5. Are the skills of Canadians adults only "average" by international standards?

Yes, but it is important to understand why.

High achievement in elementary, secondary and postsecondary education should translate into high performance on skills tests for adults. Yet the results of the Programme for the International Assessment of Adult Competencies (PIAAC) released in 2013 - which measured the performance of adults in literacy, numeracy, and problem solving on computers - placed Canada in the middle of the pack rather than near the top.[19]

- Canada placed slightly higher than the international average in terms of "problem solving in technology rich environments," at the international average in literacy, and below average in numeracy.
- In literacy, a third of the countries and economies participating in the study scored higher than Canada (in a statistically significant way): Japan, Finland, Netherlands, Australia, Sweden, Norway, Estonia, and Flanders (Belgium).

Even more puzzling, given the reputation of Canada's education systems, is that a breakdown of results by education level shows Canada lagging in each category (see the first four rows of Table 3).[20] If Canada has a high-performing education system, why do its graduates not out-perform the international norm?

Table 3
Literacy Scores by Education Level and Immigration Status

	CANADA	OECD AVERAGE
Less than high school	234	246
High school	267	271
College	276	284
University	300	302
University - Non-Immigrants	313	307
University - Immigrants	279	277

Source: CMEC and author's calculations; see http://www.conferenceboard.ca/Libraries/CONF_PRES_PUBLIC/13-0067_presentation_Andrew_2.sflb

Some of the answers to this riddle lie in the distinctive nature of the Canadian population. In comparing Canadian adults to adults elsewhere, three points in particular need to be taken into account. Canada has:

1) higher rates of education attainment;

2) a higher than average proportion of immigrants;

3) a higher than average proportion of adults whose first language is different from an official language.

Consider how these points affect literacy scores by educational attainment.

First, ironic as it may sound, Canada's lower scores for each education category is a reflection of its success.

- As education systems provide more opportunities for advancement, they become less exclusive: the higher echelons of the system are less likely to be reserved for a very high performing elite. The inclusion in Canada of 25 percent more of the population in the category of university graduates than the OECD average should naturally have a negative impact on the average literacy scores of these graduates, not because the postsecondary system has performed poorly, but because the population of students and graduates in Canada is more heterogeneous than those of most other OECD countries. (Put another way, Canada could easily raise the literacy scores of its university graduates by eliminating 25 percent of seats in university classrooms, thereby making the system more selective and elitist).
- Interestingly, the literacy scores for those who are at the lower end of the education spectrum also should be lower, and for the same reason. The more opportunities for accessing higher education there are, the more likely it is that those who do not do so are those who in fact face serious academic barriers. In countries with more exclusive higher education systems, by contrast, many academically proficient youth never have the opportunity to progress past high school, which has the effect of raising the average literacy scores of those who fall in lower educated categories.

[19] Canada's results for PIAAC are available in various materials at www.piaac.ca. The OECD's international report (Skills Outlook 2013) is available at http://www.oecd.org/site/piaac/Skills%20volume%201%20(eng)–full%20v12–eBook%20(04%2011%202013).pdf.

[20] See http://www.piaac.ca/docs/PIAAC2013/web_deck_of_findings.EN.pdf

Second, there is the impact of immigration. In all countries, there is a gap in PIAAC scores between immigrants and non-immigrants.[21] The gap is lower than average in Canada – in fact Canada is one of only a select group of countries that combine above average levels of immigration with above average scores for immigrants. That said, the high proportion of immigrants in the Canadian population (second highest in the PIAAC group of countries), and in particular the very high proportion of immigrants whose first language is other than an official language of the host country (the highest in the study) have an effect on overall scores. Mathematically, the above-average scores for Canadian immigrants can still serve to lower the overall score for Canadian adults as a whole more so than in most OECD countries, simply because of the numerical weight of the immigrant population.

- This is illustrated in Table 4. Canada ranks sixth in terms of the literacy scores of immigrants and seventh in terms of the scores of non-immigrants; the scores of the two groups combine nonetheless places Canada in 11th spot overall.

Furthermore, it is no surprise that the literacy scores for Canadians with a university degree, for example, are only average, given the relatively large proportion of our university graduates who either arrived in Canada with their degree in hand, or who face language barriers, or both.[22] Measures of the skills of adult Canadians do not differentiate between those who obtained their education in Canada and those who brought their credential with them. If we compare the scores for university graduates born in Canada with those of domestically born university graduates in other countries, Canada once again performs well above average (see the last two rows of Table 3, above).[23]

To be clear, the point here is not that Canada's PIAAC scores are not accurate or are somehow distorted by the effect of immigration. The point is simply that the scores cannot be taken simply as a reflection of Canada's education system. In countries with few immigrants, human capital is a product of education; but in Canada (and in similar countries such as Australia), it is a product of education and immigration combined. And importantly for the purposes of this discussion, the results for Canadian adults who received their education in Canada are much more encouraging than the headline PIAAC ranking of countries would suggest.

These points notwithstanding, there remains one genuinely concerning aspect of the PIAAC results for Canada, and that is the comparatively lower scores for the youngest cohort of Canadians.

- While the literacy scores of older Canadians are at or above the international average, this is not the case for those age 16 to 24 (see Table 5). Canadian young adults are outscored by twice as many countries (12) than are middle-aged Canadians (six).
- Another way of representing this is to consider the gaps between the scores of the older and younger age cohorts for different countries (see the final column of Table 5). The gap in Canada is relatively modest compared to that of most of the countries in the PIAAC study.

The story that these figures tell in one of a world that is increasingly competitive; as many industrialized countries make rapid gains in education and skills, the comparative advantage enjoyed by older generations of Canadians erodes (the same development was seen earlier in the discussion of education attainment). When framed in terms of a consideration of the comparative skills of the age cohorts exiting and entering the labour force, the implications for Canada's position in the world is clear.

Thus while the overall picture of Canada's performance in PIAAC remains positive, for the reasons discussed above, the below average performance of young adults in Canada gives pause.

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[21] OECD, Skills Outlook 2013, pp. 126 ff.

[22] As will be discussed below, Canada public school system does a remarkable job of ensuring the educational success of the children of immigrants. Immigrants who arrive in Canada as adults, however, do not have the benefit of a complete Canadian educational experience. In some cases, this may simply mean that they are less proficient in one of Canada's two official language than are those who are born or at least educated in Canada. In other cases, it may mean that they face a skills disadvantage relative to domestically educated Canadians with a similar credential.

[23] See the author's presentation to the Conference Board of Canada: http://www.conferenceboard.ca/Libraries/CONF_PRES_PUBLIC/13-0067_presentation_Andrew_2.sflb. As noted above, this does not mean that our immigrants are not doing well; to the contrary, their scores are also well above average. Indeed, there are two success stories here: that of our education systems, which produce competitive graduates, and our immigration system, which attracts newcomers who are more highly skilled that immigrants elsewhere. Again, these successes are washed out when the numbers are mushed together, in an average for the population as a whole that masks more that it reveals.

Table 4
PIAAC Literacy Scores

By Immigration Status, (Top 18 countries in each category)

JURISDICTION	LITERACY AVERAGE
Japan	296
Finland	288
Netherlands	284
Australia	280
Sweden	279
Norway	278
Estonia	276
Flanders (Belgium)	275
Czech Republic	274
Slovak Republic	274
Canada	**273**
OECD Average	**273**
Republic of Korea	273
England & N. Ireland (UK)	272
Denmark	271
Germany	270
United States	270
Austria	269
Poland	267

JURISDICTION	LITERACY AVERAGE BORN IN COUNTRY
Japan	296
Finland	291
Netherlands	290
Sweden	289
Australia	284
Norway	284
Canada	**280**
Estonia	279
Flanders (Belgium)	278
OECD Average	**276**
England & N. Ireland (UK)	276
Denmark	275
United States	275
Germany	275
Czech Republic	274
Slovak Republic	274
Austria	274
Republic of Korea	273
Ireland	268

JURISDICTION	LITERACY AVERAGE IMMIGRANTS
Australia	271
Slovak Republic	268
Czech Republic	268
Ireland	263
Estonia	256
Canada	**256**
England & N. Ireland (UK)	255
Austria	248
OECD Average	**247**
Netherlands	247
Norway	245
Flanders (Belgium)	242
Germany	241
Finland	240
United States	239
Denmark	238
Republic of Korea	235
Sweden	235
Spain	232

Table shows only OECD countries (or regions) and Ontario

Source: Author's calculations using the PIAAC international data explorer: http://piaacdataexplorer.oecd.org/ide/idepiaac/

Table 5
PIAAC Literacy Scores
By Age Group, (Top 20 countries in each category)

COUNTRY	24 OR LESS	COUNTRY	25-34	COUNTRY	35-44	COUNTRY	45-54	COUNTRY	55 PLUS	COUNTRY	GAP: 24 OR LESS MINUS 55 PLUS
Japan	299	Japan	309	Japan	307	Japan	297	Russian Fed.	275	Rep. Korea	49
Finland	297	Finland	309	Finland	299	Finland	284	Japan	273	Spain	37
Netherlands	295	Netherlands	298	Netherlands	294	Norway	277	Slovak Rep	266	Finland	37
Rep. Korea	293	Flanders (Belg.)	291	Australia	289	Netherlands	277	Eng & NI (UK)	265	Netherlands	34
Estonia	287	Sweden	290	Norway	288	Russian Fed.	277	United States	263	France	33
Flanders (Belg.)	285	Rep. Korea	290	Sweden	287	Australia	277	Australia	263	Poland	32
Australia	284	Norway	289	Flanders (Belg.)	282	Sweden	276	Czech Republic	262	Flanders (Belg.)	30
Sweden	283	Australia	287	Denmark	281	Flanders (Belg.)	272	Sweden	262	Austria	28
Poland	281	Czech Republic	287	**Canada**	**280**	Eng & NI (UK)	271	Norway	262	Italy	27
Czech Republic	281	Estonia	286	Eng & NI (UK)	279	Slovak Rep	270	Netherlands	261	Estonia	26
OECD Average	**280**	**Canada**	**285**	**OECD Average**	**279**	Estonia	269	Estonia	261	Japan	26
Germany	279	**OECD Average**	**284**	Slovak Rep	278	**Canada**	**268**	**Canada**	**260**	Germany	25
Austria	278	Denmark	282	Estonia	278	**OECD Average**	**268**	Finland	260	**OECD Average**	**24**
Denmark	276	Germany	281	Russian Fed.	278	Austria	266	**OECD Average**	**255**	Denmark	24
Slovak Rep	276	Eng & NI (UK)	280	Rep. Korea	278	United States	266	Flanders (Belgium)	255	Australia	21
Canada	**276**	Austria	280	Germany	275	Czech Republic	266	Germany	254	Sweden	20
Norway	275	Slovak Rep	278	Czech Republic	275	Denmark	266	Denmark	252	Ireland	20
France	275	France	278	Austria	275	Germany	264	Ireland	251	Czech Republic	18
Russian Fed.	274	Poland	277	United States	273	Ireland	259	Austria	250	**Canada**	**15**
United States	272	Ireland	276	Ireland	271	Poland	259	Poland	249	Norway	13
Ireland	271	United States	275	Poland	268	Rep. Korea	259	Rep. Korea	244	Slovak Rep	10

Source: Author's calculations using the PIAAC international data explorer: http://piaacdataexplorer.oecd.org/ide/idepiaac/