OECD Programme for the International Assessment of Adult Competencies

PIAAC in Canada

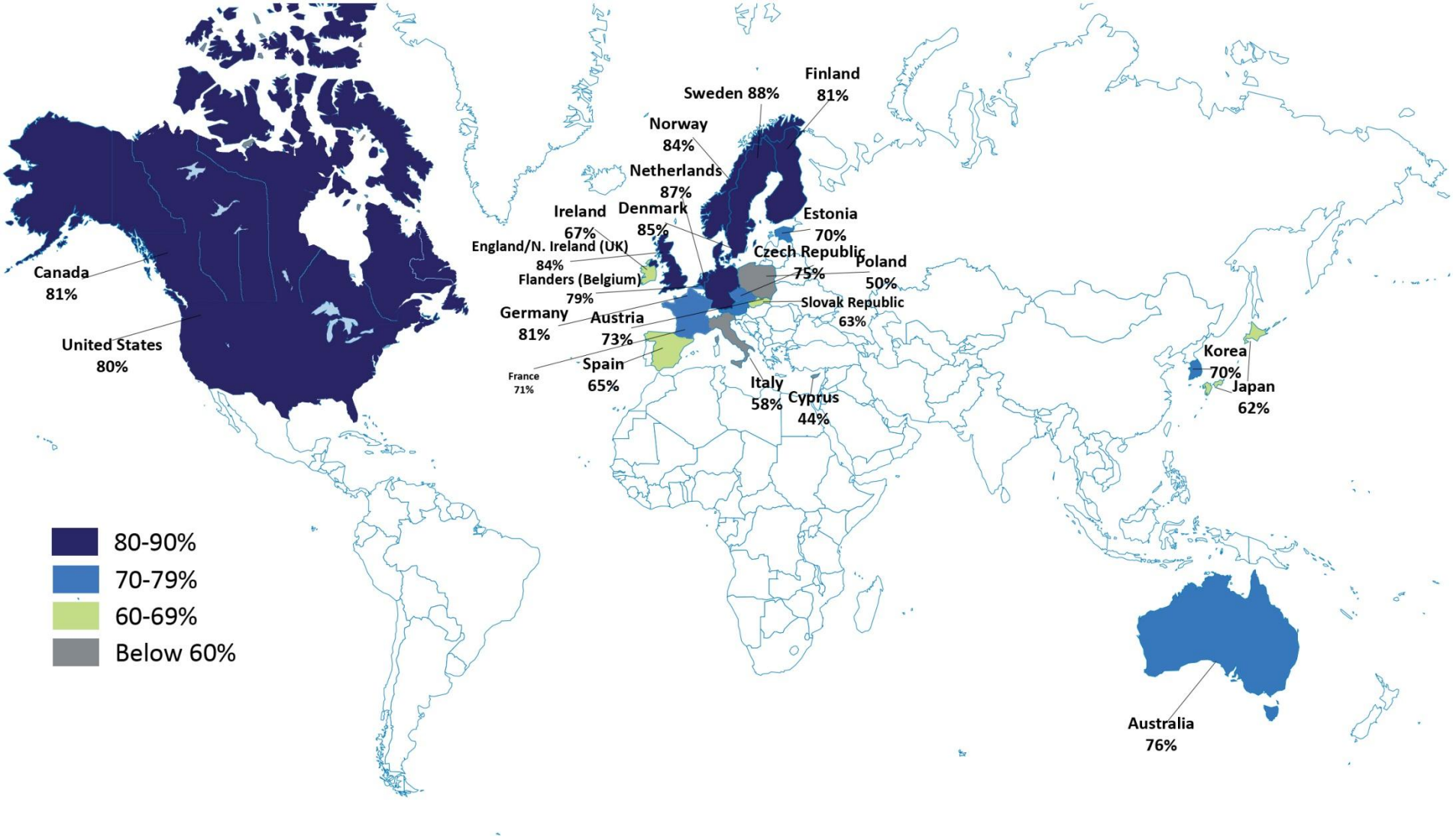
Slide Presentation

Skills for the 21st century

- ✓ Canadians are among those most equipped with the new skills demanded in the 21st century.
- ✓ Over four out of five Canadians were able to complete the computer-based assessment.
- ✓ Canadians are more likely than the OECD average to have higher levels of proficiency in the new domain of “problem solving in technology-rich environments.”

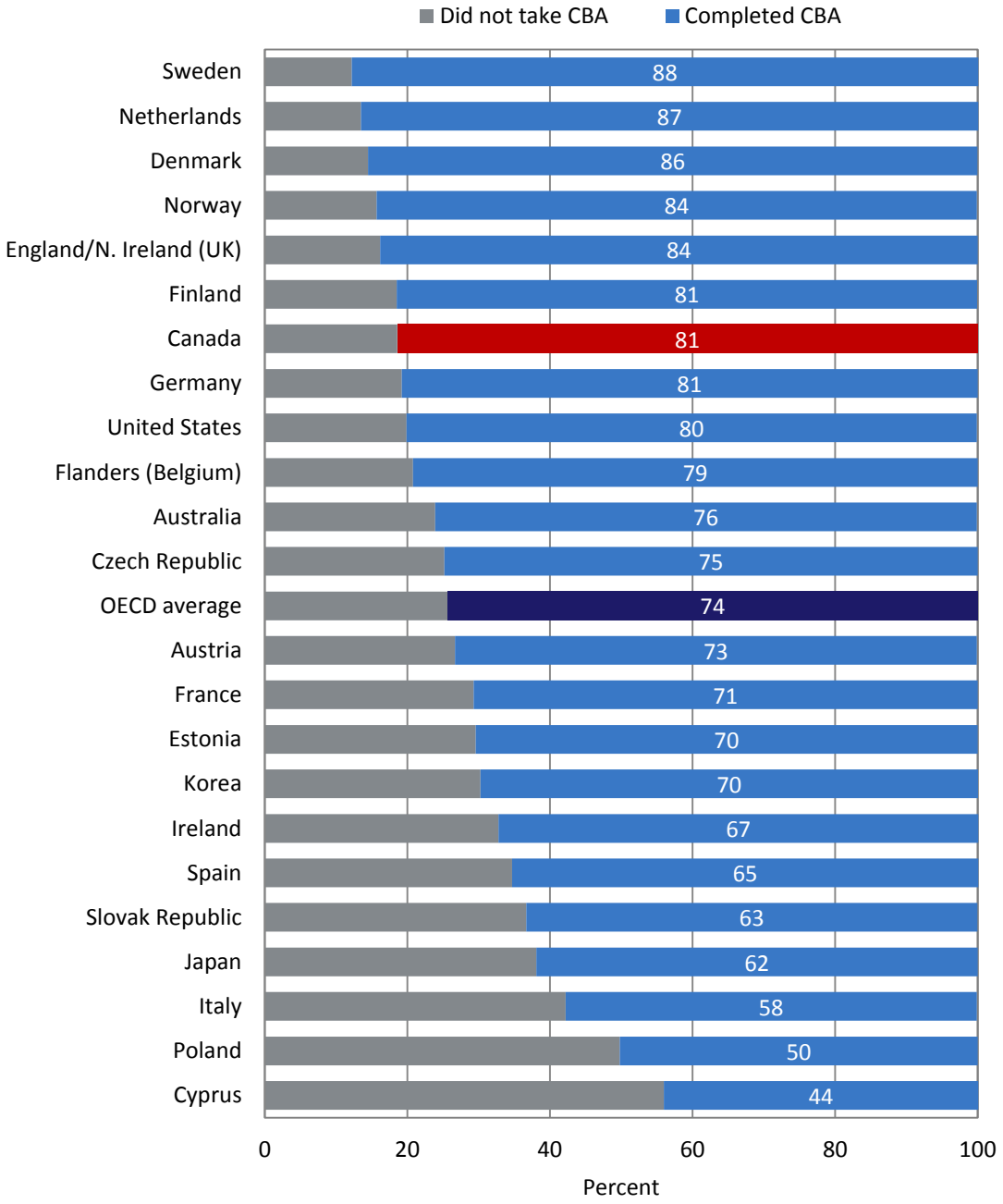
Skills for the 21st century

Proportion of population aged 16 to 65 that engaged in the computer-based survey, countries, 2012



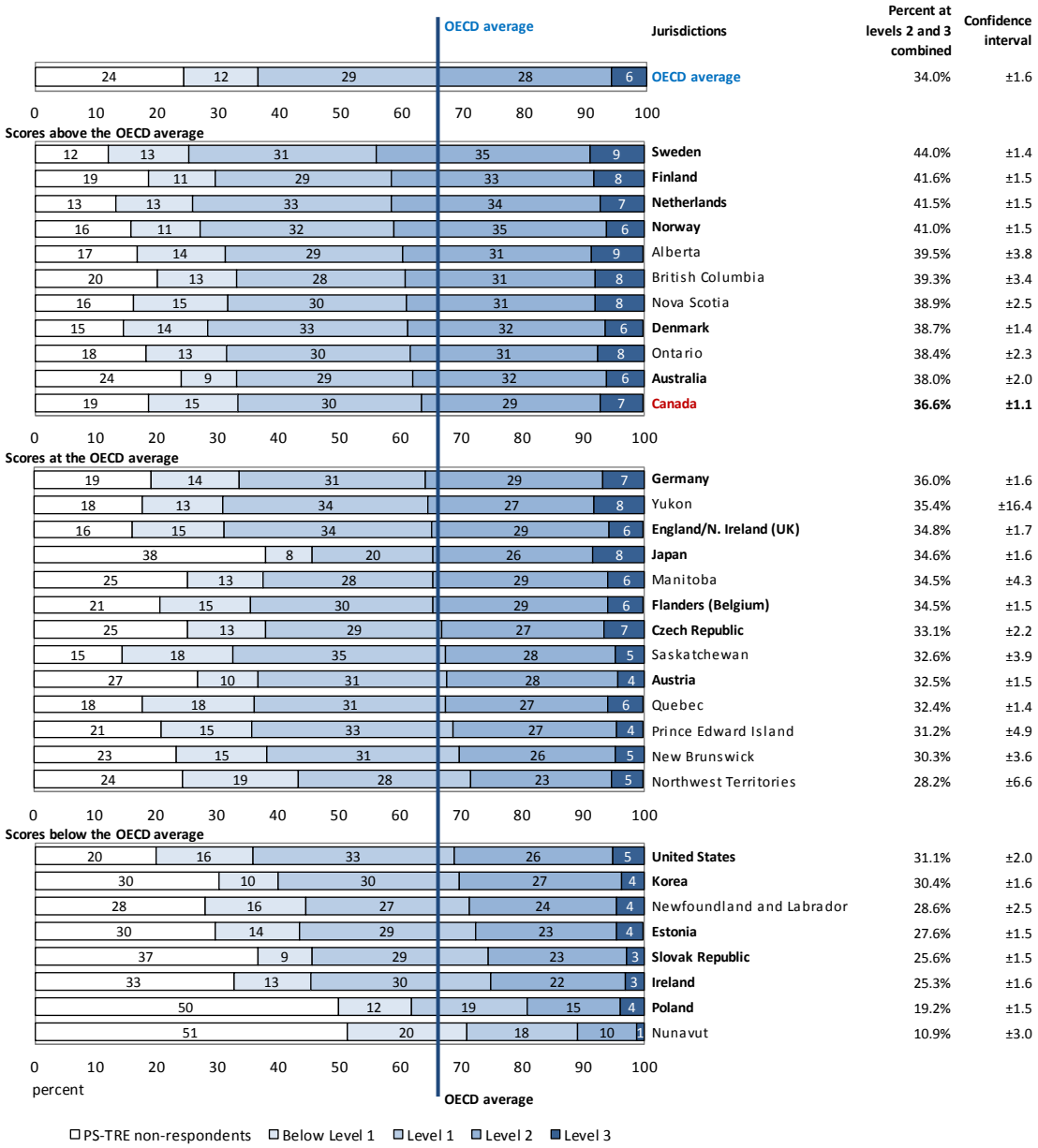
Skills for the 21st century

Proportion of population that engaged in the computer-based survey (CBA), OECD average and countries, 2012



Skills for the 21st century

Problem Solving in Technology-Rich Environments — Proficiency levels of population aged 16 to 65, countries, provinces and territories, 2012

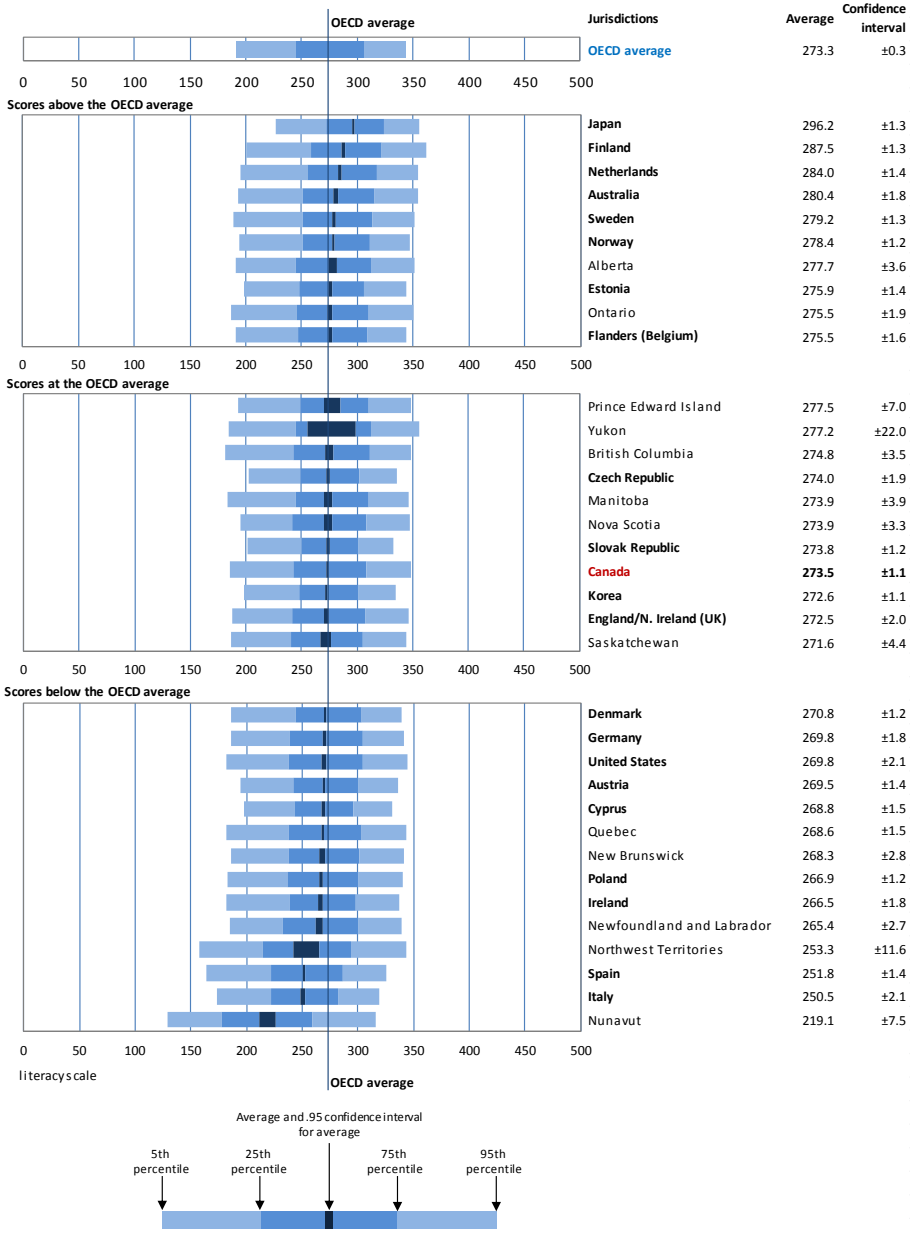


Literacy and numeracy

- ✓ Canada performs at the OECD average in literacy.
- ✓ Canada performs below the OECD average in numeracy.
- ✓ Canada's overall performance across the three domains compares favourably to that of many other OECD countries.

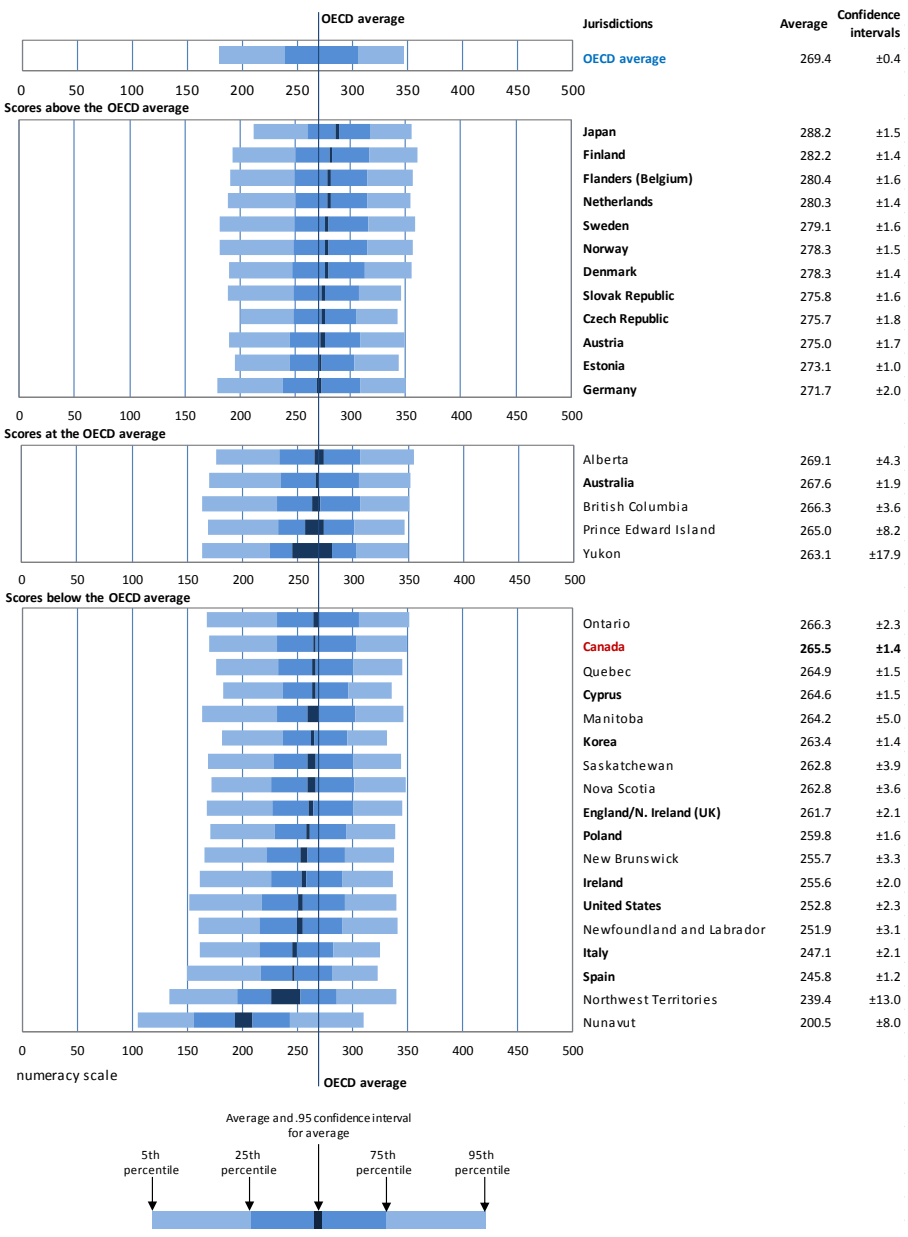
Literacy and numeracy

Literacy — Average scores with 0.95 confidence interval and scores at the 5th, 25th, 75th, and 95th percentiles of population aged 16 to 65, countries, provinces and territories, 2012



Literacy and numeracy

Numeracy — Average scores with 0.95 confidence interval and scores at the 5th, 25th, 75th, and 95th percentiles of population aged 16 to 65, countries, provinces and territories, 2012



Jurisdictions	Average	Confidence intervals
OECD average	269.4	±0.4
Japan	288.2	±1.5
Finland	282.2	±1.4
Flanders (Belgium)	280.4	±1.6
Netherlands	280.3	±1.4
Sweden	279.1	±1.6
Norway	278.3	±1.5
Denmark	278.3	±1.4
Slovak Republic	275.8	±1.6
Czech Republic	275.7	±1.8
Austria	275.0	±1.7
Estonia	273.1	±1.0
Germany	271.7	±2.0
Alberta	269.1	±4.3
Australia	267.6	±1.9
British Columbia	266.3	±3.6
Prince Edward Island	265.0	±8.2
Yukon	263.1	±17.9
Ontario	266.3	±2.3
Canada	**265.5**	**±1.4**
Quebec	264.9	±1.5
Cyprus	264.6	±1.5
Manitoba	264.2	±5.0
Korea	263.4	±1.4
Saskatchewan	262.8	±3.9
Nova Scotia	262.8	±3.6
England/N. Ireland (UK)	261.7	±2.1
Poland	259.8	±1.6
New Brunswick	255.7	±3.3
Ireland	255.6	±2.0
United States	252.8	±2.3
Newfoundland and Labrador	251.9	±3.1
Italy	247.1	±2.1
Spain	245.8	±1.2
Northwest Territories	239.4	±13.0
Nunavut	200.5	±8.0

Literacy and numeracy

Summary of proficiency in all three domains and proportion engaged with ICT, countries, 2012

	At least 80% of population engaged in CBA	Below 80% of population engaged in CBA
At or above the OECD average in all 3 domains	**Finland, Netherlands, Norway, Sweden**	**Australia, Czech Republic, Japan, Flanders (Belgium)**
At or above the OECD average in 2 domains	**Canada, Denmark, England/N. Ireland (UK), Germany**	**Austria, Estonia, Slovak Republic**
Below the OECD average in 2 domains		**Cyprus, France, Italy, Korea, Spain**
Below the OECD average in 3 domains	**United States**	**Ireland, Poland**

The distribution of skills

- ✓ Canada has a higher-than-average proportion of its population at both the high and low ends of the proficiency scales.
- ✓ Over one in seven Canadians perform at the highest levels of proficiency in literacy and numeracy.
- ✓ A significant number of Canadians (between one in seven and one in five) have very low levels of proficiency.
- ✓ Higher levels of proficiency are associated with better social and economic outcomes.
- ✓ In technology-rich environments, the challenges facing those with lower proficiency in literacy and numeracy contribute to the “digital divide”.

The distribution of skills

Proportion of the population at the highest proficiency levels in literacy, numeracy, and PS-TRE, OECD average and countries, 2012

Literacy		Numeracy		PS-TRE	
	Level 4 or 5 (%)		Level 4 or 5 (%)		Level 3 (%)
Japan	23	Finland	19	Sweden	9
Finland	22	Japan	19	Finland	8
Netherlands	19	Sweden	19	Japan	8
Australia	17	Flanders (Belgium)	18	Netherlands	7
Sweden	16	Norway	18	Canada	7
Norway	14	Netherlands	17	Germany	7
Canada	14	Denmark	17	Czech Republic	7
England/N. Ireland (UK)	13	Germany	14	Denmark	6
Flanders (Belgium)	13	Austria	14	Australia	6
United States	12	Australia	14	Norway	6
OECD average	12	Slovak Republic	13	OECD average	6
Estonia	12	Canada	13	Flanders (Belgium)	6
Germany	11	OECD average	13	England/N. Ireland (UK)	6
Denmark	10	Czech Republic	12	United States	5
Poland	10	England/N. Ireland (UK)	11	Austria	4
Czech Republic	9	Estonia	11	Estonia	4
Austria	9	United States	9	Poland	4
Ireland	9	Poland	8	Korea	4
Korea	8	France	8	Ireland	3
France	8	Cyprus	8	Slovak Republic	3
Slovak Republic	7	Ireland	8	Cyprus	–
Cyprus	7	Korea	7	France	–
Spain	5	Italy	5	Italy	–
Italy	3	Spain	4	Spain	–

The distribution of skills

Proportion of the population at the lowest proficiency levels in literacy, numeracy, and PS-TRE, OECD average and countries, 2012

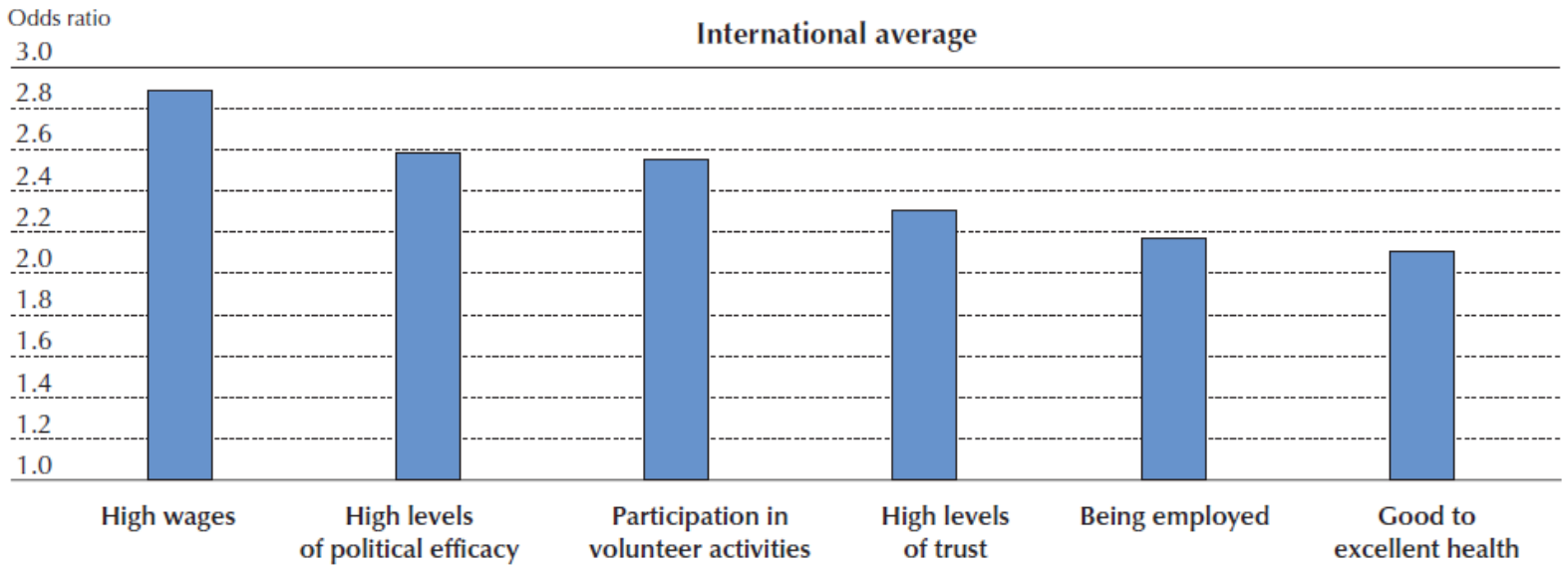
Literacy		Numeracy		PS-TRE	
	Level 1 or below (%)		Level 1 or below (%)		Below level 1 (%)
Italy	28	Italy	32	United States	16
Spain	28	Spain	31	England/N. Ireland (UK)	15
France	22	United States	30	Flanders (Belgium)	15
Poland	19	France	28	Canada	15
United States	18	Ireland	25	Germany	14
Germany	18	England/N. Ireland (UK)	24	Denmark	14
Ireland	18	Poland	23	Estonia	14
England/N. Ireland (UK)	17	Canada	23	Sweden	13
Canada	17	Australia	20	Czech Republic	13
Denmark	16	OECD average	19	Ireland	13
OECD average	16	Korea	19	Netherlands	12
Austria	16	Cyprus	19	OECD average	12
Flanders (Belgium)	15	Germany	19	Poland	12
Cyprus	14	Norway	15	Norway	11
Sweden	13	Sweden	15	Finland	11
Estonia	13	Austria	15	Austria	10
Korea	13	Estonia	14	Korea	10
Australia	13	Denmark	14	Australia	9
Norway	13	Flanders (Belgium)	14	Slovak Republic	9
Netherlands	12	Slovak Republic	14	Japan	8
Czech Republic	12	Netherlands	14	Cyprus	–
Slovak Republic	12	Czech Republic	13	France	–
Finland	11	Finland	13	Italy	–
Japan	5	Japan	8	Spain	–

The distribution of skills

Literacy — The likelihood of the population aged 16 to 65 at the highest proficiency levels at reporting positive social and economic outcomes, OECD average, 2012

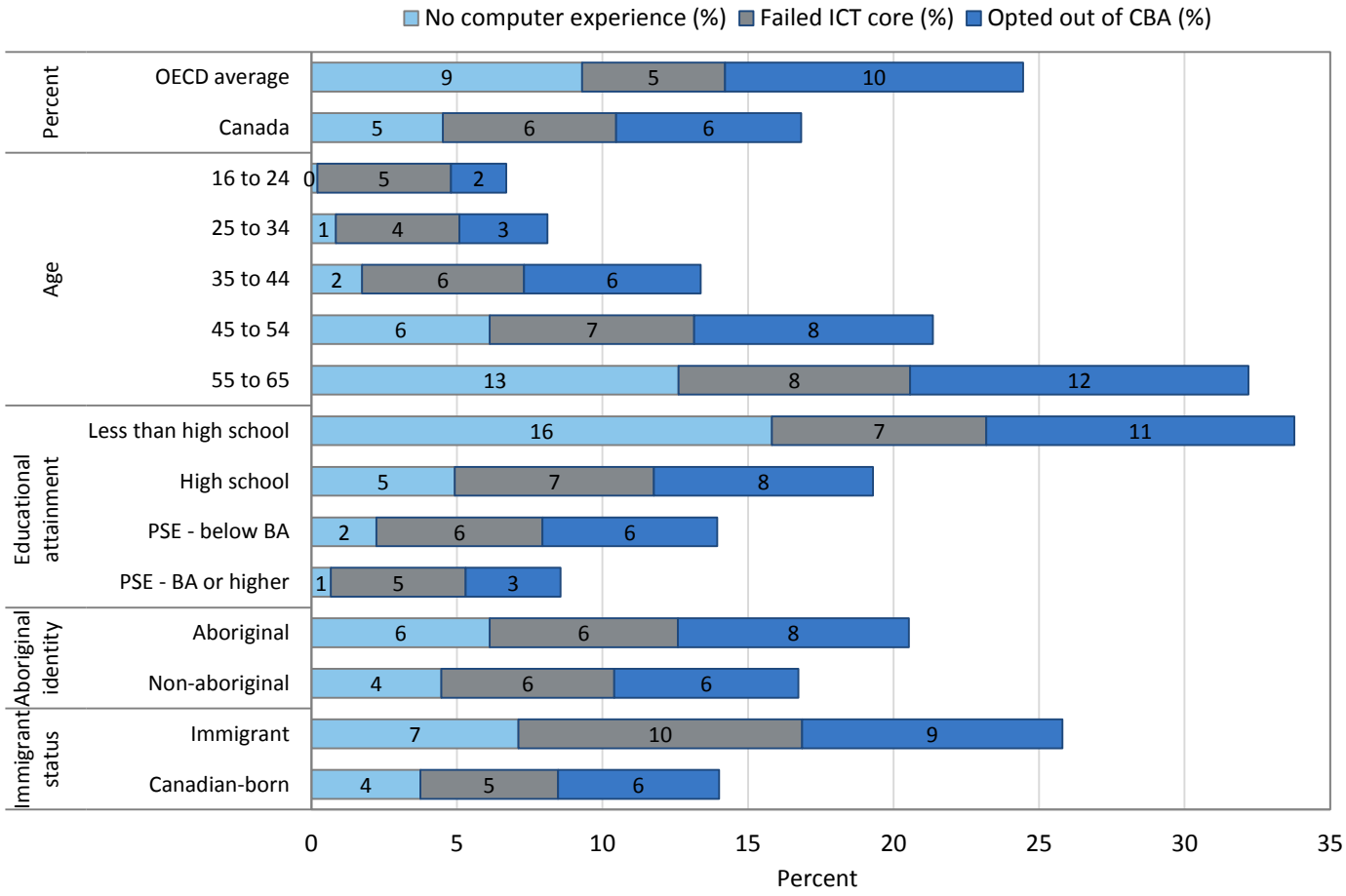
Likelihood of positive social and economic outcomes among highly literate adults

Increased likelihood (odds ratio) of adults scoring at Level 4/5 in literacy reporting high earnings, high levels of trust and political efficacy, good health, participating in volunteer activities and being employed, compared with adults scoring at or below Level 1 in literacy (adjusted)



The distribution of skills

Computer-based assessment (CBA): Percent not completing, Canada, 2012



The distribution of skills

Who are the Canadians performing at the lowest proficiency levels?

Category	Performance at the lowest proficiency levels		
	Literacy (Level 1 and below)	Numeracy (Level 1 and below)	PS-TRE (Below level 1)
General population aged 16 to 65	17%	23%	15%
45 to 65 years of age	21%	28%	19%
Less-than-high-school educational attainment	41%	51%	22%
Not in labour force	26%	35%	17%
Service and support occupations	18%	28%	16%
Immigrant	27%	33%	19%
Off-reserve Aboriginal identification	24%	35%	18%
First language is not the same as the language of the test	27%	33%	19%

The distribution of skills

From the OECD report:

- *Connectivity alone is insufficient to provide real access to online information and services. Access to the digital world is conditional, to some extent, on proficiency in literacy and numeracy. Low levels of proficiency in literacy and numeracy can be significant barriers to using ICT applications effectively to manage information. First, poor literacy may hinder the acquisition of basic ICT skills. Second, even for adults with some computer skills, it is difficult for those with low levels of proficiency in literacy and numeracy to handle many of the information management and information processing tasks encountered in online environments.*

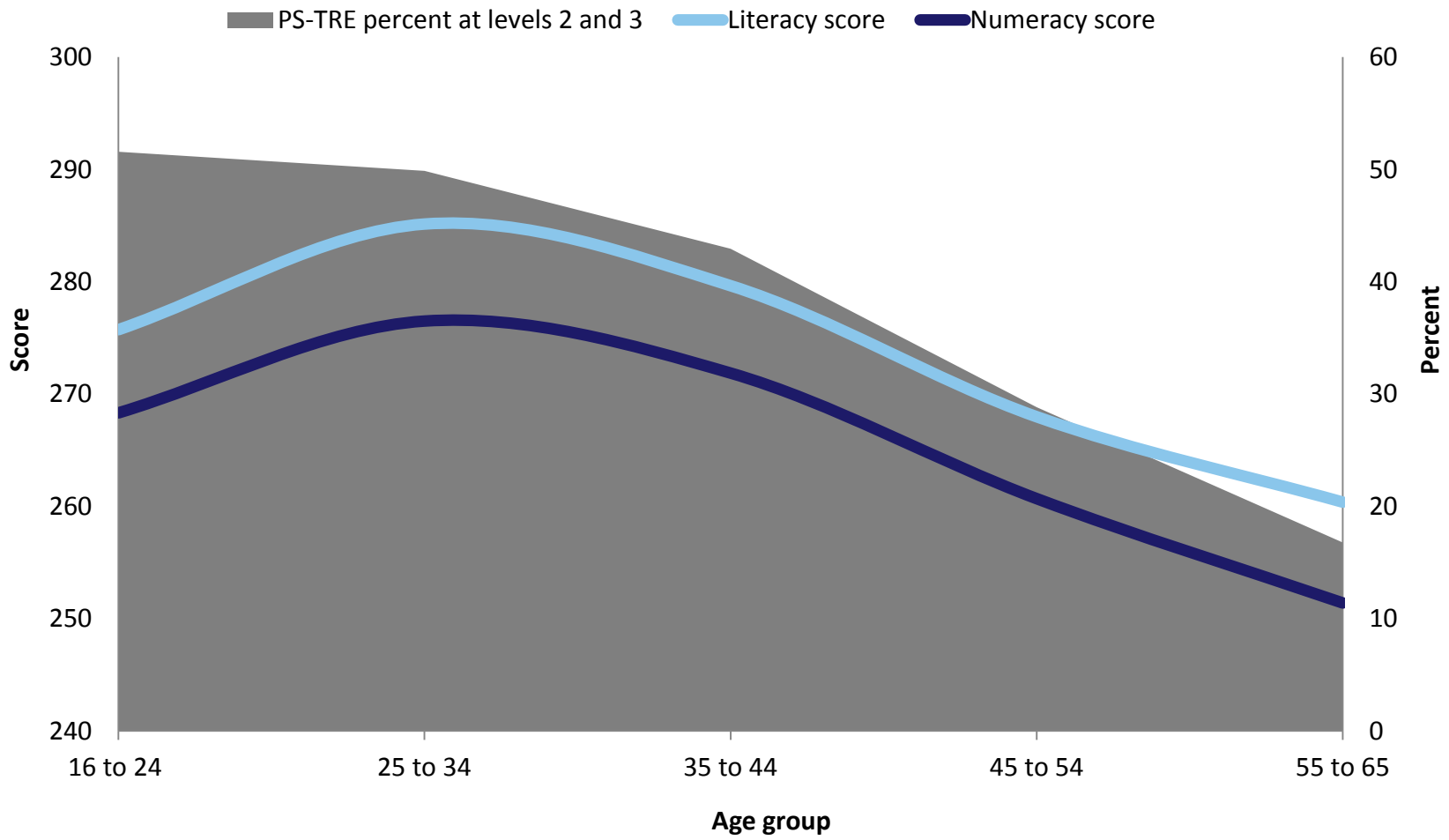
- *The digital divide may also thus reflect a literacy divide.*

The skills of young adults

- ✓ Young adults have a skills advantage compared to older age groups, especially in PS-TRE; this is true in Canada and across the OECD.
- ✓ The skills advantage that young adults have over their older counterparts is larger in a number of other countries than it is in Canada.

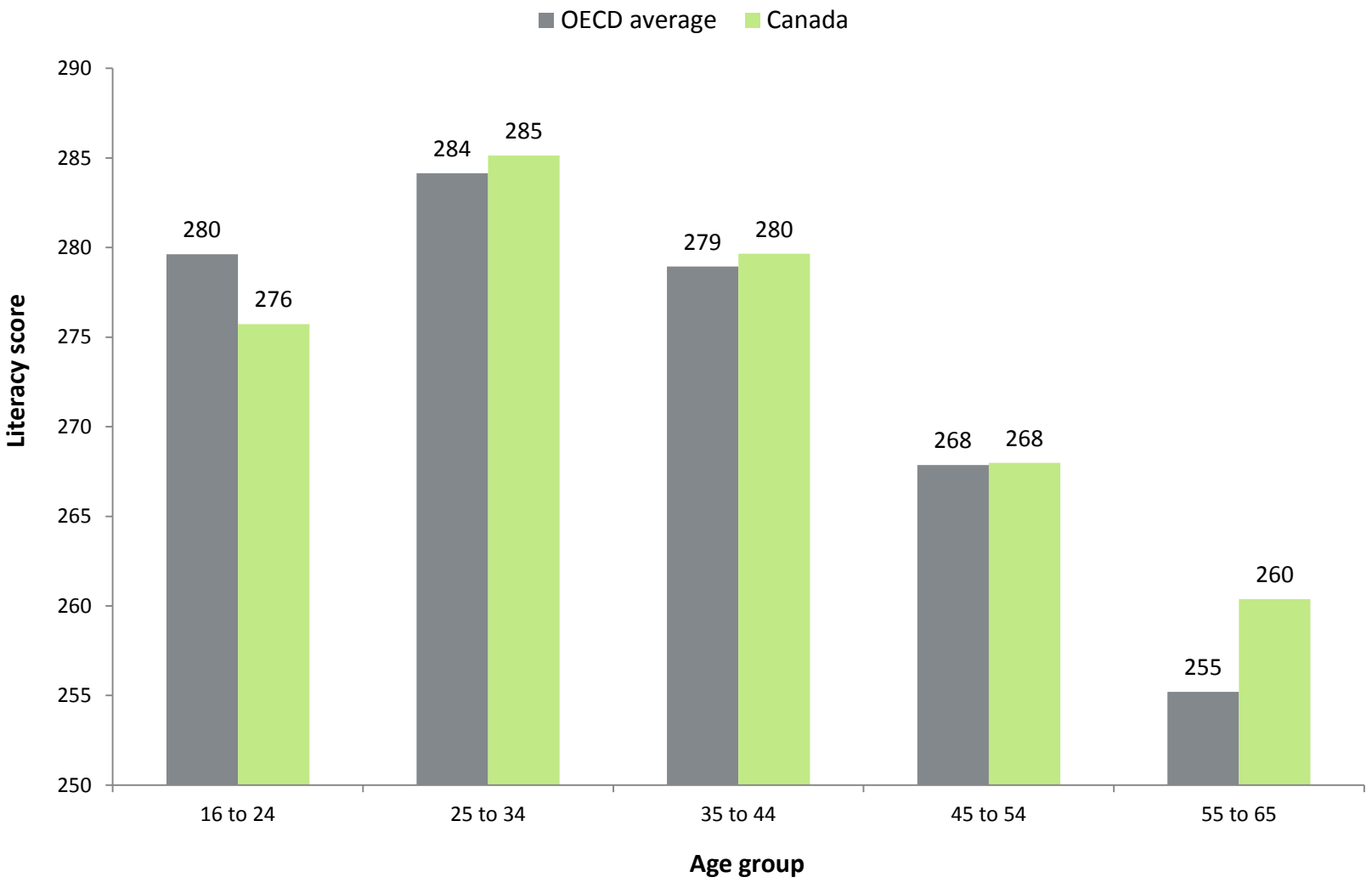
The skills of young adults

Proficiency in literacy, numeracy and PS-TRE of population aged 16 to 65, by age groups, Canada, 2012



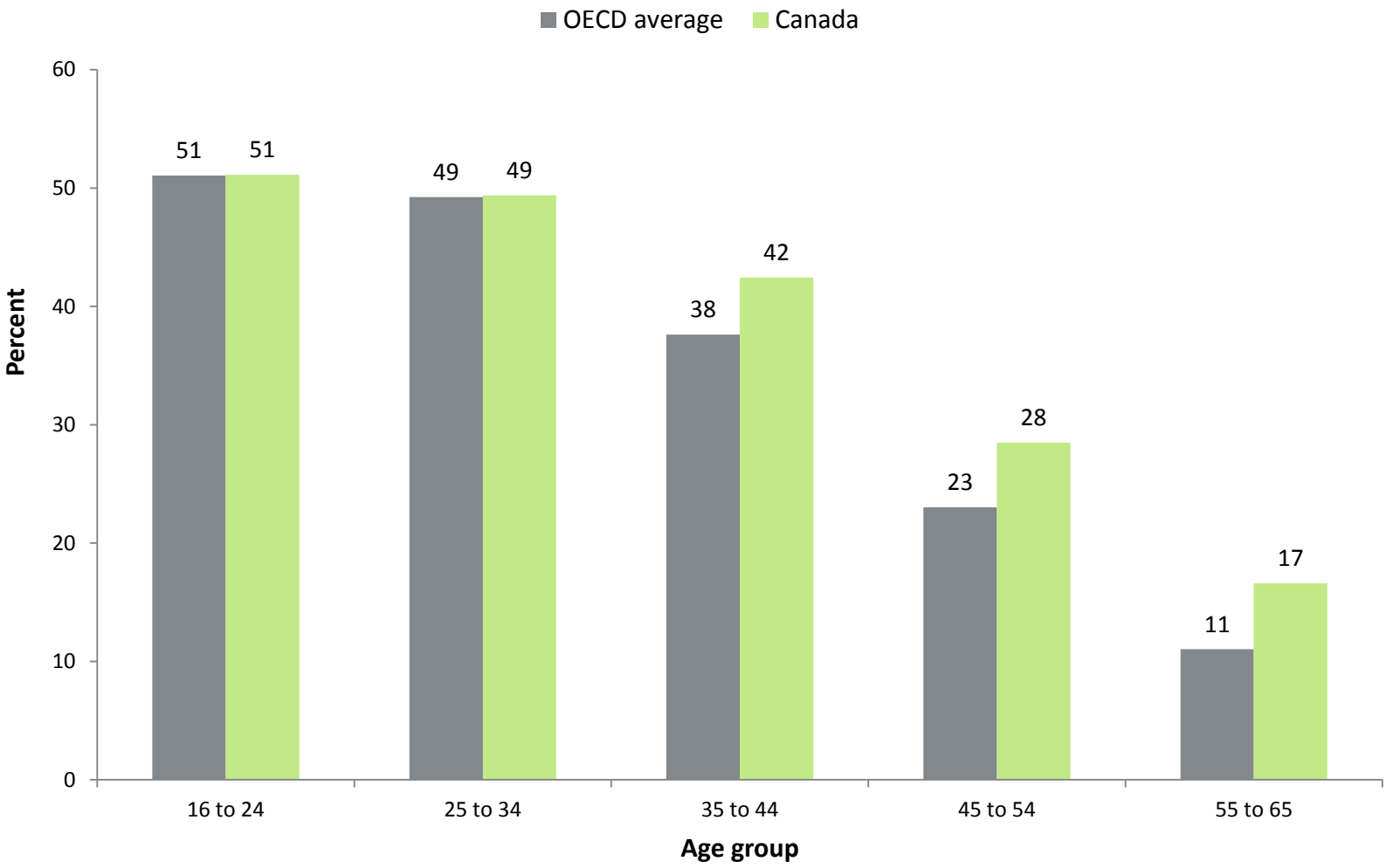
The skills of young adults

Literacy — Average scores of population aged 16 to 65 by age groups, OECD average and Canada, 2012



The skills of young adults

PS-TRE — Proficiency of population aged 16 to 65 at Level 2 or 3 by age groups, OECD average and Canada, 2012



The skills of young adults

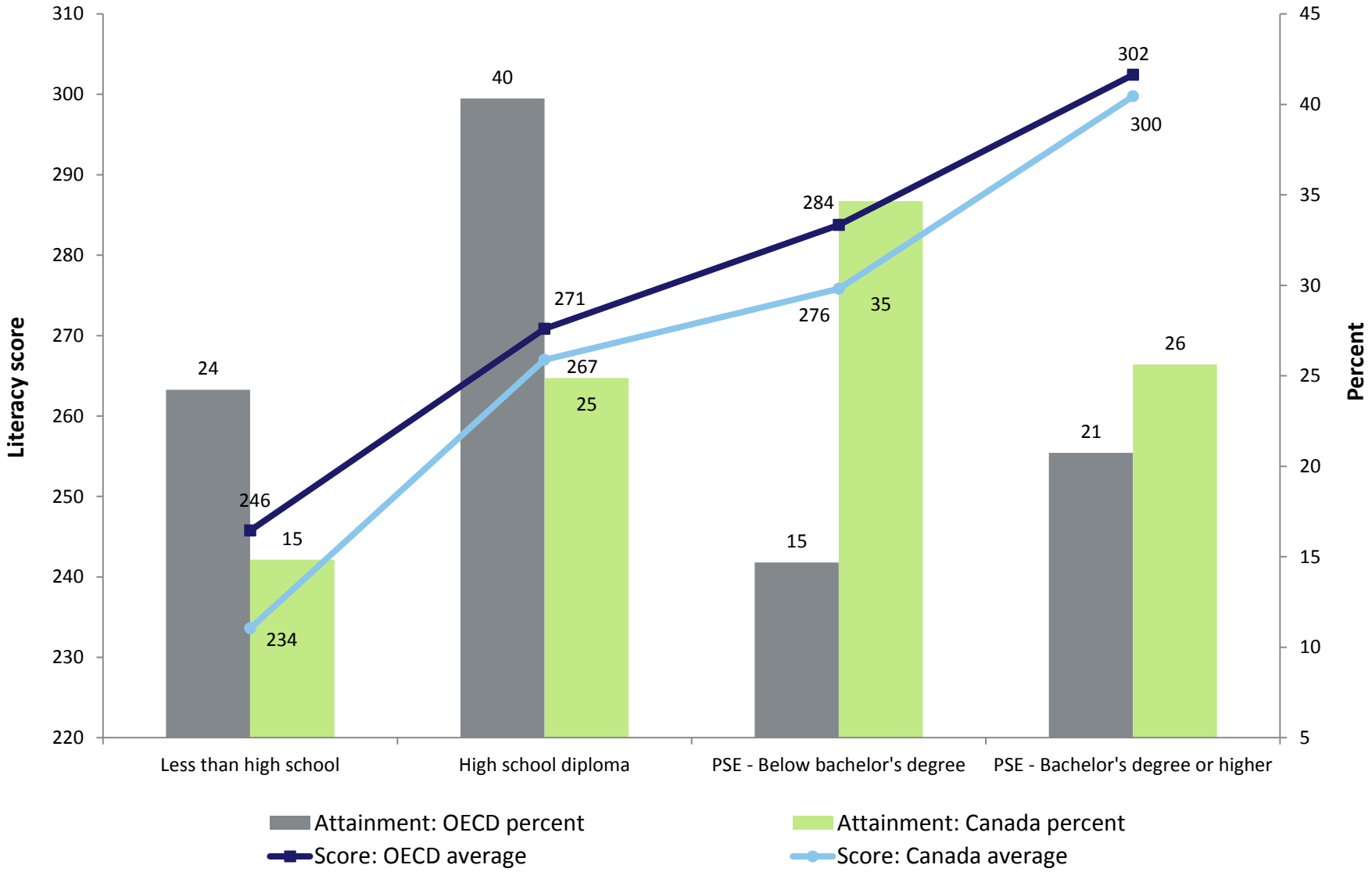
All Adults Compared with Young Adults

Difference in literacy (points) between young and all adults		Difference in numeracy (points) between young and all adults		Difference in PS-TRE (Level 2 and above, %) between young and all adults	
Korea	20	**Korea**	18	**Korea**	33
Poland	15	**Spain**	9	**Estonia**	23
France	13	**France**	9	**Flanders (Belgium)**	23
Spain	12	**Poland**	9	**Czech Republic**	22
Estonia	11	**Estonia**	5	**Finland**	20
Netherlands	11	**Netherlands**	5	**Poland**	19
Italy	10	**Austria**	4	**Austria**	18
Flanders (Belgium)	10	**Italy**	4	**Germany**	18
Finland	9	**Germany**	3	**Sweden**	18
Germany	9	**Canada**	3	**Netherlands**	17
Austria	8	**OECD Average**	3	**OECD Average**	17
OECD Average	7	**Finland**	3	**Ireland**	15
Czech Republic	7	**Flanders (Belgium)**	2	**Slovak Republic**	15
Denmark	5	**Australia**	2	**Canada**	14
Ireland	4	**Ireland**	2	**Norway**	14
Australia	4	**Czech Republic**	2	**Australia**	13
Sweden	4	**Slovak Republic**	2	**Denmark**	12
Japan	3	**Cyprus**	0	**Japan**	11
Canada	2	**Sweden**	-1	**England/N. Ireland (UK)**	8
Slovak Republic	2	**United States**	-3	**United States**	6
United States	2	**Japan**	-5	**Cyprus**	–
Cyprus	-2	**Denmark**	-5	**France**	–
Norway	-3	**England/N. Ireland (UK)**	-5	**Italy**	–
England/N. Ireland (UK)	-7	**Norway**	-7	**Spain**	–

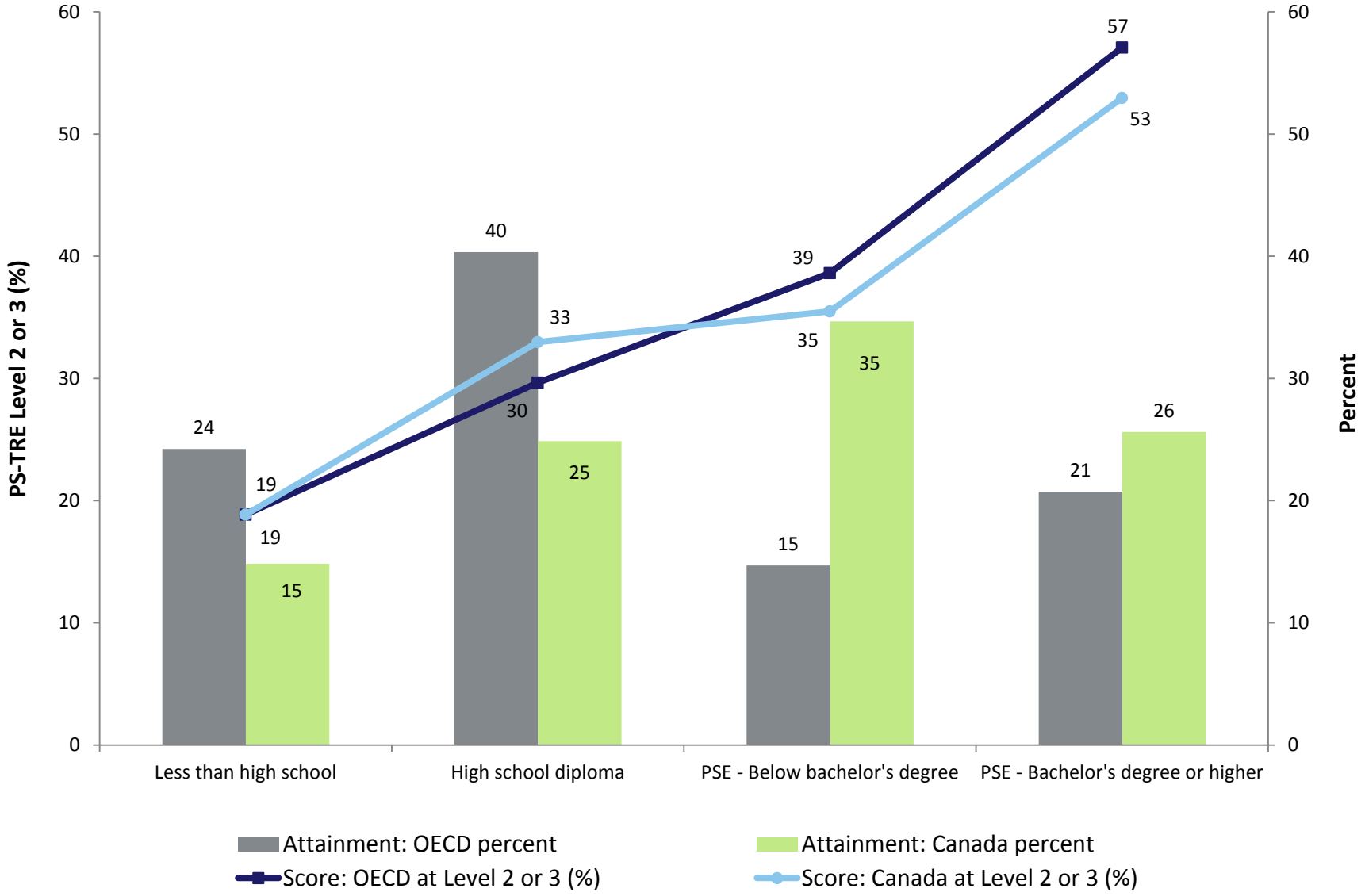
Education and skills

- ✓ Educational attainment has a strong positive influence on proficiency.
- ✓ Canadians with a postsecondary education have a significant and enduring advantage.
- ✓ The proficiency levels of Canadians with a university degree are on par with those of their counterparts in the OECD.
- ✓ There is a clear relationship between participation in organized adult learning and proficiency; but those who could benefit most from adult learning are not always those who access it.

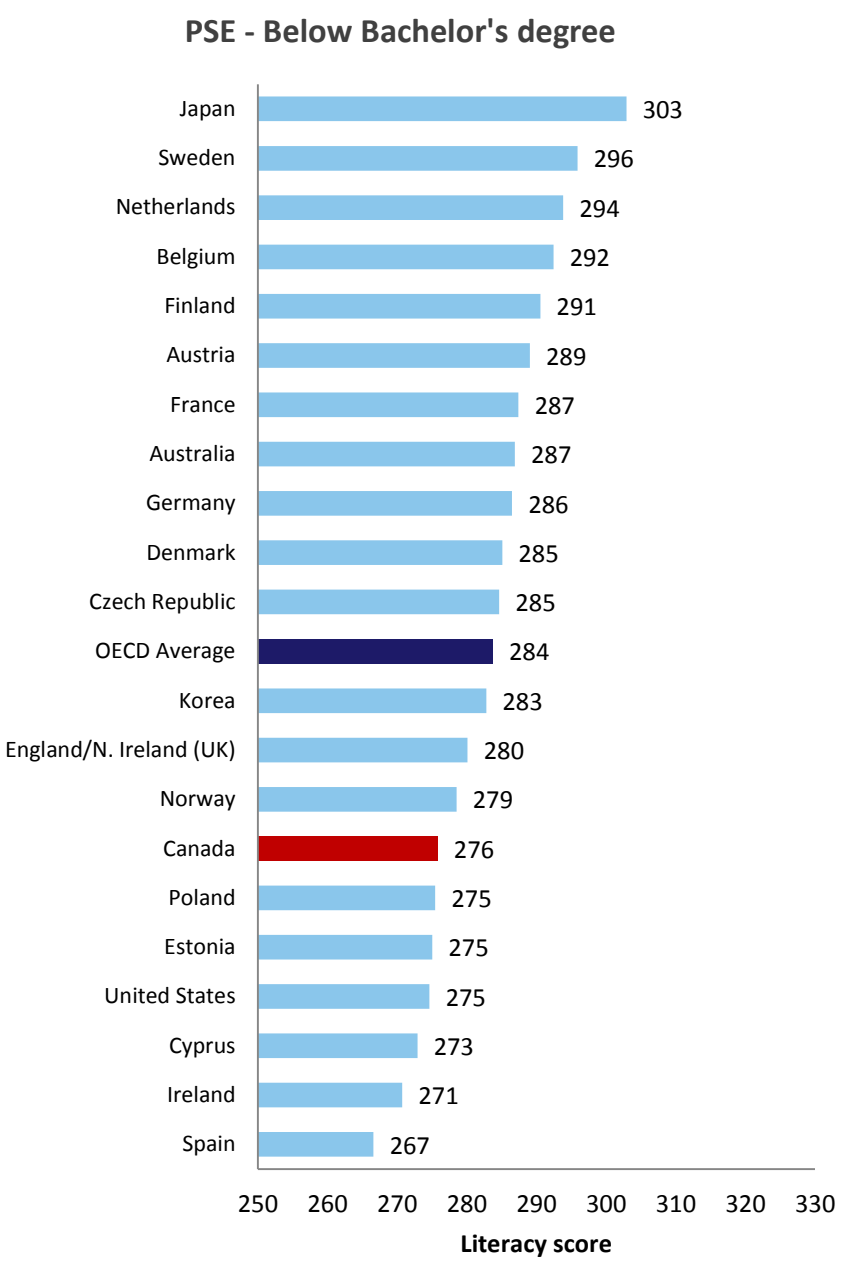
Literacy — Average scores and educational attainment, OECD average and Canada, 2012

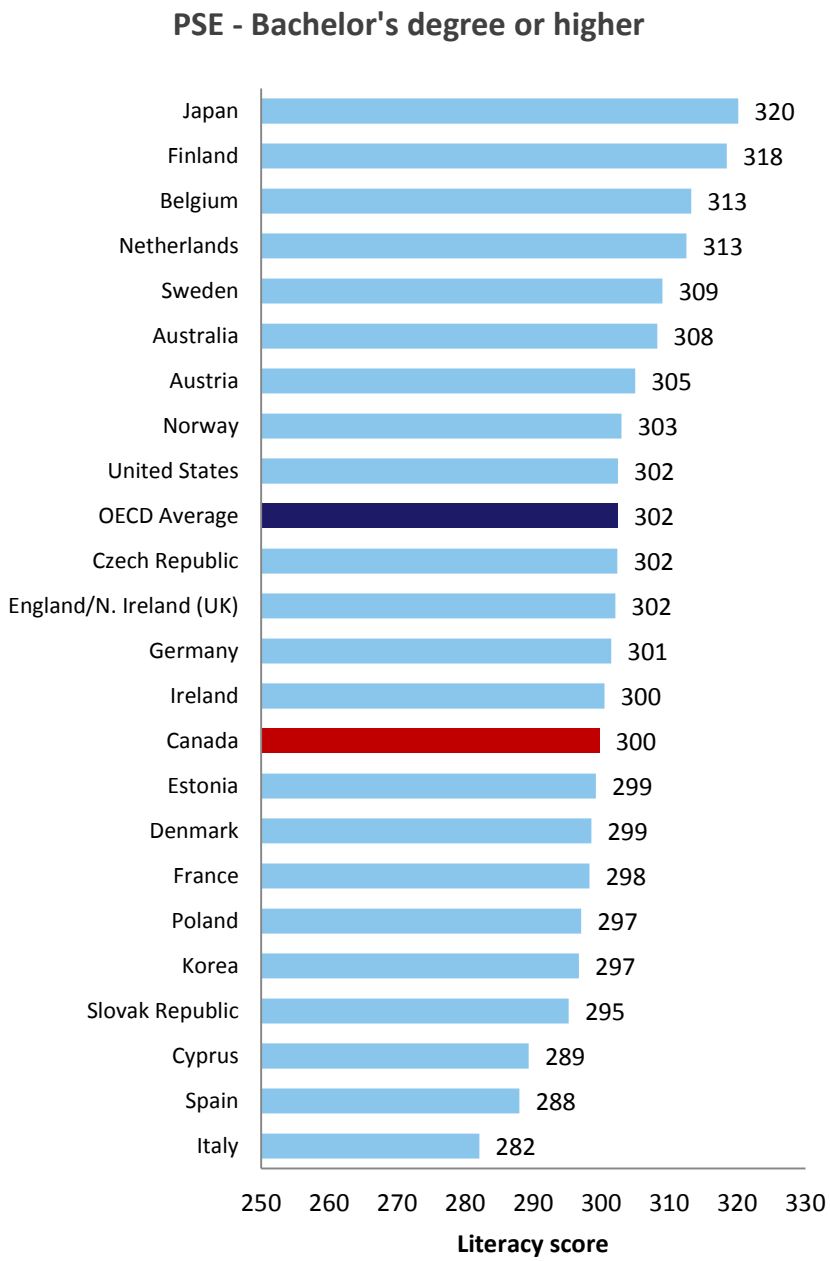


PS-TRE — Proficiency of population aged 16 to 65 at Level 2 or 3 by educational attainment, OECD average and Canada, 2012

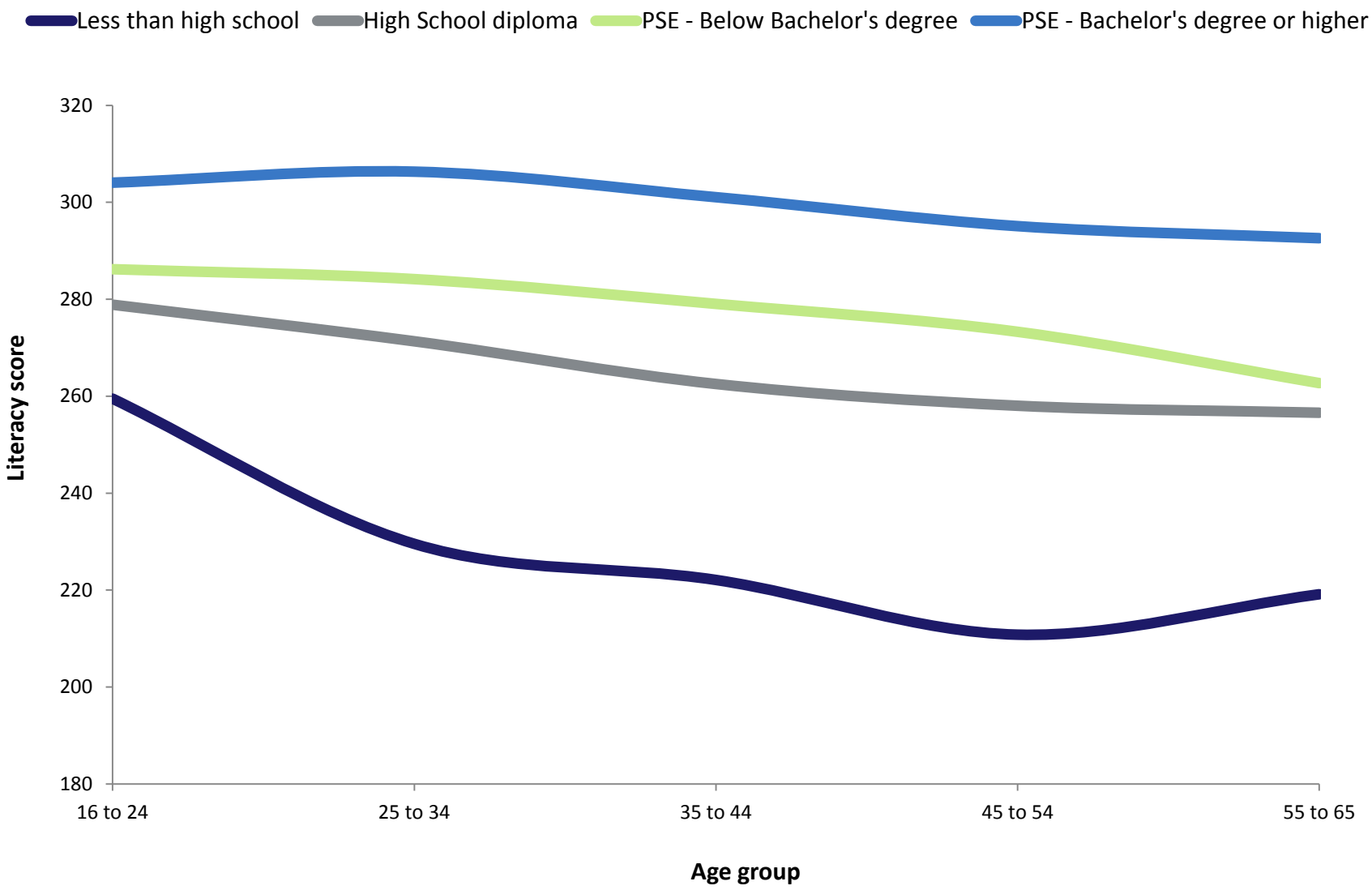


Literacy — Average scores of population aged 16 to 65 by PSE attainment, OECD average and countries, 2012

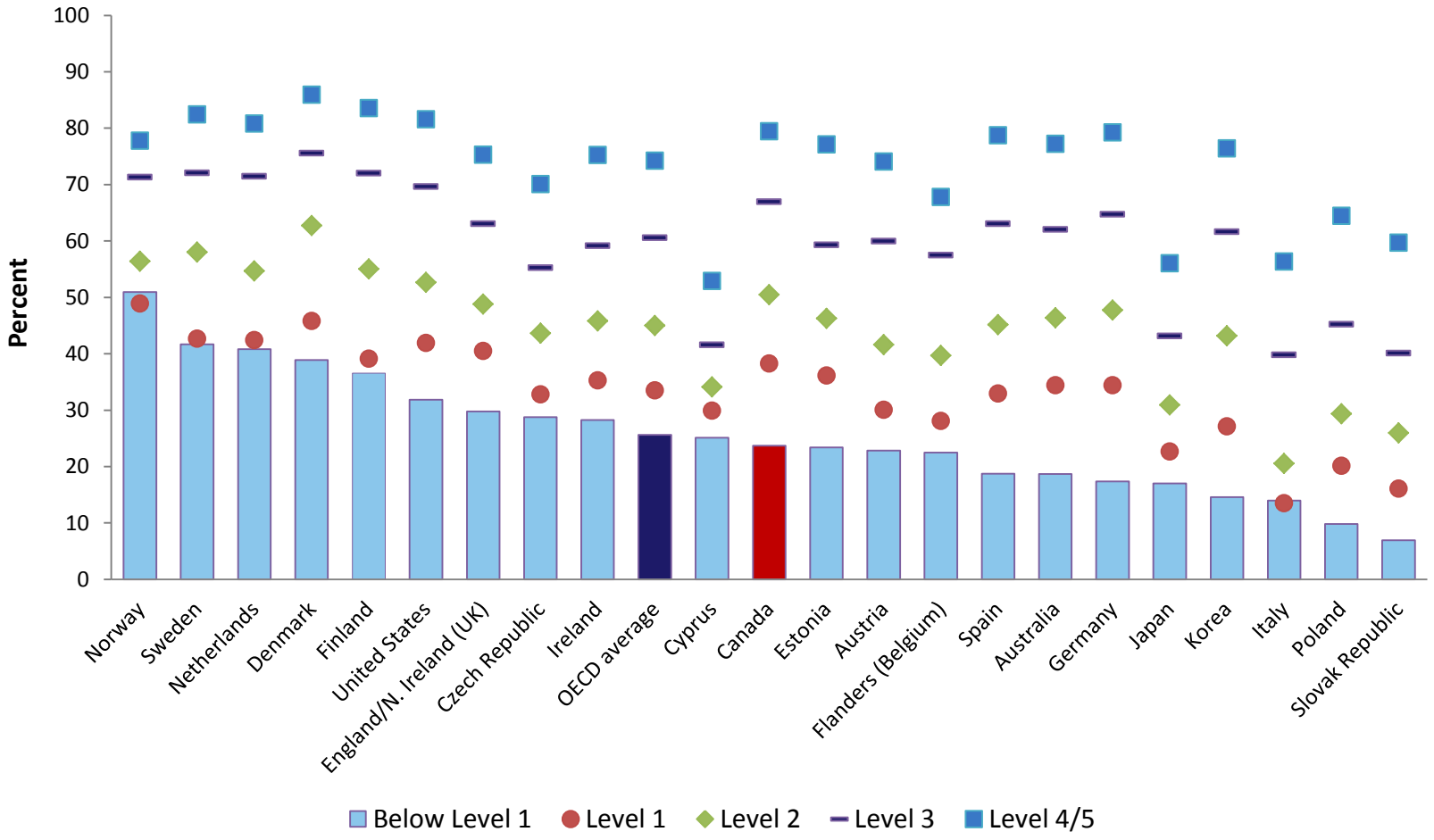




Literacy — Average scores of population aged 16 to 65, by educational attainment and age, Canada, 2012



Literacy — Proficiency levels of population aged 16 to 65, by participation rate in adult education, OECD average and countries, 2012



Skills in the labour force

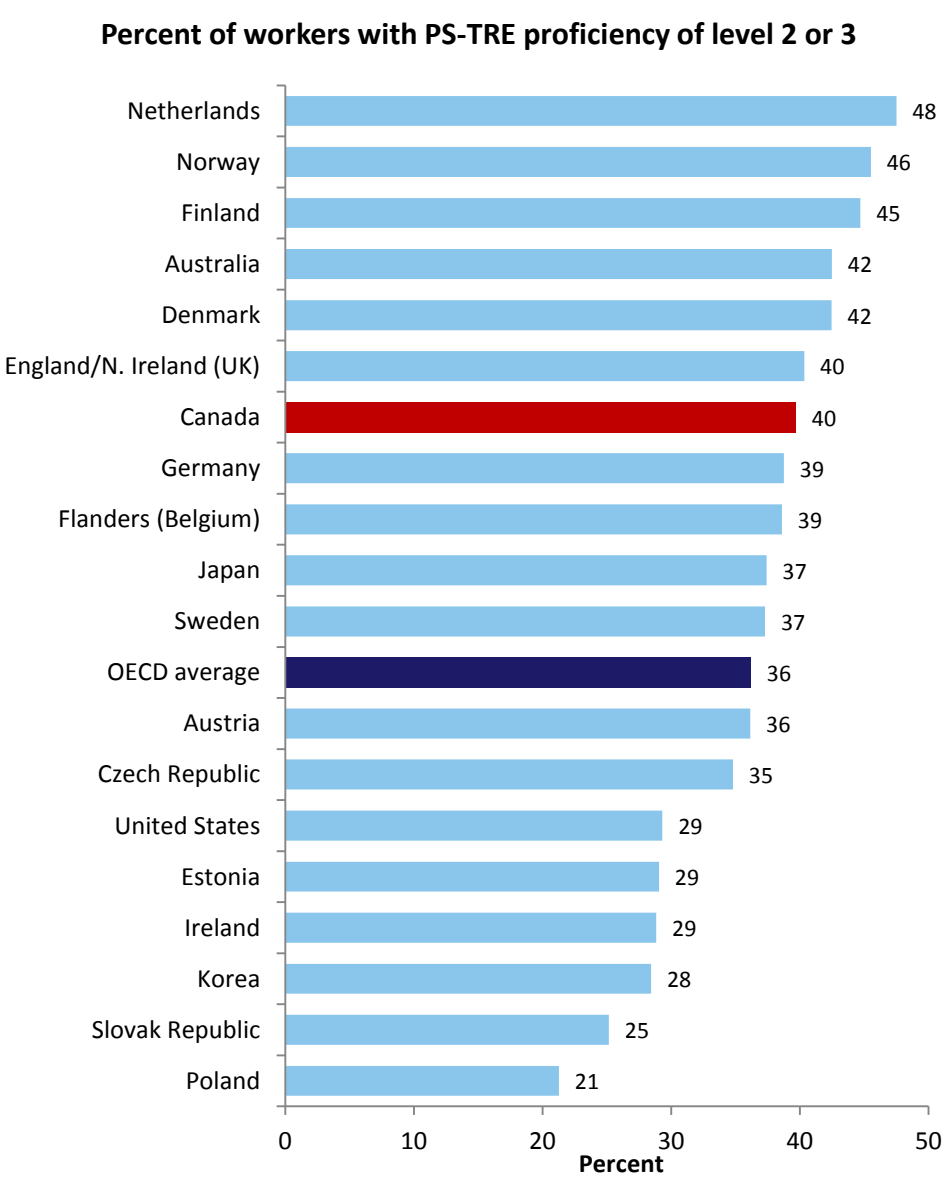
- ✓ Canada has one of the most skilled and educated labour forces in the OECD.
- ✓ Canada has more workers than average in occupations associated with higher levels of proficiency, and fewer than average in those associated with lower levels of proficiency.
- ✓ There appears to be a good match in Canada between the skills that jobs require and the skills that workers have.

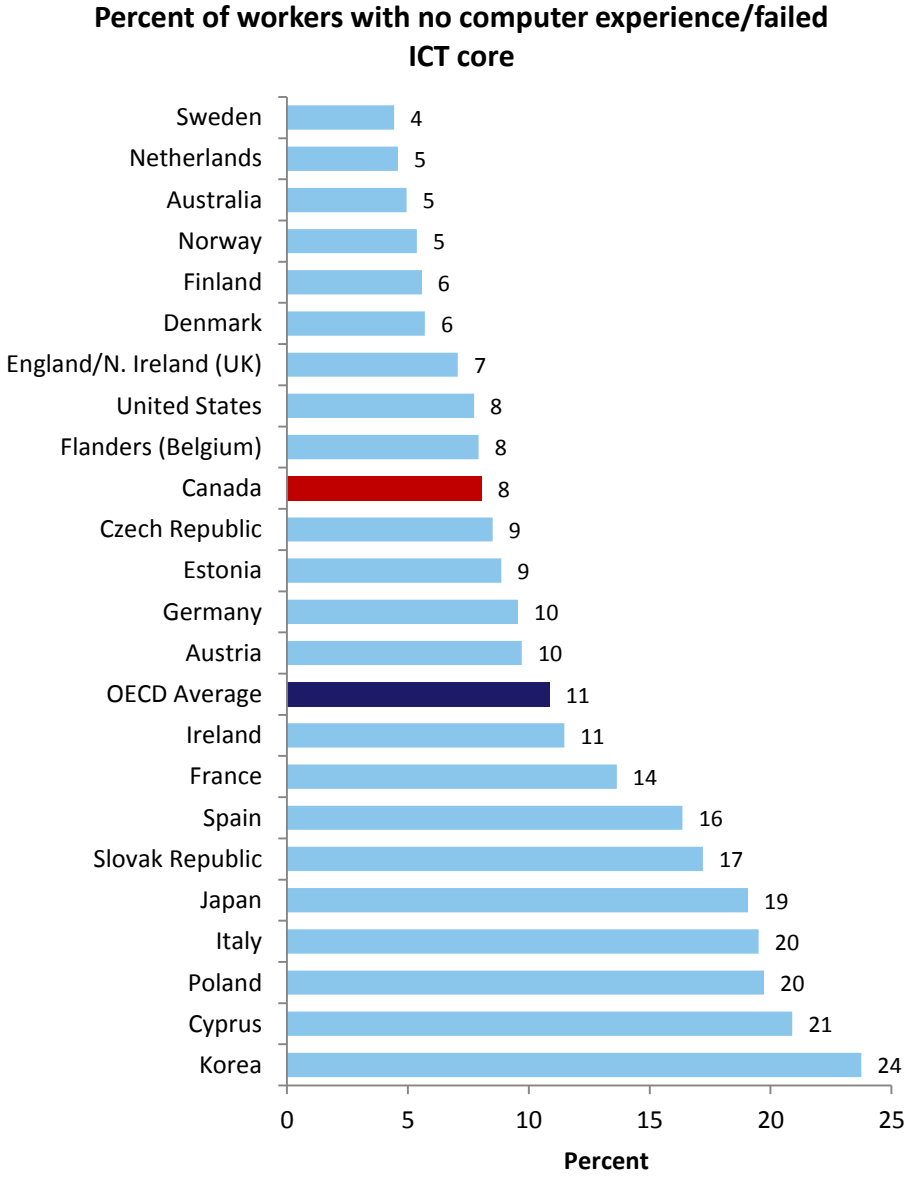
Portrait of the labour market – Canada and the OECD, 2012

	Canada			OECD average		
	Percent of population	Literacy (average)	Numeracy (average)	Percent of population	Literacy (average)	Numeracy (average)
PSE attainment	60	286	280	35	295	294
Managerial and professional occupations	50	292	286	39	294	293
PSE attainment and Managerial and professional occupations	40	297	292	27	301	301
No PSE attainment	40	255	244	65	261	255
Manual and other service occupations	8	251	241	10	250	242
No PSE attainment and Manual and other service occupations	5	245	234	9	248	239

Skills in the labour force

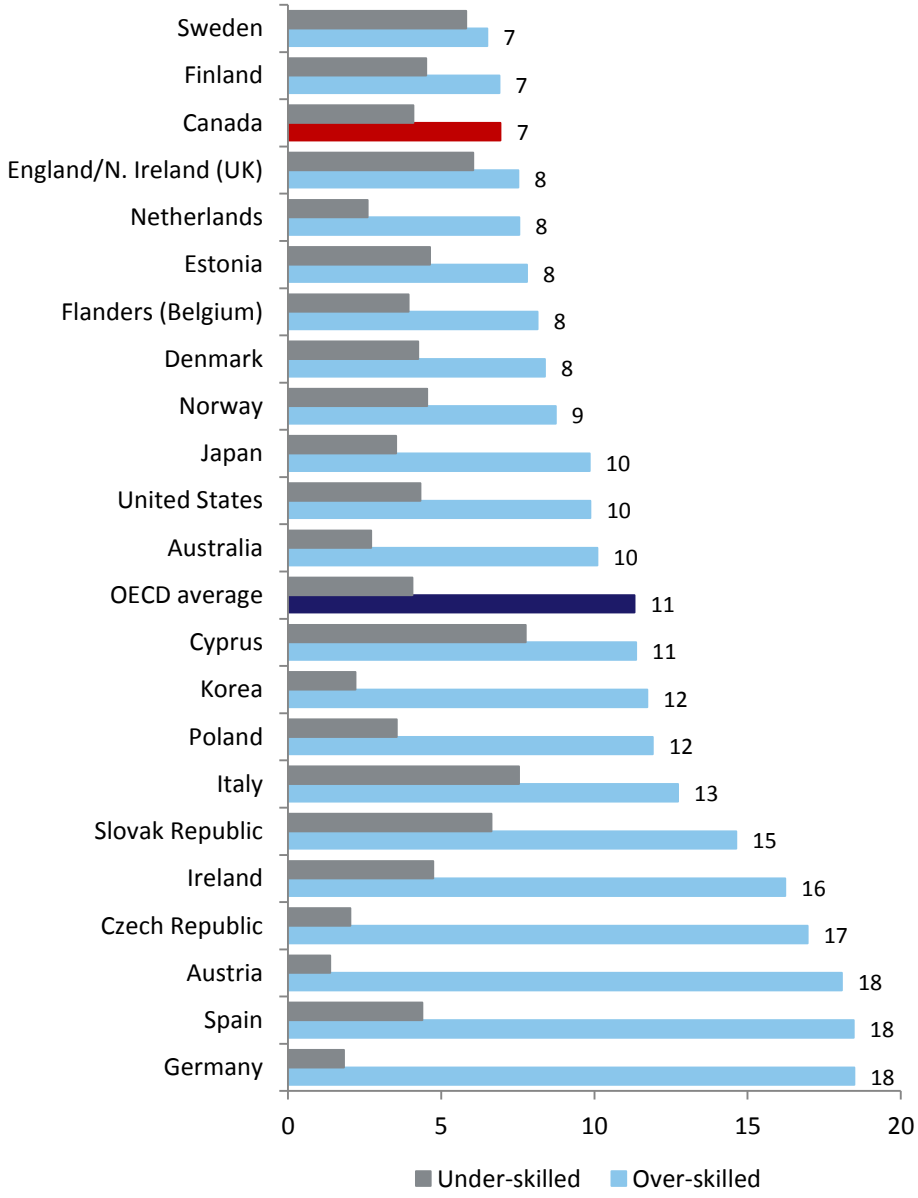
ICT Engagement and PS-TRE — Percent and proficiency of population aged 16 to 65 who are employed, OECD average and countries, 2012





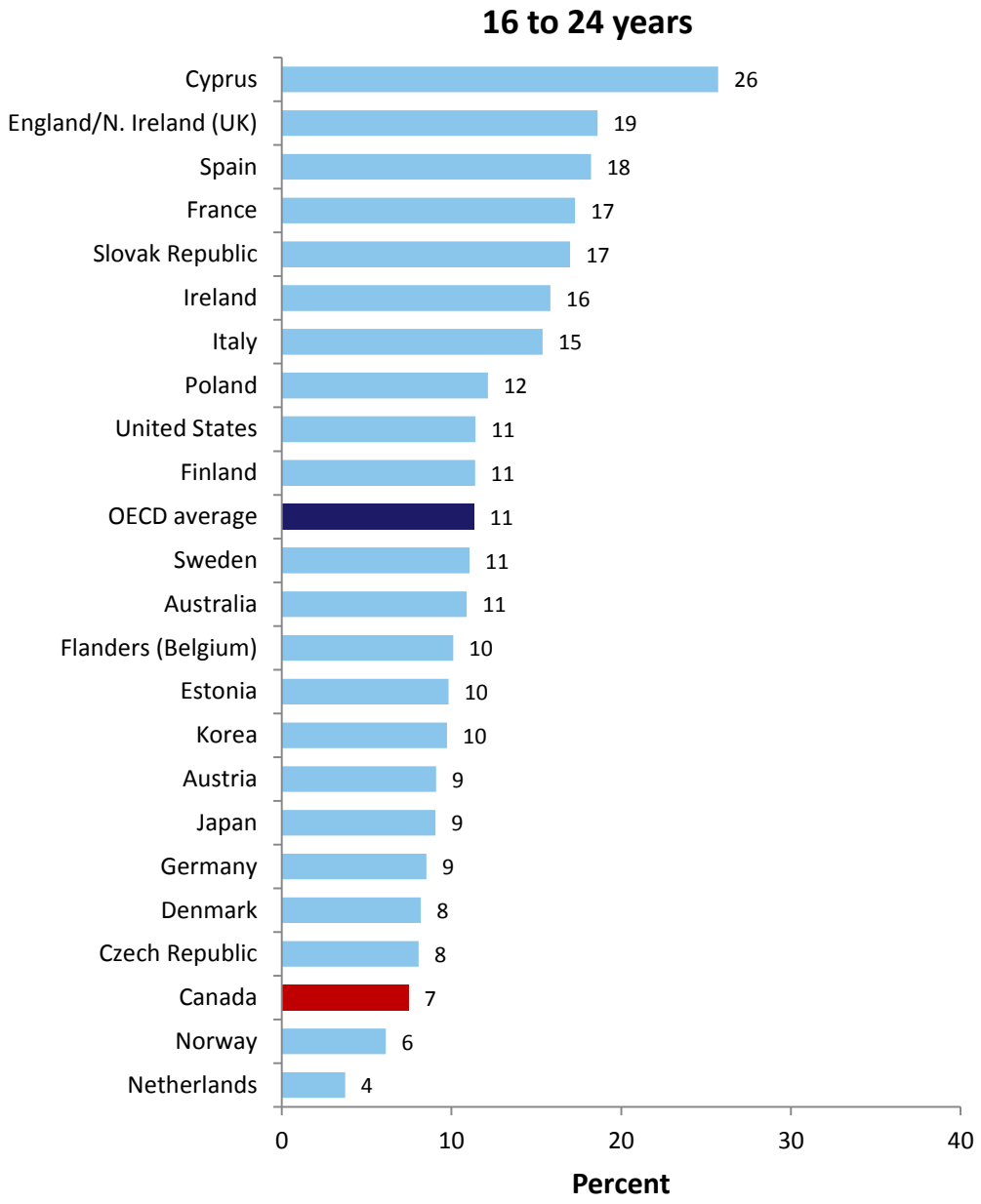
Skills in the labour force

OECD measure of skills mismatch in literacy — Percentage of under- and over-skilled workers, OECD average and countries, 2012



Skills in the labour force

Proportion of population not in education or employment (NEET), OECD average and countries, 2012

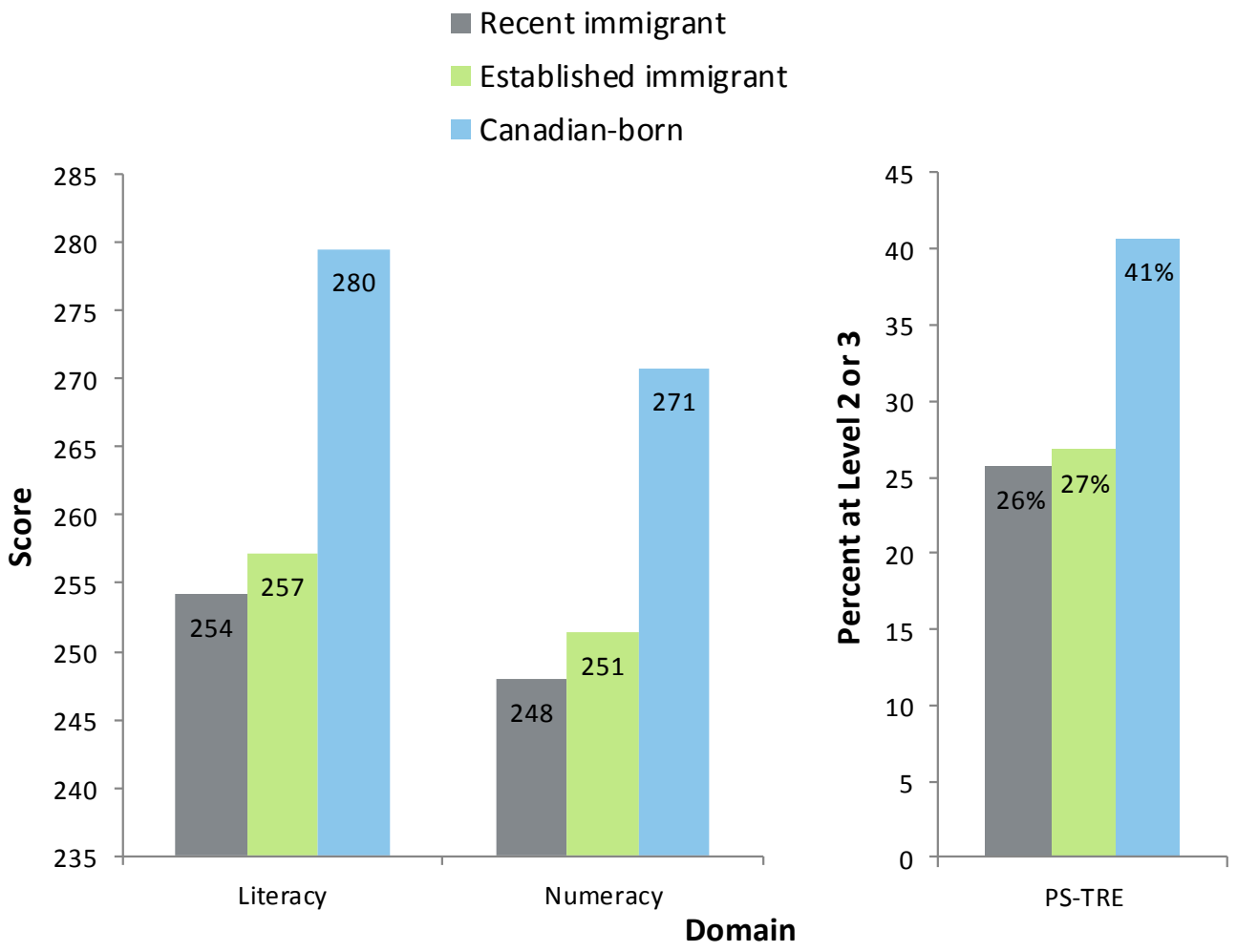


Immigrants

- ✓ Canada is one of only a few countries whose immigrant population is both proportionately larger than average and more proficient than average.
- ✓ While there is a skills gap between immigrants and non-immigrants, the gap in Canada is relatively narrow.
- ✓ For immigrants, educational attainment does not always translate into proficiency in literacy in the official language of their new country.
- ✓ Immigrants who receive a significant portion of their education in Canada are much less likely to be at a disadvantage in terms of skills.

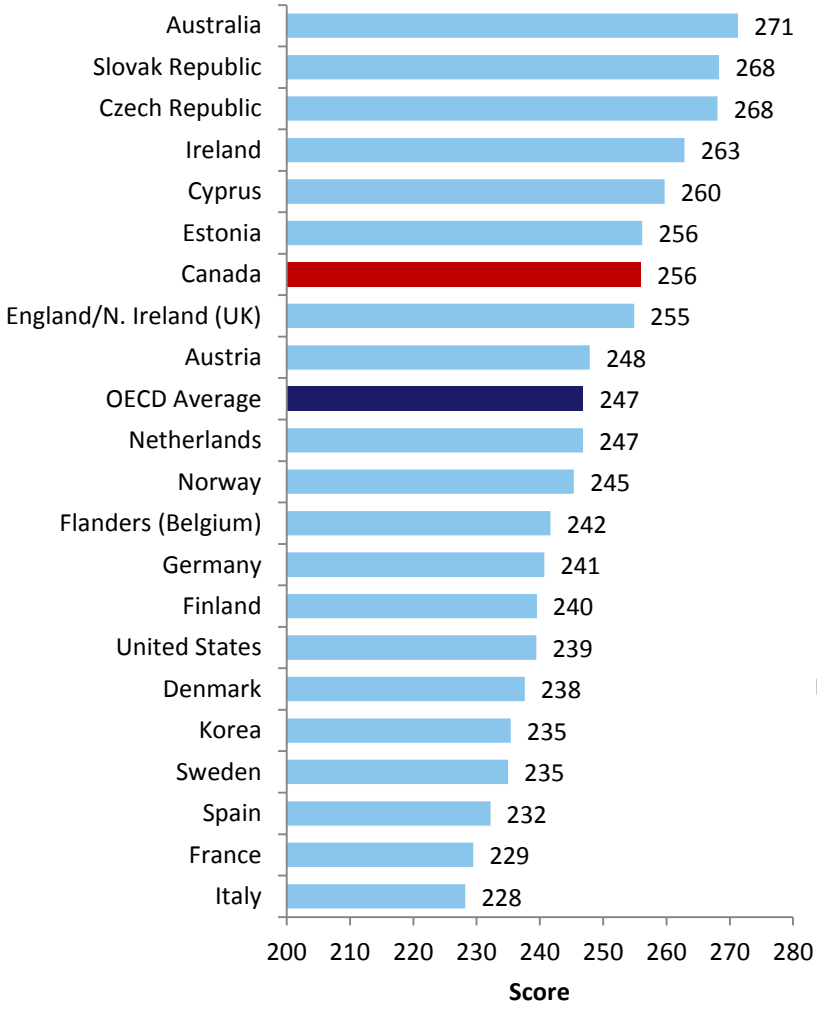
Immigrants

Literacy, Numeracy, and PS-TRE — Average scores of population aged 16 to 65 by immigrant status, Canada, 2012

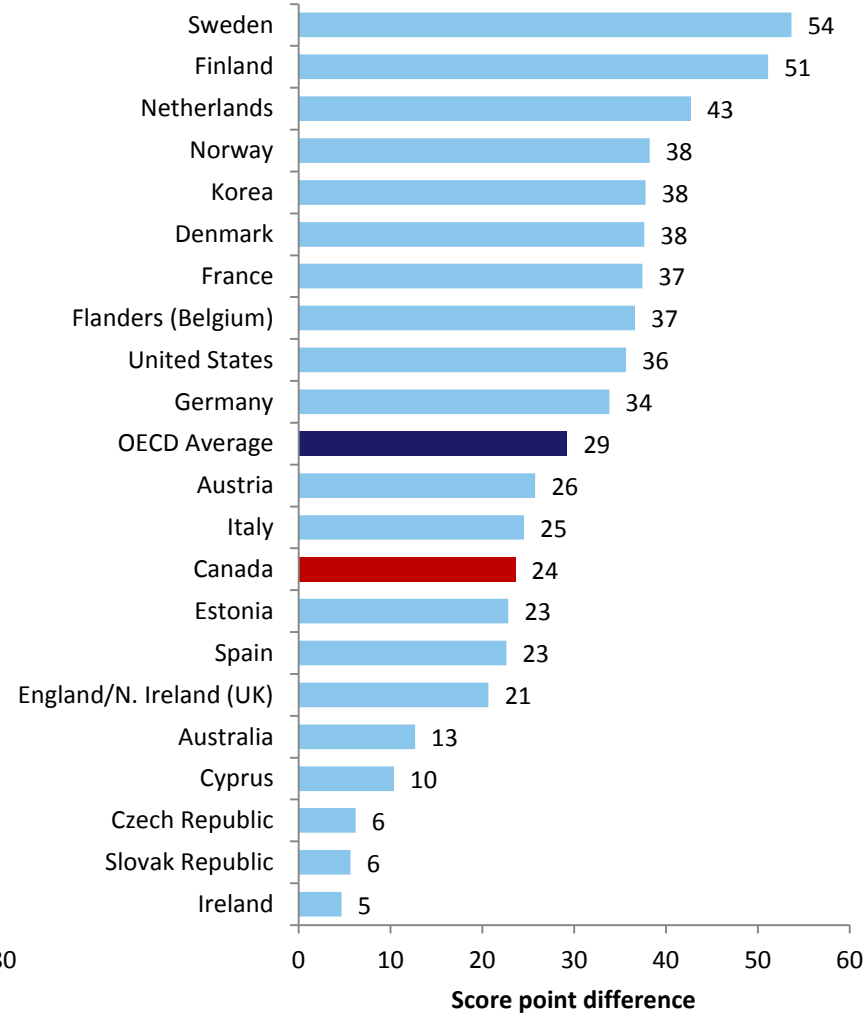


Literacy — Average scores and score point differences of population aged 16 to 65 by immigrant status, OECD average and countries, 2012

Literacy mean proficiency scores of foreign-born population

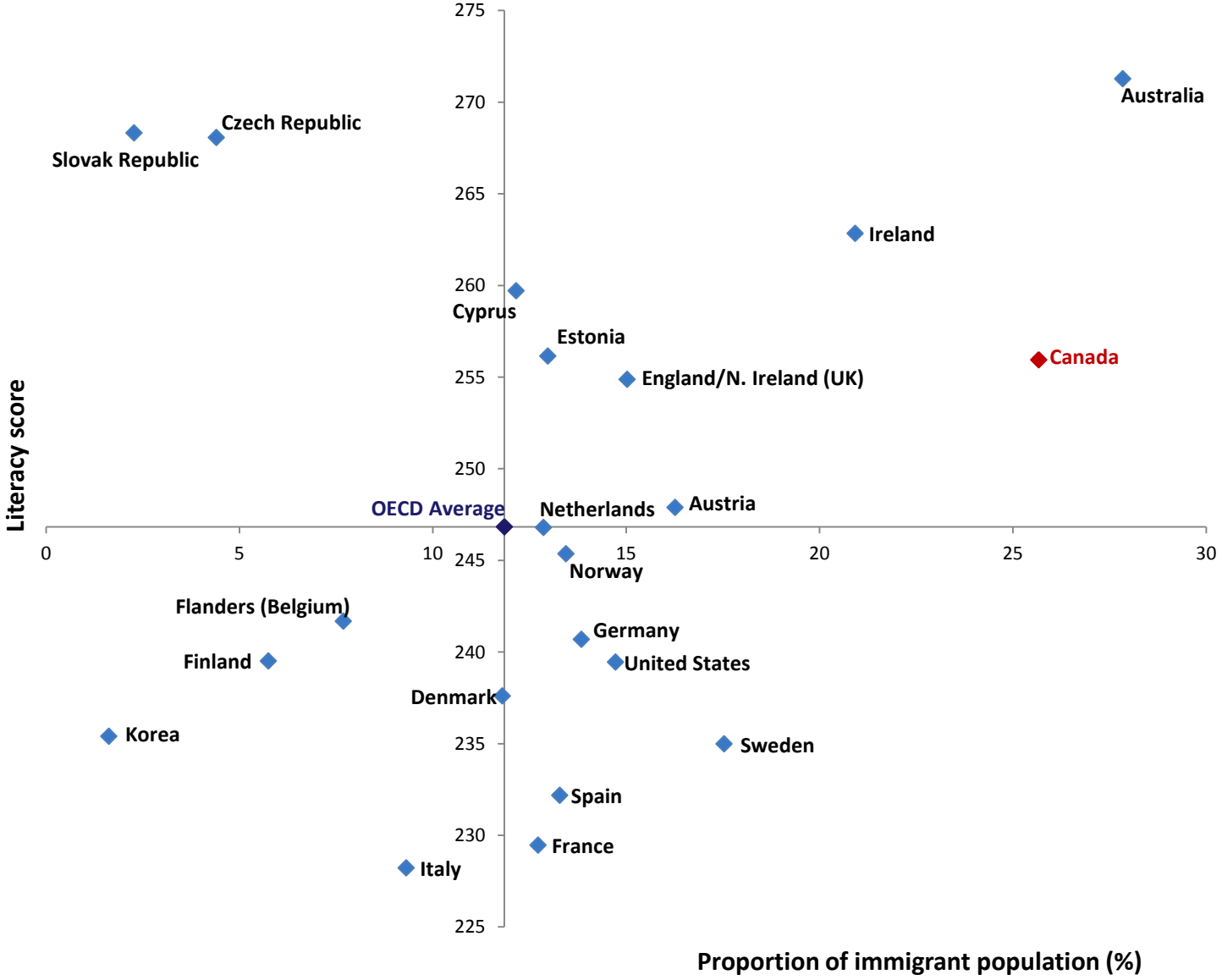


Mean score differences on the literacy scale between native- and foreign-born adults



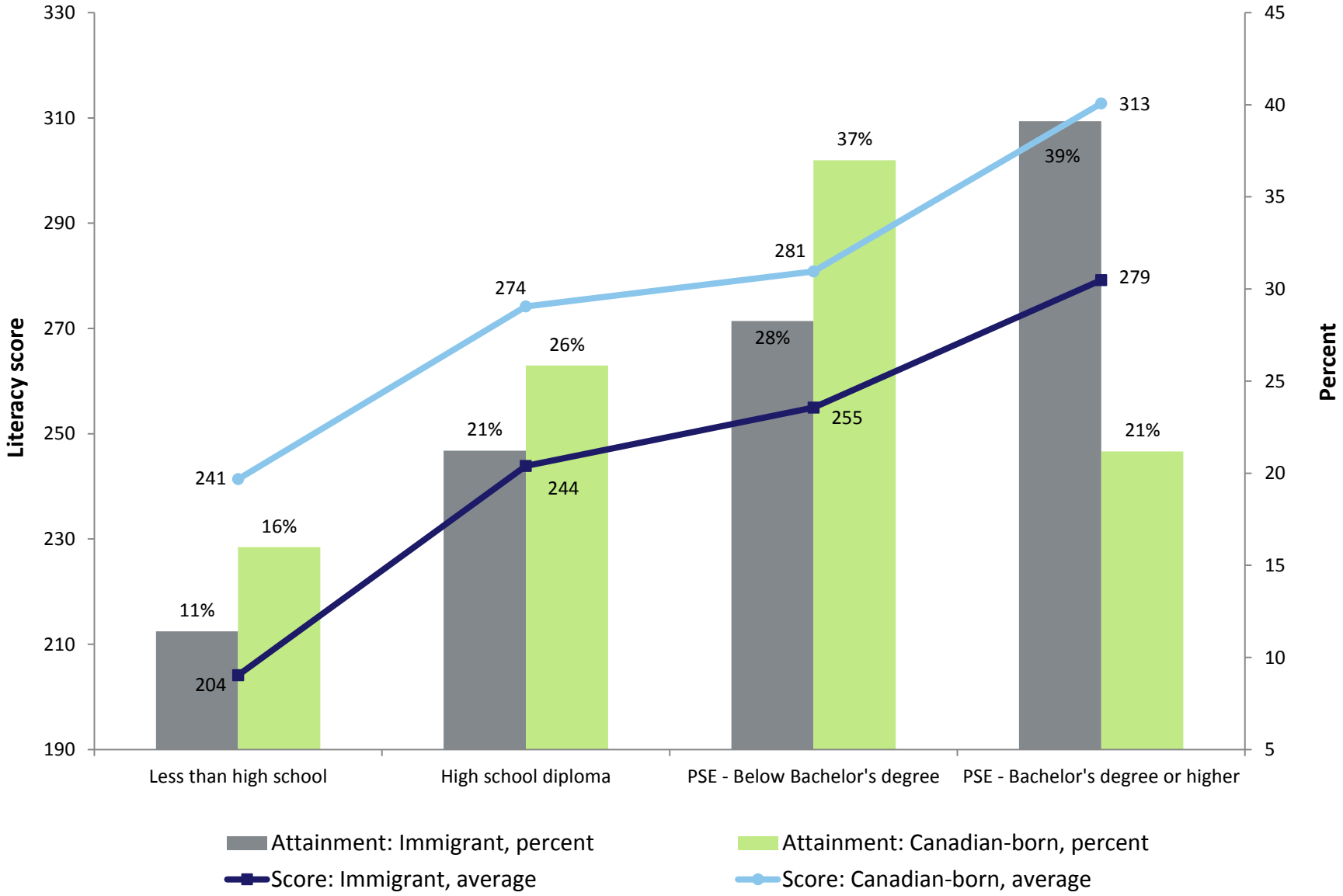
Immigrants

Literacy — Proportions and average scores of population aged 16 to 65 by immigrant status, OECD average and countries, 2012

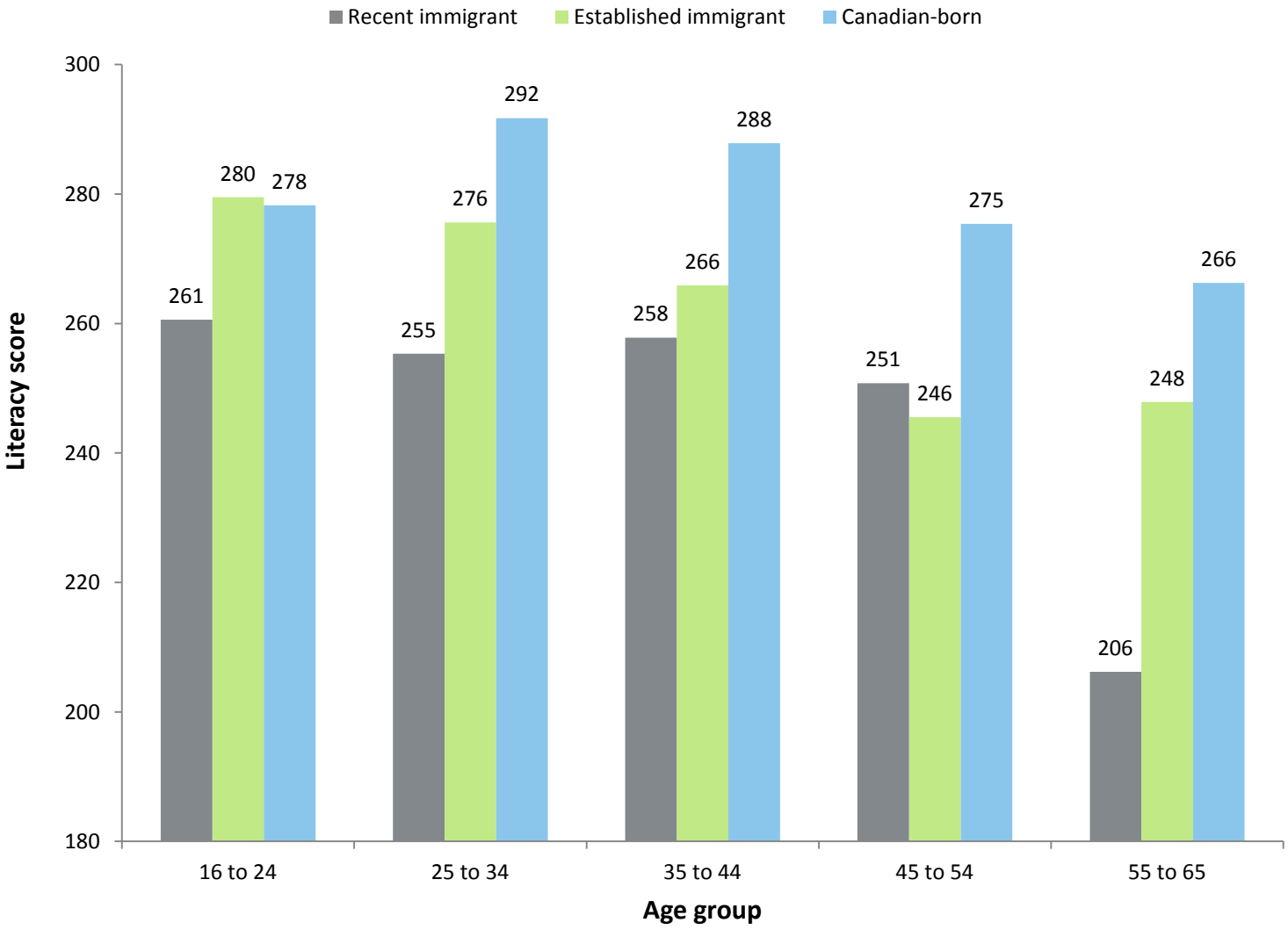


Immigrants

Literacy — Average scores of population aged 16 to 65 by educational attainment and immigrant status, Canada, 2012



Literacy — Average scores of population aged 16 to 65 by immigrant status and age, Canada, 2012

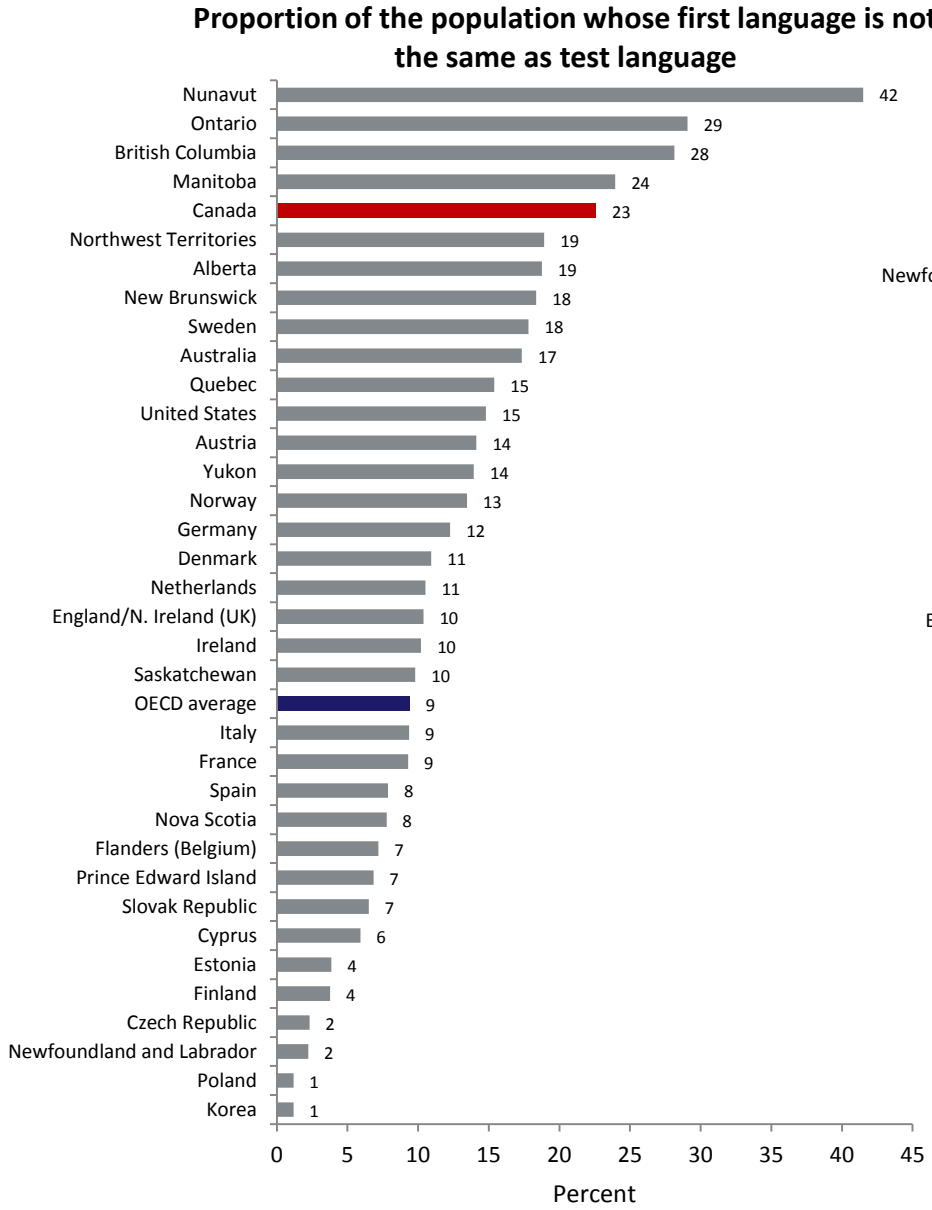


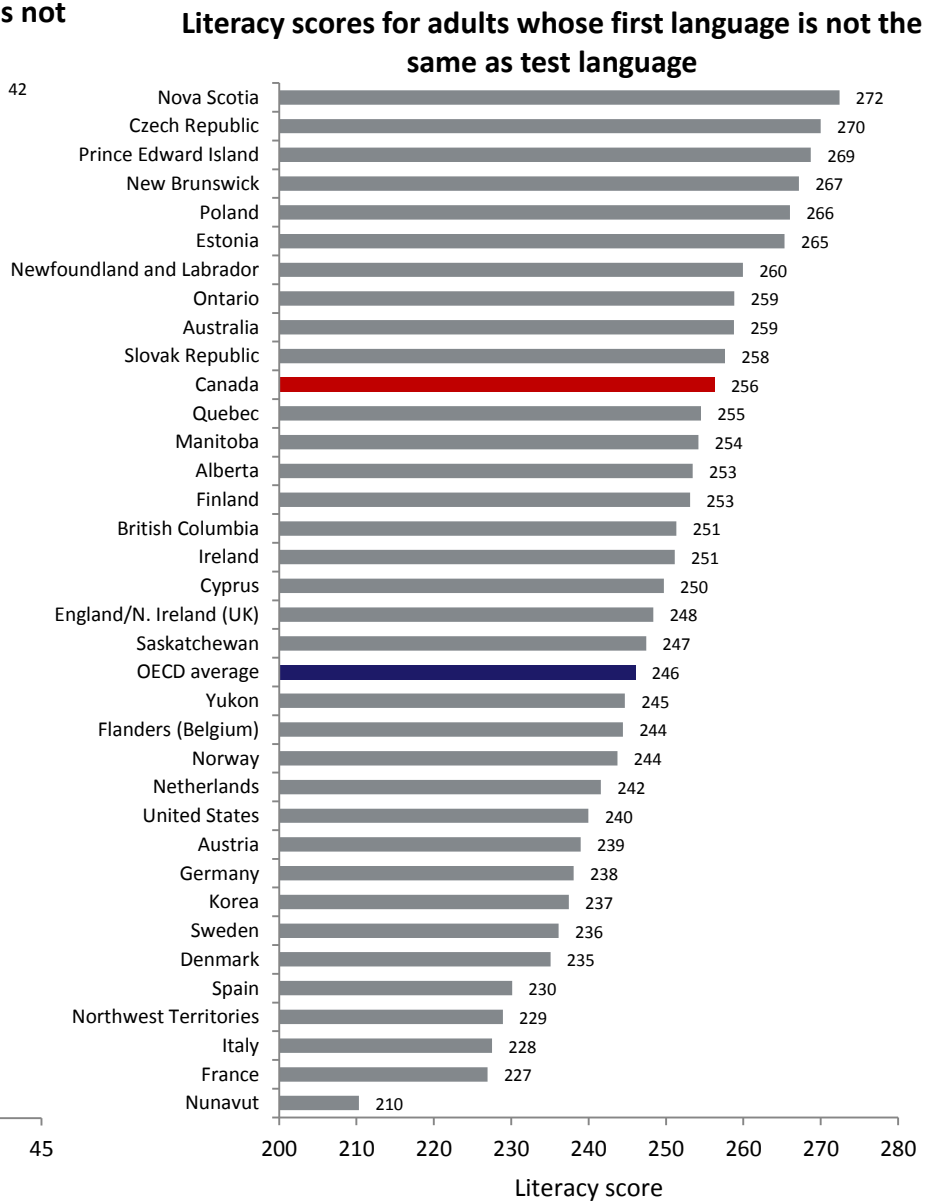
Language

- ✓ The proportion of the population whose mother tongue is different from the language of the assessment is higher in Canada than in any other country.
- ✓ Canadian immigrants whose mother tongue is neither English nor French perform better than foreign-born/ foreign-language respondents in almost all other countries.
- ✓ In Canada, official-language minority populations tend not to perform as well as official-language majority populations (except for anglophones in Quebec), but the size of the differences varies across jurisdictions.

Language

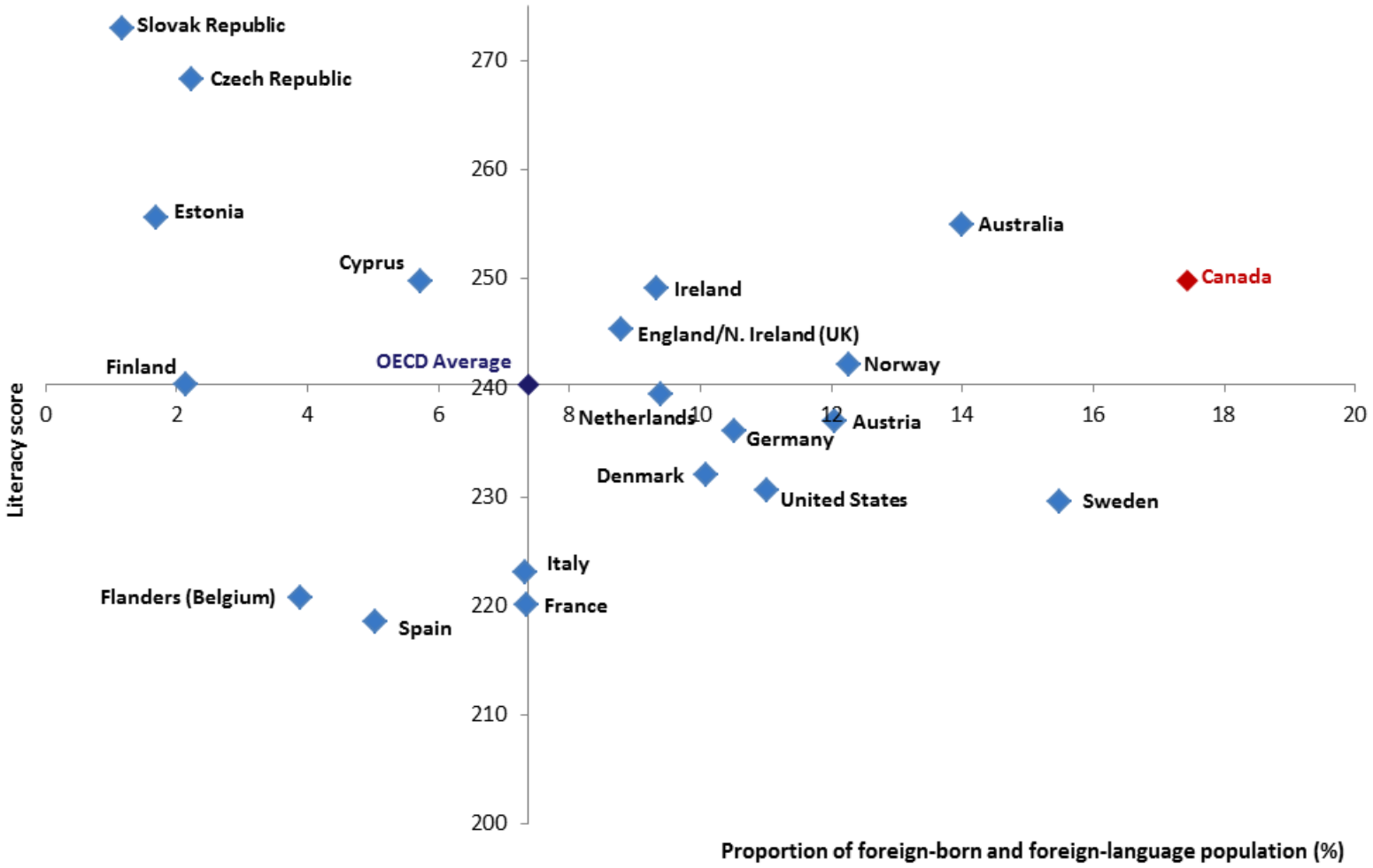
Literacy — Proportions and average scores of population aged 16 to 65 by first language and the language of the test, OECD average, countries, provinces and territories, 2012



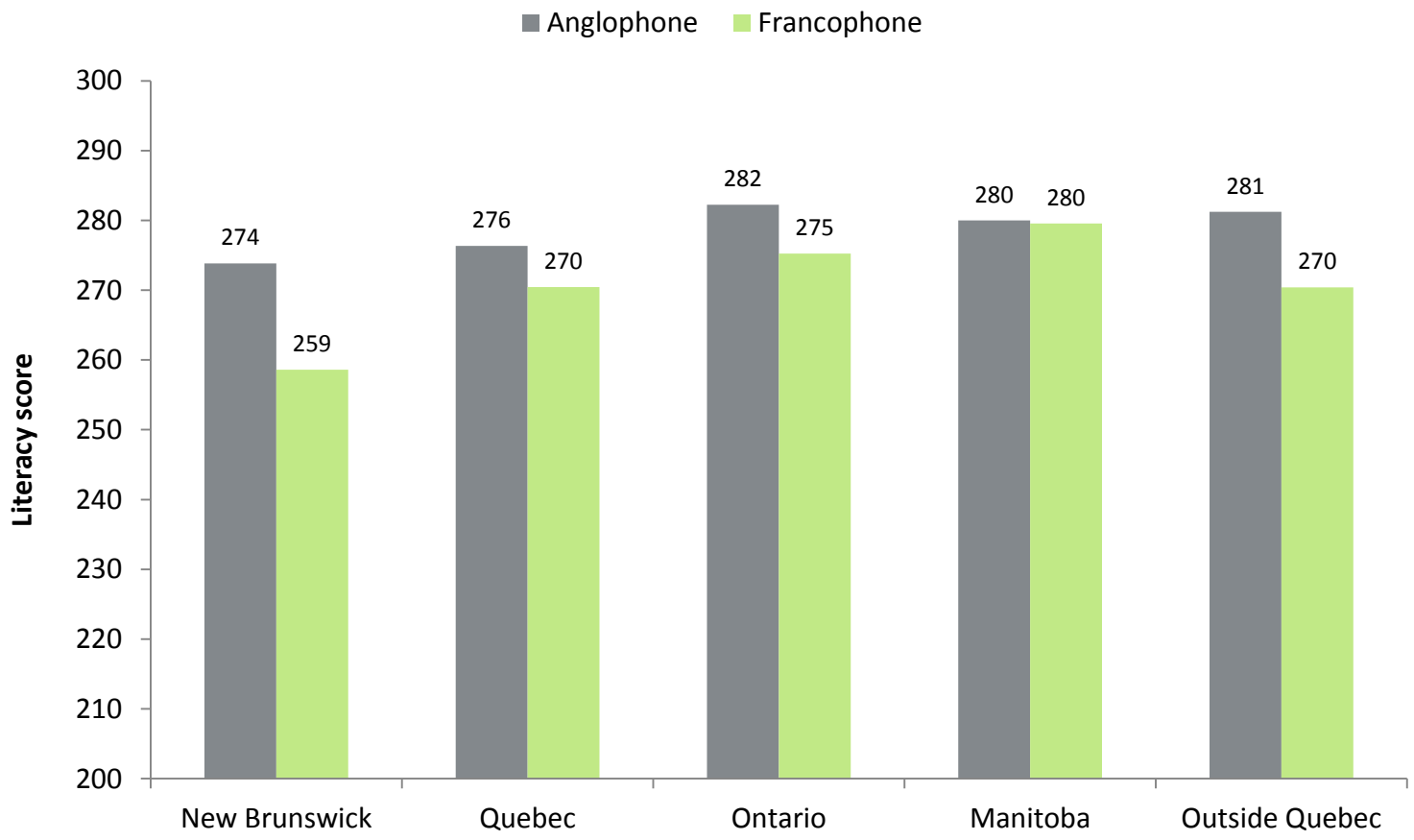


Language

Literacy —Average scores of population aged 16 to 65, foreign-born and foreign-language status, OECD average and countries, 2012



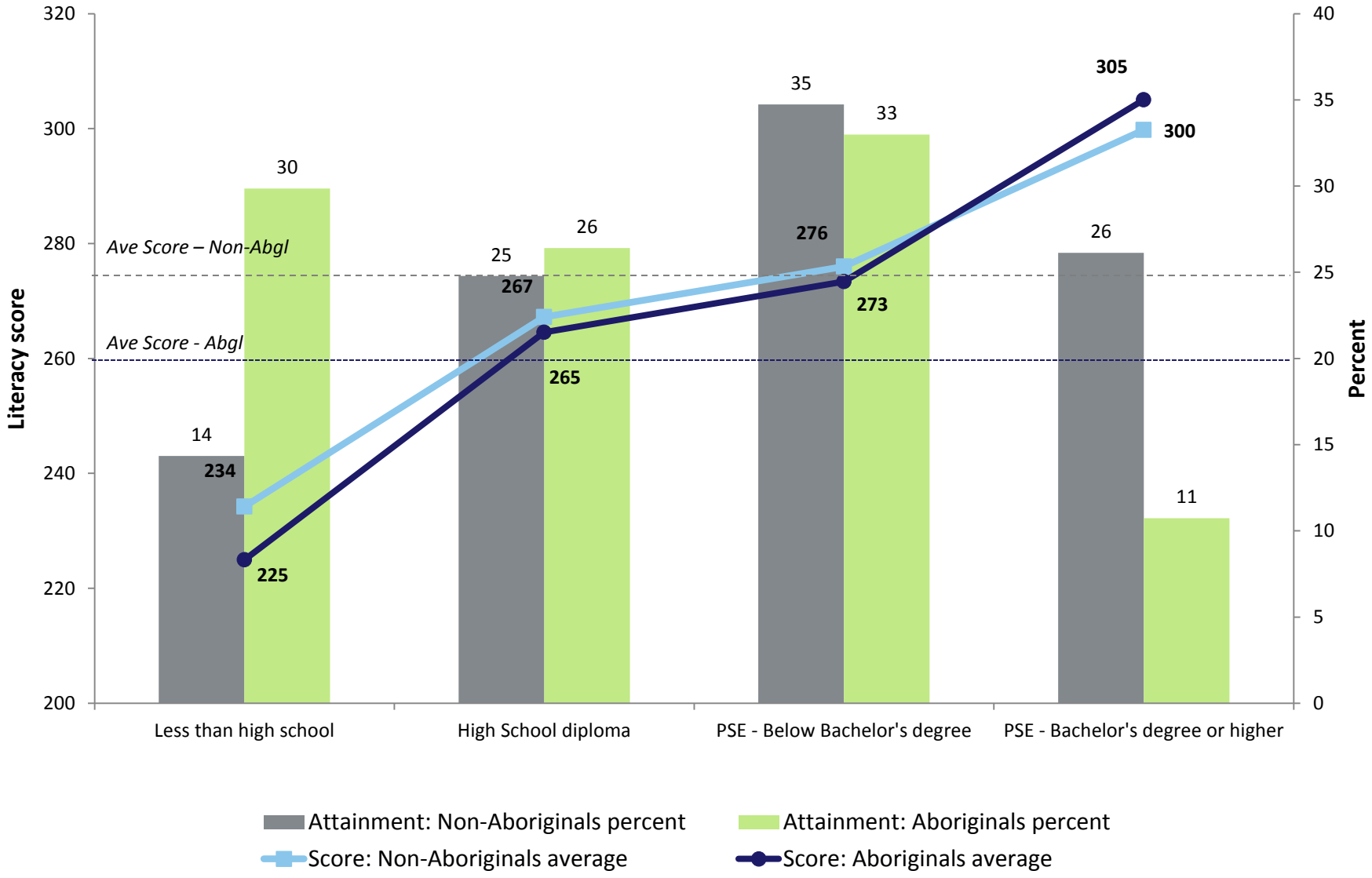
Literacy — Average scores of population aged 16 to 65 by official-language minority, Canada, 2012



Aboriginal peoples

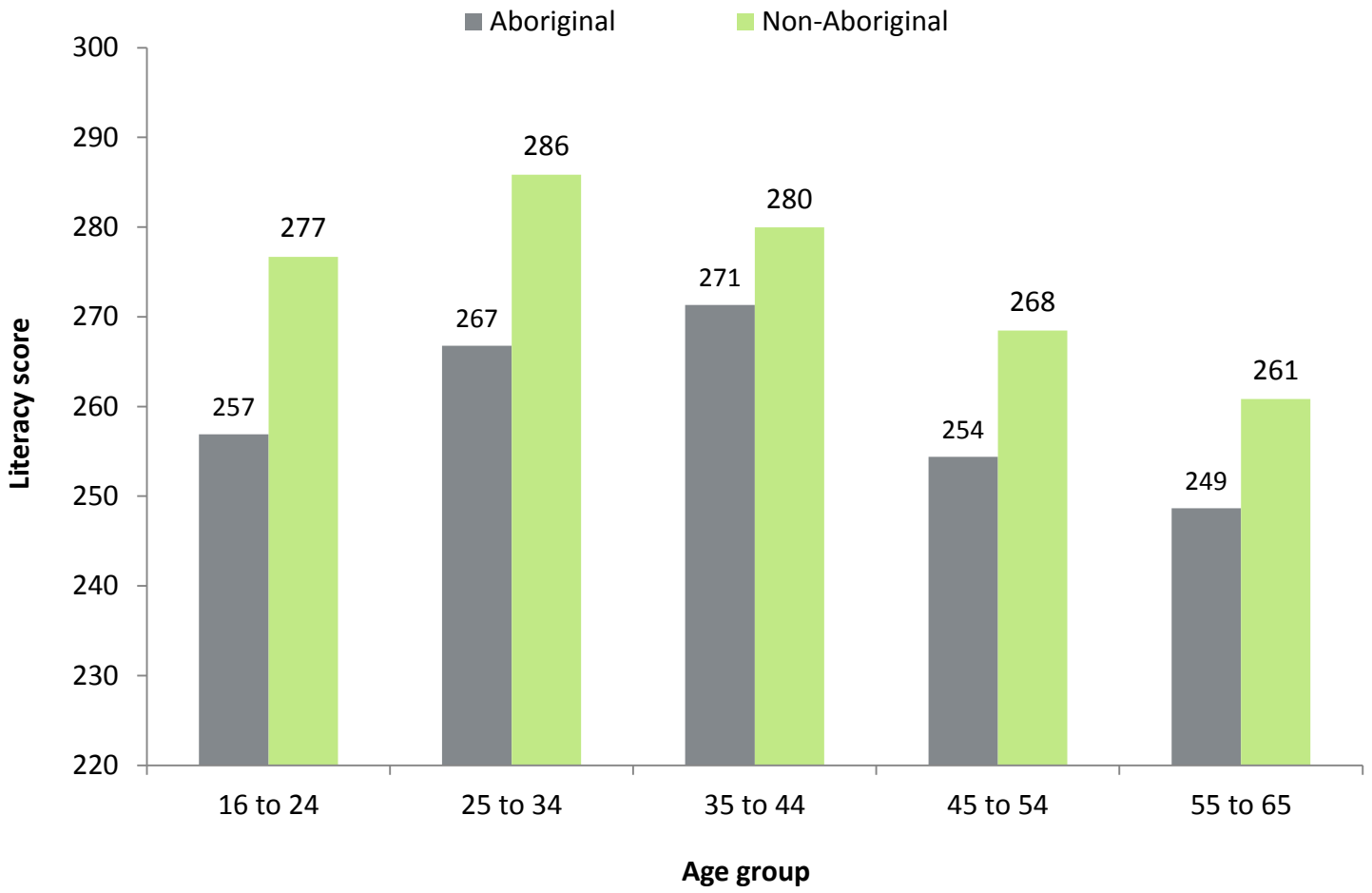
- ✓ Aboriginal and non-Aboriginal people with similar levels of education have similar skills proficiency; education is the key to eliminating the skills gap.
- ✓ The skills gap between Aboriginal and non-Aboriginal people is wider among young adults than among older cohorts of the population.
- ✓ The skills gap between Aboriginal and non-Aboriginal people varies considerably by region and by type of skills assessed.

Literacy — Average scores of population aged 16 to 65 by off-reserve Aboriginal identification and educational attainment, Canada, 2012



Aboriginal peoples

Literacy — Average scores of population aged 16 to 65 by age and off-reserve Aboriginal identification, Canada, 2012



Skills gaps that matter

- ✓ The OECD observes that the variation in proficiency between the adult populations in participating countries is relatively small.
- ✓ The same is true of provinces within Canada.
- ✓ The difference between the performance of people from different backgrounds within jurisdictions is much larger than the difference between jurisdictions themselves.

Skills gaps that matter

Literacy - Range in average scores, OECD average and Canada, 2012