Aboriginal Education:
Strengthening the Foundations

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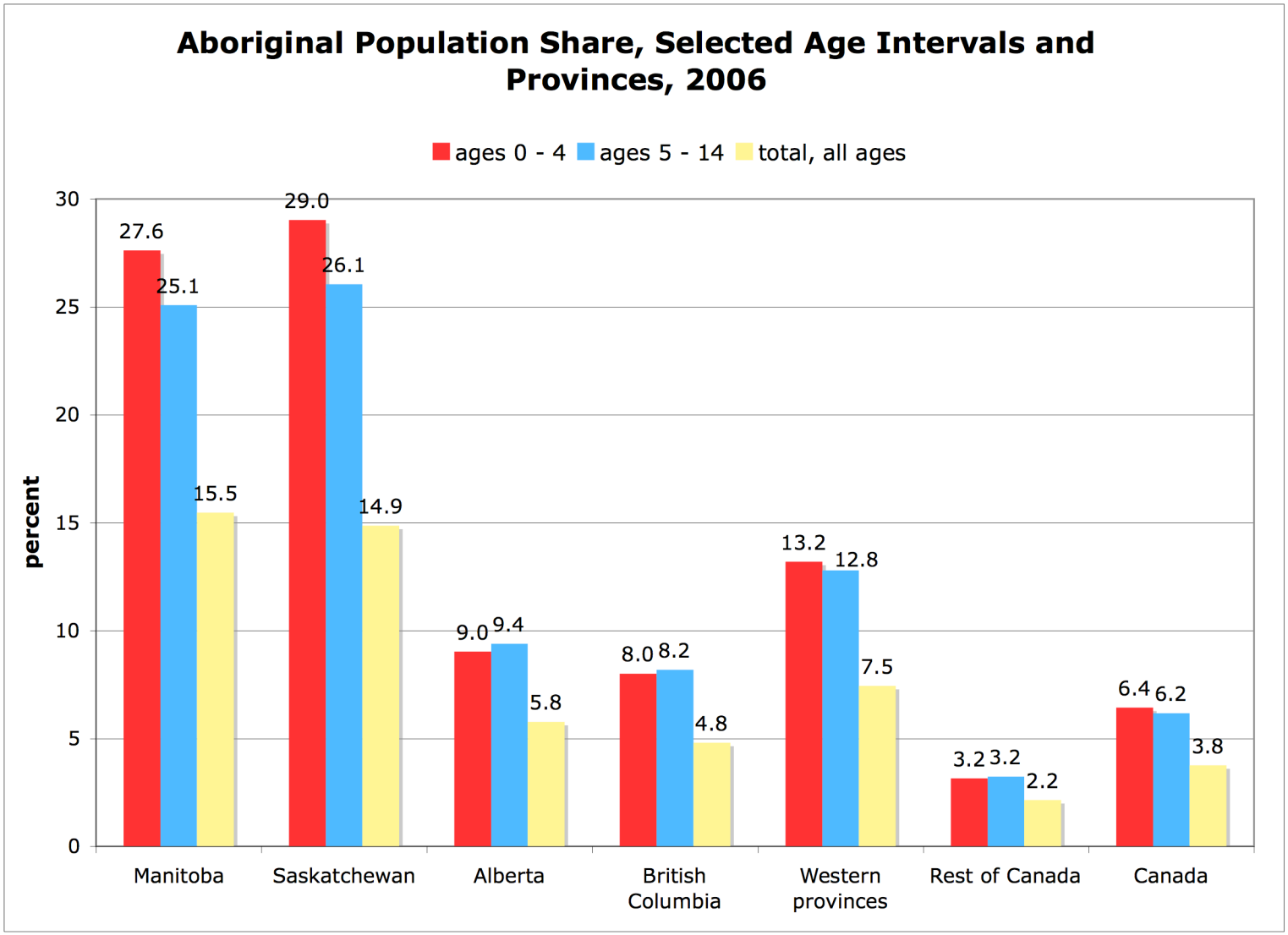
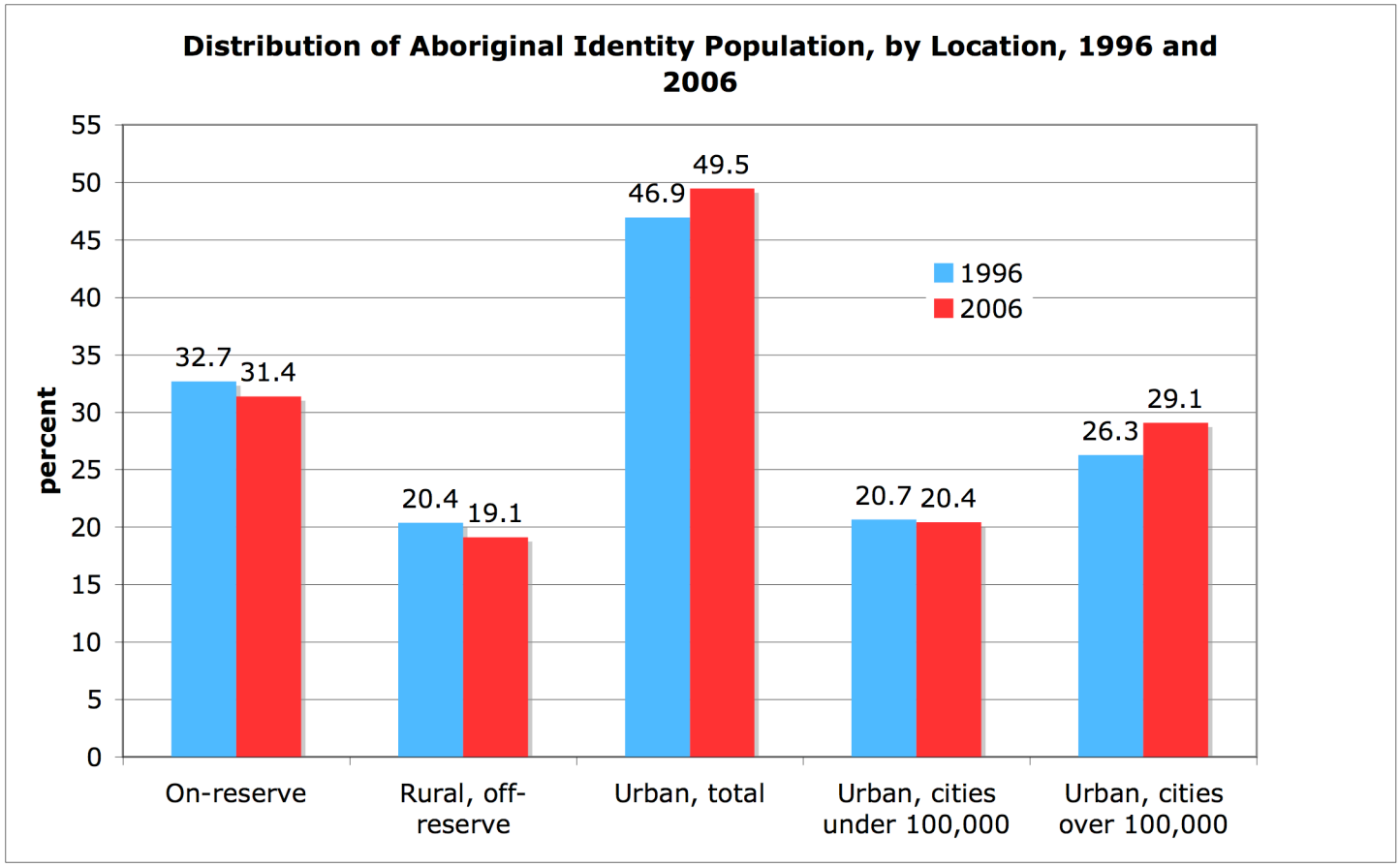
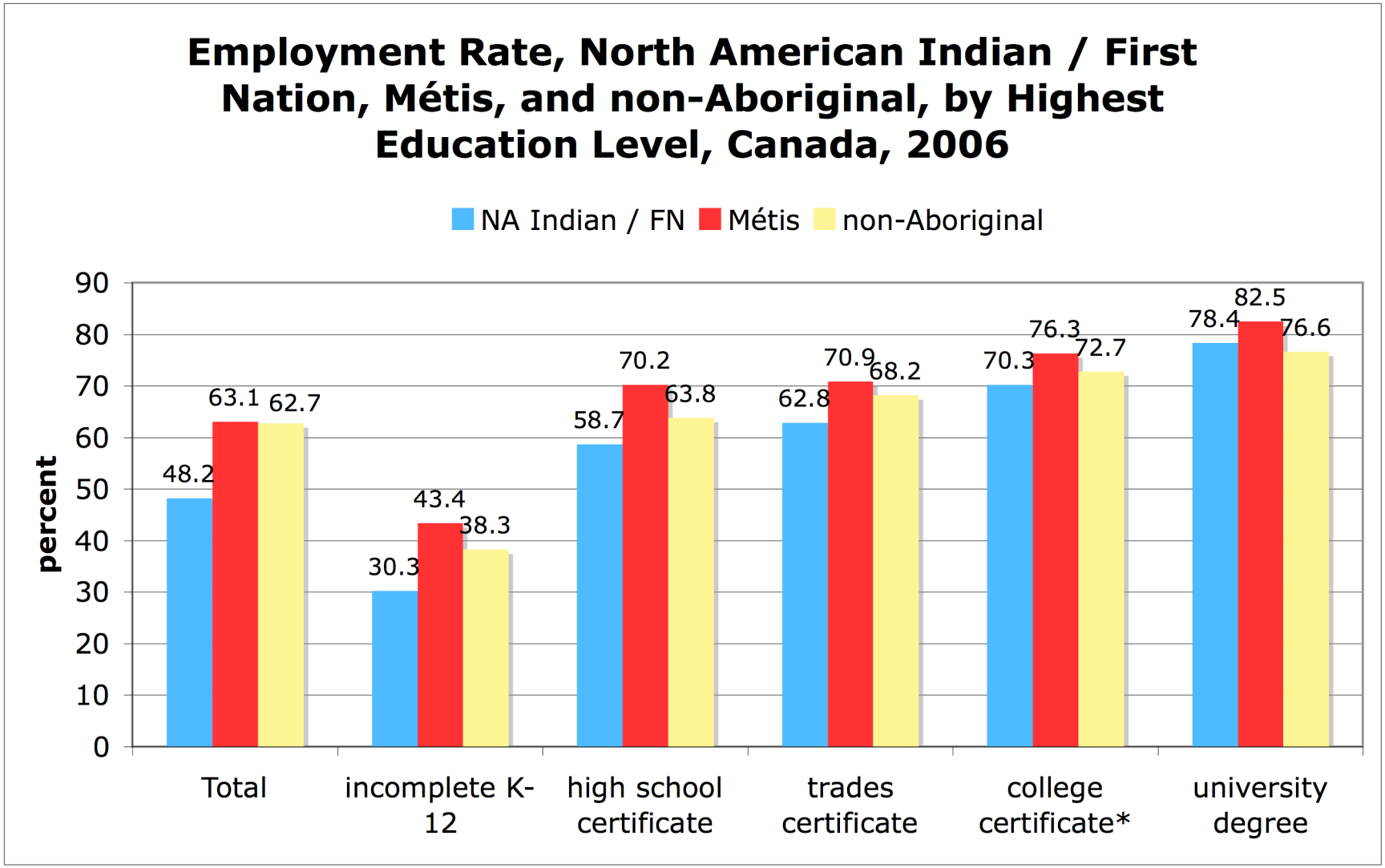


Aboriginals are a major component of “multicultural” Canada – especially in western Canada where they comprise nearly one in seven of the next generation (under age 14 in 2006).[2]



Notes:

1. Provincial Aboriginal student share is about 80% = 40% (share of on-reserve children in provincial schools) x 30% (on-reserve share of total Aboriginal population) + 70% (off-reserve share). Remainder attend 500 on-reserve schools.
2. The Census underestimates the NA Indian / First Nation identity population due to incomplete reserve enumeration. Statistics Canada subsequently revises results. Which has not yet been done for the 2006 census. Here, 2006 data have been revised by extrapolating the 1996-2001 Indian/FN growth rate from Statistics Canada revised data, and assuming the difference (86,700) between this estimate and recorded Census Indian/FN population resides on-reserve.

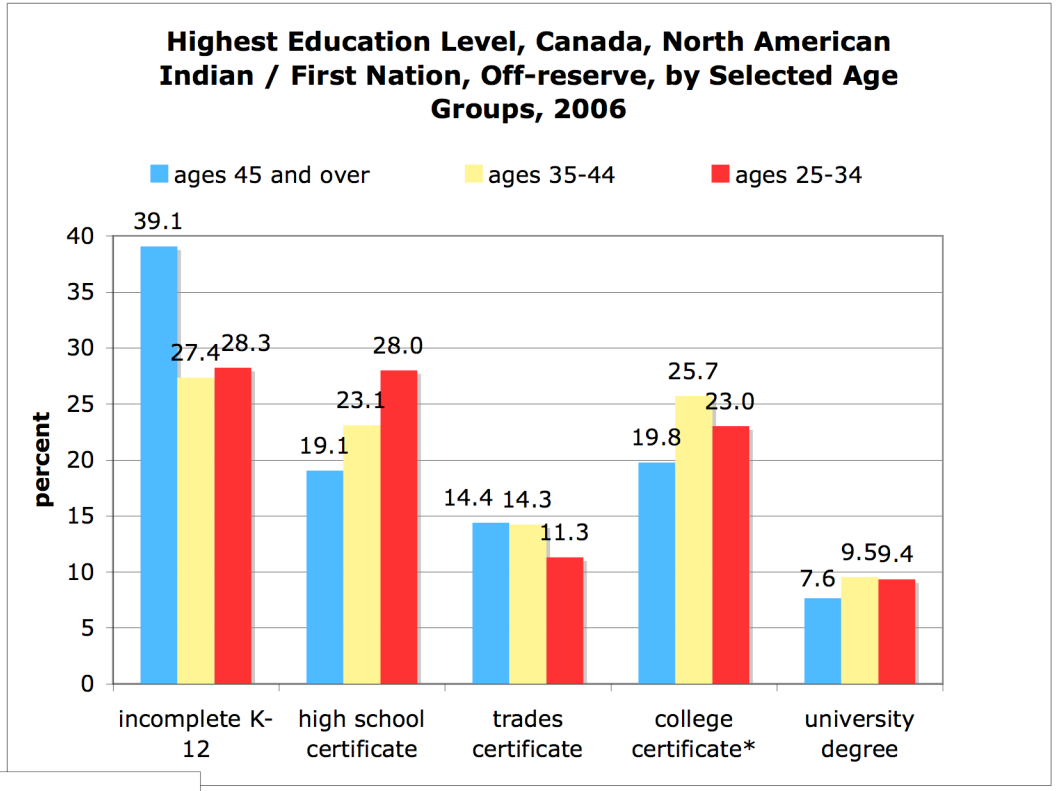


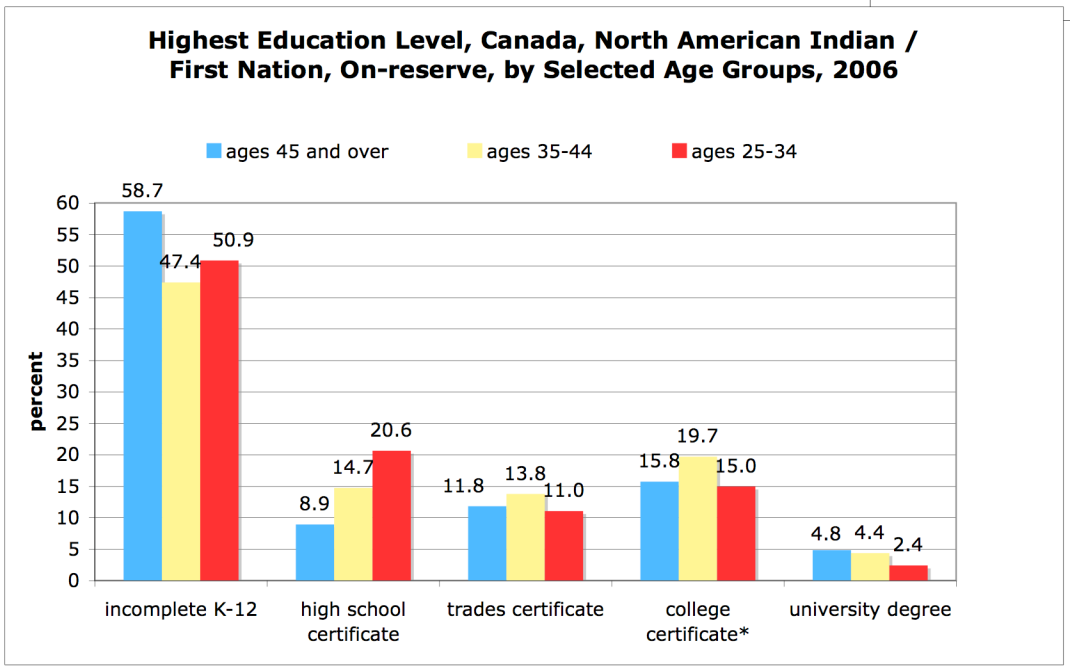
Some face serious problems; most face aspects of discrimination.

To succeed economically, they need better education outcomes.

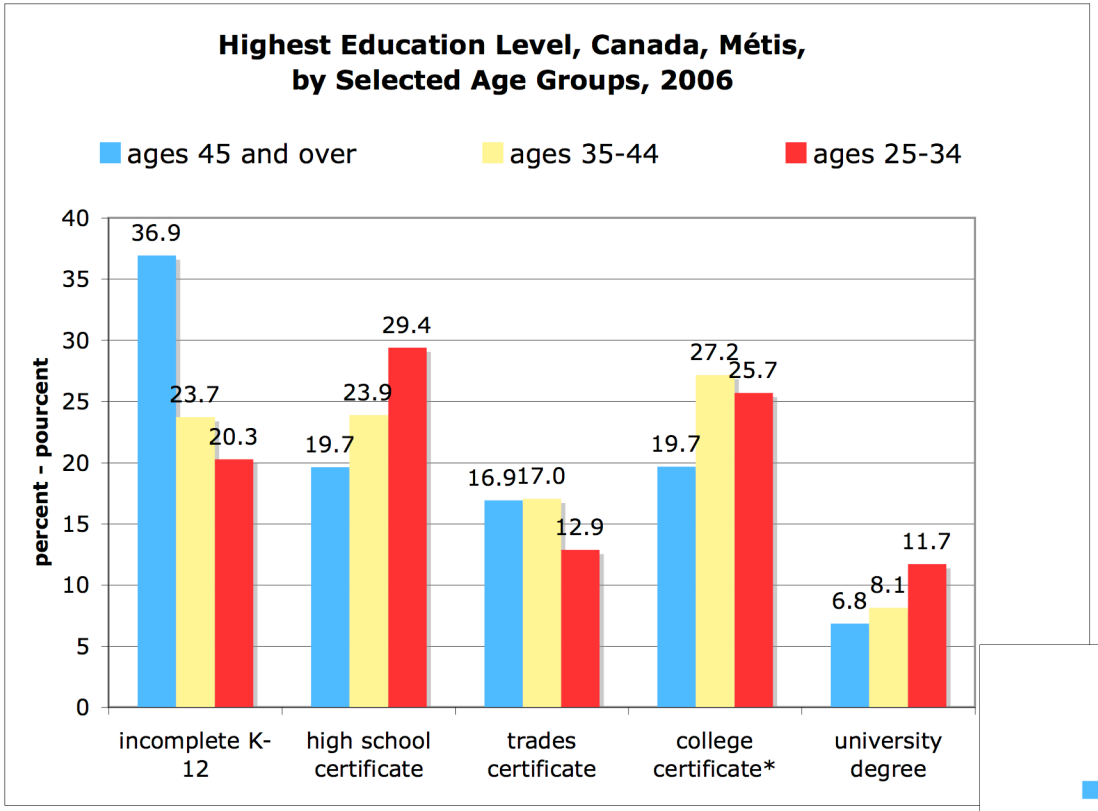
On-reserve education is in crisis; off-reserve outcomes are better, but that is to damn with faint praise.

Those registered Indian / First Nation who want to live on-reserve should be able to do so; …



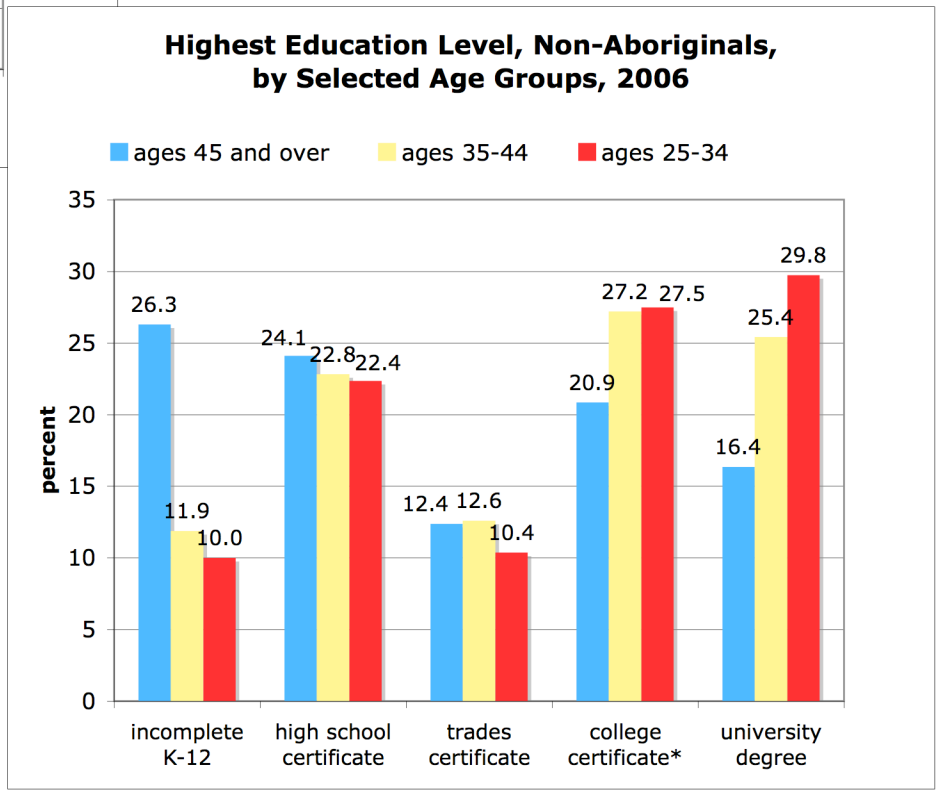


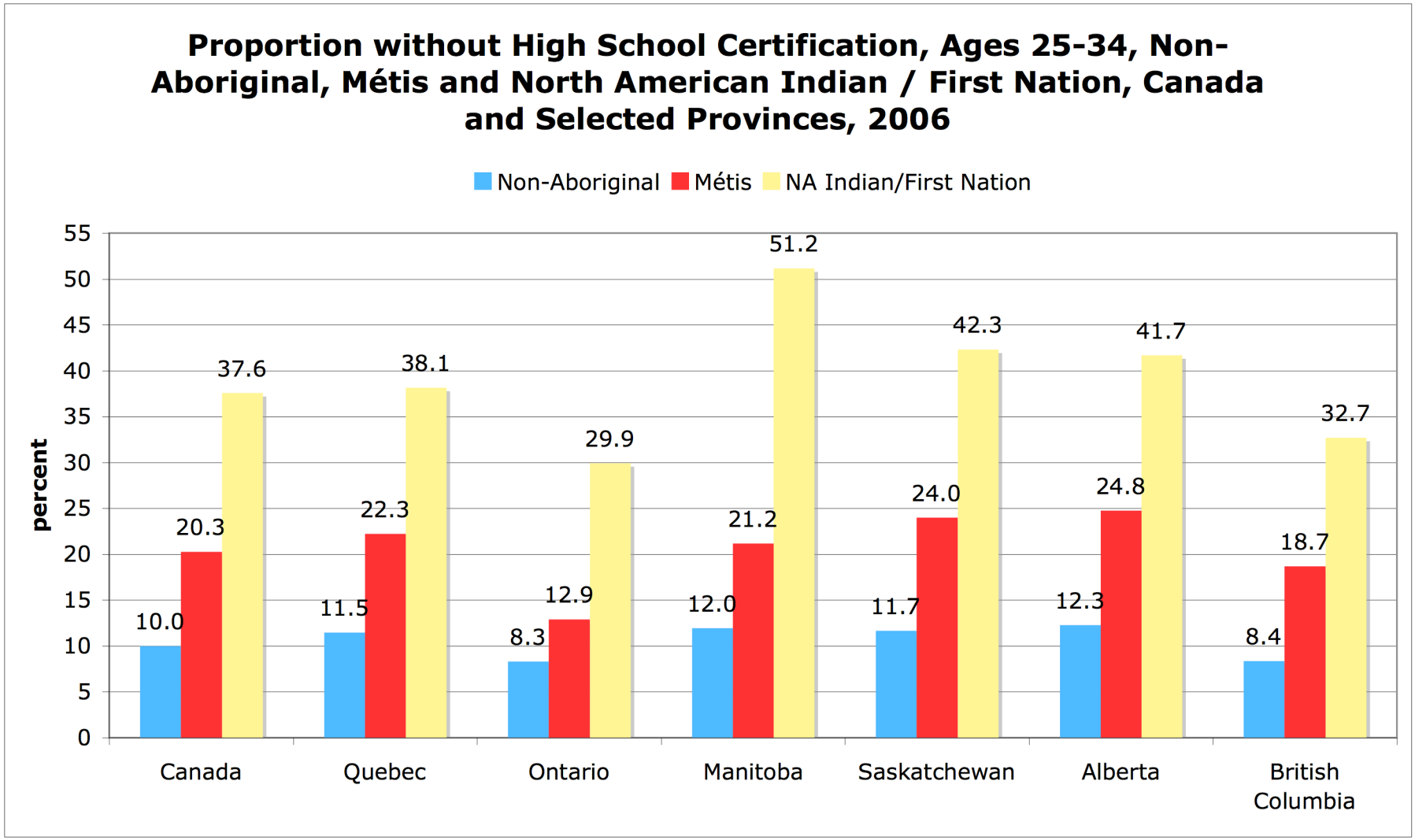
… those who want to join mainstream Canada should also be able to do so. Without high school, there is no effective choice.



Métis are faring better than Indian / First Nation, but …

… given the extent of education investment by younger Canadians, Aboriginal / non-Aboriginal education gaps have widened among all Aboriginal groups.





Improving Aboriginal education is the most important social policy challenge facing Canadians. It is not an easy challenge, but there are important success stories across Canada to celebrate and learn from.

After adjusting for the lower average hours worked by Aboriginals relative to non-Aboriginals, the **average Aboriginal wage is 70 percent of the non-Aboriginal**. In explaining the 30 percentage point gap, the most important characteristic is education.

Decomposition of the Aboriginal / non-Aboriginal Wage Gap

	Charactristics	Using Estimated Effect of Characteristics on Aboriginal Wages	Using Estimated Effect of Characteristics on non-Aboriginal Wages (percent)
1	Education	30.5	28.4
2	Full-time employment	19.9	24.4
3	Residing in a census metropolitan area	9.9	6.6
4	Province of residence	9.5	0.7
5	Experience in labour force *	9.1	7.3
6	Married	5.2	3.8
7	Knowledge of an official language	-0.4	-0.9
8	Gap explained by characteristics (sum 1. to 7.)	83.6	70.2
9	Gap unexplained (10.-8.) **	16.4	29.8
10	Total wage gap ***	100	100

Notes

* Experience is measured as age minus (years of education + 5)

** The unexplained gap is a combination of discrimination and the impact of unobserved characteristics

*** After adjusting for hours worked per year, the average Aboriginal wage is 70 percent of the average non-Aboriginal wage.

Sharpe, A., Arsenault, J.F. & Lapointe, S. (2008). *The Potential Contribution of Aboriginal Canadians to Productivity and Output Growth in Canada: An update to 2006-2026*. Ottawa: CSLS.

Interprovincial differences, evidence from PISA …

Box 2

Overview of PISA 2006

	International	Canada
Participating countries/provinces	• 57 countries	• 10 provinces
Population	• Youth aged 15	• Same
Number of participating students	• Between 5,000 and 10,000 per country with some exceptions for a total of close to 400,000 students	• Approximately 22,000 students
Domains	• Major: science • Minor: reading and mathematics	• Same

Amount of testing time devoted to domains	• 390 minutes of testing material organized into different combinations of test booklets 120 minutes in length
	  • 210 minutes devoted to science
	  • 60 minutes each devoted to reading, mathematics
		• Same

Languages in which the test was administered	• 43 languages	• English and French
International assessment	• Two hours of direct assessment of science, reading and mathematics • Twenty minute contextual questionnaire administered to youth • A school questionnaire administered to school principals	• Same
International options	• Ten-minute optional questionnaire on information technology and communications administered to students • Ten-minute optional questionnaire on educational career administered to students	• Ten-minute optional questionnaire on information technology and communication administered to students
National options	• Grade based assessment • Other options were undertaken in a limited number of countries	• Five minutes of additional questions administered to students regarding their school experiences, work activities and relationships with others.

Canada's average science performance in 2006 ranked 3rd overall; its performance in the bottom "tail" was much weaker.

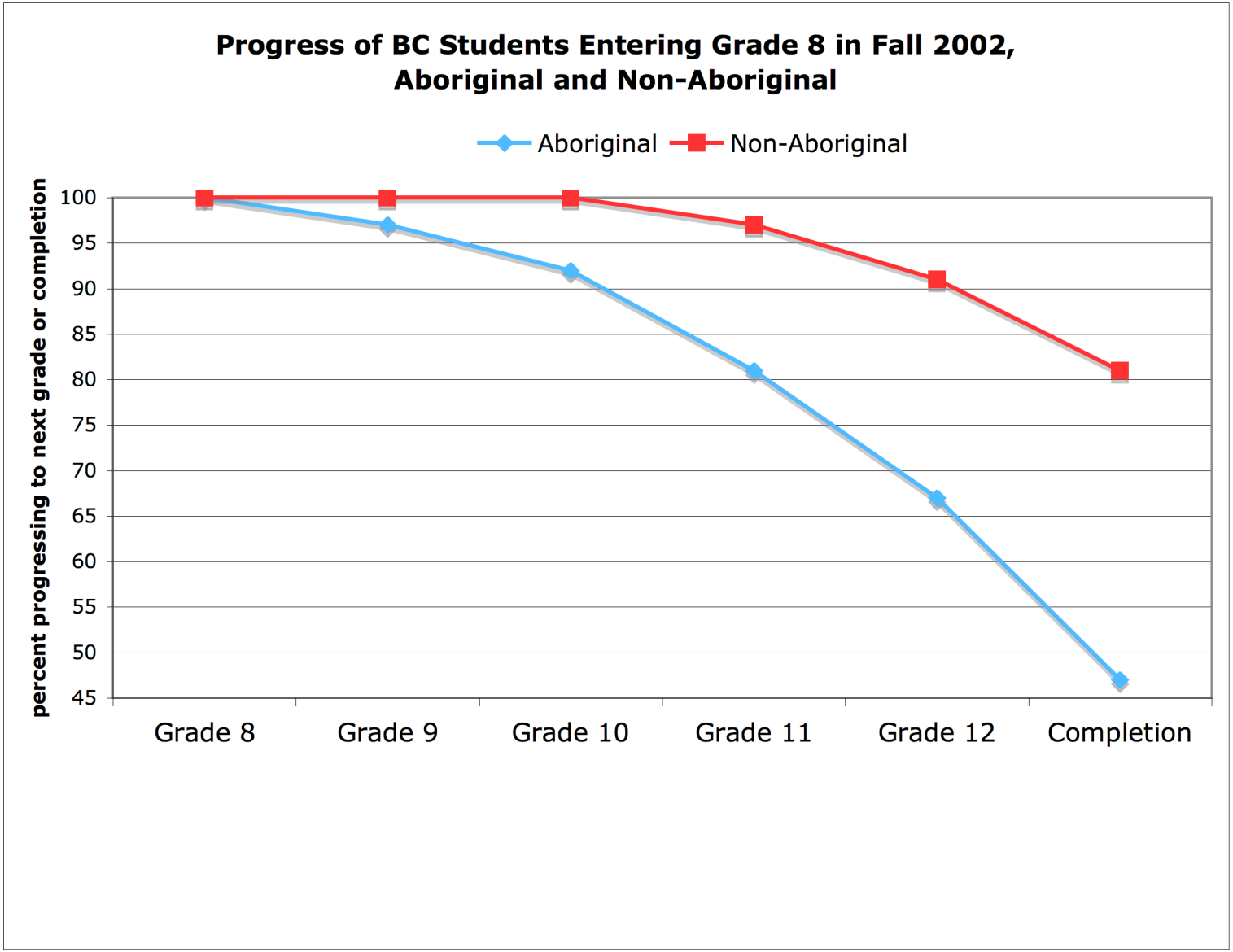
Canada ranked 3rd on overall average, much lower at 10th percentile

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

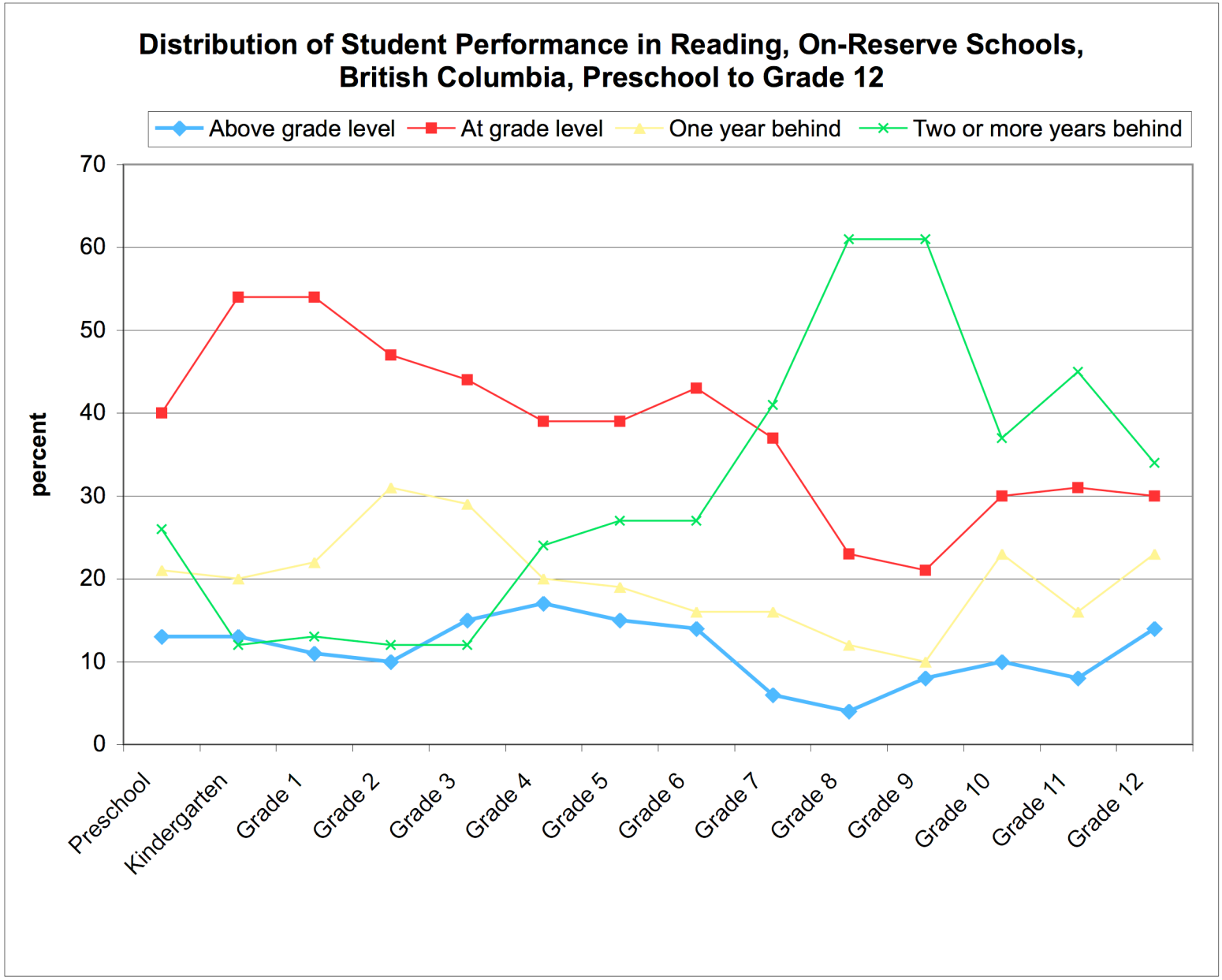
	2006 10th percentile scores			Change, 2000–2006		
	Mathematics	Science	Reading	Mathematics	Science	Reading
Canada	416	410	402	-7*	-2	-8*
British Columbia	416	415	394	-6	-3	-16
Alberta	424	433	416	-13*	4	-7
Saskatchewan	395	392	370	-30*	-20*	-40*
Manitoba	405	394	391	-17*	-18*	-15
Ontario	419	412	418	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).

Note: significant declines in Prairies and in Quebec.



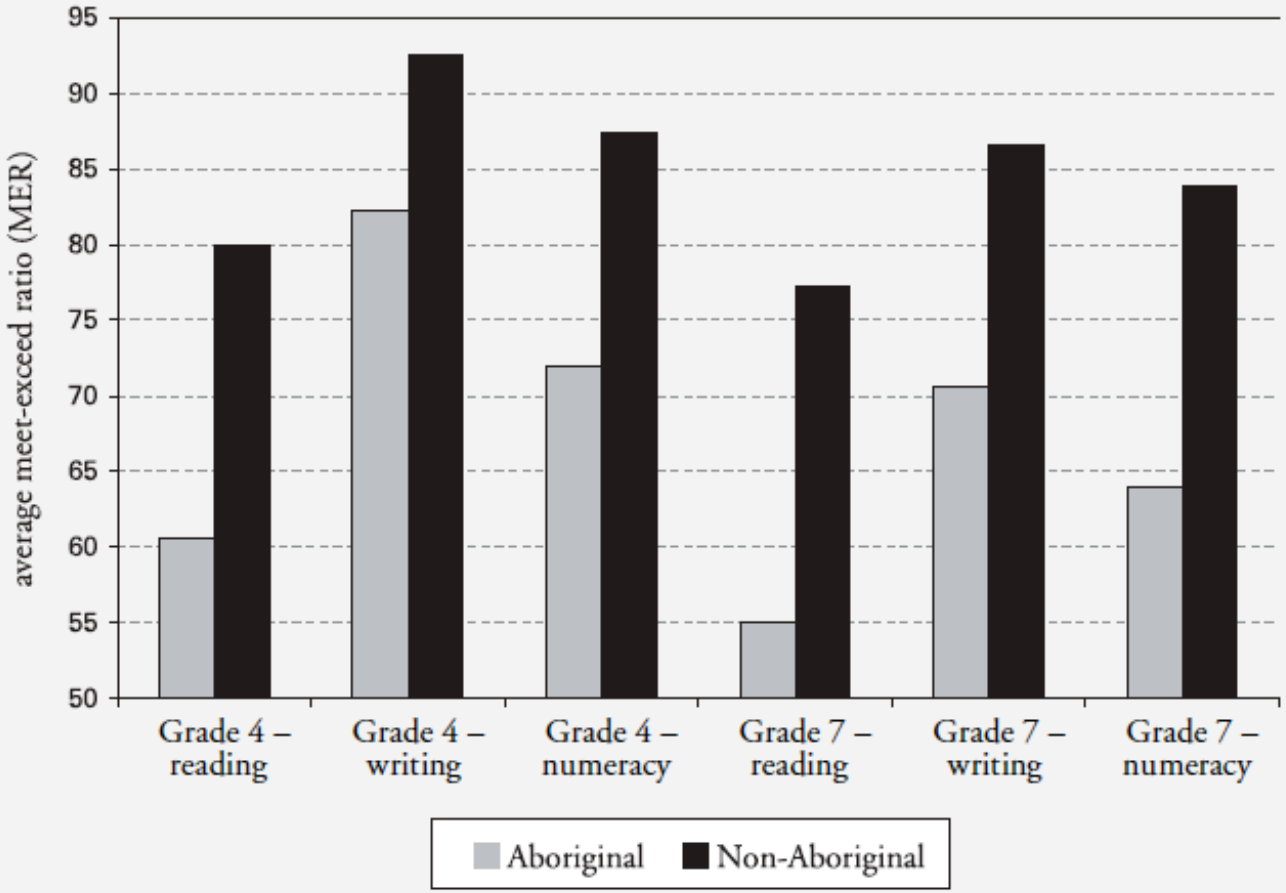
Aboriginal students drop out in secondary school, but …



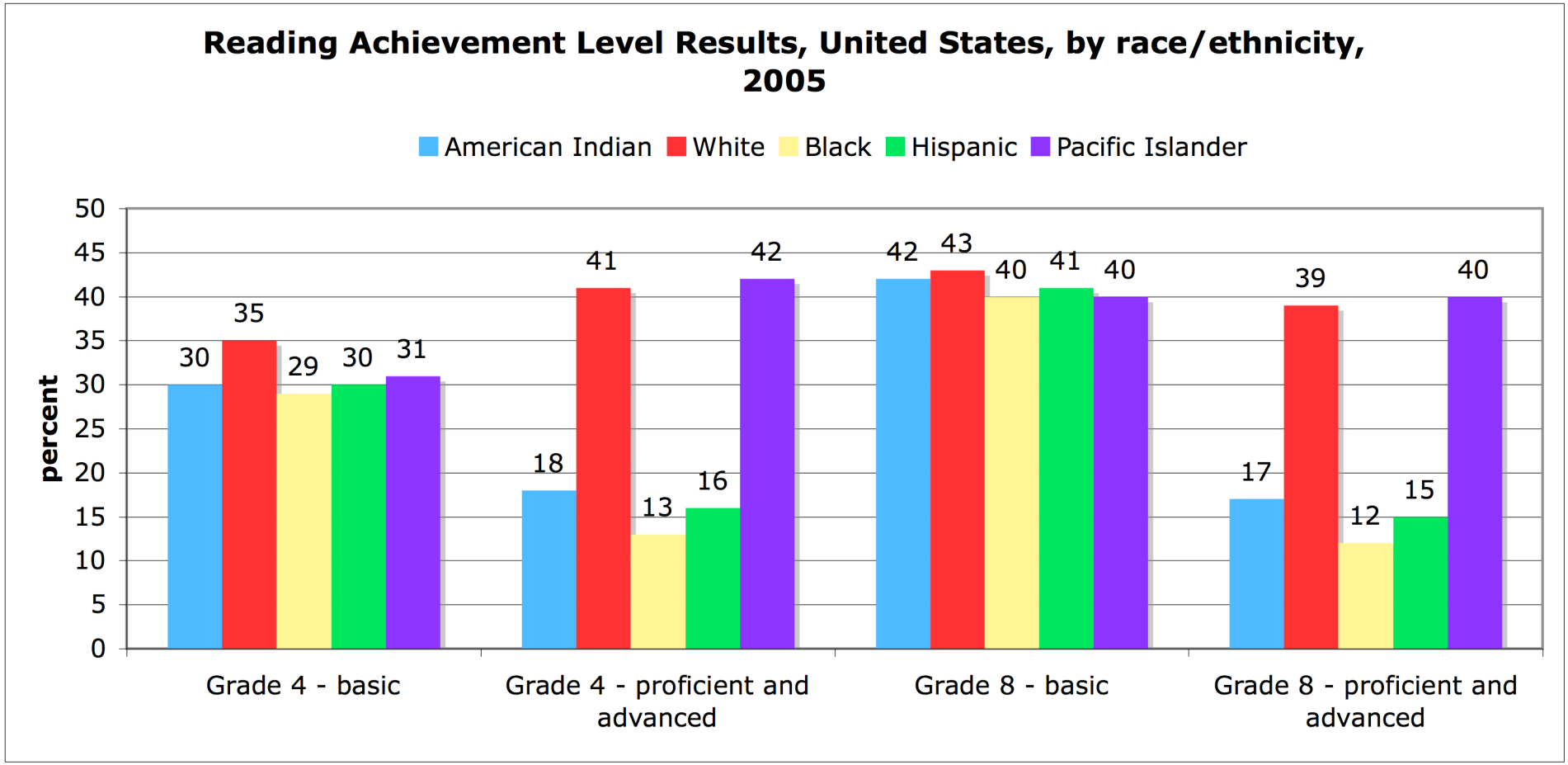
their academic problems accumulate from primary grades . . .

and often become more serious in higher grades (grade 7 gaps exceed grade 4 gaps).

Figure 3: Average FSA Performance, Aboriginal and Non-Aboriginal Students, by Subject and Grade, 2001/2002 – 2005/2006

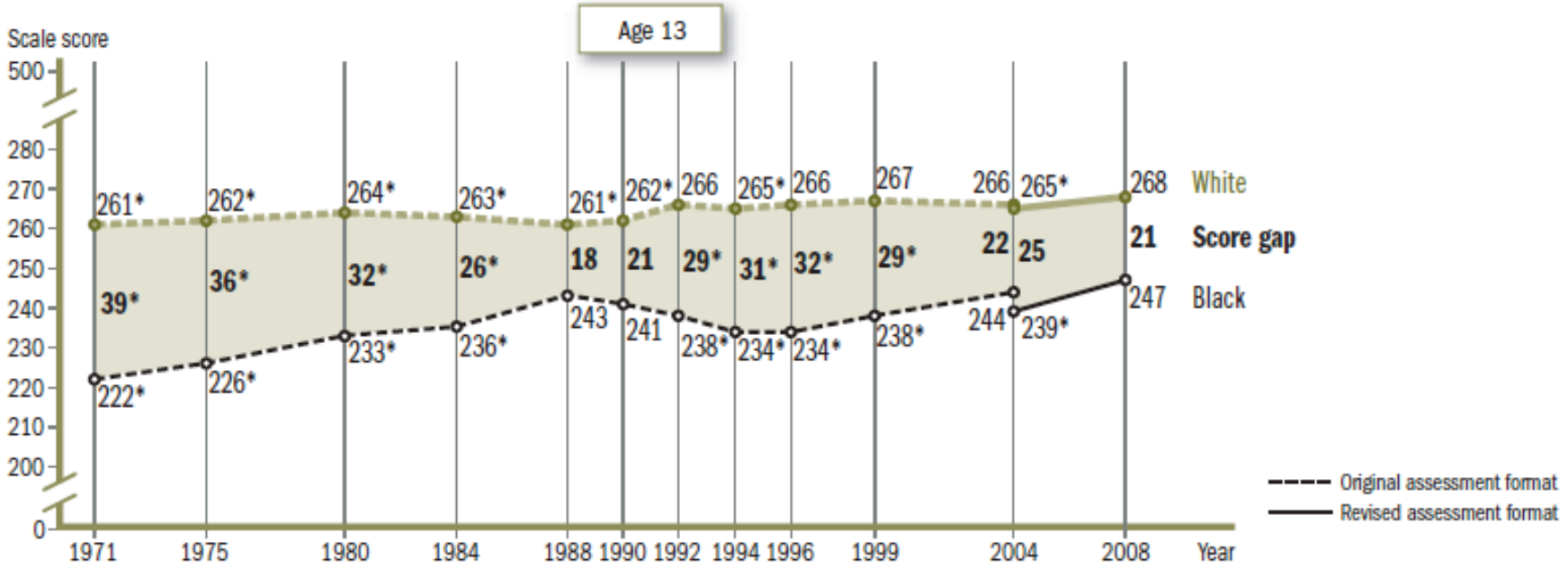


Richards, Hove, Afolabi. "Understanding the Aboriginal / Non-Aboriginal Gap in Student Performance." available at http://www.cdhowe.org



Analogous gaps exist among historically marginalized US communities: American Indian, Hispanic, Black

FIGURE 4. Trend in White – Black NAEP reading average scores and score gaps for 9-, 13-, and 17-year-old students—Continued



NAEP 2008 Trends in Academic Progress, p.15

Americans have tracked education gaps more diligently, and far longer, than have Canadians.

Why do students drop out?

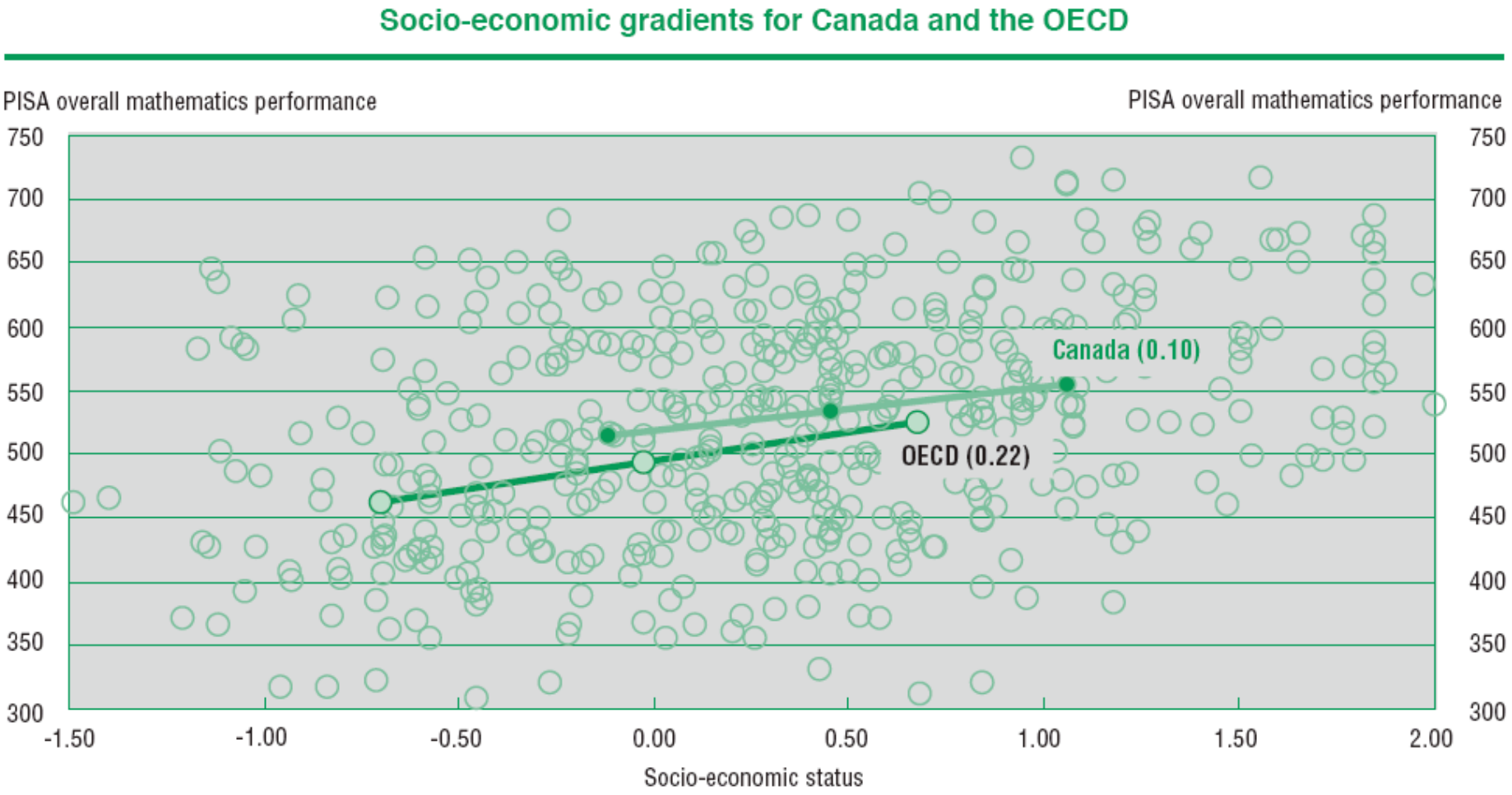
As means of organizing the various explanations, it is useful to categorize relevant factors that affect either the demand for education or its supply. On the demand side are two factors:

- 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.

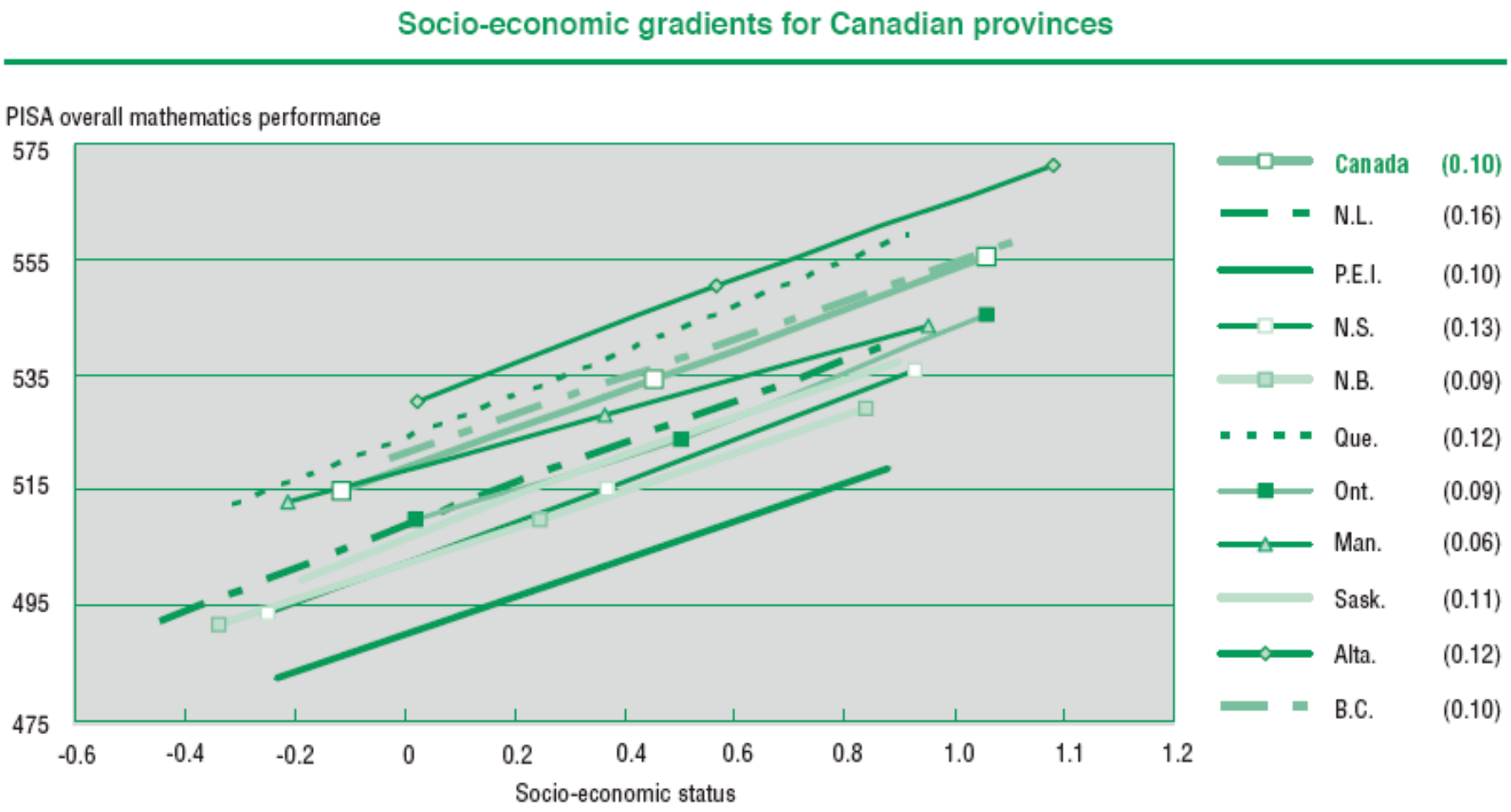
On the supply side are two other factors:

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

Ideally, a country – or province's – gradient has a "high" median value and a "shallow slope"

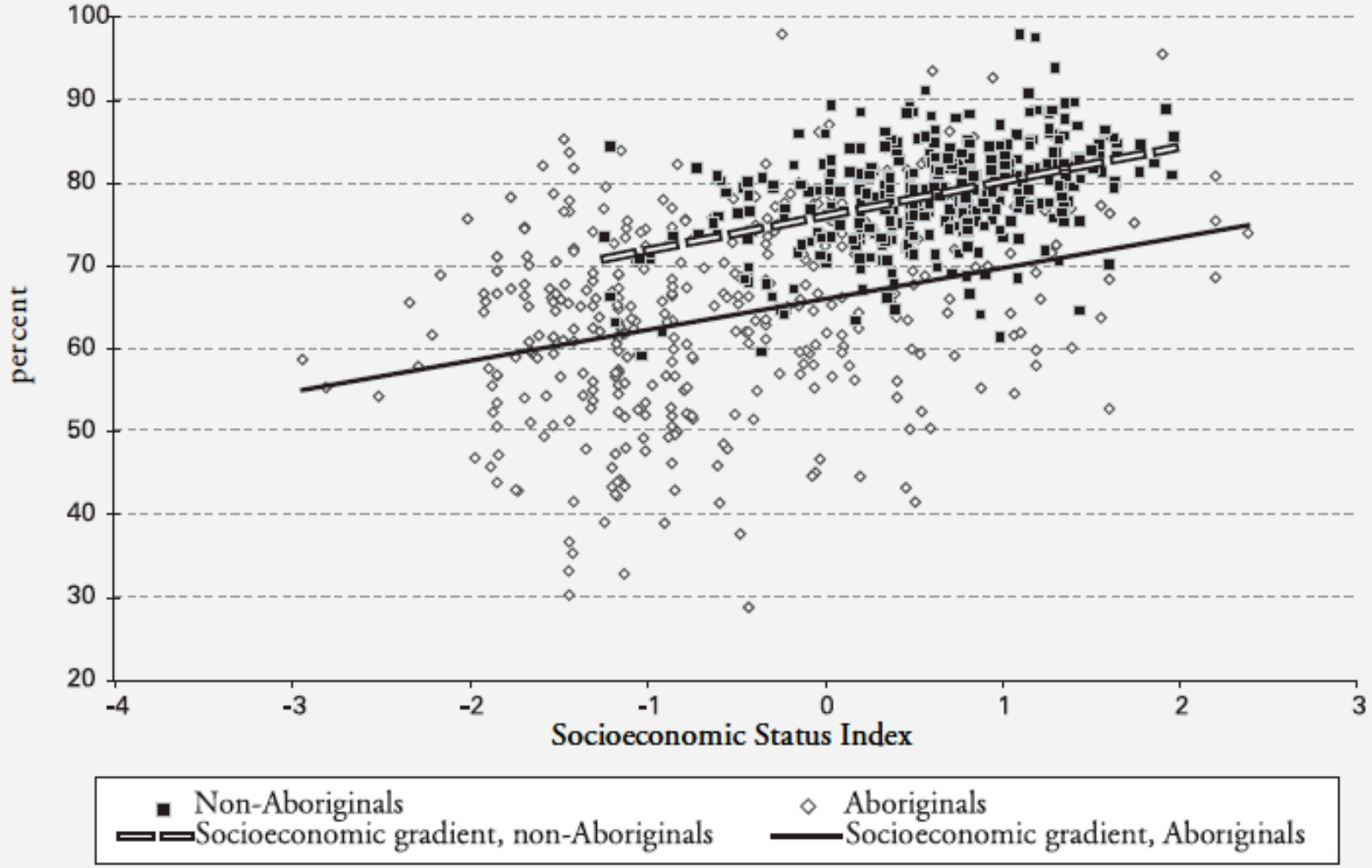


Significant differences exist across provinces



Aboriginal and non-Aboriginal gradients display similar slope, but different means and more dispersion

Figure 6: Aboriginal and Non-Aboriginal School Meet-Exceed Ratios (MERs), by Socioeconomic Status Index (366 schools)



Analysis of gap in Aboriginal / non-Aboriginal student performance in 366 BC schools, by school district

Top five …

Table 2: School Districts, Ranked by Share of Schools with Aboriginal MER above Forecast

District Name	1 Aboriginal MER *(percent)*	2 Non-Aboriginal MER *(percent)*	3 District MER gap (1-2)	4 Number of Schools Above Forecast	5 Number of Schools Below Forecast	6 Percent Above Forecast MER [4/(4+5)]
Kootenay-Columbia	73.1	76.3	3.1	3	0	100.0
Abbotsford[a]	72.5	79.2	6.7	9	2	81.8
Okanagan Skaha[a]	75.1	80.2	5.1	4	1	80.0
Fraser-Cascade	68.6	83.9	15.3	4	1	80.0
Comox Valley	68.2	78.9	10.7	7	3	70.0

… bottom five

Bulkley Valley	53.4	82.2	28.8	0	3	0.0
Nicola-Similkameen	57.0	76.1	19.1	0	5	0.0
Saanich[b]	35.6	82.9	47.4	0	3	0.0
Cowichan Valley[b]	44.5	75.5	30.9	0	8	0.0
Vancouver Island North[b]	49.8	75.9	26.1	0	4	0.0

Richards, Hove, Afolabi. 2008. "Understanding the Aboriginal / non-Aboriginal Gap in Student Performance." http://www.cdhowe.org

Socio-economic differences explain a fifth of the FSA Aboriginal/non-Aboriginal gap at the school level; negative peer effects of Aboriginal student concentration explain nearly half; positive – and negative – district level initiatives matter.

Table 1: Decomposition of the Aboriginal/non-Aboriginal MER Gap

Reduction of MER gap arising from	(percent of gap)
Elimination of gap in average SES index values[a]	17.7
Elimination of negative peer effect[b]	47.5
Replication of positive, district-fixed effect in District 67 among all districts[c]	66.6

Notes:

The gap between the observed average non-Aboriginal and Aboriginal MER is 14.7 percentage points (78.5 - 63.8). The calculations use the forecast Aboriginal MER at average regressor values as the benchmark. Each line gives the result from changing the indicated regressors, expressed as a percentage of the Aboriginal/non-Aboriginal gap.

a. The Aboriginal SES index rises from its actual average of -0.59 to 0.59, the average among non-Aboriginal catchment populations.

b. The Aboriginal test-count variable falls from its actual average of 141 to a value of 0. Equivalently, the coefficients on the Aboriginal count variables fall to zero.

c. District 67 recorded the largest positive school-district effect. This scenario envisions all districts achieving a comparable positive effect. (Under this scenario, the district schools remain subject to the other variables affecting forecast Aboriginal MER performance.)

Dependent Variable: Aboriginal Meet-Exceed Ratio (MER)				
	(1)	(2)	(3)	(4)
Number of Aboriginal test scores			-.00349 (-4.40)	-.00264 (-3.84)
Square of number of Aboriginal test scores			3.53E-06 (2.45)	2.58E-06 (2.06)
Aboriginal families with trades and above as highest education level (percent)	.00687 (3.45)			
Median Aboriginal family income (dollars)	7.79E-06 (4.06)			
Aboriginal SES index value		.185 (6.26)	.125 (4.56)	.0972 (4.04)
Non-Aboriginal meet-exceed ratio (MER)[a]			.0176 (1.68)	.0348 (3.96)
School District Fixed Effects				
Abbotsford school district				.284 (2.36)
Burnaby school district				-.484 (-2.11)
North Vancouver school district				-.729 (-2.62)
Powell River school district				-.507 (-2.23)
Howe Sound school district				-.619 (-2.62)
Saanich school district				-1.21 (-5.18)
Okanagan Skaha school district				.424 (2.39)
Cowichan Valley school district				-.550 (-3.90)
Coast Mountains school district				-.308 (-2.36)
Vancouver Island North school district				-.506 (-2.56)
Adjusted R-squared	.09	.09	.35	.53

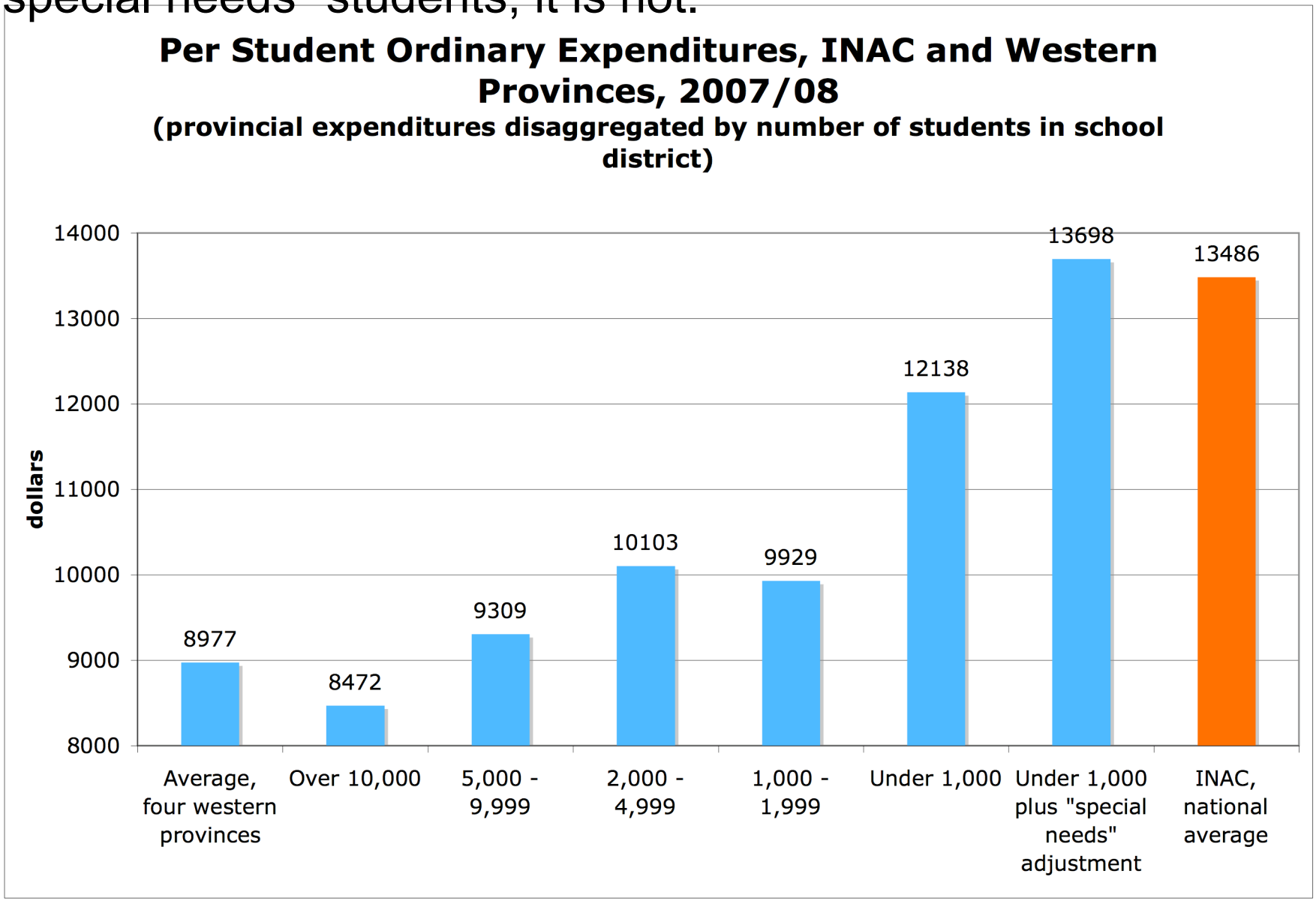
Regression results

On-reserve schools face very serious administrative problems. Most are “stand alone,” without the benefits of district-level services; most are very small; most have high percentages of “special needs” students …

Table B4.1: On-Reserve School Enrolment Size, 2008/09				
Enrolment (# of Students)	***# of Schools***	***% of Schools***	***# of Students***	***% of Students***
over 1,000	1	0.2%	1,113	1.6%
500-1,000	11	2.2%	8,887	12.7%
300-499	46	9.0%	17,990	25.7%
200-299	64	12.5%	15,804	22.6%
100-199	107	21.0%	16,004	22.9%
50-99	82	16.1%	5,847	8.4%
less than 50	199	39.0%	4,248	6.1%
Total	510	100.0%	69,893	100.0%

% of schools with <500 students	97.6%	*% of students attending schools with <500 students*	85.7%
% of schools with < 100 students	55.1%	*% of students attending schools with <100 students*	14.4%

Relative to provincial average, INAC per student funding is generous. Adjusting for school/district size and presence of "special needs" students, it is not.



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.

An Agenda for Aboriginal Education (continued)

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.

An Agenda for Aboriginal Education (continued)

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.

An Agenda for Aboriginal Education (continued)

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 an reporting school and student performance provide 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.

An Agenda for Aboriginal Education (concluded)

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.

If Saskatchewan achieved BC's female non-Aboriginal dropout rate …

I. Saskatchewan Residents with Incomplete Secondary School, Ages 25-34, by Racial Identity and Sex, 2006

	Male	Female	Total	Total (percent)
Non-Aboriginal	6,525	4,300	10,825	61.4
Aboriginal				
Indian / First Nation	2,640	2,535	5,175	29.3
Métis	870	765	1,635	9.3
Total	10,035	7,600	17,635	100.0
Total (percent)	56.9	43.1	100.0	

II.Hypothetical Saskatchewan Residents with Incomplete Secondary School, Ages 25-34, by Racial Identity and Sex, 2006 *

	Male	Female	Total	Total (percent)
Non-Aboriginal	3,162	3,273	6,435	83.0
Aboriginal				
Indian / First Nation	380	468	848	10.9
Métis	219	253	472	6.1
Total	3,761	3,994	7,756	100.0
Total (percent)	48.5	51.5	100.0	

* Calculations assume 6.9%, BC non-Aboriginal female rate for incomplete secondary studies, ages 25-34.

III. Potential Beneficiaries: Additional High School Graduates, by Racial Identity and Sex **

	Male	Female	Total	Total (percent)
Non-Aboriginal	3,363	1,027	4,390	44.4
Aboriginal				
Indian / First Nation	2,260	2,067	4,327	43.8
Métis	651	512	1,163	11.8
Total	6,274	3,606	9,879	100.0
Total (percent)	63.5	36.5	100.0	

** Differences between cell values in panels I and II.