
Key takeaways from PIAAC

This synthesis is primarily based on reports and a presentation of PIAAC results produced by the OECD, including the [primary report](#), a country-based report [for Canada](#), a report focused on [interpretations of the data](#) and a [presentation](#) featuring Andreas Schleicher, Director for Education and Skills at the OECD. Insights about [what was tested](#), including [online examples](#), and a [report focused on adults at level 1 and below](#) are also integrated. The author [Christine Pinsent-Johnson](#) also examined [aspects](#) of PIAAC test design in a [thesis](#).

What was tested and how?

PIAAC or the [Programme for the International Assessment of Adult Competencies](#) recently released results of an assessment and analysis of adult skills that took place in 2022-2023. The initiative, managed by the [Organization for Economic Co-operation and Development](#) (OECD), has taken place each decade since the mid 1990s, involving various OECD member countries. Canada has been highly involved in each assessment, and even co-managed the project with the OECD for the first two decades.

The assessment is available in the official language(s) of participating countries. This round of PIAAC was exclusively digital. Three cognitive domains were directly assessed on tablets:

1. Literacy
2. Numeracy
3. Adaptive problem-solving

The literacy and numeracy test-items used in this round of assessment were updated to reflect how the skills are used in online environments. The focus of OECD reporting was on literacy and numeracy. (See what the test looks like and try it out [here](#).)

In addition to the assessments, all participants completed a background questionnaire. Questions addressed demographics, education and training, work experience, use of specific literacy, numeracy and digital skills at work and at home, economic and non-economic outcomes. Questionnaire data was analysed with the assessment results (i.e., proficiency scores and levels) to examine the relationships between proficiency and socioeconomic outcomes (e.g., employment, income and political efficacy) and between proficiency and contributors (e.g., education level, training and literacy use).

The OECD doesn't claim there are causal relationships between proficiency and either outcomes or contributors. Only correlations are apparent. In other words, the OECD doesn't claim that improved scores lead directly to certain outcomes such as higher incomes. They also don't claim that particular levels of education or types of learning lead directly to an increased proficiency score.

How did Canada perform?

Canada performed above the OECD average and placed 10th out of 31 countries. England and Germany have similar scores as Canada. Northern European countries (i.e. Sweden, Finland, Norway, Denmark, the Netherlands, Flemish Belgium and Estonia) and Japan performed better than Canada. The United States, New Zealand and France are some of the countries that have results below the OECD average.

Countries can be compared with the OECD average and with each other. However, there is no such thing as a level 3 suitable minimum or standard. There is also no evidence to support any statements about people's ability to "function in society." These are false and demeaning claims that were fabricated when Statistics Canada was involved with the assessment project. Continued references to a level 3 standard and/or minimum functioning perpetuates the falsehood, creates confusion and disparages many adults.

How do the current results compare to results a decade ago?

Compared to the previous assessment a decade ago, average literacy scores have stagnated or declined in many countries. Adults with lower levels of education experienced greater declines than those with higher levels of education.

- The literacy gap between the highly educated and lower educated has widened. However, the gap in Canada is stable.
- The declines are due to more people scoring lower, not just an aging population (PIAAC scores decline with age) and immigration. More males than females have seen a literacy decline.
- The decline, explained the OECD director of education and skills during a presentation, isn't due to the online testing format. If this was the case, both numeracy and literacy scores would be impacted, but that's not what is happening.
- At this point, there is no evidence to explain the decline in literacy, only suppositions.

Comparing Canada’s results

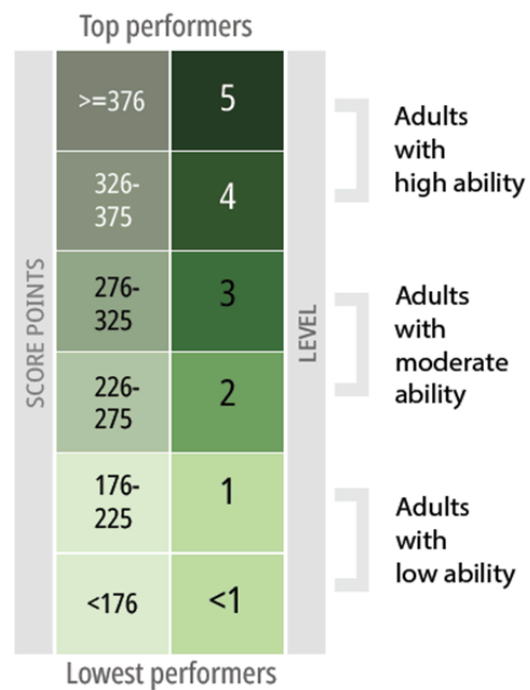
- Canada’s literacy proficiency score dropped one point from 272 in 2013 to 271 in 2023. However, the OECD considers this a sign of stagnation. Scores should be increasing to accommodate rapidly growing and changing demands as services and opportunities transition from in-person to online-only access.
- Canada’s numeracy score increased seven points from 264 in 2013 to 271 in 2023, due to new immigrants scoring at higher numeracy levels, states the OECD.

How many adults scored at the lowest levels?

About 26% of the adult population across all participating countries and regions score at level 1, including 9% who score below level 1.

In Canada, 19% of adults are at level 1 or below, which is less than the OECD average and a decrease compared to a decade ago. Nordic countries, the Netherlands and Flemish Belgium have fewer people scoring at level 1. England, with a similar overall score to Canada, has fewer adults (17%) at level 1 or below.

Although the OECD describes level 1 as “low-ability,” we don’t actually know what this means outside the confines of the assessment project. There’s no consistent and rigorous evidence to indicate adults at level 1 struggle in their daily lives.



People who score at PIAAC level 1 are from all socio-economic backgrounds. The majority are employed, completed high school and were born in the country in which they took the test. The key distinction is that they are less likely to participate in adult learning and engage less in literacy activities at work and at home due to external barriers, not motivation. **Scoring at PIAAC level 1 is more a matter of limited opportunities to develop more complex skills than limited abilities.**

How difficult is a test-item at PIAAC level 1?

PIAAC was designed to test skills *already learned* in K-12 education.

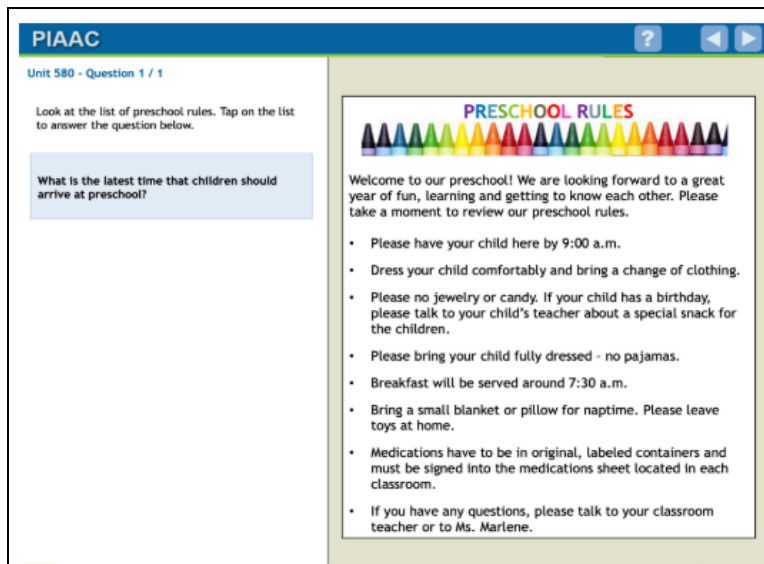
Adults who score at PIAAC level 1 aren't beginner readers.

Completion of a PIAAC level 1 test-item requires the application of reading skills, knowledge and strategies typically acquired in grades 7-8, in addition to test-taking confidence and abilities.

In the example test-item,

“Preschool Rules” has a readability

of Grade 7. The test question adds additional difficulty to the task. To respond to the question, *What is the latest time children should arrive at school?*, test-takers need to understand that the answer is a precise time, scan the rules to find two precise times, and then read the surrounding text to determine which of those times is the correct response. Test-takers must then tap the screen where they see the correct response. (You can try the online version of this sample test-item and others [here](#).)



If a PIAAC participant was unable to complete a level 1 test-item, they were given a completely different assessment involving two mini-tests. In one test, participants decide if a sentence makes sense by choosing yes or no. In the other, they have to complete sentences in a paragraph (written at a grade 7 or 8 level) with a word that makes sense. We can assume that Canadians below level 1—only 6% or 1.6 million adults—do face some challenges with literacy in their lives, since the mini-tests rely on general vocabulary knowledge and word-meaning.

PIAAC and OALCF levels are different since the assessments that operationalize the levels are different. Despite the difference, superficial alignments are made between the descriptions of PIAAC levels and OALCF competencies (e.g., read short texts and search for one piece of information). These descriptors are also the basis for Skills for Success. In addition, PIAAC is built on a model of scanning and matching bits of information that doesn't align with research about how we actually develop and use our literacy and numeracy abilities.

What does all this mean for adult learning policy?

Most OECD countries have scaled up efforts to provide formal and non-formal training to adults, and yet we are not seeing commensurate skills improvements in many countries. This finding raises questions about the effectiveness of all stages of education and training systems and their ability to embed lifelong learning. It is also crucial to evaluate if today's workplaces are nurturing essential skills or if many modern jobs are linked to skills decline. Are we building a skilled workforce or inadvertently contributing to de-skilling?

OECD report authors emphasize the development of literacy and numeracy in the “new digital information landscape” for productivity and to ensure the effective functioning of democracies. Countries need to focus on learners at level 1 and below, they argue, which means ensuring high school completion for all, combined with regular and robust lifelong learning and training opportunities. During a presentation, the OECD director of education and skills, advised policy makers to look at the drivers of success in other countries.

Nordic countries resisted literacy declines and stagnation because they have rigorous and equitable K-12 and postsecondary systems, complemented by comprehensive, well-funded and coordinated adult education and training systems focused on lower level learners.

However, lifelong learning is only one contributor to proficiency. It's up to workplaces to leverage skills and not waste them.

Technology is also playing a role. On average, across OECD countries, the share of adults who use the Internet increased from 76% in 2012 to 93% in 2023. During a presentation, the OECD director of education and skills, hypothesized that a change in reading habits could explain literacy proficiency declines. He questioned whether technology is making us passive consumers rather than active readers and producers of information. **Equally possible, we hypothesize at AlphaPlus, is that the increase in online reading, coupled with unequal access to technology and opportunities to build skills, is preventing people from developing more in-depth skills.**

PIAAC proficiency levels are influenced by three factors: 1) education, including comprehensive, well-funded and coordinated lifelong learning opportunities, 2) the continued use and further development of skills at work and at home, and 3) technology, including both access and type of skills developed online.

How can PIAAC results be used by adult learning programs?

It's important to review PIAAC related statements on fact sheets and websites to avoid perpetuating confusing and false information. Ensure statements align with the OECD reports.

Statements to make

- ✓ Canada performs above the OECD average in PIAAC.
- ✓ Literacy proficiency has stagnated, despite new online demands.
- ✓ Numeracy proficiency has increased, due to highly skilled-immigrants.
- ✓ People at PIAAC level 1 are far less likely to participate in adult learning due to external barriers, including a lack of opportunities.
- ✓ Scoring at PIAAC level 1 is more a matter of limited opportunities to gain more complex skills than limited abilities.
- ✓ Literacy is important for both productivity and a functioning democracy.
- ✓ Education level and quality (i.e. equitable access and alignments with opportunities and literacy, numeracy and digital demands) contributes the most to proficiency.
- ✓ Proficiency also depends on skill use at work and online.

Statements to avoid

- ✗ Level 3 is a suitable minimum.
- ✗ People can't function unless they are at a certain level.
- ✗ Level 1 means people struggle with everyday reading or are beginning readers.
- ✗ Low levels of literacy drag down the economy because the country is less productive (many factors contribute to productivity and literacy plays a small role).

Advocacy soundbite

Foundational learning programs help adults gain credentials and learn new literacy practices, both of which could eventually lead to greater literacy proficiencies measured by PIAAC. More importantly, foundational learning makes an immediate difference in people's lives, opens up opportunities they might not have otherwise and helps address the gap in available training and learning opportunities for those at PIAAC level 1 and below.

Contact [Alan Cherwinski](#) or [Christine Pinsent-Johnson](#) if you have comments or questions.