COUNTRY NOTE

SKILLS MATTER: ADDITIONAL RESULTS FROM THE SURVEY OF ADULT SKILLS

United States

Key issues

- Adults in the United States performed slightly above than the OECD average in literacy, well below the average in numeracy. The proportion of adults performing at the highest two levels in problem solving in technology-rich environments is close to the OECD average.
- The difference in the proficiency of high and low educated adults in both literacy and numeracy is greater than the OECD average in in the United States.
- Parental education has a stronger relationship with proficiency in the United States than is the case across OECD countries on average.
- Adults in the United States have high levels of engagement in numeracy practices, both in everyday life and at work, compared to most other countries.
- Proficiency in numeracy and years of education are comparatively strong predictors of wages in the United States.
- In the US, as in other OECD countries, higher proficiency in literacy and numeracy has a positive impact on several non-economic outcomes, such as trust in others, political efficacy, participation in volunteer activities and self-reported health.
- The United States is the only country among all PIAAC participating countries to have conducted a repeat administration of the survey as part of the 1st Cycle.

Box 1. The Survey of Adult Skills

The Survey of Adult Skills, a product of the OECD Programme for the International Assessment of Adult Competencies (PIAAC), provides a picture of adults' proficiency in three key information-processing skills:

- literacy – the ability to understand and respond appropriately to written texts
- numeracy – the ability to use numerical and mathematical concepts
- problem solving in technology-rich environments – the capacity to access, interpret and analyse information found, transformed and communicated in digital environments.

Proficiency is described on a scale of 500 points divided into levels. Each level summarises what a person with a particular score can do. Six proficiency levels are defined for literacy and numeracy (Levels 1 through 5 plus below Level 1) and four are defined for problem solving in technology-rich environments (Levels 1 through 3 plus below Level 1).

The survey also provides a wide range of information about respondents' use of skills at work and in everyday life, their education, their linguistic and social backgrounds, their participation in adult education and training programmes and in the labour market, and other aspects of their well-being.

The Survey of Adult Skills was conducted in the United States from March 2017 to September 2017. Some 3 300 adults aged 16-65 were surveyed.

Adults in the United States performed slightly above than the OECD average in literacy, well below the average in numeracy. In the domain of problem solving in technology-rich environments, the United States has proportions of high-performing adults which are close to the OECD average.

Some 12.8% of adults in the United States are proficient at the two highest levels of proficiency (Level 4 or 5) in literacy in 2017, slightly more than the average of 10.0% of adults across participating OECD countries. At Level 4, adults can integrate, interpret and synthesise information from complex or lengthy texts that contain conditional and/or competing information (for more details on what adults can do at each proficiency level, see the table at the end of this note). **Some 32.9% of adults are proficient at Level 3 in literacy in 2017**, marginally lower than the average of 34.6% of adults across participating OECD countries. Adults performing at this level can understand and respond appropriately to dense or lengthy texts, and can identify, interpret or evaluate one or more pieces of information and make appropriate inferences using knowledge text structures and rhetorical devices. The share of the population in the United States performing at the three highest levels (Level 3 and above) of proficiency in literacy (45.6%) is similar to that of countries like Austria (45.7%) and Germany (47.1%). It should also be noted that the proportion of adults in the United States proficient at these levels in 2017 (45.6%) is similar to the proportion of highly proficient adults in 2012/14 (47.5%).

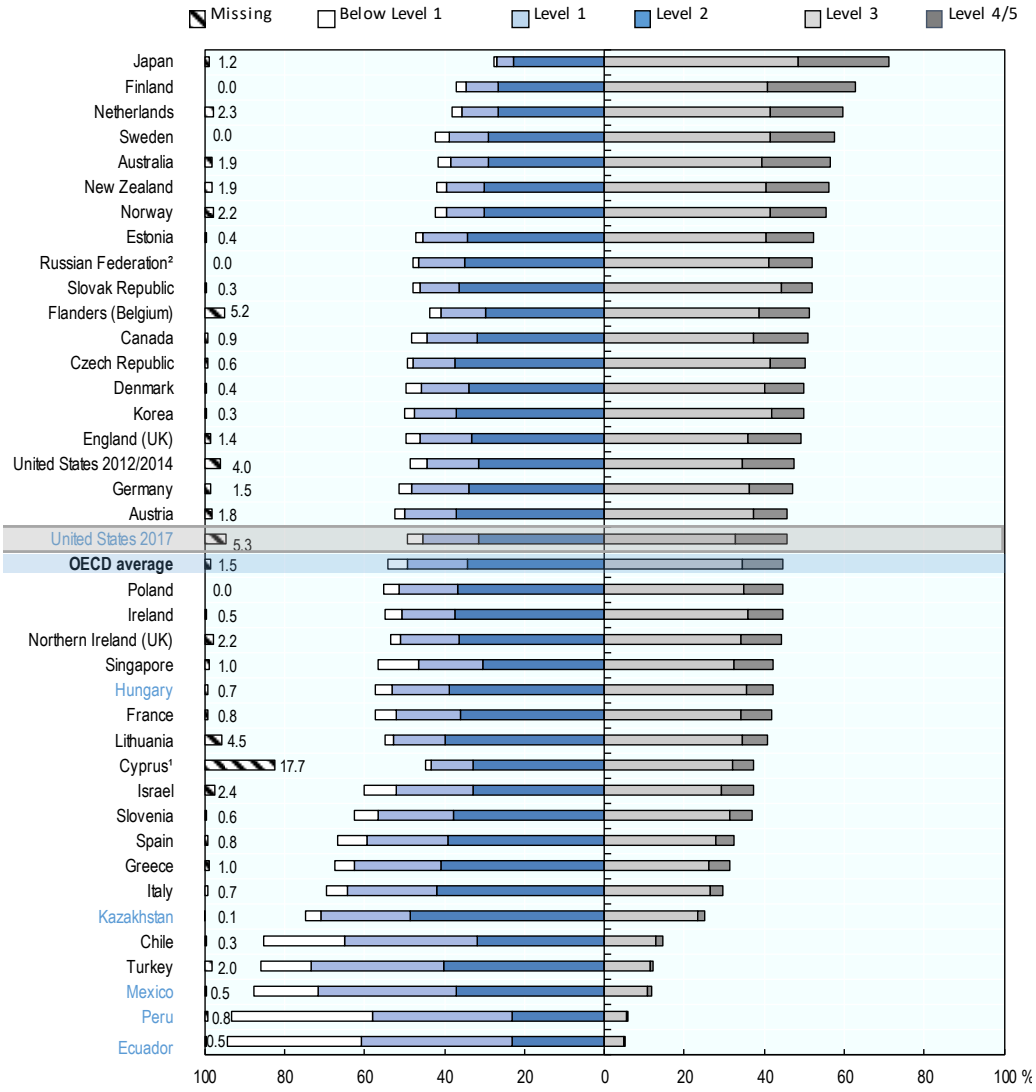
In the United States, 9.5% of adults attain Level 4 or 5 in numeracy in 2017, slightly less than the average of 10.9% across participating OECD countries. At Level 4, adults understand a broad range of mathematical information that may be complex, abstract or found in unfamiliar contexts. **Some 25.9% of adults are proficient at Level 3 in numeracy**, lower than the OECD average of 31.2%. At this level, adults have a good sense of number and space; can recognise and work with mathematical relationships, patterns, and proportions expressed in verbal or numerical form; and can interpret and perform basic analyses of data and statistics in texts, tables and graphs. In the United States, 35.4% of adults are proficient at the three highest levels of the numeracy scale. This is a lower proportion than in countries such as Germany and Austria as well as the OECD average of 42.2%. The proportion is comparable to Ireland (36.3%), Israel (36.3%) and France (37.3%). As in the case of literacy, there was little change in the proportion of highly proficient adults between 2012/14 (37.3%) and 2017 (35.4%) in the United States,

In 2017, the average literacy score of adults in the United States literacy (271 points) was higher than the OECD average (266 points). In contrast, the average numeracy score of US adults (255 points) was significantly lower than the OECD average of 262 points. There was no statistically significant difference in average proficiency in either of the two domains between two administrations of the survey in the United States.

On average, across the OECD countries participating in the Survey of Adult Skills, around one in three adults (29.7%) is proficient at the two highest levels of problem-solving proficiency (Level 2 or 3). The United States has proportions of high-performing adults (31.2%) which are close to the OECD average. As such, in terms of the proportions of adults proficient at these levels, it is similar to Hungary (28.5%) from Round 3 and Northern Ireland (28.7%) as well as Korea (30.4%) from previous rounds. Adults at Level 3 can complete tasks involving multiple computer applications, a large number of steps, and the discovery and use of ad hoc commands in a novel environment. At Level 2, adults can complete problems that involve a small number of computer applications, and require completing several steps and operations to reach a solution.

Figure 1. Literacy proficiency among adults

Percentage of adults scoring at each proficiency level in literacy



Notes: Adults in the missing category were not able to provide enough background information to impute proficiency scores because of language difficulties, or learning or mental disabilities (referred to as literacy-related non-response).

1. Note by Turkey: The information in this document with reference to "Cyprus" relates to the southern part of the Island. There is no single authority representing both Turkish and Greek Cypriot people on the Island. Turkey recognises the Turkish Republic of Northern Cyprus (TRNC). Until a lasting and equitable solution is found within the context of the United Nations, Turkey shall preserve its position concerning the "Cyprus issue".

Note by all the European Union Member States of the OECD and the European Union: The Republic of Cyprus is recognised by all members of the United Nations with the exception of Turkey. The information in this document relates to the area under the effective control of the Government of the Republic of Cyprus."

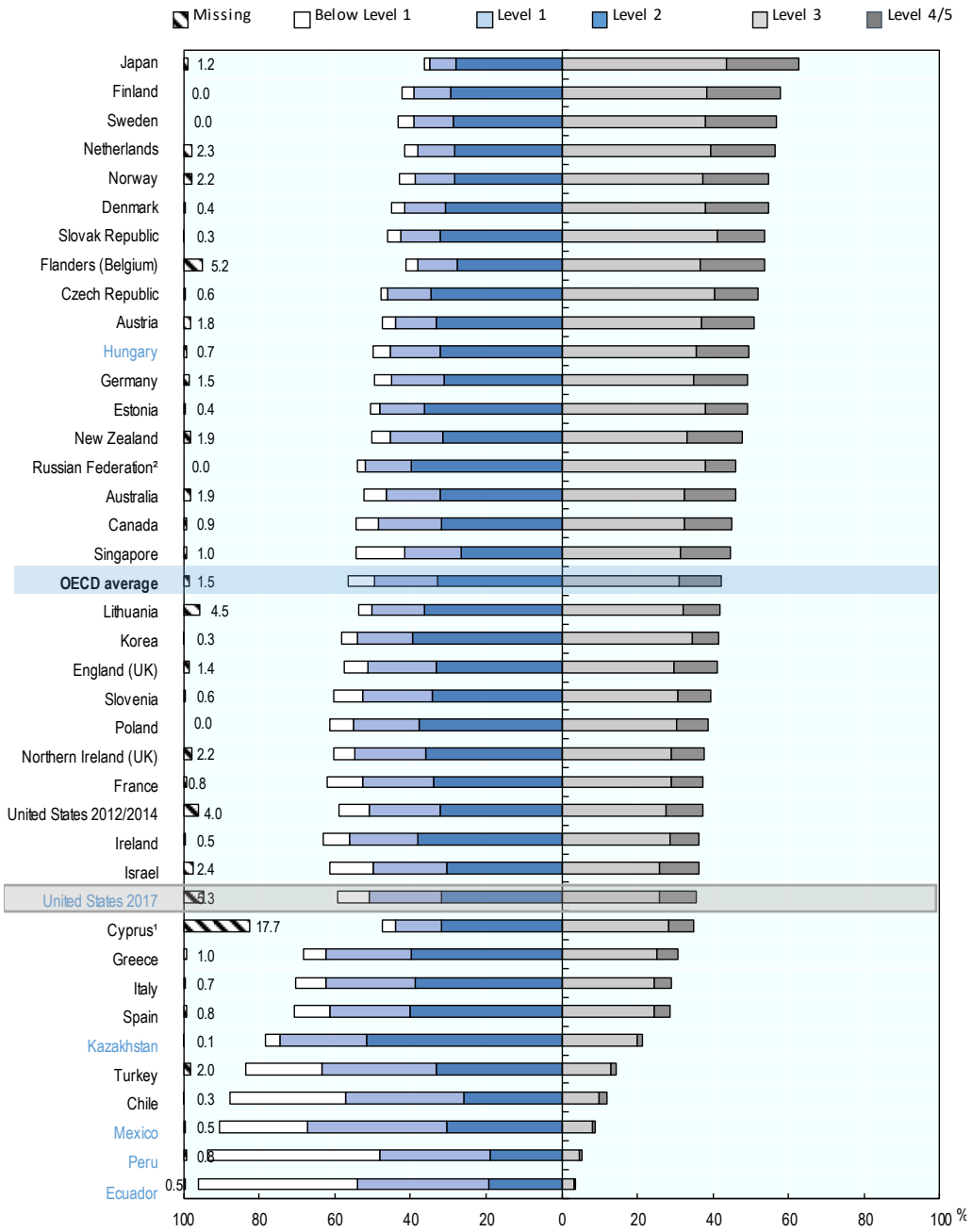
2. The sample for the Russian Federation does not include the population of the Moscow municipal area. More detailed information can be found in the Technical Report of the Survey of Adult Skills, Third Edition (OECD, 2019).

Countries and economies are ranked in descending order of the combined percentages of adults scoring at Level 3 and at Level 4/5.

Source: Survey of Adult Skills (PIAAC) (2012, 2015, 2018), Table A2.1.

Figure 2. Numeracy proficiency among adults

Percentage of adults scoring at each proficiency level in numeracy



Notes: Adults in the missing category were not able to provide enough background information to impute proficiency scores because of language difficulties, or learning or mental disabilities (referred to as literacy-related non-response).

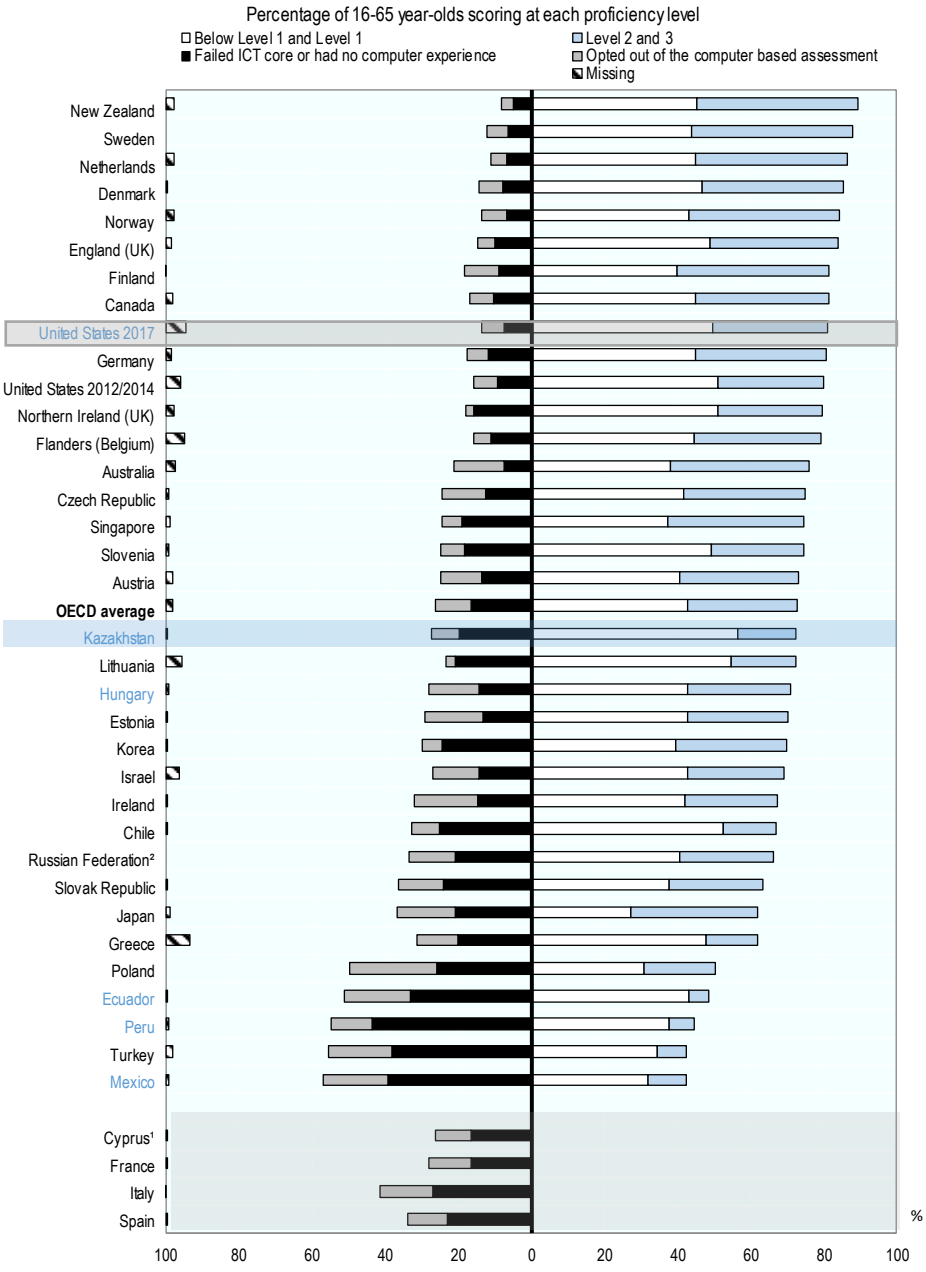
1. See note 1 under Figure 1.
2. See note 2 under Figure 1.

Countries and economies are ranked in descending order of the combined percentages of adults scoring at Level 3 and at Level 4/5.

Source: Survey of Adult Skills (PIAAC) (2012, 2015, 2018), Table A2.3.

Figure 3. Proficiency in problem solving in technology-rich environments among adults

Percentage of 16-65 year-olds scoring at each proficiency level



Notes: Adults included in the missing category were not able to provide enough background information to impute proficiency scores because of language difficulties, or learning or mental disabilities (referred to as literacy-related non-response). The missing category also includes adults who could not complete the assessment of problem solving in technology-rich environments because of technical problems with the computer used for the survey. Italy and France did not participate in the problem solving in technology-rich environments assessment.

1. See note 1 under Figure 1.
2. See note 2 under Figure 1.

Countries and economies are ranked in descending order of the combined percentages of adults scoring at Levels 2 and at Level 3.

Source: Survey of Adult Skills (PIAAC) (2012, 2015, 2018), Table A2.7.

Performance of highly educated adults in the United States is above the OECD average in literacy but below the average in numeracy.

In all countries, level of education has a positive association with performance in the PIAAC assessment. In OECD countries that participated in PIAAC, the average difference between tertiary-educated adults and adults with lower than upper secondary education is 61 score points in literacy and 70 score points in numeracy. The gaps in proficiency between high and low educated adults in literacy and numeracy proficiency were larger than the OECD average in the United States in 2017 at 76 and 92 score points respectively.

As in other countries, accounting for differences in other socio-demographic characteristics such as age, gender, and parents' educational attainment reduces the strength of the associations between proficiency and level of educational attainment although not by a large amount.

In contrast with 25-65 year olds, the differences in proficiency by level of education are relatively less strong in the United States among young adults. The difference in proficiency between young adults aged 20-24 years who are enrolled in or have completed tertiary level studies and other young people is 32 score points in the US compared to an OECD average of 35 score points. Similarly, the gap between early school leavers (young adults aged 16-24 years who have left education without attaining an upper secondary qualification) in the United States and other young people is 34 score points compared to an OECD average of 41 score points.

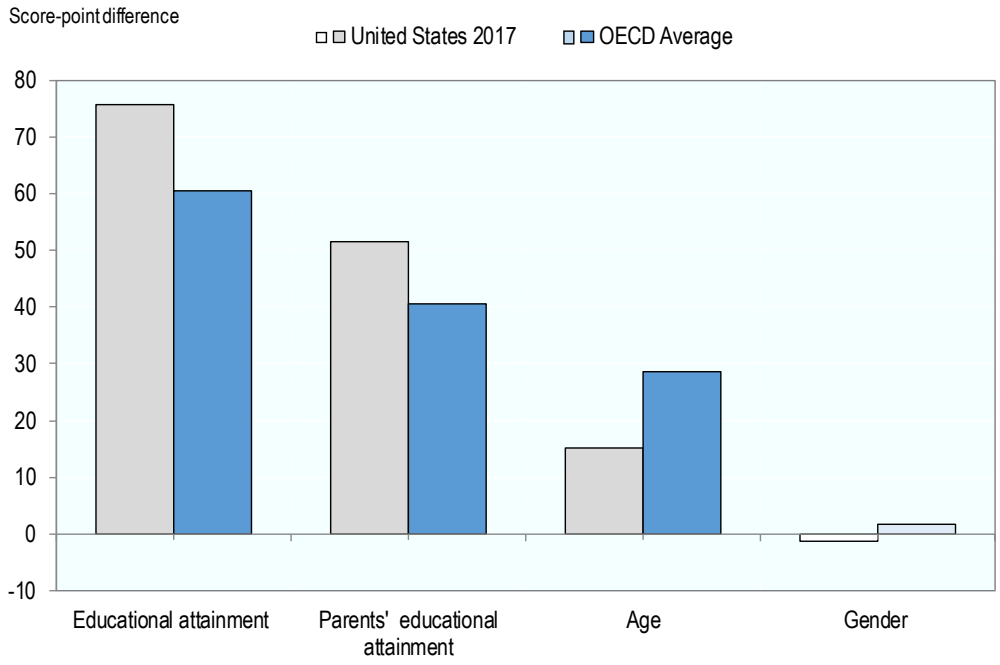
The association of parental education with proficiency is relatively strong in the United States

The association of parental education with proficiency is strong in the United States compared to other countries. In the United States, adults with at least one tertiary-educated adults scored on average 52 points higher in literacy than adults from families in which neither of the parents attained upper secondary level education compared to an OECD average of 41 score points.

Much of the difference in proficiency related to parental education accounted for by differences in other personal characteristics. In particular, controlling for educational attainment reduces the effect of socio-economic background on proficiency. The effect of socio-economic background mainly works through the intergenerational transmission of educational attainment: adults with highly educated parents are more likely to attain themselves higher levels of education.

Figure 4. Synthesis of socio-demographic differences in literacy proficiency

Difference in literacy scores between contrast categories within various socio-demographic groups



Notes: Statistically significant differences are marked in a darker tone. The estimates show the differences between the two means for each contrast category. The differences are: tertiary minus less than upper secondary (educational attainment), at least one parent attained tertiary minus neither parent attained upper secondary (parents' educational attainment), 25-34 year-olds minus 55-65 year-olds (age) and men minus women (gender).
Source: Survey of Adult Skills (PIAAC) (2012, 2015, 2018), Tables A3.1(L), A3.2(L), A3.5(L), A3.8(L),and A3.11(L).

Differences in proficiency related to age and gender are small.

In most countries, adults aged 25-34 years have the highest average proficiency in literacy and adults aged 55-65 the lowest. This is also true in the United States. The average literacy score of 25-34 year olds in the United States is 279 score-points (in line with the OECD average of 277 score points). The average score for US adults aged 55-65 years is 264 score-points (higher than the OECD average of 248 score-points). The gap in the proficiency of these tow age groups is much lower than that observed across OECD countries on average (15 compared to 29 score points). This relatively small age-related gap in

proficiency reflects the fact that educational expansion occurred earlier in the United States than in many other OECD countries

Gender differences in literacy and numeracy proficiency are small or negligible in the United States as is true across OECD countries on average. Men in the United States have a slight advantage in numeracy (7.6 score points). However, there is no statistical difference between the proficiency of men and women in literacy in the United States. It is interesting to note that the magnitude of the gender gap in favour of men in numeracy proficiency decreased from 14.5 to 7.6 score points between 2012-2014 and 2017 in the United States. In the case of literacy, it remained negligible, though with the advantage changing in favour of women.

Gender differences are also small in the domain of problem solving in the United States. As is true across OECD countries, men in the United States have a slight advantage over women. In the United States, some 32.7 % of men performed at Level 2 or 3, compared 29.6% of women, a difference of 3.1% points (compared to an OECD average of 4.0% points). The proportion of men in the United States who had no computer experience or failed the ICT core test was 9.2% compared to 5.7% for women. The gap of 3.5% points in favour of women compares to an OECD average of 0.7% points in favour of men.

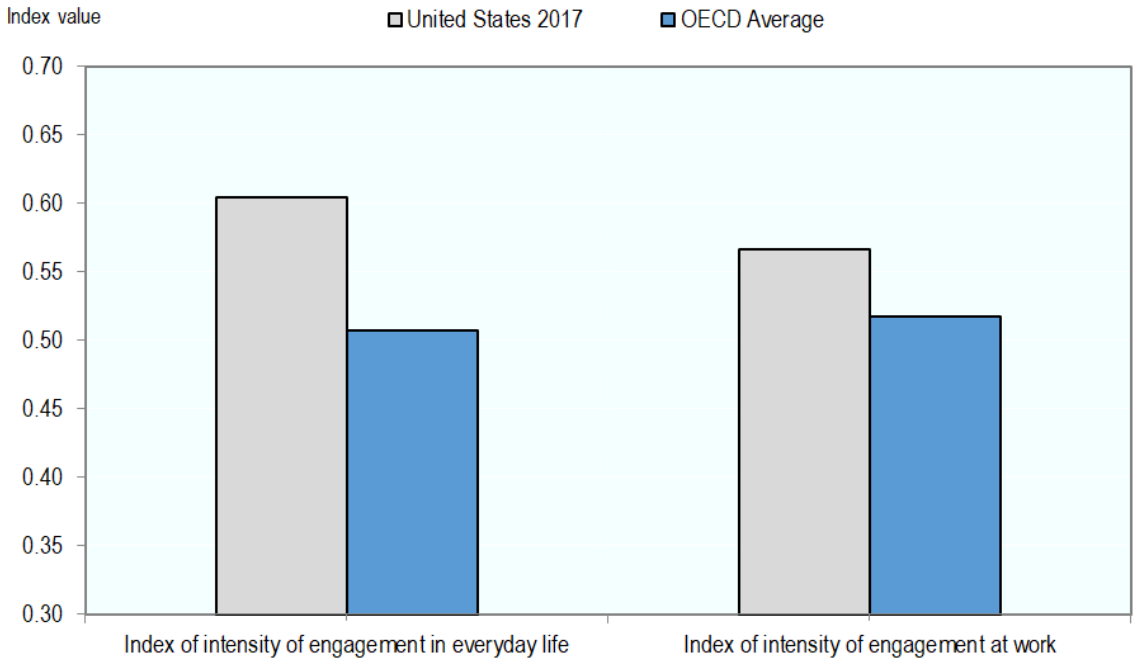
Adults in the United States engage in numeracy practices more intensely than in most other countries both in everyday life and at work.

The use of skills in everyday life and at work are highly, albeit imperfectly, correlated at the country level. Countries ranking low in skills use in everyday life (Turkey, Italy, Lithuania, Russian Federation) also rank low in use at work. This also holds true for countries that rank at the top of the distribution such as the United States, along with Finland, New Zealand, and the Czech Republic.

Additionally, the US is one of the countries with the lowest proportion of limited engagement users in numeracy, both in everyday life and at work, reaching respectively 25% and 33%, ranking third after Finland (13% vs 23%) and New Zealand (21% vs 27%).

Figure 5. Engagement in numeracy practices in everyday life and at work

Index of intensity of engagement in numeracy practices in everyday life and at work



Note: The index of intensity of engagement is an average across individuals in the country, and ranges between 0 and 1.
Source: Survey of Adult Skills (PIAAC) (2012, 2015, 2018); Table A4.2.

Proficiency in literacy and years of education are comparatively strong predictors of wages in the United States.

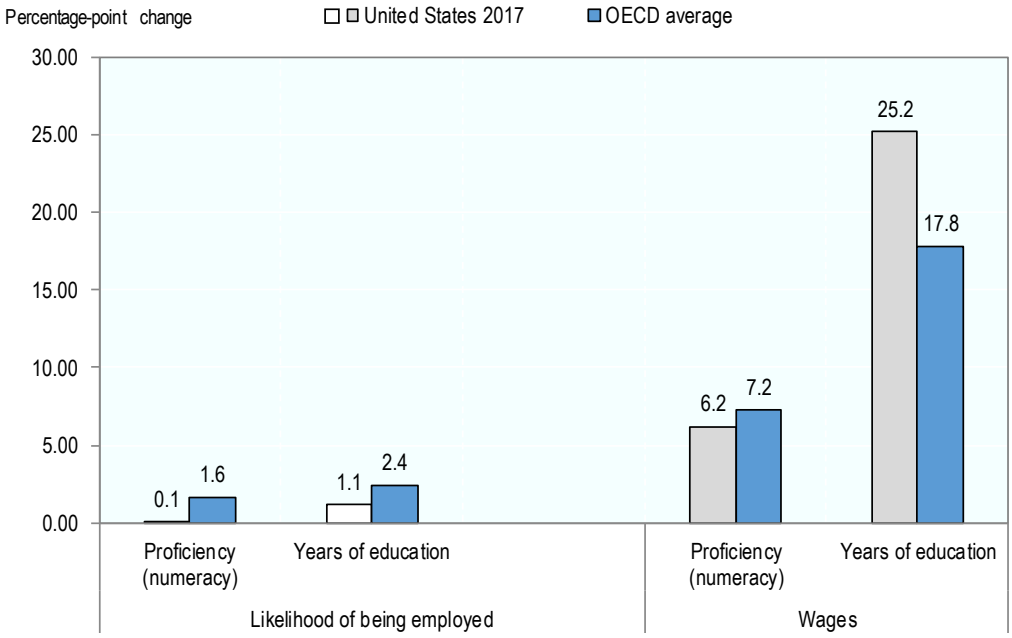
Proficiency and schooling have significant and independent effects on hourly wages. In the United States, an increase in one standard deviation in numeracy proficiency is associated with a 6% increase in hourly wages and an increase in years of education by one standard deviation brings about a bigger increase in hourly wages of about 25%, holding years of education

and other socio-demographic characteristics constant. Returns to years of education are higher and returns to proficiency are lower in the US than on average. Across the OECD countries that have implemented the Survey of Adult Skills, an increase in one standard deviation in numeracy proficiency is associated with a 7% increase in hourly wages, keeping years of education and other socio-demographic characteristics constant. An increase in years of education by one standard deviation brings about an increase in hourly wages of about 18%, all else being equal. In fact, United States shows one of the highest returns to years of education, across all OECD participating countries, after Singapore and Slovenia and at par with Turkey and Hungary.

In 2017, the contribution of information-processing skills to the variance of hourly wages was lower in the United States (2.0%) as compared to the OECD average of 4.5% but in 2012/14, information-processing skills accounted for 7.3% of the variance of hourly wages. Overall, however, years of schooling are more important in understanding the returns to human capital than proficiency. In the US, years of education account for around 12.9% of the variance of wages as compared to the OECD average of 11.7%. As such, the US is similar to Denmark, Norway, and Spain.

Figure 6. Effect of education and numeracy proficiency on the likelihood of being employed and on wages

Marginal effects (as % point change) of a one standard deviation increase in years education and numeracy on the likelihood of being employed among adults not in formal education and on wages



Notes: The reference category is "unemployed" for the modelisation of the likelihood of being employed and results are adjusted for gender, age, marital and foreign-born status. Hourly wages, including bonuses, in PPP-adjusted USD (2012). Coefficients from the OLS regression of log hourly wages on years of education and proficiency, directly interpreted as % effects on wages. Coefficients adjusted for age, gender, foreign-born status, numeracy skills at work and tenure. The wage distribution was trimmed to eliminate the 1st and 99th percentiles. One standard deviation in proficiency in numeracy is 56 points. One standard deviation in years of education is 3.3 years. Statistically significant differences are marked in a darker tone (at the 5% level).
Source: Survey of Adult Skills (PIAAC) (2012, 2015, 2018), Table A4.2.

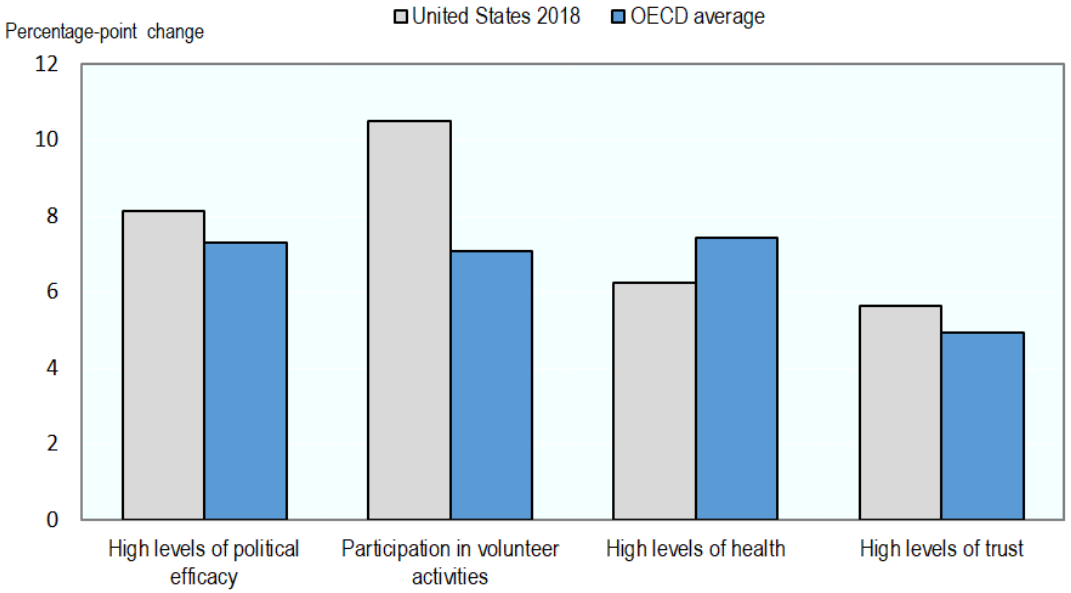
In the United States, as in other OECD countries, higher proficiency in literacy and numeracy has a positive impact on several non-economic outcomes, such as trust in others, political efficacy, participation in volunteer activities and self-reported health.

On average in the OECD, proficiency in information-processing skills is positively associated with trust, volunteering, political efficacy and self-assessed health. The relationships with political efficacy and self-assessed health hold even after accounting for the usual range of socio-demographic characteristics. On the other hand, the association with trust becomes very small and that with volunteering is no longer statistically significant once account is made for other individual characteristics.

In the United States, all these relationships are positive and statistically significant. The US shows stronger associations between proficiency in literacy and numeracy and variables such as trust, political efficacy and volunteering as compared to the OECD average. These association between proficiency and self-assessed health is however marginally weaker than the OECD average.

Figure 7. Effect of literacy proficiency on positive social outcomes

Marginal effects (as % point change) of one standard deviation increase in literacy proficiency score on the probability to report high- and low- levels of trust and political efficacy, good to excellent health, or participating in volunteer activities



Note: All differences are statistically significant.
Source: Survey of Adult Skills (PIAAC) (2012, 2015, 2018), Table A5.8(L).

The United States is the only country among all PIAAC participating countries to have conducted a repeat administration of the survey as part of the 1st Cycle.

Results for the United States in 2017 can be compared with the results from the 2012-14 data collection.

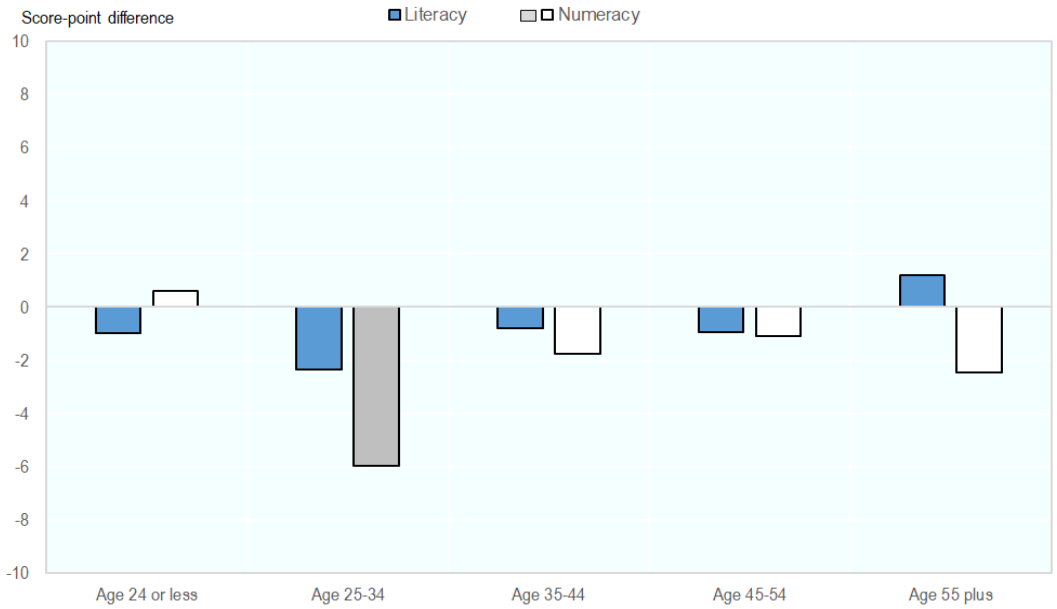
At first glance, very little has changed in the five years between 2012/14 and 2017. Average proficiency remained stable in both literacy (272 points in 2012/14 and 271 points in 2017) and in numeracy (257 points in 2012/14 compared to 255 in 2017). Performance in the assessment of problem solving in technology-rich environments improved marginally. The share of adults that scored at Levels 2/3 increased from 29 % to 31 %, and the share of adults scoring at or below Level 1 decreased from 51 to 50 %.

The absence of marked change in the proficiency of the adult population in literacy, numeracy and problem solving is in line with expectations. Change in the overall proficiency of the adult population results primarily from the replacement of older cohorts that exit the study's target age range as they age with young people turning 16 years of age. As around 10 % of the target population is replaced every five years, scope for major changes in a period of five years is relatively limited.

Looking at results by age group, shows that between 2012-14 and 2017 the numeracy proficiency of adults aged 25-34 years in 2017 was by 6 score points than that of adults of the same age in 2012/2014. For all the other age groups, the differences are very small and are not statistically significant.

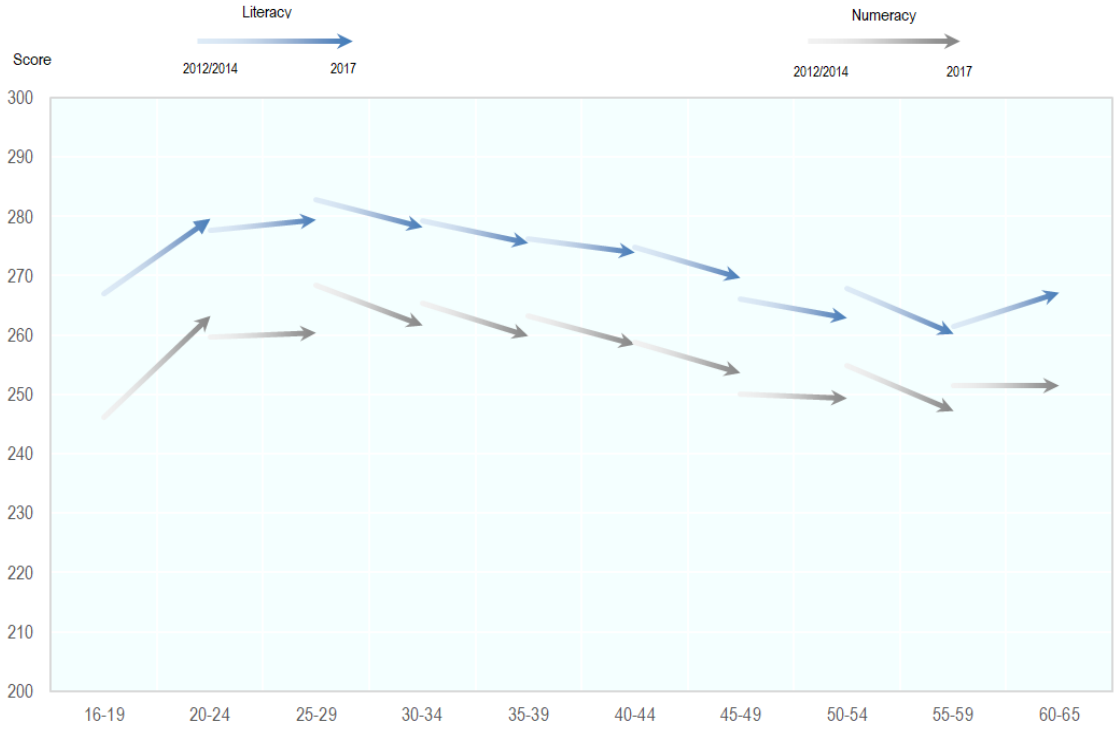
Figure 8. The evolution of literacy and numeracy proficiency, by age

Score-point difference between US cohorts assessed in 2012/2014 and 2017



Note: Statistically significant differences are marked in a darker tone
Source: Survey of Adult Skills (PIAAC) (2012, 2015, 2018), Tables A3.5(L) and A3.5(N).

Figure 9. Age-proficiency profile in the United States



Note: Each segment in the graph shows the evolution of literacy and numeracy scores of one cohort of adults that participated in PIAAC both in 2012-14 and in 2017. The first segment connects the score of adults aged 16-19 in 2012-14 to the score of adults aged 20-24 in 2017. The second segment connects the score of adults aged 20-24 in 2012-14 to the score of adults aged 25-29 in 2017, and so on.
Source: Survey of Adult Skills (PIAAC) (2012, 2015, 2018), Tables A3.5(L) and A3.5(N).

One of the benefits of having observations of the proficiency of the adult population at different points in time is the insight it provides into the process of cognitive aging. Although PIAAC does not retest the same individuals, it is possible to follow a representative sample of adults in the same birth cohorts over time. For example, adults aged 16-24 years in 2012-14 were aged (approximately) 25-34 years in 2017, and so on.

Figure 9 shows that, on average, proficiency in literacy and numeracy increases with increasing age until the early 30s and then gradually declines. The cohorts aged 16-19 and 20-24 in 2012 had higher average scores when assessed 5 years later in 2017. All other cohorts had lower scores when assessed in 2017 with the exception of adults aged 55-59 years in literacy.

Key facts about the Survey of Adult Skills (PIAAC)

What is assessed

- The Survey of Adult Skills (PIAAC) assesses the proficiency of adults from age 16 onwards in literacy, numeracy and problem solving in technology-rich environments. These skills are "key information-processing competencies" that are relevant to adults in many social contexts and work situations, and necessary for fully integrating and participating in the labour market, education and training, and social and civic life.
- In addition, the survey collects a range of information on the reading- and numeracy-related activities of respondents, the use of information and communication technologies at work and in everyday life, and on a range of generic skills, such as collaborating with others and organising one's time, required of individuals in their work. Respondents are also asked whether their skills and qualifications match their work requirements and whether they have autonomy over key aspects of their work.

Methods

- The first cycle of the Survey of Adults Skills has been conducted over three rounds of data collection. The first round surveyed around 166 000 adults aged 16-65 years in 24 countries (or regions within these countries) in 2011-12. In Australia, Austria, Canada, Cyprus*, the Czech Republic, Denmark, Estonia, Finland, France, Germany, Ireland, Italy, Japan, Korea, the Netherlands, Norway, Poland, the Slovak Republic, Spain, Sweden and the United States – the sample was drawn from the entire national population. In Belgium, the data were collected in Flanders; in the United Kingdom, the data were collected in England and Northern Ireland (data are reported separately for England and Northern Ireland in the report).
- Nine countries (or regions within these countries) took part in a second round of data collection in 2014-15: Chile, Greece, Jakarta (Indonesia), Israel, Lithuania, New Zealand, Singapore, Slovenia and Turkey. A total of 50 250 adults were surveyed. In all countries except Indonesia, the entire national population was covered. In Indonesia, the data were collected in the Jakarta municipal area only.
- The third round was conducted in 2017-18 in six countries: Ecuador, Hungary, Kazakhstan, Mexico, Peru and the United States. A total of 34 792 adults were surveyed. Note that the United States had already participated in Round 1. This brought the number of participating countries and economies to a total of 39.
- The language of assessment was the official language or languages of each participating country. In some countries, the assessment was also conducted in widely spoken minority or regional languages.
- Two components of the assessment were optional: the assessment of problem solving in technology-rich environments and the assessment of reading components.
- The target population for the survey was the non-institutionalised population, aged 16 to 65 years, residing in the country at the time of data collection, irrespective of nationality, citizenship or language status.
- Sample sizes depended primarily on the number of cognitive domains assessed and the number of languages in which the assessment was administered. Some countries boosted sample sizes in order to have reliable estimates of proficiency for the residents of particular geographical regions and/or for certain sub-groups of the population such as indigenous inhabitants or immigrants. The achieved samples ranged from a minimum of approximately 4 500 to a maximum of nearly 27 300.
- The survey was administered under the supervision of trained interviewers either in the respondent's home or in a location agreed between the respondent and the interviewer. The background questionnaire was administered in Computer-Aided Personal Interview format by the interviewer. Depending on the situation of the respondent, the time taken to complete the questionnaire ranged between 30 and 45 minutes.
- After having answered the background questionnaire, the respondent completed the assessment either on a laptop computer or by completing a paper version using printed test booklets, depending on their computer skills. Respondents could take as much or as little time as needed to complete the assessment. On average, the respondents took 50 minutes to complete the cognitive assessment.

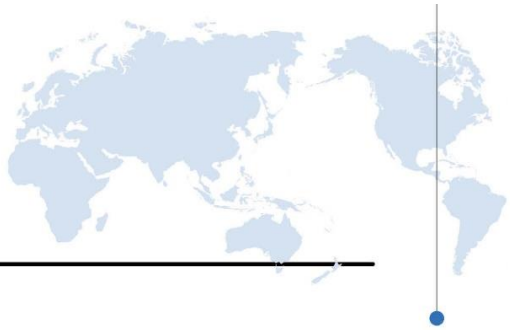
Proficiency levels: Literacy and numeracy

Level	Score range	Literacy	Numeracy
Below Level 1	Below 176 points	Tasks at this level require the respondent to read brief texts on familiar topics and locate a single piece of specific information. There is seldom any competing information in the text. Only basic vocabulary knowledge is required, and the reader is not required to understand the structure of sentences or paragraphs or make use of other text features.	Tasks at this level require the respondent to carry out simple processes such as counting, sorting, performing basic arithmetic operations with whole numbers or money, or recognising common spatial representations.
1	176 to less than 226 points	Tasks at this level require the respondent to read relatively short digital or print texts to locate a single piece of information that is identical to or synonymous with the information given in the question or directive. Knowledge and skill in recognising basic vocabulary, determining the meaning of sentences, and reading paragraphs of text is expected.	Tasks at this level require the respondent to carry out basic mathematical processes in common, concrete contexts where the mathematical content is explicit. Tasks usually require one-step or simple processes involving counting; sorting; performing basic arithmetic operations; and identifying elements of simple or common graphical or spatial representations.
2	226 to less than 276 points	Tasks at this level require the respondent to make matches between the text, either digital or printed, and information, and may require paraphrasing or low-level inferences.	Tasks at this level require the application of two or more steps or processes involving calculation with whole numbers and common decimals, %s and fractions; simple measurement and spatial representation; estimation; and interpretation of relatively simple data and statistics in texts, tables and graphs.
3	276 to less than 326 points	Texts at this level are often dense or lengthy. Understanding text and rhetorical structures is often required, as is navigating complex digital texts.	Tasks at this level require the application of number sense and spatial sense; recognising and working with mathematical relationships, patterns, and proportions expressed in verbal or numerical form; and interpreting data and statistics in texts, tables and graphs.
4	326 to less than 376 points	Tasks at this level often require the respondent to perform multiple-step operations to integrate, interpret, or synthesise information from complex or lengthy texts. Many tasks require identifying and understanding one or more specific, non-central idea(s) in the text in order to interpret or evaluate subtle evidence-claim or persuasive discourse relationships.	Tasks at this level require analysis and more complex reasoning about quantities and data; statistics and chance; spatial relationships; and change, proportions and formulas. They may also require understanding arguments or communicating well-reasoned explanations for answers or choices.
5	Equal to or higher than 376 points	Tasks at this level may require the respondent to search for and integrate information across multiple, dense texts; construct syntheses of similar and contrasting ideas or points of view; or evaluate evidence based arguments. They often require respondents to be aware of subtle, rhetorical cues and to make high-level inferences or use specialised background knowledge.	Tasks at this level may require the respondent to integrate multiple types of mathematical information where considerable translation or interpretation is required; draw inferences; develop or work with mathematical arguments or models; and critically reflect on solutions or choices.

Description of proficiency levels in problem solving in technology-rich environments

Level	Score range	The types of tasks completed successfully at each level of proficiency
No computer experience	Not applicable	Adults in this category reported having no prior computer experience; therefore, they did not take part in the computer-based assessment but took the paper-based version of the assessment, which does not include the problem solving in technology-rich environment domain.
Failed ICT core	Not applicable	Adults in this category had prior computer experience but failed the ICT core test, which assesses basic ICT skills, such as the capacity to use a mouse or scroll through a web page, needed to take the computer-based assessment. Therefore, they did not take part in the computer-based assessment, but took the paper-based version of the assessment, which does not include the problem solving in technology-rich environment domain.
"Opted out" of taking computer-based assessment	Not applicable	Adults in this category opted to take the paper-based assessment without first taking the ICT core assessment, even if they reported some prior experience with computers. They also did not take part in the computer-based assessment, but took the paper-based version of the assessment, which does not include the problem solving in technology-rich environment domain.
Below Level 1	Below 241 points	Tasks are based on well-defined problems involving the use of only one function within a generic interface to meet one explicit criterion without any categorical or inferential reasoning, or transforming of information. Few steps are required and no sub-goal has to be generated.
1	241 to less than 291 points	At this level, tasks typically require the use of widely available and familiar technology applications, such as e-mail software or a web browser. There is little or no navigation required to access the information or commands required to solve the problem. The tasks involve few steps and a minimal number of operators. Only simple forms of reasoning, such as assigning items to categories, are required; there is no need to contrast or integrate information.
2	291 to less than 341 points	At this level, tasks typically require the use of both generic and more specific technology applications. For instance, the respondent may have to make use of a novel online form. Some navigation across pages and applications is required to solve the problem. The task may involve multiple steps and operators. The goal of the problem may have to be defined by the respondent, though the criteria to be met are explicit.
3	Equal to or higher than 341 points	At this level, tasks typically require the use of both generic and more specific technology applications. Some navigation across pages and applications is required to solve the problem. The task may involve multiple steps and operators. The goal of the problem may have to be defined by the respondent, and the criteria to be met may or may not be explicit. Integration and inferential reasoning may be needed to a large extent.

COUNTRY NOTE



OECD

SKILLS MATTER: ADDITIONAL RESULTS FROM THE SURVEY OF ADULT SKILLS

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For more information on the Survey of Adult Skills (PIAAC) and to access the full *International* report, visit:

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