014)
Age in Grade 7 (Age 12)			
Age 10 or 11	-0.14***	-0.082***	-0.056**
	(0.018)	(0.018)	(0.017)
Age 13 or 14	0.022***	-0.040***	-0.046***
	(0.0046)	(0.0046)	(0.0046)
French immersion (No)			
Grade 7 French immersion	0.018**	-0.00086	0.00040
	(0.0062)	(0.0057)	(0.0056)
English language (No)			
Grade 7 ELL student	-0.041***	-0.038***	-0.040***
	(0.0057)	(0.0058)	(0.0058)
IEP in Grade 7 (none)			
IEP	-0.14***	-0.14***	-0.13***
	(0.0037)	(0.0037)	(0.0036)
G7 school (public)			
Distance ed	0.022**	0.032***	0.046***
	(0.0084)	(0.0080)	(0.0078)
Catholic independent	-0.043***	-0.043***	-0.028***
	(0.0089)	(0.0085)	(0.0082)
Other Christian ind.	0.058***	0.042***	0.036***
	(0.0064)	(0.0059)	(0.0058)
Preparatory/IB ind.	-0.20***	-0.21***	-0.22***
	(0.013)	(0.014)	(0.014)

	Year 1	Year 2	Year 3
Other non-religious ind.	-0.14***	-0.13***	-0.11***
	(0.012)	(0.012)	(0.012)
Othe religious ind.	-0.15***	-0.17***	-0.16***
	(0.026)	(0.026)	(0.026)
G7 school change (none)			
No G6 enrollment	-0.043***	-0.058***	-0.063***
	(0.0081)	(0.0080)	(0.0080)
Voluntary change	-0.053***	-0.046***	-0.045***
	(0.0038)	(0.0037)	(0.0037)
Compulsory change	0.015***	0.010**	0.0068*
	(0.0035)	(0.0033)	(0.0033)
Grade 7 FSA (Meet ex. in both)	-0.13***	-0.13***	-0.11***
Did not write	(0.0041)	(0.0040)	(0.0039)
Not yet meeting expectations in both	-0.057***	-0.040***	-0.027***
	(0.0037)	(0.0035)	(0.0034)
Meeting expectations in reading	-0.045***	-0.027***	-0.016***
	(0.0042)	(0.0039)	(0.0038)
Meeting expectations in numeracy	-0.0071	0.0034	0.0049
	(0.0042)	(0.0039)	(0.0039)
Exceeding expectations in reading	-0.019**	-0.033***	-0.038***
	(0.0070)	(0.0066)	(0.0065)
Exceeding expectations in numeracy	-0.033***	-0.046***	-0.043***
	(0.0087)	(0.0082)	(0.0081)
Exceeding expectations in both	-0.035**	-0.075***	-0.082***
	(0.011)	(0.011)	(0.010)
Rural status (Urban)			
Rural	0.042***	0.024***	0.015***
	(0.0033)	(0.0031)	(0.0031)
Neighbourhood income (lowest)			
2nd quintile	0.030***	0.029***	0.031***
	(0.0036)	(0.0034)	(0.0034)
3rd quintile	0.041***	0.042***	0.033***
	(0.0037)	(0.0036)	(0.0035)
4th quintile	0.052***	0.044***	0.040***
	(0.0039)	(0.0037)	(0.0037)
Highest quintile	0.041***	0.029***	0.024***
	(0.0043)	(0.0041)	(0.0040)
Grade 7 cohort (2002)			
2003	-0.092***	-0.019***	0.012*
	(0.0051)	(0.0050)	(0.0049)
2004	-0.12***	-0.0078	0.013*
	(0.0052)	(0.0050)	(0.0049)
2005	-0.10***	-0.0059	0.025***
	(0.0052)	(0.0051)	(0.0050)
2006	-0.088***	0.0056	0.027***
	(0.0052)	(0.0051)	(0.0050)
2007	-0.078***	0.0055	0.028***
	(0.0053)	(0.0051)	(0.0051)
2008	-0.060***	0.021***	0.037***
	(0.0055)	(0.0053)	(0.0052)
2009	-0.049***	0.025***	0.035***
	(0.0055)	(0.0054)	(0.0053)
2010	-0.055***	0.029***	0.051***
	(0.0056)	(0.0054)	(0.0053)
2011	-0.023***	0.051***	0.089***
	(0.0056)	(0.0054)	(0.0052)

	Year 1	Year 2	Year 3
Constant	0.67***	0.72***	0.72***
	(0.0045)	(0.0044)	(0.0043)
R^2	0.066	0.069	0.062
Observations	159,190	159,190	159,190

Notes: This table shows the results of a linear probability model measuring post-high school labour market entry among students who did not attend PSE within three years of their expected Grade 12 year. The explanatory variables included in the model are categorical and the reference group for each variable is in parentheses next to the bolded variable title. Standard errors are in parentheses under each coefficient. * p < 0.05, ** p < 0.01, *** p < 0.001.

Table 30 Post-high school labour market entry regression results, male students who do not attend PSE

	Year 1	Year 2	Year 3
Indigenous (No)			
Indigenous	-0.15***	-0.14***	-0.13***
	(0.0046)	(0.0046)	(0.0045)
Home language (English)			
French	-0.010	-0.0085	-0.0068
	(0.026)	(0.026)	(0.025)
Chinese	-0.15***	-0.17***	-0.15***
	(0.012)	(0.012)	(0.012)
Punjabi	0.036**	0.019	0.0075
	(0.012)	(0.011)	(0.011)
South Asian	-0.051**	-0.072***	-0.041*
	(0.019)	(0.019)	(0.019)
Korean	-0.20***	-0.25***	-0.24***
	(0.020)	(0.020)	(0.020)
Other Asian	0.010	0.022*	0.031**
	(0.012)	(0.011)	(0.011)
West European	-0.046**	-0.050***	-0.024
	(0.014)	(0.014)	(0.013)
East European	-0.012	-0.033	-0.011
	(0.020)	(0.019)	(0.019)
Semitic	-0.059**	-0.041	-0.033
	(0.023)	(0.022)	(0.022)
Other or missing	-0.0082	-0.027	-0.0069
	(0.019)	(0.019)	(0.019)
Age in Grade 7 (Age 12)			
Age 10 or 11	-0.18***	-0.12***	-0.075**
	(0.026)	(0.027)	(0.026)
Age 13 or 14	0.027***	-0.027***	-0.031***
	(0.0058)	(0.0057)	(0.0057)
French immersion (No)			
Grade 7 French immersion	0.0092	-0.0024	0.014
	(0.0095)	(0.0089)	(0.0085)
English language (No)			
Grade 7 ELL student	-0.021**	-0.016*	-0.016*
	(0.0078)	(0.0079)	(0.0079)
IEP in Grade 7 (none)			
IEP	-0.13***	-0.13***	-0.12***
	(0.0046)	(0.0046)	(0.0045)
G7 school (public)			
Distance ed	0.020	0.026*	0.049***
	(0.012)	(0.011)	(0.011)
Catholic independent	-0.039**	-0.041***	-0.016
	(0.012)	(0.012)	(0.011)
Other Christian ind.	0.070***	0.050***	0.043***
	(0.0091)	(0.0083)	(0.0083)
Preparatory/IB ind.	-0.18***	-0.18***	-0.21***
	(0.019)	(0.019)	(0.019)
Other non-religious ind.	-0.14***	-0.13***	-0.11***
	(0.017)	(0.017)	(0.017)
Othe religious ind.	-0.12***	-0.15***	-0.15***
	(0.036)	(0.036)	(0.036)
G7 school change (none)			
No G6 enrollment	-0.030**	-0.056***	-0.051***
	(0.011)	(0.011)	(0.011)

	Year 1	Year 2	Year 3
Voluntary change	-0.052***	-0.043***	-0.045***
	(0.0052)	(0.0051)	(0.0051)
Compulsory change	0.014**	0.010*	0.0062
	(0.0049)	(0.0046)	(0.0046)
Grade 7 FSA (Meet ex. in both)			
Did not write	-0.12***	-0.12***	-0.098***
	(0.0055)	(0.0054)	(0.0053)
Not yet meeting expectations in both	-0.028***	-0.015**	-0.0011
	(0.0050)	(0.0048)	(0.0047)
Meeting expectations in reading	-0.031***	-0.012*	-0.0029
	(0.0062)	(0.0059)	(0.0058)
Meeting expectations in numeracy	0.0048	0.010*	0.015**
	(0.0055)	(0.0052)	(0.0051)
Exceeding expectations in reading	-0.0098	-0.029**	-0.037***
	(0.011)	(0.011)	(0.011)
Exceeding expectations in numeracy	-0.036***	-0.041***	-0.034***
	(0.011)	(0.010)	(0.010)
Exceeding expectations in both	-0.033*	-0.068***	-0.081***
	(0.016)	(0.015)	(0.015)
Rural status (Urban)			
Rural	0.056***	0.035***	0.024***
	(0.0045)	(0.0043)	(0.0043)
Neighbourhood income (lowest)			
2nd quintile	0.036***	0.029***	0.029***
	(0.0049)	(0.0048)	(0.0047)
3rd quintile	0.045***	0.040***	0.025***
	(0.0051)	(0.0050)	(0.0049)
4th quintile	0.058***	0.046***	0.041***
	(0.0054)	(0.0052)	(0.0051)
Highest quintile	0.051***	0.032***	0.024***
	(0.0059)	(0.0056)	(0.0056)
Grade 7 cohort (2002)			
2003	-0.10***	-0.014*	0.022**
	(0.0071)	(0.0070)	(0.0069)
2004	-0.12***	0.0073	0.020**
	(0.0071)	(0.0069)	(0.0069)
2005	-0.11***	0.0049	0.041***
	(0.0073)	(0.0071)	(0.0070)
2006	-0.090***	0.016*	0.038***
	(0.0073)	(0.0071)	(0.0070)
2007	-0.084***	0.017*	0.036***
	(0.0073)	(0.0071)	(0.0071)
2008	-0.058***	0.025***	0.032***
	(0.0076)	(0.0074)	(0.0073)
2009	-0.062***	0.029***	0.038***
	(0.0076)	(0.0074)	(0.0074)
2010	-0.064***	0.036***	0.052***
	(0.0078)	(0.0075)	(0.0074)
2011	-0.020**	0.067***	0.092***
	(0.0077)	(0.0074)	(0.0073)
Constant	0.66***	0.69***	0.69***
	(0.0061)	(0.0059)	(0.0059)
R^2	0.063	0.063	0.054
Observations	84,480	84,480	84,480

Notes: This table shows the results of a linear probability model measuring post-high school labour market entry among students who did not attend PSE within three years of their expected Grade 12 year. The explanatory variables included in the model are categorical and the reference group for each variable is in parentheses next to the bolded variable title. Standard errors are in parentheses under each coefficient. * p < 0.05, ** p < 0.01, *** p < 0.001.

Table 31 Post-high school labour market entry regression results, female students who do not attend PSE

	Year 1	Year 2	Year 3
Indigenous (No)			
Indigenous	-0.17***	-0.16***	-0.15***
	(0.0047)	(0.0046)	(0.0046)
Home language (English)			
French	0.056	0.026	0.012
	(0.029)	(0.028)	(0.028)
Chinese	-0.15***	-0.21***	-0.18***
	(0.013)	(0.013)	(0.013)
Punjabi	0.046**	-0.0083	0.015
	(0.015)	(0.015)	(0.014)
South Asian	-0.056*	-0.073***	-0.034
	(0.022)	(0.022)	(0.021)
Korean	-0.26***	-0.34***	-0.33***
	(0.021)	(0.022)	(0.022)
Other Asian	0.060***	0.069***	0.072***
	(0.014)	(0.013)	(0.012)
West European	-0.020	-0.014	0.013
	(0.015)	(0.014)	(0.014)
East European	0.029	-0.011	-0.024
	(0.023)	(0.022)	(0.022)
Semitic	0.017	-0.041	-0.070**
	(0.027)	(0.027)	(0.026)
Other or missing	-0.031	-0.028	-0.044*
	(0.021)	(0.020)	(0.021)
Age in Grade 7 (Age 12)			
Age 10 or 11	-0.11***	-0.054*	-0.044
	(0.024)	(0.024)	(0.023)
Age 13 or 14	0.012	-0.063***	-0.072***
	(0.0076)	(0.0076)	(0.0075)
French immersion (No)			
Grade 7 French immersion	0.021*	-0.0035	-0.014
	(0.0081)	(0.0075)	(0.0074)
English language (No)			
Grade 7 ELL student	-0.065***	-0.064***	-0.068***
	(0.0083)	(0.0086)	(0.0086)
IEP in Grade 7 (none)			
IEP	-0.16***	-0.17***	-0.16***
	(0.0062)	(0.0063)	(0.0062)
G7 school (public)			
Distance ed	0.023	0.036**	0.042***
	(0.012)	(0.012)	(0.011)
Catholic independent	-0.047***	-0.044***	-0.040***
	(0.013)	(0.012)	(0.012)
Other Christian ind.	0.046***	0.034***	0.029***
	(0.0091)	(0.0083)	(0.0081)
Preparatory/IB ind.	-0.21***	-0.24***	-0.23***
	(0.019)	(0.019)	(0.019)
Other non-religious ind.	-0.13***	-0.13***	-0.10***
	(0.016)	(0.017)	(0.018)
Othe religious ind.	-0.17***	-0.18***	-0.17***
	(0.038)	(0.038)	(0.038)

	Year 1	Year 2	Year 3
G7 school change (none)			
No G6 enrollment	-0.059***	-0.060***	-0.075***
	(0.012)	(0.012)	(0.012)
Voluntary change	-0.053***	-0.050***	-0.045***
	(0.0056)	(0.0054)	(0.0053)
Compulsory change	0.016**	0.0098*	0.0070
	(0.0051)	(0.0048)	(0.0047)
Grade 7 FSA (Meet ex. in both)			
Did not write	-0.15***	-0.14***	-0.13***
	(0.0061)	(0.0059)	(0.0059)
Not yet meeting expectations in both	-0.089***	-0.066***	-0.055***
	(0.0053)	(0.0051)	(0.0050)
Meeting expectations in reading	-0.059***	-0.041***	-0.031***
	(0.0057)	(0.0053)	(0.0051)
Meeting expectations in numeracy	-0.019**	-0.0019	-0.0057
	(0.0065)	(0.0060)	(0.0059)
Exceeding expectations in reading	-0.031***	-0.042***	-0.046***
	(0.0090)	(0.0084)	(0.0082)
Exceeding expectations in numeracy	-0.016	-0.048***	-0.050***
	(0.014)	(0.014)	(0.013)
Exceeding expectations in both	-0.038*	-0.083***	-0.083***
	(0.015)	(0.015)	(0.015)
Rural status (Urban)			
Rural	0.027***	0.012**	0.0047
	(0.0048)	(0.0045)	(0.0045)
Neighbourhood income (lowest)			
2nd quintile	0.022***	0.029***	0.033***
	(0.0052)	(0.0050)	(0.0049)
3rd quintile	0.036***	0.043***	0.041***
	(0.0054)	(0.0052)	(0.0051)
4th quintile	0.045***	0.041***	0.039***
	(0.0057)	(0.0054)	(0.0053)
Highest quintile	0.029***	0.026***	0.024***
	(0.0062)	(0.0059)	(0.0058)
Grade 7 cohort (2002)			
2003	-0.078***	-0.026***	0.0017
	(0.0074)	(0.0071)	(0.0070)
2004	-0.10***	-0.024***	0.0050
	(0.0075)	(0.0071)	(0.0071)
2005	-0.098***	-0.017*	0.0082
	(0.0076)	(0.0073)	(0.0072)
2006	-0.085***	-0.0052	0.016*
	(0.0076)	(0.0073)	(0.0072)
2007	-0.071***	-0.0065	0.020**
	(0.0077)	(0.0074)	(0.0073)
2008	-0.061***	0.017*	0.043***
	(0.0080)	(0.0076)	(0.0075)
2009	-0.032***	0.021**	0.032***
	(0.0080)	(0.0077)	(0.0077)
2010	-0.044***	0.023**	0.052***
	(0.0080)	(0.0077)	(0.0076)
2011	-0.026**	0.034***	0.088***
	(0.0081)	(0.0077)	(0.0075)

	Year 1	Year 2	Year 3
Constant	0.69***	0.75***	0.74***
	(0.0062)	(0.0060)	(0.0059)
R^2	0.072	0.080	0.075
Observations	74,720	74,720	74,720

Notes: This table shows the results of a linear probability model measuring post-high school labour market entry among students who did not attend PSE within three years of their expected Grade 12 year. The explanatory variables included in the model are categorical and the reference group for each variable is in parentheses next to the bolded variable title. Standard errors are in parentheses under each coefficient. * p < 0.05, ** p < 0.01, *** p < 0.001.

Table 32 Post-high school labour market entry descriptive results, all students who do not attend PSE and have parental T1FF data (2005-06 to 2011-12 cohorts)

	Sample Total (96,470)	*All students (96,470)*			*With Low Income (42,640)*			*With Middle Income (32,110)*			*With High Income (21,710)*		
		Year 1	Year 2	Year 3	Year 1	Year 2	Year 3	Year 1	Year 2	Year 3	Year 1	Year 2	Year 3
Household income													
Low income	0.44	46.2	59.9	63.7	-	-	-	-	-	-	-	-	-
Middle income	0.33	59.1	70.8	73.2	-	-	-	-	-	-	-	-	-
High income	0.23	64.8	74.6	76.5	-	-	-	-	-	-	-	-	-
Lone-parent household													
Two-parent household	0.68	58.0	69.6	72.2	48.3	61.6	65.3	60.2	71.8	74.2	65.1	75.0	76.8
Lone-parent household	0.32	47.5	60.8	64.4	44.4	58.3	62.3	55.3	67.1	69.9	60.0	69.1	71.8
Male/Female													
Female	0.47	55.2	67.4	70.6	46.9	60.5	64.5	59.8	71.6	74.2	65.3	75.4	77.3
Male	0.53	54.2	66.3	69.1	45.7	59.4	63.0	58.4	70.0	72.4	64.4	74.0	75.9
Indigenous													
Non-Indigenous	0.80	58.2	70.0	72.6	50.7	64.2	67.6	61.2	72.7	74.9	66.0	75.5	77.3
Indigenous	0.20	40.9	54.4	58.8	35.0	49.0	53.9	47.9	60.4	64.5	55.2	68.1	70.2
Home language													
English	0.88	55.0	67.3	70.1	45.7	59.7	63.6	59.4	71.2	73.5	65.5	75.5	77.2
French	0.00	57.5	67.5	67.5	53.3	60.0	60.0	61.5	69.2	76.9	63.6	81.8	72.7
Chinese	0.02	39.9	49.2	54.6	38.3	48.3	53.0	43.3	53.3	60.0	41.4	48.3	51.7
Punjabi	0.02	57.9	68.0	71.1	55.6	67.8	70.0	59.5	69.0	71.4	56.5	65.2	73.9
South Asian	0.01	48.7	60.5	67.1	50.0	59.5	66.7	50.0	65.4	69.2	50.0	50.0	62.5
Korean	0.01	46.0	52.0	54.0	47.1	52.9	55.9	45.5	54.5	63.6	40.0	40.0	40.0
Other Asian	0.02	60.6	73.6	76.9	58.6	73.9	76.6	66.3	77.1	80.7	52.4	66.7	71.4
West European	0.01	54.3	68.1	71.7	48.7	64.5	68.4	57.5	70.0	75.0	71.4	76.2	81.0
East European	0.01	58.0	66.7	71.0	54.5	63.6	66.7	58.3	70.8	75.0	58.3	66.7	75.0
Semitic	0.01	48.3	60.0	61.7	46.7	60.0	60.0	46.2	61.5	69.2	33.3	33.3	33.3
Other or missing	0.01	54.7	66.7	66.7	51.1	63.8	66.0	59.1	72.7	68.2	57.1	57.1	57.1
Age in Grade 7													
Age 10 or 11	0.00	45.5	63.6	65.9	33.3	55.6	61.1	57.1	71.4	71.4	50.0	66.7	66.7
Age 12	0.93	55.0	67.5	70.4	46.4	60.5	64.3	59.3	71.3	73.8	65.4	75.3	77.1
Age 13 or 14	0.07	51.1	58.0	60.9	45.6	52.9	56.3	56.5	62.5	65.0	56.8	64.0	65.6
French immersion													
English language	0.95	54.3	66.6	69.5	45.9	59.6	63.5	58.9	70.6	73.1	64.7	74.7	76.5
French immersion	0.05	62.1	72.2	74.6	56.9	68.6	70.8	62.7	73.2	75.8	66.3	74.7	77.1
ELL support													
Non-ELL student	0.94	55.5	67.6	70.5	47.0	60.8	64.6	59.5	71.2	73.5	65.2	75.0	76.8
ELL student	0.06	41.6	54.1	58.2	38.4	51.3	54.9	50.0	61.4	66.7	45.2	57.1	59.5

	Sample Total (96,470)	*All students (96,470)*			*With Low Income (42,640)*			*With Middle Income (32,110)*			*With High Income (21,710)*		
		Year 1	Year 2	Year 3	Year 1	Year 2	Year 3	Year 1	Year 2	Year 3	Year 1	Year 2	Year 3
IEP in Grade 7													
No IEP	0.84	57.8	69.9	72.5	49.1	63.0	66.7	62.1	73.5	75.8	67.5	77.1	78.6
IEP	0.16	39.0	51.5	55.7	34.0	46.5	50.9	42.1	55.6	59.1	47.3	58.5	62.6
Grade 7 school type													
Public	0.90	54.5	66.8	69.6	46.3	60.1	63.8	58.9	70.6	73.0	64.9	74.9	76.5
Distance ed	0.03	53.5	66.2	71.0	46.4	60.9	65.5	58.2	70.9	75.5	59.2	67.3	75.5
Catholic independent	0.02	56.5	67.9	72.5	47.3	60.0	65.5	57.6	72.7	75.8	63.4	71.8	76.1
Other Christian ind.	0.04	67.6	78.1	79.3	55.7	69.1	72.2	71.1	81.3	82.0	74.6	83.3	82.5
Preparatory/IB ind.	0.01	39.7	47.6	52.4	22.2	27.8	38.9	38.5	38.5	46.2	50.0	59.4	62.5
Other non-religious ind.	0.01	36.4	47.5	53.5	30.9	43.6	45.5	40.0	48.0	60.0	52.6	63.2	68.4
Other religious ind.	0.00	50.0	58.3	62.5	50.0	50.0	66.7	57.1	57.1	57.1	50.0	66.7	50.0
Grade 7 school change													
No school change	0.72	55.6	67.6	70.5	47.1	60.8	64.5	59.4	71.0	73.4	64.7	74.5	76.6
No Grade 6 enrollment	0.02	48.7	59.4	61.4	45.2	56.3	58.5	54.1	64.9	67.6	60.0	68.0	68.0
Voluntary change	0.11	47.7	60.9	64.4	40.8	55.1	59.4	53.7	66.8	69.7	60.7	70.8	72.6
Compulsory change	0.15	56.4	68.7	71.4	47.6	61.4	65.3	61.1	72.8	75.1	68.0	77.9	78.2
Grade 7 FSA													
Did not write	0.19	42.7	54.6	59.1	37.6	49.6	54.3	46.3	59.3	62.7	50.9	60.5	66.7
Not yet meeting exp.	0.19	51.4	64.6	68.5	43.1	57.5	61.8	57.2	70.1	73.6	65.7	76.0	79.8
Meeting exp. reading	0.13	55.5	69.1	71.7	47.2	62.9	67.2	59.3	72.0	74.1	66.7	77.2	77.5
Meeting exp. numeracy	0.10	58.7	71.8	73.9	51.0	65.8	68.0	62.2	75.1	78.3	69.7	79.8	79.8
Meeting exp. both	0.32	61.6	72.9	74.8	53.0	66.5	69.7	65.4	75.5	77.0	68.7	78.3	78.9
Exceeding exp. reading	0.03	60.7	70.2	72.3	52.3	64.0	68.5	63.8	71.6	73.3	65.1	75.2	75.2
Exceeding exp. num.	0.02	53.5	64.1	66.7	43.2	52.7	55.4	57.8	70.3	71.9	59.0	68.9	73.8
Exceeding exp. both	0.01	54.0	61.3	63.5	50.0	55.3	57.9	52.4	59.5	64.3	59.6	66.7	66.7
Rural status in Grade 7													
Urban	0.83	54.4	66.9	69.9	46.0	60.1	64.2	58.4	70.5	73.1	64.2	74.2	76.1
Rural	0.17	56.2	66.7	69.0	47.1	59.1	61.8	62.7	72.2	73.9	68.3	77.1	78.7
Neighbourhood income													
Lowest quintile	0.20	48.1	61.0	64.7	41.6	55.7	60.0	55.7	67.1	70.2	61.6	72.5	74.9
2nd quintile	0.20	53.7	66.3	69.9	46.8	60.6	64.9	57.8	70.1	73.7	64.8	75.1	76.6
3rd quintile	0.21	56.0	68.4	70.8	48.0	62.1	65.2	60.5	72.4	74.3	64.6	74.4	76.2
4th quintile	0.21	58.0	69.7	72.3	49.1	62.4	66.2	60.8	72.5	74.3	66.2	75.7	77.8
Highest quintile	0.17	58.1	68.9	71.2	48.6	60.8	63.9	60.4	71.5	73.2	64.8	74.0	76.0
Grade 7 cohort													
2005	0.13	52.8	66.5	70.4	43.7	59.1	64.0	56.5	69.8	74.0	66.0	76.7	78.1
2006	0.15	52.9	66.2	69.1	43.6	58.8	62.3	57.5	70.0	72.3	64.4	75.2	77.7
2007	0.15	53.4	65.9	68.7	45.0	59.3	62.6	58.2	70.4	72.3	63.0	72.5	75.9
2008	0.15	55.0	66.6	68.7	46.8	60.1	62.9	58.9	69.9	72.3	65.2	74.5	74.8
2009	0.14	55.7	66.6	68.3	47.3	59.6	61.8	59.3	70.4	72.2	66.2	74.8	75.1
2010	0.14	55.1	67.2	69.9	47.3	60.4	64.5	59.5	71.4	73.2	63.8	74.1	75.7
2011	0.14	58.1	68.9	73.3	50.2	62.5	67.9	63.5	73.4	77.0	65.6	74.7	78.6

Table 33 Post-high school labour market entry regression results, all students who do not attend PSE and have parental T1FF data (2005-06 to 2011-12 cohorts) without controlling for household income and lone parent status

	Year 1	Year 2	Year 3
Male/female (Female)			
Male	0.0042	0.0040	-0.00065
	(0.0032)	(0.0030)	(0.0029)
Indigenous (No)			
Indigenous	-0.15***	-0.14***	-0.12***
	(0.0042)	(0.0041)	(0.0040)
Home language (English)			
French	0.021	0.00077	-0.0087
	(0.025)	(0.024)	(0.024)
Chinese	-0.15***	-0.18***	-0.15***
	(0.011)	(0.011)	(0.011)
Punjabi	0.019	-0.0047	-0.0057
	(0.011)	(0.011)	(0.011)
South Asian	-0.060***	-0.070***	-0.038*
	(0.018)	(0.018)	(0.017)
Korean	-0.11***	-0.16***	-0.17***
	(0.022)	(0.022)	(0.022)
Other Asian	0.050***	0.052***	0.055***
	(0.011)	(0.0099)	(0.0096)
West European	-0.022	-0.010	0.0039
	(0.013)	(0.013)	(0.012)
East European	0.0073	-0.028	-0.0084
	(0.019)	(0.018)	(0.018)
Semitic	-0.045*	-0.055**	-0.070***
	(0.021)	(0.020)	(0.020)
Other or missing	0.0025	0.0021	-0.020
	(0.018)	(0.017)	(0.017)
Age in Grade 7 (Age 12)			
Age 10 or 11	-0.10***	-0.045*	-0.047*
	(0.023)	(0.022)	(0.022)
Age 13 or 14	0.021**	-0.036***	-0.042***
	(0.0063)	(0.0062)	(0.0062)
French immersion (No)			
Grade 7 French immersion	0.019*	-0.00092	0.00085
	(0.0075)	(0.0069)	(0.0067)
English language (No)			
Grade 7 ELL student	-0.053***	-0.048***	-0.048***
	(0.0073)	(0.0073)	(0.0073)
IEP in Grade 7 (none)			
IEP	-0.14***	-0.14***	-0.13***
	(0.0047)	(0.0046)	(0.0046)
G7 school (public)			
Distance ed	0.0049	0.015	0.035***
	(0.010)	(0.0096)	(0.0092)
Catholic independent	-0.043***	-0.045***	-0.020*
	(0.011)	(0.011)	(0.010)
Other Christian ind.	0.060***	0.054***	0.044***
	(0.0081)	(0.0072)	(0.0071)
Preparatory/IB ind.	-0.19***	-0.21***	-0.19***
	(0.020)	(0.020)	(0.020)

	Year 1	Year 2	Year 3
Other non-religious ind.	-0.15***	-0.14***	-0.12***
	(0.015)	(0.016)	(0.016)
Othe religious ind.	-0.12***	-0.12***	-0.11***
	(0.033)	(0.032)	(0.032)
G7 school change (none)			
No G6 enrollment	-0.041***	-0.051***	-0.060***
	(0.011)	(0.011)	(0.011)
Voluntary change	-0.051***	-0.045***	-0.042***
	(0.0051)	(0.0050)	(0.0049)
Compulsory change	0.019***	0.014**	0.0094*
	(0.0046)	(0.0043)	(0.0042)
Grade 7 FSA (Meet ex. in both)			
Did not write	-0.12***	-0.11***	-0.089***
	(0.0051)	(0.0049)	(0.0048)
Not yet meeting expectations in both	-0.051***	-0.032***	-0.016***
	(0.0047)	(0.0044)	(0.0043)
Meeting expectations in reading	-0.042***	-0.019***	-0.013**
	(0.0052)	(0.0049)	(0.0047)
Meeting expectations in numeracy	-0.0014	0.014**	0.013**
	(0.0056)	(0.0051)	(0.0050)
Exceeding expectations in reading	-0.016	-0.028***	-0.027***
	(0.0088)	(0.0082)	(0.0081)
Exceeding expectations in numeracy	-0.054***	-0.053***	-0.051***
	(0.012)	(0.011)	(0.011)
Exceeding expectations in both	-0.042**	-0.074***	-0.074***
	(0.014)	(0.013)	(0.013)
Rural status (Urban)			
Rural	0.045***	0.021***	0.0090*
	(0.0042)	(0.0040)	(0.0040)
Neighbourhood income (lowest)			
2nd quintile	0.031***	0.030***	0.031***
	(0.0049)	(0.0047)	(0.0046)
3rd quintile	0.045***	0.043***	0.034***
	(0.0049)	(0.0047)	(0.0046)
4th quintile	0.058***	0.051***	0.044***
	(0.0050)	(0.0048)	(0.0047)
Highest quintile	0.053***	0.041***	0.032***
	(0.0054)	(0.0051)	(0.0050)
Grade 7 cohort (2005)			
2006	0.0075	0.0041	-0.0063
	(0.0059)	(0.0055)	(0.0054)
2007	0.014*	0.0034	-0.0080
	(0.0059)	(0.0056)	(0.0055)
2008	0.030***	0.013*	-0.0057
	(0.0060)	(0.0056)	(0.0055)
2009	0.039***	0.015*	-0.0089
	(0.0060)	(0.0057)	(0.0056)
2010	0.032***	0.019***	0.0073
	(0.0060)	(0.0057)	(0.0056)
2011	0.063***	0.037***	0.042***
	(0.0060)	(0.0057)	(0.0055)
Constant	0.58***	0.71***	0.75***
	(0.0062)	(0.0059)	(0.0057)
R^2	0.058	0.059	0.050
Observations	96,470	96,470	96,470

Notes: This table shows the results of a linear probability model measuring post-high school labour market entry among students who did not attend PSE within three years of their expected Grade 12 year. The explanatory variables included in the model are categorical and the reference group for each variable is in parentheses next to the bolded variable title. Standard errors are in parentheses under each coefficient. * p < 0.05, ** p < 0.01, *** p < 0.001.

Table 34 Post-high school labour market entry regression results, all students who do not attend PSE and have parental T1FF data (2005-06 to 2011-12 cohorts) with controlling for household income and lone parent

	Year 1	Year 2	Year 3
G7 household income (low)			
Middle income	0.083***	0.063***	0.055***
	(0.0038)	(0.0036)	(0.0036)
Highest	0.12***	0.086***	0.074***
	(0.0046)	(0.0043)	(0.0042)
Lone-parent household (No)			
Lone-parent household	-0.032***	-0.033***	-0.030***
	(0.0038)	(0.0036)	(0.0036)
Male/female (Female)			
Male	0.0016	0.0020	-0.0024
	(0.0032)	(0.0030)	(0.0029)
Indigenous (No)			
Indigenous	-0.13***	-0.12***	-0.10***
	(0.0042)	(0.0041)	(0.0041)
Home language (English)			
French	0.016	-0.0032	-0.012
	(0.025)	(0.024)	(0.024)
Chinese	-0.13***	-0.16***	-0.14***
	(0.011)	(0.011)	(0.011)
Punjabi	0.022	-0.0052	-0.0067
	(0.011)	(0.011)	(0.011)
South Asian	-0.049**	-0.064***	-0.033
	(0.018)	(0.018)	(0.017)
Korean	-0.082***	-0.15***	-0.15***
	(0.023)	(0.022)	(0.022)
Other Asian	0.059***	0.057***	0.060***
	(0.011)	(0.0100)	(0.0096)
West European	-0.0075	0.00028	0.013
	(0.013)	(0.013)	(0.012)
East European	0.012	-0.026	-0.0071
	(0.019)	(0.018)	(0.018)
Semitic	-0.020	-0.039	-0.056**
	(0.021)	(0.020)	(0.020)
Other or missing	0.017	0.012	-0.011
	(0.018)	(0.017)	(0.017)
Age in Grade 7 (Age 12)			
Age 10 or 11	-0.11***	-0.047*	-0.048*
	(0.023)	(0.022)	(0.022)
Age 13 or 14	0.023***	-0.034***	-0.041***
	(0.0063)	(0.0062)	(0.0061)
French immersion (No)			
Grade 7 French immersion	0.0079	-0.0090	-0.0062
	(0.0075)	(0.0069)	(0.0067)
English language (No)			
Grade 7 ELL student	-0.046***	-0.043***	-0.043***
	(0.0073)	(0.0073)	(0.0073)
IEP in Grade 7 (none)			
IEP	-0.14***	-0.13***	-0.13***
	(0.0047)	(0.0046)	(0.0046)

	Year 1	Year 2	Year 3
G7 school (public)			
Distance ed	-0.0030	0.0074	0.027**
	(0.010)	(0.0096)	(0.0092)
Catholic independent	-0.056***	-0.055***	-0.029**
	(0.011)	(0.011)	(0.010)
Other Christian ind.	0.044***	0.041***	0.032***
	(0.0081)	(0.0072)	(0.0071)
Preparatory/IB ind.	-0.20***	-0.22***	-0.20***
	(0.020)	(0.020)	(0.020)
Other non-religious ind.	-0.15***	-0.14***	-0.12***
	(0.015)	(0.016)	(0.016)
Othe religious ind.	-0.12***	-0.12***	-0.11***
	(0.033)	(0.032)	(0.032)
G7 school change (none)			
No G6 enrollment	-0.022	-0.037**	-0.048***
	(0.011)	(0.011)	(0.011)
Voluntary change	-0.038***	-0.034***	-0.033***
	(0.0051)	(0.0050)	(0.0049)
Compulsory change	0.020***	0.015***	0.010*
	(0.0045)	(0.0042)	(0.0042)
Grade 7 FSA (Meet ex. in both)			
Did not write	-0.11***	-0.10***	-0.084***
	(0.0051)	(0.0049)	(0.0048)
Not yet meeting expectations in both	-0.042***	-0.026***	-0.010*
	(0.0046)	(0.0044)	(0.0043)
Meeting expectations in reading	-0.037***	-0.015**	-0.0093
	(0.0052)	(0.0048)	(0.0047)
Meeting expectations in numeracy	0.0032	0.017***	0.016**
	(0.0056)	(0.0051)	(0.0050)
Exceeding expectations in reading	-0.019*	-0.031***	-0.029***
	(0.0088)	(0.0082)	(0.0081)
Exceeding expectations in numeracy	-0.060***	-0.057***	-0.055***
	(0.011)	(0.011)	(0.011)
Exceeding expectations in both	-0.056***	-0.084***	-0.083***
	(0.014)	(0.013)	(0.013)
Rural status (Urban)			
Rural	0.045***	0.021***	0.0086*
	(0.0042)	(0.0040)	(0.0039)
Neighbourhood income (lowest)			
2nd quintile	0.021***	0.022***	0.024***
	(0.0049)	(0.0047)	(0.0046)
3rd quintile	0.028***	0.030***	0.022***
	(0.0049)	(0.0047)	(0.0046)
4th quintile	0.034***	0.032***	0.028***
	(0.0050)	(0.0048)	(0.0047)
Highest quintile	0.023***	0.018***	0.012*
	(0.0054)	(0.0052)	(0.0051)
Grade 7 cohort (2005)			
2006	0.0064	0.0033	-0.0070
	(0.0058)	(0.0055)	(0.0054)
2007	0.014*	0.0033	-0.0081
	(0.0059)	(0.0056)	(0.0054)
2008	0.034***	0.015**	-0.0032
	(0.0059)	(0.0056)	(0.0055)
2009	0.042***	0.018**	-0.0063
	(0.0060)	(0.0057)	(0.0056)

	Year 1	Year 2	Year 3
2010	0.036***	0.022***	0.0098
	(0.0060)	(0.0057)	(0.0056)
2011	0.066***	0.040***	0.045***
	(0.0060)	(0.0056)	(0.0055)
Constant	0.54***	0.69***	0.73***
	(0.0068)	(0.0064)	(0.0063)
R^2	0.070	0.067	0.057
Observations	96,470	96,470	96,470

Notes: This table shows the results of a linear probability model measuring post-high school labour market entry among students who did not attend PSE within three years of their expected Grade 12 year. The explanatory variables included in the model are categorical and the reference group for each variable is in parentheses next to the bolded variable title. Standard errors are in parentheses under each coefficient. * p < 0.05, ** p < 0.01, *** p < 0.001.

Table 35 Post-high school labour market entry regression results, low-income students who do not attend PSE and have parental T1FF data (2005-06 to 2011-12 cohorts)

	Year 1	Year 2	Year 3
Lone-parent household (No)			
Lone-parent household	-0.026***	-0.025***	-0.024***
	(0.0049)	(0.0048)	(0.0047)
Male/female (Female)			
Male	-0.0017	0.0053	-0.00034
	(0.0048)	(0.0047)	(0.0046)
Indigenous (No)			
Indigenous	-0.13***	-0.13***	-0.11***
	(0.0057)	(0.0058)	(0.0057)
Home language (English)			
French	0.031	-0.032	-0.033
	(0.039)	(0.041)	(0.040)
Chinese	-0.11***	-0.14***	-0.12***
	(0.014)	(0.014)	(0.014)
Punjabi	0.056**	0.036*	0.022
	(0.017)	(0.016)	(0.016)
South Asian	0.0094	-0.040	0.0013
	(0.025)	(0.024)	(0.023)
Korean	-0.041	-0.12***	-0.11***
	(0.028)	(0.027)	(0.027)
Other Asian	0.090***	0.093***	0.086***
	(0.015)	(0.014)	(0.014)
West European	-0.0051	0.023	0.027
	(0.018)	(0.018)	(0.017)
East European	0.066*	-0.0019	0.018
	(0.027)	(0.027)	(0.026)
Semitic	0.0029	-0.012	-0.045
	(0.024)	(0.024)	(0.024)
Other or missing	0.037	0.039	0.021
	(0.023)	(0.022)	(0.022)
Age in Grade 7 (Age 12)			
Age 10 or 11	-0.14***	-0.035	-0.020
	(0.036)	(0.036)	(0.034)
Age 13 or 14	0.038***	-0.025**	-0.031***
	(0.0090)	(0.0090)	(0.0089)
French immersion (No)			
Grade 7 French immersion	0.051***	0.022	0.0077
	(0.014)	(0.013)	(0.013)
English language (No)			
Grade 7 ELL student	-0.043***	-0.040***	-0.047***
	(0.0089)	(0.0091)	(0.0092)
IEP in Grade 7 (none)			
IEP	-0.11***	-0.13***	-0.12***
	(0.0066)	(0.0067)	(0.0067)
G7 school (public)			
Distance ed	0.00074	0.013	0.018
	(0.016)	(0.015)	(0.015)
Catholic independent	-0.041	-0.060**	-0.037
	(0.021)	(0.021)	(0.020)
Other Christian ind.	0.024	0.025	0.027
	(0.016)	(0.015)	(0.015)
Preparatory/IB ind.	-0.27***	-0.32***	-0.28***
	(0.033)	(0.034)	(0.036)

	Year 1	Year 2	Year 3
Other non-religious ind.	-0.13***	-0.12***	-0.13***
	(0.020)	(0.022)	(0.022)
Othe religious ind.	-0.080	-0.13**	-0.061
	(0.048)	(0.047)	(0.046)
G7 school change (none)			
No G6 enrollment	-0.019	-0.037**	-0.046***
	(0.014)	(0.014)	(0.014)
Voluntary change	-0.038***	-0.037***	-0.033***
	(0.0070)	(0.0070)	(0.0069)
Compulsory change	0.018*	0.010	0.0096
	(0.0069)	(0.0067)	(0.0066)
Grade 7 FSA (Meet ex. in both)			
Did not write	-0.097***	-0.10***	-0.090***
	(0.0075)	(0.0074)	(0.0073)
Not yet meeting expectations in both	-0.055***	-0.043***	-0.034***
	(0.0070)	(0.0068)	(0.0067)
Meeting expectations in reading	-0.044***	-0.019*	-0.0093
	(0.0082)	(0.0079)	(0.0076)
Meeting expectations in numeracy	0.0048	0.016	0.0045
	(0.0087)	(0.0083)	(0.0082)
Exceeding expectations in reading	-0.0087	-0.025	-0.010
	(0.016)	(0.015)	(0.015)
Exceeding expectations in numeracy	-0.062**	-0.088***	-0.11***
	(0.019)	(0.019)	(0.019)
Exceeding expectations in both	-0.025	-0.081**	-0.082**
	(0.026)	(0.026)	(0.025)
Rural status (Urban)			
Rural	0.038***	0.011	-0.0038
	(0.0063)	(0.0062)	(0.0061)
Neighbourhood income (lowest)			
2nd quintile	0.027***	0.024***	0.027***
	(0.0068)	(0.0067)	(0.0066)
3rd quintile	0.028***	0.031***	0.021**
	(0.0070)	(0.0069)	(0.0068)
4th quintile	0.036***	0.034***	0.030***
	(0.0074)	(0.0073)	(0.0072)
Highest quintile	0.025**	0.014	0.0060
	(0.0083)	(0.0082)	(0.0081)
Grade 7 cohort (2005)			
2006	0.0067	0.0058	-0.0079
	(0.0088)	(0.0087)	(0.0085)
2007	0.022*	0.012	-0.0065
	(0.0089)	(0.0087)	(0.0086)
2008	0.042***	0.024**	0.0033
	(0.0090)	(0.0088)	(0.0087)
2009	0.051***	0.024**	-0.0056
	(0.0091)	(0.0089)	(0.0088)
2010	0.051***	0.030***	0.022*
	(0.0091)	(0.0089)	(0.0088)
2011	0.080***	0.052***	0.056***
	(0.0091)	(0.0089)	(0.0087)
Constant	0.52***	0.68***	0.73***
	(0.0096)	(0.0093)	(0.0091)
R^2	0.050	0.055	0.050
Observations	42,640	42,640	42,640

Notes: This table shows the results of a linear probability model measuring post-high school labour market entry among students who did not attend PSE within three years of their expected Grade 12 year. The explanatory variables included in the model are categorical and the reference group for each variable is in parentheses next to the bolded variable title. Standard errors are in parentheses under each coefficient. * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$.

Table 36 Post-high school labour market entry regression results, middle-income students who do not attend PSE and have parental T1FF data (2005-06 to 2011-12 cohorts)

	Year 1	Year 2	Year 3
Lone-parent household (No)			
Lone-parent household	-0.034***	-0.037***	-0.034***
	(0.0066)	(0.0062)	(0.0061)
Male/female (Female)			
Male	0.00087	-0.0023	-0.0057
	(0.0055)	(0.0050)	(0.0049)
Indigenous (No)			
Indigenous	-0.12***	-0.11***	-0.092***
	(0.0078)	(0.0076)	(0.0074)
Home language (English)			
French	0.040	0.0079	0.015
	(0.042)	(0.040)	(0.040)
Chinese	-0.14***	-0.17***	-0.12***
	(0.021)	(0.021)	(0.020)
Punjabi	0.0068	-0.029	-0.031
	(0.017)	(0.016)	(0.016)
South Asian	-0.096**	-0.067*	-0.043
	(0.031)	(0.029)	(0.028)
Korean	-0.11*	-0.15**	-0.15***
	(0.046)	(0.046)	(0.046)
Other Asian	0.067***	0.052***	0.056***
	(0.018)	(0.016)	(0.015)
West European	-0.032	-0.035	-0.0041
	(0.024)	(0.023)	(0.022)
East European	-0.0089	-0.037	-0.010
	(0.031)	(0.031)	(0.029)
Semitic	-0.083	-0.079	-0.056
	(0.046)	(0.043)	(0.042)
Other or missing	-0.0016	0.00021	-0.041
	(0.032)	(0.030)	(0.031)
Age in Grade 7 (Age 12)			
Age 10 or 11	-0.061	-0.042	-0.065
	(0.041)	(0.039)	(0.038)
Age 13 or 14	0.032**	-0.037***	-0.038***
	(0.011)	(0.011)	(0.011)
French immersion (No)			
Grade 7 French immersion	-0.00097	-0.0084	-0.0016
	(0.013)	(0.012)	(0.011)
English language (No)			
Grade 7 ELL student	-0.051***	-0.046**	-0.028
	(0.015)	(0.014)	(0.014)
IEP in Grade 7 (none)			
IEP	-0.15***	-0.14***	-0.12***
	(0.0084)	(0.0082)	(0.0080)
G7 school (public)			
Distance ed	0.0044	0.017	0.041**
	(0.016)	(0.015)	(0.014)
Catholic independent	-0.070***	-0.030	-0.0073
	(0.020)	(0.018)	(0.017)
Other Christian ind.	0.051***	0.054***	0.045***
	(0.013)	(0.011)	(0.011)
Preparatory/IB ind.	-0.18***	-0.24***	-0.25***
	(0.045)	(0.045)	(0.045)

	Year 1	Year 2	Year 3
Other non-religious ind.	-0.18***	-0.18***	-0.10***
	(0.030)	(0.032)	(0.032)
Othe religious ind.	-0.100	-0.083	-0.13*
	(0.061)	(0.059)	(0.060)
G7 school change (none)			
No G6 enrollment	-0.042	-0.044	-0.055*
	(0.025)	(0.024)	(0.024)
Voluntary change	-0.039***	-0.027**	-0.026**
	(0.0094)	(0.0089)	(0.0087)
Compulsory change	0.020*	0.017*	0.015*
	(0.0078)	(0.0071)	(0.0069)
Grade 7 FSA (Meet ex. in both)			
Did not write	-0.13***	-0.10***	-0.092***
	(0.0089)	(0.0084)	(0.0083)
Not yet meeting expectations in both	-0.047***	-0.017*	-0.0022
	(0.0080)	(0.0074)	(0.0072)
Meeting expectations in reading	-0.047***	-0.020*	-0.016*
	(0.0088)	(0.0081)	(0.0079)
Meeting expectations in numeracy	-0.011	0.014	0.027**
	(0.0095)	(0.0085)	(0.0082)
Exceeding expectations in reading	-0.022	-0.038**	-0.043**
	(0.015)	(0.014)	(0.014)
Exceeding expectations in numeracy	-0.053**	-0.024	-0.033
	(0.020)	(0.018)	(0.018)
Exceeding expectations in both	-0.088***	-0.11***	-0.080***
	(0.025)	(0.024)	(0.023)
Rural status (Urban)			
Rural	0.055***	0.029***	0.016*
	(0.0073)	(0.0067)	(0.0066)
Neighbourhood income (lowest)			
2nd quintile	0.0090	0.018*	0.023**
	(0.0086)	(0.0081)	(0.0078)
3rd quintile	0.030***	0.037***	0.027***
	(0.0085)	(0.0080)	(0.0078)
4th quintile	0.031***	0.036***	0.026**
	(0.0087)	(0.0081)	(0.0079)
Highest quintile	0.019*	0.022*	0.013
	(0.0095)	(0.0089)	(0.0087)
Grade 7 cohort (2005)			
2006	0.015	0.0076	-0.013
	(0.010)	(0.0094)	(0.0091)
2007	0.023*	0.013	-0.0087
	(0.010)	(0.0094)	(0.0092)
2008	0.036***	0.013	-0.0045
	(0.010)	(0.0096)	(0.0093)
2009	0.041***	0.019*	-0.0041
	(0.010)	(0.0096)	(0.0094)
2010	0.040***	0.027**	0.0047
	(0.010)	(0.0097)	(0.0094)
2011	0.081***	0.046***	0.042***
	(0.010)	(0.0096)	(0.0092)
Constant	0.63***	0.74***	0.78***
	(0.011)	(0.010)	(0.0098)
R^2	0.050	0.049	0.041
Observations	32,110	32,110	32,110

Notes: This table shows the results of a linear probability model measuring post-high school labour market entry among students who did not attend PSE within three years of their expected Grade 12 year. The explanatory variables included in the model are categorical and the reference group for each variable is in parentheses next to the bolded variable title. Standard errors are in parentheses under each coefficient. * p < 0.05, ** p < 0.01, *** p < 0.001.

Table 37 Post-high school labour market entry regression results, high-income students who do not attend PSE and have parental T1FF data (2005-06 to 2011-12 cohorts)

	Year 1	Year 2	Year 3
Lone-parent household (No)			
Lone-parent household	-0.042**	-0.055***	-0.045***
	(0.015)	(0.014)	(0.014)
Male/female (Female)			
Male	0.0080	0.0011	-0.0030
	(0.0064)	(0.0059)	(0.0057)
Indigenous (No)			
Indigenous	-0.11***	-0.076***	-0.072***
	(0.011)	(0.0099)	(0.0097)
Home language (English)			
French	-0.029	0.022	-0.019
	(0.046)	(0.040)	(0.043)
Chinese	-0.21***	-0.24***	-0.22***
	(0.029)	(0.030)	(0.030)
Punjabi	-0.037	-0.070*	-0.021
	(0.033)	(0.031)	(0.030)
South Asian	-0.18***	-0.17**	-0.18**
	(0.054)	(0.053)	(0.055)
Korean	-0.23***	-0.26***	-0.36***
	(0.070)	(0.070)	(0.071)
Other Asian	-0.10**	-0.10**	-0.066*
	(0.034)	(0.033)	(0.031)
West European	0.040	-0.015	-0.0057
	(0.031)	(0.028)	(0.028)
East European	-0.075	-0.061	-0.064
	(0.044)	(0.043)	(0.043)
Semitic	-0.078	-0.30**	-0.24*
	(0.093)	(0.094)	(0.092)
Other or missing	-0.051	-0.13*	-0.13*
	(0.060)	(0.062)	(0.061)
Age in Grade 7 (Age 12)			
Age 10 or 11	-0.11*	-0.063	-0.064
	(0.045)	(0.042)	(0.042)
Age 13 or 14	-0.023	-0.047***	-0.064***
	(0.014)	(0.013)	(0.013)
French immersion (No)			
Grade 7 French immersion	-0.021	-0.035**	-0.020
	(0.012)	(0.011)	(0.011)
English language (No)			
Grade 7 ELL student	-0.094***	-0.078**	-0.064**
	(0.026)	(0.026)	(0.025)
IEP in Grade 7 (none)			
IEP	-0.17***	-0.15***	-0.14***
	(0.011)	(0.010)	(0.0099)
G7 school (public)			
Distance ed	-0.020	-0.021	0.024
	(0.023)	(0.022)	(0.020)
Catholic independent	-0.055**	-0.070***	-0.035*
	(0.019)	(0.017)	(0.017)
Other Christian ind.	0.046***	0.043***	0.029*
	(0.013)	(0.011)	(0.011)
Preparatory/IB ind.	-0.17***	-0.16***	-0.12***
	(0.029)	(0.028)	(0.027)

	Year 1	Year 2	Year 3
Other non-religious ind.	-0.13***	-0.13***	-0.093**
	(0.036)	(0.035)	(0.034)
Othe religious ind.	-0.20**	-0.13*	-0.19**
	(0.065)	(0.064)	(0.065)
G7 school change (none)			
No G6 enrollment	-0.047	-0.058*	-0.065*
	(0.031)	(0.030)	(0.029)
Voluntary change	-0.034**	-0.035**	-0.042***
	(0.012)	(0.011)	(0.011)
Compulsory change	0.026**	0.020*	0.0051
	(0.0094)	(0.0084)	(0.0083)
Grade 7 FSA (Meet ex. in both)			
Did not write	-0.10***	-0.11***	-0.062***
	(0.011)	(0.010)	(0.0100)
Not yet meeting expectations in both	0.0052	0.0062	0.037***
	(0.010)	(0.0090)	(0.0086)
Meeting expectations in reading	-0.0081	-0.0018	-0.0046
	(0.010)	(0.0093)	(0.0093)
Meeting expectations in numeracy	0.021	0.023*	0.018
	(0.011)	(0.0099)	(0.0099)
Exceeding expectations in reading	-0.028	-0.029*	-0.032*
	(0.015)	(0.014)	(0.014)
Exceeding expectations in numeracy	-0.058**	-0.049**	-0.014
	(0.020)	(0.019)	(0.018)
Exceeding expectations in both	-0.042	-0.056**	-0.074***
	(0.022)	(0.020)	(0.020)
Rural status (Urban)			
Rural	0.048***	0.028***	0.025**
	(0.0091)	(0.0082)	(0.0081)
Neighbourhood income (lowest)			
2nd quintile	0.021	0.016	0.0099
	(0.013)	(0.012)	(0.012)
3rd quintile	0.017	0.0088	0.0081
	(0.013)	(0.011)	(0.011)
4th quintile	0.028*	0.017	0.020
	(0.012)	(0.011)	(0.011)
Highest quintile	0.021	0.0087	0.011
	(0.012)	(0.011)	(0.011)
Grade 7 cohort (2005)			
2006	-0.0076	-0.0085	0.0027
	(0.012)	(0.011)	(0.010)
2007	-0.014	-0.029**	-0.010
	(0.012)	(0.011)	(0.011)
2008	0.014	0.000097	-0.015
	(0.012)	(0.011)	(0.011)
2009	0.028*	0.0012	-0.012
	(0.012)	(0.011)	(0.011)
2010	-0.0014	-0.0033	-0.0079
	(0.012)	(0.011)	(0.011)
2011	0.017	0.0034	0.021*
	(0.012)	(0.011)	(0.011)
Constant	0.68***	0.80***	0.81***
	(0.014)	(0.013)	(0.013)
R^2	0.049	0.053	0.042
Observations	21,710	21,710	21,710

Notes: This table shows the results of a linear probability model measuring post-high school labour market entry among students who did not attend PSE within three years of their expected Grade 12 year. The explanatory variables included in the model are categorical and the reference group for each variable is in parentheses next to the bolded variable title. Standard errors are in parentheses under each coefficient. * p < 0.05, ** p < 0.01, *** p < 0.001.

OUTCOME 5: EARNINGS FOLLOWING HIGH SCHOOL

Table 38 Post-high school earnings descriptive results, all students who do not attend PSE

N = xxx,xxx	Sample Total (85,100)	*All students*			*Male students*			*Female students*		
		Year 1 (85,100)	Year 2 (103,020)	Year 3 (107,320)	Year 1 (44,630)	Year 2 (54,120)	Year 3 (56,370)	Year 1 (40,470)	Year 2 (48,900)	Year 3 (50,950)
Male/Female										
Female	0.48	8.7	9.2	9.3	-	-	-	-	-	-
Male	0.52	8.9	9.4	9.6	-	-	-	-	-	-
Indigenous										
Non-Indigenous	0.86	8.8	9.3	9.5	8.9	9.4	9.6	8.8	9.2	9.4
Indigenous	0.14	8.7	9.1	9.3	8.8	9.2	9.5	8.6	9.0	9.1
Home language										
English	0.89	8.8	9.3	9.5	8.9	9.4	9.6	8.8	9.2	9.3
French	0.00	8.8	9.3	9.5	8.8	9.3	9.6	8.7	9.2	9.3
Chinese	0.02	8.3	8.8	9.1	8.3	8.8	9.1	8.2	8.7	9.0
Punjabi	0.02	8.6	9.0	9.2	8.6	9.0	9.3	8.6	8.9	9.1
South Asian	0.01	8.5	9.0	9.2	8.6	9.0	9.2	8.5	8.9	9.2
Korean	0.00	8.4	8.9	9.0	8.4	9.0	9.1	8.3	8.6	8.8
Other Asian	0.02	8.7	9.2	9.4	8.6	9.2	9.5	8.8	9.1	9.4
West European	0.01	8.8	9.2	9.4	8.8	9.3	9.6	8.7	9.1	9.2
East European	0.01	8.9	9.2	9.4	9.0	9.3	9.6	8.8	9.1	9.2
Semitic	0.01	8.6	9.1	9.4	8.7	9.0	9.4	8.5	9.1	9.4
Other or missing	0.01	8.9	9.3	9.5	9.1	9.5	9.7	8.6	9.0	9.2
Age in Grade 7										
Age 10 or 11	0.00	8.8	9.1	9.3	8.8	9.2	9.5	8.8	9.0	9.1
Age 12	0.93	8.8	9.3	9.5	8.9	9.4	9.6	8.7	9.2	9.3
Age 13 or 14	0.07	8.8	9.2	9.4	8.9	9.3	9.5	8.6	9.0	9.1
French immersion										
English language	0.95	8.8	9.3	9.5	8.9	9.4	9.6	8.7	9.1	9.3
French immersion	0.05	8.8	9.3	9.5	8.9	9.4	9.6	8.8	9.2	9.4
ELL support										
Non-ELL student	0.96	8.8	9.3	9.5	8.9	9.4	9.6	8.8	9.2	9.3
ELL student	0.04	8.6	9.0	9.2	8.6	9.0	9.3	8.5	8.9	9.1
IEP in Grade 7										
No IEP	0.89	8.8	9.3	9.5	8.9	9.4	9.7	8.8	9.2	9.4
IEP	0.11	8.6	9.0	9.2	8.7	9.1	9.3	8.4	8.8	8.9

N = xxx,xxx	Sample Total (85,100)	*All students*			*Male students*			*Female students*		
		Year 1 (85,100)	Year 2 (103,020)	Year 3 (107,320)	Year 1 (44,630)	Year 2 (54,120)	Year 3 (56,370)	Year 1 (40,470)	Year 2 (48,900)	Year 3 (50,950)
Grade 7 school type										
Public	0.90	8.8	9.3	9.5	8.9	9.4	9.6	8.8	9.2	9.3
Distance ed	0.02	8.8	9.1	9.4	8.9	9.3	9.5	8.7	9.0	9.2
Catholic independent	0.02	8.7	9.2	9.4	8.7	9.2	9.5	8.6	9.1	9.3
Other Christian ind.	0.04	8.9	9.4	9.5	9.1	9.5	9.7	8.7	9.2	9.3
Preparatory/IB ind.	0.01	8.1	8.6	8.8	8.2	8.7	9.0	8.1	8.4	8.6
Other non-religious ind.	0.01	8.5	8.9	9.1	8.6	9.0	9.2	8.4	8.7	8.9
Other religious ind.	0.00	8.3	8.9	9.1	8.6	9.0	9.2	8.1	8.8	8.9
Grade 7 school change										
No school change	0.72	8.8	9.3	9.5	8.9	9.4	9.6	8.7	9.1	9.3
No Grade 6 enrollment	0.02	8.8	9.1	9.4	8.8	9.2	9.5	8.7	9.1	9.2
Voluntary change	0.11	8.8	9.2	9.4	8.9	9.3	9.6	8.7	9.1	9.2
Compulsory change	0.16	8.9	9.3	9.6	9.0	9.4	9.7	8.9	9.3	9.4
Grade 7 FSA										
Did not write	0.13	8.7	9.0	9.2	8.7	9.1	9.3	8.6	8.9	9.1
Not yet meeting exp.	0.17	8.8	9.2	9.4	8.9	9.4	9.6	8.7	9.0	9.2
Meeting exp. reading	0.12	8.8	9.3	9.5	8.9	9.4	9.7	8.7	9.2	9.4
Meeting exp. numeracy	0.12	8.9	9.3	9.6	8.9	9.4	9.7	8.8	9.2	9.4
Meeting exp. both	0.39	8.9	9.4	9.6	8.9	9.5	9.7	8.8	9.3	9.4
Exceeding exp. reading	0.04	8.8	9.2	9.4	8.8	9.4	9.6	8.7	9.2	9.3
Exceeding exp. num.	0.02	8.7	9.2	9.4	8.7	9.3	9.5	8.6	9.0	9.3
Exceeding exp. both	0.01	8.5	8.9	9.1	8.5	9.1	9.4	8.4	8.8	9.0
Rural status in Grade 7										
Urban	0.82	8.8	9.2	9.5	8.8	9.3	9.6	8.7	9.1	9.3
Rural	0.18	9.0	9.4	9.6	9.1	9.5	9.8	8.8	9.2	9.3
Neighbourhood income										
Lowest quintile	0.24	8.8	9.2	9.4	8.9	9.3	9.5	8.7	9.1	9.2
2nd quintile	0.22	8.8	9.3	9.5	8.9	9.4	9.6	8.8	9.2	9.4
3rd quintile	0.20	8.8	9.3	9.5	8.9	9.4	9.6	8.8	9.2	9.4
4th quintile	0.19	8.8	9.3	9.5	8.9	9.4	9.7	8.7	9.2	9.4
Highest quintile	0.15	8.8	9.3	9.5	8.8	9.4	9.6	8.7	9.1	9.3
Grade 7 cohort										
2002	0.13	8.9	9.2	9.4	9.0	9.3	9.5	8.9	9.1	9.2
2003	0.11	8.7	9.2	9.4	8.8	9.2	9.5	8.7	9.1	9.2
2004	0.10	8.7	9.2	9.5	8.8	9.3	9.6	8.7	9.1	9.3
2005	0.10	8.7	9.2	9.5	8.8	9.4	9.6	8.6	9.1	9.3
2006	0.10	8.8	9.3	9.5	8.8	9.4	9.6	8.7	9.1	9.3
2007	0.10	8.8	9.3	9.5	8.9	9.4	9.6	8.7	9.1	9.3
2008	0.10	8.8	9.3	9.5	8.9	9.4	9.6	8.8	9.2	9.4
2009	0.09	8.8	9.3	9.5	8.9	9.4	9.7	8.8	9.2	9.4
2010	0.09	8.8	9.3	9.5	8.9	9.4	9.7	8.8	9.2	9.4
2011	0.10	8.9	9.4	9.6	9.0	9.5	9.7	8.8	9.3	9.4

Table 39 Post-high school earnings regression results, all students who do not attend PSE

	Year 1	Year 2	Year 3
Male/female (Female)			
Male	0.17***	0.25***	0.31***
	(0.0071)	(0.0066)	(0.0065)
Indigenous (No)			
Indigenous	-0.15***	-0.22***	-0.20***
	(0.011)	(0.010)	(0.0096)
Home language (English)			
French	-0.026	0.0094	0.028
	(0.059)	(0.048)	(0.049)
Chinese	-0.51***	-0.49***	-0.41***
	(0.034)	(0.030)	(0.028)
Punjabi	-0.21***	-0.35***	-0.32***
	(0.028)	(0.027)	(0.026)
South Asian	-0.27***	-0.30***	-0.26***
	(0.049)	(0.042)	(0.041)
Korean	-0.42***	-0.45***	-0.54***
	(0.063)	(0.058)	(0.061)
Other Asian	-0.13***	-0.15***	-0.074***
	(0.025)	(0.023)	(0.021)
West European	-0.047	-0.084**	-0.094***
	(0.030)	(0.027)	(0.027)
East European	0.084*	-0.082	-0.087*
	(0.040)	(0.043)	(0.041)
Semitic	-0.12*	-0.16**	-0.073
	(0.054)	(0.053)	(0.045)
Other or missing	0.061	-0.0100	-0.0016
	(0.051)	(0.043)	(0.040)
Age in Grade 7 (Age 12)			
Age 10 or 11	0.020	-0.16**	-0.20***
	(0.054)	(0.052)	(0.055)
Age 13 or 14	0.0027	-0.038*	-0.077***
	(0.016)	(0.015)	(0.014)
French immersion (No)			
Grade 7 French immersion	-0.021	-0.019	-0.052***
	(0.016)	(0.015)	(0.015)
English language (No)			
Grade 7 ELL student	-0.10***	-0.12***	-0.12***
	(0.022)	(0.020)	(0.019)
IEP in Grade 7 (none)			
IEP	-0.25***	-0.31***	-0.30***
	(0.013)	(0.012)	(0.012)
G7 school (public)			
Distance ed	-0.028	-0.11***	-0.058*
	(0.027)	(0.025)	(0.023)
Catholic independent	-0.17***	-0.16***	-0.14***
	(0.026)	(0.024)	(0.022)
Other Christian ind.	0.022	-0.0047	-0.039*
	(0.017)	(0.016)	(0.016)
Preparatory/IB ind.	-0.60***	-0.69***	-0.69***
	(0.056)	(0.048)	(0.048)

	Year 1	Year 2	Year 3
Other non-religious ind.	-0.35***	-0.41***	-0.41***
	(0.051)	(0.044)	(0.043)
Othe religious ind.	-0.35***	-0.26**	-0.31***
	(0.093)	(0.080)	(0.086)
G7 school change (none)			
No G6 enrollment	0.029	-0.022	-0.013
	(0.026)	(0.024)	(0.023)
Voluntary change	0.0081	-0.030**	-0.044***
	(0.012)	(0.011)	(0.011)
Compulsory change	0.10***	0.070***	0.054***
	(0.0096)	(0.0090)	(0.0088)
Grade 7 FSA (Meet ex. in both)			
Did not write	-0.17***	-0.22***	-0.24***
	(0.013)	(0.012)	(0.012)
Not yet meeting expectations in both	-0.082***	-0.092***	-0.095***
	(0.011)	(0.0096)	(0.0094)
Meeting expectations in reading	-0.083***	-0.083***	-0.064***
	(0.011)	(0.011)	(0.010)
Meeting expectations in numeracy	-0.0066	-0.018	0.010
	(0.011)	(0.011)	(0.010)
Exceeding expectations in reading	-0.11***	-0.093***	-0.10***
	(0.018)	(0.017)	(0.017)
Exceeding expectations in numeracy	-0.15***	-0.13***	-0.12***
	(0.026)	(0.023)	(0.023)
Exceeding expectations in both	-0.30***	-0.32***	-0.32***
	(0.034)	(0.032)	(0.031)
Rural status (Urban)			
Rural	0.16***	0.12***	0.12***
	(0.0093)	(0.0089)	(0.0087)
Neighbourhood income (lowest)			
2nd quintile	0.038***	0.059***	0.055***
	(0.011)	(0.0098)	(0.0095)
3rd quintile	0.039***	0.060***	0.056***
	(0.011)	(0.010)	(0.0100)
4th quintile	0.019	0.065***	0.057***
	(0.011)	(0.011)	(0.010)
Highest quintile	-0.027*	0.011	0.0094
	(0.013)	(0.012)	(0.011)
Grade 7 cohort (2002)			
2003	-0.20***	-0.056***	0.0014
	(0.015)	(0.014)	(0.014)
2004	-0.20***	-0.010	0.091***
	(0.015)	(0.014)	(0.014)
2005	-0.21***	0.052***	0.11***
	(0.015)	(0.014)	(0.014)
2006	-0.17***	0.069***	0.14***
	(0.015)	(0.014)	(0.014)
2007	-0.12***	0.10***	0.13***
	(0.015)	(0.015)	(0.014)
2008	-0.054***	0.15***	0.17***
	(0.015)	(0.015)	(0.015)
2009	-0.057***	0.13***	0.22***
	(0.015)	(0.015)	(0.015)
2010	-0.057***	0.17***	0.23***
	(0.015)	(0.015)	(0.015)
2011	0.020	0.24***	0.26***
	(0.015)	(0.015)	(0.015)

	Year 1	Year 2	Year 3
Constant	8.91***	9.17***	9.31***
	(0.012)	(0.012)	(0.012)
R^2	0.042	0.055	0.061
Observations	85,090	103,020	107,310

Notes: This table shows the results of an OLS model measuring post-high school earnings among graduates with earnings data who did not attend PSE within three years of their expected Grade 12 year. The explanatory variables included in the model are categorical and the reference group for each variable is in parentheses next to the bolded variable title. Robust standard errors are in parentheses under each coefficient. * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$.

Table 40 Post-high school earnings regression results, male students who do not attend PSE

	Year 1	Year 2	Year 3
Indigenous (No)			
Indigenous	-0.12***	-0.20***	-0.17***
	(0.015)	(0.014)	(0.013)
Home language (English)			
French	-0.032	-0.041	0.036
	(0.087)	(0.071)	(0.064)
Chinese	-0.53***	-0.51***	-0.46***
	(0.046)	(0.039)	(0.037)
Punjabi	-0.26***	-0.37***	-0.36***
	(0.037)	(0.035)	(0.034)
South Asian	-0.28***	-0.34***	-0.36***
	(0.068)	(0.055)	(0.058)
Korean	-0.42***	-0.36***	-0.51***
	(0.084)	(0.071)	(0.077)
Other Asian	-0.26***	-0.23***	-0.19***
	(0.034)	(0.031)	(0.027)
West European	-0.059	-0.083*	-0.072*
	(0.043)	(0.037)	(0.036)
East European	0.095	-0.062	-0.051
	(0.055)	(0.056)	(0.051)
Semitic	-0.098	-0.27***	-0.15**
	(0.068)	(0.072)	(0.057)
Other or missing	0.19**	0.11*	0.066
	(0.072)	(0.056)	(0.053)
Age in Grade 7 (Age 12)			
Age 10 or 11	-0.10	-0.19*	-0.19*
	(0.084)	(0.080)	(0.081)
Age 13 or 14	0.036	-0.026	-0.067***
	(0.020)	(0.019)	(0.018)
French immersion (No)			
Grade 7 French immersion	-0.057*	-0.037	-0.057**
	(0.025)	(0.023)	(0.022)
English language (No)			
Grade 7 ELL student	-0.11***	-0.14***	-0.12***
	(0.029)	(0.027)	(0.025)
IEP in Grade 7 (none)			
IEP	-0.24***	-0.31***	-0.29***
	(0.016)	(0.015)	(0.014)
G7 school (public)			
Distance ed	-0.027	-0.100**	-0.055
	(0.040)	(0.035)	(0.033)
Catholic independent	-0.21***	-0.20***	-0.19***
	(0.037)	(0.033)	(0.031)
Other Christian ind.	0.11***	0.062**	0.0051
	(0.025)	(0.023)	(0.024)
Preparatory/IB ind.	-0.59***	-0.62***	-0.60***
	(0.082)	(0.068)	(0.067)
Other non-religious ind.	-0.36***	-0.45***	-0.47***
	(0.069)	(0.063)	(0.061)
Othe religious ind.	-0.20	-0.25*	-0.28*
	(0.11)	(0.11)	(0.11)
G7 school change (none)			
No G6 enrollment	0.041	-0.048	-0.017
	(0.035)	(0.035)	(0.032)

	Year 1	Year 2	Year 3
Voluntary change	0.012	-0.011	-0.0093
	(0.017)	(0.015)	(0.015)
Compulsory change	0.092***	0.054***	0.064***
	(0.014)	(0.013)	(0.012)
Grade 7 FSA (Meet ex. in both)			
Did not write	-0.12***	-0.20***	-0.23***
	(0.018)	(0.017)	(0.016)
Not yet meeting expectations in both	-0.017	-0.026	-0.020
	(0.015)	(0.013)	(0.013)
Meeting expectations in reading	-0.046**	-0.053**	-0.043**
	(0.017)	(0.016)	(0.016)
Meeting expectations in numeracy	0.024	0.013	0.052***
	(0.015)	(0.014)	(0.013)
Exceeding expectations in reading	-0.11***	-0.11***	-0.095***
	(0.029)	(0.027)	(0.028)
Exceeding expectations in numeracy	-0.15***	-0.11***	-0.11***
	(0.034)	(0.029)	(0.028)
Exceeding expectations in both	-0.30***	-0.31***	-0.25***
	(0.048)	(0.046)	(0.045)
Rural status (Urban)			
Rural	0.22***	0.18***	0.20***
	(0.013)	(0.013)	(0.012)
Neighbourhood income (lowest)			
2nd quintile	0.052***	0.059***	0.042**
	(0.015)	(0.014)	(0.013)
3rd quintile	0.052***	0.071***	0.045**
	(0.016)	(0.014)	(0.014)
4th quintile	0.030	0.061***	0.047***
	(0.016)	(0.015)	(0.014)
Highest quintile	-0.017	0.016	0.010
	(0.018)	(0.017)	(0.016)
Grade 7 cohort (2002)			
2003	-0.24***	-0.052*	0.013
	(0.021)	(0.020)	(0.019)
2004	-0.24***	0.020	0.12***
	(0.021)	(0.021)	(0.020)
2005	-0.20***	0.10***	0.15***
	(0.021)	(0.021)	(0.020)
2006	-0.18***	0.10***	0.16***
	(0.021)	(0.021)	(0.020)
2007	-0.14***	0.17***	0.14***
	(0.022)	(0.021)	(0.020)
2008	-0.061**	0.19***	0.19***
	(0.022)	(0.022)	(0.020)
2009	-0.082***	0.14***	0.23***
	(0.022)	(0.022)	(0.021)
2010	-0.10***	0.19***	0.23***
	(0.022)	(0.022)	(0.021)
2011	-0.0084	0.28***	0.27***
	(0.021)	(0.021)	(0.020)
Constant	9.04***	9.35***	9.56***
	(0.017)	(0.017)	(0.016)
R^2	0.041	0.051	0.050
Observations	44,630	54,120	56,370

Notes: This table shows the results of an OLS model measuring post-high school earnings among graduates with earnings data who did not attend PSE within three years of their expected Grade 12 year. The explanatory variables included in the model are categorical and the reference group for each variable is in parentheses next to the bolded variable title. Robust standard errors are in parentheses under each coefficient. * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$.

Table 41 Post-high school earnings regression results, female students who do not attend PSE

	Year 1	Year 2	Year 3
Indigenous (No)			
Indigenous	-0.17***	-0.24***	-0.23***
	(0.015)	(0.014)	(0.014)
Home language (English)			
French	-0.0080	0.070	0.024
	(0.078)	(0.064)	(0.074)
Chinese	-0.48***	-0.47***	-0.34***
	(0.049)	(0.047)	(0.044)
Punjabi	-0.13**	-0.31***	-0.24***
	(0.041)	(0.045)	(0.042)
South Asian	-0.25***	-0.25***	-0.13*
	(0.071)	(0.066)	(0.056)
Korean	-0.40***	-0.59***	-0.58***
	(0.095)	(0.10)	(0.10)
Other Asian	0.028	-0.038	0.080*
	(0.036)	(0.035)	(0.032)
West European	-0.026	-0.080*	-0.11**
	(0.044)	(0.039)	(0.039)
East European	0.073	-0.11	-0.13*
	(0.056)	(0.066)	(0.066)
Semitic	-0.14	0.00096	0.051
	(0.087)	(0.076)	(0.071)
Other or missing	-0.097	-0.16*	-0.083
	(0.068)	(0.064)	(0.059)
Age in Grade 7 (Age 12)			
Age 10 or 11	0.095	-0.13*	-0.20**
	(0.071)	(0.068)	(0.075)
Age 13 or 14	-0.069**	-0.071**	-0.11***
	(0.025)	(0.025)	(0.025)
French immersion (No)			
Grade 7 French immersion	-0.0037	-0.012	-0.055**
	(0.020)	(0.019)	(0.020)
English language (No)			
Grade 7 ELL student	-0.099**	-0.083**	-0.13***
	(0.033)	(0.029)	(0.030)
IEP in Grade 7 (none)			
IEP	-0.31***	-0.33***	-0.35***
	(0.024)	(0.022)	(0.021)
G7 school (public)			
Distance ed	-0.028	-0.13***	-0.062
	(0.037)	(0.035)	(0.032)
Catholic independent	-0.14***	-0.11***	-0.089**
	(0.036)	(0.034)	(0.031)
Other Christian ind.	-0.066**	-0.073**	-0.085***
	(0.024)	(0.022)	(0.022)
Preparatory/IB ind.	-0.61***	-0.76***	-0.78***
	(0.075)	(0.067)	(0.068)
Other non-religious ind.	-0.34***	-0.36***	-0.35***
	(0.075)	(0.062)	(0.061)
Othe religious ind.	-0.55***	-0.27*	-0.35*
	(0.16)	(0.12)	(0.14)

	Year 1	Year 2	Year 3
G7 school change (none)			
No G6 enrollment	0.012	0.0079	-0.0078
	(0.039)	(0.034)	(0.035)
Voluntary change	0.0051	-0.052**	-0.083***
	(0.017)	(0.016)	(0.016)
Compulsory change	0.11***	0.086***	0.044***
	(0.013)	(0.012)	(0.012)
Grade 7 FSA (Meet ex. in both)			
Did not write	-0.22***	-0.24***	-0.25***
	(0.020)	(0.018)	(0.018)
Not yet meeting expectations in both	-0.15***	-0.17***	-0.18***
	(0.015)	(0.014)	(0.014)
Meeting expectations in reading	-0.12***	-0.11***	-0.085***
	(0.015)	(0.014)	(0.013)
Meeting expectations in numeracy	-0.039*	-0.051**	-0.041**
	(0.017)	(0.016)	(0.016)
Exceeding expectations in reading	-0.12***	-0.095***	-0.12***
	(0.023)	(0.021)	(0.022)
Exceeding expectations in numeracy	-0.13**	-0.14***	-0.12**
	(0.040)	(0.039)	(0.040)
Exceeding expectations in both	-0.31***	-0.33***	-0.39***
	(0.047)	(0.044)	(0.044)
Rural status (Urban)			
Rural	0.10***	0.054***	0.020
	(0.013)	(0.012)	(0.012)
Neighbourhood income (lowest)			
2nd quintile	0.022	0.059***	0.071***
	(0.015)	(0.014)	(0.014)
3rd quintile	0.024	0.048***	0.066***
	(0.015)	(0.014)	(0.014)
4th quintile	0.0032	0.067***	0.065***
	(0.016)	(0.015)	(0.015)
Highest quintile	-0.038*	0.0054	0.0060
	(0.018)	(0.016)	(0.016)
Grade 7 cohort (2002)			
2003	-0.17***	-0.061**	-0.013
	(0.021)	(0.020)	(0.020)
2004	-0.17***	-0.044*	0.064**
	(0.020)	(0.020)	(0.020)
2005	-0.23***	-0.0053	0.070***
	(0.021)	(0.020)	(0.020)
2006	-0.16***	0.030	0.12***
	(0.021)	(0.020)	(0.020)
2007	-0.097***	0.026	0.11***
	(0.021)	(0.021)	(0.021)
2008	-0.045*	0.10***	0.16***
	(0.022)	(0.021)	(0.021)
2009	-0.028	0.13***	0.22***
	(0.022)	(0.021)	(0.021)
2010	-0.0068	0.14***	0.24***
	(0.021)	(0.021)	(0.021)
2011	0.054*	0.20***	0.26***
	(0.021)	(0.021)	(0.021)

	Year 1	Year 2	Year 3
Constant	8.94***	9.24***	9.37***
	(0.016)	(0.016)	(0.017)
R^2	0.041	0.046	0.047
Observations	40,470	48,900	50,950

Notes: This table shows the results of an OLS model measuring post-high school earnings among graduates with earnings data who did not attend PSE within three years of their expected Grade 12 year. The explanatory variables included in the model are categorical and the reference group for each variable is in parentheses next to the bolded variable title. Robust standard errors are in parentheses under each coefficient. * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$.

Table 42 Post-high school earnings descriptive results, all students who do not attend PSE and have parental T1FF data (2005-06 to 2011-12 cohorts)

	Sample Total (n=52,760)	*All students*			*With Low Income*			*With Middle Income*			*With High Income*		
		Year 1 (n=52,760)	Year 2 (n=64,470)	Year 3 (n=67,300)	Year 1 (n=19,720)	Year 2 (n=25,550)	Year 3 (n=27,170)	Year 1 (n=18,970)	Year 2 (n=22,720)	Year 3 (n=23,520)	Year 1 (n=14,070)	Year 2 (n=16,200)	Year 3 (n=16,610)
Household income													
Low income	0.37	8.8	9.2	9.5									
Middle income	0.36	8.9	9.4	9.6									
High income	0.27	8.9	9.4	9.6									
Household composition													
Two-parent household	0.72	8.8	9.3	9.5	8.8	9.2	9.4	8.9	9.4	9.6	8.9	9.4	9.6
Lone-parent household	0.28	8.8	9.3	9.5	8.8	9.2	9.5	8.8	9.3	9.6	8.8	9.3	9.6
Male/Female													
Female	0.47	8.8	9.2	9.4	8.7	9.1	9.3	8.8	9.2	9.4	8.8	9.3	9.4
Male	0.53	8.9	9.4	9.7	8.8	9.3	9.6	8.9	9.5	9.7	8.9	9.5	9.7
Indigenous													
Non-Indigenous	0.85	8.8	9.3	9.6	8.8	9.3	9.5	8.9	9.4	9.6	8.9	9.4	9.6
Indigenous	0.15	8.8	9.2	9.4	8.7	9.1	9.3	8.8	9.3	9.5	8.9	9.4	9.6
Home language													
English	0.89	8.9	9.3	9.6	8.8	9.3	9.5	8.9	9.4	9.6	8.9	9.4	9.6
French	0.00	8.8	9.3	9.5	8.8	9.2	9.4	8.9	9.4	9.6	8.7	9.3	9.6
Chinese	0.02	8.2	8.8	9.1	8.3	8.8	9.1	8.3	8.7	9.1	7.9	8.6	9.1
Punjabi	0.02	8.6	9.0	9.2	8.6	8.9	9.2	8.6	8.9	9.2	8.6	9.1	9.3
South Asian	0.01	8.5	9.0	9.3	8.5	9.0	9.3	8.5	9.0	9.4	8.8	8.8	9.1
Korean	0.00	8.5	8.9	9.0	8.3	8.8	8.9	8.7	9.1	9.1	8.9	9.2	9.4
Other Asian	0.02	8.7	9.2	9.5	8.7	9.3	9.5	8.7	9.2	9.5	8.5	9.0	9.2
West European	0.01	8.8	9.3	9.4	8.7	9.3	9.5	8.9	9.3	9.4	8.7	9.2	9.4
East European	0.01	8.9	9.3	9.5	8.9	9.3	9.5	8.9	9.3	9.5	9.0	9.4	9.5
Semitic	0.01	8.7	9.1	9.4	8.7	9.1	9.4	8.5	9.1	9.4	8.5	9.1	9.1
Other or missing	0.01	8.9	9.3	9.6	8.9	9.3	9.5	9.1	9.4	9.7	8.7	9.2	9.3
Age in Grade 7													
Age 10 or 11	0.00	8.8	9.1	9.3	8.8	9.2	9.2	8.8	9.1	9.4	8.9	9.1	9.4
Age 12	0.93	8.8	9.3	9.5	8.8	9.2	9.5	8.9	9.4	9.6	8.9	9.4	9.6
Age 13 or 14	0.06	8.8	9.3	9.4	8.8	9.2	9.3	8.9	9.3	9.4	8.8	9.3	9.5
French immersion													
English language	0.95	8.8	9.3	9.5	8.8	9.2	9.4	8.9	9.4	9.6	8.9	9.4	9.6
French immersion	0.05	8.8	9.4	9.5	8.9	9.4	9.6	8.9	9.4	9.6	8.7	9.3	9.5
ELL support													
Non-ELL student	0.96	8.8	9.3	9.5	8.8	9.3	9.5	8.9	9.4	9.6	8.9	9.4	9.6
ELL student	0.04	8.6	9.0	9.3	8.5	9.0	9.2	8.7	9.1	9.4	8.7	9.1	9.3
IEP in Grade 7													
No IEP	0.88	8.9	9.4	9.6	8.8	9.3	9.5	8.9	9.4	9.6	8.9	9.4	9.6
IEP	0.12	8.6	9.1	9.3	8.6	9.0	9.2	8.6	9.1	9.3	8.6	9.2	9.4

	Sample Total (n=52,760)	*All students*			*With Low Income*			*With Middle Income*			*With High Income*		
		Year 1 (n=52,760)	Year 2 (n=64,470)	Year 3 (n=67,300)	Year 1 (n=19,720)	Year 2 (n=25,550)	Year 3 (n=27,170)	Year 1 (n=18,970)	Year 2 (n=22,720)	Year 3 (n=23,520)	Year 1 (n=14,070)	Year 2 (n=16,200)	Year 3 (n=16,610)
Grade 7 school type													
Public	0.89	8.8	9.3	9.5	8.8	9.2	9.5	8.9	9.4	9.6	8.9	9.4	9.6
Distance ed	0.03	8.8	9.2	9.4	8.7	9.1	9.4	8.9	9.3	9.4	8.8	9.2	9.3
Catholic independent	0.02	8.7	9.2	9.5	8.8	9.2	9.5	8.7	9.3	9.5	8.6	9.2	9.4
Other Christian ind.	0.05	8.9	9.4	9.6	8.9	9.3	9.6	9.0	9.5	9.7	8.8	9.3	9.6
Preparatory/IB ind.	0.00	8.2	8.7	8.9	8.2	8.8	8.9	8.4	8.7	8.8	8.2	8.6	8.9
Other non-religious ind.	0.01	8.5	8.9	9.2	8.4	8.8	9.0	8.8	9.0	9.2	8.5	9.1	9.4
Other religious ind.	0.00	8.5	9.0	9.1	8.4	8.9	9.1	8.5	9.2	9.0	8.4	8.9	9.1
Grade 7 school change													
No school change	0.74	8.8	9.3	9.5	8.8	9.2	9.5	8.8	9.3	9.6	8.8	9.4	9.6
No Grade 6 enrollment	0.02	8.8	9.2	9.4	8.8	9.1	9.4	8.9	9.4	9.5	8.9	9.3	9.5
Voluntary change	0.10	8.8	9.3	9.5	8.8	9.2	9.4	8.8	9.3	9.5	8.9	9.4	9.6
Compulsory change	0.15	8.9	9.4	9.6	8.9	9.3	9.5	9.0	9.5	9.6	9.0	9.5	9.7
Grade 7 FSA													
Did not write	0.15	8.7	9.1	9.3	8.6	9.0	9.3	8.7	9.2	9.4	8.7	9.2	9.4
Not yet meeting exp.	0.18	8.8	9.3	9.5	8.7	9.2	9.4	8.8	9.3	9.6	8.9	9.5	9.7
Meeting exp. reading	0.13	8.8	9.3	9.5	8.8	9.2	9.5	8.8	9.4	9.6	8.9	9.4	9.7
Meeting exp. numeracy	0.11	8.9	9.4	9.6	8.8	9.3	9.5	8.9	9.4	9.7	8.9	9.5	9.8
Meeting exp. both	0.36	8.9	9.4	9.6	8.9	9.4	9.6	8.9	9.5	9.7	8.9	9.4	9.6
Exceeding exp. reading	0.04	8.8	9.3	9.5	8.8	9.3	9.5	8.8	9.3	9.5	8.7	9.2	9.4
Exceeding exp. num.	0.02	8.7	9.2	9.4	8.6	9.1	9.3	8.8	9.3	9.6	8.7	9.2	9.4
Exceeding exp. both	0.01	8.5	9.0	9.2	8.6	9.1	9.4	8.7	9.1	9.3	8.3	8.9	9.1
Rural status in Grade 7													
Urban	0.82	8.8	9.3	9.5	8.8	9.2	9.4	8.8	9.3	9.6	8.8	9.4	9.6
Rural	0.18	9.0	9.4	9.6	8.9	9.3	9.5	9.0	9.5	9.7	9.1	9.6	9.8
Neighbourhood income													
Lowest quintile	0.18	8.8	9.2	9.5	8.7	9.2	9.4	8.8	9.3	9.5	8.9	9.4	9.6
2nd quintile	0.20	8.8	9.3	9.5	8.8	9.2	9.4	8.9	9.4	9.6	8.9	9.4	9.6
3rd quintile	0.22	8.8	9.3	9.6	8.8	9.3	9.5	8.9	9.4	9.6	8.9	9.4	9.6
4th quintile	0.22	8.9	9.4	9.6	8.8	9.3	9.5	8.9	9.4	9.6	8.9	9.4	9.6
Highest quintile	0.18	8.8	9.3	9.5	8.8	9.3	9.5	8.9	9.4	9.6	8.8	9.3	9.5
Grade 7 cohort													
2005	0.13	8.7	9.3	9.5	8.7	9.2	9.4	8.8	9.3	9.5	8.8	9.4	9.6
2006	0.15	8.8	9.3	9.5	8.7	9.2	9.4	8.8	9.3	9.5	8.8	9.4	9.6
2007	0.14	8.8	9.3	9.5	8.7	9.2	9.4	8.8	9.3	9.6	8.9	9.4	9.6
2008	0.15	8.9	9.3	9.5	8.8	9.2	9.4	8.9	9.4	9.6	8.9	9.4	9.6
2009	0.14	8.9	9.3	9.6	8.8	9.2	9.5	8.9	9.4	9.6	8.9	9.4	9.7
2010	0.14	8.8	9.3	9.6	8.8	9.3	9.5	8.9	9.4	9.6	8.8	9.4	9.6
2011	0.15	8.9	9.4	9.6	8.9	9.3	9.5	9.0	9.5	9.7	8.9	9.5	9.6

Table 43 Post-high school earnings regression results, all students who do not attend PSE and have household income data (2005-06 to 2011-12 cohorts), without controlling for household income and lone parent status

	Year 1	Year 2	Year 3
Male/female (Female)			
Male	0.16***	0.26***	0.31***
	(0.0089)	(0.0082)	(0.0081)
Indigenous (No)			
Indigenous	-0.12***	-0.19***	-0.19***
	(0.013)	(0.012)	(0.012)
Home language (English)			
French	-0.013	-0.0074	-0.0036
	(0.073)	(0.062)	(0.061)
Chinese	-0.54***	-0.55***	-0.40***
	(0.040)	(0.036)	(0.033)
Punjabi	-0.27***	-0.42***	-0.35***
	(0.034)	(0.033)	(0.031)
South Asian	-0.29***	-0.31***	-0.22***
	(0.060)	(0.051)	(0.049)
Korean	-0.34***	-0.46***	-0.55***
	(0.078)	(0.072)	(0.080)
Other Asian	-0.15***	-0.11***	-0.051*
	(0.030)	(0.027)	(0.025)
West European	-0.058	-0.057	-0.096**
	(0.038)	(0.032)	(0.033)
East European	0.11*	-0.061	-0.073
	(0.047)	(0.051)	(0.049)
Semitic	-0.095	-0.18**	-0.11*
	(0.062)	(0.061)	(0.053)
Other or missing	0.087	-0.014	0.032
	(0.060)	(0.049)	(0.047)
Age in Grade 7 (Age 12)			
Age 10 or 11	-0.024	-0.18**	-0.19**
	(0.064)	(0.060)	(0.062)
Age 13 or 14	0.023	-0.026	-0.095***
	(0.020)	(0.020)	(0.019)
French immersion (No)			
Grade 7 French immersion	-0.036	-0.021	-0.050**
	(0.019)	(0.017)	(0.017)
English language (No)			
Grade 7 ELL student	-0.12***	-0.14***	-0.13***
	(0.026)	(0.024)	(0.023)
IEP in Grade 7 (none)			
IEP	-0.28***	-0.32***	-0.30***
	(0.016)	(0.015)	(0.014)
G7 school (public)			
Distance ed	-0.053	-0.16***	-0.14***
	(0.032)	(0.029)	(0.028)
Catholic independent	-0.18***	-0.15***	-0.17***
	(0.033)	(0.029)	(0.028)
Other Christian ind.	0.031	-0.017	-0.016
	(0.021)	(0.020)	(0.019)
Preparatory/IB ind.	-0.52***	-0.62***	-0.64***
	(0.073)	(0.069)	(0.068)

	Year 1	Year 2	Year 3
Other non-religious ind.	-0.38***	-0.44***	-0.37***
	(0.063)	(0.054)	(0.052)
Othe religious ind.	-0.22*	-0.17	-0.31**
	(0.10)	(0.089)	(0.10)
G7 school change (none)			
No G6 enrollment	0.045	-0.013	-0.019
	(0.034)	(0.032)	(0.030)
Voluntary change	0.026	-0.022	-0.025
	(0.015)	(0.014)	(0.014)
Compulsory change	0.12***	0.074***	0.047***
	(0.012)	(0.011)	(0.011)
Grade 7 FSA (Meet ex. in both)			
Did not write	-0.14***	-0.19***	-0.20***
	(0.016)	(0.014)	(0.014)
Not yet meeting expectations in both	-0.062***	-0.078***	-0.078***
	(0.013)	(0.012)	(0.012)
Meeting expectations in reading	-0.066***	-0.068***	-0.047***
	(0.014)	(0.013)	(0.012)
Meeting expectations in numeracy	0.0089	-0.0034	0.023
	(0.015)	(0.014)	(0.013)
Exceeding expectations in reading	-0.11***	-0.095***	-0.090***
	(0.023)	(0.021)	(0.021)
Exceeding expectations in numeracy	-0.14***	-0.15***	-0.17***
	(0.035)	(0.031)	(0.031)
Exceeding expectations in both	-0.29***	-0.29***	-0.28***
	(0.041)	(0.039)	(0.038)
Rural status (Urban)			
Rural	0.19***	0.14***	0.11***
	(0.012)	(0.011)	(0.011)
Neighbourhood income (lowest)			
2nd quintile	0.048**	0.054***	0.054***
	(0.015)	(0.013)	(0.013)
3rd quintile	0.049***	0.059***	0.059***
	(0.015)	(0.013)	(0.013)
4th quintile	0.042**	0.064***	0.065***
	(0.015)	(0.013)	(0.013)
Highest quintile	0.0079	0.032*	0.038**
	(0.016)	(0.014)	(0.014)
Grade 7 cohort (2005)			
2006	0.030	0.012	0.030*
	(0.017)	(0.015)	(0.015)
2007	0.082***	0.042**	0.013
	(0.017)	(0.016)	(0.015)
2008	0.14***	0.084***	0.056***
	(0.017)	(0.016)	(0.015)
2009	0.14***	0.076***	0.11***
	(0.017)	(0.016)	(0.015)
2010	0.14***	0.10***	0.11***
	(0.017)	(0.016)	(0.015)
2011	0.21***	0.18***	0.14***
	(0.017)	(0.015)	(0.015)
Constant	8.68***	9.21***	9.42***
	(0.018)	(0.016)	(0.016)
R^2	0.042	0.055	0.057
Observations	52,760	64,470	67,290

Notes: This table shows the results of an OLS model measuring post-high school earnings among graduates with earnings data who did not attend PSE within three years of their expected Grade 12 year. The explanatory variables included in the model are categorical and the reference group for each variable is in parentheses next to the bolded variable title. Robust standard errors are in parentheses under each coefficient. * p < 0.05, ** p < 0.01, *** p < 0.001.

Table 44 Post-high school earnings regression results, all students who do not attend PSE and have household income data (2005-06 to 2011-12 cohorts) with controlling for household income and lone parent

	Year 1	Year 2	Year 3
G7 household income (low)			
Middle income	0.037***	0.077***	0.077***
	(0.011)	(0.010)	(0.0097)
Highest	0.033*	0.086***	0.077***
	(0.013)	(0.012)	(0.012)
Lone-parent household (No)			
Lone-parent household	-0.012	-0.0089	-0.0011
	(0.011)	(0.010)	(0.0097)
Male/female (Female)			
Male	0.16***	0.26***	0.31***
	(0.0089)	(0.0082)	(0.0081)
Indigenous (No)			
Indigenous	-0.11***	-0.18***	-0.18***
	(0.013)	(0.012)	(0.012)
Home language (English)			
French	-0.014	-0.013	-0.0083
	(0.073)	(0.062)	(0.061)
Chinese	-0.53***	-0.54***	-0.38***
	(0.040)	(0.037)	(0.033)
Punjabi	-0.27***	-0.41***	-0.35***
	(0.034)	(0.033)	(0.031)
South Asian	-0.29***	-0.30***	-0.21***
	(0.060)	(0.051)	(0.049)
Korean	-0.33***	-0.44***	-0.52***
	(0.078)	(0.071)	(0.080)
Other Asian	-0.15***	-0.10***	-0.044
	(0.030)	(0.027)	(0.025)
West European	-0.054	-0.045	-0.084*
	(0.038)	(0.032)	(0.033)
East European	0.11*	-0.056	-0.068
	(0.047)	(0.051)	(0.049)
Semitic	-0.087	-0.16**	-0.087
	(0.062)	(0.061)	(0.053)
Other or missing	0.092	-0.00089	0.045
	(0.060)	(0.049)	(0.047)
Age in Grade 7 (Age 12)			
Age 10 or 11	-0.026	-0.18**	-0.19**
	(0.064)	(0.060)	(0.062)
Age 13 or 14	0.025	-0.023	-0.092***
	(0.020)	(0.020)	(0.019)
French immersion (No)			
Grade 7 French immersion	-0.038*	-0.027	-0.056**
	(0.019)	(0.018)	(0.017)
English language (No)			
Grade 7 ELL student	-0.12***	-0.13***	-0.13***
	(0.026)	(0.024)	(0.023)
IEP in Grade 7 (none)			
IEP	-0.27***	-0.31***	-0.30***
	(0.016)	(0.015)	(0.014)

	Year 1	Year 2	Year 3
G7 school (public)			
Distance ed	-0.057	-0.17***	-0.15***
	(0.032)	(0.029)	(0.028)
Catholic independent	-0.18***	-0.16***	-0.17***
	(0.033)	(0.029)	(0.028)
Other Christian ind.	0.026	-0.027	-0.024
	(0.021)	(0.020)	(0.019)
Preparatory/IB ind.	-0.52***	-0.63***	-0.65***
	(0.073)	(0.069)	(0.068)
Other non-religious ind.	-0.38***	-0.43***	-0.37***
	(0.063)	(0.054)	(0.052)
Othe religious ind.	-0.22*	-0.17	-0.31**
	(0.10)	(0.089)	(0.10)
G7 school change (none)			
No G6 enrollment	0.052	0.0029	-0.0037
	(0.034)	(0.032)	(0.030)
Voluntary change	0.030	-0.013	-0.017
	(0.016)	(0.014)	(0.014)
Compulsory change	0.12***	0.075***	0.048***
	(0.012)	(0.011)	(0.011)
Grade 7 FSA (Meet ex. in both)			
Did not write	-0.14***	-0.18***	-0.20***
	(0.016)	(0.014)	(0.014)
Not yet meeting expectations in both	-0.060***	-0.073***	-0.074***
	(0.013)	(0.012)	(0.012)
Meeting expectations in reading	-0.065***	-0.065***	-0.044***
	(0.014)	(0.013)	(0.012)
Meeting expectations in numeracy	0.010	-0.00045	0.025
	(0.015)	(0.014)	(0.013)
Exceeding expectations in reading	-0.11***	-0.097***	-0.091***
	(0.023)	(0.021)	(0.021)
Exceeding expectations in numeracy	-0.14***	-0.15***	-0.17***
	(0.035)	(0.031)	(0.031)
Exceeding expectations in both	-0.30***	-0.30***	-0.29***
	(0.041)	(0.039)	(0.038)
Rural status (Urban)			
Rural	0.19***	0.14***	0.11***
	(0.012)	(0.011)	(0.011)
Neighbourhood income (lowest)			
2nd quintile	0.045**	0.047***	0.048***
	(0.015)	(0.013)	(0.013)
3rd quintile	0.044**	0.047***	0.049***
	(0.015)	(0.013)	(0.013)
4th quintile	0.035*	0.048***	0.052***
	(0.015)	(0.013)	(0.013)
Highest quintile	0.00029	0.013	0.023
	(0.016)	(0.014)	(0.014)
Grade 7 cohort (2005)			
2006	0.030	0.011	0.029
	(0.017)	(0.015)	(0.015)
2007	0.082***	0.042**	0.013
	(0.017)	(0.016)	(0.015)
2008	0.15***	0.086***	0.058***
	(0.017)	(0.016)	(0.015)
2009	0.15***	0.078***	0.11***
	(0.017)	(0.016)	(0.015)

	Year 1	Year 2	Year 3
2010	0.14***	0.11***	0.11***
	(0.017)	(0.016)	(0.015)
2011	0.21***	0.18***	0.14***
	(0.017)	(0.015)	(0.015)
Constant	8.66***	9.17***	9.37***
	(0.019)	(0.018)	(0.017)
R^2	0.043	0.056	0.058
Observations	52,760	64,470	67,290

Notes: This table shows the results of an OLS model measuring post-high school earnings among students with earnings data who did not attend PSE within three years of their expected Grade 12 year. The explanatory variables included in the model are categorical and the reference group for each variable is in parentheses next to the bolded variable title. Robust standard errors are in parentheses under each coefficient. * p < 0.05, ** p < 0.01, *** p < 0.001.

Table 45 Post-high school earnings regression results, low-income students who do not attend PSE and have household income data (2005-06 to 2011-12 cohorts)

	Year 1	Year 2	Year 3
Lone-parent household (No)			
Lone-parent household	-0.00047	0.0049	0.0014
	(0.015)	(0.014)	(0.013)
Male/female (Female)			
Male	0.16***	0.26***	0.29***
	(0.015)	(0.014)	(0.013)
Indigenous (No)			
Indigenous	-0.17***	-0.23***	-0.23***
	(0.020)	(0.018)	(0.017)
Home language (English)			
French	0.0066	0.0067	-0.031
	(0.13)	(0.10)	(0.12)
Chinese	-0.51***	-0.50***	-0.36***
	(0.052)	(0.047)	(0.042)
Punjabi	-0.26***	-0.37***	-0.30***
	(0.050)	(0.049)	(0.046)
South Asian	-0.28***	-0.22**	-0.16*
	(0.079)	(0.071)	(0.065)
Korean	-0.47***	-0.57***	-0.62***
	(0.096)	(0.090)	(0.098)
Other Asian	-0.092*	-0.027	0.014
	(0.041)	(0.036)	(0.033)
West European	-0.054	-0.0097	-0.019
	(0.054)	(0.045)	(0.044)
East European	0.12	-0.025	-0.043
	(0.071)	(0.077)	(0.079)
Semitic	-0.020	-0.13	-0.039
	(0.074)	(0.072)	(0.062)
Other or missing	0.095	0.031	0.089
	(0.080)	(0.063)	(0.061)
Age in Grade 7 (Age 12)			
Age 10 or 11	-0.022	-0.080	-0.26*
	(0.098)	(0.095)	(0.10)
Age 13 or 14	0.030	0.0036	-0.093**
	(0.032)	(0.029)	(0.028)
French immersion (No)			
Grade 7 French immersion	0.042	0.099**	0.041
	(0.036)	(0.031)	(0.030)
English language (No)			
Grade 7 ELL student	-0.13***	-0.13***	-0.13***
	(0.035)	(0.031)	(0.029)
IEP in Grade 7 (none)			
IEP	-0.25***	-0.31***	-0.26***
	(0.025)	(0.022)	(0.021)
G7 school (public)			
Distance ed	-0.10	-0.22***	-0.062
	(0.056)	(0.050)	(0.043)
Catholic independent	-0.057	-0.12*	-0.11*
	(0.059)	(0.057)	(0.051)
Other Christian ind.	0.054	-0.064	-0.00049
	(0.044)	(0.044)	(0.040)
Preparatory/IB ind.	-0.60***	-0.53***	-0.62***
	(0.13)	(0.16)	(0.14)

	Year 1	Year 2	Year 3
Other non-religious ind.	-0.44***	-0.42***	-0.37***
	(0.093)	(0.076)	(0.073)
Othe religious ind.	-0.23	-0.25	-0.28*
	(0.14)	(0.15)	(0.12)
G7 school change (none)			
No G6 enrollment	0.065	-0.017	0.018
	(0.044)	(0.041)	(0.038)
Voluntary change	0.028	-0.018	-0.030
	(0.024)	(0.021)	(0.020)
Compulsory change	0.074***	0.052**	0.048**
	(0.021)	(0.018)	(0.018)
Grade 7 FSA (Meet ex. in both)			
Did not write	-0.19***	-0.20***	-0.24***
	(0.025)	(0.022)	(0.021)
Not yet meeting expectations in both	-0.13***	-0.14***	-0.14***
	(0.021)	(0.019)	(0.018)
Meeting expectations in reading	-0.11***	-0.11***	-0.10***
	(0.023)	(0.021)	(0.020)
Meeting expectations in numeracy	-0.042	-0.045*	-0.033
	(0.024)	(0.023)	(0.021)
Exceeding expectations in reading	-0.049	-0.016	-0.056
	(0.039)	(0.037)	(0.037)
Exceeding expectations in numeracy	-0.23***	-0.15**	-0.20***
	(0.068)	(0.056)	(0.061)
Exceeding expectations in both	-0.21**	-0.14	-0.092
	(0.082)	(0.073)	(0.067)
Rural status (Urban)			
Rural	0.15***	0.076***	0.035*
	(0.019)	(0.018)	(0.017)
Neighbourhood income (lowest)			
2nd quintile	0.056*	0.042*	0.038*
	(0.022)	(0.019)	(0.019)
3rd quintile	0.033	0.047*	0.044*
	(0.023)	(0.020)	(0.019)
4th quintile	0.050*	0.077***	0.081***
	(0.024)	(0.021)	(0.020)
Highest quintile	0.034	0.046	0.071**
	(0.026)	(0.024)	(0.022)
Grade 7 cohort (2005)			
2006	0.045	0.018	0.054*
	(0.029)	(0.025)	(0.024)
2007	0.069*	0.015	0.0015
	(0.029)	(0.025)	(0.025)
2008	0.16***	0.077**	0.082***
	(0.029)	(0.025)	(0.024)
2009	0.13***	0.041	0.11***
	(0.029)	(0.026)	(0.025)
2010	0.18***	0.11***	0.13***
	(0.029)	(0.025)	(0.025)
2011	0.22***	0.17***	0.17***
	(0.029)	(0.025)	(0.024)
Constant	8.69***	9.21***	9.40***
	(0.030)	(0.026)	(0.026)
R^2	0.046	0.056	0.057
Observations	19,720	25,550	27,170

Notes: This table shows the results of an OLS model measuring post-high school earnings among students with earnings data who did not attend PSE within three years of their expected Grade 12 year. The explanatory variables included in the model are categorical and the reference group for each variable is in parentheses next to the bolded variable title. Robust standard errors are in parentheses under each coefficient. * p < 0.05, ** p < 0.01, *** p < 0.001.

Table 46 Post-high school earnings regression results, middle-income students who do not attend PSE and have household income data (2005-06 to 2011-12 cohorts)

	Year 1	Year 2	Year 3
Lone-parent household (No)			
Lone-parent household	-0.0053	-0.0084	0.018
	(0.018)	(0.017)	(0.016)
Male/female (Female)			
Male	0.15***	0.25***	0.31***
	(0.014)	(0.013)	(0.013)
Indigenous (No)			
Indigenous	-0.069**	-0.12***	-0.13***
	(0.023)	(0.021)	(0.020)
Home language (English)			
French	0.050	0.0035	-0.015
	(0.11)	(0.099)	(0.099)
Chinese	-0.50***	-0.60***	-0.49***
	(0.071)	(0.069)	(0.065)
Punjabi	-0.28***	-0.46***	-0.40***
	(0.052)	(0.051)	(0.049)
South Asian	-0.34**	-0.33***	-0.23**
	(0.11)	(0.079)	(0.086)
Korean	-0.17	-0.28*	-0.52***
	(0.17)	(0.13)	(0.16)
Other Asian	-0.18***	-0.14**	-0.058
	(0.047)	(0.045)	(0.039)
West European	-0.012	-0.062	-0.19**
	(0.064)	(0.054)	(0.065)
East European	0.048	-0.15	-0.13
	(0.066)	(0.086)	(0.076)
Semitic	-0.27*	-0.28*	-0.19
	(0.14)	(0.12)	(0.11)
Other or missing	0.16	-0.025	0.041
	(0.10)	(0.086)	(0.081)
Age in Grade 7 (Age 12)			
Age 10 or 11	-0.10	-0.26**	-0.14
	(0.11)	(0.097)	(0.11)
Age 13 or 14	0.051	-0.025	-0.11**
	(0.033)	(0.033)	(0.034)
French immersion (No)			
Grade 7 French immersion	0.0034	-0.0065	-0.031
	(0.030)	(0.030)	(0.029)
English language (No)			
Grade 7 ELL student	-0.079	-0.13**	-0.071
	(0.047)	(0.045)	(0.041)
IEP in Grade 7 (none)			
IEP	-0.28***	-0.30***	-0.31***
	(0.027)	(0.025)	(0.024)
G7 school (public)			
Distance ed	0.0016	-0.087*	-0.17***
	(0.045)	(0.043)	(0.044)
Catholic independent	-0.21***	-0.15**	-0.12*
	(0.060)	(0.047)	(0.046)
Other Christian ind.	0.095**	0.069*	-0.013
	(0.034)	(0.031)	(0.031)
Preparatory/IB ind.	-0.32*	-0.46**	-0.61***
	(0.15)	(0.15)	(0.16)

	Year 1	Year 2	Year 3
Other non-religious ind.	-0.20	-0.46***	-0.41***
	(0.11)	(0.11)	(0.11)
Othe religious ind.	-0.16	0.039	-0.40
	(0.20)	(0.13)	(0.24)
G7 school change (none)			
No G6 enrollment	-0.011	0.018	-0.073
	(0.073)	(0.063)	(0.067)
Voluntary change	0.021	-0.0097	-0.015
	(0.026)	(0.025)	(0.023)
Compulsory change	0.14***	0.077***	0.019
	(0.019)	(0.018)	(0.018)
Grade 7 FSA (Meet ex. in both)			
Did not write	-0.12***	-0.21***	-0.18***
	(0.025)	(0.024)	(0.024)
Not yet meeting expectations in both	-0.043*	-0.060**	-0.051**
	(0.021)	(0.020)	(0.019)
Meeting expectations in reading	-0.074***	-0.080***	-0.035
	(0.022)	(0.021)	(0.020)
Meeting expectations in numeracy	0.029	0.0086	0.044*
	(0.024)	(0.022)	(0.021)
Exceeding expectations in reading	-0.13***	-0.14***	-0.071*
	(0.037)	(0.035)	(0.035)
Exceeding expectations in numeracy	-0.10	-0.13**	-0.045
	(0.057)	(0.052)	(0.045)
Exceeding expectations in both	-0.16*	-0.26***	-0.28***
	(0.066)	(0.068)	(0.069)
Rural status (Urban)			
Rural	0.21***	0.17***	0.15***
	(0.019)	(0.018)	(0.018)
Neighbourhood income (lowest)			
2nd quintile	0.038	0.050*	0.048*
	(0.024)	(0.022)	(0.021)
3rd quintile	0.050*	0.025	0.037
	(0.023)	(0.021)	(0.021)
4th quintile	0.027	0.035	0.043*
	(0.024)	(0.022)	(0.021)
Highest quintile	0.017	0.041	0.027
	(0.026)	(0.024)	(0.024)
Grade 7 cohort (2005)			
2006	0.035	-0.0081	0.011
	(0.028)	(0.026)	(0.025)
2007	0.099***	0.068**	0.037
	(0.028)	(0.026)	(0.025)
2008	0.17***	0.11***	0.056*
	(0.028)	(0.026)	(0.025)
2009	0.18***	0.11***	0.091***
	(0.028)	(0.026)	(0.025)
2010	0.15***	0.13***	0.12***
	(0.028)	(0.026)	(0.025)
2011	0.25***	0.22***	0.17***
	(0.028)	(0.026)	(0.025)
Constant	8.66***	9.22***	9.43***
	(0.029)	(0.027)	(0.026)
R^2	0.041	0.056	0.057
Observations	18,970	22,720	23,520

Notes: This table shows the results of an OLS model measuring post-high school earnings among graduates with earnings data who did not attend PSE within three years of their expected Grade 12 year. The explanatory variables included in the model are categorical and the reference group for each variable is in parentheses next to the bolded variable title. Robust standard errors are in parentheses under each coefficient. * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$.

Table 47 Post-high school earnings regression results, high-income students who do not attend PSE and have household income data (2005-06 to 2011-12 cohorts)

	Year 1	Year 2	Year 3
Lone-parent household (No)			
Lone-parent household	-0.076	-0.045	-0.024
	(0.040)	(0.038)	(0.038)
Male/female (Female)			
Male	0.18***	0.28***	0.34***
	(0.017)	(0.016)	(0.016)
Indigenous (No)			
Indigenous	-0.024	-0.10***	-0.050
	(0.030)	(0.029)	(0.028)
Home language (English)			
French	-0.13	-0.057	0.0049
	(0.14)	(0.12)	(0.093)
Chinese	-0.78***	-0.68***	-0.30**
	(0.13)	(0.11)	(0.093)
Punjabi	-0.22*	-0.32***	-0.33***
	(0.099)	(0.090)	(0.089)
South Asian	-0.082	-0.58**	-0.44**
	(0.18)	(0.19)	(0.16)
Korean	0.14	-0.091	-0.017
	(0.17)	(0.24)	(0.28)
Other Asian	-0.35***	-0.40***	-0.41***
	(0.11)	(0.098)	(0.10)
West European	-0.11	-0.11	-0.11
	(0.096)	(0.089)	(0.082)
East European	0.19	0.046	-0.036
	(0.14)	(0.10)	(0.10)
Semitic	-0.27	-0.24	-0.58
	(0.21)	(0.30)	(0.39)
Other or missing	-0.15	-0.15	-0.23
	(0.19)	(0.19)	(0.19)
Age in Grade 7 (Age 12)			
Age 10 or 11	0.063	-0.22	-0.16
	(0.12)	(0.12)	(0.100)
Age 13 or 14	-0.027	-0.067	-0.055
	(0.046)	(0.043)	(0.041)
French immersion (No)			
Grade 7 French immersion	-0.14***	-0.15***	-0.16***
	(0.032)	(0.029)	(0.031)
English language (No)			
Grade 7 ELL student	-0.091	-0.16*	-0.20*
	(0.086)	(0.080)	(0.089)
IEP in Grade 7 (none)			
IEP	-0.31***	-0.32***	-0.34***
	(0.035)	(0.032)	(0.030)
G7 school (public)			
Distance ed	-0.11	-0.22**	-0.26***
	(0.077)	(0.067)	(0.066)
Catholic independent	-0.22***	-0.18***	-0.25***
	(0.050)	(0.048)	(0.047)
Other Christian ind.	-0.045	-0.084*	-0.036
	(0.035)	(0.033)	(0.031)
Preparatory/IB ind.	-0.54***	-0.66***	-0.61***
	(0.10)	(0.089)	(0.088)

	Year 1	Year 2	Year 3
Other non-religious ind.	-0.41**	-0.37**	-0.24*
	(0.13)	(0.11)	(0.097)
Othe religious ind.	-0.30	-0.29	-0.31
	(0.20)	(0.18)	(0.23)
G7 school change (none)			
No G6 enrollment	0.075	-0.017	-0.041
	(0.083)	(0.088)	(0.078)
Voluntary change	0.053	0.0048	0.025
	(0.034)	(0.033)	(0.031)
Compulsory change	0.14***	0.11***	0.086***
	(0.024)	(0.022)	(0.023)
Grade 7 FSA (Meet ex. in both)			
Did not write	-0.100**	-0.13***	-0.17***
	(0.032)	(0.030)	(0.029)
Not yet meeting expectations in both	0.017	0.031	0.022
	(0.026)	(0.025)	(0.025)
Meeting expectations in reading	0.0050	0.023	0.023
	(0.026)	(0.025)	(0.024)
Meeting expectations in numeracy	0.054	0.056*	0.092***
	(0.030)	(0.027)	(0.027)
Exceeding expectations in reading	-0.14**	-0.11**	-0.13***
	(0.042)	(0.035)	(0.036)
Exceeding expectations in numeracy	-0.10	-0.16**	-0.25***
	(0.055)	(0.053)	(0.055)
Exceeding expectations in both	-0.39***	-0.36***	-0.38***
	(0.065)	(0.061)	(0.059)
Rural status (Urban)			
Rural	0.23***	0.18***	0.18***
	(0.024)	(0.023)	(0.022)
Neighbourhood income (lowest)			
2nd quintile	0.0086	0.031	0.028
	(0.035)	(0.033)	(0.033)
3rd quintile	0.012	0.049	0.032
	(0.034)	(0.031)	(0.032)
4th quintile	-0.0061	-0.00073	-0.012
	(0.033)	(0.031)	(0.031)
Highest quintile	-0.065	-0.062	-0.057
	(0.034)	(0.032)	(0.032)
Grade 7 cohort (2005)			
2006	0.0092	0.031	0.018
	(0.032)	(0.029)	(0.029)
2007	0.080*	0.052	-0.0044
	(0.033)	(0.030)	(0.030)
2008	0.096**	0.076*	0.023
	(0.032)	(0.030)	(0.030)
2009	0.14***	0.091**	0.13***
	(0.032)	(0.030)	(0.030)
2010	0.069*	0.063*	0.066*
	(0.033)	(0.031)	(0.030)
2011	0.16***	0.15***	0.060*
	(0.032)	(0.030)	(0.030)
Constant	8.74***	9.26***	9.47***
	(0.038)	(0.035)	(0.035)
R^2	0.051	0.060	0.067
Observations	14,070	16,200	16,610

Notes: This table shows the results of an OLS model measuring post-high school earnings among graduates with earnings data who did not attend PSE within three years of their expected Grade 12 year. The explanatory variables included in the model are categorical and the reference group for each variable is in parentheses next to the bolded variable title. Robust standard errors are in parentheses under each coefficient. * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$.

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