# 1. Is Canada's performance in education really among the best in the world?

**Yes. Canada may not be the world's top performer, but it consistently places among an elite group of high performing countries and economies. Canada's relative advantage is diminishing over time, however, because a number of other rapidly modernizing countries are catching up.**

Considerations of performance in education can focus on two distinct measures: educational attainment (the number of years or levels of education completed), and educational achievement (the outcomes of education as measured through learning assessments).

## Educational attainment

Canada leads the world in terms of educational attainment. A greater proportion (53 percent) of adult Canadians have a tertiary (i.e. college or university) degree than is the case in any other OECD country. On this basis, Canada can claim to be the world's most educated country.[3]

Critics argue that this interpretation of the figures inflates Canada's advantage, for two reasons.

- First, Canada may be in top spot when considering the educational attainment of all adults, but falls to third place when considering only younger adults (25-34 years). This suggests that a number of countries are catching up with and overtaking Canada, as they make gains in education at a faster pace.[4]

Table 1
Education Attainment, OECD
(Top 20 countries in each category)

| COUNTRY | Percent with Tertiary Degree (25 to 64 years of age) |
|---|---|
| **Canada** | **52.6** |
| Japan | 46.6 |
| Israel | 46.4 |
| United States | 43.1 |
| Korea | 41.7 |
| Australia | 41.3 |
| United Kingdom | 41.0 |
| New Zealand | 40.6 |
| Ireland | 39.7 |
| Finland | 39.7 |
| Luxembourg | 39.1 |
| Norway | 38.6 |
| Estonia | 37.3 |
| Switzerland | 36.6 |
| Sweden | 35.7 |
| Belgium | 35.3 |
| Iceland | 35.2 |
| Denmark | 34.8 |
| Netherlands | 34.4 |
| Spain | 32.3 |

| COUNTRY | Percent with Tertiary Degree (25 to 34 years of age) |
|---|---|
| Korea | 65.7 |
| Japan | 58.6 |
| **Canada** | **57.3** |
| Luxembourg | 49.9 |
| Ireland | 49.2 |
| United Kingdom | 47.9 |
| Australia | 47.2 |
| New Zealand | 46.9 |
| Norway | 45.0 |
| Israel | 44.5 |
| United States | 44.0 |
| Sweden | 43.5 |
| Netherlands | 43.0 |
| Belgium | 43.0 |
| France | 42.9 |
| Poland | 40.8 |
| Switzerland | 40.6 |
| Denmark | 40.2 |
| Estonia | 39.8 |
| Finland | 39.7 |

| COUNTRY | Percent with University Degree (25 to 64 years of age) |
|---|---|
| Norway | 36.2 |
| United States | 32.6 |
| Israel | 32.5 |
| Netherlands | 31.6 |
| Iceland | 31.1 |
| United Kingdom | 31.0 |
| Australia | 29.8 |
| Denmark | 29.2 |
| Korea | 28.4 |
| **Canada** | **27.7** |
| Sweden | 26.6 |
| Japan | 26.4 |
| Finland | 26.2 |
| Luxembourg | 26.1 |
| Switzerland | 25.8 |
| New Zealand | 25.3 |
| Ireland | 24.9 |
| Estonia | 24.6 |
| Poland | 24.5 |
| Spain | 22.7 |

| COUNTRY | Percent with University Degree (25 to 34 years of age) |
|---|---|
| Norway | 44.2 |
| Poland | 40.8 |
| Netherlands | 40.5 |
| United Kingdom | 40.1 |
| Korea | 39.9 |
| Finland | 38.9 |
| Australia | 36.7 |
| Iceland | 35.8 |
| Luxembourg | 35.7 |
| Japan | 35.2 |
| Denmark | 34.9 |
| United States | 34.1 |
| Sweden | 34.1 |
| Ireland | 33.2 |
| New Zealand | 32.8 |
| Israel | 32.8 |
| **Canada** | **31.8** |
| Switzerland | 31.7 |
| Hungary | 29.0 |
| Portugal | 28.3 |

Source: OECD, Education at a Glance 2014, tables accessed at http://www.oecd.org/edu/education-at-a-glance-2014-indicators-by-chapter.htm.

[3] Some non-OECD countries, such as the Russian Federation, may in some categories have better results than Canada, but the data may not be as comparable or reliable.

- Second, Canada's top ranking in terms of tertiary education attainment is a product of its unusually large college sector, which masks more mediocre outcomes in the university sector. One in four adult Canadians has a college degree, compared with the OECD average of one in ten. While Canada leads the OECD in attainment at the college level, it is only in tenth spot for university degrees – and this falls to 17th spot when considering university degrees among the younger 25-34 year old age group[5]

## Educational achievement

**Educational achievement is measured through a variety of international assessments of the abilities of students in key subjects such as reading, math and science. While the results of each study are important, the best portrait of any country's performance emerges from a consideration of the pattern of results across several studies over time. This section will review the main findings from the most recent studies before examining the general pattern – a pattern that is largely positive.**

An international study of the reading abilities of grade four students published in 2011 (the Progress for International Reading Literacy Study) placed Canada well above average, though not quite in the highest performing group of countries and economies.[6]

- Of the 45 countries and economies participating in PIRLS 2011, seven[7] outperformed Canada: Hong Kong, the Russian Federation, Finland, Singapore, Northern Ireland, the United States, and Denmark. Six other countries and economies performed at the same level as Canada (Croatia, Chinese Taipei, Ireland, England, the Netherlands, and the Czech Republic). Canada performed better than the remaining 31 participating countries.

Similarly, in the latest round of the more widely known PISA study (Programme for International Student Assessment) of 15-year old students, Canada also performed well above average, if slightly below the very top cluster of high-achieving countries.

- In PISA 2012, Canada was outperformed by only three other OECD countries and economies in math, four in science and two in reading.
- Taking all PISA participants into account (and not just OECD member countries), Canada was outperformed by nine of 65 countries and economies in math, five in reading and seven in science.[8]
- Canada did even better on the additional PISA computer-based test that focused on problem solving. Among OECD countries, only Korea and Japan performed better than Canada; five additional non-OECD members also outperformed Canada, namely Singapore, Macao-China, Hong Kong-China, Shanghai-China, and Chinese Taipei.[9]

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[4] In many ways, Canada's top position overall simply reflects the fact that its postsecondary education system expanded somewhat earlier in the postwar period than did that of many European or Asian countries; thus older Canadians – many of whom had the opportunity to obtain a college or university education – enjoy a significant educational advantage over their OECD counterparts that no longer holds for younger generations.

[5] It should be noted that this last objection is valid only if one concedes that a university degree is "higher" than or superior to a college diploma, and therefore that Canada's overall performance in terms of tertiary education attainment is not as good as it looks because it is so heavily weighted to the college side. A viable counter-argument is that Canada's dominant college sector gives the country a competitive advantage in terms of the practical and technical skills in demand in the contemporary labour market.

[6] Council of Ministers of Education, Canada (CMEC), PIRLS 2011 - Canada in Context: Canadian Results from the Progress in International Reading Literacy Study (Toronto: CMEC, 2012), accessed at http://cmec.ca/Publications/Lists/Publications/Attachments/294/PIRLS_2011_EN.pdf ; highlights available at http://www.cmec.ca/docs/pirls/PIRLS_2011_Highlights_EN.pdf.

[7] These results take into account the margins of error; countries and economies outperforming Canada have average scores that are higher than Canada's in a statistically significant way. Countries and economies performing at the same level have scores whose difference from Canada's (whether higher or lower) is not statistically significant.

[8] See the OECD's snapshot of performance in the three domains at http://www.oecd.org/pisa/keyfindings/PISA-2012-results-snapshot-Volume-I-ENG.pdf.

[9] CMEC, "How Good are Canadian 15-year-olds at Solving Problems? Further Results from PISA 2012," Assessment Matters, No. 6 (2014); see: http://cmec.ca/Publications/Lists/Publications/Attachments/324/AMatters_No6_EN_Web.pdf.

The same picture emerged from a lesser known study of computer skills – the International Computer and Information Literacy Study (ICILS) – published late last year. ICILS placed Ontario's grade eight students at the very top, alongside the Czech Republic and Australia, and ahead of the 17 other participating countries including Korea and Germany.[10] (Newfoundland and Labrador, the only other Canadian province to participate, didn't do quite as well as Ontario, but still scored above average, and did as well as countries such as Germany.)

How can Canada's performance across these various different studies best be summarized? Canada does not place at the very top of any one study, but consistently performs well – certainly well above the international average – and tends to be surpassed by a relatively small number of other countries or economies. Indeed, what is notable is that there are very few countries or economies that regularly do better than Canada (see Table 2). Among OECD countries, only Korea and Japan almost always do better than Canada. Canada is also consistently out-performed by the Asian city-regions of Hong-Kong, Shanghai and Singapore. But no country outside of east Asia performs better than Canada on a consistent basis.

- While it is certainly true that Canadian students are being outclassed by students in east Asia, the same is true of students throughout the west. The new benchmark in education that these Asian economies have set must be taken seriously. The point here is that no western country is currently better positioned in education relative to these "Asian tigers" than Canada.

## Table 2
## Canada's Performance in Comparative Perspective

| Country (or "Economy") | Reading - Grade 4 (PIRLS) | Reading - 15 year olds (PISA) | Math - 15 year olds (PISA) | Science - 15 year olds (PISA) | Problem-Solving - 15 year olds (PISA) | Computer Literacy - Grade 8 (ICILS) |
|---|---|---|---|---|---|---|
| Those performing better than Canada* | **Hong Kong SAR**<br>Russian Federation<br>*Finland*<br>**Singapore**<br>*Northern Ireland*<br>*United States*<br>Denmark | **Shanghai-China**<br>**Hong Kong-China**<br>**Singapore**<br>***Japan***<br>***Korea*** | **Shanghai-China**<br>**Singapore**<br>**Hong Kong- China**<br>Chinese Taipei<br>***Korea***<br>Macao-China<br>***Japan***<br>Liechtenstein<br>*Switzerland* | **Shanghai-China,**<br>**Hong Kong-China,**<br>**Singapore**<br>***Japan***<br>*Finland*<br>*Estonia*<br>***Korea*** | **Singapore**<br>***Korea***<br>***Japan***<br>Macao-China,<br>**Hong Kong-China**<br>**Shanghai-China**<br>Chinese Taipei | – |
| Those performing as well as Canada* | Croatia,<br>Chinese Taipei<br>*Ireland*<br>*England*<br>*Netherlands*<br>*Czech Republic* | *Finland*<br>*Ireland*<br>Chinese Taipei<br>*Poland*<br>Liechtenstein | *Netherlands*<br>*Estonia*<br>*Finland*<br>*Poland*<br>*Belgium*<br>*Germany*<br>Vietnam | Vietnam<br>*Poland*<br>Liechtenstein<br>*Germany*<br>Chinese Taipei<br>*Netherlands*<br>*Ireland*<br>*Australia* | *Australia*<br>*Finland*<br>*United Kingdom* | *Czech Republic*<br>*Australia* |

* for ICILS, the table shows countries or economies performing better than or the same as Ontario. OECD countries shown in italics. Countries performing better than Canada in three or more assessment domains are shown in bold.

[10] Mélanie Labrecque and Jessica Dionne, ICILS 2013 - Preparing for Life in a Digital Age: Results for Ontario and Newfoundland and Labrador (Toronto: CMEC, 2014); see http://www.cmec.ca/Publications/Lists/Publications/Attachments/340/ICILS2013_CdnReport_EN.pdf