



SKILLS MATTER: FURTHER RESULTS FROM THE SURVEY OF ADULT SKILLS

JAKARTA (INDONESIA)

Key findings

- Adults in Jakarta show low levels of proficiency in literacy and numeracy compared to adults in the
 other countries and economies that participated in the Survey of Adult Skills. This is not surprising,
 given that most participating countries/economies are more economically developed than
 Indonesia.
- The dispersion of proficiency scores across adults living in Jakarta is wider than in most other participating countries/economies.
- Age-related differences in literacy proficiency are smaller than on average across OECD countries, mainly due to the lower-than-average proficiency of young adults. Gender gaps are larger, however, with men scoring significantly higher than women in both literacy and numeracy.
- Literacy proficiency is an important determinant of hourly wages: in Jakarta, the estimated increase
 in hourly wages associated with a one standard-deviation increase in literacy proficiency is similar
 to that observed on average across OECD countries. The estimated effect of formal education on
 wages, however, is much larger than in other participating countries/economies.
- Improving the information-processing skills of the population, particularly by improving the quality of schooling, will be essential for Indonesia's continued economic development.

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 Jakarta (Indonesia) from 1 April 2014 to 31 March 2015.

Some 7 229 adults aged 16-65 were surveyed.

The statistical data for Israel are supplied by and are under the responsibility of the relevant Israeli authorities. The use of such data by the OECD is without prejudice to the status of the Golan Heights, East Jerusalem and Israeli settlements in the West Bank under the terms of international law.

Few adults in Jakarta score at the highest levels of proficiency in literacy and numeracy.

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). To put this in context, only 10.6% of participants in OECD countries/economies attain these levels, on average, and the share of top performers in Jakarta is similar to that observed in Chile and Turkey, and slightly smaller than the shares in Italy and Spain, where less than 5% of adults score at Level 4 or 5). But the results for a single city, like Jakarta, may not reflect the situation across an entire country, and comparisons with the average scores recorded in other countries/economies should be regarded with caution.

Only 5.4% of adults attain Level 3 in literacy, less than half the share observed in Chile and Turkey (and far below the OECD average of 35.4%). 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.

In numeracy, 1.4% of adults in Jakarta attain Level 4 or 5, a proportion similar to that observed in Turkey (1.5%) and Chile (1.9%) and well below the OECD average of 11.2%. At Level 4, adults understand a broad range of mathematical information that may be complex, abstract or found in unfamiliar contexts. However, almost one in ten adults (9.1%) attains Level 3 in numeracy, compared with the OECD average of 31.8%. 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. A similar share of adults scored at this level in Chile (10.0%) and Turkey (13.0%).

A large proportion of adults in Jakarta have poor literacy and numeracy skills.

Almost 70% of adults in Jakarta score at or below Level 1 in literacy – a much larger share than observed in any other participating country/economy. This result mainly reflects the relatively large proportion of adults scoring below Level 1 (32.1%). Adults at this level are only able to read brief texts on familiar topics to locate a single piece of specific information. To complete such tasks, only basic vocabulary knowledge is required, and the reader is not required to understand the structure of sentences or paragraphs.

Low levels of proficiency are less widespread in numeracy:60.0% of adults in Jakarta score at or below Level 1, and the proportion scoring below Level 1 (26.0%), although high, is roughly similar to that found in Turkey (20.2%) and Chile (30.8%). In numeracy, adults below Level 1 can carry out only simple processes, such as counting, sorting, performing basic arithmetic operations with whole numbers, and recognise common spatial representation in concrete, familiar contexts.

Missing ☐ Below Level 1 Level 1 Level 2 Level 3 Level 4 or 5 1.2 Japan Finland 0.0 Netherlands 2.3 Sweden 0.0 Australia 1.9 New Zealand **1**.9 Norway 2.2 Estonia Russian Federation² 0.0 Slovak Republic | 0.3 Flanders (Belgium) 5.2 Canada 10.9 Czech Republic | 0.6 0.4 Denmark 0.3 Korea England (UK) 1.4 Germany 1.5 OECD average 1.4 United States 4.2 Austria 1.8 Poland Ireland 0.5 Northern Ireland (UK) Singapore 1.0 France Lithuania 4.5 Cyprus¹ Israel 2.4 Slovenia 0.6 Spain | 0.8 Greece 1.0 Italy 0.7 Chile 0.3 Turkey 2.0 Jakarta (Indonesia) 0.0 [0 100 80 60 40 20 20 40 60 80 100

Figure 1. Literacy proficiency among adults

Percentage of adults scoring at each proficiency level in literacy

Note: 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.

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

Source: Survey of Adult Skills (PIAAC) (2012, 2015), Table A2.1 (http://dx.doi.org/10.1787/888933366458).

Missing ☐ Below Level 1 Level 1 Level 2 Level 3 Level 4 or 5 Japan 1.2 0.0 Finland Sweden 0.0 Netherlands 2.3 Norway 2.2 Denmark 0.4 Slovak Republic 0.3 Flanders (Belgium) 5.2 1// Czech Republic 0.6 Austria 1.8 Germany 1.5 Estonia 0.4 New Zealand 1.9 Russian Federation² Australia 1.9 Canada | 0.9 Singapore 1.0 OECD average 1.4 Lithuania 4.5 Korea England (UK) 1.4 Slovenia 0.6 Poland 0.0 Northern Ireland (UK) 2.2 France Ireland 0.5 Israel 2.4 Cyprus¹ **■** 17.7 United States 4.2 Greece 1.0 Italy 0.7 Spain 0.8 Turkey 2.0 Chile 0.3 Jakarta (Indonesia) 0.0 100 % 100 80 60 40 20 0 20 40 60 80

Figure 2. **Numeracy proficiency among adults**Percentage of 16-65 year-olds scoring at each proficiency level in numeracy

Note: 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.} The sample for the Russian Federation does not include the population of the Moscow municipal area. *Countries and economies are ranked in descending order of the combined percentage of adults scoring at Level 3 and at Level 4 or 5.* **Source**: Survey of Adult Skills (PIAAC) (2012, 2015), Table A2.4 (http://dx.doi.org/10.1787/888933366458).

Despite comparatively low literacy proficiency, few adults in Jakarta can be considered illiterate.

The Survey of Adult Skills included an assessment of reading components designed to provide information about adults with very low proficiency in reading. The assessment was conducted among adults who opted out of the computer-based assessment, or who failed the literacy and numeracy core test. Given that only the paper-based version of the assessment was used in Jakarta, every respondent also completed the reading components assessment.

The reading components assessment tested three skills deemed essential for understanding the meaning of written texts: knowledge of print vocabulary (word recognition), the ability to evaluate the logic of sentences (sentence processing), and fluency in reading passages of texts (passage comprehension). Even among adults scoring below Level 1 in literacy, the average proportion of reading components items answered correctly ranges from 85.1% (in sentence processing) to 95.9% (in word recognition). In other words, most adults are equipped with the foundation skills that are a prerequisite for developing higher levels of literacy proficiency.

The gap between the most and least proficient adults in Jakarta is wide.

In Jakarta, **the variability in adults' scores in both literacy and numeracy** – defined as the difference between the score of an adult who performs better than 75% of survey respondents, and the score of an adult who performs better than only 25% of respondents – **is relatively large**. This is in line with the general finding that countries with low average levels of proficiency are usually characterised by wide variations in individual scores.

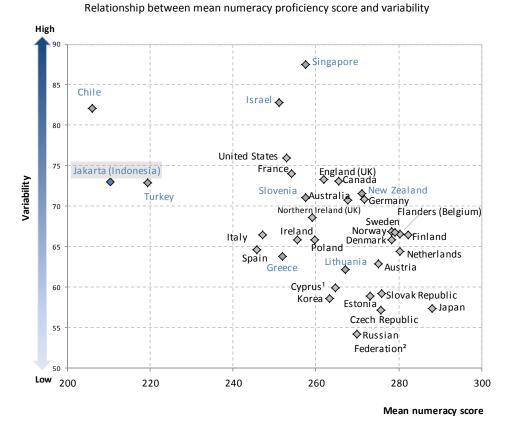


Figure 3. Average and distribution of numeracy scores

Note: The measure of variability used is the interquartile range (third quartile minus first quartile).

Source: Survey of Adult Skills (PIAAC) (2012, 2015), Table A2.5 (http://dx.doi.org/10.1787/888933366458).

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^{1.} See note 1 under Figure 1.

^{2.} The sample for the Russian Federation does not include the population of the Moscow municipal area.

In Jakarta, differences in proficiency related to educational attainment and family background are large.

As in all other countries and economies that participated in the Survey of Adult Skills, levels of proficiency vary significantly according to the socio-demographic characteristics of respondents, such as age and educational attainment. In Jakarta, tertiary-educated adults score about 65 points higher than adults who have not attained an upper secondary qualification, a gap similar to the one observed on average across OECD countries (61 score points). At each level of educational attainment, adults in Jakarta score around 60 points below the OECD average.

A similar gap in proficiency is observed between adults with at least one parent who attained tertiary education and adults with neither parent having attained upper secondary education. In this case, the 63-point gap is far larger than the OECD average difference of 40 points.

Age-related differences in performance are relatively small in literacy, and similar to the OECD average in numeracy. In literacy, 55-65 year-olds score 17 points below 25-34 year-olds, compared to the average difference of 29 score points. But the smaller age-related difference is mainly due to the comparatively low levels of proficiency among adults aged 25 to 34. Their average score is 74 points lower than the OECD average, while the difference in literacy scores between older adults in Jakarta and the average for that age group across OECD countries is 63 points. In numeracy, the gap between the two age groups is wider – 28 points – in favour of younger adults, and similar to that observed on average across OECD countries. Both age groups score about 60 points below the OECD average in numeracy.

Compared to most other countries, women in Jakarta perform considerably worse than men in literacy (a difference of 14 points), and score 8 points below men in numeracy. Jakarta is the only participant in the survey where the gender gap in proficiency is smaller in numeracy than in literacy.

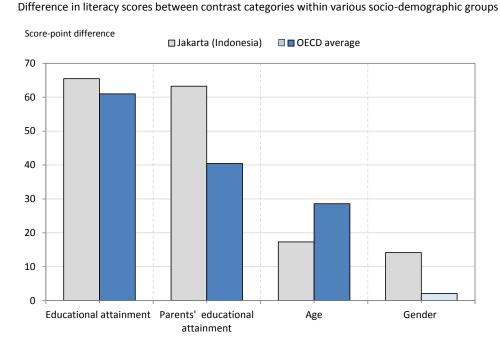


Figure 4. Synthesis of socio-demographic differences in literacy proficiency

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 and 25-34 year-olds minus 55-65 year-olds (age).

Source: Survey of Adult Skills (PIAAC) (2012,2015), Tables A3.2(L), A3.5 (L), A3.9 (L), A3.12 (L) and A3.14 (L) (http://dx.doi.org/10.1787/888933366463).

Skills and field-of-study mismatch are especially prevalent among workers in Jakarta.

The survey collected information about the frequency with which information-processing and various generic skills are used in the workplace. Adults in Jakarta read, write, work with mathematics, solve problems and use computers in their jobs less frequently than workers in OECD countries. This is likely a reflection of differences in how the sectors and occupations of the respective economies are structured.

The degree of mismatch between workers' literacy skills and the level of proficiency demanded in their jobs is higher than on average across participating OECD countries. **Some 14.5% of workers in Jakarta can be identified as overskilled** (i.e. being more proficient than their job requires), **above the OECD average of 10.8%**. Some 4.7% of workers in Jakarta can be considered as underskilled (i.e. being less proficient than their job requires), close to the OECD average of 3.8%.

More than one in two workers (54.6%, compared to an average of 39.6%) are employed in a different field than the one in which they earned their highest educational qualification. Such **field-of-study mismatch is less strongly associated with overskilling and overqualification** (i.e. working in a position for which a lower educational qualification is usually required) than it is in other countries, suggesting that skills and qualifications are recognised even if the workers are employed outside their original field of study. But field-of-study mismatch entails a large wage penalty: the hourly wages of workers who are mismatched with their jobs by field of study are estimated to be about 19% lower than wages of equally skilled (and qualified) workers who are well-matched with their jobs. Overskilled workers in Jakarta earn about 15.4% more than well-matched workers with similar qualifications – the opposite of what is observed in most participating countries/economies.

Mean use

3.5

3

2.5

1

Reading at work Writing at work Numeracy at work ICT at work Problem solving

Figure 5. Information-processing skills used at work

Average skills use, working population aged 16-65

Notes: For reading, writing, numeracy and ICT skills, skills use indicators are scales between 1 "Never" and 5 "Every day". Problem-solving skills use refers to respondents' answers to "How often are you usually confronted with more complex problems that take at least 30 minutes to find a good solution?". The set of possible answers also ranges between 1 "Never" and 5 "Every day".

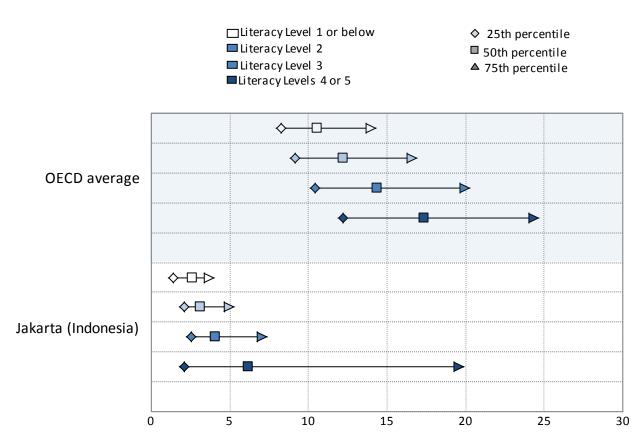
Source: Survey of Adult Skills (PIAAC) (2012, 2015), Table A4.1 (http://dx.doi.org/10.1787/888933366479).

In Jakarta, higher proficiency is rewarded with higher wages, but returns to formal education are even larger.

In all participating countries/economies, there is a positive relationship between proficiency in literacy and numeracy and hourly wages. Jakarta is no exception: even after accounting for educational attainment, a one-standard deviation increase in literacy proficiency is associated with a 5.8% increase in hourly wages, close to the average estimated effect across participating OECD countries/economies. However, in Jakarta, formal education appears to have an even larger impact on wages: a one-standard deviation increase in years of schooling (about 3.4 years) is associated with a 26.6% increase in hourly wages, much larger than the 14.4% estimated on average across OECD countries.

Figure 6. Distribution of wages, by literacy proficiency level

25th, 50th and 75th percentiles of the wage distribution



Notes: Employees only. Hourly wages, including bonuses, in purchasing-power-parity-adjusted USD (2012).

Source: Survey of Adults Skills (PIAAC) (2012, 2015), Table 5.3 (L) (http://dx.doi.org/10.1787/888933366489).

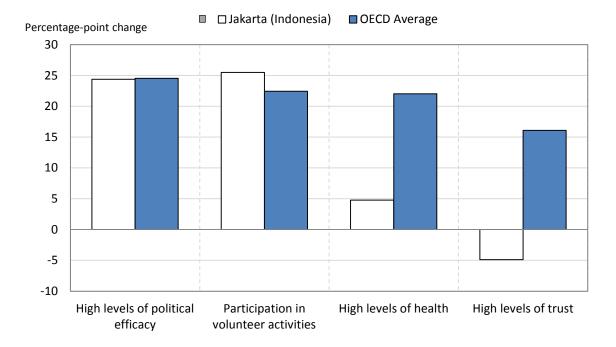
Proficiency in information-processing skills is associated with a wide range of non-economic outcomes that affect well-being: trust, political efficacy, participation in volunteer activities and self-reported health.

The association between literacy proficiency and both participation in volunteer activities and political efficacy (the belief that one has an impact on the political process) is as strong in Jakarta as on average across OECD countries. The small share of people scoring at Level 4 or 5 implies that the differences presented in Figure 7 are imprecise estimates, and thus turn out to be not statistically significant. However, the overall picture does not change much if adults scoring at Level 3 are used as the comparison group.

When it comes to trust and self-reported health, the association with literacy proficiency is much weaker. At each level of proficiency in literacy, large proportions of adults in Jakarta reported a relative lack of trust in others. The share of adults reporting to be in good to excellent health is close to the OECD average (if not larger) among adults scoring up to Level 3 in literacy, but is much lower among adults scoring at Level 4 or 5. Adults scoring at Level 3 are about 15.1 percentage points more likely than adults at or below Level 1 to report being in good to excellent health, close to the OECD average difference of 17.7 percentage points.

Figure 7. Literacy proficiency and positive social outcomes

Difference between the percentage of adults with high proficiency (Levels 4 or 5) and the percentage of adults with low proficiency (Level 1 or below) who reported high levels of trust and political efficacy, good to excellent health, or participating in volunteer activities



Notes: All differences for the OECD average are statistically significant, all the differences in Jakarta (Indonesia) are not statistically significant.

Source: Survey of Adult Skills (PIAAC) (2012, 2015), Table A5.14(L) (http://dx.doi.org/10.1787/888933366489).

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 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, that are 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 Survey of Adults Skills was conducted over two rounds of data collection.
- In the first round, around 166 000 adults aged 16-65 years in 24 countries were surveyed Australia, Austria, Belgium, Canada, Cyprus, the Czech Republic, Denmark, Estonia, Finland, France, Germany, Ireland, Italy, Japan, Korea, the Netherlands, Norway, Poland, the Russian Federation, the Slovak Republic, Spain, Sweden, the United Kingdom and the United States. In all but three countries, data collection covered the entire national population. In Belgium, data were collected in Flanders; in the United Kingdom, data were collected in England and Northern Ireland (data are reported separately for England and Northern Ireland in the report). In the Russian Federation, the data do not cover the Moscow municipal area.
- Data collection for Round 1 of the Survey of Adult Skills took place from 1 August 2011 to 31
 March 2012 in most participating countries. In Canada, data were collected from November
 2011 to June 2012; and France collected data from September to November 2012.
- Nine countries took part in the second round of the assessment: Chile, Greece, 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, data were collected in the Jakarta municipal area only.
- Data collection for Round 2 of the Survey of Adult Skills took place from April 2014 to end-March 2015. The duration of fieldwork varied from around 100 to 330 days, depending on the country.
- The language of assessment was the official language(s) of each participating country/economy. In some countries, the assessment was also conducted in widely spoken minority or regional languages.
- The target population for the survey was the non-institutionalised population of 16-65 yearolds residing in the country or region at the time of the data collection, irrespective of nationality, citizenship or language status. The achieved national samples ranged from a minimum of approximately 4 000 persons to a maximum of nearly 27 300 persons.
- The survey was conducted under the supervision of trained interviewers usually in the respondent's home. 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 the respondent's computer skills. Respondents could take as much
 or as little time as needed to complete the assessment. On average, respondents took 50
 minutes to complete the cognitive assessment.
- Identical instruments were used in Rounds 1 and 2 of the survey. The one exception was in Jakarta (Indonesia) where, since only paper-based instruments were used, additional test items were added to the paper-based instruments used in the other countries.

Comparing the results of countries/economies in Round 1 and Round 2

Identical data-collection instruments and methodology were used in Rounds 1 and 2 of the survey. The one difference is that data collection for Rounds 1 and 2 occurred some three years apart. The difference in reference dates for the two rounds of the study is unlikely to have an impact on the proficiency of the adult populations in Round 1 countries/economies compared to that of adults in Round 2 countries/economies. However, data were collected at different points in the economic cycle in the two rounds; this may have some effect on the relationships observed between proficiency and labour market outcomes and jobs characteristics, in particular, in the countries/economies in the two different rounds.

Notes

- * See note under Figure 1.
- ** The data from the Russian Federation are preliminary and may be subject to change. Readers should note that the sample for the Russian Federation does not include the population of the Moscow municipal area. The data published, therefore, do not represent the entire resident population aged 16-65 in Russia but rather the population of Russia excluding the population residing in the Moscow municipal area.

More detailed information regarding the data from the Russian Federation as well as that of other countries can be found in the *Technical Report of the Survey of Adult Skills, Second Edition* (OECD, forthcoming).

References and further reading

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OECD (2016c), *Survey of Adult Skills (PIAAC)* (Database 2012, 2015), <u>www.oecd.org/site/piaac/public</u> dataandanalysis.<u>htm.</u>

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Description of proficiency levels in 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 ocate a single piece of information that is dentical 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 out basic mathematical processes in common, concrete contexts where the mathematical content is explicit. Tasks usually require one-stern 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, percents 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, noncentral 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 all 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 at this level 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	Tasks at this level 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	Tasks at this level 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	Tasks at this level 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.

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