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C.D. Howe Institute COMMENTARY

SOCIAL POLICY

Dropouts:

The Achilles' Heel of Canada's High-School System

John Richards

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In this issue...

High secondary school dropout rates, particularly among Aboriginals and francophone Quebecers, have negative impacts on the future of the individuals concerned and on Canada's economy.

The Author of This Issue

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The Study in Brief

The high dropout rate among francophone Quebec students, particularly boys, has recently received considerable attention in that province. Media coverage has been extensive, indicating widespread public concern. However, the high-school dropout-rate problem is not restricted to Quebec. Based on the 2006 census, four provinces – Manitoba, Saskatchewan, Newfoundland and Alberta – have higher dropout rates among those aged 20 to 24 than do Quebec francophones.

The ratio between the province with the highest dropout rate, Manitoba, and the lowest, British Columbia, is two to one. The major factor underlying the large number of students failing to complete high school in the Prairies is the concentration of Aboriginals and their low completion rate.

This *Commentary* examines different approaches to addressing the education challenges facing francophone Quebecers and Aboriginals, both those living on- and off-reserve. It emphasizes the value of collecting reliable data on student core-skill performance at various stages in the K-12 cycle and concludes with a range of potential interventions. These include campaigns to shift cultural attitudes toward education, investment in early childhood and early primary school programming, discretionary agreements with entrepreneurial school districts, and major institutional reform of on-reserve school administration.

In the fall of 2008, former Quebec premier Jacques Parizeau wrote a newspaper article drawing attention to the high dropout rate among francophone students – particularly among boys.[1] He cited government statistics on high-school completion rates as of 2007, showing that in Montréal French-language public schools 63 percent of girls and only 49 percent of boys had graduated seven years after entering secondary studies.

The comparable statistics in Montreal English-language public schools were 86 percent for girls and 79 percent for boys. "Why," he asked, "are the results of [Quebec's] English-language school system so much better than those of the French-language system?"

In his indiscriminate critique of provincial education ministers and officials, Parizeau went too far, but his article drew wide attention to the Achilles heel of Quebec's public school system. His article preceded, by six months, a substantive venture directed by Jacques Ménard, president of BMO Financial Group, Quebec and chairman of BMO Nesbitt Burns. In early 2009, Ménard announced the formation of a 27-member group of prominent Quebecers committed to explore initiatives to lower *décrochage* (dropping out). They titled their report *Savoir pour Pouvoir,* (knowledge is power), a quotation from 17th century philosopher Francis Bacon.

If Quebec elites have recently become concerned over low high-school completion rates in their province, the elites in several other provinces should be even more concerned. Once every five years, the census provides a snapshot of the state of education achievement among Canadians age 15 and over. (The youngest tabulated cohort for which it is reasonable to expect completion of secondary school is aged 20-24.)

Among Quebec francophones who fail to complete high school as teenagers, some obtain equivalent certification at an older age. The large difference in graduation rates between the 20 to 24 and 25 to 34 cohorts is disturbing: why are so many completing secondary studies at an age above 25? Figure 1a shows the percentage of the population without secondary school certification for the 20 to 24 group by sex, by province and, in the case of Quebec, by English and French mother tongue. Figure 1b does the same for the 25 to 34 group, the cohort with the best high-school completion results. For both cohorts, the three Prairie provinces and Newfoundland recorded even worse completion rates than Quebec francophones.[2]

This *Commentary's* first section addresses the apparent contradiction between Canada's low high-school completion rates in particular provinces and relatively high performance in the Programme for International Student Assessment, a major international exam for 15-year-olds conducted every three years by the OECD. The second section examines three examples of less-than-satisfactory education accomplishment – Quebec francophones, Aboriginals and men (relative to women). The final section provides an introduction to the empirical analysis of factors bearing on education outcomes, combined with two sets of comprehensive recommendations (each summarized in a box) for education reform in Quebec and among Aboriginals.

These recommendations, one from the Ménard *Groupe d'action* and the other from a forthcoming report of the Canadian Policy Research Networks on Aboriginal education, are exercises in "whole system" reform.

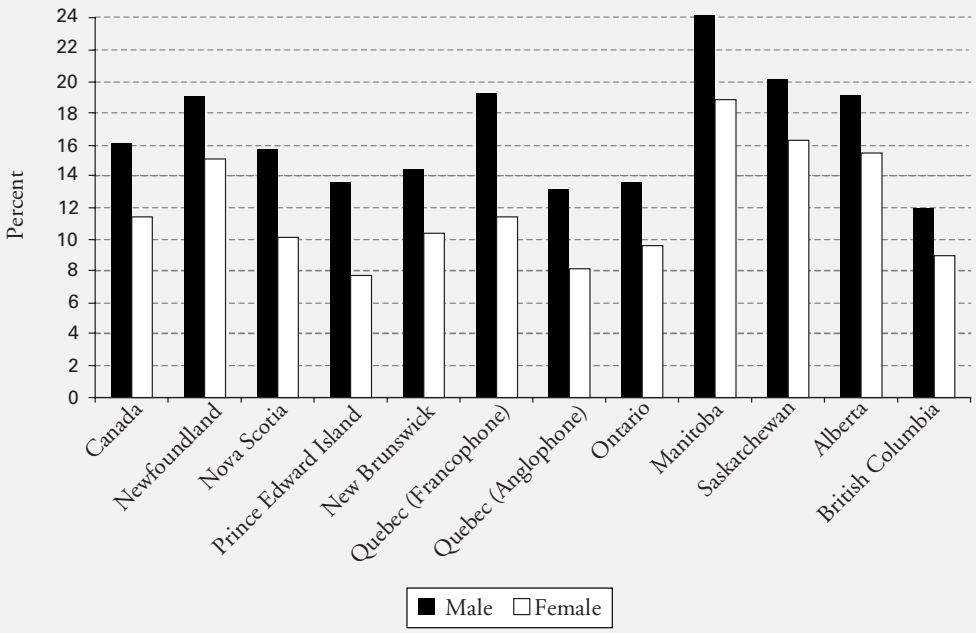
(The report of Ménard's *Groupe d'action* exists in French only and has received very little attention in

Education is a complex policy file. I thank the following for advice on aspects they know better than I: Dan Beavon, Fred Caron, Pierre Fortin, Gerry Hurton, Michael Mendelson, Henry Milner, Audrey Roadhouse, Bill Robson, Megan Scott, Larry Steeves, Charles Ungerleider, and Aidan Vining. Colin Busby and Ben Dachis provided a careful "in-house" review of earlier drafts. James Fleming oversaw editing and production.

1 *Le Journal de Montréal,* Sept. 11, 2008.

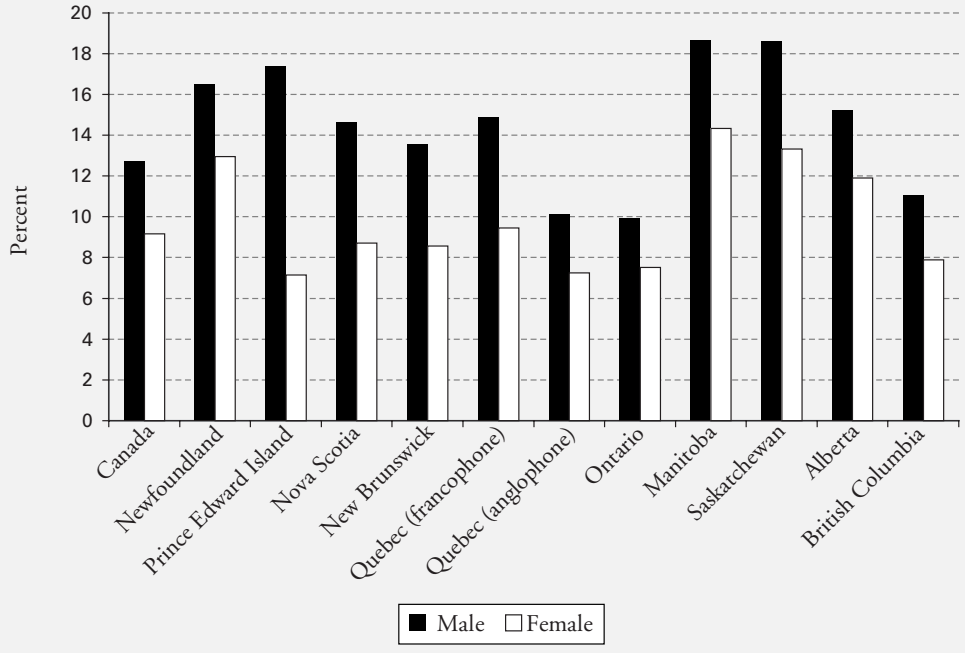
2 Aggregate P.E.I. results are almost identical to those for Quebec francophones, but are particularly subject to uncertainty due to small numbers in the 20 percent census sample underlying these statistics.

Figure 1a: Share Without High-School Certification, Ages 20-24, Canada and Provinces by Sex, 2006



Notes: – The source for this and subsequent education figures is the 20 percent sample of the 2006 census. The sample size is particularly small for Prince Edward Island; hence, higher uncertainty surrounds estimated rates for this province. Furthermore, these are self-reported data.
– In disaggregating Quebec results by official language mother tongues, the figures exclude Quebec allophones (those whose mother tongue is neither French nor English). They are included in the aggregate Canadian data.
Source: Canada (2008b).

Figure 1b: Share Without High-School Certification, Ages 25-34, by Province and Sex, 2006



Source: Canada (2008b).

Table 1: 2006 10th Percentile Scores and Changes 2000 – 2006, Canada and Provinces

	2006 10th percentile scores			Change, 2000–2006		
	Mathematics	Science	Reading	Mathematics	Science	Reading
Canada	416	410	402	-7*	-2	-8*
British Columbia	416	415	394	-6	-3	-16
Alberta	424	433	416	-13*	4	-7
Saskatchewan	395	392	370	-30*	-20*	-40*
Manitoba	405	394	391	-17*	-18*	-15
Ontario	419	412	418	3	6	13
Quebec	418	402	386	-25*	-16*	-28*
New Brunswick	399	388	376	-2	2	6
Nova Scotia	400	400	385	-3	-1	-6
Prince Edward Island	393	383	398	-12*	-17*	7
Newfoundland	401	400	376	-4	-1	-5
OECD	380	375	360			

Notes: – PISA scores in each round have been normalized to an average value of 500.
– 2000-2006 changes marked with an asterisk (*) are significant at a 10 percent significance level.
Source: Author's calculations from PISA data (Bussière et al. 2001, 2007).

English-language policy discussions. In the interest of full disclosure, I am co-author of the Aboriginal education agenda conducted on behalf of the Canadian Policy Research Networks.)

Lessons from the Programme for International Student Assessment

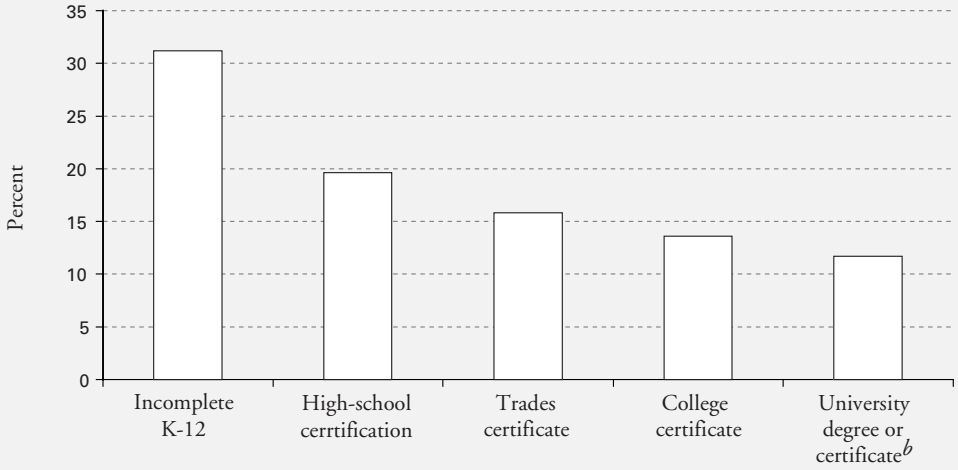
Among the 57 participating countries in the 2006 Programme for International Student Assessment (PISA) round, Canada ranked third on a key measure – average country score on the "combined science" index. If we rank the 10 provinces among the 57 participating countries, Canada's overall score drops to sixth: the top 10 become Finland (1), Alberta (2), Hong Kong (3), British Columbia (4), Ontario (5), Canada (6), Taiwan (7), Estonia (8), Japan (9) and Quebec (10). Even New Brunswick, the weakest province, scored above the international average (Bussière et al. 2007, 16).

The Canadian picture is not so rosy when one looks at the *variance* of Canadian PISA scores as well as the *average*. Potential school dropouts usually perform weakly on standardized tests. Hence, those running a school system with relatively low scores in the bottom tail of the system's distribution should be concerned.

If, instead of average scores, we look at 2006 PISA scores at the 10th percentile – the score at which 90 percent of students were above and 10 percent below – Canadian scores are still above the comparable OECD averages (See Table 1). However, from 2000, the year of the first PISA round, to 2006, Canadian 10th percentile scores declined relative to the normalized international average of 500. In other words, among weak students, Canada's performance declined from the first to third round.

The declines are not uniform across the country. Six provinces have reasonably stable results over the six-year period inasmuch as their changes are either positive (but not statistically significant) or they experienced at most one statistically significant decline in the three broad subject areas being tested. The remaining four (Saskatchewan, Manitoba, Quebec and Prince Edward Island) suffered statistically significant declines in at least two subjects; while two provinces (Saskatchewan and Quebec) did so in all three. Although not absolute, the overlap with those provinces recording relatively high incomplete high-school rates is obvious. Here is evidence, admittedly tentative, that Canada's schools

Figure 2: Share with After-Tax Income below After-Tax LICO,[a] Canada, Ages 25-64, by Highest Education Level, 2005

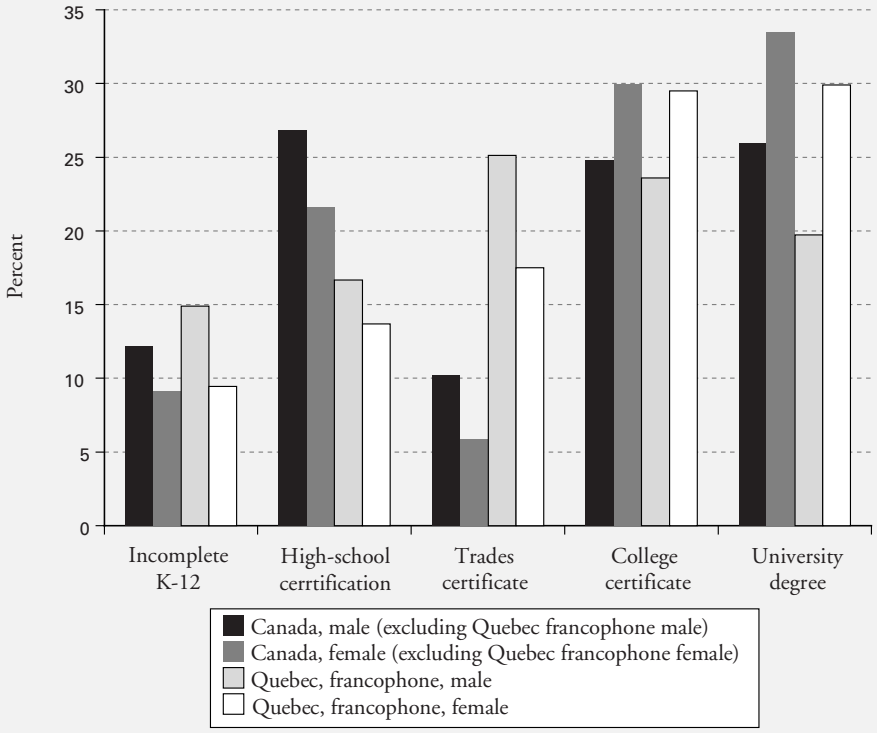


Notes: [a] The after-tax low-income cutoff (LICO) used as threshold is $14,562, the 2005 value for one person living in a census metropolitan area with a population between 100,000 and 500,000. The data include self-reported income from multiple sources, not only earnings from market activities. Calculations exclude those between ages 15 and 24, many of whom are studying and not engaged in full-time employment. They also exclude those over age 65, most of whom are not employed and depend on public and private pension income. Calculations also exclude those with reported after-tax income below $5,000 in 2005. This subset includes those declaring losses in 2005 and many having a limited attachment to the labour force.

[b] "University degree or certificate" includes those with degrees plus those with university certificates below the level of Bachelor degree.

Source: Author's calculations from 2006 census (Canada 2008a).

Figure 3: Highest Education Level, Quebec Francophones and All Other Canadians, Ages 25-34, by Sex, 2006



Source: Canada (2008b).

are not necessarily doing well by those students most likely to drop out.

In sum, a country should be concerned not only about its students performing at or above the average, but about its weaker students. Why? First, because there is good evidence to suggest performance at the lower end of the student performance distribution and at the upper end both matter. A World Bank assessment of the role of education in long-term growth in per capita income across 50 countries concluded that countries with a small tail *below* 400 on their PISA distribution performed better; independent of that result, countries with a large tail *above* 600 performed better (Hanushek & Woschmann 2007, 39). There is no reason to think Canada an exception. Second, because failing to complete high school has dire economic and social consequences for those who drop out. Third, because very high dropout rates among particular ethnic and racial groups have the potential to destroy community cohesion by setting in motion an intergenerational dynamic of marginalization: low education expectations, low attachment to the labour market, poverty, and social conflict with other groups.

Once in the labour force, school dropouts experience much lower employment rates and are less productive than students with higher education levels. In 2006, the employment rate among those whose highest education level was high-school certification was 64 percent, compared to only 38 percent among those with incomplete K-12 (Canada 2008c).

The 2006 census affords a crude measure of the productivity gain for individuals achieving high-school certification, namely the gap between the average after-tax income reported by those whose highest education level is high-school certification and the comparable average among those without certification. That difference (from $18,700 to $24,200) is nearly 30 percent.[3]

While high-school completion is an important rung on the education ladder, it is a low rung. To have good prospects of earning a middle-class income requires some post-secondary training. On the other hand, not obtaining high-school certification is a good indicator of subsequent poverty. (See Figure 2). The probability of someone between the ages of 25 and 64 without high-school certification reporting an income below the 2005 after-tax, low-income cutoff (LICO) is nearly one in three.[4] This is double the rate for those with a trades certificate and nearly three times the rate for those with a university degree.

Three Education Syndromes

Quebec Francophones

Statistics Canada employs a five-level hierarchical classification in reporting census-based education results. The levels, based on highest education attained, are incomplete K-12, high-school certificate, trades certificate, college certificate, and university degree.

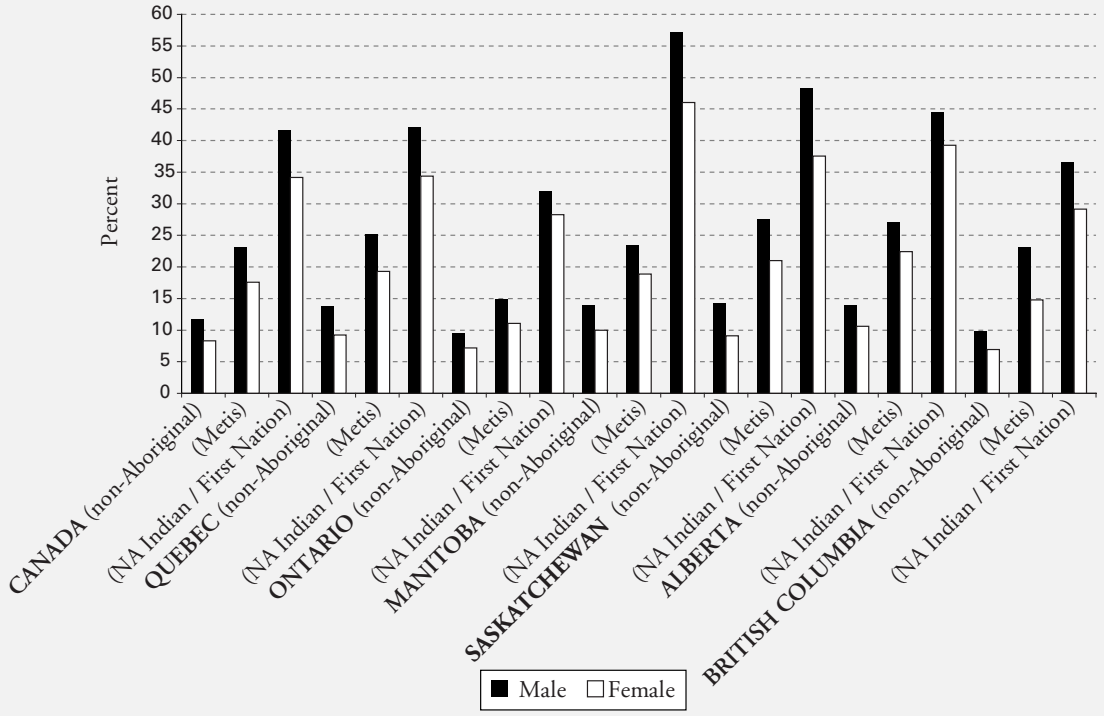
Among the tabulated age cohorts, 25 to 34 is the youngest at which to expect completion of post-secondary education. For those in this cohort, Figure 3 shows the education profile of francophone Quebecers (henceforth Québécois), by sex, set against the comparable profile for all other Canadians.[5] In this cohort, the age 20-24 Québécois/rest of Canada gaps in high-school completion (illustrated in Figure 1a) are less pronounced. Evident in this age cohort is the pronounced Québécois/rest of Canada gap at the level of university training and, among Québécois at this level, a large male/female gap. There is nothing necessarily optimal about the non-Québécois percentage with university degrees, but Quebec productivity would almost certainly rise with a shift in the distribution toward more

3 This measure summarizes self-reported, after-tax income in 2005 from all sources, not only market earnings. The averages are calculated among all those with any reported income. They are not adjusted for relevant factors such as age and experience.

4 The after-tax, low-income cutoff (LICO) used as threshold is $14,562, the 2005 value for one person living in a census metropolitan area with a population between 100,000 and 500,000. This statistic should not be interpreted as a poverty rate because it does not take into account family composition.

5 The "all other" statistics include Quebecers whose mother tongue is not French.

Figure 4: Share without High-School Certification, Ages 25-34, Non-Aboriginal, Metis and North American Indian/First Nation – Canada and Selected Provinces, by Sex, 2006



Source: Author's calculations from Canada (2008c).
Note: The 2006 Census enumerated 1.18 million Aboriginals: 698,000 Indian/First Nation, 390,000 Métis and 50,000 Inuit. These three subsets are not exhaustive: a residual category includes those giving multiple Aboriginal identities. The non-Aboriginal population excludes the entire Aboriginal identity population.

university training. That, in turn, presupposes stronger secondary school outcomes in younger cohorts.

A further consideration in this comparison of Québécois to other Canadians is that high-school graduation in Quebec occurs at Grade 11, as opposed to Grade 12 in all other provinces, and some of the curriculum in Quebec CEGEPs *(Collèges d'enseignement général et professionnel)* covers material that, in other provinces, would be taught in high schools. Hence, the academic quality of Quebec high-school and college certificates is probably lower than the comparable certificates issued elsewhere.

Parizeau described present Quebec francophone education outcomes as "scandalous, a massive waste of human talent that is compromising Quebec's future. I experienced a similar shock in 1962 [at the beginning of the Quiet Revolution] when an education census reported that 54 percent of Quebec adults over age 25 had no more than six years of elementary schooling."[6] In placing current Quebec political and administrative elites in the same purgatory as the Roman Catholic hierarchy that ran most provincial schools prior to the creation of an education ministry in the early 1960s, Parizeau draws an intriguing parallel. Quebec needs, he insists, equivalent education reforms to those of the Quiet Revolution. In the 1960s, Quebec government leaders – Parizeau among them – both dramatically increased spending on education and undertook a public dialogue intended to change Quebecers' collective cultural attitudes toward formal education.

6 *Le Journal de Montréal,* Sept. 11, 2008. This is a translation of the original French text:

En fait, nous sommes simplement confrontés à une situation scandaleuse, à un formidable gaspillage qui compromet l'avenir. J'ai connu un tel choc en 1962 quand un recensement de la scolarité des Québécois avait fait ressortir que 54 des adultes de plus de 25 ans n'avaient pas dépassé la sixième année d'études.

Aboriginal Education

The census employs several definitions for an Aboriginal. One is based on ancestry. The second – and most frequently used – is self-identification. Individuals can self-identify as belonging to one of three Aboriginal groups: 1) North American Indian or First Nation (Mohawk, Ojibway, Cree and so on); 2) Métis (descendants of communities formed from the intermarriage of Indians and coureurs de bois); or, 3) Arctic Inuit. A person self-identifying as Aboriginal does not necessarily have Aboriginal ancestry.

A third definition is based on being a "registered Indian" under the *Indian Act*. The great majority of those identifying as Indian/First Nation are also registered Indians. Only registered Indians have the right to live on reserves.

For an understanding of Aboriginal education, one must distinguish between Aboriginal students attending on-reserve schools and those attending off-reserve schools with non-Aboriginal students. Jurisdiction over on-reserve schools lies formally with Ottawa; in practice, control lies with the relevant band councils. With a few exceptions, jurisdiction over off-reserve schools is provincial.

About two-fifths of on-reserve students – more at the secondary than primary level – attend off-reserve schools. According to the census, more than two-thirds of Aboriginals now live off-reserve and their children attend provincially run schools. This fraction includes all Métis and nearly half of those who identify as Indian/First Nation. Based on these ratios, on-reserve schools run by band councils are responsible for educating about one Aboriginal child in five; provincial governments are responsible for the other four.

Aboriginal education – in particular education among those who identify as Indian/First Nation – is in a state of crisis. I start with the evidence from Figure 4, showing rates of adults aged 25 to 34 who lack high-school certification among those identifying as Indian/First Nation, Métis and all non-Aboriginals.

To summarize, the rate of Métis who have not graduated from high school is twice that for non-Aboriginals; the comparable rate for Indians/First Nations is nearly four times that for non-Aboriginals. Sizeable gender gaps exist among all three populations, with women faring better than men.

Within the Aboriginal population, education outcomes are above average in Ontario and British Columbia, close to the national average in Quebec, and much worse in the Prairies, home to nearly half of Canada's Aboriginals. In Manitoba, well over half of Indian/First Nation men aged 25 to 34 lack high-school certification.

Figures 5 (a-d) summarize evidence from the 2006 census on intergenerational trends. Among Métis (5c), there is a continuous intergenerational decline in the percentage without high-school certification and increase in the percentage with a university degree.[7]

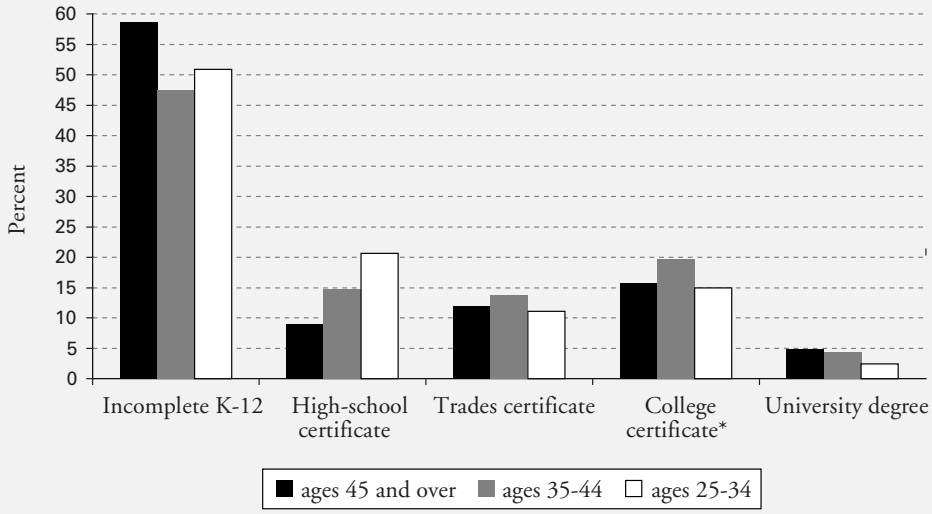
Among those who identify as North American Indian – both those living on- and off-reserve – education outcomes improved among those in the 35 to 44 cohort relative to those age 45 and over (Figures 5a and 5b). Achievement of the youngest cohort is slightly worse than among ages 35-44 – worse in the sense that the shares with each of the post-secondary levels declined and the shares with incomplete high school and high school increased. The dramatic intergenerational increase in education investment among the non-Aboriginal population while the Aboriginal population experienced only a modest increase, has led to a widening of Aboriginal/non-Aboriginal education gaps at all levels.

A second conclusion is the dramatic difference in the off- and on-reserve education profiles of the Indian/First Nation population. To some extent, the difference reflects rational decisions among those choosing between an on- or off-reserve lifestyle. On-reserve, investing in education is less rewarding because of the scarcity of nearby jobs, especially jobs requiring higher education levels. Off-reserve, high-school certification is the minimum education level offering a reasonable prospect of stable employment in the mainstream economy.

The very high fraction without high-school certification among the on-reserve groups means these people effectively have little choice between living on- or off-reserve. Off-reserve, higher education levels are required to obtain meaningful employment. While those on-reserve may enjoy a rewarding life, for many the absence of work prospects means welfare

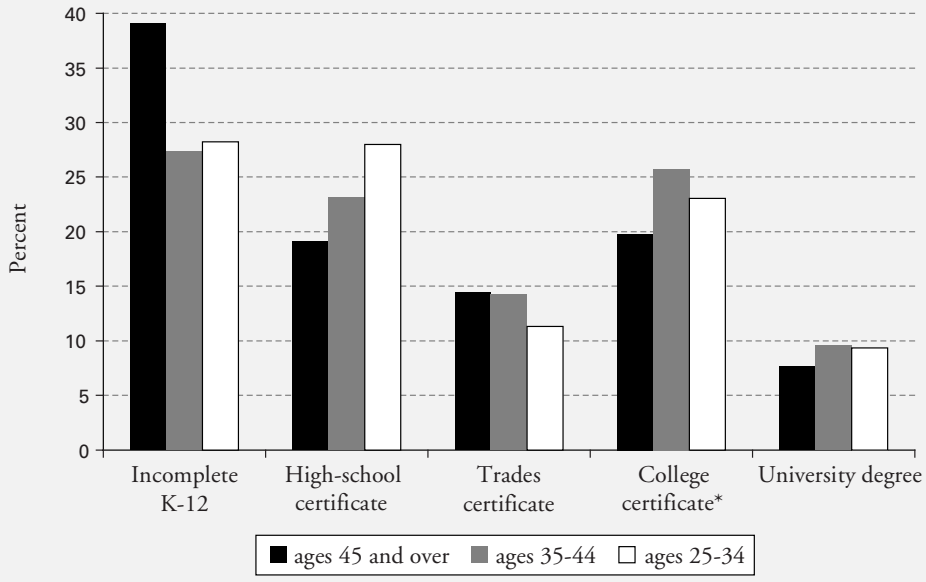
7 The high growth rate of the Métis population can be explained, in part, by assuming that the Métis identity population includes some who, in earlier censuses, identified as non-Aboriginal. If these newly declared Métis have above-average education profiles, they are giving an upward bias to what would otherwise be the education profiles of "old stock" Métis.

Figure 5a: Highest Education Level, Canada, North American Indian/First Nation, On-reserve, by Selected Age Groups, 2006



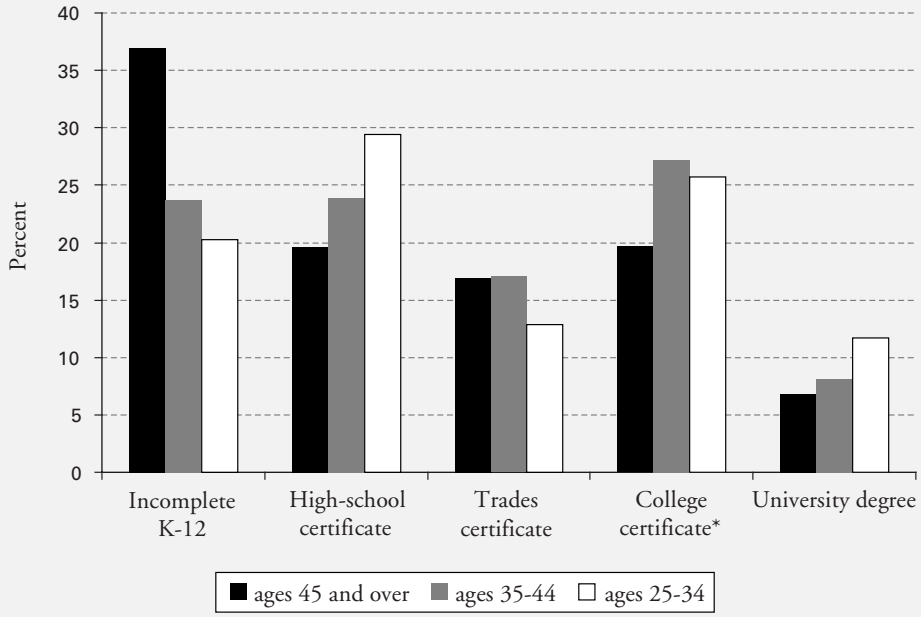
* College certificate population includes those with college/CEGEP certificates plus those with university certificates below Bachelor degree level.
Source: Canada (2008c).

Figure 5b: Highest Education Level, Canada, North American Indian/First Nation, Off-reserve, by Selected Age Group, 2006



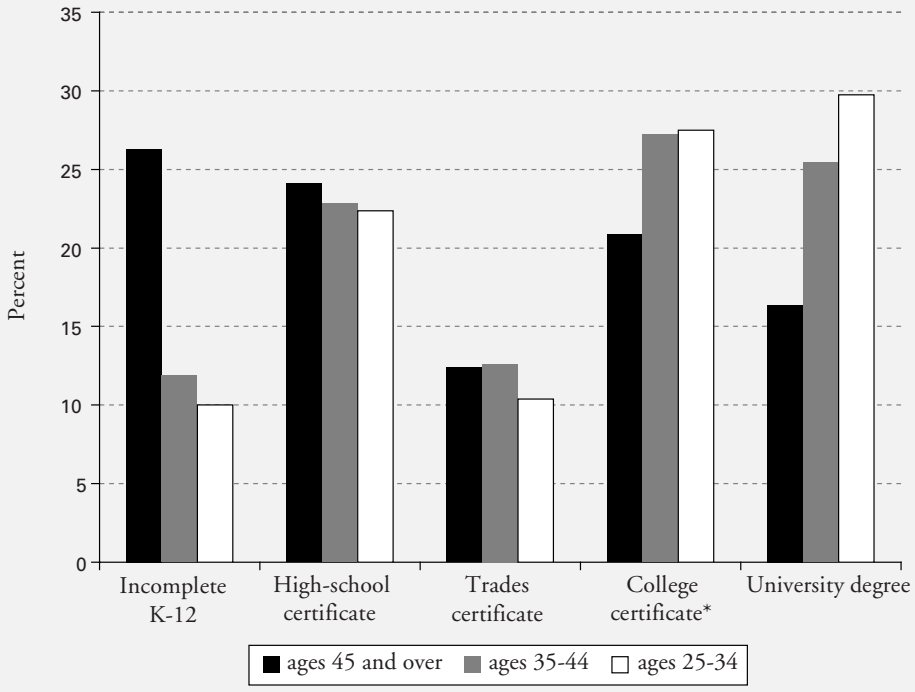
Source: Canada (2008c).

Figure 5c: Highest Education Level, Canada, Métis, by Selected Age Groups, 2006



Source: Canada (2008c).

Figure 5d: Highest Education Level, Non-Aboriginals, by Selected Age Grups, 2006



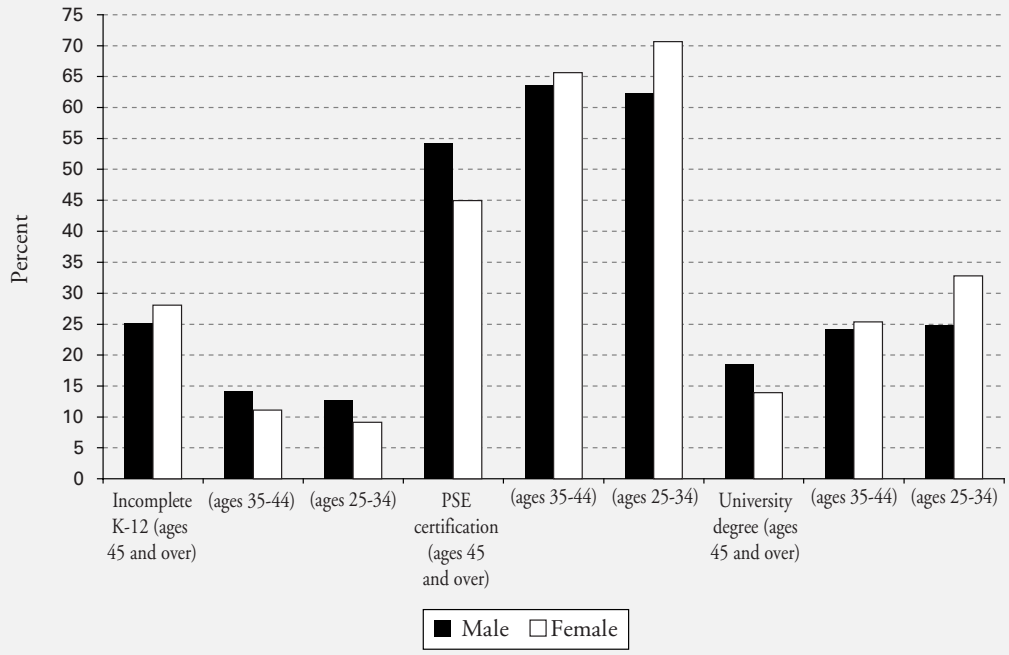
Source: Canada (2008c).

Table 2: Average PISA Scores, Canada and OECD, by Sex, 2006

	Male	Female	Difference
Math			
Canada	534	520	14
OECD	504	492	11
Science			
Canada	536	532	4
OECD	501	499	2
Reading			
Canada	511	543	-32
OECD	473	511	-38

Source: Bussière et al. (2007).

Figure 6: Share with Selected Highest Education Levels, Canada, by Age Groups and Sex, 2006



Source: Author's calculations from 2006 Census (Canada 2008b).

dependency. The education profiles are higher among Aboriginals living off-reserve, but the share of the under-45, off-reserve cohorts lacking high-school certification is nearly three times that of comparable non-Aboriginal cohorts (see Figures 5b and 5d).

The "Trouble With Boys"

Throughout the OECD, females are catching up and, in many areas, outperforming males academically. In the latest PISA round in 2006, males scored somewhat ahead of females in math. Science was a dead heat, while females performed decidedly better than males in reading. In terms of gender differences, Canada is close to the OECD average (See Table 2).

Of the three core competencies, most experts agree that reading is the most important. To quote the highly acclaimed author Peg Tyre:

> As the technological age began to dawn in earnest, the business community … began to urge schools to help students develop high-level skills in math, science, and computer science … Literacy turns out to be the key. Kids can't do well in math and science unless they have a strong grounding in reading and writing. But as educators have been making these grand discoveries – and creating literacy-soaked curricula in response – boys have been losing ground in the very skills we now know are paramount. (2008,136.)

The "trouble with boys" is not static.[8] Figure 6 illustrates intergenerationally the rates of incomplete high school, of post-secondary certification (trades certificate, college certificate, or university degree) and the subset with a university degree. Among those aged 45 and over, men have a higher high-school graduation rate and higher rates of post-secondary and university certification. Among those under 45, all three rankings are reversed. Among Canadians aged 25 to 34, four out of seven university graduates are women; four of seven without high-school certification are men.

Canadians under age 45 at the time of the 2006 census were born in 1961 or after. They have participated in a major social transformation in the role of women over the last half-century, a transformation that has occurred through most of the industrial world. One feature of this transformation has been the removal of barriers to female education achievement and a "catching up" to men in terms of earnings. In Canada, the ratio of average after-tax female/male incomes rises from 58 percent among those aged 55 to 64 to 78 percent among those aged 25 to 34. The intergenerational increases in this ratio are most dramatic in the case of women with university degrees, least in the case of women in the trades. The combination of "catching up" in earnings among younger women and a larger shift for women, relative to men, toward higher education levels augurs well for Canadian women achieving overall parity within the next two decades (see Figure 7).

Most initiatives directed at redressing the gender balance in primary and secondary school are inspired by developmental psychology. For example, we know that girls in early primary school are more willing to concentrate for lengthy periods on reading and writing while boys' concentration period is shorter – boys need recess.

Beyond a brief discussion of gender aspects of education, the remainder of the *Commentary* deals with Quebec and Aboriginal education. However, the "trouble with boys" is a factor in both cases. Recall, for example, that incomplete high-school rates among francophone Quebec women aged 20 to 24 are identical to the national average; among men they are 70 percent higher.

Explaining Education Outcomes and Assessing Policy Implications

As means of organizing the various explanations, it is useful to categorize relevant factors that affect either the demand for education or its supply. On the demand side are two factors:

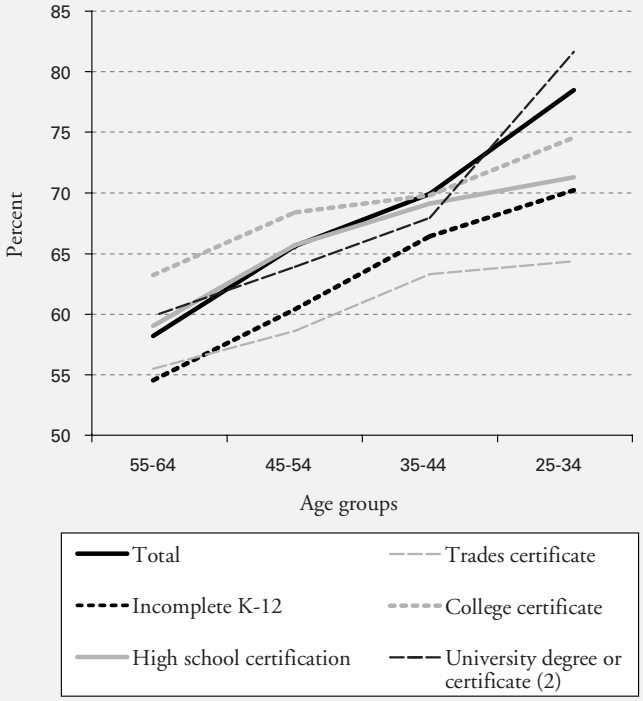
- Dropping out of high school because students expect certification will produce only a small gain in income. This argument has two variants. A tight labour market may increase employment opportunities and wages in jobs requiring little formal education. Alternatively, a weak labour market combined with reasonably generous social transfer programs (EI and social assistance) may encourage students to leave school and accept a career of intermittent employment supplemented by transfers.
- Low cultural expectations for formal academic achievement prevalent among some self-identified ethnic and racial communities – and the converse, high expectations among others.

On the supply side are two other factors:

- Socioeconomic characteristics, especially parental education and income, of students' families.
- School-related factors that collectively define school quality.

8 "Trouble with Boys" is the title of Peg Tyre's (2008) book, an informal introduction to the education research and policy debates surrounding the growing gender gap across Western Europe and North America.

Figure 7: Ratio of Female/Male Average After-Tax Incomes, Canada, by Highest Education Level and Selected Age Groups



* "University degree or certificate" includes those with degrees plus those with university certificates below the level of Bachelor degree.
Source: Author's calculations from 2006 Census (2008a).

Expectation of Low Financial Gain from High-School Completion

Those in the 20 to 24 cohort illustrated in Figure 1a were in the prime "dropout" age interval of 14 to 18 in the year 2000. A high provincial employment rate in 2000 among those aged 15 to 24 implies a tight provincial labour market that may have persuaded an above-average share of students, particularly those without expectations of post-secondary education, to drop out. Two indicators that the second variant may be relevant to the province are a high 2000 unemployment rate among those aged 15 to 24 plus a tradition of high provincial welfare utilization.

The three Prairie provinces "fit" the first variant – above-average incomplete high-school rate, combined with above-average youth employment rate, below-average unemployment rate and below-average welfare utilization. Two other provinces, Quebec and Newfoundland, "fit" the second variant – above-average incomplete high-school rate, combined with below-average youth employment rate, above-average youth unemployment rate and above-average welfare utilization.The five remaining provinces fit neither variant well.

The simple regression identifying first the Prairie provinces and second Quebec and Newfoundland provides some evidence in support of this demand-side argument. The regression "explains" the provincial data on incomplete high-school data remarkably well (see Table 3, column 5). Those provinces with above-average dropout rates are the five identified above as corresponding to one or other variant of this demand-side argument.

Culture Matters

In admonishing Quebecers for displaying less commitment to formal learning than Canadians living elsewhere, the *Groupe d'action* implicitly acknowledges the importance of low cultural expectations as a partial explanation for relatively poor francophone Quebec education outcomes. Their report cites a

Table 3: Incomplete High-School Rate and Selected Labour Market Measures, Canada and Provinces

	Incomplete high school, 2006 ages 20-24	Employment rate 2000 ages 15-24	Unemployment rate, 2000 ages 15-24	Provincial Off-Reserve utilization of social assistance average 1981-2000	Fitted incomplete high-school rate ages 20-24 *
	1	2	3	4	5
			percent		
Canada	13.8	56.3	12.7	8.1	
British Columbia	10.5	53.0	13.7	7.9	11.7
Alberta	17.4	63.1	10.6	4.9	19.1
Saskatchewan	18.3	59.1	10.6	6.4	19.1
Manitoba	21.5	64.7	9.4	6.2	19.1
Ontario	11.6	58.2	11.9	7.9	11.7
Quebec	15.2	52.7	13.9	9.7	16.1
New Brunswick	12.5	51.7	15.7	9.4	11.7
Nova Scotia	12.9	52.4	15.8	9.0	11.7
Prince Edward Island	10.8	58.4	14.6	8.0	11.7
Newfoundland	17.1	35.1	25.5	10.1	16.1

* Column 5 refers to fitted values from the following OLS regression : $y = 11.7 + 7.4\ x_1 + 4.5\ x_2$, where y is the predicted provincial incomplete high-school rate among people aged 20 to 24 expressed as a percentage, x_1 designates a Prairie province and x_2 designates Quebec or Newfoundland (both coefficients significant at 0.01, adjusted $R^2 = .84$).
Source: Canada (2007, 2009).

2003 Ipsos-Reid poll that asked respondents across Canada how important is it for students: 1) to have good reading, writing and mathematical skills; 2) to develop a disciplined attitude toward study; 3) to acquire the competencies allowing for admission to college or university; and 4) to acquire the skills to get a good job. To the first question, 94 percent outside Quebec said "extremely important," compared to only 81 percent of Quebecers. To the second question, the comparable statistics were 80 percent and 61 percent; to the third, 83 percent and 53 percent; to the fourth, 82 percent and 60 percent.[9]

A more dramatic example of cultural alienation from formal education exists among Canada's Aboriginals. The importance of this alienation has been noted in virtually all studies of Aboriginal education. In its 2003 report on urban Aboriginal youth, for example, the Canadian Senate referred to many factors impinging on Aboriginal education, such as poverty and residual racism, but it insisted that cultural attitudes among both Aboriginal parents and the broader Aboriginal community matter:

> Consistently, witnesses emphasized that the lack of parental involvement, guidance and support was partly responsible for the fact that Aboriginal youth continue to fare so poorly academically.... The damaging effects of residential schools on Aboriginal peoples, cultures, and languages are now widely recognized... [T]here is a deep mistrust among some Aboriginal people of mainstream educational institutions. The importance of obtaining a good education becomes secondary to what may be perceived as a further assimilative assault on Aboriginal culture, language and traditions. (Canada 2003, s.1.4.)

Aboriginal alienation from schooling becomes understandable in the context of a past that involved forced family separations (when children were sent to residential schools) and denigration of Aboriginal culture and languages. Provincial governments and band councils are attempting to counter this alienation, but with limited success.

Of the two demand-side factors, low expectations of financial gain and cultural influences, which is more important? Any answer must be somewhat tentative, but attempting an answer is worthwhile.

In the case of the Prairies, cultural attitudes among Aboriginals are almost certainly the more important factor. Let us assume financial incentives – resource jobs not requiring high

9 The Quebec sample included Anglophones as well as Francophones.

school for example – explain the entire deviation from the national average incomplete high school rate among non-Aboriginals. Among non-Aboriginal Albertans, 20 to 24, the deviation is 1.8 points (15.6 percent of non-Aboriginal Albertans did not complete high school compared to 13.8 percent among all Canadians). Among Saskatchewan non-Aboriginals, the deviation is –1.0 point (implying an incomplete high-school rate below the national average); in Manitoba it is 1.7 points. In the Prairies overall, the non-Aboriginal deviation is 1.4 points (15.2 percent to 13.8 percent). Among Aboriginals, the comparable deviations from the national average range from 28.5 percentage points in Alberta to 34.4 points in Manitoba.[10]

Overall, the deviation is 4.5 points in the Prairie region. If we allow that 1.4 points of the overall deviation are attributable to regionally specific financial incentives, then over two-thirds, 3.1 points (4.5 points to 1.4 points), of the regional deviation is attributable to the syndrome underlying Aboriginal school dropout rates.

As for the other set of high dropout provinces, Quebec and Newfoundland, financial incentives may seem minor relative to important cultural differences between anglophone and francophone Quebecers. However, provincial welfare policies almost certainly matter. These two provinces had the highest average utilization rates over the preceding two decades.

Long-term welfare utilization is a variable effectively under provincial political control. Communities that attach a relatively low significance to formal education are likely to endorse politicians advocating generous income transfer policies, including access by young adults to social assistance. Since the years of peak welfare utilization in the mid-1990s, the policy conclusion drawn by most provincial governments has been to render access by young employable adults to social assistance more difficult, for fear of abetting intergenerational welfare dependency. The major exceptions to this generalization are Quebec and Newfoundland. In these two provinces are few instances over the last generation of provincial voters electing politicians favouring social assistance policies comparable to those in Ontario and western Canada.

Cultural attitudes among some groups operate in a positive direction. Most Asian-origin communities attach great importance to formal education, leading to higher rates of high-school completion than the national average. Among the 4.2 million young Canadians aged 15 to 24, 40 percent are without high-school certification. Since the first three years of this age interval overlap with the normal age of high-school studies, this statistic is obviously not a measure of school dropouts. However, the relative value of this statistic among ethnic communities is a reasonable measure of commitment to education achievement.

The two provinces with the highest share of Asian-origin families are Ontario and British Columbia. The more dramatic impact is to be seen in B.C., where slightly over one-quarter of the 15 to 24-year-olds report an Asian origin. In this subset, the rate of those who fail to complete high school is one-quarter below the overall national average (See Figure 8). Among the remaining B.C. residents in this age cohort, the rate is at the national average

Recommendations 1, 2 and 10 from the *Groupe d'action* report and Recommendation 4 of the Canadian Policy Research Networks agenda are attempts to shift cultural attitudes with respect to education. (See Boxes 1 and 2.) Such initiatives are worth undertaking but, by their nature, cultural attitudes change slowly. A gap in both sets of recommendations is the absence of discussion of the role played by social assistance policy in student decisions to complete high school.

10 Relative to Alberta, the higher aggregate deviations in Saskatchewan and Manitoba are mainly because of their higher Aboriginal shares in this age cohort. The Aboriginal share of the 2006 Prairie population ranged from 6 percent (in Alberta) to 15 percent (in both Manitoba and Saskatchewan). Fully 43 percent of the Aboriginal identity population lives in the Prairies. By contrast, Aboriginals comprise only 2.5 percent of the population of the remaining provinces.

Box 1: Recommendations of the Report *(Savoir pour Pouvoir)* Prepared by the *Groupe d'action* on the High Rate of Incomplete High-school Education among Francophone Quebecers.

Below is a translation and précis of recommendations put forward by the *Groupe d'action.* Their report estimated annual costs of their recommendations in the range of $150-$250 million.

Recommendation 1

Expand the consensus among Quebecers on the importance of education and improving high-school completion outcomes.

This will entail campaigns waged at the provincial, regional and local levels. At the provincial level, the campaign will promote the importance of education across all elements of Quebec society. It will include messages on the importance of reducing dropout rates. At the regional and local levels, the campaign will centre on families and employers. The campaign could, for example, entail local business groups and government devising protocols governing employment of teenagers such as limiting hours of work, particularly during exam periods.

Recommendation 2

Reinforce regional organizations to pursue strategies directed at reducing dropout rates in their respective regions.

Regional governments and associations need to analyze the regional dimensions of the problem and discuss strategies they could pursue.

Recommendation 3

Increase services available to future parents and parents of children under age five in "at risk" communities.

The Quebec government organizes perinatal and, relative to the other provinces, very generous childcare programs. More needs to be done to reach parents who do not use these services.

Recommendation 4

Undertake pilot projects – complementing existing childcare services – targeting "at risk" children in order to better prepare them for integration into primary school.

"At risk" children are under-represented in provincial childcare centres. This is primarily due to a reluctance by their parents to make use of government services. Pilot projects require active involvement of local community groups in targeted neighbourhoods.

Recommendation 5

Introduce intervention programs to remedy weak performance in early primary grades.

Students who fall behind in primary school face a high probability of dropping out in secondary school. This recommendation envisions individualized support for students.

Recommendation 6

Reinforce Agir autrement [a Quebec program targeting secondary schools with high dropout rates].

This recommendation envisions pilot projects and better links to other community and business associations, and to government social services.

Recommendation 7

Launch projects targeting students at secondary schools in very poor neighbourhoods.

This recommendation envisions use of community development techniques developed in inner-city US contexts and elsewhere.

Recommendation 8

Improve transition from school to post secondary skills training.

This recommendation concerns ease of student transition from secondary school to employment and to relevant post-secondary skills training. For example, there is an important role for work-study programs that encourage completion of secondary studies while students work part-time. This entails new teaching techniques (online courses, for example). Educators need to frequently reassess employer skills requirements in choice of programs and to work with employer associations in designing the content of such programs.

Recommendation 9

Incorporate into school administration the incentive measures envisioned in recent legislation (La loi modifiant la loi sur l'instruction publique et d'autres dispositions législatives 2007).

Recent Quebec legislation envisions agreements between the provincial education ministry and school districts and individual schools. The agreements are to contain specific targets on matters such as school dropout rates and to provide increased flexibility to district and school leaders. The recommendation notes the obstacle posed by collective bargaining agreements to undertaking incentive-based reforms.

Recommendation 10

Create a high-profile advisory council on secondary school completion.

The intent is to maintain a high profile – in government, the education system, the business community and general society – for initiatives targeting education outcomes.

Box 2: An Agenda for Aboriginal Education.

The following summarizes recommendations on Aboriginal education prepared by John Richards and Megan Scott, in a study undertaken on behalf of the Canadian Policy Research Networks.

Recommendation 1

Early childhood education (ECE) is a valuable investment in children from marginalized communities, few of whose members have a tradition of formal education. All Aboriginal children should have access to ECE, either on- or off-reserve.

Provinces should assess the extent of access to reasonable quality childcare programs among Aboriginal families in their jurisdiction; on-reserve, band councils should do likewise. "Where numbers warrant" – to use the wording of Section 23 of the Charter of Rights – the provinces should assure that Aboriginal-specific programming (such as Aboriginal language instruction) be included in the ECE curriculum.

Recommendation 2

Provincial education ministries should expand existing provincial precedents that enable school districts to undertake discretionary Aboriginal education initiatives.

Comprehensive initiatives undertaken at the school district level can significantly improve Aboriginal education outcomes. These benefits seem to derive from a variety of innovations. Provincial education ministry support for district initiatives can take several forms:

- awarding supplemental funding to districts based on the number of identified Aboriginal students;
- requiring districts to draw up explicit agreements with provincial education ministries as is done in B.C.;
- requiring districts to engage Aboriginal community leaders in school policymaking; and
- collecting and disseminating data on district-level Aboriginal outcomes, with the intent of highlighting best practices.

Recommendation 3

To improve quality of school management, bands should form school authorities equivalent to provincial school districts. As an inducement to bands to consolidate school management under school authorities, the federal Department of Indian Affairs should offer a significant – at least 25 percent – increase in per-student funding for schools organized into school authorities.

Most on-reserve schools are "stand alone," operated by the relevant band independently. Provincial education ministries long ago abandoned a "stand alone" system due to its inability to provide adequate secondary services at reasonable per-student cost. Secondary services include specialized courses and higher-level management (such as negotiating teacher compensation and terms of work).

Band-operated schools are also very small relative to provincial schools and have a high proportion of "special needs" students. A realistic comparison is with the smallest provincial school districts, those with fewer than 1,000 students. Based on per student costs in comparable provincial schools, a 25 percent increase in per-student funding for band-operated schools – which would increase the ordinary spending per on-reserve student to $16,900 – is not unreasonable. It is, however, unreasonable to expect more money to improve results unless the additional funds are accompanied by major institutional reform that transfers authority and budget for on-reserve schools from individual band councils to school authorities managing a reasonable number of schools.

Recommendation 4

Provinces should enable local Aboriginal organizations and individuals to participate meaningfully in school governance where numbers warrant.

Overcoming widespread Aboriginal cultural alienation toward formal education requires engaging Aboriginal communities. This may range from an active role for elders in particular schools to curriculum advisory committees comprised of local Aboriginal leaders. A dual responsibility is implied. At all levels, provincial school authorities need to provide opportunities for Aboriginal organizations, parents and citizens to participate meaningfully in school governance. Simultaneously, Aboriginal communities have a responsibility to engage with the provincial education system.

Box 2 *(cont'd)*

Recommendation 5

Provincial education ministries, band councils, and First Nations school authorities, where relevant, should engage in comprehensive performance measurement activities. Results should be publicly reported. One key activity is gathering data on Aboriginal student performance in core competency tests. We recommend that the relevant authorities publish core competency test results disaggregated to the school level.

The effectiveness of schools in supporting Aboriginal students should be measured and reported for two main reasons. First, measuring and reporting school and student performance provides accountability. Whether Aboriginal or not, parents and citizens are concerned about the effectiveness, efficiency and responsiveness of the schools their children attend and for which they pay taxes. As well, given the absence of educational accountability to Aboriginal communities in the past, information about school performance is particularly important to convince Aboriginal communities that education programs are working for Aboriginal students. Second, performance measurement is a tool for high-quality, data-driven program evaluation and planning by those responsible for school program design.

The approach to performance measurement should be comprehensive. Measuring Aboriginal student performance on tests of basic skills is important, since competence in reading, writing and math are essential for success, both in higher education and mainstream society. However, given the complexity and multiple aims of the educational enterprise, as well as the cultural priorities of Aboriginal communities, a focus on basic skills is insufficient. For instance, the ability of provincial schools to provide a culturally affirming educational experience for Aboriginal children is an important aspect of performance to monitor.

Recommendation 6

The provinces should undertake more aggressive affirmative action to encourage Aboriginal post-secondary students to become teachers, and provincial teacher training institutions should require courses in Aboriginal history/culture.

Among the robust results in education analysis is the value of teachers who can identify culturally with their students, and vice versa, the value of students being able to identify culturally with their teachers. In most jurisdictions today, Aboriginals remain seriously underrepresented in both teaching and educational leadership positions. With the rising share of Aboriginals among provincial students, this matter becomes more crucial.

Socioeconomic Characteristics of Students' Families

Among the supply-side factors with an impact on education, socioeconomic characteristics of students' families matter a great deal. By far the most extensive empirical analysis of education outcomes has been in the US, much of it motivated by attempts to explain differences in black/white education performance. These large-scale empirical studies of children's education outcomes have found that family characteristics count for up to half the variance.

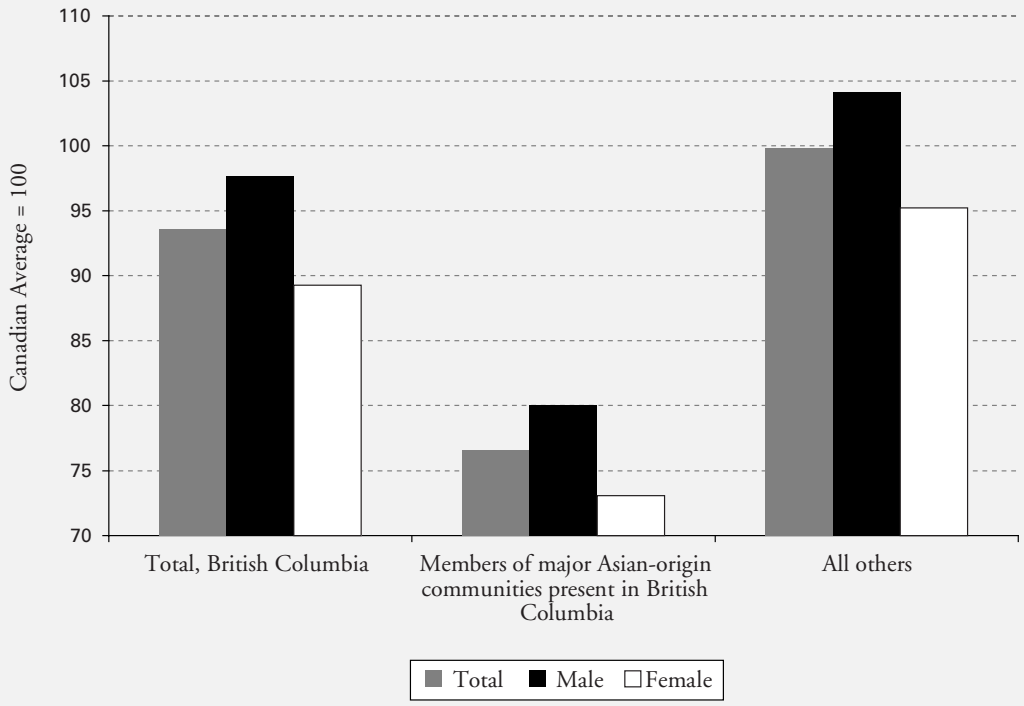
Three family characteristics loom large in analyses of student performance.

1. FAMILY INCOME AND PARENTAL EDUCATION

To use an economic analogy, parents are one "input" in producing the "output" of educated children. In empirical analyses of parental influence, the two most important variables are usually parental education levels and family income. Parental education measures the stock of human capital that parents can contribute to their children's education; family income measures the current resources, including parental time, that families contribute.

The parental input analogy provides a rationale for government investing in early childhood education for children who come from "at risk" families able to contribute only a low level of "inputs" to their

Figure 8: British Columbia Young Adults Without High-School Certification, Ages 15-24, by Selected Ethnic Origins and Sex, 2006 (relative to Canadian average)



Source: Author's calculations from 2006 Census (Canada 2008b).

children's education. Both the *Groupe d'action* and the Agenda for Aboriginal Education (see boxes) make the case for targeted early childhood education programming. The *Groupe d'action* report does not discuss why Quebec, despite spending far more per capita on early childhood education than other provinces, has been unable to reach "at risk" families adequately.

2. FAMILY MOBILITY

Many studies have documented the negative impact on student performance of parental mobility. The problem affects low-income more than middle- or high-income families because employment among the poor tends to be less stable.

A recently completed analysis of factors pertinent to "on schedule" high-school completion among Alberta students entering Grade 10 found mobility to be a highly significant variable. Among those students who did not move, 75 percent successfully graduated in three years; among those who moved, only 60 percent did. Analysis of completion within four years of entering Grade 10 produced similar results. In a multivariate analysis, moving school between Grades 3 and 9 was a statistically significant (negative) factor in probability of high-school completion within three years (among students who had reached Grade 10), as was any move in senior high-school years (Alberta 2009, 9,41).

In another study, this one bearing on a cohort of B.C. Aboriginal students entering Grade 8 in the 1998/99 school year, 57 percent of the students who stayed in the same school (or changed schools only because their original school did not teach senior secondary grades) completed high school within six years. Among those who changed schools (for other reasons), the completion rate was approximately 30 percent (Aman 2009, 186).

3. SCHOOL QUALITY

Everyone agrees that "good schools" are important, but determining what aspects of schools distinguish "good" from "bad" is contentious. Many variables have been used to evaluate a school. Some measure

school inputs: per-student expenditures, student/teacher ratios, qualification and experience of teachers, particular curriculum design, and quality of school management both at the school and at higher levels, such as school districts or provincial education ministries. It is important to supplement input with output measures, such as performance of school students on standardized tests. Among school inputs are three important quality variables.

a) Peer Effects

Socioeconomic characteristics of families may affect not only the students of the relevant families; they may also affect – positively or negatively – other students in a school and, hence, become determinants of school quality. For example, mobile students tend to exercise a negative effect on their peers. Frequent school moves tend to lower a student's prospects and, as the share of movers rises in a school, to affect adversely the performance of all students, including those who do not move (Hanushek & Rivkin 2009).

Indeed, high mobility is one dimension of the Aboriginal education disadvantage. Aboriginal families are roughly twice as likely to move as non-Aboriginals (Norris & Clatworthy 2003). Among those who are registered Indian, their migration may entail their children moving not only among schools within a provincial system but between a provincial school and an on-reserve, band-operated school using a different curriculum.[11]

In a recently published study of 366 B.C. schools, colleagues and I (Richards et al. 2008) reported a negative peer effect among Aboriginal students – in the sense that, after adjusting for other factors, Aboriginal student performance declined as the number of Aboriginal students in a school increased.[12]

The potential impact of Aboriginal students on one another's school performance poses a tradeoff. To improve performance among marginalized ethnic/racial groups, there is value in hiring teachers who belong to the group in question and of introducing a school curriculum oriented to the group's cultural experience. Such adaptations help validate a minority group's cultural experience, and are usually more in evidence in (magnet) schools with large numbers from the relevant group. Such schools are better able to achieve minimum efficient scale in making the adaptations. On the other hand, the presence of a large culturally homogeneous, low-performing student group can encourage a school culture of low academic expectations: some combination of low teacher expectations of students' academic potential and low student expectations of their own and their peers' potential.

Conversely, student peer effects may be positive. In the same B.C. school study, the performance of non-Aboriginal students in a school had a marked positive impact on that school's Aboriginal students. The policy implication is that school districts should be cautious about concentrating Aboriginal students in one or a few schools.

Potentially important negative peer effects underlie US concerns that African Americans are, for reasons of neighbourhood segregation, overly concentrated in low-performing, inner-city schools. In a typical large-scale study (of Texas schools), Steven Rivkin and Eric Hanushek (2009) found that a rising share of black students in a school generated a negative externality on the performance of black students, particularly on those who had performed in the top quarter (in terms of core competency tests) in early elementary grades. The share of black students generated a smaller, but in many cases significant, negative externality on white students within the school.

The *Groupe d'action* report implicitly acknowledges negative peer effects by endorsing intense tutoring/monitoring projects at the secondary level in schools experiencing high dropout rates. The report endorses initiatives such as those undertaken in a Montreal

11 Among families living on-reserve, 40 percent of their children attend a nearby provincial school. Given the high Aboriginal mobility, Saskatchewan has now mounted an online tracking system to follow more accurately students who migrate frequently among provincial and band-run schools.

12 Whether there exists a negative peer effect in the case of Aboriginal students is a subject of debate. Aman (2009) found that Aboriginal student high-school completion varied inversely with the Aboriginal share of students in a school. She was reluctant, however, to define this as a negative peer effect.

suburb by the non-profit society Pathways to Education, which promoted the following goals:[13]

- Academic – tutoring in five core subjects, four nights a week.
- Social – group mentoring for Grades 9 and 10; specialty and career mentoring for Grades 11 and 12.
- Financial – immediate financial support such as free bus tickets tied to attendance and a bursary for post-secondary education (up to $4,000 per student in the program).
- Advocacy – student-parent support workers help connect teens, parents, school administrators, teachers and community agencies.

Such interventions are expensive. In the case of Pathways, the annual cost is approximately $4,000 per student, nearly half the average per-student provincial government expenditure across Canada. Pathways relies on unpaid volunteers for the labour-intensive tutoring component. Without them the per-student cost would be much higher. Pathways established its reputation in the wake of a successful project for the Toronto school district in Regent Park, a low-income, inner-city neighbourhood.[14] It has subsequently launched projects elsewhere in Ontario, in Verdun, QC. and in Winnipeg.

b) Teacher Quality

Many dimensions of teacher quality are not easily measured. One accessible dimension is experience. Empirical studies usually find that students perform better when taught by experienced teachers. In their study of black/white gaps in Texas schools, Hanushek and Rivkin identified teacher quality as a relevant variable: black students were disproportionately taught by teachers with less experience and this explained some of the performance gap.

The Alberta study on factors conducive to "on schedule" graduation of students entering Grade 10 also found evidence that teacher experience matters. In schools where the average teacher tenure was less than 10 years, 64 percent of students graduated within three years; in schools where average teacher experience exceeded 10 years, 75 percent did (Alberta 2009, 28).

Teaching in an inner-city or isolated rural school is potentially rewarding work, but it is usually more stressful than teaching in a stable middle-class suburban neighbourhood. Talented and committed teachers often gravitate away from "tough" schools, leading such schools to suffer high turnover and a teaching staff with limited experience. The policy implication is the need for a teacher compensation system that rewards good teachers willing to make their careers in "tough" schools.[15]

c) School Management

Because the "output" of successful schools is hard to measure, so too is good school management. However, the importance of management becomes undeniable when it is patently absent, as is the case for most "stand-alone," band-operated schools (Mendelson 2009). There is considerable agreement among educators and policy administrators involved with Aboriginal education that improvements in on-reserve school outcomes requires both more money and reorganization of schools into professionally run multi-school equivalents of provincial school districts.

Similarly, the quality of district-level management appears important in explaining off-reserve Aboriginal education outcomes. In analyzing B.C. schools with sizeable Aboriginal student cohorts, variables identifying school districts dramatically increased the ability to explain Aboriginal education outcomes (Richards et al. 2008). Schools in some districts performed much better than predictions based on socioeconomic characteristics and peer

13 See http://www.pathwaystoeducation.ca.

14 In its evaluation, the Boston Consulting Group (2007, 10) reported a 10 percent dropout rate for the first two years of the 2005 Pathways cohort relative to a 44 percent dropout rate for a pre-Pathways cohort used as a benchmark. The estimated per student cost is from personal communication with Pathways officers.

15 The compensation may be in the form of higher salaries for teaching in designated schools. But it may take other forms as well. In both the US and UK, large-scale pilots are underway to attract young university graduates, from any discipline, willing to spend a designated number of years in "tough" schools. As incentives, these teachers receive implicit future job offers from firms in their respective disciplines. The hope is that a high proportion remain teachers. 'Teach First" (http://www.teachfirst.org.uk/) is a UK example.

effects would suggest; schools in other districts performed much worse. Relative to the weaker school districts, the more successful had the following characteristics: school administrators and teachers who more consistently emphasized Aboriginal educational success as a long-term priority; engagement of Aboriginal leaders and the broader community; better use of objective data on Aboriginal student performance; and, finally, a reputation of following through on policy implementation.

The B.C. education ministry provides funds and considerable discretion to districts to manage and adjust Aboriginal education programming in a manner compatible with local conditions. Recommendation 9 of the *Groupe d'action* report illustrates the same conclusion: the education ministry in Quebec City should enable considerable district-level discretion in designing programs to reduce drop-out rates.

An element lacking in the *Groupe d'action* report is an adequate discussion of standardized province-wide testing on core subject material as students progress through primary and secondary school. Such tests measure "school output" and are an important component of school management. Canada participates in international random sample tests such as PISA. These are useful in comparing education results across provinces and between Canada and other countries. Standardized tests within a province permit comparison of quality across provincial schools and school districts. As with all data gathered by statistical agencies, comparisons can be abused. To rank schools without, for example, adjusting for factors beyond the control of schools is not helpful.

Conclusion

Canadians should be alarmed by the current ranks of high-school dropouts. On average, Canada's provincial school systems perform well by international standards. However, more is at stake than averages. Two identifiable groups across Canada – Canadian Aboriginals and francophone Quebecers – have unacceptably low education outcomes.

Boxes 1 and 2 summarize two sets of recommendations for education reform. Both propose campaigns to shift cultural attitudes toward education, advocate ambitious investment in early childhood and early primary school programming, and discuss the importance of leadership at the level of school districts. These are broad reform agendas that, admittedly, lack detail on implementation and fail to prioritize incremental benefits to expect from particular interventions. Nonetheless, when faced with serious education gaps, "whole system" agendas are worthwhile exercises to undertake by those responsible for "whole system" administration.

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