

2. Has Canada's performance in education been declining over time?

Yes, although the nature and extent of the decline has tended to be exaggerated, and has not eroded Canada's position as an overall high achieving country in education.

Canada's PISA scores in all three domains (reading, math and science) have been declining since the original study was published in 2000. While the trend is noticeable in all three domains, it is only statistically significant in the domains of mathematics and science (see Chart 1).

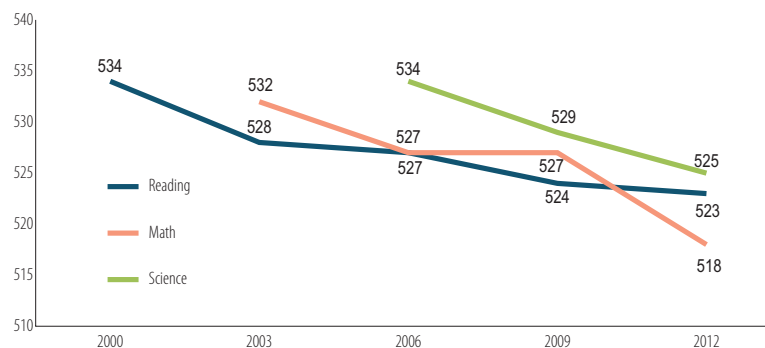
- In math, the proportion of Canadian students performing at the highest levels slipped from 20 to 16 percent between 2003 and 2012, while the proportion performing below the lowest level rose from 10 to 14 percent.¹¹

It is important not to confuse the decline in Canada's scores over time with the apparent decline in Canada's placement in the so-called PISA "rankings" – that is, its placement relative to other participants in the study. Canada has indeed fallen in its rank: for instance, in 2000, Canada placed second in reading, compared with ninth place in 2012; similarly, Canada placed seventh in math in 2003, but only 13th in 2012. This comparison of rankings over time, however, is misleading for two reasons.

- First, a number of new economies have joined the PISA study in each cycle; there were 32 participating economies in 2000 and 45 in 2003; this grew to 65 in 2012. Thus it is not clear whether Canada's relative placement of 13th out of 65 economies in math in 2012 is actually worse than its 7th place out of 45 economies in 2003.
- Second, the rankings do not take into account the margins of error associated with the mean scores; many of the differences between the scores of participating economies are not statistically significant.

Once these nuances are taken into account, Canada's decline in rankings appears less dramatic. In reading, Canada was surpassed in a statistically significant way by only one economy in 2000 (Finland); excluding economies that joined the PISA study after 2000, Canada was surpassed in a statistically significant way in 2012 by only two economies (Japan and Korea) – hardly a dramatic change. In math, Canada was out-ranked (again, in a statistically significant way) by two economies in 2003, and by six in 2012 (excluding newcomers to the study).

Chart 1
Trends in PISA Mean Scores
Canada (2000-2012)



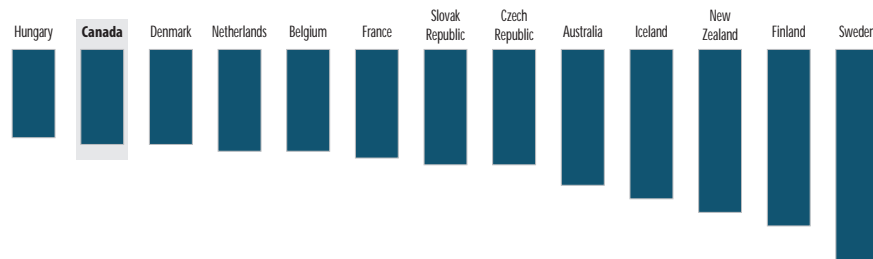
Source: Pierre Brochu, Marie-Anne Deussing, Koffi Houme, and Maria Chuy, *Measuring Up: Canadian Results of the OECD PISA Study* (Toronto: CMEC, 2013).

¹¹ Pierre Brochu, Marie-Anne Deussing, Koffi Houme, and Maria Chuy, *Measuring Up: Canadian Results of the OECD PISA Study* (Toronto: CMEC, 2013), Table B.1.18, p. 72. See: http://cmecc.ca/Publications/Lists/Publications/Attachments/318/PISA2012_CanadianReport_EN_Web.pdf

It is also worth noting that Canada is not the only high achieving country to experience a decline in PISA scores. In fact, several often celebrated PISA performers, such as Finland and the Netherlands, have seen a greater drop in math scores

than has Canada (see Chart 2). This doesn't mean that the decline in Canada's scores is not a cause for concern; but it does mean that Canada is neither a special nor a relatively alarming case.

Chart 2
Change in PISA Math Scores
(2003-2012)



Source: OECD, PISA 2012 Results: What Students Know and Can Do – Student Performance in Mathematics, Reading and Science (Volume I) (Paris: OECD, 2013), Table I.2.3.b (page 306); Chart only includes figures for OECD countries whose declines are statistically significant.