

# Exploring the 'Boy Crisis' in Education

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### **Introduction**

The issue of the “boy gap” or “boy crisis” in education has been the subject of increasing attention across a number of OECD countries.

The issue has also captured the attention of the Canadian media. As the *Globe and Mail* recently emphasized in their six-part series on ‘failing boys’:

*“data suggests that boys, as a group, rank behind girls by nearly every measure of scholastic achievement. They earn lower grades overall in elementary school and high school. They trail in reading and writing, and 30 per cent of them land in the bottom quarter of standardized tests, compared with 19 per cent of girls. Boys are also more likely to be picked out for behavioural problems, more likely to repeat a grade and to drop out of school altogether”.* (*Globe and Mail*, October 15, 2010)

Given the importance of this issue and the need to better understand the situation in boys' education, this report draws on material and data from a review of websites, research reports and relevant data sources, as well as informal consultations with some official and expert sources, to scope out four main questions:

1. What is the situation regarding education and training participation and results for boys and men throughout the OECD, including post-secondary education and trades?
2. Are there policies and practices in place to attenuate unfavourable trends?
3. What are Canadian jurisdictions doing?
4. What do we know about the success and failure of various models OECD-wide with a focus on Germany, the United States, Australia and the United Kingdom?

It should be noted that there is a substantial disconnect between public policy commentary on issues in the “developed” and “non-developed” worlds. In the latter, priority attention continues to be centred on the barriers and obstacles faced by females in education and the labour market. Access to education in all its forms is still significantly more available to males in such countries. The UN Girls’ Education Initiative (UNGEI) is focused on ensuring that a gender equity and equality perspective is brought to bear within the broad context of the UN’s Education for All (EFA) initiative, and is reflected in the Global Monitoring Reports issued by the EFA.

It is also the case that attention within OECD countries continues to be paid to the traditional barriers faced by women in many areas of education and employment. A “question scan” done by CCL for the British Columbia Ministry of Advanced Education only a few years ago identified a number of studies and reports on the issue of gender in PSE access; all of them focused on the question of female participation and access, none on the “boy crisis”.

It is also the case that attention in several OECD jurisdictions has shifted in some circles in the past number of years to the phenomenon of a substantial shortfall of the percentage of males, compared to females, who complete secondary schooling, and who are enrolled in and graduate from PSE. The implications of this “boy gap” are increasingly being pondered in such countries as Canada, the U.S., the U.K. and Australia. The statistical picture in terms of this gender gap, as shown in literacy rates, school achievement in literacy, and participation and success in university studies, has been quite clear in such jurisdictions for two decades and more; the implications of this gap, however, are not at all a matter of consensus. Nor are the public policy and program responses either clear or consistent.

## **Question 1: What is the situation for boys and men throughout the OECD, including PSE and the trades?**

The purpose of this section is to present general statistics on performance and participation in education and training for both boys/young men and girls/young women across OECD countries. The data have been selected to provide a preliminary overview that can be used to direct further research and analysis. Given the parameters of this project, it is not possible to complete a comprehensive survey of data. For the purposes of this paper, the focus is on Australia, Canada, Germany, the United Kingdom and the United States, using a limited number of variables.

This first section focuses entirely on statistics and trends. It becomes obvious early in any consideration of this issue that its complexity and multifaceted nature present challenges. For clarity, the findings below are presented by educational sector.

### **1. Overview—general trends over time**

The relationship between education and skill development has been a well-explored topic over the last decade, with many countries concluding that highly skilled and educated citizens are essential to meet the challenges of globalization and the knowledge economy. In an effort to help understand the complex network and inter-relationship of factors that influence individuals to participate and succeed in education and training, researchers have undertaken detailed research on educational outcomes and the influences on motivation, participation and completion of education.

Over the last couple of decades there has been increasing emphasis on maximizing the participation of under-represented groups such as immigrants, women and other minorities in education. Along the way, an interesting trend has emerged that is now clearly illustrated by the statistics—the statistics indicate that, overall, girls and women tend to do better in school environments, outperforming males. This is evident in both the secondary- and higher-education sectors. Research shows that girls/young women and boys/young men have distinctly different experiences in the various educational sectors.

### **2. K–12**

For many years, gender-related research in the K–12 sector was focused on dropout rates in secondary schools. These rates were usually significantly higher for boys than girls, a trend which held across OECD countries.

## PISA

The OECD PISA (Programme for International Student Assessment), designed to explore “the educational performance and attitudes of adolescent males and females”, provides data to answer questions related to why female and male students perform differently. Ironically, one of the main rationales for PISA was to determine why females appeared disinterested in, and tended to be less successful in, mathematics and the physical sciences. However, PISA findings that demonstrated that boys had difficulty in the area of reading spurred further research into literacy among boys and, eventually, the design of specific interventions to address related issues.

Statistical evidence about gender differences among young boys and girls is quite detailed. The OECD report, “Equally Prepared for Life?”, provides a summary of gender issues from early childhood based on results from PISA, PIRLS (Progress in International Reading Literacy Study), TIMSS (Trends in International Mathematics and Science Study) and other statistics that are gathered regularly.

Some of the main findings across OECD countries include<sup>1</sup>:

- Gender differences appear at early stages of education but they are small. Females show better performance in reading in primary schools.
- Females showed significantly higher reading achievement than males in all (except two) countries by Grade 4. (2004 data)
- At Grade 4, the results for mathematics and science were mixed. Males had significantly higher scores for math in 12 countries while females had significantly higher scores in eight countries. In science, the scores for males and females were somewhat similar in more than half the countries (2007).
- By Grade 8, on average, females had higher achievement than males in mathematics, although there were country variations. (2007) The same was true for science.
- Although PISA 2006 showed no significant differences between males and females in the overall performance in science, females were better identifying scientific issues while males were better at explaining phenomena scientifically.
- In the PISA 2009 reading assessment, girls outperform boys in every participating country by an average, among OECD countries, of 39 PISA score points—equivalent to more than half a proficiency level or one year of schooling.
- On average across OECD countries, boys outperform girls in mathematics by 12 score points while gender differences in science performance tend to be small, both in absolute terms and when compared with the large

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<sup>1</sup> OECD, “Equally Prepared for Life?” 2009, pp. 3; 10–12;16–19; 2–24 and 27.

- gender gap in reading performance and the more moderate gender gap in mathematics.
- The ranks of top-performing students are filled nearly equally with girls and boys. On average across OECD countries, 4.4% of girls and 3.8% of boys are top performers in all three subjects, and 15.6% of girls and 17.0% of boys are top performers in at least one subject area. While the gender gap among top-performing students is small in science (1% of girls and 1.5% of boys), it is significant in reading (2.8% of girls and 0.5% of boys) and in mathematics (3.4% of girls and 6.6% of boys).<sup>2</sup>

The evidence demonstrates that, at the general level, there are gender differences which result in different performance and behaviour. In Canada, statistics also clearly show that boys lag behind girls in K–12 performance, especially with respect to reading.<sup>3</sup>

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<sup>2</sup> OECD, *PISA 2009 Results: What Students Know and Can Do*, Volume I (Paris: 2010).

<sup>3</sup> Statistics Canada, “Measuring up: Canadian Results of the OECD PISA Study”, 2008, p. 56.

## **Secondary-school graduation rates**

Across OECD countries, (total) graduation rates (2008 data) are generally lower for males than females, with an average spread of 8 percentage points in favour of females. Germany's rate of 97% graduation for males is the highest recorded in the OECD countries while their graduation rate of 98% for females is among the highest. The gap of one percentage point between male and female graduation rates (77 versus 76) in the United States also represents a fairly balanced graduation rate from upper-secondary school (although the U.S. rates are lower than the OECD average of 76% for males and 84% for females). Canada's rate of 72% for males and 81% for females represent a significant gap in graduation rates by gender.<sup>4</sup>

Extract from *Education at a Glance*, 2010, Table A2.1

### **Upper-secondary graduation rates – Total and for those destined for general university programs, 2008**

	Total graduation rates		Graduation rates for those destined for general university	
	Male	Female	Male	Female
Australia	missing	missing	62%	73%
Canada	72%	81%	69%	79%
Germany	97%	98%	36%	47%
United Kingdom	88%	94%	missing	missing
United States	77%	76%	missing	missing
OECD Avg.	76%	84%	41%	53%
EU 19	80%	87%	37%	49%

OECD countries like Germany, Austria and Switzerland whose upper-secondary schools have strong vocational-preparation components have much higher male-graduation rates and, consequently, a lower gender gap among those who graduate.

<sup>4</sup> OECD, *Education at a Glance*, 2010, Table A2.1 (Paris: 2010).

### 3. Post-secondary education

Activity in post-secondary education (PSE) in the last decade has been intense as countries attempt to position themselves to benefit from the knowledge economy. It is here where changes in the gender mix of post-secondary students have been most dramatic. For most of the 20th century significantly more men than women attended post-secondary education. In the mid-nineties this changed and by 2005 women composed the majority of the post-secondary student population in 16/18 of the OECD nations, with an average female share of 55%.<sup>5</sup> In Canada (2005) women made up 58% of the student population, while the percentages in the U.K. and the U.S. were 57%, with 50% in Germany and 54% in Australia, leaving men in a minority position on most campuses.

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<sup>5</sup> OECD, *Higher Education to 2030*, "Volume 1: Demography", 2008, p. 266.

The table reproduced below is an extract from OECD, “The Reversal of Gender Inequalities in Higher Education: An On-Going Trend”, 2008, p. 267.

**Table 10.1. Percentage of women students in higher education: past twenty years and projections**

	1985	1990	1995	2000	2005	2015	2020	2025
Australia	m	m	50	54	54	55	55	56
Austria	44	45	48	51	54	61	66	72
Belgium	47	49	49	52	54	58	59	60
Canada	49	54	53	56	58	60	62	64
Czech Republic	m	m	48	50	53	53	54	54
Denmark	48	50	52	57	57	59	59	60
Finland	49	52	53	54	54	54	53	53
France	52	53	55	54	55	56	57	57
Germany	m	m	43	48	50	54	56	58
Greece	m	m	49	50	51	53	53	53
Hungary	m	m	52	54	58	59	60	60
Iceland	m	m	58	62	65	67	67	68
Ireland	43	45	49	54	55	58	58	59
Italy	45	48	52	56	57	57	57	57
Japan	m	41	44	45	46	47	47	48
Korea	m	m	35	36	37	38	39	40
Luxembourg	m	m	m	m	m	M	m	m
Mexico	m	m	47	49	50	52	52	52
Netherlands	41	44	47	50	51	53	54	54
New Zealand	46	52	55	59	59	59	60	60
Norway	50	53	55	58	60	63	64	65
Poland	m	m	m	58	58	58	58	58
Portugal	53	m	57	57	56	56	56	56
Slovak Republic	m	m	m	50	55	58	59	59
Spain	48	51	53	53	54	55	55	55
Sweden	52	53	55	58	60	62	63	63
Switzerland	32	34	37	43	46	49	51	52
Turkey	31	34	38	40	42	43	43	43
United Kingdom	45	48	51	54	57	65	68	71
United States	52	54	55	56	57	60	61	62
<b>Average</b>	<b>46</b>	<b>48</b>	<b>50</b>	<b>52</b>	<b>54</b>	<b>56</b>	<b>57</b>	<b>58</b>
<b>Comparable average</b>	<b>46</b>	<b>48</b>	<b>51</b>	<b>53</b>	<b>55</b>	<b>57</b>	<b>58</b>	<b>59</b>

m = missing.

Note: The gross enrolment rates by gender were derived by linear regression from the changes between 1998 and 2005 and applied to the corresponding age cohorts according to UN projections.

It is notable that male participation has fallen (slightly) in three countries over the last decade—Austria, Canada, and the U.K. In other countries, although the share of males has fallen over the last decade, the number of men enrolled has increased.<sup>6</sup> In Canada, the male participation rates enrolled in undergraduate courses fell behind the female participation rate in 1988 which means we are into the third decade where, in general, men are in a minority situation on many post-secondary campuses.

Even if PSE statistics are disaggregated to distinguish between general programs (theoretical higher education) and practical higher education, men's participation rates are still below those of women who, on average, still dominate both categories in OECD countries. Among the five nations we are comparing, Germany is an exception where the participation gender gap in general university programs is much smaller than in other western countries, with only 48% female students in 2005 in general university programs. However, men are in the minority in the practical higher-education institutions in Germany, accounting for 40% of enrolment.<sup>7</sup>

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<sup>6</sup> Ibid., p. 267.

<sup>7</sup> Ibid., p. 270.

Extract from OECD, "The Reversal of Gender Inequalities in Higher Education: An On-going Trend", 2008, p. 267.

Table 10.2. **Percentage share of women in the different sectors of higher education and size of sector (1998, 2005)**

	1998						2005					
	Theoretical higher (ISCED 5A)		Practical higher (ISCED 5B)		Advanced research (ISCED 6)		Theoretical higher (ISCED 5A)		Practical higher (ISCED 5B)		Advanced research (ISCED 6)	
	% total students	% women	% total students	% women	% total students	% women	% total students	% women	% total students	% women	% total students	% women
Australia	72	55	26	52	3	44	80	55	16	53	4	50
Austria	81	49	10	61	9	40	83	53	10	68	6	45
Belgium	m	m	m	m	m	m	46	51	52	58	2	40
Canada	72	57	26	52	2	43	97	58	m	m	3	46
Czech Republic	72	46	22	61	6	32	83	52	10	68	7	37
Denmark	54	50	43	63	2	40	84	59	14	47	2	45
Finland	77	52	16	63	7	45	93	54	0	32	7	51
France	72	56	24	53	5	47	72	55	24	56	4	48
Germany	85	44	15	63	m	m	85	48	15	60	m	m
Greece	71	51	28	49	1	35	61	53	35	49	3	43
Hungary	98	54	m	m	2	40	93	58	5	64	2	45
Iceland	82	60	18	59	0	36	95	66	4	49	1	59
Ireland	m	m	m	m	m	m	67	58	30	49	3	48
Italy	98	55	2	56	1	52	97	57	1	60	2	51
Japan	69	36	29	67	1	22	74	41	24	62	2	29
Korea	59	35	40	36	1	23	61	37	38	37	1	33
Luxembourg	24	50	76	52	a	a	m	m	m	m	m	m
Mexico	94	48	x	x	6	42	96	51	3	42	1	40
Netherlands	99	49	1	53	n	m	99	51	a	a	1	m
New Zealand	72	57	26	62	2	44	73	59	25	58	2	52
Norway	91	58	7	48	2	34	97	60	1	57	2	43
Poland	97	57	1	84	1	42	97	57	1	81	2	48
Portugal	77	57	22	54	1	49	94	56	1	56	5	56
Slovak Republic	m	m	m	m	m	m	92	56	3	64	6	41
Spain	91	53	5	49	4	50	82	54	14	51	4	51
Sweden	94	57	x	x	6	40	91	61	4	50	5	48
Switzerland	68	42	24	40	8	33	73	48	18	41	8	39
Turkey	71	37	27	45	1	35	69	43	29	39	1	40
United Kingdom	66	52	30	56	4	39	73	55	23	66	4	44
United States	77	56	21	56	2	42	77	57	21	60	2	51
Country average	77	51	22	56	3	40	82	54	16	55	3	45
Comparable average (24)	77	51	20	56	3	39	82	53	16	54	3	46
OECD	77	51	20	54	2	41	79	53	19	55	2	47

m = missing; x = included in another column; a = not applicable; n = negligible.

There are significant differences in the choices that women and men make regarding 'field of study'. Table 10.5 of the OECD report on 'The Reversal of Gender Inequalities in Higher Education' shows that men tend to choose education, the arts and humanities, health and services only half as often as women. This trend tends to hold across most OECD countries. Men tend to gravitate to engineering and sciences, areas in which they are still in the majority. So, while women have significantly increased their participation in PSE to the

point where they are a definite majority, they still tend to choose fields of study that are traditionally female dominated. It is reported by the OECD that “Canada, Australia, and the United Kingdom show greater subject-related gender segregation” than some other countries.<sup>8</sup>

Table 10.2 (above) shows that men are still in the majority in pursuit of advanced-research degrees, with males representing 53% of students (on average) across OECD countries. Males represent 54% of the total students pursuing advanced research in Canada and 56% in the United Kingdom respectively.

Men tend to have lower completion or graduation rates in general post-secondary education in 22 of the 24 OECD countries that have data on this issue (2007 data). In Canada, for example, there is an 18 percentage point spread between the male completion rate of 25% and the rate of 43% for females.<sup>9</sup> The comparable gap in Germany was only 3 percentage points in favour of women. The U.K. and the U.S had gaps of 10.5 and 12.9 percentage points respectively.<sup>10</sup>

#### 4. Trades

Unfortunately, this project has not been able to identify comprehensive information which would allow the presentation of data to demonstrate trends in male participation in apprenticeship in relevant OECD countries. Apprenticeship-training systems are very different across jurisdictions, with significant differences in data collection and reporting. Often it is not possible to make valid comparisons across systems or identify trends over time because the coverage of trades or the system of certification is so dissimilar.

It is generally accepted that, despite affirmative action and interventions over the last two decades to increase female participation in the apprenticeable trades, men still dominate the traditional industrial trades. Women have made some progress but in the areas outside of the usual female-dominated trades (i.e. service occupations), males still hold the vast majority of training spots.

A 2003 study of the German Apprenticeship system included an examination of trends in male/female participation. The study concludes that there are more women in the trades but that “occupations segregation is still striking in certain sectors of the vocational training system.”<sup>11</sup>

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<sup>8</sup> Ibid., p. 274.

<sup>9</sup> Statistics Canada, *Education Indicators in Canada: An International Comparison*, Table A3.1, (Ottawa: September 7, 2010).

<sup>10</sup> OECD, *Education at a Glance*, 2010, Table A3.1 (Paris: 2010).

<sup>11</sup> Diane-Gabrielle Tremblay and Irene Le Bot, “The German Dual Apprenticeship System: Analysis of its Evolutions and Present Challenges,” University of Quebec, 2003. (web copy)

The Statistics Canada study by Karl Skof on “Trends in the Trades, 1991–2007” makes similar observations. In 2007, females accounted for 11% of apprenticeship completions in Canada, a figure that has been relatively stable since the mid-nineties. But some of this increase is attributed to changes to programs that women tend to take (hairdressing, for example). He points out that the proportion of female completions in the major trade groups is very low—1% to 2%. The exceptions are in the food and services trade group.<sup>12</sup>

Some countries are in the process of reviewing their apprenticeship programs, but these reviews and subsequent reforms would be motivated by the desire to make them more relevant to changing economic realities. The OECD has undertaken the Learning-for-Jobs exercise to help members determine if their vocational education and training can deliver the skills required by their economies and adapt to changing needs.

Suffice it to say, at this point in time, males continue to almost completely dominate enrolments in the major industrial trades.

## **5. Labour-market outcomes**

Education plays a very significant role in a person’s success in getting a job. History shows that, in general, employment rates are higher among those with higher levels of education. This trend is consistent across most OECD countries, although employment rates obviously vary depending on economic cycles and country-specific circumstances.

When gender is taken into consideration, differences become apparent. The general trend of higher-employment rates for those with higher education holds true, but males have higher-employment rates than women holding similar educational qualifications.

Differences between males and females were less pronounced for general post-secondary programs and advanced research degrees (a gap of about 7.6 percentage points for the EU 19 group) than for high-school graduates (a gap of 13.8 percentage points for the EU 19 group).<sup>13</sup>

These trends held more or less for the five countries we have been examining in more detail, although the U.K. gender gap for general university and research programs was smaller (about 3.8 percentage points) and that for the U.S. was higher, about 10.3 percentage points. The gender gap in employment rates for upper-secondary graduates was higher in Australia (19.8 percentage points) and much lower in Germany (9.3 percentage points).<sup>14</sup>

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<sup>12</sup> Karl Skof, “Trends in the Trades, Registered Apprenticeship Registrations, Completions and Certification, 1991 to 2007”, 2010, p. 4.

<sup>13</sup> OECD, *Education at a Glance*, 2010, Table A6.1a (Paris: 2010).

<sup>14</sup> OECD, *Education at a Glance*, 2010, Table A6.1a (Paris: 2010).

The difference in employment rates between males and females for general post secondary programs and advanced research degrees in Canada was 6.4 percentage points while the gender gap in employment rates for upper-secondary school graduates was 11.9 percentage points.<sup>15</sup>

There are considerable other differences in the labour-market patterns of men and women—variables that are well documented, including longer labour-market activity rates for men (has remained more or less constant around 22%) for at least a decade<sup>16</sup>. Men still dominate certain sectors and occupations that tend to have higher remuneration—55% of men aged 25–39 with university qualifications were employed in industry, business and financial services (OECD figures) while 59% of women aged 25 to 39 were in education, health and services.<sup>17</sup>

Recent research has focused on returns in higher education and degrees differing by gender, with the literature suggesting that higher rates of return for women, who often do not have access to some of the highly paid jobs in industries (such as the resource sector) which may not require high levels of education, may be one factor explaining the gender gap in higher education. In other words, men may have alternative choices to earn very good wages outside of the occupations requiring university graduation. Comparison of wages by gender is an exercise fraught with methodological problems but general trends seem clear.

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<sup>15</sup> Statistics Canada, *Education Indicators in Canada: An International Comparison*, Table A4.1, (Ottawa: September 7, 2010).

<sup>16</sup> European Foundation for the Improvement of Living and Working Conditions, *Working in Europe: Gender Differences*, 2008, p. 4.

<sup>17</sup> *Ibid.*, Table 4, p. 9.

The OECD report, *Education at a Glance*, publishes trends in differences in earning between females and males, showing that men consistently earn higher wages, even taking into account level of educational attainment.<sup>18</sup>

Extract from OECD, *Education at a Glance*, 2010, Table A7.3b Trends in differences in earnings between females and males (1998-2008)

**Average annual earnings of females as a percentage of earnings of males, by level of educational attainment of 25–64 year-olds**

		2004	2005	2006	2007	2008
Australia	Below upper secondary	m	61	m	m	m
	Upper secondary and post-secondary non-tertiary	m	60	m	m	m
	Tertiary	m	65	m	m	m
Canada	Below upper secondary	52	53	53	52	m
	Upper secondary and post-secondary non-tertiary	59	60	61	63	m
	Tertiary	61	62	62	63	m
Germany	Below upper secondary	54	52	56	55	49
	Upper secondary and post-secondary non-tertiary	60	62	62	59	60
	Tertiary	60	62	58	59	58
United Kingdom	Below upper secondary	55	55	53	56	59
	Upper secondary and post-secondary non-tertiary	54	56	56	55	55
	Tertiary	66	69	69	69	68
United States	Below upper secondary	63	63	65	64	60
	Upper secondary and post-secondary non-tertiary	63	65	65	66	65
	Tertiary	59	59	60	61	59

<sup>18</sup> OECD, *Education at a Glance*, 2010, Table A7.3b (Paris: 2010).

Some literature has raised the question of whether concern about lower male participation in education is justified, given that the labour-market outcomes for males tend to indicate stronger labour-market attachment and higher wages. The 2009 Environmental Scan<sup>19</sup> for Colleges Ontario makes the point that advances for women in education and labour-market participation have not necessarily resulted in consequential gains within the labour market.

The Feb. 2010 report from HEQCO makes the same point: the comparative rise in female participation has resulted in an increase in women in the labour force and a narrowing of the wage gap but labour-market outcomes for males remain stronger. The report cites research showing that males give more consideration to options outside of PSE and male graduates earn a higher annual return on their investment in an undergraduate degree.<sup>20</sup>

A study by Louis Christofides et al on “The Gender Imbalance in Participation in Canadian Universities (1977–2003) concluded that, “From the point of view of policy implication, our results suggest that the increasing gender imbalance in university attendance reflects, to a large extent, the difference in the returns to a university education for the different genders.”<sup>21</sup>

It appears that, despite the fact that more women now have higher educational credentials and have increased their employment rates, men and women have very different labour-market experiences and outcomes. Analysis of the situation points to the need for more in-depth research on the trends and their future potential impacts for both sexes.

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<sup>19</sup> [www.collegesontario.org/](http://www.collegesontario.org/)

<sup>20</sup> Angelika Kerr, “What about the boys?: An Overview of Gender Trends in Education and the Labour Market in Ontario”, HEQCO, February 1, 2010.

<sup>21</sup> Louis Christofides et al, *The Gender Imbalance in participation in Canadian Universities (1977–2003)*, April 2006, web copy, p. 14.

## **Question 2: What policies and practices are in place to attenuate unfavourable trends?**

As demonstrated in the research on academic performance and participation by gender, boys/young men and girls/young women have different educational experiences. The challenge becomes how to interpret the statistical differences and how to determine the significance of the role of gender in analyzing the results.

At the multi-national level, the 2009 OECD report—focused on Programme for International Student Assessment (PISA)<sup>22</sup> results—addressed the following questions:

- Why do female and male students perform differently?
- What drives gender differences?
- Is there a need for gender-specific policies?
- Are there specific policies that would improve male or female student performance?

The report's conclusion states that *“the results show that schools and societies do not always succeed in fostering comparable levels of motivation, interest or self-confidence in different areas among male and female students. Male students need to be helped towards a more positive approach to reading, which requires them to see it as a useful, profitable and enjoyable activity. Teachers need to consider the expectations that they have of students of both sexes and adopt strategies to raise the level of self-confidence and motivation of students in those areas where each are weak. This cannot be achieved simply through classroom practice, since reading is a cultural practice influenced by the social context. Promoting male reading interest therefore needs to involve the family and society more widely. In similar respects, females need wide support in developing their interest and self-regard in mathematics. In particular, female students who do not have confidence in their mathematical abilities are likely to be constrained in their future choice of career, making it important to aim to build this aspect of their confidence.”* (48)

The report notes that cultural and media impacts have not been considered in its preparation, and are important influences. As well, the issue of the value of single-sex education was not authoritatively commented upon in the report, given the “relatively small numbers of students and because PISA does not measure either the social environment or the social development of students which is also an important goal of education.” (48)

The central findings of the OECD report are very much consistent with those in many of the materials found in this binder:

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<sup>22</sup> OECD, “Equally prepared for life? How 15-year-old boys and girls perform in school”, 2009.

- Boys lag girls in secondary school performance and graduation rates;
- Males lag females in enrolment and completion of post-secondary education, especially universities;
- The main explanatory factor for this lag is the gap between boys and girls in literacy, in reading and writing skills.
- The reasons for the gap in literacy are seen as manifold; many of them are attributed to the “boy culture” in many western industrialized states that views “reading” and “education” as “girl activities”, others discuss the differences in rates of maturation (including brain development) between boys and girls, still others see the approach to school organization and management, and pedagogy, as a reason; and
- The solutions aimed at achieving a balance between males and females range from specific suggestions about school structure, classroom organization and pedagogical approaches, to broader questions about how the overall culture and social norms affecting the development of boys’ values and self-images must be changed.

It is a question, however, whether such suggestions qualify as practical or specific “policies and practices” aimed at attenuating unfavourable trends, given their relatively high level of generality.

Below is a brief summary of preliminary research results which provides an overview of program and policy responses in five OECD countries, chosen because their educational systems are similar enough that the experiences in each could inform consideration of future initiatives.

## **Australia**

It is generally acknowledged in the literature we have reviewed that Australia was the first jurisdiction to pay high-level political attention to the questions related to differential achievement trends between the genders in school and PSE. The government of Australia has been focused for many years on skill development in the face of globalization and international competitiveness. In the nineties the government conducted a fair amount of work on literacy issues, including literacy needs of the workplace. In 2000, responding to community concerns about the education of boys, particularly the evidence of “boys’ educational under-achievement and disengagement from learning”<sup>23</sup>, the Minister of Education, Training and Youth Affairs asked the Parliamentary Committee on Employment, Education and Workplace Relations to:

- Inquire into and report on the social, cultural and educational factors affecting the education of boys in Australian schools,

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<sup>23</sup> Australia House of Representative Standing Committee on Education and Training, “Boys: Getting it Right”, October 2002, p. xv.

particularly in relation to their literacy needs and socialization skills in the early and middle years of schooling; and

- The strategies which schools have adopted to help address these factors, those strategies which have been successful and scope for their broader implementation or increased effectiveness.

Based on input from public hearings, written submissions, research and analysis, the Committee agreed there was “justification for the concerns about boys’ education and that these are not being adequately addressed within the current framework.”<sup>24</sup>

The Report included 24 detailed recommendations which focused on revision of policy frameworks, teacher development and education, community and public awareness, literacy, development of role models and attracting men to teaching professions and funding relevant research. Jennifer Buckingham, in her article “Getting it Right Some of the Time” summarizes the major themes of the Parliamentary report:

- “the document on a national gender equity strategy needs to be rewritten because it is based on a flawed model of masculinity that seeks to achieve equity by changing boys so that they become more like girls, a biased and futile approach;
- that boys’ lower levels of literacy need to be addressed through strategies that take into account boys’ difficulties in hearing and processing verbal instructions from the early years of schooling on, and that reading instruction in schools return to the traditional, phonics-based approach; and,
- that effective teacher education and training is paramount in delivering good educational outcomes and meeting the needs of all children.”<sup>25</sup>

Concurrently, the Australian Council for Educational Research was investigating gender issues, based on perceptions that girls were becoming more successful than boys in school. The Council observed, “[t]his has been especially notable in education outcomes relating to literacy and to measures of participation in various subject types and retention rates for students in the last years of secondary education. There has also been a relationship noted between post secondary destinations and successes of Australian students and their gender.”

Responses from government, the educational sector and the community were notable. The Gender Equity Framework was written to reflect recommendations of the report. The Government dedicated funds to address boys’ education with

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<sup>24</sup> Ibid.

<sup>25</sup> Jennifer Buckingham, “Getting it Right Some of the Time: An Appraisal of the Report on the Inquiry into the Education of Boys”, Issue Analysis, The Centre for Independent Studies, 14 November 2002.

initiatives such as the Boys' Educational Lighthouse Schools (BELS), providing for a school-based approach to develop and test the strategies to improve learning outcomes for boys. The findings from this Initiative were used to develop an interactive compendium for use by teachers. The federal Department of Education, Employment and Work Relations maintains a website for this, and other, information on effective best practices as well as a site on publications, conferences and websites. A biennial Conference on "Working with Boys, Building Fine Men" is held to disseminate relevant research and identify issues for further investigation.

A second generation of programs included "Success for Boys", targeted for at-risk and disadvantaged boys in the areas of mentoring, literacy, technology and indigenous issues. Grants are provided to schools to promote professional learning in boys' education and incorporate it into curriculum. Key areas of focus include:

- effective literacy teaching;
- use of technology;
- mentoring opportunities; and,
- supporting indigenous boys.

The initiatives have not been without their critics, causing considerable review—and sometimes criticism—particularly among those concerned with gender politics. There has been ongoing debate among many academics of whether or not the approach misdiagnosis the problem and may result in "deleterious results for boys and girls."<sup>26</sup>

In higher education, too, the national Australian government has set out a strong vision and policy statements for higher education. The Higher Educational Support Act (2003) has stated objectives which include (among others) to support a system that is:

- characterized by quality, diversity and equality of access;
- contributes to the development of cultural and intellectual life in Australia; and,
- is appropriate to meet Australia's social and economic needs for a highly educated and skilled population.

Focus on advancing the education of young men does not appear to be a specifically articulated objective, but there is much emphasis on equity of access.

In March 2008, the Government initiated a review of Higher Education "to examine the future direction of the higher-education sector, its fitness for purpose

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<sup>26</sup> Zoe Gill, "Boys: Getting it Right—The "New" Disadvantaged or "Disadvantaged" Redefined?", *The Australian Educational Researcher*, Volume 32, Number 2, August 2005, p. 105.

in meeting the needs of the Australian community and economy and the options for ongoing reform". The initial response of the government has been to increase funding for higher education and research. The focus for funding includes:

- providing high-quality teaching and learning;
- improving access and outcomes for students from low socio-economic backgrounds;
- building links between universities and disadvantaged schools;
- providing rewards for meeting quality and equity outcomes;
- building world-class infrastructure; and,
- resourcing research.

The policy approach appears to be one of "getting the environment right"—putting policy frameworks, funding and infrastructure in place, with initiatives to reduce barriers for disadvantaged students (low socio-economic backgrounds). However, at this level, boys/young men do not appear to be targeted.

In summary, Australia has been among the leaders in OECD countries in responding to statistical evidence and community concern about boys' educational achievement, by mounting an aggressive campaign on interventions in the K–12 system, providing policy frameworks and targeting funding for specific programs to remediate factors that are negatively impacting boys' education. Action on this scale has only been possible because of the existence of a national department of education which has taken on responsibility for setting policy and providing funding linked to specific outcomes. The national government has also taken on the role of initiating research, maintaining and distributing relevant information and sponsoring conferences to ensure dissemination of information. The Government plays a pivotal and very visible role.

Australia's direct interventions with regard to addressing issues related to the education of boys and men has been mainly in the K–12 arena, with efforts at the PSE level aimed at improving access for all by addressing barriers to disadvantaged groups (named as low socio-economic backgrounds and indigenous peoples). In the higher-education sector, the emphasis appears to be focused on building world-class infrastructure to maintain international competitiveness. The existence of a national department of education and employment (with a substantial budget) has facilitated this.

## **United Kingdom**

Recent (2008) U.K. data regarding nation-wide assessments of 7-, 11- and 14-year-olds demonstrates a consistent pattern of female superiority in English, reading and writing, and near parity for mathematics and sciences. In universities, data from 1994–1995 to 2005–2006 show a rising trend in the

percentage of first-class and upper second-class first degrees awarded to women—from 47% to 56%. About 60% of female full-time students gained a first- or upper-second degree in 2005–2006, compared with 53% of male full-time students. ([www.dcsf.gov.uk/trends/index.cfm](http://www.dcsf.gov.uk/trends/index.cfm))

As is the case in the other jurisdictions reviewed here, then, the differential participation and achievement between males and females in post-secondary education is traced back to the differential achievements in school, and especially with respect to literacy. On this analysis, it makes sense that many of the governmental interventions that have been undertaken in the U.K. with a view to “attenuating” the problems that are seen to be associated with the gender gap are focused on the school system.

As part of a general governmental initiative aimed at improving educational outcomes, a 2003 report by the National Audit Office on secondary schools noted that “successive education policies have created many different types of maintained secondary schools, including selective (grammar) schools, specialist schools, faith schools, academies, beacon or leading edge schools, single sex schools, and schools in Education Action Zones or Excellence in Cities areas.”<sup>27</sup> The report noted that academic achievements are influenced by a number of external factors as well as by the quality of education received in school. These external factors include prior academic achievement, economic and social background, ethnicity, gender, age and special educational needs. Once these external factors had been taken into account, the study found that academic achievement was higher in selective schools, specialist schools, faith schools, beacon schools and single sex schools (both boys and girls). It concluded that prior academic achievement had the strongest association with current academic achievement. Other external factors having a significant, though relatively small association with academic achievement, included gender (girls performed better overall than boys).<sup>28</sup>

The website notes that “OfSTED published two reports on 11 July 2003: one on boys' achievement and the other on boys' writing. The reports acknowledge that improving the achievements of boys is a complex matter in which a range of factors are important. Both reports conclude that schools that have been successful in raising boys' attainment and writing skills exhibit the following characteristics:

\* A positive learning culture that stimulates high standards, engages boys' interests, and insists on good behaviour. High expectations for all pupils with value placed on diversity of style and approach.

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<sup>27</sup>*Making a difference: Performance of maintained secondary schools in England*, National Audit Office, November 2003, p. 3.

<sup>28</sup> *Ibid.*, p. 6.

- \* Good teaching and learning – The Key Stage 3 National Strategy has been a catalyst for developments in these respects. Teachers are knowledgeable and enthusiastic about language with effective pastoral systems and extra-curricular activities.
- \* Good classroom management i.e. behaviour was well managed, discipline was fair and praise was used frequently.
- \* Tracking and supporting boys' performance through good use of data and assessment which particularly values their work and always offers them clear advice on how to improve.
- \* Strategies focusing on literacy, which provides intensive support on reading, writing and literacy across the curriculum with careful selection of materials which appeal to boys. To improve writing, pupils are encouraged to write frequently and at length with a balance between support and independence.”

In examining experience with “Aimhigher”, an England-wide government program targeted to widening participation in higher education particularly among those from disadvantaged background the report notes that “[t]here is an awareness among Aimhigher partnerships that boys from disadvantaged backgrounds can be particularly difficult to reach, though taking positive action to address male under-representation does not yet appear as a major activity.” Of around 3500 “reported activities” undertaken as part of Aimhigher between 2004–2005 and 2006–2007, only 18 such sets of reported activities focused on boys as the, or one of the, targeted groups.

More recently, the government launched the “gender agenda”, an 18-month program begun in spring 2008.<sup>29</sup> The Department of Children, Schools and Families is responsible for the initiative, and their “gender and achievement” website states that the “boy problem” in education is “nothing new—it is mentioned in the 1868 Taunton Commission and 1913 pedagogy texts—and has persisted to the present day. In the 1970s and 80s, schools were responding to evidence of the patterns of girls achievement while in the 1990s, they were responding to widely publicised statements about boys' underachievement.”

The Department’s view is that the key to addressing boys’ underachievement “lies in the teaching and learning approaches adopted by schools. Our Primary and Key Stage 3 Strategies are aimed at raising standards and providing a better foundation for improved performance at GCSE. The National Literacy Strategy has a number of features which particularly support schools and teachers in their work to close the achievement gap: the use of Frameworks for teaching and the

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<sup>29</sup> A substantial amount of information and materials can be found on the website for ‘gender and achievement’ website, at [nationalstrategies.standards.dcsf.gov.uk/search/inclusion/results/nav:46260](http://nationalstrategies.standards.dcsf.gov.uk/search/inclusion/results/nav:46260).

introduction of the literacy hour are particularly beneficial for boys. For example, clear objectives help boys to see exactly what they have to learn, and interaction with the teacher in the whole-class sessions keeps boys motivated and involved.” A number of other initiatives tailored to help boys is identified, but the site goes to some lengths to make the point that the government’s overall objective is to help underperforming individuals of both genders improve.

It observes that the gender gap in favour of female achievement in education is construed as resulting from a number of factors:

- girls' greater maturity and more effective learning strategies at all ages, and the apparent success of equal opportunities programs in schools; the emphasis amongst girls on collaboration, talk and sharing;
- (some) boys' disregard for authority, academic work and formal achievement, and the identification with concepts of masculinity which are frequently seen to be in direct conflict with the ethos of the school;
- differences in students' attitudes to work, and their goals and aspirations, linked to the wider social context of changing labour markets, de-industrialization and male employment;
- differential gender interactions between pupils and teachers in the classroom, particularly as perceived by (some) boys;
- the influence of laddish behaviour, the bravado and noise as boys seek to define their masculinity; the inclination of many boys to act in ways in line with peer-group norms, in ways which protect their macho image—itself a form of self-defence for many boys; peer group pressure against the academic work ethic, resulting in male behaviour which is less likely to know to acknowledge and accept boundaries; the influence of personal and social development, including the role of language in boys' achievement. For example girls have been observed to develop their vocabulary sooner and acquire some language concepts (such as passive voice) earlier than boys; and,
- boys' efforts to avoid the culture of failure, to seek explanations—through their off-task behaviour, their lack of effort in terms of class work, homework and coursework, their lack of acceptance of the aims and objectives of the school—for their poor performance in school, to protect themselves against failure and competition; the possibility of failure can lead to anger, hostility and disaffection; a 'can't do / can't win' insecurity leads to a 'won't try / don't won't play' culture, which leads to a self-sabotaging, anti-learning stance which in turn can be expressed in

physical anger, fighting and dominance; such boys are seen to lack self-esteem as learners.

Reviewing other potential sources of the gap and remedies for it, the department argues that review of the evidence that the emphasis on coursework favours girls “concluded that the effect on performance is probably marginal because other elements in the examination, such as the weighting given in the overall mark, can be more critical in determining final grades.” Similarly, the evidence regarding single-sex teaching and single-sex schools suggests that “the apparent superior performance of single-sex (and especially girls only) institutions in terms of overall measures of examinations results has been largely due to the superior performance of the pupils entering those schools. When the different nature of the intakes to the schools has been taken into account the differences usually disappear.”

As the review published by HEPI<sup>30</sup> states, non-completion of higher-education programs is also a problem, and poses a “gender gap” issue, but “[i]t is not necessary for initiatives to reduce non-completion to be specific to men for them to reduce the gap in HE achievement.” The report also makes the point that reduction in non-completion will not eliminate the gender gap, but will make a contribution to such a reduction. Furthermore, “unlike efforts to raise aspirations and achievements in schools, such initiatives are within the jurisdiction of HEIs [higher education institutions].”

## **United States**

The issue of the “boy gap” in U.S. K–12 and post-secondary education is the subject of considerable attention among extra-governmental organizations and some elements of the media. Indeed, a number of specific initiatives have been launched in recent years with a view to focusing public and political attention on the issues involved: the underlying causes and potential solutions. It seems fair to observe, however, that there is little or no governmental or program focus on the specific issue of gender gaps in schools or higher education, as is the case in Australia. This may be due to a number of reasons, including the fact that responsibility for education is a state matter, and that the issue of gender-focused programs is politically controversial.

That is not to say that there is no public interest in the issues, or a lack of analysis and pressure to address those issues. But most of that interest is focused through extra-governmental avenues and organizations, having no specific authority to effect policy or program-level changes on a wide-scale basis<sup>31</sup>. While there are many local initiatives in both schools and, perhaps to a

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<sup>30</sup> John Thompson, *Male and female participation and progression in Higher Education*, HEPI, n.d.

<sup>31</sup> The “boys project” ([www.boysproject.net](http://www.boysproject.net)) is one such extra-governmental organization. The stated mission of The Boys Project is to “help young males develop their capabilities and reach the potential that their families and teachers know they have. The Boys Project seeks to accomplish for young men what the

lesser extent, in post-secondary institutions, that seek to improve the performance of boys, it does not seem to be the case that there are system-wide, much less nation-wide initiatives such as those put in place in Australia.

Many proponents of focusing on the “gender gap” or “boy crisis” operate outside government, and are sharply critical of the lack of attention government pays to the issue. Tom Mortenson, Richard Whitmire, and Peg Tyre are just three of a number of such analysts (many, such as Whitmire and Tyre, are former journalists) who have written about the issues involved. Whitmire, especially, criticizes the U.S. Federal Department of Education for its lack of attention to the gender gap. In *Why Boys Fail*<sup>32</sup>, Whitmire concludes that “[o]nly one action, a federal probe into the boy troubles, will send ...educators, legislators, think tankers, and business leaders in the right direction. As Australia discovered, it’s all about the boys. Any strategy designed to boost global competitiveness that ignores the boys problem ends up ignoring the obvious solution. Currently, men make up only about 42 percent of those earning bachelor’s degrees. There’s no evidence that men need college any less than women do. Boosting that rate closer to 50 percent, where it belongs, amounts to going after achievable solutions.”

In the absence of many government-led, system-wide initiatives aimed at closing the “gender gap”, many of these authors point to anecdotal or one-off examples of initiatives, launched by individual educators or schools. The array of such idiosyncratic interventions identified is, not surprisingly, similar to those identified in the OECD work and in the other jurisdictions. They range from more parental involvement to encourage reading among young boys, teacher training, pedagogical focus and techniques, curriculum change, school organization reform, and so on. As is the case OECD-wide, the root of the PSE problem is traced to the comparatively lower achievement levels of boys in literacy, reading and writing—as pointed out by test results, and carrying negative consequences in terms of boys’ drop out rates, graduation rates, and PSE admission and persistence rates. As a sign of the growing seriousness of the issue in PSE, media attention has been paid to the admissions policies of some American post-secondary institutions in recent years. In essence, these institutions follow a *de*

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Girls Project so successfully accomplished for young women—to increase academic skills, to increase college success, and to develop the confidence, drive, and determination to contribute to American society.” The ‘boys project’ states its objectives as seeking to:

- “Showcase colleges, schools, teachers, and organizations that have succeeded in engaging young men, increasing their academic success, and developing drive and ambition.
- Educate families, educators and the public about the challenges our young boys are facing.
- Develop federal, state and foundation initiatives that support relevant research and necessary legislative change.”

<sup>32</sup> Richard Whitmire, *Why Boys Fail, Saving Our Sons from an Educational System That’s Leaving Them Behind*, Amacom, New York, 2010, p. 185.

*facto* affirmative action program to close the gap between female and male admissions, by admitting male applicants with lower GPA or SAT scores.<sup>33</sup>

Publications by such academic and journalist activists such as Mortenson, Whitmire and Tyre review the experience in several jurisdictions with potential solutions, including an intensive focus into turning boys into early readers, intensifying literacy instruction in middle and high school, adjusting curriculum and pedagogical approaches to make high school (and community colleges) more “relevant” to males, single-sex classes or schools (admitting the evidence is inconclusive and ambiguous), possibly continuing the admissions “break” given to less academically qualified males by some colleges, and focusing on the issue by explicitly collecting gender data for purposes of accountability, as well as program improvement.

Frustrated by the need to search out isolated anecdotal success stories, Whitmire goes on to complain about the absence of more widespread and government-led focus on the negative implications for the economy and society of the “boy problem”, and on lack of attention to closing the college gender gap as a solution. His explanation for this absence is that the gender gap is too controversial politically, socially and culturally to raise. And the “only way to move beyond the controversy is a federal inquiry, exactly what the Australians did. President Obama, with his sensitivity to the plight of black boys, is the ideal president to launch the research.”<sup>34</sup>

The January 2010 report of the American Council on Education<sup>35</sup> is perhaps the most recent comprehensive overview of the statistics and issues involved. The ACE study found that, after decades of increasing female enrolment majorities in colleges since parity was achieved 30 years ago, the gender gap in undergraduate enrolment has stabilized in the past few years, with the important exception of Hispanic males, especially those who were foreign-born. The gender gap in enrolment, while stabilized, still persists, especially among older undergraduates. The percentage of these older (25 years old or more) undergraduates who are male is 39%, whereas the percentage of male

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<sup>33</sup> See, for example, Nancy Gibbs, “Affirmative Action for Boys”, *Time Magazine*, April 3, 2008, or Alex Kingsbury, “Many Colleges Reject Women at Higher Rates than for Men”, *US News and World Report*, June 17, 2007.

<sup>34</sup> The Obama administration published its education agenda on March 15, 2010. The 45-page “Blueprint for Reform: The Reauthorization of the elementary and Secondary Education Act” contains a wide array of initiatives, but mentions the topic of gender only once: in the context of requirements to collect data for accountability purposes on issues including “high school graduation rates, college enrollment rates, and rates of college enrollment without need for remediation” that are “disaggregated by race, gender, ethnicity, disability status, English Learner status and family income”. The Obama proposals enunciate the clear goal of “raising standards for all students” to make “every student ... graduate from high school ready for college and a career, regardless of their income, race, ethnic or language background, or disability status.” Gender is not mentioned as a variable. The document can be found at [www2.ed.gov/policy/elsec/leg/blueprint/blueprint.pdf](http://www2.ed.gov/policy/elsec/leg/blueprint/blueprint.pdf).

<sup>35</sup> Jacqueline E. King, *Gender Equity in Higher Education: 2010*, American Council on Education, Center for Policy Analysis, Washington, DC, 2010.

undergraduates 24 or younger is 46%. The study found that, in 2008, 32% of white males between 25–29 had at least a bachelor's degree, compared to 40% of white women. (p. 15) Women have earned the majority of bachelor's degrees since 1990, although the share awarded to men has remained steady since 2000-2001. (p. 17) The report indicates that further work will be done to shed light on the low percentage of older male undergraduates, speculating that it may have to do with factors such as the higher rates of income males earn in the labour market.

The ACE report notes that there is more conjecture than research on possible reasons for the gender gap, but goes on to outline the major theses that have been put forward by psychologists, social commentators, educators, journalists, and others. Noting as well that the phenomenon is OECD-wide, ACE states that “the hypotheses generally fall into three major categories: economic incentives, school effects, and social/psychological factors.” (p. 20) Briefly reviewing these three categories, the report concludes that, “[u]nfortunately, there is no consensus on the causes of the gender gap and little comprehensive empirical research upon which to base firm conclusions.... Not only are the possible causes of the gender gap complex, but also the relative influence of these causes likely differs depending on the race, ethnicity, age, and socio-economic status of students. This makes diagnosing the problem and designing effective interventions that much more difficult.” (p. 21)

ACE points out that disparities are not only a gender issue, and that the rising number of degrees being earned by both men and women shows that the game is not zero-sum. “It is important,” the report concludes, “to examine the gender gap within this context and to target our efforts at reaching those low-income, minority and older men who are in greatest need of assistance. Colleges and universities can begin this work by identifying those groups of men who are not making it to their campuses and who are struggling once they arrive, and then tailoring outreach and programmatic interventions to their unique needs.” (p. 22)

While several of the analyses cited above frame the issue as an undifferentiated gender gap, others take a more nuanced view of the issues involved, arguing that labelling it a “boy crisis” ignores the fact that there may be more differences within genders than between them, and that a more sophisticated and targeted approach to solutions needs to be found. But the further point is made that such interventions should not assume a “one-size-fits-all” solution is possible or desirable. “Boys” are too general a category, in the view of many. Instead, the question that should be posed is “*which* boys” require “*which* interventions”; or, even more generally, “*which* individuals” require “*which* interventions”—on the grounds that some sub-populations of girls also face problems in schooling and beyond. So solutions, too, should be tailor-made to address the specific causes and most promising avenues for addressing those specific causes among the sub-populations.

## Germany

There have been several difficulties in researching material (other than that published by the OECD) on the situation with regard to the education of boys in Germany. The fact that the education system is very decentralized across 16 German states makes it difficult to access information. The summary below is very preliminary and should be supplemented by additional work on the topic.

A quick internet search has identified several newspaper articles that raise the issue of “boys falling behind” and the lower educational attainment of boys in Germany. Other themes identified are quite similar to those found in the press of other countries: linguistic ability of boys; over-representation of women in teaching; lack of male role models; images of masculinity; curricula not suited to boys’ interests, etc.

Eurydice published a summary of recent trends in German education as of Feb. 2009 which appears to indicate that current emphasis in the system is on promoting equity for all groups. Specific trends include:

- Reduction of the close relation between the socio-economic background of pupils and their performance by all-day schooling and facilitating the transfer between different education pathways.
- Furthering children at an early age and improving individual support by increasing care provision from age three up to school entry.
- Furthering of children from migrant families, especially in the knowledge of the German language by pre-school language tests and early promotion in day-care centres and improved methods for language-skills diagnosis.
- Furthering of literacy in reading, mathematics and science by general remedial instruction during school hours or complementary remedial instruction after hours. Both types concern Germany, foreign languages and mathematics.

The higher-educational system in Germany has experienced a series of significant changes in recent years which appear to be challenging the system. In the fall of 2009, there were numerous student rallies against higher-education reforms to the revamping of degree structures (in accordance with the Bologna process) and against the introduction of a tuition-fee system. The reunification of Germany and the acceptance of a (relatively) high number of foreign students has also resulted in tension in the educational system.

The federal government introduced multi-year reforms in 2005 focused on building world-class institutions. Entitled “The Excellence Initiative”, the move to a centre-of-excellence type of approach and the enhanced focus on advanced research has frustrated many.

Rising female participation rates throughout the educational system is well recognized and documented but, based on this preliminary research, there does not appear to be much specifically targeted on young men, given the major reforms which the system is facing.

A March 13, 2010, Special Report on Germany in *The Economist* reviewed issues in the German educational system, but made no specific mention of gender issues. Instead, it focused on the pressures by the traditional German dual system, in light of the “PISA shock” of 2001, the need to adjust to the Bologna process, and broader demographic and economic changes. *The Economist* observed that there have been some changes to reduce the amount of early streaming, and to mitigate the “rigidities” of the traditional system, but concludes that “too much of German education remains hidebound, and that “immigrant children suffer most”.

Further investigation of the German situation is required before any conclusions can be drawn.

### **Question 3: What are Canadian jurisdictions doing?**

This section is designed to highlight what is happening in Canada on the issue of boys' and young men's education. It addresses the issue from two points of view—an overview of the research and Canada-specific results on the gender gap and a brief overview, based on an unfortunately limited survey of initiatives across the country, of recent relevant initiatives.

#### **Overview of the Canadian situation**

Over the last 10 years, Canada has engaged in extensive research on education that includes tracking educational experiences and pathways, correlations of variables influencing choices young people make, documenting barriers to access and mounting pilot projects to test program and policy interventions. This has resulted in a rich data base for statistics that are widely quoted and used as the basis for program and policy intervention. In the last two to three years alone, several Canadian studies have been completed which add to our knowledge about factors influencing educational performance and participation—studies from Statistics Canada, the Millennium Scholarship Foundation, Colleges Ontario, the Ontario government, Education Policy Institute, Canadian Policy Research Network, and from academics across the country. We are getting to the point where we have a “critical mass” of information for informing program and policy decisions.

A quick overview shows this wide-ranging research is sometimes focused specifically on boys' achievement or sometimes on equity groups with boys as one of the targets. In general, the research and/or resulting interventions appear to be concentrated in two areas: 1) K–12 responses to address issues identified in OECD's PISA (which now has a 10-year record of measuring and assessing the performance of young Canadians in science, reading and mathematics) and 2) barriers to access and participation in education and training. The largest body of information is on the K–12 system, likely prompted by an international focus on boys underachievement (*vis-à-vis* girls) arising from studies like PISA and other surveys.

## 1. K–12

The PISA results have been a catalyst for focusing attention on the gender gap in students' performance in elementary and secondary schools—in Canada and other OECD countries

Key findings derived from analysis of the PISA assessments across several OECD nations in 2000, 2003, 2006 and 2009 include:

- In the PISA 2009 reading assessment, girls outperform boys in every participating country by an average, among OECD countries, of 39 PISA score points—equivalent to more than half a proficiency level or one year of schooling.
- On average across OECD countries, boys outperform girls in mathematics by 12 score points while gender differences in science performance tend to be small, both in absolute terms and when compared with the large gender gap in reading performance and the more moderate gender gap in mathematics.<sup>36</sup>
- The ranks of top-performing students are filled nearly equally with girls and boys. On average across OECD countries, 4.4% of girls and 3.8% of boys are top performers in all three subjects, and 15.6% of girls and 17.0% of boys are top performers in at least one subject area. While the gender gap among top-performing students is small in science (1% of girls and 1.5% of boys), it is significant in reading (2.8% of girls and 0.5% of boys) and in mathematics (3.4% of girls and 6.6% of boys).<sup>37</sup>

Specific 2009 PISA results for Canada showed:

- Results from PISA 2009 corroborate the findings from previous PISA cycles: Canada performed among top-level countries in reading.
- Overall, Canadian students continue to perform well compared with students in most other countries.
- Among the 65 countries that participated in PISA 2009, only four countries outperformed Canada on the combined reading scale: Shanghai-China, Korea, Finland and Hong Kong-China while three countries had similar performance to Canada.
- At the provincial level, most 15-year-olds also performed well in reading. Students in nine of the Canadian provinces performed at or above the OECD average on the combined reading scale with only Prince Edward Island performing below the OECD mean.
- Canada is widely recognized as one of a few PISA countries that has both high performance and high equity.
  - For Canada overall, those in the highest quarter scored 124 score points higher compared to those in the lowest quarter. This

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<sup>36</sup> OECD, *PISA 2009 Results: What Students Know and Can Do*, Volume I (Paris: 2010).

<sup>37</sup> Ibid.

- compares to 128 score points across all OECD countries. At the provincial level, the largest gap was in Alberta (133 points) and the smallest in Nova Scotia (117 points).
- The amount of within-country variation in performance in reading varied widely among OECD countries.
  - Both Canada and the majority of the provinces were among the few jurisdictions with higher reading performance and lower variation in student performance (as measured by score point differences between the 75th and 25th percentile).
- The PISA results show that Canada had both a high proportion of high achievers (Level 5 or above) and a low proportion of low achievers (below Level 2) compared to the OECD average.
  - There was a significant decrease in reading scores between 2000 and 2009 in five of the 10 provinces—Prince Edward Island, Quebec, Manitoba, Saskatchewan and Alberta.
  - Canada's change in overall mean performance in reading over time was not significantly different but its relative performance decreased. Among the countries that participated in both the 2000 and 2009 assessments, only one country outperformed Canada in reading in 2000 while three countries outperformed Canada in 2009. This suggests that in order to maintain its' competitive edge in the future, Canada will need to improve at the rate of the top-performing countries, rather than simply maintain its competencies in reading.
  - Between 2000 and 2009 the gender gap remained stable in Canada and across nine provinces but was significantly reduced in New Brunswick.
  - Canada continues to perform well internationally in both mathematics and science, scoring well above the OECD average and being outperformed by seven countries in mathematics and six countries in science among 65 countries that participated in 2009.
  - Canadian students' performance in mathematics and science remained stable over time. However, as a result of a lack of improvement in performance, coupled with increased performance in other countries, more countries outperformed Canada in mathematics and science than in previous PISA assessments. Additionally, a few countries participating in PISA for the first time in 2009 outperformed Canada in mathematics and science.
  - In mathematics, on average across OECD countries, males outperformed females by 12 score points. In Canada, males also outperformed females by 12 score points. This difference was much smaller than the gender difference favouring females in reading.
  - In science, on average across OECD countries, males and females had similar performance. However in Canada, males outperformed females by 5 score points.<sup>38</sup>

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<sup>38</sup> Human Resources and Skills Development Canada, Council of Ministers of Education, Canada and Statistics Canada, *Measuring up: Canadian Results of the OECD PISA Study, The Performance of Canada's Youth in Reading*,

## High School Graduation Rates

- Canada's upper-secondary graduation rate was 77% in 2007, based on the most-recent data available for the country's provinces and territories.
- In Canada, the upper-secondary graduation rate for females was 81%; the rate for males, 73%—a relatively large gender gap of 8 percentage points.
- According to the latest figures provided by the OECD, the comparable average international rates were 84% and 76%, respectively, also revealing a female–male gap of 8 percentage points.<sup>39</sup>

As a 2010 report claims, in Canada “provincial ministries of departments of education have been able to lessen the effects of socio-economic status and provide relative equity in learning opportunities across schools for their students.”<sup>40</sup> The evidence to support this is drawn from the PISA data which demonstrated that socio-economic status had a smaller impact on science achievement in Canada than in all OECD countries as a whole and that the average performance in Canada<sup>41</sup> was above the OECD average for science. PISA data helped raise awareness of the underachievement of boys', specifically in literacy, as both a Canadian and international issue.

Boys' literacy has been the centre of attention for provinces which decided to address issues related to boys' underachievement. In Canada, the statistics clearly show that boys lag girls in K–12 performance, especially with respect to reading. The CMEC's July 2008 overview document on “Education in Canada” notes that “[i]n many provinces and territories, increased attention is being paid to literacy, especially in the case of boys, as test results have shown that their performance is falling behind that of girls in language.” The document further notes that the high-school graduation rate in 2003 for girls was 78% as compared to 70% for boys. (p. 6)

CMEC's Progress Report on Literacy 2009 (published March 2010) reviews activities undertaken in individual jurisdictions in aid of CMEC's literacy initiative. It notes the gender gap in favour of females, and makes particular mention of initiatives aimed at Aboriginal learners. No examples are provided of any jurisdictional initiatives specifically targeted at improving the performance of boys, however.

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*Mathematics and Science, PISA 2009 First Results for Canadians Aged 15*, Catalogue no. 81-590-XPE, no. 4 (Ottawa: December 2010).

<sup>39</sup> Statistics Canada, *Education Indicators in Canada: An International Comparison*, Table A2.1, (Ottawa: September 7, 2010).

<sup>40</sup> Human Resources and Skills Development Canada, Council of Ministers of Education, Canada and Statistics Canada, *Measuring up: Canadian Results of the OECD PISA Study, The Performance of Canada's Youth in Reading, Mathematics and Science, PISA 2009 First Results for Canadians Aged 15*, Catalogue no. 81-590-XPE, no. 4 (Ottawa: December 2010).

<sup>41</sup> *Ibid.*, p. 55.

## 2. Research on barriers to educational participation

Canada has a wide body of research on general barriers to education which usually includes material on the gender gap but does not adopt a single focus on boys' achievement. This research, however, richly informs the situation for boys and young men. For example, the Canada Millennium Scholarship Foundation, in existence for a decade, launched an aggressive research program to help inform decision-makers in the country about access on participation issues. Several of their studies and pilot projects have shed light on the influence of gender in education. The latest (and last) edition of the *Price of Knowledge* (2009) explored the factors explaining participation in post-secondary studies, sorting the many predictors of participation into five major groups. The first was "individual characteristics such as gender and age", followed by familial socio-economic factors; factors linked to academic performance; individual behaviour factors (motivation, etc.); and the environment in which youths live.<sup>42</sup>

The report asserts that addressing any one of these five groups would not allow the issue of access to be resolved as the "situation is complicated: things are different for, say, a boy in Quebec compared to a girl in the same province or a boy elsewhere in the country".<sup>43</sup> The report concludes that "there is not one factor, nor single group of factors, that entirely determines participation in post secondary education studies. The same factor can play a vastly different role from one population to another."<sup>44</sup>

In the western provinces, and at CMEC, research was launched on the participation of Aboriginals, seen as an under-represented group. Studies on aboriginal pathways in education revealed factors which influenced decisions in education.

Other studies such as the Frenette and Zeman 2007 study on "Why are Most University Students Women?" found that "differences in the characteristics of boys and girls account for more than three quarters (76.8%) of the gap in university participation. In order of importance, the main factors are:

- Differences in school marks at age 15 (31.8%)
- Standardized test scores in reading at age 15 (14.6%)
- Study habits (11.1%)
- Parental expectations (8.5%)
- University earnings premiums relative to high school (5.3%)."<sup>45</sup>

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<sup>42</sup> Canada, Millennium Scholarship Foundation, *Price of Knowledge*, 2009, p. 129.

<sup>43</sup> *Ibid.*, p. 131.

<sup>44</sup> *Ibid.*, p. 143.

<sup>45</sup> Statistics Canada, Marc Frenette and Klarla Zeman, "Why Are Most University Students Women?", 2007.

In the public domain, there is some discussion of the emerging gender gap—articles in newspapers or magazines or comments on blogs. But in comparison with the debate that has occurred in some countries like Australia, Canada’s public “debate’ has been fairly muted.

The issue seems to fall onto and off the political agenda. Ivan Fellegi, former Chief Statistician of Canada, made presentations in 2006 highlighting a number of statistics illustrating the gender gap, and concluded by posing the following issues:

- Does the decline in young men’s earnings signal a permanent decline in men’s lifetime employment income?
- Given their strong propensity to marry low-educated women, will the (poor) performance of less-educated young males—and that of their families—keep deteriorating?
- What are the long-term implications of changes in young men’s earnings and of the emerging gender gap in education performance for family income?
- What are the implications of changes in the wealth of young couples for family formation, fertility and future ability to retire on a reasonable income?
- What will happen to the children of young poorly educated couples?

A March 2007 article in *The Walrus*<sup>46</sup> notes that, beneath the “rosy picture” of overall increases in enrolments in higher education in Canada, “lies a sobering reality” revealing that “in terms of high-school reading skills, educational engagement, and university enrolment, young men are lagging significantly behind similarly aged females.” Citing the statistics in support of this, and noting as well that similar trends are apparent in the U.S., the article goes on to survey possible causes and consequences. It can easily be argued that the statistics on female participation and achievement are simply long-overdue recognition of centuries of barriers and obstacles placed in the way of girls and women. The *Walrus* article goes on to state, however, that “[t]wo decades of declining proportional university participation seems less than a mere societal correction, and ignoring the apparent widespread disengagement of young men could result in a huge loss of human capital for Canada.” Indeed, unless something is done to rebalance the equation, the article warns, the fact that continuing male “control” in corporate boardrooms, provincial and federal cabinets, and senior administrations of public institutions” could well have a serious impact more generally. “Will this [phenomenon of ongoing male domination as outlined] change in the near future as the growing pool of well-qualified, highly motivated, and extremely capable women wend their way through the workforce? If not, we have ahead of us a bubbling cauldron of conflict, dissatisfaction, and social distress. We’ll have one large group of men blocked from progress due to their

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<sup>46</sup> Ken Coates and Clive Keen, “*Snail Males: Why are men falling behind in universities while women speed ahead?*”, *The Walrus* ([www.walrusmagazine.com/articles/2007.03](http://www.walrusmagazine.com/articles/2007.03)).

failure to keep up academically, while another cohort of eager and highly educated women finds itself stymied in its attempt to reach the top.”

Such articles and viewpoints, however, are relatively uncommon in Canadian discourse, at least at the level of public-policy issues. It seems often to be the case that issues of relative performance by gender are submerged or subsumed into other kinds of analysis: in the U.S., on the basis of race; in the U.K., on the basis of class, for example, and here in Canada, on the basis of barriers to participation in education.

Because education is a provincial responsibility, we attempted to find province-specific references to any initiatives focusing specifically on the gender gap, by consulting websites, government publications, and selected telephone consultations with governmental and institutional sources.

### **British Columbia**

Based on a brief survey of material, it appears that B.C. does not have an exclusive focus on boys/young men education. An October 2009 Vancouver Sun article by Janet Steffenhagen criticizes the province for not taking steps similar to Ontario to address issues related to boys’ underachievement in K–12. Individual school districts may have initiatives but, overall, the provincial curriculum is focused on “promoting learning and achievement in early childhood, grade school, post-secondary education, and the world of work”. There are special initiatives for aboriginal education, literacy among immigrant children and a general initiative for healthy lifestyles but these do not appear to be targeted specifically at boys.

In post-secondary, there is some discussion among academics about the topic (a UVic/U of A website “Adolescent Boys and Literacy Home Page”) but overall, most see issues about boys’ education as having solutions/responses in the K–12 system, with universities responding to the applications they receive within the framework of their merit and standards system.

A recent “question scan” done by CCL for the British Columbia Ministry of Advanced Education supports this observation. The survey of literature for studies focused on “how does gender, ethnicity, and socio-economic status impede access to post-secondary education, and what options exist for overcoming impediments to access”?<sup>47</sup> With respect to gender, the scan identified 306 articles, 106 of which met inclusion criteria. On the question of gender specifically, the scan identified 5 quantitative and 10 qualitative articles, 5 reviews, 9 reports and 10 documents in “grey literature”. Almost all of these focused on women’s access issues, and none identified focused specifically on questions related to the “boy gap”.

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<sup>47</sup> [www.aved.gov.bc.ca/ccl\\_question\\_scans/post-sec-access.htm](http://www.aved.gov.bc.ca/ccl_question_scans/post-sec-access.htm)

## Alberta

An overview of education-related websites in Alberta did not identify any particular focus on boys' or young men's education, except that the Alberta Teachers' Association website contained reference articles on male elementary teachers is listed under a "Gender Equity" heading in the Educational Issues section. Academic research on initiatives to increase literacy levels among boys and the effect of technology on boys' education are some of the themes being explored by academics in the province.

The experience of the University of Alberta President, Indira Samarasekera, when she gave an interview soon after her appointment, is worth noting as it is now quoted by some in the post-secondary sector. She stated that, "I'm going to be an advocate for young white men," because of her concern about the gender gap. "The [...] worry is that we'll wake up in 20 years and we will not have the benefit of enough male talent at the heads of companies and elsewhere." Her remarks were criticized by student groups and faculty who thought she was trivializing the difficulties many groups faced in gaining entry into post secondary. This incident demonstrates the complexity of the topic of gender balance.

## Ontario

Boys' education became a concern in Ontario early in the decade. Prompted by research results indicating problems with boys' performance in school, the Ontario Ministry of education mounted a series of initiatives to raise the achievement of boys. The Boys' Literacy Teacher Inquiry Project, undertaken between 2005 and 2008 and guided by OISE, was one of the most extensive teacher inquiry exercises in Ontario. The Project identified and reviewed strategies designed to increase boys' engagement with and achievement in literacy. It was also intended to complement ongoing provincial initiatives across the educational system.

The final report, *The Road Ahead: Boys' Literacy Teacher Inquiry Project, 2005-2008*, concludes that the initiative has successfully improved boys' interest, engagement and achievement in reading, writing and oral communication. School teams reported increases in the confidence of boys to engage in literacy activities.<sup>48</sup>

In the winter of 2008, the government of Ontario issued "Reach Every Student: Energizing Ontario Education". This document outlined the government's continued determination to focus on improving literacy and numeracy through its second mandate. Among other specifics, the initiative identified a strategy of "targeted resources and training to help teachers improve boys' literacy." (p. 9)

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<sup>48</sup> OISE, *The Road Ahead: Boys' Literacy Teacher Inquiry Project, 2005-2008*, February 2009, Executive Summary.

The Department of Education has been very responsive to research findings—they have led and managed advanced research, development of tools for teachers and information dissemination on boys' achievement. The Literacy and Numeracy Secretariat of the Department was established in 2004 to boost student achievement. Experts from the Secretariat, called student achievement officers, work with school boards across the province to implement strategies to improve reading, writing and math skills. Boys have been a particular focus for the Secretariat. Detailed curriculum interventions have been developed to address the specific literacy needs of many of the ethnic groups found in the Toronto area as well as those of boys in rural areas.

Below is an extract from the Department of Education's website which illustrates the available support for teachers to address boys' literacy:

### **“Boys' Literacy**

Supports for teacher teams to conduct inquiry into teaching and assessment strategies and classroom practice for improving boys' literacy achievement. The resources are designed to help teachers make a positive impact on the learning environment and the reading experience for all students.

- [Me Read? And How? Ontario teachers report on how to improve boys' literacy skills](#) (PDF, 5.32 MB)
- *The Road Ahead – Boys' Literacy Teacher Inquiry Project, 2005 to 2008*, [Final Report](#) (February, 2009)
- *The Road Ahead – Boys' Literacy Teacher Inquiry Project, 2005 to 2008*, [Supplement: Individual Team Reports](#) (February, 2009)
- [Video: Read Anything Good Lately? Boys, Books and Reading](#)
- [What Current Research Tells Us](#) (PDF, 29 KB)
- [Boys' Literacy Teacher Inquiry – A Conversation with Dr. Lynne Hannay: Collecting and Analyzing Qualitative Data](#) (Windows Media, 23:23)
- [Teacher Inquiry for Boys' Literacy Achievement: Taking Stock in Year Three](#) (Windows Media, 36:40)
- [Getting Started with Teacher Inquiry](#) (Windows Media, 25:39)
- [An interview featuring two Ontario educators discussing their journey \(DVD, 2006\)](#) (Windows Media, 25:39)
- [Me Read? No, Way! A practical guide to improving boys' literacy skills](#)

### **Boys' Literacy Teacher Inquiry**

- [Boys' Literacy Teacher Inquiry – Work Plan Support Booklet, Volume III, Issue 4, June 2008](#) (PDF, 363 KB)

- [Boys' Literacy Teacher Inquiry – Work Plan Support Booklet, Volume III, Issue 3, February 2008](#) (PDF, 1.01 MB)
- [Boys' Literacy Teacher Inquiry – Work Plan Support Booklet, Volume III, Issue 2, December 2007](#) (PDF, 2.19 MB)
- [Boys' Literacy Teacher Inquiry – Work Plan Support Booklet, Volume III, Issue 1, October 2007](#) (PDF, 1.51 MB)
- [Boys' Literacy Teacher Inquiry – Progress Report, September 2006](#) (PDF, 2.6 MB)
- [Boys' Literacy Teacher Inquiry – Work Plan Support Booklet, Volume II, Issue 4, June 2007](#) (PDF, 1.75 MB)
- [Boys' Literacy Teacher Inquiry – Work Plan Support Booklet, Volume II, Issue 3, April 2007](#) (PDF, 2.39 MB)
- [Boys' Literacy Teacher Inquiry – Work Plan Support Booklet, Volume II, Issue 2, December 2006](#) (PDF, 2.4 MB)
- [Boys' Literacy Teacher Inquiry – Work Plan Support Booklet, Volume II, Issue 1, November 2006](#) (PDF, 3.0 MB)
- [Work Plan Support Booklet One – March, 2006](#) (PDF, 537 KB)
- [Work Plan Support Booklet Two – April, 2006](#) (PDF, 633 KB)
- [Work Plan Support Booklet Three – June, 2006](#) (PDF, 562 KB)

*NSDC excerpts: used with permission of the National Staff Development Council, [www.nsd.org](http://www.nsd.org), 2006. All rights reserved."*

On the post-secondary front, activity is more limited. HEQCO released a report in February 2010, on the gender gap in post-secondary participation<sup>49</sup>. The report concludes that gender differences “reach even further back into primary and secondary school.... The implication is that, in order to address gender disparities in PSE participation, the differences in male and female student achievement at earlier stages of education require attention.” HEQCO’s plans further analysis, disaggregating data by characteristics such as socio-economic status, ethnicity and geography to identify which males and which females may be at risk.

A report commissioned by Colleges Ontario and published in October 2009 examined the issues involved in “Who Doesn’t Go to Post-Secondary Education”. Chapter four of the final report, entitled “Gender”, made reference to the “Reach Every Student” initiative in the context of noting that “[e]vidence has been accumulating for many years regarding the challenges experienced in schools by male students in comparison to females.” The Chapter reviews the data with respect to enrolments, noting that while college enrolments are roughly equal by gender, there is a wide gap in favour of females at universities and in favour of males in apprenticeships. The statistics regarding gender differences (and, generally, higher-female average marks) in test scores for English, sciences and math, both in ministry testing and national testing (SAIP) are highlighted, with the implication that, “[g]iven the fact that university admission requirements are

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<sup>49</sup> Angelika Kerr, “What about the boys?”:00 An Overview of Gender Trends in Education and the Labour Market in Ontario, Higher Education Quality Council of Ontario, Research Note 3, February 1, 2010.

based primarily on academic achievement, it is not surprising that far more females than males enroll in university.” (p. 67)

There is no evidence in the literature of any targeted initiatives at the post-secondary level to encourage young men to participate. The natural selection process at colleges and universities is left to determine the gender composition of the post-secondary student population.

More research is emerging in Ontario on the gender gap, both at the secondary and post-secondary levels—issues such as whether differences within gender are greater than those across them; detailed research on which boys are having difficulty with literacy; and the use of technology to engage boys.

## **Quebec**

The focus in Quebec on boys’ academic achievement appears to stem, at least in part, from the Conseil supérieur de l’Éducation attention to the topic. In 1999, the Conseil proposed that the Minister of Education adopt measures to tackle gender gaps at elementary and secondary levels. Their brief to the Minister was both informational and prescriptive in that it outlined five policy guidelines and remedial measures.

A 2004 study published by the Ministère de l’Éducation in Quebec<sup>50</sup> noted the gap between boys and girls in terms of “academic delay” (i.e. need to repeat grades), success in learning the language of instruction (whether French or English), and graduation rates. On academic delay, 3.8% of boys and 2.3% of girls repeated a grade in elementary school in 2001–2002, and 15.7% of boys and 10.1% of girls repeated their first year of secondary school. On the uniform examinations in the language of instruction, the gender gap in favour of girls was 5.8% for the French examination, and 3.2% for the English examination. On PISA reading, girls scored 6.6% higher than boys (553 v 519). The graduation rate of girls was steadily 13–14% higher than that of boys through the period of the mid 1990s to 2001–2002. The Ministry report notes that, while the cross-OECD situation is quite similar to that in Quebec in this regard, “Quebec ranks on a par with countries where the differences between boys and girls are the most significant.” (p. 8) With respect to university education, “the statistics for 1976 to 2001 show that the proportion of girls graduating from the school system with a bachelor’s degree jumped from 13% to 31%, while for boys it increased from 17% to just 21%.” (p. 8)

The report points to a number of social and cultural factors as possible explanations for the differences in performance: socio-economic status, family attitudes toward reading and education, peer group influence, “boy culture” attitudes toward school and learning. It identifies a number of intervention

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<sup>50</sup> *Boys’ Academic Achievement: Putting the Findings into Perspective*, found at [www.meq.gouv.qc.ca/publications/menu-rapports.htm](http://www.meq.gouv.qc.ca/publications/menu-rapports.htm).

strategies, including single-sex education, an emphasis on learning projects in a context of pedagogical differentiation and individualization, teacher professional development and the development of “professional communities” that, among other things, focus on concepts of gender and identity development, the quality of the teacher–student relationship, and greater involvement on the part of parents (and especially fathers). While cautioning that we “must avoid making rash generalizations”, and that “there is no single solution to a complex problem”, the report notes that “all the studies consulted show that the academic difficulties experienced by boys relate to the language of instruction. We must therefore determine what should be done to support students in learning the language of instruction and, more particularly, with respect to reading.” (p. 19)

The Quebec study concluded:

- It is important to avoid generalizations: most boys do well in school.
- Boys are not a homogeneous group: environment has major influence.
- Strong correlation between adhering to sexual stereotypes and school failure.
- In some school boards and in some schools the gender gap is very narrow or negligible.
- Conclusions drawn are consistent with statistical findings reported by AAUW and TDSB regarding achievement gaps along race/ethnicity and social class lines.

A 2009 study on literacy published by CMEC and Statistics Canada<sup>51</sup> suggests that Quebec underperformed in international tests on literacy, but that underperformance is at least partly explained by the policy of holding back students. In addition, the report suggests that allowing a greater degree of autonomy to individual schools might encourage the kind of flexibility and creativity that would improve performance, on the basis that higher scores were achieved in other jurisdictions in Canada and internationally which allowed for relatively greater school-level autonomy.<sup>52</sup>

## **Atlantic Canada**

There is no information available on research or interventions specific to Atlantic Canada. We contacted a researcher at MPHC and the Nova Scotia Ministry of Education but they were not aware of any specific interventions to increase boys’ achievements. There were some studies on Ministry websites and references to boys’ underachievement, but this material was usually based on PISA results and research.

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<sup>51</sup> *Acquiring Literacy Skills: A Comparison of Provincial and International Results from PISA and IALSS, Final Report*, Prepared for the Canadian Educational Statistics Council by SPR Associates, Toronto, June 6, 2008.

<sup>52</sup> *Ibid*, pp. 19, 25, 33.

## Observations

Compared to 10 years ago, Canada has now developed a rich data base which allows for more insightful study on educational performance and participation as well as significant factors that are related to educational outcomes. The evidence about a gap in the performance of boys and girls in secondary education seems generally accepted. A number of provinces have moved to mitigate the gap, either through initiatives targeted at boys or through programs designed to address specific issues (i.e. literacy) which impact boys, even if these programs are not exclusive to boys.

Among researchers and academics there appears to be an increased focus in the last year or so on the question, “Which Boys?”—a question which raises the point that there is a need to focus on the specific issues affecting “subsets ” within the group of boys. This research points out the need to compare performance results of “apples to apples” i.e. middle-class boys with middle-class girls to really understand what factors are influencing educational performance.

In the post-secondary sector, the dialogue about the gender gap is just becoming audible. It does not appear to be getting much attention, maybe for a variety of reasons. Some would still say that there is no problem. Others may recognize the issue but feel its source—and solution—is in the K–12 system. Others may be concerned about the backlash that they would experience from the “progressive” groups on campus.

#### **Question 4: What do we know about success/failure of the various models OECD-wide?**

As was noted in earlier sections, the profile of the “gender gap” or “boy crisis” in terms of political attention, or specific policy or program interventions, is relatively modest in the OECD jurisdictions we surveyed. Only in Australia, and to a lesser extent, in Ontario, Quebec and the United Kingdom, does the “boy-specific” focus of policy and program intervention appear to have received much public profile. This is despite the statistical evidence in most of those jurisdictions showing consistent and quite long-established trends of a growing gap, especially when it comes to literacy in schools, and in participation and completion of post-secondary education (especially in universities). Given this, it should not be surprising that there is little rigorous evidence available about the effectiveness of particular interventions or models aimed at addressing the “boy crisis”.

Many of those concerned about the “boy crisis” as manifested in post-secondary enrolment and completion figures trace the origins of that gap to the differential, and inferior, performance of boys in literacy, beginning quite early in school. In light of this analysis, the range of suggested interventions suggested typically includes specific measures aimed at changing pedagogical approaches, curriculum content and school organization with a view to making them more “boy friendly”. The general idea is to tailor programming to encourage a love of reading in boys by providing instructional content and methods that are, arguably, more in tune with their alleged different brain and personality development. More broadly, concerns are often expressed about “laddish” or “boy culture” and peer pressures that discourage an interest in reading, and in learning, among boys—or at least many boys. Critics urge that efforts be made to reverse these general societal or cultural phenomena.

There is, however, very little if any formal evaluative evidence of effectiveness of such interventions. Most of the discussion about types of interventions, such as single-sex classes or schools, or particular types of pedagogical or curriculum approaches, focuses on anecdotal and idiosyncratic examples. This is, perhaps, quite understandable, given that system-wide initiatives aimed at the “boy problem” are hard to find beyond those in Australia.

#### **Australia**

In 2001, the Australian government commissioned a study “to investigate how systemic factors affect the educational performance and outcomes of boys and how these can be addressed in the school context. These systemic factors include family, school and community environments, peer culture, student–teacher relationships and teacher–classroom practices. The research seeks to understand how these variables affect the educational experiences and achievement of boys and girls from different socio-economic status (SES)

backgrounds and to determine which school and classroom strategies ensure the best academic and social outcomes for all students.”<sup>53</sup>

The report goes on to discuss and evaluate specific strategies and programs implemented in certain schools and draws some conclusions about what schools can do to achieve positive academic and social outcomes for both boys and girls.

In summary, the authors of the study concluded the picture is complex, and the question of how best to address the educational needs of boys is a “professional issue for teachers about which opinions are divided”, and, indeed, one which “touches on strongly held personal values and as such can provoke acrimonious debate.” (p. 118) It further notes that, while some general conclusions can be drawn and lessons learned from the specific strategies employed in the school studies, these conclusions need to be “recontextualized” to take into account the idiosyncratic history, culture, community and professional staff relationships that differentiate individual schools and communities.

Having entered these important caveats, the report goes on to report its general conclusions and lessons, in the following terms:

- “There is very strong evidence from the Case Study Schools that it is the quality of teacher–student relationships and the quality of the classroom pedagogies that are central school-based factors in achieving good educational outcomes for both boys and girls.
- Furthermore, there is additional evidence to demonstrate the need for schools to align those pedagogies with curriculum purposes and assessment practices.
- Teachers and their practices appear to be the core element in good and effective strategies for addressing the educational needs of boys. Indeed, these are the core elements in effective schooling for all students.
- In turn, this would seem to imply teacher professional development within schools and systems as a very important strategy for addressing the educational needs of boys.
- It would also suggest the need to make pedagogy in schools more intellectually demanding, more connected to the students’ lives and the world beyond the classroom, more socially supportive, along with greater recognition of differences amongst the student body. These are the characteristics of productive pedagogies. The alignment of such pedagogies with assessment practices and curriculum goals is also central here.”<sup>54</sup>

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<sup>53</sup> Lingard, Martino, Mills and Bahr, *Addressing the Educational Needs of Boys*, Research Report submitted to Department of Education, Science and Training, November 2002.

<sup>54</sup> *Ibid*, p. 119.

## United Kingdom

It was noted earlier that a National Audit Office review of academic achievements in maintained secondary schools found that a series of specialized schools (including boy-only and girl-only schools) performed better than the average of maintained schools generally. The study also found that gender was a relatively insignificant factor affecting achievement, however.

In addition to the rather muted findings regarding such specialized school organizational models, the NAO noted a number of characteristics that make an effective school in terms of the quality of education, including:

- a clear ethos or vision, related to the school's particular circumstances;
- effective leadership and management;
- high-quality teaching;
- effective procedures for encouraging pupil attendance and good behaviour; and
- strong links with parents and the local community.<sup>55</sup>

While not reflecting evaluative evidence, per se, Thompson's article on male and female participation and progression in higher-education comments that interventions aimed at improving educational outcomes need not necessarily be gender-focused.

121. It is not necessary for initiatives to reduce non-completion to be specific to men for them to reduce the gap in HE achievement. For example, improving retention in high risk subjects like engineering would also help more men than women. Another example, which is relevant across a wider range of subject areas, concerns attendance. Improving attendance records and developing strategies to identify students at the early stages of disengagement from programmes could help all at risk students and reduce non-completion overall, but it may also reduce the gap in completion between men and women<sup>40</sup>.

A 2008 report by the National Audit Office (<http://web.nao.org.uk>) assessed efforts to widen participation in higher education, pursuant to the government's 2003 White Paper, *The Future of Higher Education*. It noted that the previous five years had seen some improvements, but not for all groups. "The participation rate for men is currently 10 percentage points below that for women", and, while participation of young, full-time students from lower socio-economic backgrounds had improved by 2% over the previous four years, they still made up only 29% of young, full-time, first-time entrants while constituting around one half of the English population. The report noted that "[l]ow achievement by some pupils in secondary schools is the principal reason for the difference between rates of participation in higher education for different groups. Notably, all applicants with the necessary qualifications are equally likely to accept a higher education place

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<sup>55</sup> *Making a Difference*, NAO, p. 7.

as others with the same level of attainment, regardless of their family background.”<sup>56</sup>

## **United States**

In light of all the earlier material reviewed on this topic, it will perhaps not be surprising to read that specific evaluations of effectiveness of interventions in the U.S. are not easy to find. Most of the examples used about promising interventions focus on the same topics as those already canvassed in the context of Australian and British examples, but it seems fair to observe that most of the “evidence” adduced in support of such interventions is anecdotal rather than systematic in nature. The arguments in favour of focusing on such things as single-sex classes or schools, or “boy-friendly” curriculum or teaching techniques, point to specific examples tried out in specific schools or by specific teachers, and try to make the case that their individual successes ought to be seen as “models” that should be taken to scale and implemented on a systemic basis.

In a sense, this is unsurprising given the relative lack of “top-down” governmental or institutional focus on the question of gender differences in schooling or PSE. In another sense, too, it may be quite reasonable to argue from example, and suggest that techniques that appear to have positive effects in some situations might well be tried in other situations.

But it seems important to add the proviso that was contained in the Australian review of case studies, cited above, that it is important to “recontextualize” specific intervention strategies to take into account the idiosyncratic community and school-specific conditions and relationships. How this is to be accomplished in practice, however, is not a question that has been explored in detail in any materials we have discovered in our brief survey of the field.

Another topic that has been raised in this context is the theory that male and female brain development and learning styles are generally different, and that improved knowledge of the specifics of those differences can, and should, be taken into account by separating boys and girls in classes or in single-sex schools, and in designing curriculum and pedagogical approaches. Michael Gurian and Leonard Sax are perhaps the leading proponents of this approach, citing developments in neurosciences as support for their conclusions. Others, however, are sharply critical of such conclusions, arguing that experts in the field of neurobiological and neuropsychological development recoil in horror at what they consider to be unsupportable over-reaching conclusions from their findings. Whitmire cites Lise Eliot, an associate professor of neuroscience in Chicago, as arguing in a *USA Today* article that:

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<sup>56</sup> *Widening Participation in Higher Education*, National Audit Office, London, June 2008, p. 6.

“While subtle gender differences exist in sensory, motor, cognitive and emotional skills, sex typically accounts for only 1% to 5% of the total variance—meaning the range of such abilities is much larger within a group of girls or boys than between the sexes. And yet, we have educators who believe they should separate boys and girls because of differences in hearing or visual abilities, serotonin or oxytocin levels, corpus callosum or planum temporale sizes.... Scientists often publish data showing profound gender similarities, but these studies rarely make it into public view. Rather, it is the studies reporting gender differences, however small or tentative, that are hyped. The same is true for research on single-sex K–12 education, which has generally found that success in such settings is not caused by gender segregation per se, or even gender-gearred instructional techniques, but to the high expectations, dedicated faculty, family involvement and engaged students who choose to attend such <sup>57</sup> schools.”

Because the U.S. is such a large and varied jurisdiction, with education a state responsibility, the array of anecdotes from among to choose is also fairly large and varied: a positive development for those who argue for the need for changes to address what they see as a deeply troubling set of gender-focused trends. Intensified literacy instruction, volunteer tutoring programs, more “relevant” high-school curricula, and so on are cited by Whitmire as examples of interventions showing promise in responding to the question of “why boys fail.” He notes that 514 schools were provided with federal funding to experiment with single-sex education by the end of 2008, but expresses frustration that the Bush administration authorizing the experiments “offered no research on how to conduct the experiment” and, even worse, “didn’t launch any research to track what was playing out” in those schools. (p. 195)

## Canada

CCL’s 2007 report on post-secondary education noted the growing gender gap in post-secondary enrolment and graduation rates, and observed that “[t]he widening of this gender gap is as important today as it used to be when females were under-represented in the PSE sector and requires close monitoring.”<sup>58</sup> The report also included a table from the OECD showing that the proportion of 20–24 year old males far outnumbered females of the same age in terms of those who did not complete upper-secondary education and are not in education and are unemployed. This phenomenon was found not only in Canada, but through many or most OECD nations.

As noted earlier, Ontario and Quebec are the two provincial jurisdictions that appear to have been most explicitly focused on improving boys’ performance in reading and literacy. Specific evaluative evidence of the effectiveness of such

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<sup>57</sup> Whitmire, p. 197.

<sup>58</sup> *Post-secondary education in Canada: Strategies for Success*, Canadian Council on Learning, 2007, p. 77 and 74.

interventions, however, was not identified during our review of available materials.

### **Concluding observations**

Evidence of effectiveness of particular models or interventions is not easy to find. While frustrating, this is perhaps not surprising in light of the fact that the central question of the meaning and implications of this “boy gap” is freighted with complexity, ambiguity and uncertainty—and not a little controversy. A major meta-analysis of thousands of studies on the contribution of various factors affecting student achievement concludes that gender differences account for an impact of only 0.12 of a standard deviation<sup>59</sup>, which raises the question of “why we are so constantly immersed in debates about gender differences in achievement—they are just not there.”<sup>60</sup> In other words, the similarities between males and females are much more striking than the differences, and, “[o]verall, the differences between males and females should not be of major concern to educators. There is more variance within groups of boys and within groups of girls than there are differences between boys and girls.”

If this is the case, then the question might justifiably be asked why females are so dominant in recent years in terms of secondary-school results and post-secondary participation. A number of analysts suggest that one answer likely lies in the differences in opportunity structures that persist between men and women in the labour market.<sup>61</sup> Many men are still able to find good jobs, and earn good livings, through employment in areas not requiring university, such as in the trades. The differences in net-life earnings for males, when factoring in such things as the direct and opportunity costs of undertaking post-secondary education, therefore make it a rational decision for males to forego university. Such is not so much the case for women, who understand that their access to better-paying career opportunities very much depends on their attaining university credentials. The statistics on gender comparisons of earnings shows that, while the gap is closing in recent years, males still earn more than females (although this can be attributed to a range of factors).

Others, however, continue to be deeply worried about the implications of the gender gap over the longer term, and persist in calling for more study, more resources, and more policy and program development in an effort to ameliorate those implications.

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<sup>59</sup> John Hattie's, *Visible Learning: A Synthesis of over 800 meta-analyses relating to achievement*, Routledge, Milton Park and New York, 2009. Hattie's analysis argues that a deviation of at least 0.4 must be attained to constitute a meaningful level of impact, arguing that almost any factor or intervention has at least some positive impact, but the question is to identify what are significant factors.

<sup>60</sup> John Hattie, p. 55.

<sup>61</sup> The point is made by, among others, Thompson, and Louis Christofides of the Department of Economics, Universities of Cyprus and Guelph (et al), “The Gender Imbalance in Canadian Universities (1977–2003)”, April 2006”, web copy.

In terms of specific interventions, Australia is the best example of a jurisdiction which has made a concerted attempt to improving the performance of boys, while being careful not to reverse or impede the gains made by girls in recent decades.

As noted above, most jurisdictions position policy and program initiatives within a much-broader contextual framework: aiming to raise participation and achievement levels generally, and/or targeting disaggregated sub-populations facing particular obstacles, barriers or difficulties. These sub-populations may include sub-populations of boys or girls. Examples include the references by ACE in the U.S. to the most-significant gap being among foreign-born Hispanic males. But ACE goes on to note that many other sub-populations are also lagging, and in need of attention.

This kind of approach is much more typical than is any policy or program initiative targeting “boys” in general, which might be seen as providing an insufficiently disaggregated analysis of the problem, and therefore an inappropriate level of action for policy and program intervention. It also attempts to sidestep the political controversy that often arises when the focus on boys is viewed as an attempt to undo the progress of girls in recent decades.

The need for a more-comprehensive contextual viewpoint to be adopted in the search for useful interventions is stated persuasively by the Australian review of case studies. The report argues that the divisions in views that arise over the issue of the “gender gap” often resulted in “[S]trategies for improving the social and educational outcomes of boys [that] were often understood in terms of the following unhelpful binaries. In most cases,” the report concluded, “there is a clear need to reconcile both sides of the binary. For example:

1. a general focus on reforming pedagogy as opposed to directly addressing boys’ educational needs;
2. a focus on student welfare and discipline as opposed to a focus on student academic outcomes;
3. an emphasis on socio-economic effects as opposed to gender effects in schooling;
4. an emphasis on commonalities as opposed to differences amongst boys;
5. an emphasis on boys as opposed to an emphasis on girls;
6. an emphasis on teacher effects as opposed to whole-school effects;
7. an emphasis on out-of-school effects as opposed to within school effects;
8. single sex classes/schools as opposed to co-educational classes/schools;
9. male teachers as opposed to female teachers;
10. an emphasis on targeted reform projects for boys as opposed to the creation of a school learning community;
11. an emphasis on developing teachers’ pedagogical repertoires or teaching skills as opposed to developing teacher knowledges of subject areas, individual student differences, the construction of gender, community research, policy and the purposes of schooling;

12. an emphasis on boys' biology, maturity and developmental stage as opposed to an emphasis on the social dimensions of masculinities;
13. an emphasis on academic as opposed to social outcomes.<sup>62</sup>

The conclusions reached in this Report seem as relevant today as when they were written eight years ago. Analysis of the case studies in Australia that focused on boys' schooling led the researchers to identify seven specific themes as being of specific significance in relation to the attitudes and experiences of boys in school:

- (i) The influence of school environment and the peer group;
- (ii) The influence of teachers and their pedagogies;
- (iii) The impact and effect of masculinity or specific gender concepts;
- (iv) The need for professional development;
- (v) Moving beyond a narrow focus on boys' educational strategies to a broader focus on pedagogies and critical reflective practice;
- (vi) The need for systemic and school-based gender policies; and,
- (vii) The need for longitudinal data collection regarding differential gender-based subject choices, and academic and social performance at system and school levels. (123)

As was noted above, the Australian review of case studies took pains to note that the more general lessons and directions learned about what might work in schools must be "recontextualized" to take into account the specific conditions faced in individual communities and schools. Sounding a similar note, the U.K. website on the 2008 "gender agenda" initiatives identifies a number of factors, and a "tool kit" of potential approaches aimed at improving the performance of boys, but goes on to note that: "[e]ach school has its own history, culture, relationship with its community, professional staff and so on. While the problems they experience have much in common, the solutions to these problems must be set against the specific context of any given school. There are no easy solutions. Rather there is a pressing need for schools to continually be trying things out and evaluating their success. This is central to an effective school learning community.

Schools will be better able to address underachievement in the performance of boys and girls if they know when and where they emerge. A careful analysis of data, mapping the development of male and female pupils, particularly the value-added data, including a breakdown of data by key pupil sub-groups, will enable schools to plan when and how to intervene. Schools should monitor pupils' progress regularly by gender (e.g. by comparing National Curriculum points score between boys and girls at the same school), be sensitive to the particular

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<sup>62</sup> Lingard et al, p. 121.

patterns of achievement of their own pupils and understand how these relate to patterns in comparable schools and localities.”<sup>63</sup>

Before determining what kinds of models or interventions are of most use, it seems to be the case that, as in so many cases, we need a lot more information before we can draw conclusions. As the Australian studies states: “[t]his research is in support of moving beyond a ‘tips for teachers’ approach or model of educational reform in relation to addressing the educational needs of boys. What is required is the bringing together of sophisticated research-based knowledge—about the ways gender issues affect schooling for both boys and girls—with deep knowledge of the best pedagogical practices and most effective whole school reform strategies.” (131)

“The way forward for schools is to create professional learning communities for staff which are committed to the provision of enhancing teacher threshold knowledges and broader understandings about the impact and effects of gender concepts, family, school and community environment, peer culture, student–teacher relationships on both boys’ and girls’ attitudes, expectations and engagement with schooling. These threshold knowledges then need to underpin productive pedagogies and their alignment with demanding curriculum and assessment practices. System and school policies about gender equity would appear to be necessary at this particular policy moment in education. Such policies would help to counter unhelpful representations of the issues which often precipitate conflict and one-dimensional solutions, rather than contributing to enhanced professional understandings and practices.” (132)

On the basis of our very quick, and admittedly non-comprehensive, review of materials from several jurisdictions on the topics identified, the “boy crisis” as a label, therefore, seems to be a potentially useful entry point into examination of a number of societal, cultural, educational, economic and labour-market issues of importance. But it should be viewed as just that—an entry point—highlighting the need for more nuanced and disaggregated attention to be paid to the various kinds of interventions that might be helpful in “attenuating” problematic outcomes for boys—or, more precisely, for particular sub-populations of boys. These “problematic outcomes”, however, also need to be seen—for all kinds of reasons—as subsets of a more general appreciation of the differential starting conditions, impacts and outcomes experienced by a large number of such disaggregated sub-populations of boys and girls, men and women, who face obstacles, difficulties and barriers. It is not, and never has been, a case of “one size fits all”.

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<sup>63</sup> <http://nationalstrategies.standards.dcsf.gov.uk/node/46121>