Programme for International Student Assessment

PISA 2018

Financial Literacy in Australia

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Please check the online version of the report at http://www.acer.org/pisa for any amendments.

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Executive summary

The Programme for International Student Assessment (PISA) is an international comparative study of student performance directed by the Organisation for Economic Co-operation and Development (OECD). PISA measures the cumulative outcomes of education by assessing how well 15-year-olds,[1] who are nearing the end of their compulsory schooling in most participating educational systems, are prepared to use their knowledge and skills in particular areas to meet real-life opportunities and challenges.

PISA 2018 is the seventh cycle of PISA since it was first conducted in 2000 and measures students' skills in the core areas of reading literacy, mathematical literacy and scientific literacy. Since PISA 2012, financial literacy has been included as an additional optional assessment that accompanies the core assessments. In Australia, the financial literacy assessment is funded by the Australian Securities and Investment Commission.

This report presents the results for the third assessment of financial literacy and focuses on the measurement of financial literacy for Australia as a whole and for different demographic groups, including sex and socioeconomic background. This report also examines students' experiences, attitudes and behaviours in financial literacy, including their opportunities to acquire financial literacy at school and at home, students' experience with money and their confidence in handling money matters and their engagement with money.

What are the main goals of PISA?

PISA tries to answer several important questions related to education:

- How well prepared are young adults to meet the challenges of the future?
- What skills do young adults have that will help them adapt to change in their lives? Are they able to analyse, reason and communicate their ideas effectively?
- Are some ways of organising schools and school learning more effective than others?
- What influence does the quality of school resources have on student outcomes?
- What educational structures and practices maximise the opportunities of students from disadvantaged backgrounds?
- To what extent does a student's performance depend on their background? How equitable is education for students from all backgrounds?

Who is assessed?

PISA assesses a random sample of 15-year-old students, drawn from a nationally representative sample of schools. In 2018, 79 countries and economies (all 36 OECD countries and 43 partner countries and economies) and around 600 000 students (representing 32 million 15-year-old students) participated in the core assessments (reading literacy, mathematical literacy and scientific literacy). Twenty countries and economies (13 OECD countries and economies and 7 partner countries) and around 117 000 students (representing about 13.5 million 15-year-old students) participated in the financial literacy assessment.

1 Students who were aged between 15 years and 3 (complete) months and 16 years and 2 (complete) months at the time of the assessment.

In Australia, 740 schools participated in PISA 2018. A sample of students was drawn for the financial literacy assessment, separate to the students drawn for the core assessments. A total of 14 273 students were assessed in the core assessments and 9411 were assessed in financial literacy.

What is assessed?

The PISA assessment focuses on young people's ability to apply their knowledge and skills to real-life problems and situations. The term literacy is attached to the assessment domains of reading, mathematics and science to reflect the focus on these broader skills and as a concept it is used in a much broader sense than simply being able to read and write. Financial literacy is defined as:

> *… the knowledge and understanding of financial concepts and risks, and the skills, motivation and confidence to apply such knowledge and understanding in order to make effective decisions across a range of financial contexts, to improve the financial wellbeing of individuals and society, and to enable participation in economic life.* (OECD, 2019a, p. 128).

What did participants need to do?

In PISA 2018, students completed a two-hour computer-based financial literacy assessment, which consisted of financial literacy, mathematical literacy and reading literacy tasks. The tasks contained stimulus material describing a real-life situation and a series of one or more questions for students to answer. The stimulus material was, typically, a short written passage or text that accompanied a table, graph, or diagram. Some of the PISA 2018 questions were multiple-choice items, and others required students to construct and write their own answers.

Students also completed a suite of three student questionnaires, which asked about their family background, aspects of their lives such as their motivation and engagement towards learning, and their attitudes to school, their use and availability of information and communication technologies, their attitudes towards money, behaviours, and their experiences and familiarity with money matters.

School principals completed a short web-based questionnaire that focused on information about the level of resources in the school, the school environment and the qualifications of staff.

How are results reported?

International comparative studies provide an arena to observe the similarities and differences between educational policies and practices (OECD, 2019a). They enable researchers and others to observe what is possible for students to achieve and what environment is most likely to facilitate their learning. PISA provides regular information on educational outcomes within and across countries by offering insight into the range of skills and knowledge in the different assessment domains.

In PISA, results are presented as mean (average) scores, as distributions of scores and as percentages of students who attain each of a set of defined proficiency levels. Each of the literacy proficiency scales contains descriptions of the skills typically shown by students achieving at each level, as defined by international experts.

The PISA financial literacy proficiency scale is divided into five levels. Students who achieved Level 5 (scoring 625 points or higher) are considered high performers, while students who achieved below Level 2 (scoring 400 points or lower) are considered low performers. Students who are proficient at Level 3 or above are considered to have attained the National Proficient Standard, and demonstrated more than the minimal skills expected in the assessment domain.

In this report, differences are only mentioned if tests of statistical significance showed that these were likely to be real differences.[2]

2 For more information about statistical significance, please refer to the Reader's Guide.

Australia's results in an international context

- Australian students achieved an average of 511 points in financial literacy in PISA 2018, which was higher than the OECD average of 505 points. Estonia was the highest performing country with an average of 547 points.
- Australia's performance was:
  - higher than 13 countries
  - not different to the United States and Portugal
  - lower than 4 countries – Estonia, Finland, Canada[3] and Poland.
- Australia's proportion of high performers (14%) was higher than the OECD average (10%) but lower than Estonia's (19%).
- Australia's proportion of low performers (16%) was higher than the OECD average (15%) and higher than Estonia's (6%).
- Between PISA 2012 and 2018, Australia's mean performance decreased, on average, by 15 points (from 526 points in 2012 to 511 points in 2018).
- There was a strong relationship between performance in financial literacy and two core assessments. In Australia, the correlation between financial literacy and mathematical literacy was 0.87 and the correlation between financial literacy and reading literacy was 0.82.
- For Australia, 21% of the financial literacy score reflected skills that were uniquely assessed in the financial literacy assessment, while the remaining 79% of the financial literacy score reflected skills that were measured in the mathematical literacy and/or reading literacy assessments.
- Australian students' performance in financial literacy was 3 points higher than the performance of students with similar scores in the two core assessments. Fifty-three per cent of Australian students performed above their expected financial literacy score, given their scores in mathematical literacy and reading literacy.

Australia's results in a national context

Results for female and male students

- In Australia, the financial literacy performance between female and male students was not different.
- Australian female students achieved an average score of 510, which was not different to the OECD average for female students, with 507 score points.
- Australian male students achieved an average score of 512 points, which was higher than the OECD average for male students, with 509 score points.
- There were no differences between the proportions of high-performing or low-performing female and male students.
- Between PISA 2012 and 2018, the average score for female students declined by 18 points, while the difference in scores for male students declined by 13 points.
- Between PISA 2012 and 2018, the proportion of low-performing female students increased by 6 percentage points and the proportion of low-performing male students decreased by 4 percentage points, while there was no difference in the proportions of high-performing female and male students over this 6-year period.

3 Seven Canadian provinces (British Columbia, Manitoba, New Brunswick, Newfoundland and Labrador, Nova Scotia, Ontario and Prince Edward Island) participated in the PISA 2018 financial literacy assessment.

Results for geographic location

In PISA, the locations of schools have been classified using the MCEETYA Schools Geographic Location Classification.[4] Three-quarters of the assessed financial literacy participants attended schools in metropolitan areas, about one-quarter were from provincial areas and the remaining 1% of participants attended schools in remote areas.

- Students in metropolitan schools scored, on average, 21 points higher (equivalent to two-thirds of a school year) than students in provincial schools, and 78 points higher (equivalent to two-and-a-half school years) than students in remote schools. Students in provincial schools scored, on average, 57 points higher (around one-and-a-quarter years of schooling) than students in remote schools.
- Fifteen per cent of students in metropolitan schools were high performers compared to 11% in provincial schools and 5% in remote schools.
- Fourteen per cent of students in metropolitan schools were low performers compared to 19% in provincial schools and 39% in remote schools.
- Between PISA 2012 and 2018, the mean performance decreased for students in metropolitan schools by 18 points.
- Between PISA 2012 and 2018, the proportions of low performers in metropolitan schools and provincial schools increased by 5 percentage points, while the proportion of high performers in metropolitan schools declined by 3 percentage points.

Results for socioeconomic background

Information about socioeconomic background is based on a measure of the economic, social and cultural status index.[5] Using this index, participating students were distributed into quartiles of socioeconomic background.

- Students from the highest socioeconomic quartile scored, on average, 89 points higher (or almost 3 years of schooling) than students in the lowest quartile.
- Six per cent of students in the lowest socioeconomic quartile were high performers compared to 11% in the second quartile, 17% in the third quartile and 25% in the highest quartile.
- Twenty-six per cent of students in the lowest socioeconomic quartile were low performers compared to 17% in the second quartile, 12% in the third quartile and 7% in the highest quartile.
- Between PISA 2012 and 2018, the mean performance decreased for students in the lowest quartile by 15 points, in the second quartile by 16 points, and in the third quartile by 20 points.
- Between PISA 2012 and 2018, the proportion of low performers in the lowest quartile increased by 4 percentage points, in the second and third quartiles by 7 percentage points, and in the highest quartile by 3 percentage points.

Results for Indigenous background

In PISA 2018, Australian students were asked to identify whether they were of Indigenous background when they completed the Student Questionnaire. Five per cent of the assessed financial literacy students identified as being of Indigenous background.

- Indigenous students scored, on average, 86 points lower (or around two-and-three-quarter years of schooling) than non-Indigenous students.

4 For more information about the *MCEETYA Schools Geographic Location Classification*, please refer to the Reader's Guide.

5 For more information about socioeconomic background, please refer to the Reader's Guide.

- Three per cent of Indigenous students were high performers compared to 15% of non-Indigenous students.
- Thirty-nine per cent of Indigenous students were low performers compared to 15% of non-Indigenous students.
- Between PISA 2012 and 2018, the mean performance for Indigenous students decreased by 48 points.
- Between PISA 2012 and 2018, the proportion of low-performing Indigenous students increased by 16 percentage points and the proportion of low-performing non-Indigenous students increased by 5 percentage points, while the proportion of high-performing Indigenous students declined by 7 percentage points.

Results for immigrant background

In PISA, immigrant background consists of three categories: Australian-born, first-generation and foreign-born.[6] Fifty-five per cent of the assessed financial literacy students were Australian-born, 31% were first-generation and 14% of students were foreign-born.

- First-generation students scored, on average, 10 points higher (or around one-third of a year of schooling) than Australian-born students.
- Fourteen per cent of Australian-born students were high performers compared to 17% of first-generation students and 16% of foreign-born students.
- Fifteen per cent of Australian-born students were low performers compared to 14% of first-generation students and 18% of foreign-born students.
- Between 2012 and 2018, the mean performance for Australian-born students decreased by 14 points and for first-generation students by 19 points.
- Between 2015 and 2018, the proportion of low-performing Australian-born students decreased by 4 percentage points and the proportion of low-performing foreign-born students decreased by 5 percentage points. Between PISA 2012 and 2018, the proportion of low performing students increased by 6 percentage points for each group.

Results for language background

In PISA 2018, 86% of the assessed financial literacy students indicated that English was spoken at home and 14% of students indicated they spoke a language other than English at home.

- Students who spoke English at home scored, on average, 23 points higher (or three-quarters of a year of schooling) than students who spoke a language other than English at home.
- Fifteen per cent of students who spoke English at home were high performers, which was the same proportion of students who spoke a language other than English at home.
- Fifteen per cent of students who spoke English at home were low performers compared to 24% of students who spoke a language other than English at home.
- Between PISA 2012 and 2018, the mean performance for students who spoke a language other than English at home decreased by 37 points.
- Between PISA 2012 and 2018, the proportion of low-performing students who spoke English at home increased by 5 percentage points and the proportion of low-performing students who spoke a language other than English at home increased by 11 percentage points.

6 For more information about immigrant background, please refer to the Reader's Guide.

Student access to information and education about money matters

Learning to manage money

- Forty-eight per cent of Australian students indicated they were taught to manage their money *at school, in a subject specifically about managing your money* and 55% of students reported learning to manage their money *at school as part of another subject*. These percentages were higher than the OECD averages of 36% and 42% respectively.

Familiarity with finance-related activities

- Australian students reported they had lower exposure to financial education in school classes than students in Indonesia, Finland and the Russian Federation, and higher exposure to financial education in school classes than the other participating countries.
- Approximately two-thirds of Australian students reported that they had encountered *discussing the rights of consumers when dealing with financial institutions* and *exploring ways of planning to pay an expense* in school classes over the previous 12 months. A higher percentage, around 80%, had encountered *analysing advertisements to understand how they encourage people to buy things*, *describing the purpose and uses of money*, and *exploring the difference between spending money on needs and wants* in school classes.

Source of information outside of school

- Almost all (96%) Australian students reported that they obtained information about money matters from their parents, which was similar to the percentages of students in Canada and the United States.
- Australian students also obtained information about money matters from the internet (65%), their teachers (61%), their friends (52%), television or radio (33%) and magazines (15%).
- Students who obtained information about money matters from their parents performed higher in financial literacy (by 24 points) than students who did not, while students who reported that they obtained information about money matters from their friends, the television or radio and magazines performed lower in financial literacy than students who did not obtain information from these sources.

Discussing money matters with parents or guardians

- Australian students reported that their parents were less involved in developing their financial literacy than students in Bulgaria, Brazil, Lithuania, Serbia, Peru and Portugal, while students in Canada, Italy, Indonesia, the Russian Federation and the United States reported having parents who had similar involvement in their financial literacy matters as parents of Australian students.
- Around half of Australian students reported that they frequently discussed *money for things you want to buy*, *your savings decisions*, and *spending decisions* with their parents, while around one-third of students discussed *the family budget* or *news related to economics or finance* with their parents.

Student experiences with financial matters

The use of basic financial products

- Sixty-eight per cent of Australian students reported that they had *an account with a bank, building society or credit union*, 61% held *a credit card/debit card*, and 55% had *a mobile app to access your account*. A higher percentage of Australian students reported holding these financial products than students in most other countries.
- Students who held *an account with a bank, building society or credit union* scored 38 points higher (or one-and-a-quarter years of schooling) than students who did not.
- Students who held *a credit card/debit card* scored 7 points higher (or nearly one-quarter of a year of schooling) than students who did not.

Online financial activities

- Seventy-five per cent of Australian students reported that they *bought something online* and 47% reported that they *made a payment using a mobile phone* in the previous 12 months. These percentages were similar to those for students in Latvia and Lithuania.
- Students who *bought something online* scored 14 points higher than students who had not undertaken this financial activity.
- Students who had *made a payment using a mobile phone* scored 19 points lower (just over half a year of schooling) than students who had not undertaken this financial activity.

Access to money

- The most common source of money for Australian students was receiving money from *gifts from friends or relatives* (86%), followed by *working outside school hours* (52%). These percentages were similar to students in Canada, the Russian Federation, Serbia, Spain and the United States.
- Receiving money as *gifts from friends or relatives* was positively associated with financial literacy performance. In Australia, students who received money in this way scored, on average, 37 points higher than students who did not. In contrast, Australian students who received money from *working in a family business* scored 46 points lower than students who did not.

Student attitudes towards and confidence about financial matters

Interest in money matters

- Fifty-one per cent of Australian students agreed with *I enjoy talking about money matters*, which was similar to the OECD average, while 34% of students agreed with *money matters are not relevant for me right now*, which was lower than the OECD average.
- Students who agreed with *I enjoy talking about money* performed higher in financial literacy (by 12 points) than students who disagreed, while students who agreed with *money matters are not relevant for me right now* performed lower in financial literacy (by 43 points) than students who disagreed.

Confidence in dealing with money matters

- Australian students reported they had less confidence in dealing with money matters than students in Estonia, Lithuania and the Russian Federation, and they had similar levels of confidence as students in Poland, Chile and Latvia.

- Seventy-six per cent of Australian students reported that they were confident in *keeping track of my account balance*, 68% reported that they were confident in *planning my spending in consideration of my current financial situation*, while fewer than half the Australian students reported that they were confident in *making a money transfer*, in *understanding bank statements*, in *filling in forms at the bank*, and in *understanding a sales contract*.
- Australian students who reported that they were more confident in *planning my spending in consideration of my current financial situation* scored 52 points higher than students who reported that they were not very confident.

Student behaviour with financial matters

Money-related behaviours

- Ninety-two per cent of Australian students reported that they had *checked how much money they have* and 88% students reported that they had *checked that they were given the right change when they bought something*, which was higher than the OECD average. Around two-thirds of Australian students reported that they had *bought something that cost more money than they intended to spend* and that they *complained that they did not have enough money for something they wanted to buy*, which was similar to the OECD average.
- Australian students who reported that they *checked how much money they have* and who *checked that they were given the right change when they bought something* performed higher in financial literacy (by 54 points and 43 points respectively) than students who did not demonstrate these behaviours, while students who reported that they had *bought something that cost more money than they intended to spend* performed lower in financial literacy (by 22 points) than students who did not demonstrate this behaviour.

Approached to spending

- Eighty-four per cent of Australian students reported that they always *compare prices in different shops*, 78% reported that they always *compared prices between a shop and an online shop*, 75% reported that they always *wait until the product gets cheaper before buying*, and 42% reported that they always *buy the product without comparing prices*. These percentages were higher than the OECD average.
- Students who used spending strategies when buying a new product from their allowance performed higher in financial literacy than students who did not. Students scored 23 points higher in financial literacy when they reported that they *wait until products get cheaper before buying* and also scored 64 points higher when they reported that they *compare prices in different shops*.

Decisions about spending money

- Eighty-nine per cent of Australian students agreed with *I can decide independently what to spend my money on*, 85% agreed with *I am responsible for my own money matters*, and 32% agreed with *I need to ask my parents or guardians for permission before I spend any money on my own*. These percentages were higher than the OECD average. Sixty-seven per cent of Australian students agreed with *I can spend small amounts of my money independently*, which was similar to the OECD average.
- Australian students who reported *I can decide independently what to spend my money on* scored 37 points higher than students who did not, while students who agreed with *I need to ask my parents or guardians for permission before I spend any money on my own* scored 51 points lower than students who did not.

Reader's guide

Target population for PISA

This report uses '15-year-olds' as shorthand for the PISA target population. In practice, the target population is students aged between 15 years and 3 (complete) months and 16 years and 2 (complete) months at the beginning of the assessment period, and who are enrolled and attending an educational institution full-time or part-time. As the majority of students are 15-year-olds, it has become the default shorthand for the population.

Confidence intervals and standard errors

PISA assesses a subset or sample of 15-year-olds so that inferences about the entire population of 15-year-olds can be obtained, but this design introduces a source of uncertainty. The use of confidence intervals based on the standard errors provides a way to take into account the uncertainty associated with the sampling design.

International survey assessments often describe student achievement by an average score. For PISA, each average score is calculated from the sample of students who undertook PISA 2018 and is referred to as the sample average. The sample average is an approximation of the actual average score (known as the population average) that would have been obtained had all students in a country actually sat the assessment. Since the sample average is just one point along the range of student achievement scores, more information is needed to gauge whether the sample average is an underestimation or overestimation of the population average. The calculation of confidence intervals can indicate the precision of a sample average as a population average. Confidence intervals provide a range of scores within which we are confident that the population average actually lies.

In this report, each sample average is presented with an associated standard error. The confidence interval, which can be calculated using the standard error, indicates that there is a 95% chance that the actual population average lies within plus or minus 1.96 standard errors of the sample average.

Statistical significance

Tests for statistical significance indicate whether observed differences between results occur because they are 'real' or if they have occurred because of sampling error, or chance. An 'insignificant' or 'not significant' result should be ignored because it may not reflect real differences, while a 'significant' result refers to the statistical nature of the difference and indicates the difference is worth noting.

Significance does not imply any judgement about absolute magnitude or educational relevance. It is not to be confused with the term 'substantial', which is qualitative and based on judgement rather than statistical comparisons. A difference may appear substantial but not be statistically significant (due to factors that affect the size of the standard errors around the estimate, for example) while another difference may seem small but reach statistical significance because the estimate was more accurate.

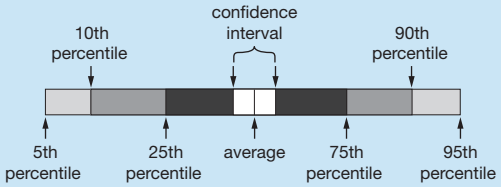
The term 'significant' is used to describe a difference that meets the requirements of statistical significance at the 0.05 level, indicating that the difference is real, and would be found in at least 95 analyses out of 100 if the comparisons were to be repeated.

In this report, all reported differences and changes are statistically significant, unless specifically stated otherwise. **References to no difference or no change mean that the statistical requirement for significance was not met.**

Mean performance and distribution of scores

Mean scores provide a summary of student performance and allow comparisons of the relative standing between different countries and different subgroups. In addition, the distribution of scores (reported at the 5th, 10th, 25th, 75th, 90th and 95th percentiles) are reported in graphical format. The following box details show how to read these graphs.

Each country's results are represented in horizontal bars with various colours. On the left end of the bar is the 5th percentile—this is the score below which 5% of the students have scored. The next two lines indicate the 10th percentile and the 25th percentile. The next line at the left of the white band is the lower limit of the confidence interval for the mean—i.e., there is 95% confidence that the mean will lie in this white band. The line in the centre of the white band is the average. The lines to the right of the white band indicate the 75th, 90th and 95th percentiles.



OECD average

In PISA, an OECD average was calculated for each assessment domain and is presented for comparative purposes. The OECD average corresponds to the arithmetic average of the respective country estimates, and can be used to compare a country on a given indicator with a typical OECD country.

For financial literacy, the OECD average is the average of the values across the OECD countries and economies who participated in this assessment. The number of OECD countries and economies has changed across the three financial literacy assessments. Eighteen countries and economies participated in the financial literacy assessment in PISA 2012, 15 countries and economies in PISA 2015 and 13 countries and economies in PISA 2018.

When reporting results over time, more than one OECD average may be reported in the same table to reflect consistent sets of OECD countries. A number in the label indicates the number of countries included in the average:

OECD average 2012: This is the mean across the 18 OECD countries and economies who participated in the 2012 financial literacy assessment.

OECD average 2015: This is the mean across the 15 OECD countries and economies who participated in the 2015 financial literacy assessment.

Average

The Average is also presented with the results, and is the mean of the data values across all participating countries and economies in the PISA 2018 financial literacy assessment.

Interpreting differences in the PISA scores

It is possible to estimate the score point difference that is associated with one year of schooling. This difference can be estimated for Australia because the Australian PISA 2018 sample included a sizeable number of students from different school year levels. Analyses of these data indicate that the difference between two year levels is, on average, 31 score points on the financial literacy scale.

Reporting of trends

Each cycle of PISA includes a number of items from previous cycles (referred to as trend items). This allows for comparisons with previous cycles to be made and trends (changes over time) to be measured.

When comparing performance over time, there is an introduced source of uncertainty because assessment design and items, sampling design and scheduling,[1] the calibration of samples, and sometimes the scaling models change. Link error estimates quantify this uncertainty around the equating of the scales.

PISA provides link error estimates around the scale scores that are independent of the size of the student sample. These estimates can be used when comparing performance over time by country and for subpopulations. In this report, link errors have been used for all calculations when comparing the mean score difference between two cycles.

Rounding of figures

Because of rounding, some numbers and percentages in figures and tables may not exactly correspond to the totals reported in the text. Totals, differences and averages are always calculated on the basis of exact numbers and are rounded only after calculation. **When standard errors have been rounded to one or two decimal places and the value 0.0 or 0.00 is shown, this does not imply that the standard error is zero, but that it is smaller than 0.05 or 0.005 respectively.**

Sample surveys

PISA is a sample survey and is designed and conducted so that the sample provides reliable estimates about the population of 15-year-old students. The PISA 2018 sample was a two-stage stratified sample. The first stage involved the sampling of schools in which 15-year-old students could be enrolled. The second stage of the selection process involved randomly sampling students within the sampled schools.

The following variables were used in the stratification of the school sample: jurisdiction; school sector; geographic location; sex of students at the school; and a socioeconomic background variable (based on the Australian Bureau of Statistics' Socio-Economic Indexes for Areas, which consists of four indexes that rank geographic areas across Australia in terms of their relative socioeconomic advantage and disadvantage).

Definition of background characteristics

A number of definitions used in this report are particular to the Australian context, as well as many that are relevant to the international context. This section provides an explanation for those that are not self-evident.

1 The sample design and scheduling of the financial literacy assessment in 2015 was different to the other two assessments. Students assessed in financial literacy in 2012 and 2018 were tested in financial literacy – and, in addition, in mathematical and reading literacy – at the same time as other students sat the core assessment. By contrast, students assessed in financial literacy in 2015 sat the financial literacy test in a separate session after having been tested in the core assessment. In most participating countries and economies, the financial literacy testing session took place on the afternoon of the same day as the testing of the core assessments test.

Indigenous background

Indigenous background data were derived from the Student Questionnaire, which asked students whether they identified as being of Aboriginal and/or Torres Strait Islander descent. For the purpose of this report, data for the two groups are presented together under the term 'Indigenous students'.

Socioeconomic background

Two measures are used by the OECD to represent elements of socioeconomic background. One is the highest level of the father's and mother's occupations (known as the highest international social and economic index – HISEI), which is coded in accordance with the International Labour Organization's International Standard Classification of Occupations. The other measure is the index of economic, social and cultural status (ESCS), which was created to capture the wider aspects of a student's family and home background. The ESCS is based on three indices: the highest occupational status of parents (HISEI); the highest educational level of parents in years of education (PARED); and home possessions (HOMEPOS). The index HOMEPOS comprises all items on the indices of family wealth (WEALTH), cultural resources (CULTPOSS), access to home educational and cultural resources and books in the home (HEDRES). It must be noted that there have been some adjustments to the computation of ESCS over the PISA cycles.

Geographic location

In Australia in 2018, participating schools were coded with respect to the Ministerial Council on Education, Employment, Training and Youth Affairs (MCEETYA) Schools Geographic Location Classification (Jones, 2004).

For reporting purposes, only the broadest categories of the MCEETYA Schools Geographic Location Classification have been used:

- metropolitan – mainland capital cities or major urban districts with a population of 100 000 or more (e.g. Queanbeyan, Cairns, Geelong, Hobart)
- provincial – provincial cities and other non-remote provincial areas (e.g. Darwin, Ballarat, Bundaberg, Geraldton, Tamworth)
- remote – areas with very restricted or very little accessibility to goods, services and opportunities for social interaction (e.g. Coolabah, Mallacoota, Capella, Mount Isa, Port Lincoln, Port Hedland, Swansea, Alice Springs, Bourke, Thursday Island, Yalata, Condingup, Nhulunbuy).

Immigrant background

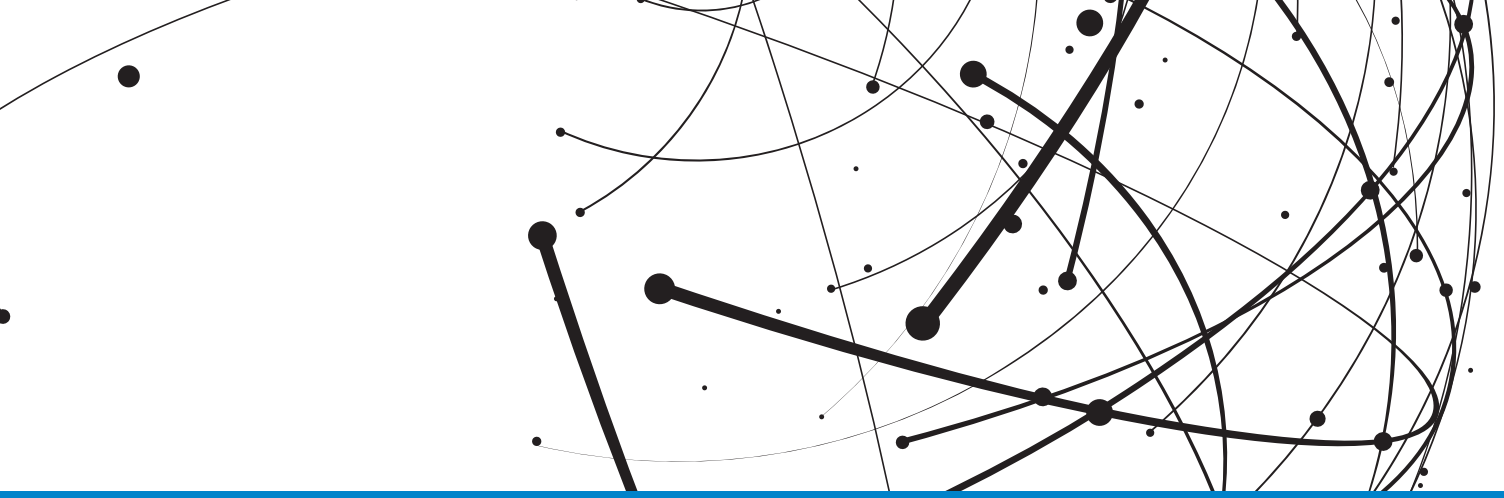
Immigrant background is derived from students' self-report of the country in which they and their parents were born. For the analysis in this report, immigrant background is defined by the following categories:

- Australian-born students – students born in Australia with both parents born in Australia
- first-generation students – students born in Australia with at least one parent born overseas
- foreign-born students – students born overseas with both parents also born overseas.

Language background

Language background is derived from students' self-report of the language they speak at home most of the time. For the analysis in this report, language background has been defined as:

- students who speak English at home
- students who speak a language other than English at home.



CHAPTER 1

Introduction

What is PISA?

The Organisation for Economic Co-operation and Development (OECD) Programme for International Student Assessment (PISA) is an international comparative study that measures the skills and knowledge of 15-year-old students, the age at which they have nearly completed compulsory schooling in most participating education systems, and how prepared they are to use these to meet real-life opportunities and challenges.[1]

Since 2000, PISA has measured student skills in the core areas of reading literacy, mathematical literacy and scientific literacy, and in 2012, PISA became the first large-scale international assessment to offer financial literacy as an optional assessment. It was also conducted as an optional assessment in PISA 2015, when 15 countries and economies participated, and again in PISA 2018 when 20 countries and economies participated.

In Australia, the assessment of financial literacy in PISA is supported by the Australian Securities and Investment Commission (ASIC). This report focuses on the findings from the financial literacy assessment in PISA 2018.

What are the main goals of PISA?

PISA looks to answer several important questions related to education:

- How well prepared are young adults to meet the challenges of the future?
- What skills do young adults have that will help them adapt to change in their lives? Are they able to analyse, reason and communicate their ideas effectively?
- Are some ways of organising schools and school learning more effective than others?
- What influence does the quality of school resources have on student outcomes?
- What educational structures and practices maximise the opportunities of students from disadvantaged backgrounds?
- To what extent does a student's performance depend on their background? How equitable is education for students from all backgrounds?

1 For more information about the target population for PISA, please refer to the Reader's Guide.

What does PISA assess?

PISA measures three core assessment domains of reading literacy, mathematical literacy and scientific literacy. PISA also assesses additional domains in each cycle, including financial literacy.

In PISA, 'literacy' refers not only to the capacity of 15-year-old students to apply knowledge and skills in key subject areas, but also to students' ability to analyse, reason and communicate effectively as they pose, solve and interpret problems in a variety of situations.

How often is PISA administered?

PISA commenced in 2000 and has been conducted every three years since then. In each cycle, the three assessment domains are rotated so that one domain is the major focus (the major domain) and has a larger amount of the assessment time devoted to it compared to the other two assessment domains (the minor domains).

PISA 2018 was the seventh cycle of PISA and reading literacy was the major assessment domain, which allows for in-depth analysis and reporting of results by subscale to be undertaken. PISA 2018 also offered an optional assessment of financial literacy for the third time.

The assessment delivery of PISA has changed over the cycles. Between PISA 2000 and 2012 it was offered as a paper-based assessment, and from 2015 it has become a computer-based assessment.

How are results reported in PISA?

International comparative studies provide an arena to observe the similarities and differences between educational policies and practices. They enable researchers and others to observe what is possible for students to achieve and what environment is most likely to facilitate student learning. PISA provides regular information on educational outcomes within and across countries by offering insight into the range of skills and competencies, in different assessment domains, that are considered to be essential to an individual's ability to participate in and contribute to society.

PISA results are reported on a set of scales. Each scale was developed when an assessment domain was first administered. Each scale was initially set to have a mean of 500 and a standard deviation of 100 across OECD countries.

Mean scores and standard errors

Similar to other international studies, PISA results are reported as mean (average) scores, which provide a summary of student performance and allow for comparisons of the relative standing between different countries and different subgroups.

In the reading, mathematical and scientific literacy domains, the OECD average is constructed by using the data values across all OECD countries. This average can be used to compare a country on a given indicator with a typical OECD country. For financial literacy, the OECD average is the average of the values across the OECD countries and economies who participated in this assessment. As a second point of comparison, the average of the data values across all participating countries and economies in financial literacy is also presented with the results.[2]

2 For more information about the OECD average and the Average, please refer to the Reader's Guide.

Proficiency levels

PISA also provides a profile of student performance using proficiency levels – categories that summarise the skills and knowledge that students are able to display. The performance scale is divided into levels of difficulty, referred to as proficiency levels. Students at a particular level not only typically demonstrate the knowledge and skills associated with that level, but also the proficiencies required at the levels beneath it. Financial literacy has five levels of proficiency. A difference of 75 score points represents one proficiency level on the PISA financial literacy scale.

For illustrative purposes, students who attain a proficiency of Level 5 are considered high performers who demonstrate high levels of skills and knowledge in financial literacy that will enable them to solve financial problems or to make the kinds of financial decisions to plan for the future.

Students who attain a proficiency level below Level 2 are considered low performers who demonstrate basic financial literacy skills, but are not yet able to apply their knowledge to real-life situations involving financial issues and decisions. Level 2 has been defined internationally as a baseline proficiency level and defines the level of performance on the PISA scale at which students begin to demonstrate the competencies that will enable them to engage effectively and productively across a wider range of situations. Students who fail to reach Level 2 (so placed at Level 1 or below) have, according to the OECD, not acquired the skills and knowledge to allow them to adequately participate in the 21st century workforce and contribute as productive citizens. These students have low levels of cognitive ability in that assessment domain.

In Australia, Level 3 is the National Proficient Standard, as agreed in the Measurement Framework for Schooling in Australia (ACARA, 2015). This level was chosen because it 'represents a "challenging but reasonable" expectation of student achievement at a year level with students needing to demonstrate more than elementary skills expected at that year level' (p. 5). Students who performed at or above Level 3 have met or exceeded the National Proficient Standard.

Further details on the proficiency levels can be found in Chapter 2.

What did participants do?

Students

All students who participated in the assessment of financial literacy completed a two-hour cognitive test that consisted of financial literacy questions, as well as reading and mathematical literacy questions.

After the cognitive test, students also completed a suite of three student questionnaires.

Cognitive test

Students were assigned a financial literacy test that comprised four 30-minute clusters. Each student completed two clusters of financial literacy material, one cluster of reading literacy and one cluster of mathematical literacy.

In the cognitive test, students were presented with units that required them to construct a response to a stimulus and a series of questions (or 'items'). The stimulus material was, typically, a short written passage or text that accompanied a table, chart, graph, photograph or diagram. A range of item-response formats was administered to cover the full range of cognitive abilities and knowledge identified in the assessment framework.[3] In addition, students responded to questions that used interactive features, for example, using a slide bar, and running simulations.

3 For more information about the item-response formation, please refer to Chapter 2.

Questionnaires

Students were assigned a suite of three student questionnaires. These consisted of the internationally standardised student questionnaire, and two additional student questionnaires that were offered as international options: an information and communications technology (ICT) questionnaire and the financial matters questionnaire.

The student questionnaire sought information on students and their family background; aspects of students' lives, such as their attitudes towards learning, their habits and life in and outside of school; aspects of students' interest, motivation and engagement; and learning and instruction in science, including instructional time and class size.

The ICT questionnaire collected information on the availability and use of ICT, student perceptions of their competence in completing tasks and their attitudes towards computer use.

The financial matters questionnaire collected information about student attitudes towards money, and behaviours, and their experiences and familiarity with money matters.

School principals

Principals from participating schools were asked to complete a school questionnaire that collected descriptive information about the school, including the quality of the school's human and material resources, decision-making processes, instructional practices and school and classroom climate.

Administration of PISA

Students completed the cognitive test and questionnaires using computers. The delivery of the PISA software and the capture of student responses was predominantly through USB drives. The assessment session took place on a day nominated by the school and took about three and a half hours. This included the time for students to listen to instructions, complete their test and questionnaires, and also take scheduled breaks. All students, regardless of whether they were sampled to complete a test on the core domains or a test on financial literacy participated in PISA at the same time.

School principals completed their questionnaires online using unique login credentials to access a secure website.

In Australia, PISA 2018 took place during a six-week period from late July to early September 2018. For most countries in the Northern Hemisphere, the testing period took place between March and May 2018. Together with appropriate application of the student age definition, this resulted in the students in Australia being at both a comparable age and a comparable stage in the school year to those in the Northern Hemisphere who had been tested earlier in 2018.[4]

4 For more information on the PISA procedures, please refer to Appendix A in the *PISA 2018: Reporting Australia's Results. Volume I Student Performance*. (2019). https://research.acer.edu.au/ozpisa/35

Who participates in PISA?

PISA aims to be as inclusive as possible of the population of 15-year-old students in each country and strict guidelines are enforced with regard to the percentage of schools and of students that could be excluded (which cannot exceed 5% of the nationally desired target population).[5]

There are strict criteria on population coverage, response rates and sampling procedures. For initially selected schools, a minimum response rate of 85% (weighted) was required, as well as a minimum rate of 80% (weighted) of selected students. Countries that obtained an initial school response rate between 65% and 85% could still obtain an acceptable school response by the use of replacement schools. Schools with a student participation response rate lower than 50% were not regarded as participating schools. Australia successfully achieved the required response rates.

Countries

Although PISA was originally an OECD assessment created by the governments of OECD countries, it has become a major assessment in many regions and countries around the world. Seventy-nine countries and partner economies participated in PISA 2018, including 37 OECD countries and 43 partner countries or economies (Figure 1.1).[6]

In PISA 2018, 20 countries and economies participated in the financial literacy assessment: The participants were:

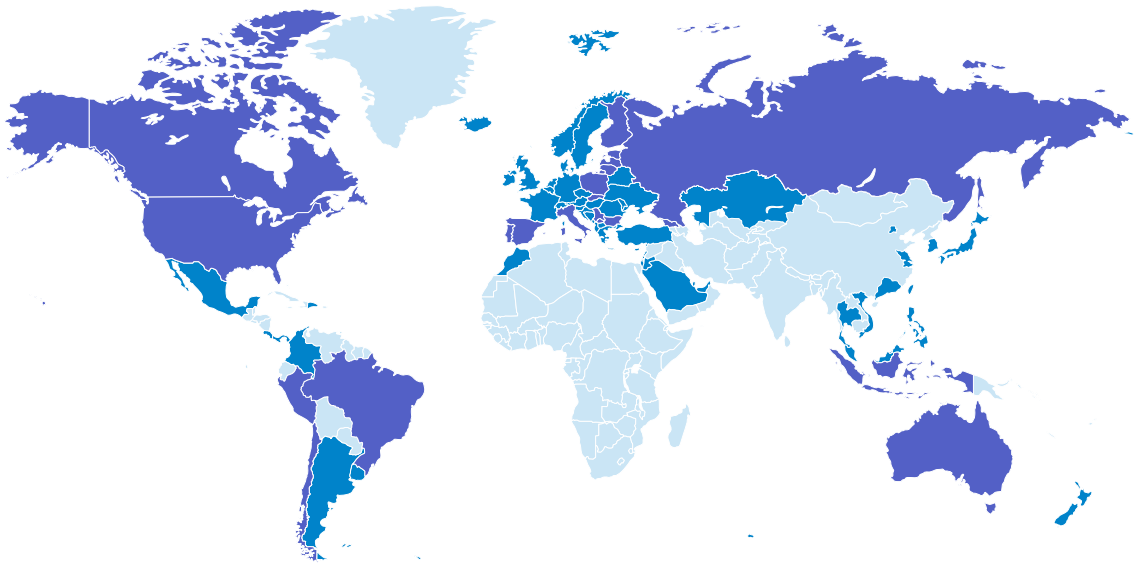
- 13 OECD countries and economies:[7] Australia, seven Canadian provinces (British Columbia, Manitoba, New Brunswick, Newfoundland and Labrador, Nova Scotia, Ontario and Prince Edward Island),[8] Chile, Estonia, Finland, Italy, Latvia, Lithuania, Poland, Portugal, the Slovak Republic, Spain and the United States.
- 7 partner (non-OECD) countries: Brazil, Bulgaria, Georgia, Indonesia, Peru, the Russian Federation and Serbia.

5 For more information on sampling, please refer to Appendix B in the *PISA 2018: Reporting Australia's Results. Volume I Student Performance*. (2019). https://research.acer.edu.au/ozpisa/35

6 PISA 2018 assessed the economic regions of Beijing, Shanghai, Jiangsu and Zhejiang [B-S-J-Z (China)], Chinese Taipei, Hong Kong (China) and Macao (China). Economic regions are required to meet the same PISA technical standards as other participating countries. Results for an economic region are only representative of the region assessed and are not representative of the country. For convenience, this report refers to these economic regions as countries.

7 The Netherlands also participated in the PISA 2018 financial literacy assessment; however, the students who participated in this assessment were not representative of the entire student population in the country. Therefore, data from the Netherlands are not comparable with other education systems and their results have not been presented in this report.

8 For convenience, this report refers to the seven Canadian provinces as Canada.



OECD countries		
Australia	Hungary	New Zealand
Austria	Iceland	Norway
Belgium	Ireland	Poland
Canada	Israel	Portugal
Chile	Italy	Slovak Republic
Colombia	Japan	Slovenia
Czech Republic	Korea	Spain
Denmark	Latvia	Sweden
Estonia	Lithuania	Switzerland
Finland	Luxembourg	Turkey
France	Mexico	United Kingdom
Germany	The Netherlands	United States
Greece		

Partner countries/economies		
Albania	Hong Kong (China)	Qatar
Argentina	Indonesia	Republic of North Macedonia
Baku (Azerbaijan)	Jordan	Romania
Belarus	Kazakhstan	Russian Federation
Bosnia & Herzegovina	Kosovo	Saudi Arabia
Brazil	Lebanon	Serbia
Brunei Darussalam	Macao (China)	Singapore
B-S-J-Z (China)*	Malaysia	Thailand
Bulgaria	Malta	United Arab Emirates
Chinese Taipei	Moldova	Ukraine
Costa Rica	Montenegro	Uruguay
Croatia	Morocco	Vietnam
Cyprus	Panama	
Dominican Republic	Peru	
Georgia	Philippines	

Countries that participated in financial literacy in 2018	
Australia	Latvia
Brazil	Lithuania
Bulgaria	Peru
Canada	Poland
Chile	Portugal
Estonia	Russian Federation
Finland	Serbia
Georgia	Slovak Republic
Indonesia	Spain
Italy	United States

* B-S-J-Z (China) refers to the four PISA participating provinces: Beijing, Shanghai, Jiangsu and Zhejiang.

FIGURE 1.1 Countries and economies that participated in PISA 2018

Seven countries have participated in all three financial literacy assessments: Australia, Italy, Poland, the Russian Federation, the Slovak Republic, Spain, and the United States. Estonia and Latvia participated in both PISA 2012 and 2018, while Brazil, the provinces of Canada,[9] Chile, Lithuania and Peru participated in both 2015 and 2018. Bulgaria, Finland, Georgia, Indonesia and Serbia participated in the PISA 2018 financial literacy assessment for the first time.

9 The same seven Canadian provinces participated in both the PISA 2015 and 2018 financial literacy assessments.

Schools

In most countries, 150 schools were randomly selected to participate in PISA. In some countries, including Australia, larger samples of schools and students participated. This allowed countries to carry out specific national options at the same time as the PISA assessment and for meaningful comparisons to be made between different sectors of the population.

In Australia, a larger sample of schools and students participated in PISA to produce reliable estimates that would be representative of each of the Australian states and territories. In order for comparisons to be made between each jurisdiction, it was necessary to oversample the smaller states and territories, because a random sample proportionate to state and territory populations would not yield sufficient students in the smaller states and territories to give a result that would be sufficiently precise.

As shown in Table 1.1, the final Australian PISA 2018 school sample consisted of 740 schools. The sample was designed so that schools were selected with a probability proportional to the enrolment of 15-year-olds in each school. Stratification of the sample ensured that the PISA sample was representative of the Australian population of 15-year-olds. Several variables were used in the stratification of the school sample including state and territory, school sector, geographic location, sex of students at the school and a socioeconomic background variable.[10]

TABLE 1.1 Number of Australian PISA 2018 schools, by state, territory and sector

	Sector			
State/Territory	Government	Catholic	Independent	Total
ACT	24	9	8	41
NSW	98	39	29	166
VIC	70	30	26	126
QLD	81	26	26	133
SA	58	20	22	100
WA	60	21	20	101
TAS	37	11	8	56
NT	8	4	5	17
Australia	436	160	144	740

Note: These numbers are based on unweighted data

Of the Australian PISA schools, 85% were coeducational, 8% of schools catered for all-female students, and 7% catered for all-male students.

In PISA 2018, 2% of the schools (17 schools) were single-sex schools from the government school sector, 8% (61 schools) were from the Catholic school sector, and 4% (30 schools) were from the independent school sector.

10 Based on the Australian Bureau of Statistics' Socio-Economic Indexes for Areas (SEIFA).

Students

The target population for PISA is students who are aged between 15 years and 3 months, and 16 years and 2 months at the beginning of the testing period and are enrolled in an educational institution, either full-time or part-time. Since the largest proportion (but not all) of the PISA target population is made up of 15-year-olds, the target population is often referred to as 15-year-olds.

In most Australian jurisdictions, 30 students were sampled per school, while in the Australian Capital Territory, 36 students were sampled per school, and in the Northern Territory, 48 students were sampled per school.[11] The Australian PISA 2018 sample consisted of 14 273 students, who were assessed in the core assessment domains and 9 411 students who were assessed in the financial literacy assessment. Internationally, 117 000 students took part in the financial literacy assessment in PISA 2018, which represented about 13.5 million 15-year-old students internationally.[12]

The Australian financial literacy assessment sample for PISA 2018 was drawn from all jurisdictions and school sectors according to the distributions shown in Table 1.2.

TABLE 1.2 PISA 2018 financial literacy assessment student sample across the states and territories and school sectors

		State/Territory								
		ACT	NSW	VIC	QLD	SA	WA	TAS	NT	Total
Government	N Students	146	547	424	374	275	289	133	61	2 249
	Weighted N	1 502	19 762	16 449	11 422	3 515	5 431	1 234	298	59 613
Catholic	N Students	288	1 236	872	963	659	701	427	90	5 236
	Weighted N	2 643	46 517	35 235	31 948	9 603	16 453	3 690	1 305	147 394
Independent	N Students	126	387	373	346	279	268	67	80	1 926
	Weighted N	763	14 124	14 151	10 057	3 795	5 251	574	388	49 103
Total	N Students	560	2 170	1669	1 683	1 213	1 258	627	231	9 411
	Weighted N	4 908	80 403	65 835	53 427	16 913	27 135	5 498	1 991	256 110

Note: N students is based on the unweighted sample; weighted N is based on the number of students in the target population represented by the sample.

In this report, as per the agreement by the state and territory education authorities, there are no jurisdictional or sectoral results.

Table 1.3 describes the number of students across the different demographic groups who were assessed in the PISA 2018 financial literacy assessment.[13]

11 This included the number of students sampled per school for both the core assessments and the financial literacy assessment. The student sample for the financial literacy assessment was drawn separately from the students who were sampled for the core assessment domains, which was different to PISA 2015, where the student sample for the financial literacy assessment was drawn from the subsample of students sampled for the core assessment domains.

12 For more information about the sample design, survey weighting and sampling outcomes, please refer to the PISA 2018 Technical Report (OECD, forthcoming).

13 An explanation of each of these background variables is provided in the Reader's Guide.

TABLE 1.3 PISA 2018 financial literacy assessment student sample across the different demographic groups

Demographic group	N Students*	Weighted N	Weighted %
Sex			
Female	4 661	126 005	49.2
Male	4 750	130 103	50.8
Geographic location			
Metropolitan	6 866	191 940	74.9
Provincial	2 388	61 487	24.0
Remote	157	2 682	1.0
Indigenous background			
Indigenous	474	11 636	5.0
Non-Indigenous	8 045	222 101	95.0
Socioeconomic background			
Lowest quartile	2 124	58 122	25.0
Second quartile	2 090	58 062	25.0
Third quartile	2 135	58 160	25.0
Highest quartile	2 117	58 147	25.0
Immigrant background			
Australian-born	4 683	125 790	54.7
First-generation	2 506	70 905	30.9
Foreign-born	1 186	33 140	14.4
Language spoken at home			
English	7 399	201 706	86.3
Language other than English	1 122	32 123	13.7

Note: N students is based on the unweighted sample; weighted N is based on the number of students in the target population represented by the sample. N does not always add up to the full sample as some background information is not available for all students

Policy interest in financial literacy[14]

Policymakers are increasingly recognising the importance of developing financial literacy skills among young people, many of whom already face financial decisions and are consumers of financial services, such as choosing a mobile phone plan or using a savings account. As these students approach the end of compulsory education, they also have to decide whether to continue with post-secondary education or whether to enter the workforce, and to consider the financial decisions around these choices. As they mature, they will soon have to perform more financial operations and engage in financial activities, both as part of their work and in everyday life.

Results from the PISA 2018 financial literacy assessment show the extent to which 15-year-olds are already using money and are involved in financial decisions. For example:

- On average, across the 13 OECD countries, 54% of students held a bank account and 45% of students held a debit or credit card. In Australia, 68% of students held a bank account and 61% of students held a debit or credit card.
- On average, across the 13 OECD countries, 73% of students had bought something online (either alone or with a family member) over the previous 12 months, and 39% of students had made a payment using a mobile phone. In Australia, 75% of students had bought something online and 47% of students had made a payment using a mobile phone.

14 The section on policy and students' exposure to financial literacy are adapted or reproduced (with permission) from the *PISA 2018 Results Volume IV: Are students smart about money?* (OECD, 2020).

Results from the OECD Programme for the International Assessment of Adult Competencies (PIAAC) show the extent to which young people and adults engage in basic financial activities (OECD, 2016). The results reported in the following bullet point focus on those countries that participated in both PIAAC (in any of the earlier rounds) and in PISA 2018. For young people, aged between 16 and 24 years:

- More than one-third of students in Australia (41%), Finland (34%) and the United States (35%) indicated that they read bills, invoices, bank statements or other financial statements at least once a week in their everyday life, while more than one-fifth of students in Australia (29%), Canada (27%), Estonia (22%), Poland (23%), the Russian Federation (29%) and the Slovak Republic (26%) indicated that they read such financial statements at least once a week as part of their current or last job.
- More than half the students in Australia (53%), Finland (54%) and the United States (54%) indicated that they calculate prices, costs or budgets at least once a week in their everyday life, while almost one in two students in Australia (48%), Chile (43%) and Peru (45%) indicated that they do/did this at least once a week as part of their current or last job.

Current trends are likely to make financial literacy skills even more essential in the future. Indeed the necessity for such skills has been brought sharply into focus during the writing of this report with the financial crisis associated with the COVID-19 pandemic worldwide. With the vast majority of financial transactions moving online almost overnight, bringing the increased risk of fraud, offers made to people to freeze their mortgage repayments or to draw money from their superannuation in order to meet expenses, it is vital that young people have the skills to navigate such offers and options and to be able to evaluate the costs and benefits associated with each.

This generation of youth are likely to face more challenging financial choices if the current trend of increasing financial complexity continues. Financial education will therefore have a role, in conjunction with financial consumer protection and regulation policies, in equipping people to attain the appropriate skills and knowledge in financial literacy.

While the spread of digital financial services may open up new opportunities for poor and financially excluded people to access the formal financial system, it can also expose consumers to new security threats and risks of fraud that are compounded when low financial literacy is combined with poor digital skills and low cybersecurity awareness (OECD, 2017). The increasing availability of online credit – especially unlicensed instruments that often target young and/or inexperienced consumers, such as a variety of payday lenders or debt repayment companies – will pose further challenges for financial consumer protection and education (Consumers of Canada, 2015; OECD, 2017).

Future generations in some countries will also probably bear more financial risks during their lifetime than the present generation, particularly after the current crisis. These may include increased life expectancy, but also more uncertain job prospects due not only to digitalisation, technological change and climate change, but also the increased economic issues posed as a result of the COVID-19 pandemic.

Finally, growing income and wealth inequality will mean that socioeconomically disadvantaged groups will need strong levels of financial literacy to avoid being left further behind. Providing youth with financial education is essential to help bridge disparities in financial literacy due to differences in students' current socioeconomic status, and will potentially reduce differences in their future socioeconomic status.

Providing financial education to young people

A growing number of countries recognise the importance of developing financial literacy skills among young people and adults and have developed and implemented national strategies for financial literacy. These nationally coordinated approaches to financial education consist of an adapted framework that:

- recognises the importance of financial education
- requires the cooperation of different stakeholders
- identifies a national coordinating body
- establishes a roadmap to achieve specific and predetermined objectives within a set period of time
- provides guidance to be applied by the individual program.

A number of countries who participated in the PISA 2018 financial literacy assessment are developing or implementing a national strategy for financial education whose target audience is specifically young people.

In Australia, the National Financial Capability Strategy 2018 is coordinated by ASIC, and provides a framework to develop and deliver policies and programs to improve financial literacy for all Australians. The Strategy builds on the prior National Financial Literacy Strategies in 2011 and 2014–2017, and aims to assist Australians 'to take control of their financial lives by managing money day-to-day, making informed decisions, and planning for the future.' (ASIC, 2020).

Introducing financial literacy in schools

Many of the existing national strategies for financial education specifically identify young people and students among their main target groups and support the introduction of financial education in schools. A growing number of countries teach financial education in schools, even though provision remains limited. In many cases, this is done by introducing financial topics in the curriculum, mostly following a cross-curricular approach. To minimise curriculum overload, countries typically integrate financial literacy into other subjects and existing courses, rather than introducing an additional subject into an already crowded curriculum. Some countries have developed financial education pilot programs in a selected number of schools, before formally introducing financial education elements into the national curriculum.

In Australia, the Australian Curriculum incorporates the education of financial literacy as Consumer and Financial Literacy, which has been informed and guided by the National Consumer and Financial Literacy Framework (MCEECDYA, 2011). This framework outlines a rationale for consumer and financial education in Australian schools and describes the financial capabilities that will support lifelong learning. It provides direction on how consumer and financial education can be organised to support the progression of learning from Foundation to Year 10.

The consumer and financial literacy curriculum connections resource, developed collaboratively by ASIC, the Australian Taxation Office and the Australian Curriculum and Assessment Reporting Authority (ACARA), illustrates the connections in content across the curriculum dealing with consumer knowledge and financial capability.

While content linking to consumer and financial literacy has been identified and selected for relevance, there are broader opportunities for students to learn about and develop skills in consumer and financial literacy throughout the Australian Curriculum. Schools and teachers are encouraged to identify opportunities and create learning programs that will meet their students' needs and interests. Since what goes on in the real world is essentially interdisciplinary, teaching programs that develop consumer and financial literacy can weave content from all dimensions of the Australian Curriculum in ways that are authentic and meaningful.

Providing young people with financial education through extracurricular opportunities

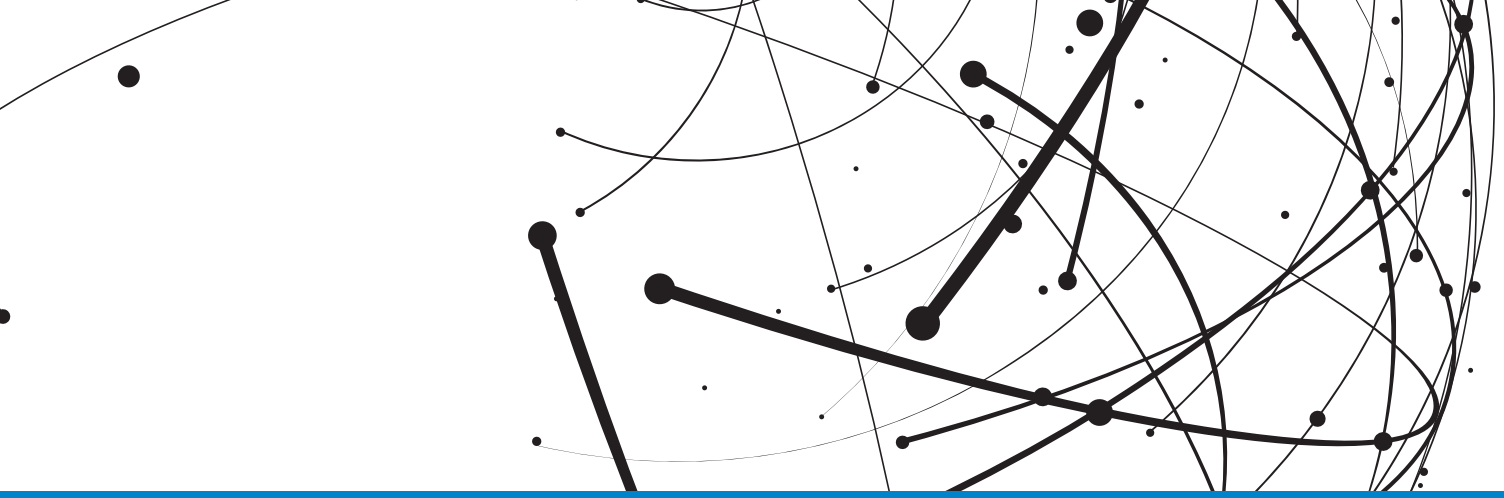
Young people can learn about financial matters from a variety of sources, including their parents, friends, schools, extracurricular activities, and through personal experiences, such as making purchases, using a mobile phone, opening a bank account, or taking out a student loan. Governments, together with not-for-profit organisations and financial institutions, also try to teach young people basic financial literacy skills outside of normal school hours, often through extracurricular activities. These might include participation in events dedicated to money or saving, school visits from staff of a financial institution, stock market games, visits to a money museum, or events where students can create their own small business.

Organisation of the report

This report focuses on Australian student performance in the PISA 2018 financial literacy assessment. Chapter 2 provides an overview of the financial literacy assessment framework. It outlines the content that students need to know, the processes that students need to be able to perform, and the contexts in which this knowledge and these skills are applied, and how financial literacy is assessed. Chapters 3, 4 and 5 present results on the financial literacy performance of Australian students in an international context, and from a national context for different demographic groups of interest. Chapters 6, 7, 8 and 9 are devoted to student experiences, attitudes and behaviour towards financial literacy.

Further information

Further information about PISA Australia is available from the national PISA website: https://www.acer.org/au/pisa.



CHAPTER 2

The financial literacy assessment framework and structure

The PISA financial literacy assessment framework is the conceptual foundation of the financial literacy assessment. It defines what it means to be proficient in financial literacy, describes the constructs to be assessed, the types of questions and response styles to be developed, and the forms of measurement to report proficiency in the financial literacy assessment domain.[1]

In PISA 2018, financial literacy was assessed for the third time. The assessment framework maintains the same definition and structure as in PISA 2012, when the financial literacy framework was first developed, and in PISA 2015. The first section of this chapter summarises the assessment domain, including how it is defined, organised and measured in PISA. The second section focuses on the assessment structure for financial literacy.

How is financial literacy defined in PISA?

Financial literacy in PISA 2018 is defined as:

> *… the knowledge and understanding of financial concepts and risks, and the skills, motivation and confidence to apply such knowledge and understanding in order to make effective decisions across a range of financial contexts, to improve the financial wellbeing of individuals and society, and to enable participation in economic life.* (OECD, 2019b, p. 128).

This definition, like other PISA assessment domain definitions, has two parts. The first part refers to the thinking and behaviour that characterise the domain. The second part refers to the purposes for developing the particular literacy.

In Figure 2.1, each part of the definition of financial literacy is considered in turn to help clarify its meaning in relation to the assessment.

1 Details about the PISA 2018 financial literacy assessment framework, proficiency scales and structure of the assessment have been adapted or reproduced (with permission) from the *PISA 2018: Assessment and Analytical Framework* (OECD, 2019b).

Financial literacy…

Literacy is viewed as an expanding set of knowledge, skills and strategies on which individuals build throughout life, rather than a line to be crossed, with illiteracy on one side and literacy on the other. Literacy involves more than the reproduction of accumulated knowledge; instead, it involves a mobilisation of cognitive and practical skills, and other resources such as attitudes, motivation and values. The PISA assessment of financial literacy draws on a range of knowledge and skills associated with the development of the capacity to deal with the financial demands of everyday life and uncertain futures within contemporary society.

…is knowledge and understanding of financial concepts and risks…

Financial literacy is thus contingent on some knowledge and understanding of the fundamental elements of the financial world, including key financial concepts as well as the purpose and basic features of financial products. This also includes risks that may threaten financial wellbeing as well as insurance policies and pensions. It can be assumed that 15-year-olds are beginning to acquire this knowledge and gain experience of the financial environment that they and their families inhabit and the main risks they face. All of them are likely to have been shopping to buy household goods or personal items; some will have taken part in family discussions about money and whether what is wanted is actually needed or affordable; and a sizeable proportion of them will have already begun to earn and save money. Some students already have experience of financial products and commitments through a bank account or a mobile phone contract. A grasp of concepts such as interest, inflation and value for money are soon going to be, if they are not already, important for their financial wellbeing.

…and the skills…

These skills include generic cognitive processes such as accessing information, comparing and contrasting, extrapolating and evaluating, but applied in a financial context. They include basic skills in mathematical literacy such as performing basic calculations, computing a percentage, or converting from one currency to another, and language skills such as the capacity to read and interpret advertising and contractual texts.

…motivation and confidence…

Financial literacy involves not only the knowledge, understanding and skills to deal with financial issues, but also non-cognitive attributes: the motivation to seek information and advice in order to engage in financial activities, the confidence to do so and the ability to manage emotional and psychological factors that influence financial decision-making. These attributes are considered to be a goal of financial education, as well as being instrumental in building financial knowledge and skills.

…to apply such knowledge and understanding in order to make effective decisions…

PISA focuses on the ability to activate and apply knowledge and understanding in real-life situations rather than the reproduction of knowledge. In assessing financial literacy, this translates into a measure of young people's ability to transfer and apply what they have learnt about personal finance into effective decision-making. The term 'effective decisions' refers to informed and responsible decisions that satisfy a given need.

…across a range of financial contexts…

Effective financial decisions can refer to a range of financial contexts that relate to young people's current daily lives and experiences, but also to steps they are likely to take in the near future as adults. For example, young people may currently make relatively simple decisions such as how they will use their pocket money or which mobile phone contract they will choose, but they may soon be faced with more significant decisions about education and work options with long-term financial consequences.

...to improve the financial wellbeing of individuals and society...

Financial literacy in PISA is primarily conceived of as literacy around personal or household finance and is distinguished from economic literacy, which includes concepts such as the theories of supply and demand, and the structure of markets. Financial literacy is concerned with how individuals understand, manage and plan their own and their households' – which often means their families' – financial affairs. It is recognised, however, that good financial understanding, management and planning on the part of individuals has some collective impact on the wider society, in contributing to national and even global stability, productivity and development.

...and to enable participation in economic life.

Like the other definitions of literacy in PISA, the definition of financial literacy emphasises the importance of the individual's role as a thoughtful and engaged member of society. Individuals with a high level of financial literacy are better equipped to make decisions that are of benefit to themselves, and also to constructively support and critique the economic world in which they live.

FIGURE 2.1 Understanding the definition of financial literacy in PISA

How is financial literacy assessed in PISA?

Figure 2.2 shows how the financial literacy assessment framework is organised around the content, processes and contexts that are relevant for the assessment of 15-year-old students.

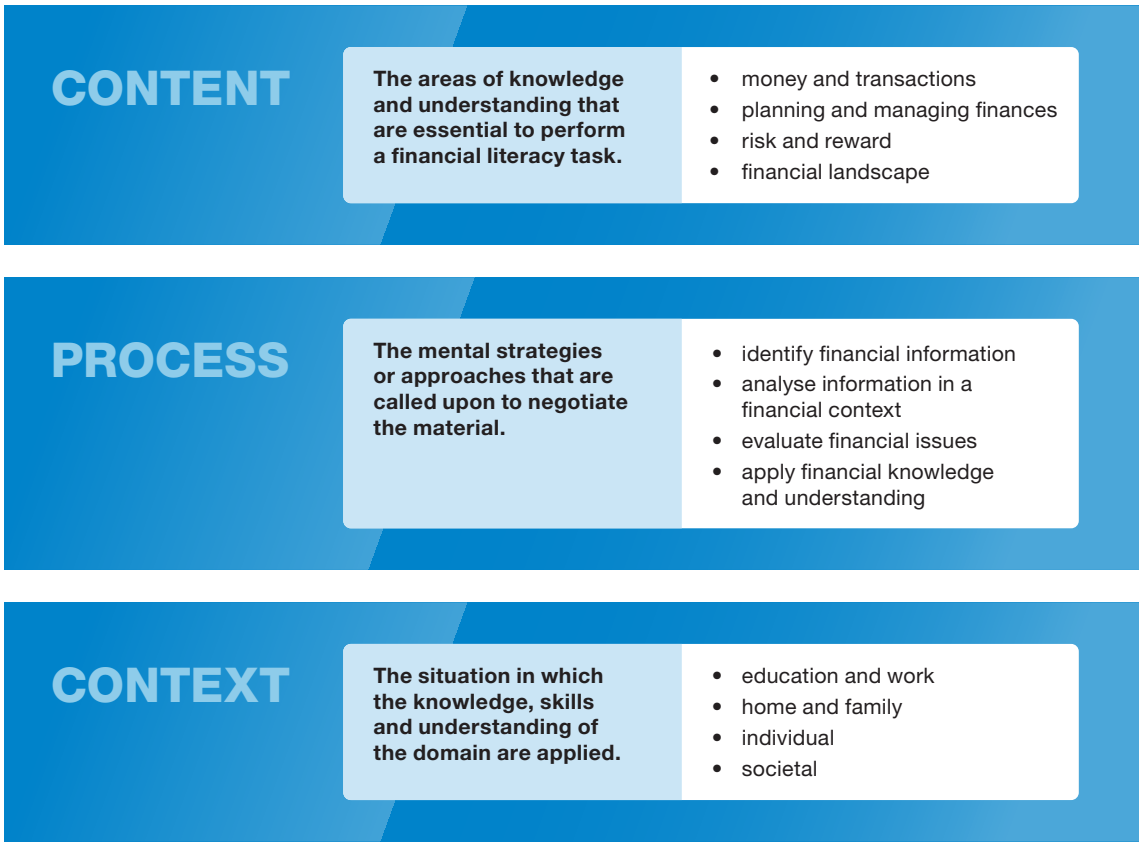


FIGURE 2.2 Main features of the financial literacy assessment framework

Content

The content categories comprise the areas of knowledge and understanding that are essential to draw upon to perform a particular financial literacy task. The financial literacy framework identifies four content areas.

Money and transactions – includes awareness of the different forms and purposes of money and managing monetary transactions, such as everyday payments, spending, value for money, bank cards, cheques, bank accounts and currencies.

Planning and managing finances – covers skills such as planning and managing income and wealth over both the short term and long term and in particular the knowledge and ability to monitor income and expenses, and to make use of income and other available resources to enhance financial wellbeing.

Risk and reward – incorporates the ability to identify ways of managing, balancing and covering risks and an understanding of the potential for financial gains or losses across a range of financial contexts and products, such as credit agreements with variable interest rates or investment products.

Financial landscape – relates to the features of the financial world. It covers an awareness of the role of regulation and consumer protection, knowing the rights and responsibilities of consumers in the financial marketplace and within the general financial environment, and the main implications of financial contracts. It also incorporates an understanding of the consequences of change in economic conditions and public policies, such as changes in interest rates, inflation, taxation, sustainability and environmental targets or welfare benefits.

Process

The process categories relate to cognitive processes. They describe students' ability to recognise and apply concepts relevant to the domain, and to understand, analyse, reason about, evaluate and suggest solutions. The financial literacy framework identifies four process categories with no particular hierarchical order:

Identify financial information – is applicable when the individual searches for and accesses sources of financial information and identifies or recognises its relevance.

Analyse information in a financial context – covers a wide range of cognitive activities undertaken in financial contexts, including interpreting, comparing and contrasting, synthesising, and extrapolating from information that is provided.

Evaluate financial issues – focuses on recognising or constructing financial justifications and explanations, by applying financial knowledge and understanding to specific contexts. It also involves cognitive activities, such as explaining, assessing and generalising.

Apply financial knowledge and understanding – focuses on taking effective action in a financial setting by using knowledge of financial products and contexts, and understanding of financial concepts.

Context

The context categories relate to the situations in which the financial knowledge, skills and understandings are applied, ranging from the personal to the global. In PISA, assessment tasks are framed in general life situations, which may include the following aspects.

Education and work – is of great importance to young people, who will be starting to think about financial matters related to both education and work, whether they are spending existing earnings, considering future education options or planning their working life.

Home and family – includes financial issues relating to the costs involved in running a household, including the kind of shared accommodation that young people often use shortly after leaving the family home.

Individual – has importance within personal finance as students make financial decisions for personal benefit or gratification, and in the many risks and responsibilities that must be borne by individuals. These decisions span essential personal needs, as well as leisure and recreation.

Societal – recognises that individuals' financial decisions and behaviours can influence and be influenced by the rest of society. It includes matters such as being informed and understanding the rights and responsibilities of financial consumers and understanding the purpose of taxes and local government charges.

Non-cognitive factors: Attitudes and behaviours

The PISA definition of financial literacy includes the non-cognitive attributes of motivation, confidence and attitudes. These constructs are important in their own right, and of interest in their interaction with the cognitive elements of financial literacy.

The financial literacy framework identifies four non-cognitive factors:

Access to information and education – there are various sources of financial information and education that may be available to students, including informal discussions with friends, parents or other family members, information from the financial sector, as well as formal school education.

Access to money and financial products – personal experience of financial products may influence young people's financial literacy and vice versa. Personal experience may come, for example, from earning money or receiving an allowance, and from using financial products, such as payments cards, from dealing with the banking system, or from occasional working activities outside of school hours.

Attitudes towards and confidence about financial matters – individual preferences can be related to financial behaviour and the ways in which financial knowledge is used. Confidence in their own ability to make a financial decision may make it more likely that a student will work through complex financial problems or carefully make choices across several possible products. At the same time, however, confidence may turn into over-confidence, leading to mistakes and overly risky decisions.

Spending and saving behaviour – while items on the cognitive assessment test students' ability to make particular spending and savings decisions, it is also useful to have some measure of what their actual (reported) behaviour is, that is, how students save and spend in practice.

How is financial literacy reported in PISA?

Statistics such as mean scores and measures of distribution of performance allow for comparisons against other countries and subgroups. Proficiency levels provide results in descriptive terms, where descriptions of the skills and knowledge students typically use are attached to achievement results.

Means and standard errors

Mean scores provide a summary of student performance and allow comparisons of the relative standing between different countries and different subgroups. In PISA 2012, when financial literacy was assessed for the first time, the metric for the overall financial literacy scale was based on an average score, across the 13 participating OECD countries, of 500 points and a standard deviation of 96 points. The mean score on the PISA 2015 financial literacy scale across the 10 participating OECD countries was 489 points with a standard deviation of 110 points. In PISA 2018, the mean score on the financial literacy scale across the 13 OECD countries was 505 points with a standard deviation of 94 points.

The distribution of scores along the financial literacy scale also provides further detail about student performance. Results at the international level are reported at the 5th, 10th, 25th, 75th, 90th and 95th percentiles in graphical format to observe the variation in student performance within a country or sub-group.

Proficiency levels

While mean scores provide a comparison of student performance on a numerical level, proficiency levels provide a description of the knowledge and skills that students are typically capable of displaying. Following PISA practice, a single continuous scale of financial literacy was constructed in PISA 2012. This proficiency scale remains valid and was used for the PISA 2018 assessment.

The PISA 2018 financial literacy proficiency scale is divided into five proficiency levels, with 75 points representing one proficiency level. The financial literacy proficiency scale spans from Level 1 (the lowest proficiency level) to Level 5 (the highest). Students who placed at Level 5 (scoring 625 points or above) are considered high performers, while students who placed below Level 2 (scoring 400 points or lower) are considered low performers.

Descriptions of each of these levels are based on the framework-related cognitive demands imposed by tasks that are located within each level to describe the kinds of skills and knowledge needed to successfully complete those tasks, and which can then be used as characterisations of the substantive meaning of each level. Figure 2.3 provides descriptions of the financial literacy scale, and the cut-off points between the proficiency levels.

	Proficiency level	What students can typically do at each level
High performers	5	Students can apply their understanding of a wide range of financial terms and concepts to contexts that may only become relevant to their lives in the long term. They can analyse complex financial products and can take into account features of financial documents that are significant but unstated or not immediately evident, such as transaction costs. They can work with a high level of accuracy and solve non-routine financial problems, and they can describe the potential outcomes of financial decisions, showing an understanding of the wider financial landscape, such as income tax.
	624.6 score points	
Middle performers	4	Students can apply their understanding of less common financial concepts and terms to contexts that will be relevant to them as they move towards adulthood, such as bank account management and compound interest in saving products. They can interpret and evaluate a range of detailed financial documents, such as bank statements, and explain the functions of less commonly used financial products. They can make financial decisions taking into account longer-term consequences, such as understanding the overall cost implication of paying back a loan over a longer period, and they can solve routine problems in less common financial contexts.
	549.9 score points	
	3	Students can apply their understanding of commonly used financial concepts, terms and products to situations that are relevant to them. They begin to consider the consequences of financial decisions and they can make simple financial plans in familiar contexts. They can make straightforward interpretations of a range of financial documents and can apply a range of basic numerical operations, including calculating percentages. They can choose the numerical operations needed to solve routine problems in relatively common financial literacy contexts, such as budget calculations.
	475.1 score points	
	2	Students begin to apply their knowledge of common financial products and commonly used financial terms and concepts. They can use given information to make financial decisions in contexts that are immediately relevant to them. They can recognise the value of a simple budget and can interpret prominent features of everyday financial documents. They can apply single basic numerical operations, including division, to answer financial questions. They show an understanding of the relationships between different financial elements, such as the amount of use and the costs incurred.
	400.3 score points	
Low performers	1	Students can identify common financial products and terms and interpret information relating to basic financial concepts. They can recognise the difference between needs and wants and can make simple decisions on everyday spending. They can recognise the purpose of everyday financial documents such as an invoice and apply single and basic numerical operations (addition, subtraction or multiplication) in financial contexts that they are likely to have experienced personally.
	325.6 score points	

FIGURE 2.3 Summaries of the five proficiency levels and cut-off points on the financial literacy scale

The financial literacy assessment structure in PISA 2018

The assessment framework serves as the conceptual basis for assessing student proficiency in financial literacy. The items presented to students reflect the concepts outlined in the framework, as well as taking into consideration the difficulty of the items and the different types of item formats.

The PISA 2018 financial literacy assessment included 43 items, of which approximately two-thirds were trend items, allowing for comparisons of student performance to be reported over time, and one-third were newly developed items for the PISA 2018 cycle to increase coverage of all aspects of the framework.

Construct coverage

The balance of items among the content, process and context categories is broadly consistent with the assessment framework and reflects the consensus view of the experts who were consulted when the framework was being reviewed for PISA 2018. The number and proportion of items, by the four content categories, the four processes and the four contexts are shown in Table 2.1.

TABLE 2.1 Distribution of items in the financial literacy assessment by content, process and context categories

	Number	%
Content		
Money and transactions	11	26
Planning and managing finances	16	37
Risk and reward	11	26
Financial landscape	5	12
Process		
Identify financial information	7	16
Analyse information in a financial context	11	26
Evaluate financial issues	14	33
Apply financial knowledge and understanding	11	26
Context		
Education and work	5	12
Home and family	14	33
Individual	21	49
Societal	3	7

Note: Due to rounding, some percentages may not match the totals.

Item response formats

The assessment domains were assessed through a range of item response formats to cover the full range of cognitive abilities and knowledge identified in the financial literacy assessment framework. These included:

- *Selected-response items* – students are required to choose one or more alternatives from a given set of options. These were coded automatically. Selected-response items consisted of:
  - simple multiple-choice items – students were asked to select one correct response from among four possible response options, or where students had to select an answer from a selectable element within a graphic or text.
  - complex multiple-choice items – students were asked to respond by selecting the correct response to each of a number of statements or questions.
- *Constructed-response items* – students were required to generate their own answers. Constructed-response items consisted of:
  - Closed constructed-response items – students were asked to provide a response with a limited range of acceptable answers, typically numbers. Responses were easily judged to be either correct or incorrect and were coded automatically.
  - Open constructed-response items – students were asked to provide an extended response that ranged from writing a short explanation to showing the method and thought processes they used in reaching their response. These items were coded by trained experts who selected the code that best captured the response provided by a student to an item. Each code was then converted to a score for that item.

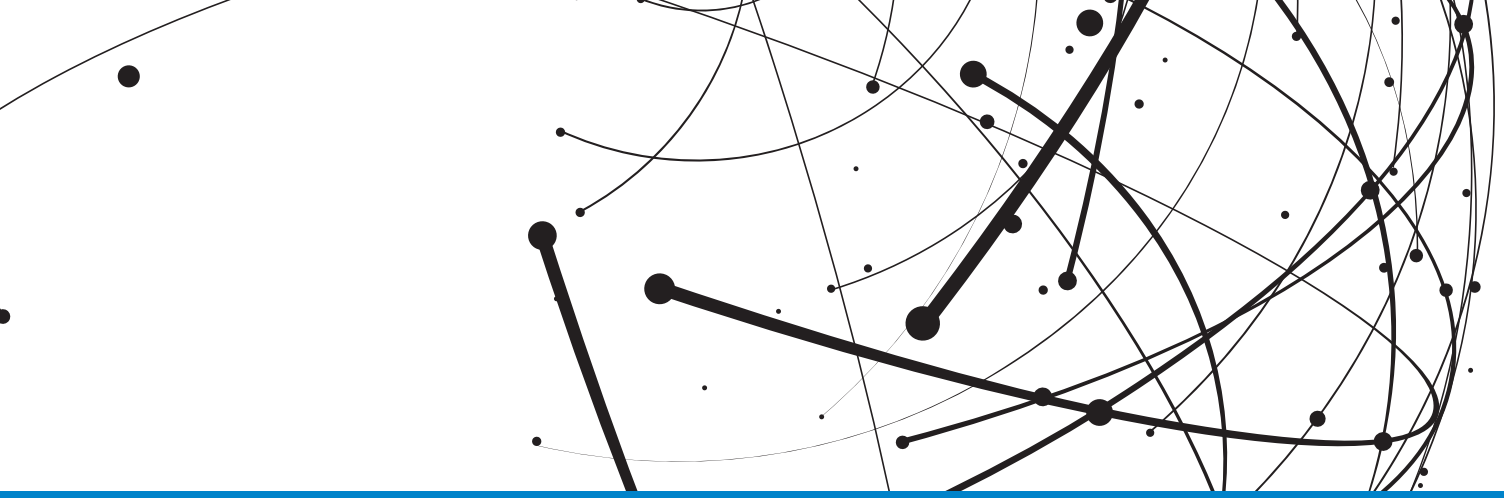
Table 2.2 shows that of the 43 financial literacy items in PISA 2018, 54% were selected-response items, and 46% of the items were constructed-response items. All of the multiple-choice items and approximately one-third of the constructed-response items were computer scored, while the remainder of the constructed-response items (two-thirds) were coded by experienced trained coders.

TABLE 2.2 Distribution of items in the financial literacy assessment by item response format

	Number	%
Selected-response items		
Simple multiple-choice	12	28
Complex multiple-choice	11	26
Constructed-response items		
Closed (computer scored)	7	16
Open (human coded)	13	30
Total	**43**	**100**

Released items

As PISA is a recurring assessment, the majority of items remain secure in order for trend data to be reported over time. A small number of example items for financial literacy have been made publically available. Appendix A provides a few examples of sample items for illustrative purposes. A selection of items is also available through the OECD website www.oecd.org/pisa/test/.



CHAPTER 3

Australia's results in an international context

This chapter presents the results on Australian student performance in financial literacy. Results are reported by mean scores and proficiency levels and focus on performance by country, for PISA 2018 and over time. A comparison between financial literacy and the two core assessments (mathematical literacy and reading literacy) is also provided.[1]

Key findings

- Australian students achieved an average of 511 score points in financial literacy in PISA 2018, which was higher than the OECD average of 505 score points.
- Australia was outperformed by students in 4 countries. The highest scoring country in PISA 2018 was Estonia with an average achievement of 547 score points. This was 42 score points and around half a standard deviation higher than the OECD average, 36 score points higher than Australia, the equivalent of around one year of schooling.
- Since 2015, Australia's performance has not changed, while across those OECD countries with comparable data, there has been an improvement of 20 points. Five of the 12 countries with comparable data improved their performance over this 3-year period.
- Since 2012, when financial literacy was first assessed as a domain in PISA, Australia's performance declined by 15 points (or half a year of schooling). In most other countries with comparable data, performance has remained stable, except for Estonia, whose performance has improved by 18 points.
- Fourteen per cent of Australian students were classed as high performers. This was higher than the OECD average of 10% but contrasted with 19% of students in Estonia.
- Sixteen per cent of Australian students were classed as low performers. This was similar to the OECD average of 15% but contrasted with Estonia who had 6% of low performers.

1 In this report, the focus is on differences that are statistically significant (in other words, are unlikely to have occurred by chance). Where the commentary states that there was a difference between sets of numbers, whether these are scores, percentages or percentage point differences, it means that the difference satisfied this condition. Where the commentary states that there was no difference, or where no comment is made regarding a possible comparison, it indicates that the difference was not statistically significant.

- Between 2015 and 2018, the percentage of low performers decreased by 4 percentage points, while the percentage of high performers remained stable.
- Between 2012 and 2018, the percentage of low performers increased by 6 percentage points, while the percentage of high performers remained stable.

Reporting financial literacy scores in PISA

PISA uses mean scores and proficiency levels to provide a summary of student performance and to compare the relative standing between countries and for different groups.

Mean scores

The financial literacy scale is reported on a numeric scale. The higher a student scored on the scale, the stronger they performed in financial literacy. When the scale was first established in 2012, the results were scaled to fit approximately normal distributions, with a mean of around 500 score points and standard deviations of around 100 score points. This means that a one-point difference on the PISA financial literacy scale corresponds to an effect size of 1%, and a 10-point difference to an effect size of 10%.

The mean score across participating OECD countries on the PISA 2018 financial literacy scale was 505 score points, with a standard deviation of 94 score points. This is the benchmark against which each country's financial literacy performance in PISA 2018 can be compared.

Differences in terms of schooling

As the PISA scores do not have a substantive meaning, their interpretation can be difficult to understand from a practical perspective. Previous PISA reports have used a common metric, years of schooling, to help judge the magnitude of score differences between groups and over time.

For Australia, it is possible to estimate the score-point difference that is associated with one year of schooling because the Australian PISA 2018 sample included a sizeable number of students from different school year levels. Analyses of these data indicate that the difference between adjacent year levels is, on average, around 31 points on the PISA financial literacy scale.

It is important to reiterate that the purpose of using *years of schooling* in the Australian report is not to quantify the progress of learning as 'recent research shows that students who have completed the same number of years of school often have vastly different learning outcomes across different countries' (Filmer et al., 2018, p.2). Rather, this metric is used as a rule of thumb to provide a contextual understanding about what the PISA scores mean in a practical sense in the Australian education system.

Proficiency levels

The financial literacy scale is divided into five levels of proficiency, with Level 5 as the highest and Level 1 as the lowest. One proficiency level in financial literacy represents 75 score points, which is equivalent to almost two-and-a-half years of schooling. PISA provides a richness to the data, interpreting scores in substantive terms by providing a description of what students can typically do at each proficiency level.[2] Further comparisons consider the proportions of low performers, high performers and students who attained the National Proficient Standard.

2 For more information about the different knowledge and skills for each reading literacy proficiency level, please refer to Chapter 2.

Low performers

Students who scored below Level 2 in financial literacy (lower than 400 points) are considered low performers in financial literacy. Low performers demonstrate basic financial literacy skills and are not yet able to apply their knowledge to real-life situations involving financial issues and decisions.

In previous PISA reports, a proficiency of Level 2 was referred to as the baseline level and defines the level of achievement on the financial literacy scale at which students demonstrate the skills that are essential for full participation in society as an independent and responsible citizen.

High performers

Students who scored at Level 5 (625 points) or above are considered high performers in financial literacy. High performers demonstrate high levels of skills and knowledge in financial literacy that enable them to solve financial problems or to make the kinds of financial decisions to plan for the future.

Students who attained the National Proficient Standard

In Australia, a proficiency of Level 3 has been identified as the National Proficient Standard because it represents 'a reasonably challenging level of performance where students need to demonstrate more than the minimal skills expected' for 15-year-old students (ACARA, 2015).

Performance – PISA 2018

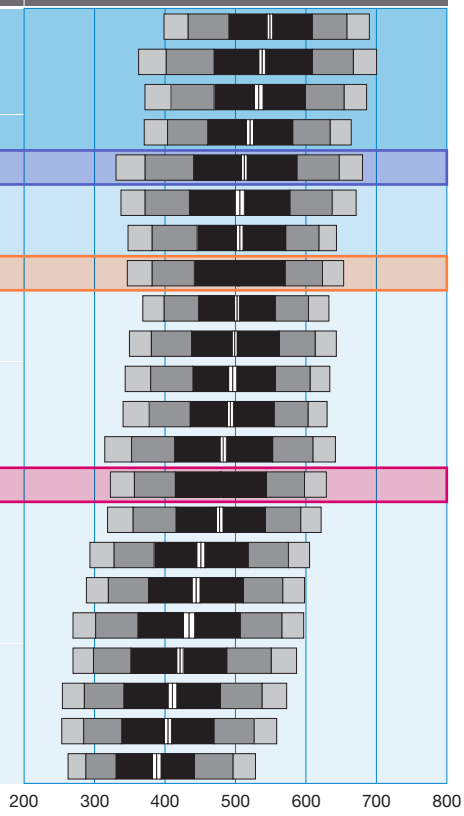
Figure 3.1 shows the mean financial literacy scores, along with the standard errors, confidence intervals around the mean, and the difference between the 5th and 95th percentiles. It also shows the graphical variation of student performance within a country. Countries are shown in order from the highest to the lowest mean financial literacy score and the three colour bands indicate whether a particular country has performed at a significantly higher or lower level or whether they performed at a level not significantly different to Australia. In the 2018 Financial Literacy assessment, Australian students achieved an average score of 511 points. This was significantly higher than the OECD average of 505 points.

Australia was one of five countries (Estonia, Finland, Canada, Poland, and Australia) to achieve a mean score that was higher than the OECD average. Three other countries (the United States, Portugal and Latvia) performed at a level not different to the OECD average. The remaining 12 countries' scores were lower than the OECD average.

Estonia achieved the highest mean score in financial literacy with 547 points, which was higher than any other participating country. Estonia's score was 42 points higher, or around one-half a proficiency level higher, than the OECD average. The average student in Estonia was placed at a high level within proficiency level 3, almost at level 4, while the average student across the OECD was placed at the lower end of proficiency level 3.

Australian students' performance in financial literacy was lower than that of Estonia, Finland, Canada and Poland, and not different to that of the United States or Portugal. The difference in financial literacy performance between the 5th and 95th percentiles across OECD countries was 308 points. Latvia had the smallest performance difference between the 5th and 95th percentiles, of 264 points, while Australia had the largest performance difference of 349 points.

	Country	Mean score	SE	Confidence interval	Difference between 5th & 95th percentiles	Distribution of scores
Significantly higher than Australia	Estonia	547	2.0	543 – 551	291	
	Finland	537	2.4	532 – 541	337	
	Canada	532	3.2	525 – 538	315	
	Poland	520	2.5	514 – 524	294	
Not significantly different from Australia	**Australia**	511	2.1	506 – 514	349	
	United States	506	3.3	499 – 512	334	
	Portugal	505	2.4	500 – 510	296	
Significantly lower than Australia	OECD average	505	0.7	503 – 505	308	
	Latvia	501	1.8	497 – 504	264	
	Lithuania	498	1.8	494 – 501	293	
	Russian Federation	495	2.9	489 – 500	290	
	Spain	492	2.2	487 – 496	290	
	Slovak Republic	481	2.3	476 – 485	327	
	Average	478	0.6	476 – 478	307	
	Italy	476	2.5	471 – 481	303	
	Chile	451	2.9	445 – 456	311	
	Serbia	444	2.9	437 – 449	310	
	Bulgaria	432	4.1	424 – 440	326	
	Brazil	420	2.3	415 – 424	317	
	Peru	411	3.2	404 – 416	319	
	Georgia	403	2.6	397 – 407	304	
	Indonesia	388	3.2	382 – 394	266	



Note: Refer to the Reader's Guide for the interpretation of this figure. This relates to all figures with simliar formatting in this chapter.

FIGURE 3.1 Mean scores and distribution of student performance on the financial literacy scale, by country

Proficiency – PISA 2018

Proficiency levels provide further meaning about students' ability in financial literacy. There are five levels of described proficiency in the 2018 financial literacy assessment, which range from Level 5 (highest proficiency) to Level 1 (lowest proficiency). Figure 3.2 shows the proportion of students at each financial literacy level from below Level 1 to Level 5 by country. Countries have been ordered by the percentage of students performing below Level 2, which is the internationally assigned baseline benchmark. Countries with the lowest proportion of students below Level 2 are placed at the top of the figure and countries with the highest proportion of students below Level 2 are placed at the bottom.

High performers

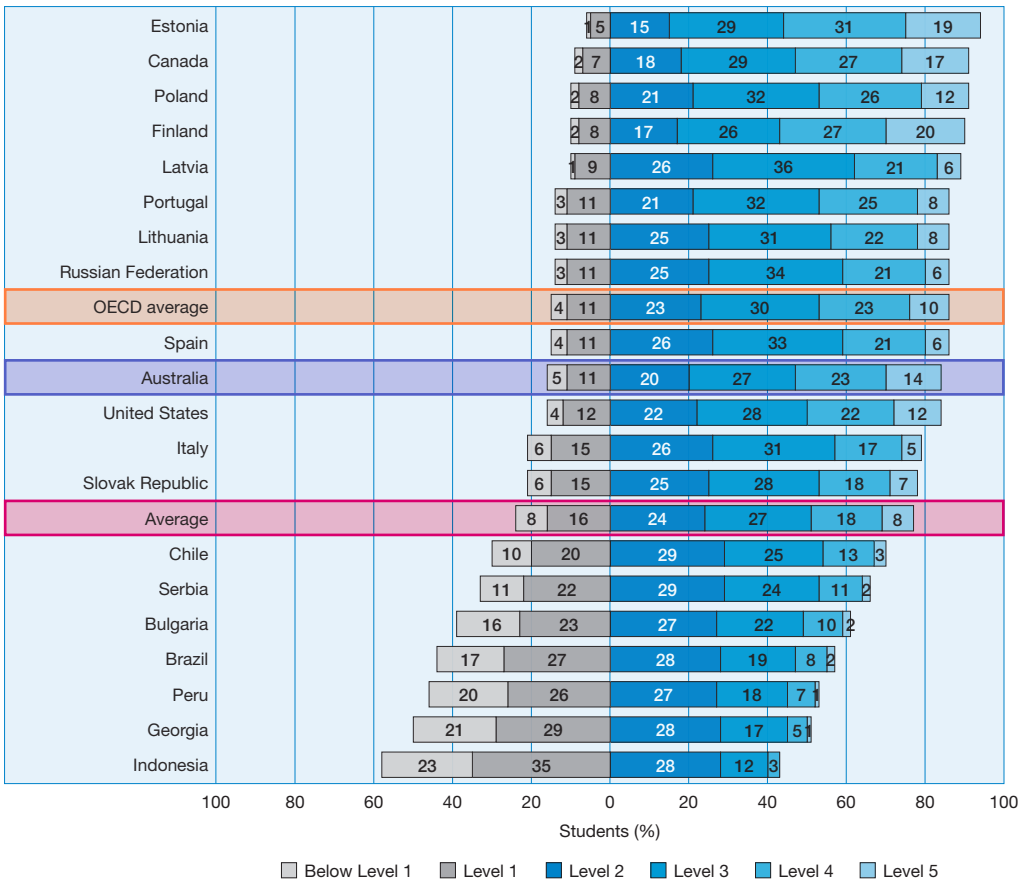
The students who demonstrated the highest level of proficiency, Level 5, achieving a score of 625 points or higher, are referred to as high performers and are proficient learners of financial literacy, successfully completing the most difficult items on the assessment. They can apply their understanding of a wide range of financial terms and concepts to contexts that may only become relevant to their lives later on, such as borrowing money from loan providers. Students at this level can analyse complex financial products and take into account features of financial documents that are significant but unstated or not immediately evident, such as transaction costs. They can work with a high level of accuracy and solve non-routine financial problems, such as calculating the bank balance in a given bank statement taking into account multiple factors, such as transfer fees. The tasks at this level are related to students' ability to look ahead and plan for the future, to solve financial problems or make the kinds of financial decisions that will be relevant to many of them in the future, regardless of country contexts. Students at Level 5 can also describe the potential outcomes of financial decisions, showing an understanding of the wider financial landscape, such as income tax. These tasks relate to higher-order uses of knowledge and skills and can thus reinforce other competencies, such as the use of basic mathematical knowledge and the ability to look ahead and plan for the future.

On average, 10% of students across the 13 OECD countries were high performers. Finland had the highest proportion of high performers (20%), and Estonia (19%) and Canada (17%) also did well. In Australia, 14% of students were high performers. Fourteen countries (Latvia, Portugal, Lithuania, the Russian Federation, Spain, Italy, the Slovak Republic, Chile, Serbia, Bulgaria, Brazil, Peru, Georgia and Indonesia) had fewer than 10% of students who were high performers, with only 1% of students in Georgia and Peru achieving this level.

Low performers

Level 2 is considered the baseline level of financial literacy proficiency. Students who do not attain this level are considered to have limited skills and are not yet able to apply their knowledge to real-life situations involving financial issues and decisions. Students who do not achieve Level 2 are considered low performers. Students proficient at Level 1 display basic financial literacy skills: they can identify common financial products and terms, and interpret information relating to basic financial concepts, such as recognising the purpose of an invoice. They can recognise the difference between needs and wants and they make simple decisions on everyday spending, such as recognising value by comparing prices per unit. Students at this level can also apply single and basic numerical operations, such as addition, subtraction or multiplication, in financial contexts that they are likely to have personally encountered.

On average, 15% of students across the 13 OECD countries were low performers. In Australia 16% of students were low performers. In the countries who achieved a higher score than Australia, the proportion of low performers ranged from 6% in Estonia to 9% in Canada, and 10% in Finland and Poland. In some of the lowest performing countries (Georgia and Indonesia) half or more of their students were low performers.



Note: If the proportion of students in a proficiency level is one per cent or less, the level still appears in the figure but the numeric label '1' does not. This convention has been used for all figures about proficiency levels in this chapter.

FIGURE 3.2 Percentages of students across the financial literacy proficiency scale, by country

Performance – over time

Seven countries (Australia, Italy, Poland, the Russian Federation, Slovak Republic, Spain, and the United States) have participated in the financial literacy assessments in PISA 2012, 2015 and 2018; two (Estonia and Latvia) in both 2012 and 2018; and five (Brazil, Canada, Chile, Lithuania and Peru) in 2015 and 2018 (Table 3.1).

Comparing PISA results in financial literacy over time

Although Australia has participated in the financial literacy assessment in three cycles of PISA, some caution must be taken in the interpretation of the findings over time due to differences in how the assessment was conducted in different years.

While the financial literacy framework remained unchanged across the three assessments, a major change that took place between the 2012 and 2015 assessments of all domains, including financial literacy, was the use of computers instead of pencils and paper to deliver the assessment. Between 2015 and 2018, there were differences in sampling design and the scheduling of the assessment. Students assessed in financial literacy in 2012 and 2018 were tested in financial literacy – and, in addition, in mathematical and reading literacy – at the same time as other students sat the core assessment. By contrast, students assessed in financial literacy in 2015 sat the financial literacy test in a separate session after having been tested in mathematical, reading and scientific literacy. In most participating countries/economies, the financial literacy testing session took place on the afternoon of the same day as the core PISA tests in a large majority of sampled schools.

This report presents changes in performance between 2012 and 2018, where the major difference in implementation was in the mode of delivery; between 2015 and 2018, where the major difference in implementation was in scheduling, and for the years 2012 – 2015, with the caveats mentioned herein.

Between 2015 and 2018:

- Australia's performance did not change.
- The performance of students across those OECD countries with comparable data improved by 20 points.
- The performance for five of the 12 countries with comparable data has improved, ranging from 24 points in Spain to 50 points in Lithuania.

Between 2012 and 2018:

- Australia's performance declined by 15 points.
- Estonia's performance improved by 18 points.
- The performance for all other countries with comparable data has remained stable.

TABLE 3.1 Mean financial literacy scores from PISA 2012 to 2018, and differences in performance between 2012 and 2018, and 2015 and 2018, by country

Country	PISA 2012		PISA 2015		PISA 2018		Mean score difference between 2012 and 2018 (PISA 2018 – PISA 2012)			Mean score difference between 2015 and 2018 (PISA 2018 – PISA 2015)		
	Mean score	SE	Mean score	SE	Mean score	SE	Score dif.		SE	Score dif.		SE
Australia	526	2.1	504	1.9	511	2.1	**-15**	▼	6.3	7		9.8
Brazil	✧	✧	393	3.8	420	2.3	✧		✧	**27**	▲	10.4
Canada	✧	✧	533	4.6	532	3.2	✧		✧	-1		10.9
Chile	✧	✧	432	3.7	451	2.9	✧		✧	19		10.5
Estonia	529	3.0	✧	✧	547	2.0	**18**	▲	6.6	✧		✧
Italy	466	2.1	483	2.8	476	2.5	10		6.4	-7		10.1
Latvia	501	3.3	✧	✧	501	1.8	1		6.7	✧		✧
Lithuania	✧	✧	449	3.1	498	1.8	✧		✧	**50**	▲	10.0
Peru	✧	✧	403	3.4	411	3.2	✧		✧	8		10.5
Poland	510	3.7	485	3.0	520	2.5	9		7.1	**34**	▲	10.2
Russian Federation	486	3.7	512	3.3	495	2.9	9		7.3	-17		10.4
Slovak Republic	470	4.9	445	4.5	481	2.3	11		7.7	**36**	▲	10.7
Spain	484	3.2	469	3.2	492	2.2	8		6.8	**24**	▲	10.1
United States	492	4.9	487	3.8	506	3.3	14		8.1	18		10.7
OECD average 2012	497	1.2	✧	✧	504	0.8	7		5.8	✧		✧
OECD average 2015	✧	✧	476	1.2	496	0.9	✧		✧	**20**	▲	9.5

Note: The symbols indicate if the change in performance is significantly higher (▲) or signifcantly lower (▼).
✧ Did not participate in this cycle or comparisons cannot be made.
Bulgaria, Finland, Georgia, Indonesia, Portugal and Serbia did not participate in PISA 2012 or 2015, and have not been included in this table.
Due to rounding, some differences may not match the totals in the text. This relates to all tables and figures in this chapter. See the Reader's Guide for more information.

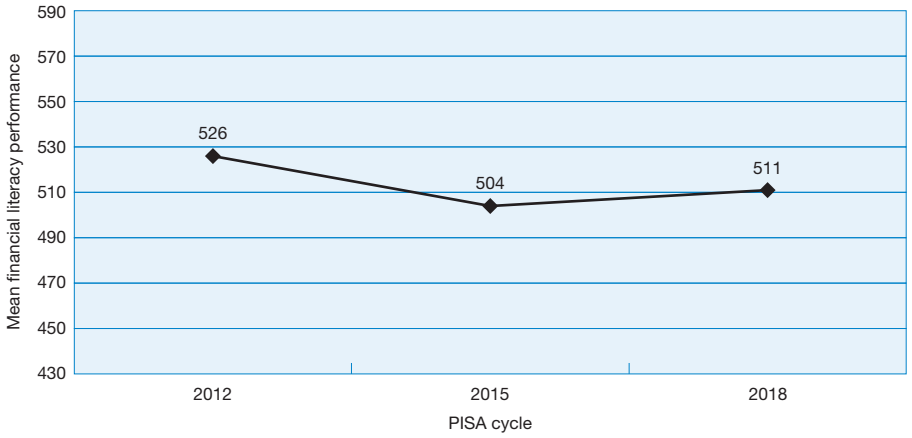
Table 3.2 shows the trends in financial literacy performance, relative to Australia. The only changes relative to Australia have been for Estonia, Poland and the United States. Estonia achieved at a similar level to Australia in 2012 but outperformed Australia in 2018. Both Poland and the United States were outperformed by Australia in 2012 and 2015, however in 2018 Poland outperformed Australia while the United States performed at a similar level to Australia. Australia has outperformed all other participating countries in each assessment.

TABLE 3.2 Relative trends in financial literacy performance, by country

Country	Position relative to Australia in other PISA cycles		
	2018	2015	2012
Estonia	▲	–	●
Canada	▲	▲	–
Poland	▲	▼	▼
Australia			
United States	●	▼	▼
Latvia	▼	–	▼
Lithuania	▼	▼	–
Russian Federation	▼	▼	▼
Spain	▼	▼	▼
Slovak Republic	▼	▼	▼
Italy	▼	▼	▼
Chile	▼	▼	–
Brazil	▼	▼	–
Peru	▼	▼	–

Note: ▲ Score signficantly higher than Australia
● Score not significantly different to Australia
▼ Score signficantly lower than Australia
– Did not participate in this cycle or comparisons cannot be made
Bulgaria, Finland, Georgia, Indonesia, Portugal and Serbia did not participate in PISA 2012 or 2015, and have not been included in this table.

Figure 3.3 shows the trend for the three cycles of financial literacy, from PISA 2012 to 2018, showing the decline in scores between 2012 and 2015, then relative stability between 2015 and 2018.



	Difference between PISA cycles			
	2015		2012	
2018	7		-15	▼
2015			-22	▼

Note: Read across the row to determine whether the performance in the row year is significantly higher (▲) or signifcantly lower (▼) than the performance in the column year.

FIGURE 3.3 Mean financial literacy scores and differences from PISA 2012 to 2018, for Australia

Figure 3.4 shows the distribution of scores over the three assessments in financial literacy. This figure shows that the spread of scores increased between PISA 2012 and 2015 (from 275 to 309 points), and then decreased between 2015 and 2018 (from 309 to 255 points). The decline in performance between 2012 and 2015 largely occurred at the lower end of the distribution, that is, with weaker students. The average scores for the 10th and 25th percentiles both declined, while there was no change at the 75th and 90th percentiles. Between 2015 and 2018 there was an increases in the average score at the 10th percentile (from 342 to 370 points), and at the 25th percentile (from 425 to 439 points), but again, no change at the higher percentiles. These data may hint that changes in mode of delivery or in scheduling effects weaker students to a greater extent than more able students.

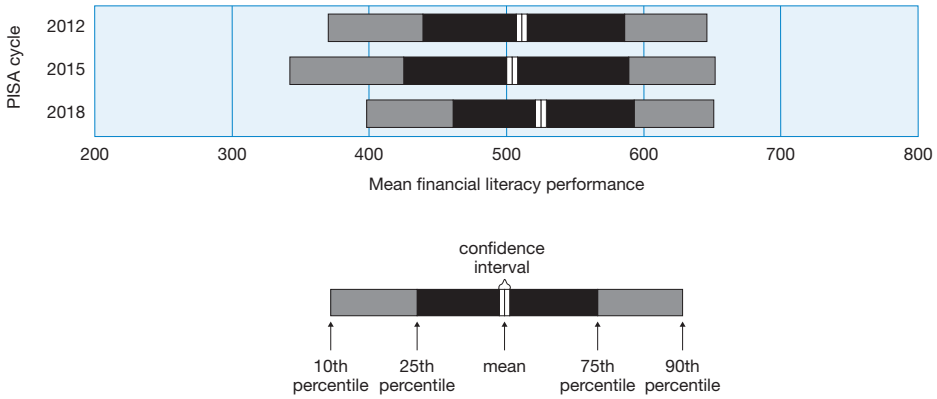


FIGURE 3.4 Distribution of student performance on the financial literacy scale from PISA 2012 to 2018, for Australia

Proficiency – over time

The findings from Figure 3.4 showing the distribution of student performance are further explicated in Figure 3.5, which shows proficiency levels for Australian students over the three assessments.

Between 2015 and 2018:

- The percentage of low performers decreased by 4 percentage points (from 20% to 16%).
- The percentage of high performers remained stable.

Between 2012 and 2018:

- The percentage of low performers increased by 6 percentage points (from 10% to 16%).
- The percentage of high performers remained stable.

In 2018, 64% of students reached the National Proficient Standard in financial literacy. This was 3 percentage points lower than in 2015, and 6 percentage points lower than in 2018.

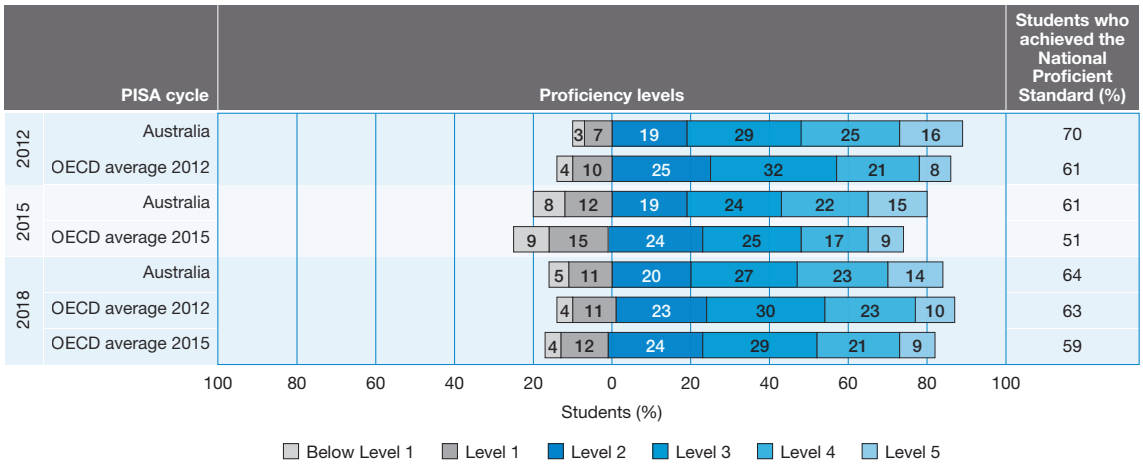


FIGURE 3.5 Percentages of students across the financial literacy proficiency scale and percentages of students who achieved the National Proficient Standard from PISA 2012 to 2018, for Australia and the OECD average

Comparing financial literacy performance with the core assessments of mathematical and reading literacy

Being financially literate also relies on being proficient in mathematical literacy and reading literacy. For example, making financial decisions involves understanding the written material, and carrying out mathematical calculations.

The relationship between financial literacy and the core assessment domains of mathematical literacy and reading literacy is a positive association. In general, students who perform well in reading literacy and/or mathematical literacy also perform well in financial literacy.

On average across the 13 OECD countries, and also for Australian students, the correlation between financial literacy and mathematical literacy was 0.87 and the correlation between financial literacy and reading literacy was 0.82, which indicates that financial literacy is strongly correlated with both these core assessments. Likewise, the correlation between mathematical literacy and reading literacy is also strong (OECD average of 0.81, Australian average of 0.80).

The correlations were generally high among participating countries. The association between financial literacy and the two core assessments were strongest in the United States (the correlation between financial literacy and mathematical literacy was 0.90 and the correlation between financial literacy and reading literacy was 0.85), while, even though still strongly associated, Italy recorded the

lowest of all the countries (the correlation between financial literacy and mathematical literacy was 0.84 and the correlation between financial literacy and reading literacy was 0.77).

The strong association between performance in financial literacy and performance in mathematical literacy and reading literacy was also observed in the patterns with which students were either high or low performers in financial literacy, mathematical literacy and reading literacy. Among the high-performing Australian students in financial literacy, 57% were also high performers in mathematical literacy, and 53% were also high performers in reading literacy, compared to 51% and 60% of high-performing students across the OECD average respectively. Only 4% of Australian students were high performers in financial literacy but not in mathematical literacy or reading literacy compared to 3% of high performers on average across the OECD countries.

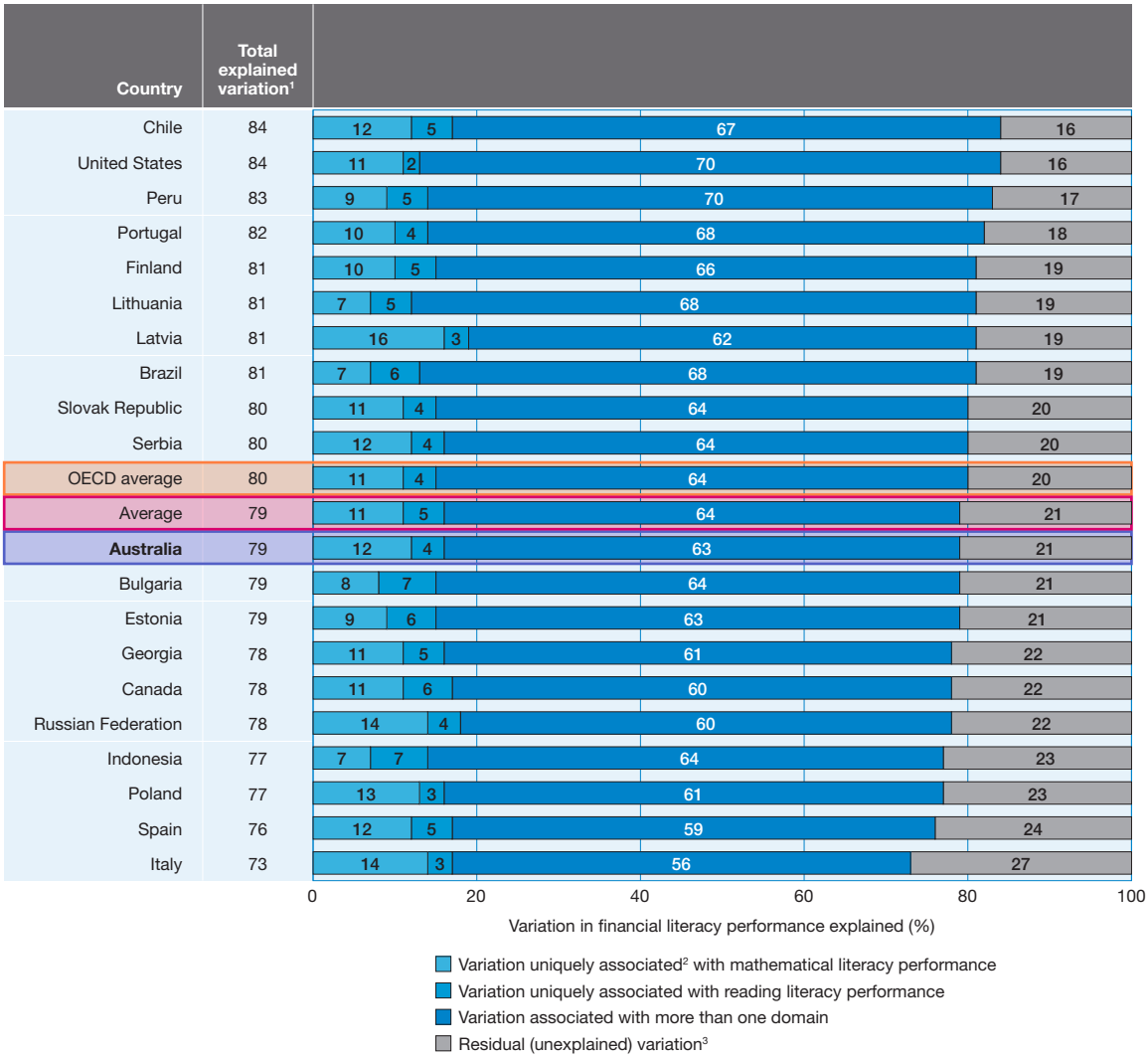
Among the low-performing Australian students in financial literacy, 72% were also low performers in mathematical literacy, and 81% were also low performers in reading literacy, compared to 77% and 82% of low-performing students across the OECD average respectively. Only 2% of Australian students were low performers in financial literacy but not in mathematical literacy or reading literacy compared to 1% of low performers on average across the OECD countries.

Another way of looking at the relationship between financial literacy and mathematical literacy and reading literacy is to examine to what extent the variation in financial literacy can be explained by performance in mathematical literacy and reading literacy.

Figure 3.6 shows the association of financial literacy skills with mathematical literacy and reading literacy among countries. Countries are shown in descending order of the percentage of variation in financial literacy performance explained by performance in mathematical literacy and reading literacy. Those countries who achieved strong correlations between financial literacy, mathematical literacy and reading literacy showed high values of explained variation, for example, in the United States, performance in the two core assessments explained around 84% of the variation in financial literacy performance. On the other hand, Italy who achieved lower correlations between financial literacy, mathematical literacy and reading literacy, showed a lower percentage of explained variation with 73%.

On average across the 13 OECD countries, 80% of the variation in student performance in financial literacy was explained by their performance in the mathematical literacy and reading literacy assessments (the explained variation), and 20% of the variation in performance in financial literacy was explained by their performance in the financial literacy assessment (the residual variation). Similar results were found in Australia, with 79% of the financial literacy score reflecting skills that were directly assessed in the two core assessments (63% of the variation was shared with mathematical literacy and reading literacy together, 12% was uniquely associated with mathematical literacy performance and 4% was uniquely associated with reading literacy performance), and 21% of the financial literacy score reflecting skills that were directly assessed in the financial literacy assessment.

The high values of explained variation (73% or over for all participating countries) show the strong associations between financial literacy, mathematical literacy and reading literacy, while the residual variation suggests that there is a wide spread of student performance in financial literacy amongst students who scored at the same level in the mathematical literacy and reading literacy assessments. It also suggests the possibility of developing financial literacy skills amongst low performers in mathematical literacy and reading literacy.



Notes: [1] The total explained variance is the R-squared coefficient from a regression of financial literacy performance on mathematical literacy and reading literacy performance.
[2] The variation uniquely associated with mathematical literacy is measured as the difference between the R-squared of the full regression (a regression of financial literacy on mathematical literacy and reading literacy performance) and the R-squared of a regression of financial literacy on all variables except mathematical literacy (in this case, reading literacy only). The variation uniquely associated with reading literacy is calculated in an analogous manner.
[3] The residual variation is computed as 100 - total explained variation.

FIGURE 3.6 Variation in financial literacy performance associated with mathematical literacy and reading literacy performance

As mentioned above, the residual variation reflects the various aspects that were uniquely measured in the financial literacy assessment, for example, the relationship between risk and reward or the security aspects associated with certain transactions.

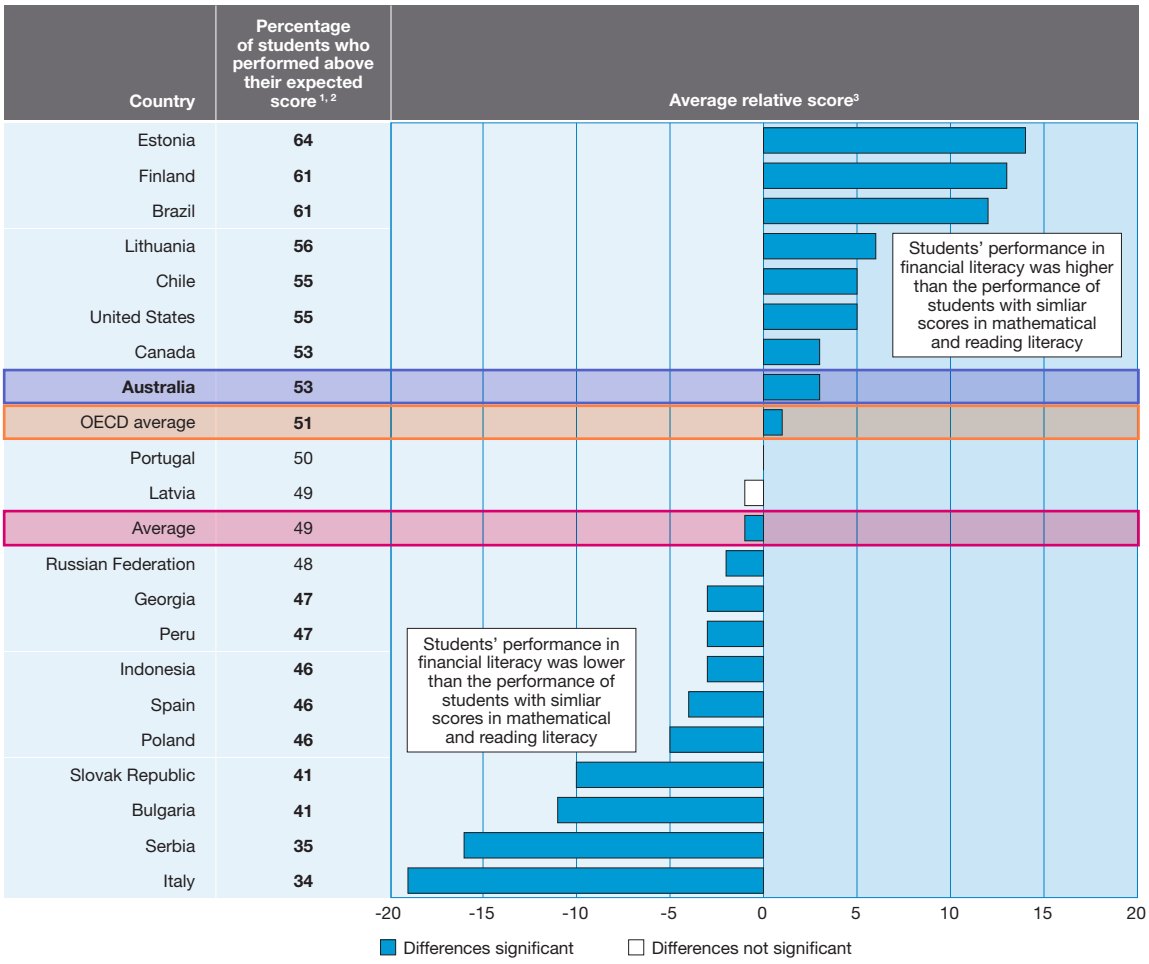
Figure 3.7 shows the average relative performance, the extent to which each student's actual performance in the financial literacy assessment would have been expected by their performance in the two core assessments.[3] Countries are shown in descending order of the score-point difference between actual and expected performance.

In Estonia, Finland, Brazil, Lithuania, Chile, the United States, Canada and Australia, students performed higher in financial literacy than students in other countries with similar performance in mathematical literacy and reading literacy. These students were relatively stronger in competences that were uniquely related to financial literacy. The difference between students' scores in financial literacy and their expected performance, given their performance in mathematical literacy and reading

3 A regression of student financial literacy performance over student mathematical and reading literacy performance was performed; the relative performance was the residual of the financial literacy performance.

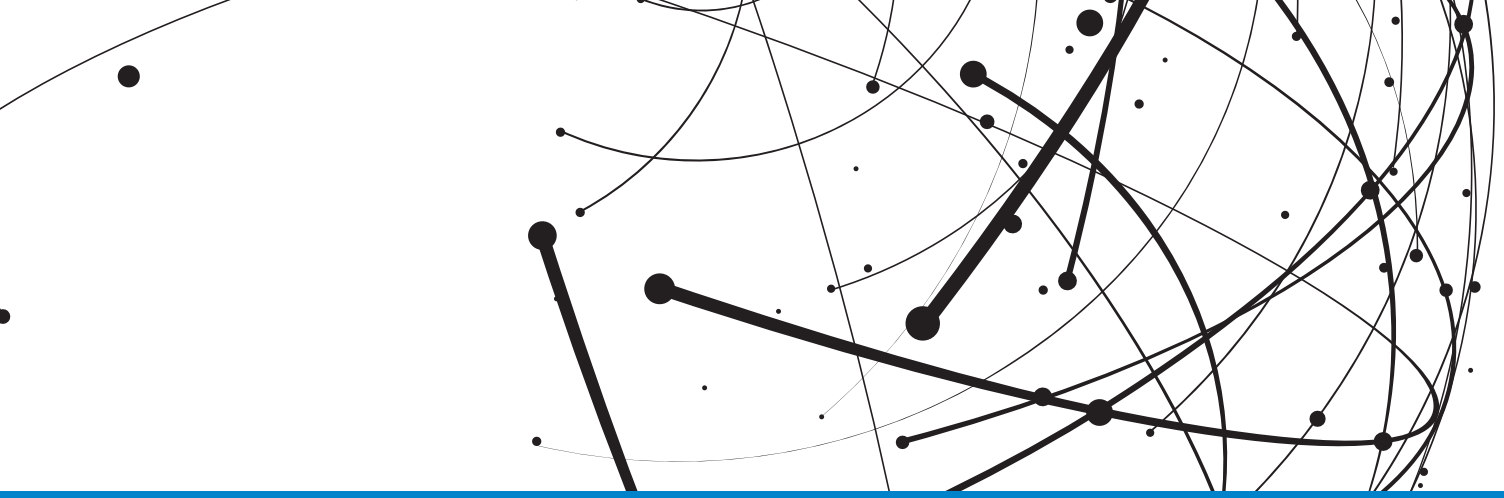
literacy assessments ranged from 3 points in Australia to 14 points in Estonia. In Australia, 53% of students performed above their expected financial literacy score, given their scores in mathematical literacy and reading literacy, while in the other countries, there were between 53% of students in Canada and 64% of students in Estonia who performed above their expected financial literacy score, given their scores in mathematical literacy and reading literacy,

In contrast, Italy, Serbia, Bulgaria, the Slovak Republic, Poland, Spain, Indonesia, Peru, Georgia and the Russian Federation performed lower in in financial literacy than students in other countries with similar performance in mathematical literacy and reading literacy. These students were relatively weaker in competences that were uniquely related to financial literacy. The difference between students' scores in financial literacy and their expected performance, given their performance in mathematical literacy and reading literacy assessments ranged from 2 points in the Russia Federation to 19 points in Italy. There were between 34% of students in Italy and 47% of students in Georgia who performed below their expected financial literacy score, given their scores in mathematical literacy and reading literacy.



Notes: [1] Students who scored higher than expected are those with positive relative scores.
[2] The percentage of students who scored higher than expected is bolded when it differs significantly from 50%.
[3] Relative scores are the residuals obtained from a pooled linear regression, across all participating countries, of performance in financial literacy over performance in mathematical and reading literacy.
Values that are statistically significant are indicated in bold.

FIGURE 3.7 Relative performance in financial literacy



CHAPTER 4

Australia's results by sex in an international and national context

This chapter summarises the financial literacy performance for female and male students in PISA 2018. The performance of Australian PISA students is compared to the performance of students from other participating countries. A discussion about the changes in financial literacy performance between PISA 2012 and 2018 is also provided.[1]

Key findings

- In Australia, there was no difference between the financial literacy performance of male and female students.
- Australian female students achieved an average score of 510 points, which was not different to the OECD average for female students of 507 points.
- Australian male students achieved an average score of 512 points, which was higher than the OECD average for male students of 509 score points.
- Between 2015 and 2018, there were no changes in the financial literacy performance of either Australian male or female students, while across those OECD countries with comparable data, the performance of female and male students improved by 23 points and 34 points respectively.
- Between 2012 and 2018, the average score for Australian female students declined by 18 points, while the difference in scores for Australian male students was not significant. Across those OECD countries with comparable data, the performance for male students improved by 12 points, while the difference in scores for female students was not significant.
- In Australia, the proportions of low-performing female students was similar to that of low-performing male students (15% of female students and 16% of male students). The proportions of high-performing female and male students was also similar (with 13% of female students and 16% of male students).

1 In this report, the focus is on differences that are statistically significant (in other words, are unlikely to have occurred by chance). Where the commentary states that there was a difference between sets of numbers, whether these are scores, percentages or percentage point differences, it means that the difference satisfied this condition. Where the commentary states that there was no difference, or where no comment is made regarding a possible comparison, it indicates that the difference was not statistically significant.

Performance across countries – PISA 2018

On average across the participating OECD countries, male students scored two points higher than female students (Figure 4.1). In Italy, Peru and Poland, male students scored higher than female students (by 15, 11 and 7 points respectively), while in Bulgaria, Indonesia and Georgia, female students outperformed male students (by 19 points, 18 points and 12 points respectively). In Australia, and in other participating countries, the difference between male and female students was not different.

Country	Females		Males		Difference in mean score
	Mean score	SE	Mean score	SE	
Bulgaria	442	4.5	423	5.1	
Indonesia	397	3.4	379	3.7	
Georgia	409	2.7	397	3.3	
Serbia	447	3.5	441	3.5	
Finland	540	3.0	534	3.2	
Lithuania	500	2.5	496	2.4	
Latvia	503	2.4	499	2.5	
Brazil	421	2.7	419	2.6	
Spain	493	2.3	492	2.7	
Average	478	0.7	477	0.7	
Slovak Republic	481	3.1	482	3.0	
Portugal	505	3.0	506	2.8	
Australia	510	2.8	512	2.5	
OECD average	507	0.8	509	0.8	
Estonia	546	2.6	549	2.5	
Chile	448	3.1	453	4.0	
Russian Federation	493	3.1	498	3.4	
United States	503	3.5	509	4.1	
Canada	529	3.4	535	4.0	
Poland	516	2.8	523	3.3	
Peru	405	3.6	416	3.7	
Italy	469	2.7	484	3.0	

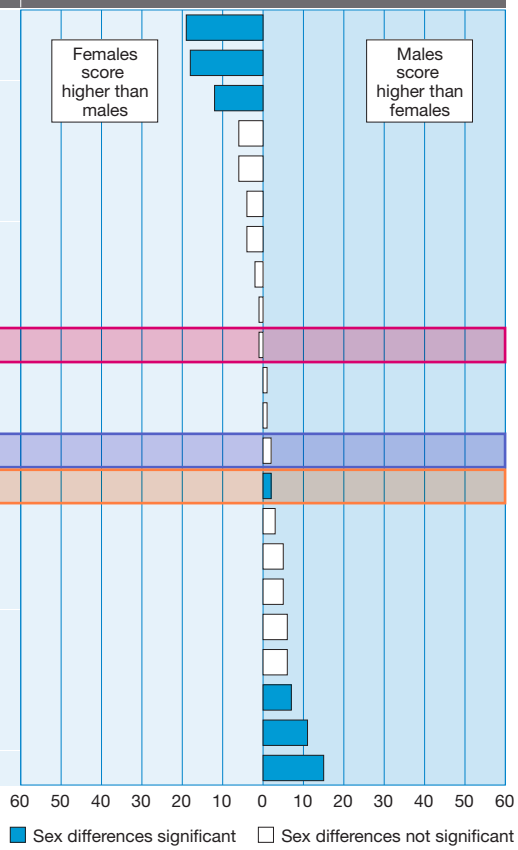


FIGURE 4.1 Mean scores and differences in student performance on the financial literacy scale, by country and sex

Proficiency in Australia – PISA 2018

Figure 4.2 shows the proportions of female and male students for Australia and the OECD average at each level of the financial literacy proficiency scale. The proportions of male and female students in Australia who were low performers were about the same, 15% of female students and 16% of male students. As would be expected, given that there was no sex difference in the average scores for Australia, the proportions of male and female students at the higher levels of achievement were also about the same: 13% of female students and 16% of male students were high performers.

Across the OECD, on average, there were more high performing male students than female students (13% compared to 10%), but also more low performing male students than female students (15% compared to 13%).

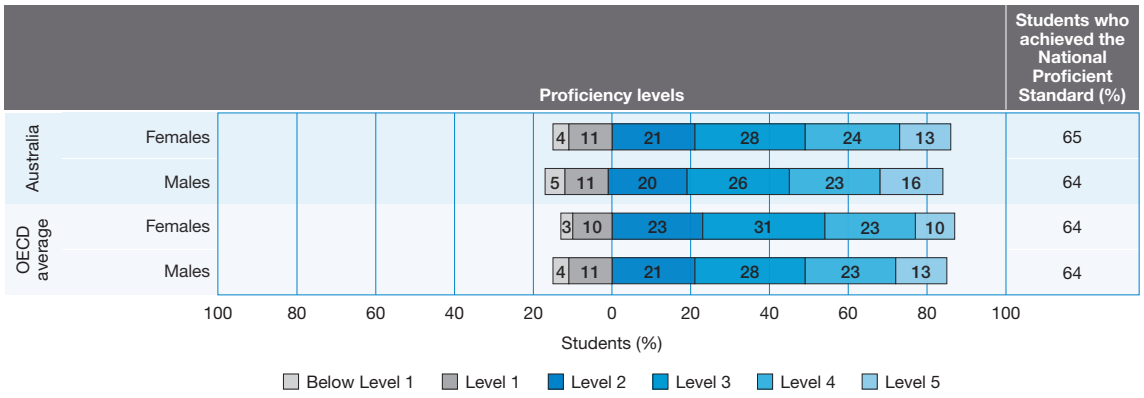


FIGURE 4.2 Percentages of students across the financial literacy proficiency scale and percentages of students who achieved the National Proficient Standard by sex, for Australia and the OECD average

Performance across countries – over time

Table 4.1 provides the scores for male and female students participating in the 2018 financial literacy assessment, for all years in which the country had participated.

Between 2015 and 2018:

- There were no changes in the performance of either Australian male or female students.
- Over the OECD, on average, the performance for female and male students improved by 23 points and 34 points respectively.

Between 2012 and 2018:

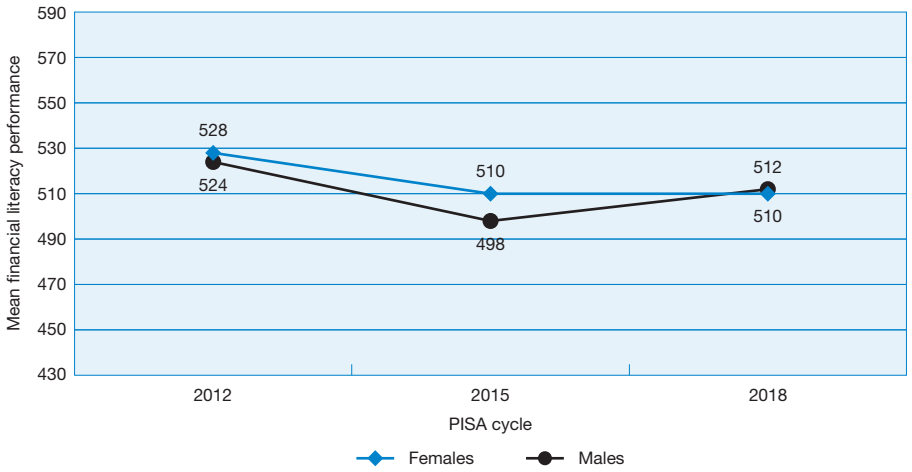
- The average score for female students in Australia declined by 18 points, while the difference in scores for male students was not different.
- Over the OECD, on average, the performance for male students improved by 12 points, while the difference in scores for female students was not significant.

TABLE 4.1 Mean financial literacy scores for PISA 2012, 2015 and PISA 2018, and differences in performance between PISA 2012 and 2015, and 2015 and 2018, by country and sex

	PISA 2012				PISA 2015				PISA 2018				Difference in mean score between 2015 and 2018 (PISA 2018 – PISA 2015)					Difference in mean score between 2012 and 2018 (PISA 2018 – PISA 2012)				
	Females		Males		Females		Males		Females		Males		Females			Males			Females			Males	
Country	Mean score	SE	Mean score	SE	Mean score	SE	Mean score	SE	Mean score	SE	Mean score	SE	Score dif.		SE	Score dif.		SE	Score dif.		SE	Score dif.	SE
Australia	**528**	**2.4**	**524**	**3.3**	**510**	**2.1**	**498**	**2.7**	**510**	**2.8**	**512**	**2.5**	**0**		**10.0**	**14**		**10.1**	**-18**	▼	**6.7**	**-13**	**6.9**
Brazil	✧	✧	✧	✧	397	4.3	389	4.5	421	2.7	419	2.6	**24**	▲	10.7	**30**	▲	10.7	✧		✧	✧	✧
Canada	✧	✧	✧	✧	536	5.2	531	4.8	529	3.4	535	4.0	-7		11.2	5		11.3	✧		✧	✧	✧
Chile	✧	✧	✧	✧	430	4.2	434	4.5	448	3.1	453	4.0	18		10.7	19		11.1	✧		✧	✧	✧
Estonia	531	4.1	527	4.5	✧	✧	✧	✧	546	2.6	549	2.5	✧		✧	✧		✧	**15**	▲	7.4	**21**	▲ 7.6
Italy	462	2.2	470	3.1	478	4.0	489	3.9	469	2.7	484	3.0	-9		10.5	-5		10.6	7		6.5	14	7.0
Latvia	506	4.3	495	4.8	✧	✧	✧	✧	503	2.4	499	2.5	✧		✧	✧		✧	-3		7.4	4	7.8
Lithuania	✧	✧	✧	✧	462	3.2	435	3.7	500	2.5	496	2.4	**38**	▲	10.2	**61**	▲	10.3	✧		✧	✧	✧
Peru	✧	✧	✧	✧	405	4.0	400	4.1	405	3.6	416	3.7	0		10.8	15		10.9	✧		✧	✧	✧
Poland	508	4.2	512	4.7	493	3.2	478	3.6	516	2.8	523	3.3	**23**	▲	10.3	**45**	▲	10.6	8		7.5	11	8.0
Russian Federation	486	4.2	487	4.5	514	3.3	510	4.2	493	3.1	498	3.4	**-21**	▼	10.4	-13		10.8	7		7.6	11	7.9
Slovak Republic	472	6.2	469	5.8	458	5.6	433	4.9	481	3.1	482	3.0	**23**	▲	11.3	**48**	▲	11.0	9		8.8	13	8.6
Spain	481	4.3	487	4.3	474	4.1	464	3.7	493	2.3	492	2.7	19		10.5	**28**	▲	10.4	12		7.4	5	7.5
United States	491	6.0	492	6.3	487	4.1	488	4.4	503	3.5	509	4.1	16		10.8	20		11.1	11		8.9	17	9.3
OECD average	497	1.6	497	1.7	485	1.3	477	1.4	507	0.8	509	0.8	**23**	▲	9.5	**34**	▲	9.5	9.8		5.8	**12**	▲ 5.9

Note: The symbols indicate if the change in performance is significantly higher (▲) or signifcantly lower (▼).
✧ Did not participate in this cycle or comparisons cannot be made.
Bulgaria, Finland, Georgia, Indonesia, Portugal and Serbia did not participate in PISA 2012 or 2015, and have not been included in this table.
Due to rounding, some differences may not match the totals in the text. This relates to all tables and figures in this chapter. See the Reader's Guide for more information.

Figure 4.3 shows the changes in scores by sex over the three cycles of financial literacy for Australian students.



Females				
	Difference between PISA cycles			
	2015		2012	
2018	0		-18	▼
2015			-18	▼

Males				
	Difference between PISA cycles			
	2015		2012	
2018	14		-13	
2015			-27	▼

Note: Read across the row to determine whether the performance in the row year is significantly higher (▲) or signifcantly lower (▼) than the performance in the column year.

FIGURE 4.3 Mean financial literacy scores and differences from PISA 2012 to 2018, for Australia by sex

Proficiency in Australia – over time

Figure 4.4 shows the proportions of Australian high performers and low performers, by sex, over the three cycles. For both female and male students there were very few changes in the proportion of high performers.

Between 2015 and 2018:

- The proportion of low-performing male students decreased by 6 percentage points and the proportion of high-performing female students decreased by 2 percentage points.

Between 2012 and 2018:

- The proportion of low-performing female students increased by 7 percentage points and the proportion of low-performing male students decreased by 5 percentage points, while the proportions of high-performing female and male students were not different between years.

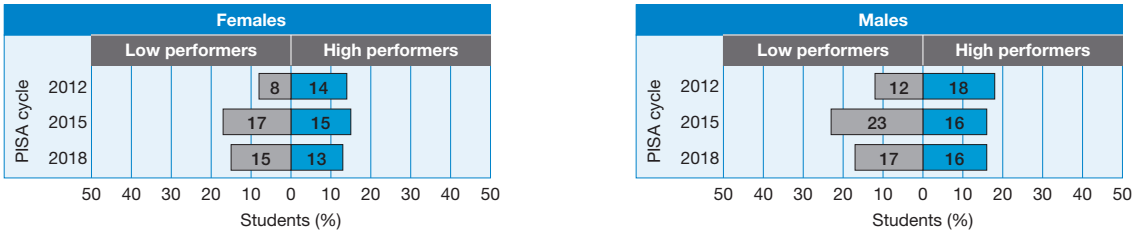
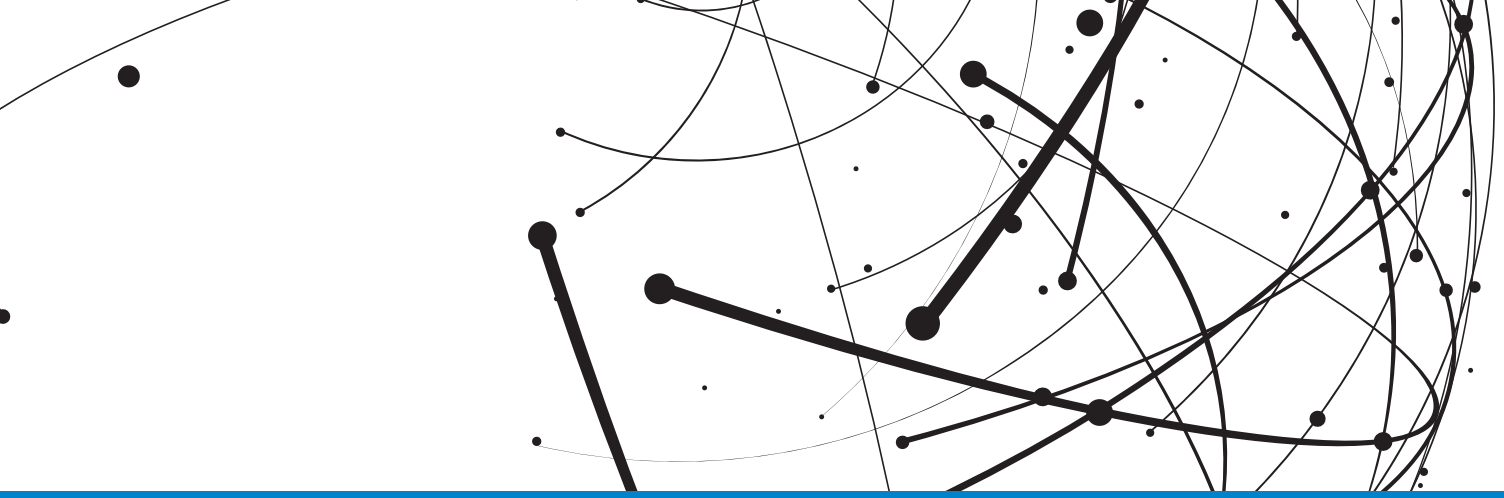


FIGURE 4.4 Percentages of low and high performers on the financial literacy proficiency scale from PISA 2012 to 2018, for Australia by sex

As would be expected given previous findings in this chapter, the proportion of both female and male students achieving the national proficient standard declined between 2012 and 2015 and then increased slightly between 2015 and 2018 (Table 4.2).

TABLE 4.2 Percentages of students who achieved the National Proficient Standard on the financial literacy proficiency scale from PISA 2012 to 2018, for Australia by sex

	PISA 2012		PISA 2015		PISA 2018	
Sex	%	SE	%	SE	%	SE
Females	72	1.4	64	0.9	65	1.2
Males	70	1.8	59	1.0	64	1.0



Australia's results for different demographic groups in a national context

CHAPTER 5

This chapter provides results of Australian students' financial literacy performance for different demographic groups of interest: geographic location, socioeconomic background, Indigenous background, immigrant and language background.[1]

Key findings

- Students attending metropolitan schools scored higher than students from provincial schools or remote schools. Students attending provincial schools scored higher than students in remote schools, however, both scored below than the OECD average. The average score for students in remote schools was the same as that of Brazil, the fourth lowest performing country in the financial literacy assessment.
- Between 2015 and 2018, the performance of students in metropolitan, provincial or remote schools has remained stable.
- The proportion of students who achieved the National Proficient Standard was 66% for students attending metropolitan schools, 59% for those attending provincial schools and 39% for those attending remote schools.
- The difference between socioeconomically advantaged and disadvantaged students was 89 points, almost three years of schooling.
- Between 2015 and 2018, the performance of students across the socioeconomic groups has remained stable.
- Eighty per cent of students in the highest quartile of socioeconomic background achieved the National Proficient Standard, compared to 47% of those in the lowest quartile.
- The mean financial literacy score for Indigenous students was 430 points, lower than the OECD average and lower than that of non-Indigenous Australian students.

1 In this report, the focus is on differences that are statistically significant (in other words, are unlikely to have occurred by chance). Where the commentary states that there was a difference between sets of numbers, whether these are scores, percentages or percentage point differences, it means that the difference satisfied this condition. Where the commentary states that there was no difference, or where no comment is made regarding a possible comparison, it indicates that the difference was not statistically significant.

- The performance gap between Indigenous and non-Indigenous students was 86 points. This represents a difference of about two and three-quarter years of schooling.
- Thirty-nine per cent of the Indigenous students and 15% of non-Indigenous students were low performers. Between 2012 and 2018, the proportion of students who achieved the National Proficient Standard has decreased for both groups of students – by 19 percentage points for Indigenous students and by six percentage points for non-Indigenous students.
- First-generation students scored higher than either Australian-born or foreign-born students.
- Scores for Australian-born and first-generation students declined from the PISA 2012 assessment – by 14 points for Australian-born students and by 19 points for first-generation students.
- The proportion of students who achieved the National Proficient Standard has decreased from the PISA 2012 assessment for both Australian-born and first-generation students – by 6 percentage points for the former and eight percentage points for the latter.
- Between 2015 and 2018, the performance of students, regardless of immigrant background did not change.
- Students who spoke English at home scored 23 points higher, on average, than those who spoke a language other than English at home.
- The percentage of low performers amongst the "speak a language other than English at home" group was substantially higher than for the "English spoken at home" group (24% compared to 15%), while the proportion of high performers is the same for both groups (15%).
- Sixty-six per cent of students who speak English at home achieved the National Proficient Standard, compared to 56 per cent of those who spoke a language other than English at home. Both of these have declined since the 2012 assessment – by six percentage points for those who speak English at home and by 10 percentage points for those who speak a language other than English at home.
- Between 2015 and 2018, the mean financial literacy performance did not change for students from either of the two language background groups.

Geographic location – PISA 2018

Using the MCEETYA Schools Geographic Location Classification (Jones, 2004), schools were categorised by their geographic location using three broad categories – metropolitan, provincial or remote.[2]

Performance

Opportunities to acquire financial skills and performance in financial literacy might be related to where students live, which can be determined generally by the school location: whether students attend school in a metropolitan, provincial or remote area.

Figure 5.1 shows the average scores and the distribution of scores for students in each geographic location. Students attending schools in metropolitan areas scored an average of 517 points, higher than the average for the OECD countries, 21 points higher than students in provincial schools and 78 points higher than students in remote schools. Students in provincial schools scored 57 points higher than students in remote schools, however, both scored below than the OECD average. The average score for students attending remote schools was very low, not different to the average score for Brazil, the fourth lowest performing country in the financial literacy assessment.

2 For more information about the MCEETYA Schools Geographic Location Classification, please refer to the Reader's Guide.

The distribution of scores in remote areas is much wider than in either provincial or metropolitan areas, with 385 points separating students at the 5th and those in the 95th percentile in remote areas compared to 348 points in provincial schools and 347 points in metropolitan schools.

Geographic location	Mean score	SE	Confidence interval	Difference between 5th & 95th percentiles	Distribution of scores
Metropolitan	517	2.4	512 – 521	347	
Provincial	496	3.6	488 – 502	348	
Remote	439	10.5	418 – 459	385	

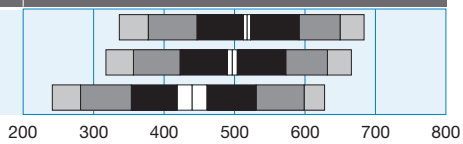


FIGURE 5.1 Mean scores and distribution of student performance on the financial literacy scale, by geographic location

Proficiency

Around 15% of students in metropolitan schools achieved the highest proficiency level – the high performers, compared to 11% of those in provincial schools and 5% of those attending remote schools (Figure 5.2).

At the other end of the proficiency scale, 14% of students attending metropolitan schools compared to 19% of those attending provincial schools and 39% of those in remote schools did not achieve at proficiency level 2.

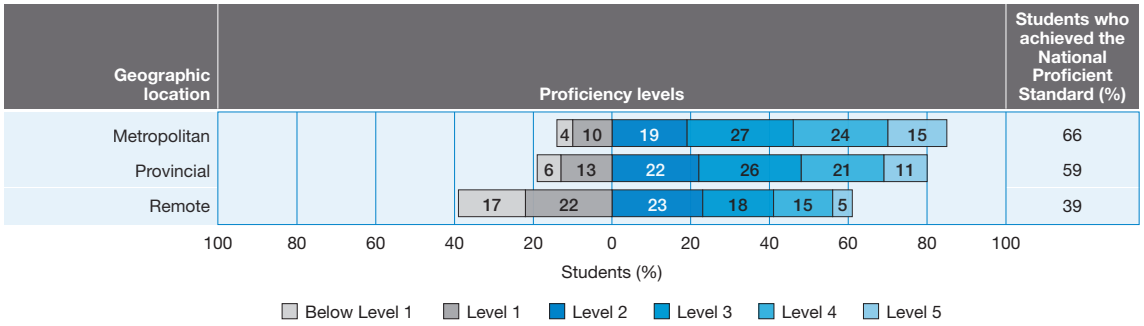


FIGURE 5.2 Percentages of students across the financial literacy proficiency scale and percentages of students who achieved the National Proficient Standard, by geographic location

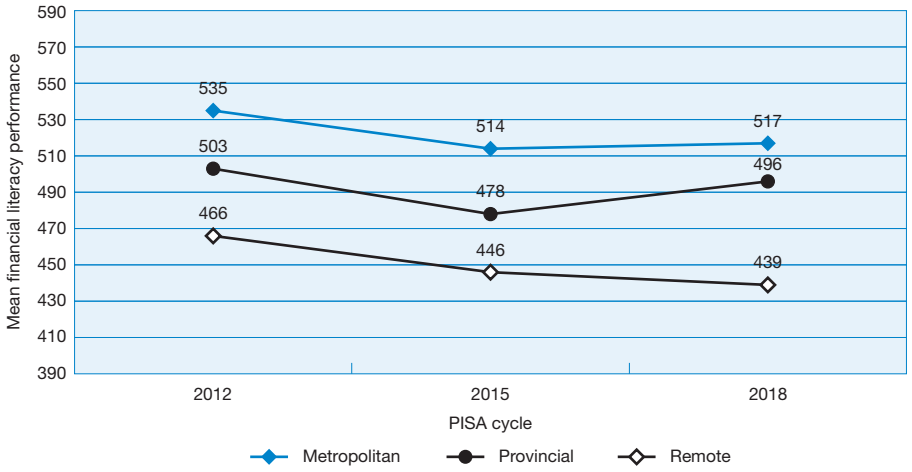
Geographic location – over time

Performance

Figure 5.3 provides a graphical representation of scores in financial literacy for students attending schools in each geographical grouping in each assessment.

Between 2015 and 2018, there was no change in the level of performance of students in metropolitan, provincial or remote schools.

Between 2012 and 2018 the only difference seen was for students in metropolitan schools, where scores were lower in 2018 by 18 points.



Metropolitan				
	Difference between PISA cycles			
	2015		2012	
2018	3		-18	▼
2015			-21	▼

Provincial				
	Difference between PISA cycles			
	2015		2012	
2018	18		-7	
2015			-25	▼

Remote				
	Difference between PISA cycles			
	2015		2012	
2018	-7		-27	
2015			-20	

Note: Read across the row to determine whether the performance in the row year is significantly higher (▲) or signifcantly lower (▼) than the performance in the column year.

FIGURE 5.3 Mean financial literacy scores and differences from PISA 2012 to 2018, by geographic location

Proficiency

Figure 5.4 shows the proportions of low and high performers on the financial literacy proficiency scale for PISA 2012 to 2018 by geographic location.

Between 2015 and 2018 in metropolitan schools, there was a 3 percentage point decrease in the proportion of low performers and a 2 percentage point decrease in high performers. In the same period in provincial schools, there was also a 7 percentage point decrease in the proportion of low performers.

Between 2012 and 2018 in metropolitan schools, there was a 5 percentage point increase in the proportion of low performers and a 3 percentage point decrease in high performers. In the same period in provincial schools, there was also a 5 percentage point increase in the proportion of low performers.

FIGURE 5.4 Percentages of low and high performers on the financial literacy proficiency scale from PISA 2012 to 2018, by geographic location

Table 5.1 shows the proportions of students who achieved the National Proficient Standard in financial literacy from PISA 2012 to 2018 by geographic location.

Between 2015 and 2018, the percentage of students who achieved the National Proficient Standard in provincial schools increased by 6 percentage points, from 53% to 59%

Between 2012 and 2018, the percentage of students who achieved the National Proficient Standard in metropolitan schools decreased by 8 percentage points, from 74% to 66%.

TABLE 5.1 Percentages of students who achieved the National Proficient Standard on the financial literacy proficiency scale from PISA 2012 to 2018, by geographic location

	PISA 2012		PISA 2015		PISA 2018	
Geographic location	%	SE	%	SE	%	SE
Metropolitan	74	1.1	65	0.9	66	1.0
Provincial	64	2.9	53	1.4	59	1.5
Remote	55	9.1	43	4.8	39	4.5

Socioeconomic background – PISA 2018

Performance

Socioeconomic background is measured by PISA's ESCS index,[3] which is based on a number of questions about a student's family and home background. The mean scores for financial literacy performance at each socioeconomic quartile (ESCS) are shown in Figure 5.5 and illustrate that, on average, students in the highest quartile of socioeconomic background scored an average of 556 points, 89 points higher than those in the lowest quartile. This is the equivalent of almost three years of schooling.

The difference between each quartile of socioeconomic background is significant, and, in most cases, represents about a year of schooling (with the exception of the difference between the second and third quartiles, where the difference is about three-quarters of a year).

3 For more information about socioeconomic background and the ESCS index, please refer to the Reader's Guide.

Socioeconomic background	Mean score	SE	Confidence interval	Difference between 5th & 95th percentiles	Distribution of scores
Lowest quartile	467	3.1	460 – 473	339	
Second quartile	501	3.0	495 – 506	335	
Third quartile	525	3.0	519 – 531	335	
Highest quartile	556	3.1	550 – 562	330	

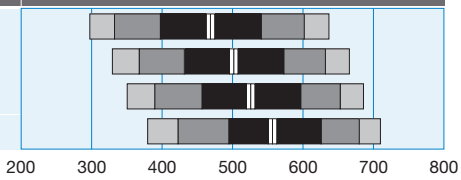


FIGURE 5.5 Mean scores and distribution of student performance on the financial literacy scale, by socioeconomic background

Proficiency

One-quarter of the students in the highest socioeconomic quartile in Australia achieved proficiency Level 5, categorising them as high performers, with 80% who achieved the National Proficient Standard (Figure 5.6). Seven per cent of students from a high socioeconomic background failed to achieve the base level of proficiency level 2.

At the other end of the proficiency scale, however, just 6% of students in the lowest socioeconomic quartile achieved this proficiency level, which is below the overall average of all countries participating in financial literacy. Under one-half (47%) achieved the National Proficient Standard, and more than one-quarter (26%) failed to achieve the base level of proficiency Level 2.

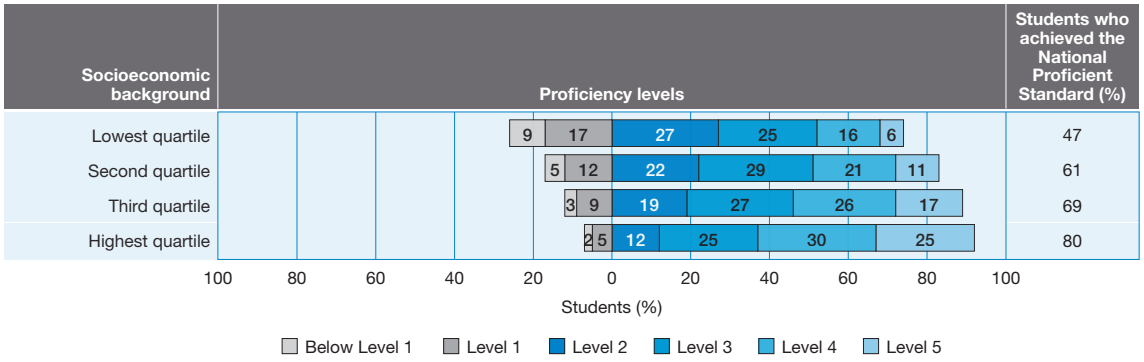


FIGURE 5.6 Percentages of students across the financial literacy proficiency scale and percentages of students who achieved the National Proficient Standard, by socioeconomic background

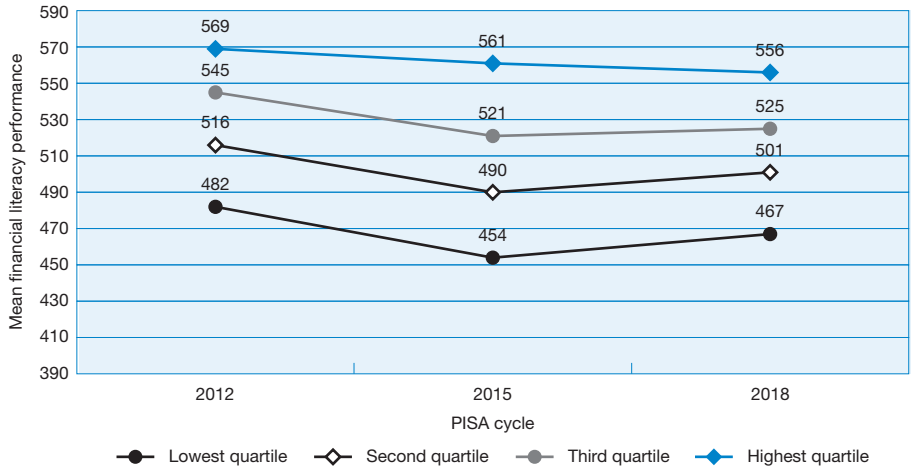
Socioeconomic background – over time

Performance

There has been no change in the average score of students in the highest quartile of socioeconomic background from either the 2012 or 2015 assessments (Figure 5.7).

Between 2015 and 2018, there have been no changes in the scores across the socioeconomic groups.

Between 2012 and 2018 there have been declines in the scores of all but the highest socioeconomic group – the lowest quartile by 15 points, second quartile by 16 points and third quartile by 20 points.



Lowest quartile				
	Difference between PISA cycles			
	2015		2012	
2018	13		-15	▼
2015			-28	▼

Second quartile				
	Difference between PISA cycles			
	2015		2012	
2018	11		-16	▼
2015			-27	▼

Third quartile				
	Difference between PISA cycles			
	2015		2012	
2018	4		-20	▼
2015			-24	▼

Highest quartile				
	Difference between PISA cycles			
	2015		2012	
2018	-5		-13	
2015			-8	

Note: Read across the row to determine whether the performance in the row year is significantly higher (▲) or signifcantly lower (▼) than the performance in the column year.

FIGURE 5.7 Mean financial literacy scores and differences from PISA 2012 to 2018, by socioeconomic background

Proficiency

Figure 5.8 shows the proportions of low and high performers on the financial literacy proficiency scale by socioeconomic background.

Between 2015 and 2018, the proportion of low-performing students in the third and highest quartiles decreased by 2 percentage points and 1 percentage points respectively.

Between 2012 and 2018, the proportion of low-performing students increased in each socioeconomic group. There was an increase of: 5 percentage points in the lowest quartile, 7 percentage points in each of the second and third quartiles, and 3 percentage points in the highest quartile.

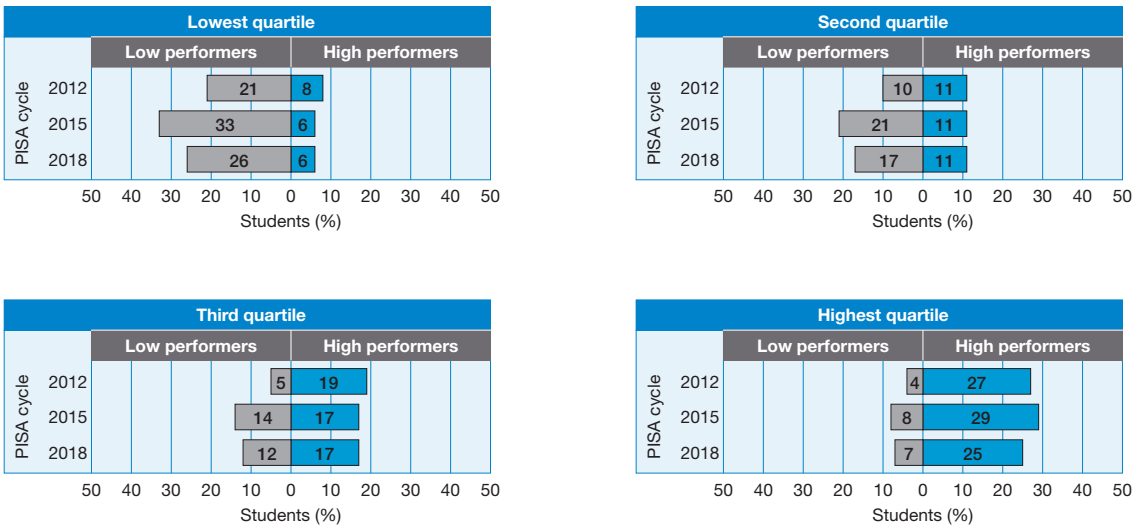


FIGURE 5.8 Percentages of low and high performers on the financial literacy proficiency scale from PISA 2012 to 2018, by socioeconomic background

Between 2015 and 2018, the proportion of students who achieved the National Proficient Standard in the second quartile increased by 4 percentage points and the highest quartile decreased by 5 percentage points (Table 5.2).

Between 2012 and 2018, the proportion of students who achieved the National Proficient Standard has decreased for all quartiles other than the lowest. The difference was 5 percentage points for students in the highest socioeconomic quartile, 8 percentage points for those in the third highest and 9 percentage points for those in the second quartile.

TABLE 5.2 Percentages of students who achieved the National Proficient Standard on the financial literacy proficiency scale from PISA 2012 to 2018, by socioeconomic background

Socioeconomic background	PISA 2012		PISA 2015		PISA 2018	
	%	SE	%	SE	%	SE
Lowest quartile	52	2.4	43	1.2	47	1.5
Second quartile	70	1.9	57	1.1	61	1.3
Third quartile	77	2.2	69	1.1	69	1.5
Highest quartile	85	1.5	85	1.5	80	1.2

Indigenous background – PISA 2018

Performance

The average score for Indigenous students in the 2018 financial literacy assessment was 430 points (Figure 5.9).[4] This was 86 points lower than the average score for non-Indigenous students, representing a difference of two and three-quarter years of schooling, and 75 points lower than the OECD average.

4 This mean score is unadjusted and does not take into account other factors, such as socioeconomic background and geographic location.

Indigenous background	Mean score	SE	Confidence interval	Difference between 5th & 95th percentiles	Distribution of scores
Indigenous	430	6.7	416 – 442	347	
Non-Indigenous	516	2.1	512 – 520	348	

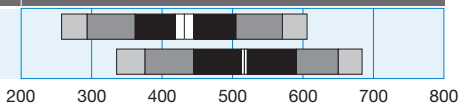


FIGURE 5.9 Mean scores and distribution of student performance on the financial literacy scale, by Indigenous background

Proficiency

While 15% of non-Indigenous students achieved proficiency level 5 and were thus classed as high performers, this was the case for just 3% of Indigenous students (Figure 5.10). At the other end of the proficiency scale, around 14% of non-Indigenous students failed to achieve proficiency level 2, compared with 39% of Indigenous students. These results are reflected in the proportion of students who achieved the National Proficient Standard – 33% of Indigenous students compared to 66% of non-Indigenous students.

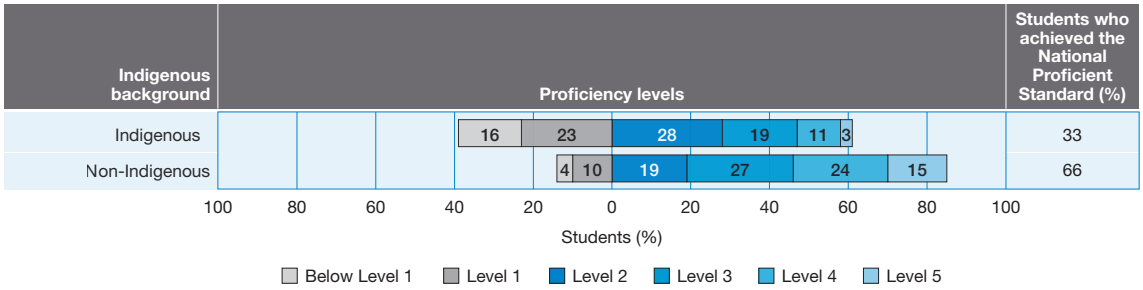


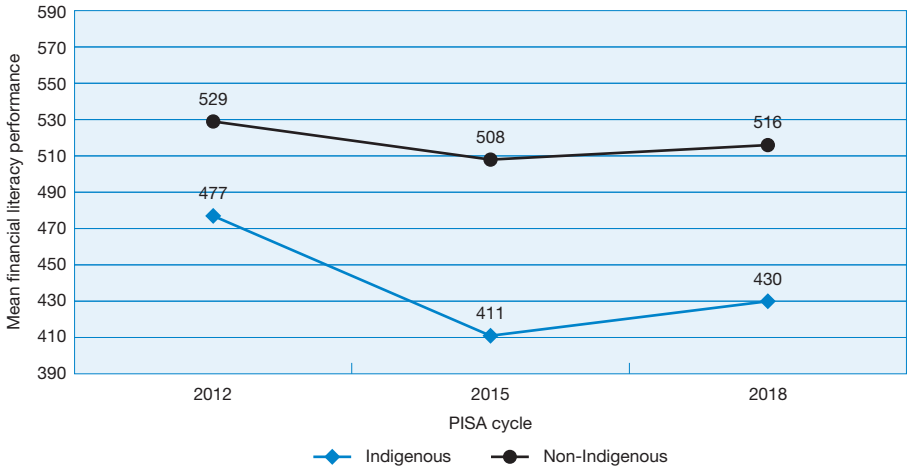
FIGURE 5.10 Percentages of students across the financial literacy proficiency scale and percentages of students who achieved the National Proficient Standard, by Indigenous background

Indigenous background – over time

Performance

The achievement score for Indigenous students has declined overall between PISA 2012 and 2018 (Figure 5.11), with Indigenous students scoring 48 points lower on the 2018 assessment than the 2012 assessment.[5] This difference represents a decline of about 1 and one-half years of schooling in financial literacy.

5 For more information about Indigenous background, please refer to the Reader's Guide.



Indigenous				
	Difference between PISA cycles			
	2015		2012	
2018	19		-48	▼
2015			-66	▼

Non-Indigenous				
	Difference between PISA cycles			
	2015		2012	
2018	9		-12	
2015			-21	▼

Note: Read across the row to determine whether the performance in the row year is significantly higher (▲) or signifcantly lower (▼) than the performance in the column year.

FIGURE 5.11 Mean financial literacy scores and differences from PISA 2012 to 2018, by Indigenous background

Proficiency

The changes in the average scores described in the previous section are illustrated in terms of changes in proficiency levels between 2012 and 2018 (Figure 5.12).

Between 2015 and 2018, there was a decrease in the proportions of low-performing Indigenous and non-Indigenous students by 9 percentage points and 3 percentage points respectively.

Between 2012 and 2018, the proportion of low-performing Indigenous students increased by 16 percentage points, while the proportion of high-performing Indigenous students decreased by 7 percentage points.

Over this same period, the proportion of high performers amongst non-Indigenous students has not changed, and the proportion of low performers has increased by five percentage points.

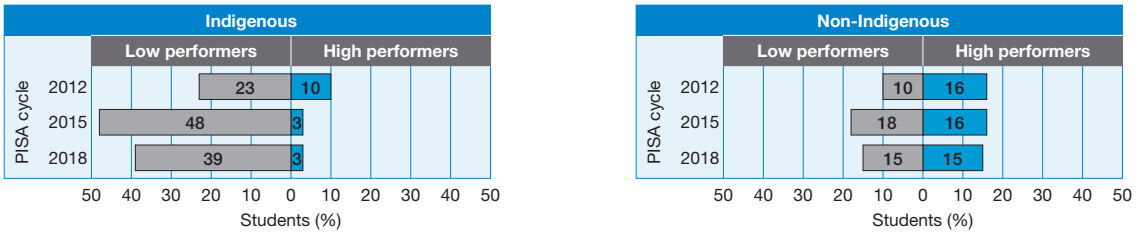


FIGURE 5.12 Percentages of low and high performers on the financial literacy proficiency scale from PISA 2012 to 2018, by Indigenous background

Table 5.3 shows the change in the proportion of students who achieved the National Proficient Standard over the three cycles of financial literacy.

Between 2015 and 2018, the proportion of non-Indigenous students who achieved the National Proficient Standard increased by 3 percentage points.

Between 2012 and 2018, the decline in the proportions of both Indigenous and non-Indigenous students who achieved the National Proficient Standard, by 19 percentage points and 6 percentage points respectively.

TABLE 5.3 Percentages of students who achieved the National Proficient Standard on the financial literacy proficiency scale from PISA 2012 to 2018, by Indigenous background

Indigenous background	PISA 2012		PISA 2015		PISA 2018	
	%	SE	%	SE	%	SE
Indigenous	52	3.4	29	1.3	33	2.8
Non-Indigenous	72	1.2	63	0.8	66	0.9

Immigrant background – PISA 2018

Performance

As is the case in many international assessments in Australia, students who are first-generation Australian, that is, born in Australia with at least one parent born overseas, outperformed those students born in Australia with both parents born in Australia (Figure 5.13). The performance of foreign-born students was not different to that of either of the two groups.[6]

Immigrant background	Mean score	SE	Confidence interval	Difference between 5th & 95th percentiles	Distribution of scores
Australian-born	510	2.6	504 – 514	344	
First-generation	520	3.3	513 – 527	356	
Foreign-born	512	4.9	502 – 521	367	

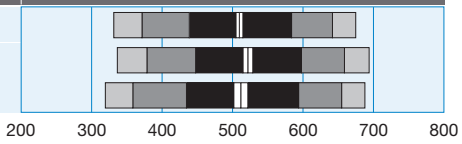


FIGURE 5.13 Mean scores and distribution of student performance on the financial literacy scale, by immigrant background

Proficiency

Proficiency levels for the three groups reflect the previous findings (Figure 5.14). Seventeen per cent of first-generation students, slightly higher than the 14% of Australian-born students, were high performers in financial literacy. At the other end of the proficiency scale, 15% of Australian-born students and 14% of first-generation students were low performers. A slightly higher proportion (18%) of foreign-born students were low performers.

There were no differences in the proportion of students in each group who achieved the National Proficient Standard – 64% of Australian-born and foreign-born students and 67% of first-generation students.

6 For more information about immigrant background, please refer to the Reader's Guide.

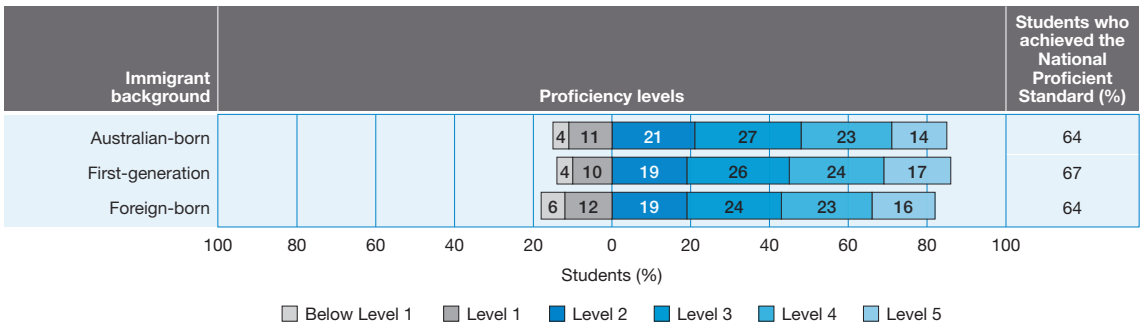


FIGURE 5.14 Percentages of students across the financial literacy proficiency scale and percentages of students who achieved the National Proficient Standard, by immigrant background

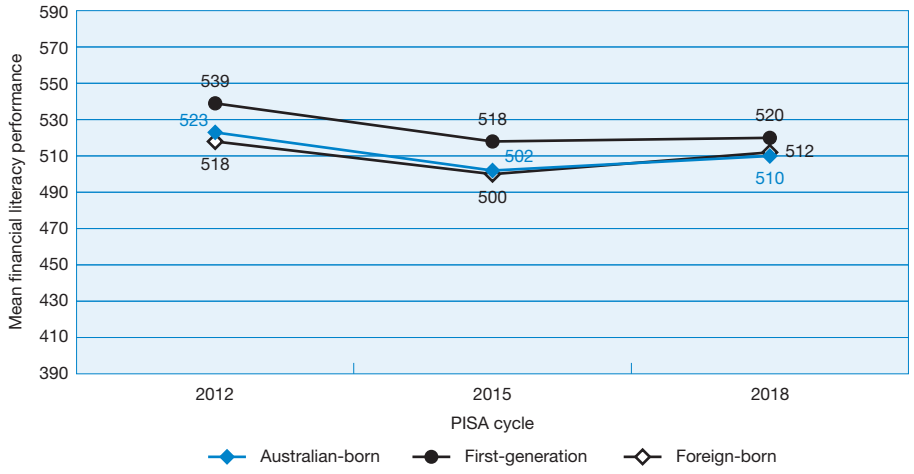
Immigrant background – over time

Performance

Figure 5.15 shows the average performance of both Australian-born students and first-generation students has declined over time.

Between 2015 and 2018, the performance of students, regardless of immigrant background did not change.

Between 2012 and 2018, the average score for Australian-born students decreased by 14 points and for first-generation students by 19 points.



Australian-born				
	Difference between PISA cycles			
	2015		2012	
2018	8		-14	▼
2015			-21	▼

First-generation				
	Difference between PISA cycles			
	2015		2012	
2018	2		-19	▼
2015			-21	▼

Foreign-born				
	Difference between PISA cycles			
	2015		2012	
2018	12		-7	
2015			-18	

Note: Read across the row to determine whether the performance in the row year is significantly higher (▲) or signifcantly lower (▼) than the performance in the column year.

FIGURE 5.15 Mean financial literacy scores and differences from PISA 2012 to 2018, by immigrant background

Proficiency

The proportion of high performers has remained about the same for all three groups over the three cycles of financial literacy (Figure 5.16).

Between 2015 and 2018, the proportion of low-performing Australian-born students decreased by 3 percentage points and the proportion of low-performing foreign-born students decreased by 5 percentage points.

Between 2012 and 2018, the proportion of low-performing Australian-born students decreased by 6 percentage points and the proportions of low-performing first-generation and foreign-born students each increased by 6 percentage points.

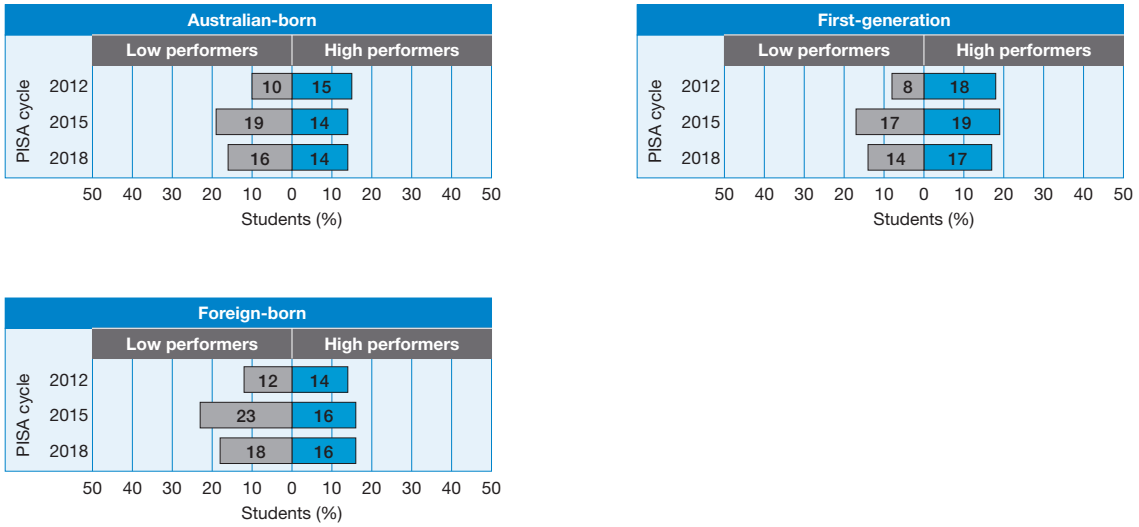


FIGURE 5.16 Percentages of low and high performers on the financial literacy proficiency scale from PISA 2012 to 2018, by immigrant background

Table 5.4 shows the proportions of students who achieved the National Proficient Standard in financial literacy across all groups of immigrant background has generally decreased from PISA 2012 to 2018.

Between 2015 and 2018, the percentage of students who achieved the National Proficient Standard, regardless of immigrant background did not change.

Between 2012 and 2018, the percentage of students who achieved the National Proficient Standard decreased by 6 percentage points for Australian-born students and by 8 percentage points for first-generation students.

TABLE 5.4 Percentages of students who achieved the National Proficient Standard on the financial literacy proficiency scale from PISA 2012 to 2018, by immigrant background

Immigrant background	PISA 2012		PISA 2015		PISA 2018	
	%	SE	%	SE	%	SE
Australian-born	70	1.5	61	0.9	64	1.1
First-generation	75	1.8	66	1.1	67	1.4
Foreign-born	68	3.4	60	1.6	64	2.1

Language background – PISA 2018

Performance

Figure 5.17 shows students who spoke English at home scored, on average, 23 points higher than those for whom English was not spoken at home.[7] The score of 492 points for students who spoke a language other than English at home was lower than the average of the participating OECD countries.

Language background	Mean score	SE	Confidence interval	Difference between 5th & 95th percentiles	Distribution of scores
English spoken at home	515	2.1	510 – 519	343	
Language other than English spoken at home	492	6.3	479 – 503	405	

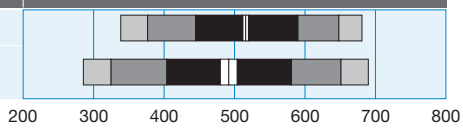


FIGURE 5.17 Mean scores and distribution of student performance on the financial literacy scale, by language background

Proficiency

Figure 5.18 shows the proficiency levels for the two groups of students, and this indicates that the group "language other than English spoken at home" probably encompasses two groups. One group is higher achieving, and so the proportion of high performers is the same as for the English-speaking cohort, and the other is much lower achieving, which is reflected in the 24% of this group being low performers compared to 15% of the English spoken at home group.

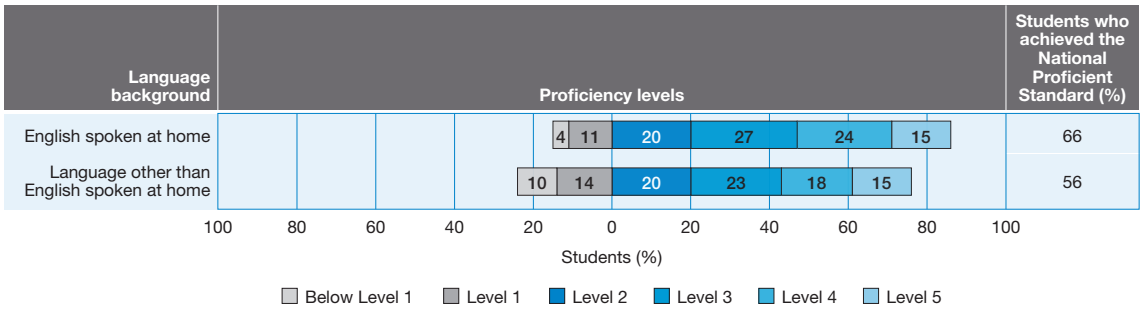


FIGURE 5.18 Percentages of students across the financial literacy proficiency scale and percentages of students who achieved the National Proficient Standard, by language background

Language background – over time

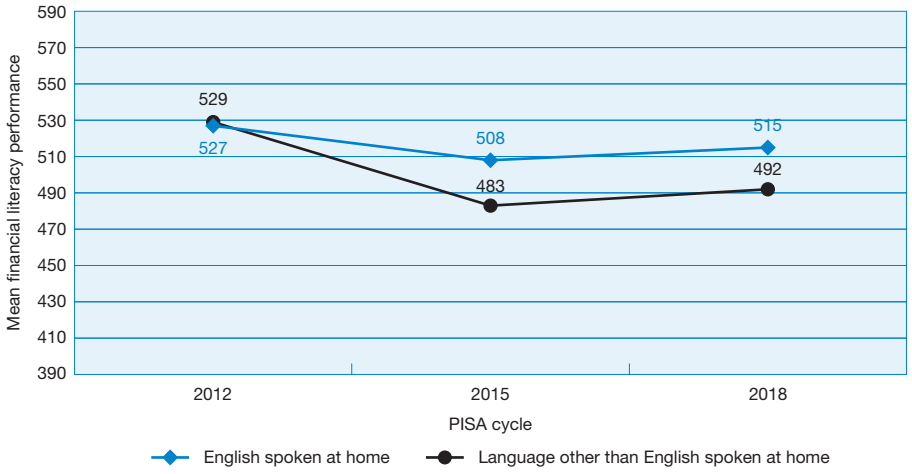
Performance

Figure 5.19 shows the mean scores for the two language background groups over each financial literacy cycle.

Between 2015 and 2018, the mean financial literacy performance did not change for students from either group.

7 For more information about language background, please refer to the Reader's Guide.

Between PISA 2012 and 2018, there has been no change in the score of students who speak English at home. For those students who speak a language other then English at home, there was a decline of 37 points over the same period, which is equivalent to just over one year of schooling.



English spoken at home				
	Difference between PISA cycles			
	2015		2012	
2018	7		-12	
2015			-19	▼

Language other than English spoken at home				
	Difference between PISA cycles			
	2015		2012	
2018	9		-37	▼
2015			-46	▼

Note: Read across the row to determine whether the performance in the row year is significantly higher (▲) or signifcantly lower (▼) than the performance in the column year.

FIGURE 5.19 Mean financial literacy scores and differences from PISA 2012 to 2018, by language background

Proficiency

For both groups of high-performing students, there has been little change in the proportions over time (Figure 5.20).

Between 2015 and 2018, the percentage of low-performing students who spoke English at home decreased by 3 percentage points.

Between PISA 2012 and 2018, there has been a 5 percentage point increase in the proportion of low performers who speak English at home, and an 11 percentage point increase in the proportion who speak a language other than English at home.

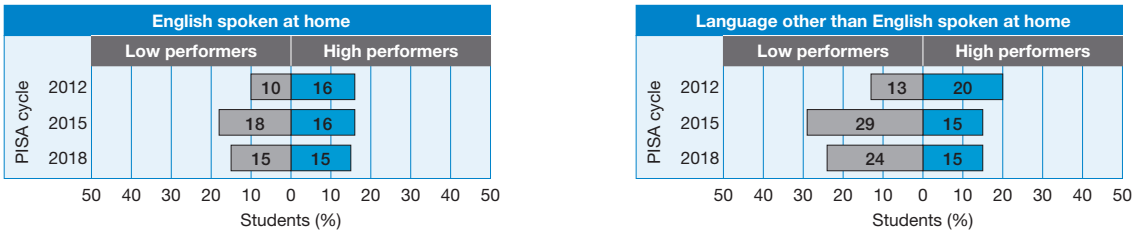


FIGURE 5.20 Percentages of low and high performers on the financial literacy proficiency scale from PISA 2012 to 2018, by language background

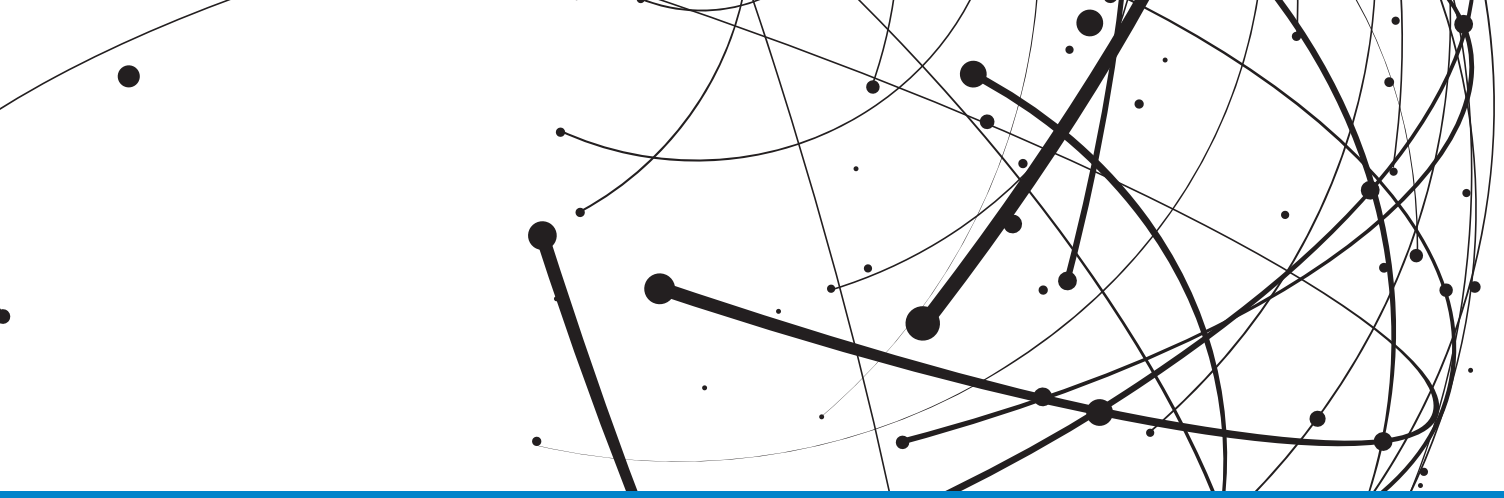
Table 5.5 shows the proportion of students who achieved the National Proficient Standard in financial literacy by language background has decreased from PISA 2012 to 2018.

Between 2015 and 2018, there was a 3 percentage point increase in the proportion of students who achieved the National Proficient Standard for students who spoke English at home.

Between 2012 and 2018, there was a decrease in the percentage of students who achieved the National Proficient Standard both among those who spoke English at home (by 6 percentage points), and those who spoke a language other than English at home (by 10 percentage points).

TABLE 5.5 Percentage of students who achieved the National Proficient Standard on the financial literacy proficiency scale from PISA 2012 to 2018, by language background

Language background	PISA 2012		PISA 2015		PISA 2018	
	%	SE	%	SE	%	SE
English spoken at home	72	1.3	63	0.8	66	0.9
Language other than English spoken at home	66	3.2	53	2.1	56	2.3



CHAPTER 6

Student access to information and education about money matters

This chapter examines student exposure to financial education and presents the similarities and differences between countries and for different demographic groups. The first part of the chapter explores student access to information through financial programs, familiarity with finance-related activities and exposure to problems about money matters. The second part explores student access to financial information outside of school.

Key findings

- Forty-eight per cent of Australian students indicated they were taught to manage their money *at school, in a subject specifically about managing your money* and 55% of Australian students reported learning to manage their money *at school as part of another subject*.
- Australian students reported lower exposure to financial education in school classes than students in Indonesia, Finland and the Russian Federation, but more exposure to financial education than across the OECD, on average, and 16 countries, including Canada and the United States.
- Australian students reported similar levels of parental involvement with helping them develop their financial literacy to students in Canada, Italy, Indonesia, the Russian Federation and the United States.
- Parents, guardians or other adult relations and the internet were the most common sources of information about money matters for students.
- Students who obtained information about money matters from their parents performed higher in financial literacy by 24 points (or three-quarters of a year of schooling) than students who did not obtain information from their parents.

The delivery of financial programs in schools

Learning to manage money

Using a two-response item (yes; no), PISA 2018 collected information on how students were taught about managing their money, asking them where they were taught to manage their money. The options they could choose were:

- *at school, in a subject specifically about managing your money*
- *at school as part of another subject*
- *in an activity outside of school*.

Figure 6.1 shows the percentages of students who were taught about managing their money, by country.[1] It shows:

- Forty-eight per cent of Australian students indicated they were taught to manage their money *at school, in a subject specifically about managing your money*. In other participating countries, these percentages ranged from 19% in Portugal to 69% in Indonesia. This percentage for Australia was higher than the OECD average of 36%. This was the most used way of teaching students about managing their money in Latvia.
- Fifty-five per cent of Australian students reported learning to manage their money *at school as part of another subject*. In other participating countries, these percentages ranged from 23% in Portugal to 80% in Indonesia. This percentage for Australia was higher than the OECD average of 42%. This was the most used way of teaching students about managing their money in Australia, and also in Canada, Estonia, Finland and Indonesia.
- Forty-one per cent of Australian students indicated they were taught to manage their money *in an activity outside of school*, which was lower than the OECD average of 47%. In other participating countries, these percentages ranged from 31% in Italy and Portugal to 72% in Serbia. This was the most used way of teaching students about managing their money in Brazil, Bulgaria, Chile, Georgia, Italy, Lithuania, Poland, Portugal, Serbia, Spain, the Slovak Republic, the Russian Federation, and the United States.

1 All figures and tables in this chapter include the OECD average and the Average across all participating countries in the financial literacy assessment for comparison.

Country	Percentages of students who were taught to manage money		
	At school, in a subject specifically about managing your money	At school as part of another subject	In an activity outside school
Australia	48	55	41
Brazil	34	35	58
Bulgaria	42	39	61
Canada	42	53	44
Chile	29	31	51
Estonia	40	53	41
Finland	52	60	34
Georgia	30	27	47
Indonesia	69	80	70
Italy	26	28	31
Latvia	49	44	42
Lithuania	42	44	71
Peru	29	44	44
Poland	31	30	40
Portugal	19	23	31
Russian Federation	49	55	63
Serbia	37	37	72
Slovak Republic	43	43	60
Spain	32	34	39
United States	38	46	52
Average	46	53	57
OECD average	36	42	47

FIGURE 6.1 Percentages of students who were taught to manage their money, by country

PISA is designed to compare results between cycles. In PISA 2012 and 2015, students were asked the same questions about how they were taught to manage their money. Table 6.1 shows the percentages of Australian students from PISA 2012 to 2018, along with percentage point differences between the current cycle and the previous cycles that the financial literacy questionnaire has been administered. The data show that over a 6-year period, more PISA 2018 students indicated they were taught about managing their money, both at school and outside of school, than PISA 2012 students.

Between 2015 and 2018:

- There was a 3 percentage point increase for students who indicated they were taught about money matters *at school as part of another subject*.
- There was a 5 percentage point increase for students who indicated they were taught about money matters *in an activity outside school*.

Between 2012 and 2018:

- There was an 11 percentage point increase for students who indicated they were taught about money matters *at school, in a subject specifically about managing your money*, and *in an activity outside school*.
- There was a 6 percentage point increase for students who indicated they were taught about money matters *at school as part of another subject*.

TABLE 6.1 Percentages of students who were taught to manage their money from PISA 2012 to 2018, and the difference between PISA 2012 and 2018, and 2015 and 2018, for Australia

	Students who were taught to manage money											
	PISA 2012		PISA 2015		PISA 2018		Difference between 2012 and 2018 (PISA 2018–2012)			Difference between 2015 and 2018 (PISA 2018–2015)		
	%	SE	%	SE	%	SE	% point difference		SE	% point difference		SE
At school, in a subject specifically about managing your money	37	1.7	47	0.7	48	0.8	11	▲	1.9	1		1.0
At school as part of another subject	49	1.7	52	0.7	55	0.8	6	▲	1.9	3	▲	1.0
In an activity outside school	30	1.3	36	0.6	41	0.6	11	▲	1.4	5	▲	0.9

Note: The symbols indicate the change over time is significantly higher (▲) or signifcantly lower (▼).

Figure 6.2 presents how students in different demographic groups reported being taught about managing their money.

- Higher percentages of male students indicated they were taught about managing their money in school, regardless of class subject or *in an activity outside of school*, than female students. There was a 10 percentage point difference between male and female students in being taught at school in a subject specifically about managing your money and *in an activity outside school*, and there was a 5 percentage point difference in being taught *at school as part of another subject*.
- Higher percentages of students in remote schools indicated they were taught about managing their money *in an activity outside school* than students in provincial schools (by 13 percentage points), and in turn, a higher percentage of students in provincial schools were taught about managing their money *in an activity outside school* than students in metropolitan schools (by 7 percentage points).
- Higher percentages of non-Indigenous students than Indigenous students indicated they were taught about managing their money *in a subject specifically about managing your money* (by 11 percentage points) and in an activity outside school (by 9 percentage points).
- Higher percentages of foreign-born students indicated they were taught about managing their money *at school in a subject specifically about managing your money* than first-generation students (by 6 percentage points) and Australian-born students (by 8 percentage points). Higher percentages of foreign-born students indicated they were taught about managing their money *at school as part of another subject* than Australian-born students (by 6 percentage points), and higher percentages of Australian-born and foreign-born students indicated they were taught about managing their money *in an activity outside school* than first-generation students (by 3 percentage points).
- There were no observable differences in the percentage of students within each of the socioeconomic background groups.

Demographic group	Percentages of students who were taught to manage money		
	At school, in a subject specifically about managing your money	At school as part of another subject	In an activity outside school
Sex			
Females	43	52	36
Males	53	57	46
Socioeconomic background			
Most disadvantaged students	47	53	42
Socioeconomically average students	48	54	41
Least disadvantaged students	48	56	40
Geographic location of schools			
Metropolitan	48	55	39
Provincial	48	53	46
Remote	42	51	59
Indigenous background			
Indigenous	58	56	50
Non-Indigenous	47	54	41
Immigrant background			
Australian-born	46	53	42
First-generation	48	55	39
Foreign-born	54	59	42

FIGURE 6.2 Percentages of students who were taught to manage their money, for different demographic groups

Table 6.2 presents the percentages of students from PISA 2012 to 2018, and shows that overall there were more changes over the 6-year period than the 3-year period in terms of how students were taught to manage their money.

Between 2015 and 2018:

- For students who indicated that they were taught about money matters *at school, in a subject specifically about managing money*, in PISA 2018 there were more students from the least disadvantaged group (by 7 percentage points) than in 2015.
- For students who indicated that they were taught about money matters *at school, as part of another subject*, there were more male students, students from the most disadvantaged group, socioeconomically average students, students in metropolitan schools, non-Indigenous students and Australian-born students in PISA 2018 than in 2015. These increases ranged from 2 to 4 percentage points.
- For students who reported that they were taught about money matters *in an activity outside of school*, there were more female and male students, students from the socioeconomically average and least disadvantaged groups, students in metropolitan schools, non-Indigenous students, Australian-born students and first-generation students in PISA 2018 than in 2015. These increases ranged from 5 to 8 percentage points. There were fewer Indigenous students (by 1 percentage point).

Between 2012 and 2018:

- For students who indicated that they were taught about money matters *at school, in a subject specifically about managing money*, there were more students in almost of the categories across the different demographic groups in PISA 2018 than in 2012. These changes ranged from a 10 percentage point increase for students in provincial schools and for female students to a 27 percentage point increase for students in remote schools.
- For students who indicated that they were taught about money matters *at school, as part of another subject*, there were more male students, students from the socioeconomically average and the least disadvantaged groups, students in metropolitan schools, non-Indigenous students and Australia-born students in PISA 2018 than in 2012. These changes ranged from a 5 percentage point increase for non-Indigenous students to a 7 percentage point increase for male students, students from the least disadvantaged group and students in metropolitan schools.
- For students who indicated that they were taught about money matters *in an activity outside of school*, there were more students in almost all of the categories across the different demographic groups in PISA 2018 than in 2012. These changes ranged from a 9 percentage point increase for Australian-born students to a 15 percentage point increase for first-generation students.

TABLE 6.2 Percentages of students who were taught to manage their money for PISA 2012, 2015 and 2018, and the differences between PISA 2012 and 2018, and 2015 and 2018, for different demographic groups

	At school, in a subject specifically about managing your money											
	PISA 2012		PISA 2015		PISA 2018		Difference between 2012 and 2018 (PISA 2018–2012)			Difference between 2015 and 2018 (PISA 2018–2015)		
Demographic group	%	SE	%	SE	%	SE	% point difference		SE	% point difference		SE
Sex												
Females	33	2.2	41	0.9	43	1.1	10	▲	2.4	2		1.4
Males	40	2.4	52	0.9	53	0.9	13	▲	2.6	1		1.2
Socioeconomic background												
Most disadvantaged students	42	3.6	50	1.1	47	1.7	5		3.9	3		2.0
Socioeconomically average students	36	2.2	47	0.8	48	1.0	12	▲	2.4	1		1.3
Least disadvantaged students	32	3.2	42	1.3	48	1.2	16	▲	3.4	7	▲	1.8
Geographic location of schools												
Metropolitan	36	2.1	47	0.8	48	0.8	12	▲	2.3	1		1.2
Provincial	38	2.9	47	1.1	48	1.8	10	▲	3.5	1		2.1
Remote	15	5.8	51	4.3	42	3.8	27	▲	6.9	9		5.7
Indigenous background												
Indigenous	49	5.7	60	1.4	58	2.5	9		6.2	2		2.8
Non-Indigenous	36	1.7	46	0.7	47	0.8	11	▲	1.9	1		1.1
Immigrant background												
Australian-born	34	2.1	45	0.8	46	1.0	12	▲	2.3	2		1.3
First-generation	39	3.3	47	1.2	48	1.1	9	▲	3.5	1		1.7
Foreign-born	42	4.9	52	1.8	54	1.8	12	▲	5.2	1		2.5

TABLE 6.2 (continued)

Demographic group	At school, as part of another subject											
	PISA 2012		PISA 2015		PISA 2018		Difference between 2012 and 2018 (PISA 2018–2012)			Difference between 2015 and 2018 (PISA 2018–2015)		
	%	SE	%	SE	%	SE	% point difference		SE	% point difference		SE
Sex												
Females	49	2.3	49	0.9	52	1.0	3		2.5	3		1.4
Males	50	2.3	54	0.9	57	0.9	7	▲	2.5	3	▲	1.3
Socioeconomic background												
Most disadvantaged students	51	3.6	49	1.2	53	1.4	2		3.9	4	▲	1.8
Socioeconomically average students	48	2.6	52	0.8	54	0.9	6	▲	2.7	2	▲	1.2
Least disadvantaged students	49	3.3	54	1.4	56	1.3	7	▲	3.6	3		1.9
Geographic location of schools												
Metropolitan	48	2.1	52	0.8	55	0.7	7	▲	2.2	3	▲	1.1
Provincial	52	2.9	51	1.1	53	1.9	1		3.4	2		2.2
Remote	32	9.6	44	3.1	51	7.2	19		12.1	7		7.8
Indigenous background												
Indigenous	52	5.3	53	1.6	56	2.1	4		5.7	3		2.6
Non-Indigenous	49	1.8	51	0.7	54	0.8	5	▲	2.0	4	▲	1.1
Immigrant background												
Australian-born	47	2.3	50	0.8	53	1.0	6	▲	2.5	3	▲	1.3
First-generation	53	2.8	53	1.2	55	1.0	2		2.9	2		2.9
Foreign-born	48	5.1	54	1.8	59	1.9	11		5.4	5		2.6

Demographic group	In an activity outside of school											
	PISA 2012		PISA 2015		PISA 2018		Difference between 2012 and 2018 (PISA 2018–2012)			Difference between 2015 and 2018 (PISA 2018–2015)		
	%	SE	%	SE	%	SE	% point difference		SE	% point difference		SE
Sex												
Females	26	1.8	31	0.9	36	0.8	10	▲	1.9	5	▲	1.2
Males	33	2.1	41	0.8	46	0.8	13	▲	2.2	5	▲	1.1
Socioeconomic background												
Most disadvantaged students	32	2.6	39	1.1	42	1.4	10	▲	3.0	3		1.8
Socioeconomically average students	30	1.9	36	0.8	41	0.9	11	▲	2.1	5	▲	1.2
Least disadvantaged students	27	2.8	32	1.4	40	1.0	13	▲	3.0	8	▲	1.7
Geographic location of schools												
Metropolitan	26	1.6	34	0.7	39	0.7	13	▲	1.7	5	▲	1.0
Provincial	41	2.7	42	1.2	46	1.3	5		3.0	4		1.7
Remote	45	7.7	47	4.1	59	4.4	14		8.9	-12		6.0
Indigenous background												
Indigenous	41	5.0	51	1.8	50	2.9	9		5.7	-1	▼	3.4
Non-Indigenous	29	1.3	35	0.6	41	0.6	12	▲	1.4	6	▲	0.9
Immigrant background												
Australian-born	33	1.8	37	0.7	42	0.8	9	▲	1.9	5	▲	1.1
First-generation	24	2.1	32	1.2	39	1.0	15	▲	2.4	7	▲	1.6
Foreign-born	28	5.3	38	1.7	42	1.8	14	▲	5.7	4		2.5

Note: The symbols indicate the change over time is significantly higher (▲) or signifcantly lower (▼).

Figure 6.3 shows that Australian students, as well as students across the OECD countries, who had not been taught to manage money in school performed higher on financial literacy than students who were taught to manage money in school.

Australian students who had not been taught to manage money *at school, in a subject specifically about managing your money*, performed 35 points higher (or around one year of schooling) than students who had been taught to manage money in this way. The differences in the mean financial literacy performance between students who had and had not been taught to manage money *at school as part of another subject* and *in an activity outside school* were 12 points and 33 points respectively.

Further investigations into understanding student exposure through different subjects across different year levels are required to gain a better understanding of these results, as well as acknowledging that students acquire knowledge about money matters from sources outside of the school, and directly apply these skills in the real world with some kind of feedback.

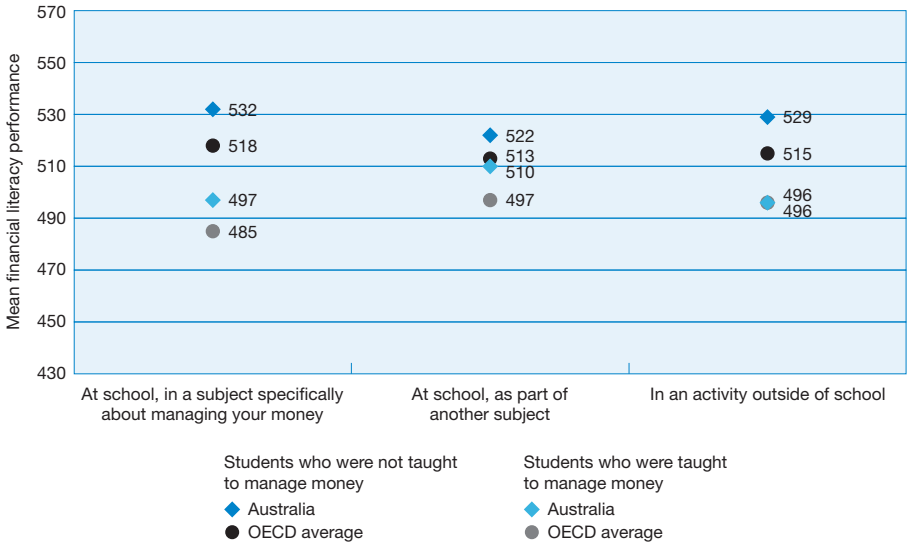


FIGURE 6.3 Mean scores on the financial literacy scale, by students who were and were not taught to manage money, for Australia and the OECD average

Familiarity with finance-related activities

Using a three-point scale (never; sometimes; often), PISA 2018 collected information about personal finance-related activities that students may have encountered in school classes. Students were asked to rate the frequency with which they encountered the following activities in a school class in the previous 12 months. The topics they were asked about were:

- *describing the purpose and uses of money*
- *exploring the difference between spending money on needs and wants*
- *exploring ways of planning to pay an expense*
- *discussing the rights of consumers when dealing with financial institutions*
- *discussing the ways in which money invested in the stock market changes value over time*
- *analysing advertisements to understand how they encourage people to buy things*

An index of financial education in school classes was constructed using student responses to these statements on how often they had encountered these six activities. The index was standardised to have a mean of 0 and a standard deviation of 1 across OECD countries. Higher values on the index illustrate students having higher exposure to financial education in school classes, while lower values indicate students having lower exposure to financial education in school classes.

Figure 6.4 shows the mean index scores for each country and the OECD average on the financial education in school classes index over the prior 12 months. Students in Indonesia, Finland and the Russian Federation reported the highest mean index scores, which indicated these students had higher exposure to financial education than students in other countries, including Australia. Students from the other remaining 16 countries, including students across the OECD countries, reported lower exposure to financial education in school classes than Australian students.

Country	All students	
	Mean index	SE
Serbia	-0.43	0.0
Italy	-0.26	0.0
Bulgaria	-0.22	0.0
Portugal	-0.21	0.0
Chile	-0.20	0.0
Georgia	-0.20	0.0
Brazil	-0.16	0.0
Spain	-0.15	0.0
United States	-0.10	0.0
Poland	-0.06	0.0
Latvia	0.00	0.0
Lithuania	0.05	0.0
Estonia	0.07	0.0
Slovak Republic	0.11	0.0
Canada	0.22	0.0
Peru	0.22	0.0
Australia	0.33	0.0
Russian Federation	0.41	0.0
Finland	0.47	0.0
Indonesia	0.47	0.0

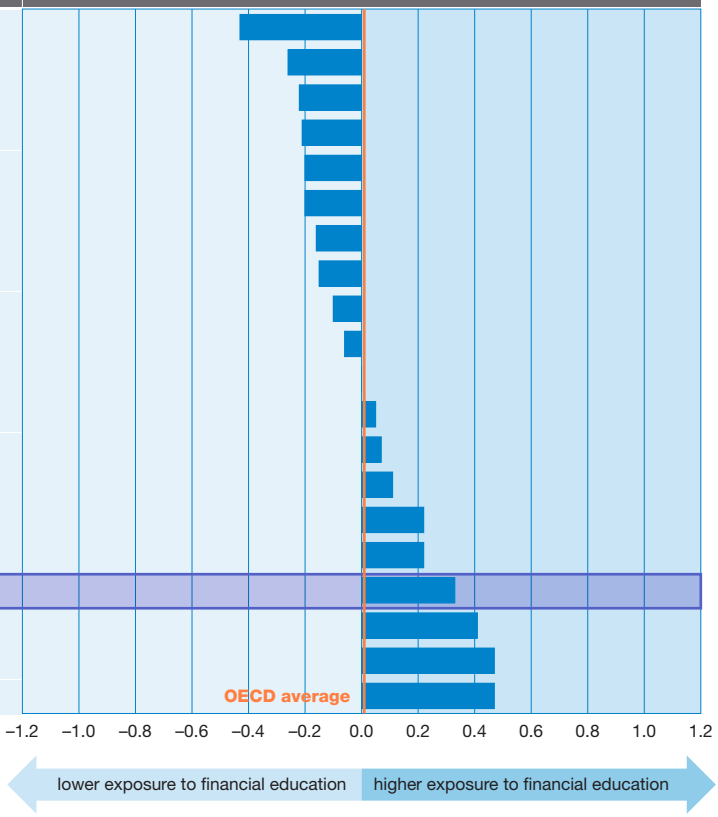


FIGURE 6.4 Financial education in school classes index, by country

Figure 6.5 shows the percentages of students who reported that they had encountered[2] each of the six personal finance-related activities over the previous 12 months by country. Countries with the lowest mean score on the financial education index in school classes are placed at the top of the figure and countries with the highest mean index score are placed at the bottom. The OECD average and Average have been included in the figure for comparison.

- Seventy-eight per cent of Australian students reported that they had encountered the activity *describing the purpose and uses of money*. This was similar to the percentage of students in Estonia, lower than the percentage of students in Finland and Indonesia, and higher than the percentage of students in the remaining 16 countries.
- Eighty per cent of Australian students reported that they had encountered the activity *exploring the difference between spending money on needs and wants*. This was similar to the percentages of students in Latvia, the Russian Federation and Peru, lower than the percentages of students in Finland and Indonesia, and higher than the percentages of students in the remaining 14 countries.

2 Refers to the students who responded *sometimes* or *often* to how often they had encountered each of the activities.

- Sixty-nine per cent of Australian students reported that they had encountered the activity *exploring ways of planning to pay an expense*. This was similar to the percentages of students in Canada, Lithuania, the Slovak Republic, Latvia and Estonia, lower than the percentages of students in Finland, Peru, the Russian Federation and Indonesia, and higher than the percentages of students in the remaining 10 countries.
- Sixty-six per cent of Australian students reported that they had encountered the activity *discussing the rights of consumers when dealing with financial institutions*. This was similar to the percentage of students in Peru, lower than the percentages of students in Indonesia, the Russian Federation and Finland, and higher than the percentages of students in the remaining 15 countries.
- Sixty-seven per cent of Australian students reported that they had encountered the activity *discussing the ways in which money invested in the stock market changes value over time*. This was similar to the percentage of students in Canada, lower than the percentages of students in Indonesia, the Russian Federation and Finland, and higher than the percentages of students in the remaining 15 countries.
- Seventy-seven per cent of Australian students reported that they had encountered *analysing advertisements to understand how they encourage people to buy things*. This was similar to the percentages of students in Indonesia and Estonia, lower than the percentage of students in Finland, and higher than the percentages of students in the remaining 16 countries.

Country	Percentages of students who encountered the following activities over the previous 12 months					
	Describing the purpose and uses of money	Exploring the difference between spending money on needs and wants	Exploring ways of planning to pay an expense	Discussing the rights of consumers when dealing with financial institutions	Discussing the ways in which money invested in the stock market changes value over time	Analysing advertisements to understand how they encourage people to buy things
Serbia	46	50	47	45	43	48
Italy	46	58	56	49	47	55
Bulgaria	51	61	55	54	52	59
Portugal	56	67	53	47	45	60
Chile	55	65	56	49	50	63
Georgia	63	61	58	51	50	56
Brazil	52	62	55	54	56	66
Spain	51	68	55	45	52	64
United States	64	66	56	46	53	62
Poland	68	65	61	57	57	66
Latvia	70	78	70	58	53	65
Lithuania	71	69	69	61	64	68
Estonia	78	74	71	62	61	77
Slovak Republic	71	76	69	63	63	69
Canada	73	77	67	58	65	71
Peru	74	81	79	68	64	70
Australia	78	80	69	66	67	77
Russian Federation	76	80	79	79	73	73
Finland	90	86	77	81	80	86
Indonesia	85	86	84	73	70	77
Average	66	71	64	58	58	67
OECD average	67	71	64	57	58	68

FIGURE 6.5 Percentages of students who encountered various financial activities in school classes, by country

Figure 6.6 shows the mean index scores on the financial education in school classes index for students from different demographic groups.

- Female students reported lower exposure to financial education than male students.
- Students in the most disadvantaged group reported lower exposure to financial education than students in the least disadvantaged group.
- Students in provincial and remote schools reported similar levels of financial education to each other, and lower exposure to financial education than students in metropolitan schools.
- Australian-born students reported lower exposure to financial education than first-generation or foreign-born students, who reported similar levels of financial education to each other.

Demographic group	All students	
	Mean index	SE
Sex		
Females	0.22	0.0
Males	0.44	0.0
Socioeconomic background		
Most disadvantaged students	0.20	0.0
Socioeconomically average students	0.32	0.0
Least disadvantaged students	0.49	0.0
Geographic location of schools		
Metropolitan	0.37	0.0
Provincial	0.25	0.0
Remote	0.10	0.1
Indigenous background		
Indigenous	0.27	0.1
Non-Indigenous	0.34	0.0
Immigrant background		
Australian-born	0.30	0.0
First-generation	0.38	0.0
Foreign-born	0.38	0.0

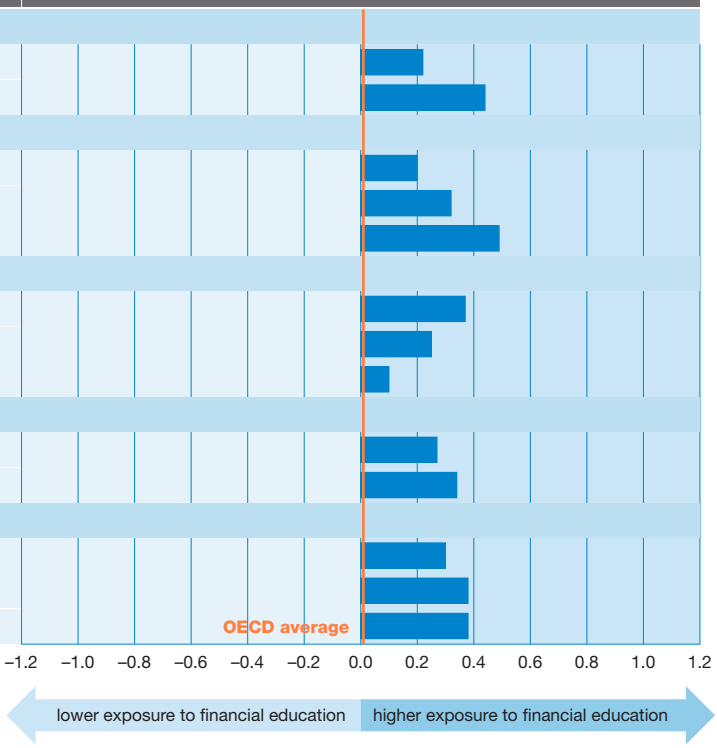


FIGURE 6.6 Financial education in school classes index, for different demographic groups

Figure 6.7 shows the percentages of students who reported that they had encountered each of the six personal finance-related activities for the different demographic groups.

- Higher percentages of male students encountered each of the six personal finance-related activities than female students. These differences ranged from 3 percentage points for *analysing advertisements to understand how they encourage people to buy things* to 11 percentage points for *discussing the ways in which money invested in the stock market changes value over time*.
- Higher percentages of students from the least disadvantaged group indicated that they had encountered *exploring the difference between spending money on needs and wants*, *exploring ways of planning to pay an expense*, *discussing the rights of consumers when dealing with financial institutions*, and *analysing advertisements to understand how they encourage people to buy things*, than students from the most disadvantaged group. These differences ranged from 3 to 9 percentage points.
- Higher percentages of students in metropolitan schools encountered *exploring the difference between spending money on needs and wants*, *exploring ways of planning to pay an expense*, and *discussing the rights of consumers when dealing with financial institutions* than students in remote schools. These differences ranged from 8 to 10 percentage points. Higher percentages

of students in provincial schools encountered *describing the purpose and uses of money* and *exploring ways of planning to pay an expense* than students in remote schools.

- Higher percentages of Indigenous students encountered *discussing the ways in which money invested in the stock market* than non-Indigenous students (by a difference of 5 percentage points).
- Higher percentages of first-generation and foreign-born students encountered *discussing the ways in which money invested in the stock market* than Australian-born students, and higher percentages of first-generation students encountered *analysing advertisements to understand how they encourage people to buy things*, than Australian-born students.

Demographic group	Percentages of students who encountered the following activities over the previous 12 months		
	Describing the purpose and uses of money	Exploring the difference between spending money on needs and wants	Exploring ways of planning to pay an expense
Sex			
Females	76	77	65
Males	81	83	74
Socioeconomic background			
Most disadvantaged students	78	78	67
Socioeconomically average students	78	80	70
Least disadvantaged students	80	81	71
Geographic location of schools			
Metropolitan	78	80	69
Provincial	79	79	70
Remote	73	72	59
Indigenous background			
Indigenous	78	80	74
Non-Indigenous	78	80	69
Immigrant background			
Australian-born	78	79	69
First-generation	79	80	69
Foreign-born	78	83	71

Demographic group	Discussing the rights of consumers when dealing with financial institutions	Discussing the ways in which money invested in the stock market changes value over time	Analysing advertisements to understand how they encourage people to buy things
Sex			
Females	61	61	76
Males	71	72	79
Socioeconomic background			
Most disadvantaged students	64	65	73
Socioeconomically average students	67	66	77
Least disadvantaged students	67	68	82
Geographic location of schools			
Metropolitan	67	67	78
Provincial	64	66	77
Remote	58	66	73
Indigenous background			
Indigenous	71	71	77
Non-Indigenous	66	66	77
Immigrant background			
Australian-born	65	65	76
First-generation	68	68	80
Foreign-born	67	69	79

FIGURE 6.7 Percentages of students who encountered various financial activities in school classes, for different demographic groups

Figure 6.8 shows the financial literacy performance for Australian students and students across the OECD countries who had or had not encountered the personal finance-related activities in a school class in the previous 12 months.

Except for *analysing advertisements to understand how they encourage people to buy things*, Australian students who had not encountered the other activities performed higher than Australian students who had. The score point differences ranged from 9 points (or one-third of a school year) for *describing the purpose and uses of money* to 19 points (or almost two-thirds of a school year) on *discussing the rights of consumers when dealing with financial institutions*.

For the four activities *exploring the difference between spending money on needs and wants*, *exploring ways of planning to pay an expense*, *discussing the rights of consumers when dealing with financial institutions*, and *discussing the ways in which money invested in the stock market changes value over time*, on average across OECD countries, students who had not encountered these activities performed higher than students who had in the previous 12 months.

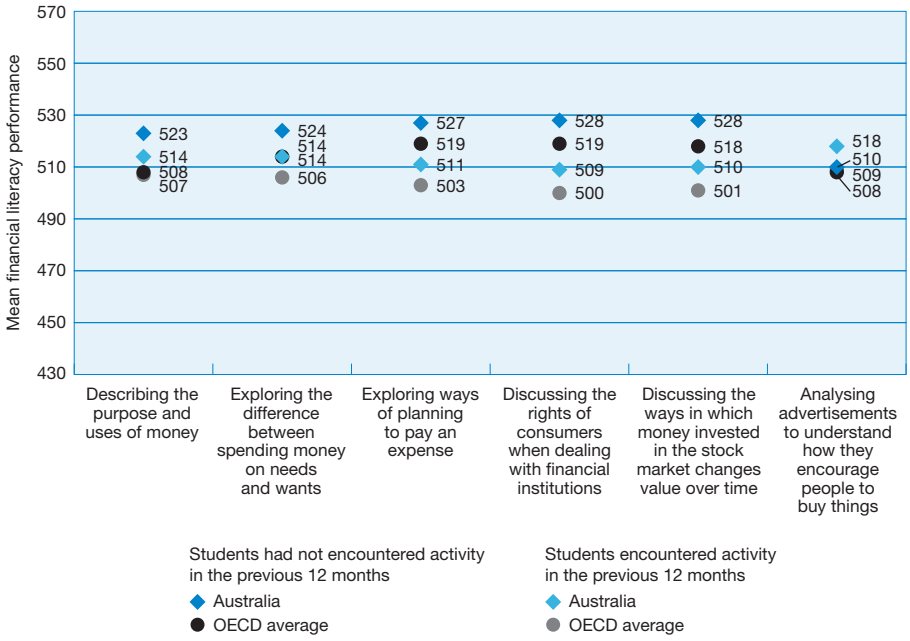


FIGURE 6.8 Mean scores on the financial literacy scale, by students who encountered various activities in school classes, for Australia and the OECD average

Exposure to problems about money matters

PISA measured student exposure to problems about money matters at school by presenting students with the following two problems:

Problem 1

1 Ann is on holiday in a country called Farway but she normally lives in Zedland. The unit of currency in Zedland is the ZED. The unit of currency in Farway is the FAD. At the time of the holiday, the exchange rate was 1 ZED = 25 FAD.

2 Ann needs 200 FAD to buy some food. If she exchanges some of her ZEDs, the exchange bureau will apply a 3% commission. If she withdraws FADs from an ATM in Farway, her bank will charge her a fixed 2-ZED fee.

Should Ann exchange her ZEDs or withdraw FADs from an ATM?

Problem 2

Tom is talking with his grandmother and they are comparing the price of ice cream now and when his grandmother was his age. They noted that the purchasing power of money usually decreases over time, meaning that, all else being equal, inflation decreases the amount of goods and services that you can purchase over time. Discuss some examples of how inflation affects you or your family.

Students were then asked to specify where they may have encountered these two problems. The options they could choose were:

- *during your mathematics class*
- *during another class*
- *during a one-off lesson or activity in school time from an outside visitor (not one of your teachers)*
- *during extracurricular activities outside of school time*.

Figure 6.9 shows that *during your mathematics class* was the most common class or activity. Across the OECD countries, 57% of students encountered at least one of these two problems about money matters, followed by 33% of students who encountered them in *another class*, and then less than 20% of students who encountered them in a *one-off lesson or activity* or in *extracurricular activities outside of school time*.

- Sixty-one per cent of Australian students reported that they had encountered these problems *during your mathematics class*. This was similar to the percentages of students in Canada, Georgia and Latvia, lower than the percentages of students in Poland, Lithuania, Brazil, Estonia, the Russian Federation, Peru and Indonesia, and higher than the percentages of students in the remaining 9 countries.
- Thirty per cent of Australian students reported that they had encountered these problems in *another class*. This was similar to the percentages of students in the United States, Spain, Bulgaria and Poland, lower than the percentages of students in 9 countries (Canada, Brazil, Estonia, Latvia, Lithuania, Peru, the Russian Federation, Finland, and Indonesia), and higher than the percentages of students in the remaining 6 countries.
- Seventeen per cent of Australian students reported that they had encountered these problems in *a one-off class or activity during school time from an outside visitor that wasn't a teacher*. This was similar to the percentages of students in the United States, Serbia and Latvia, lower than the percentages of students in 11 countries (Canada, the Slovak Republic, Georgia, Brazil, Bulgaria, Estonia, Poland, Peru, Lithuania, the Russian Federation and Indonesia), and higher than the percentages of students in the remaining 5 countries.

- Fifteen per cent of Australian students reported that they had encountered these problems in *extracurricular activities outside of school time*. This was similar to the percentages of students in Italy and Chile, lower than the percentages of students in 15 countries, and higher than the percentages of students in Portugal and Spain.

Country	Percentages of students who had encountered problems about money matters in the following classes or activities in the previous 12 months			
	Mathematics class	Another class	A one-off class or activity during school time from an outside visitor (not a teacher)	Extracurricular activities outside of school time
Australia	61	30	17	15
Brazil	66	35	24	29
Bulgaria	48	30	25	34
Canada	60	34	21	19
Chile	52	24	14	15
Estonia	68	39	25	35
Finland	58	51	13	17
Georgia	63	27	24	35
Indonesia	75	64	53	49
Italy	40	27	16	15
Latvia	63	43	19	25
Lithuania	66	44	29	25
Peru	72	44	27	33
Poland	63	30	26	17
Portugal	48	27	14	12
Russian Federation	69	47	32	37
Serbia	41	20	18	34
Slovak Republic	49	26	23	27
Spain	53	28	13	12
United States	55	27	17	20
Average	58	35	23	25
OECD average	57	33	19	20

FIGURE 6.9 Percentages of students who encountered problems about money matters, by country

Figure 6.10 presents the percentages of students who reported that they had encountered the two problems about money matters in class or outside of class for the different demographic groups.

- Male students reported more often than female students that they had encountered the two problems both in school and in extracurricular activities (between 4 percentage points and 9 percentage points in *mathematics class* and *another class* respectively).
- Students from the least disadvantaged group encountered the two problems in class or a one-off class or activity during school time from an outside visitor more than students from the most disadvantaged group. These differences ranged from 3 to 10 percentage points.
- Students in remote schools reported that they encountered these problems in their *mathematics classes* less often than students in provincial schools (by 11 percentage points) and in metropolitan schools (by 13 percentage points). Students in provincial schools also reported that they encountered these problems in *another class* less often than students in metropolitan schools (by 5 percentage points).
- Indigenous students reported that they encountered these problems in their *mathematics classes* less often than non-Indigenous students (by 7 percentage points). On the other hand, Indigenous students reported encountering these problems in *extracurricular activities outside of school time* more often than non-Indigenous students (by 8 percentage points).
- First-generation and foreign-born students reported that they encountered these problems in *another class* than Australian-born students (by 3 and 5 percentage points respectively).

Demographic group	Percentages of students who had encountered problems about money matters in the following classes or activities in the previous 12 months			
	Mathematics class	Another class	A one-off class or activity during school time from an outside visitor (not a teacher)	Extracurricular activities outside of school time
Sex				
Females	59	25	14	11
Males	63	34	20	18
Socioeconomic background				
Most disadvantaged students	55	24	17	14
Socioeconomically average students	61	30	17	15
Least disadvantaged students	65	34	20	16
Geographic location of schools				
Metropolitan	61	31	18	14
Provincial	59	26	17	16
Remote	48	20	22	16
Indigenous background				
Indigenous	54	27	20	22
Non-Indigenous	61	30	17	14
Immigrant background				
Australian-born	60	28	17	15
First-generation	62	31	17	14
Foreign-born	61	33	19	17

FIGURE 6.10 Percentages of students who encountered problems about money matters, for different demographic groups

Figure 6.11 shows that students who had encountered the two money matter problems in class performed higher in financial literacy than students who had not, while students who had encountered them in extracurricular activities performed lower in financial literacy than students who had not.

Australian students who had encountered the two problems in their mathematics class in the previous 12 months performed, on average, 32 points higher (or one year of schooling) than students who had not, and students who had encountered the two problems in another class performed, on average, 11 points higher than students who had not. Australian students who had encountered these two problems in a one-off class or extracurricular activities outside school performed, on average, 21 and 28 points respectively, lower than student who had not.

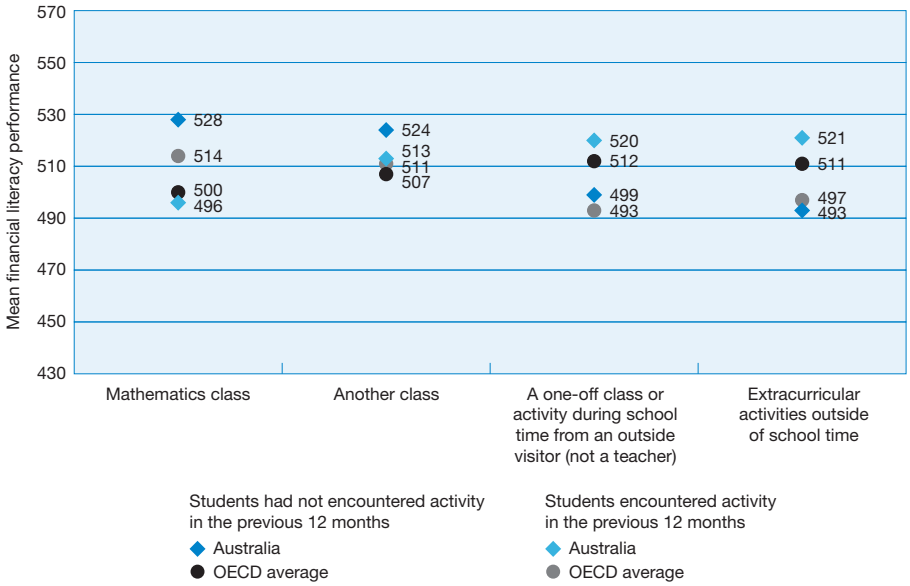


FIGURE 6.11 Mean scores on the financial literacy scale, by students who encountered problems about money matters, for Australia and the OECD average

Source of information outside of school

PISA asked students about where they obtained the information they needed about money matters, such as spending, banking and investments. The options they could choose were:

- *parents, guardians or other adult relations*
- *friends*
- *television or radio*
- *the internet*
- *magazines*
- *teachers*.

Figure 6.12 shows that parents, guardians or other adult relations[3] and the internet were the most common sources of information about money matters for students, and magazines were the least common source.

- Almost all Australian students reported that they obtained information about money matters from their parents. This was similar to the percentages of students in Canada and the United States, lower than the percentages of students in 16 countries, and higher than the percentages of students in Finland.
- Fifty-two per cent of Australian students reported that they obtained information about money matters from their friends. This was similar to the percentages of students in Portugal, Finland, Serbia, the Slovak Republic and Bulgaria, higher than the percentages of students in 7 countries, including Canada and the United States, and lower than the percentages of students in 7 countries, including Poland, Estonia and Indonesia.
- Thirty-three per cent of Australian students reported that they obtained information about money matters from television or radio. This was similar to the percentages of students in the United States and Finland, higher than the percentage of students in Canada, and lower than the percentages of students in the remaining 16 countries.

3 For ease of reading, from this point onward 'parents, guardians or other adult relations' will be referred to as 'parents'.

- Sixty-five per cent of Australian students reported that they obtained information about money matters from the internet. This was similar to the percentages of students in the United States, Bulgaria and Canada, higher than the percentages of students in Serbia, and lower than the percentages of students in the remaining 15 countries.
- Fifteen per cent of Australian students reported that they obtained information about money matters from magazines. This was similar to the percentages of students in the United States, Canada and Spain, and lower than the percentages of students in the remaining 16 countries.
- Sixty-one per cent of Australian students reported that they obtained information about money matters from their teachers. This was similar to the percentage of students in the Russian Federation, higher than the percentages of students in 15 countries, and lower than the percentages of students in Finland, Peru and Indonesia.

Country	Percentages of students who obtained information about money matters					
	Parents, guardians, or other adult relations	Friends	Television or radio	The internet	Magazines	Teachers
Australia	96	52	33	65	15	61
Brazil	90	43	61	81	32	46
Bulgaria	91	54	53	66	36	44
Canada	96	48	31	66	15	57
Chile	94	48	58	81	26	45
Estonia	94	59	45	82	31	51
Finland	97	53	33	77	31	71
Georgia	90	55	61	74	32	39
Indonesia	93	75	70	81	50	87
Italy	90	41	65	83	28	44
Latvia	95	55	51	86	25	52
Lithuania	94	55	60	81	33	51
Peru	89	37	57	73	35	74
Poland	94	58	55	79	26	34
Portugal	95	51	76	82	28	43
Russian Federation	90	54	59	83	33	61
Serbia	92	53	42	59	27	32
Slovak Republic	93	53	65	79	39	55
Spain	94	44	48	70	16	42
United States	96	45	32	66	14	47
Average	93	52	53	76	29	52
OECD average	94	51	50	77	25	50

FIGURE 6.12 Percentages of students who obtained information about money matters from various sources, by country

Figure 6.13 shows the percentages of students who acquired information about money matters from various sources for different demographic groups.

- Male students more often than female students reported that they obtained information from their friends (by 6 percentage points), television or radio (by 8 percentage points), the internet (by 3 percentage points), magazines (by 6 percentage points) and their teachers (by 5 percentage points).
- Female students more often than male students reported obtaining information about money matters from their parents (by 2 percentage points).
- The least disadvantaged students reported more often than the most disadvantaged students that they obtained their information from their parents (by 4 percentage points), from the internet (by 7 percentage points), and from teachers (by 4 percentage points).
- Students in remote schools less often than students in metropolitan and provincial schools reported obtaining information about money matters from their parents (by 7 and 8 percentage points respectively), while students in remote and provincial schools more often than students in metropolitan schools reported obtaining information about money matters from magazines (by 9 and 3 percentage points respectively). Students in provincial schools less often than students in metropolitan schools reported obtaining information about money matters from the internet (by 4 percentage points).
- Non-Indigenous students reported more often than Indigenous students that they obtained information about money matters from their parents (by 4 percentage points), while Indigenous students reported more often than non-Indigenous students that they obtained information about money matters from magazines (by 7 percentage points), and from television or radio (by 8 percentage points).
- Foreign-born students reported more often than Australian-born students that they obtained information about money matters from their friends (by 6 percentage points). Foreign-born students also reported more often than Australian-born and first-generation students that they obtained information about money matters from the internet (by 14 and 6 percentage points respectively). The difference between Australian-born and first-generation students was also significant (by 8 percentage points).

Demographic group	Percentages of students who obtained information about money matters		
	Parents, guardians, or other adult relations	Friends	Television or radio
Sex			
Females	97	49	29
Males	95	55	37
Socioeconomic background			
Most disadvantaged students	94	53	33
Socioeconomically average students	96	52	33
Least disadvantaged students	98	52	34
Geographic location of schools			
Metropolitan	96	52	33
Provincial	97	51	34
Remote	89	55	38
Indigenous background			
Indigenous	92	56	41
Non-Indigenous	96	52	33
Immigrant background			
Australian-born	96	50	34
First-generation	96	53	32
Foreign-born	96	56	34

Demographic group	The internet	Magazines	Teachers
Sex			
Females	63	12	58
Males	66	18	63
Socioeconomic background			
Most disadvantaged students	61	16	59
Socioeconomically average students	65	15	60
Least disadvantaged students	68	15	63
Geographic location of schools			
Metropolitan	66	14	61
Provincial	62	17	59
Remote	64	23	54
Indigenous background			
Indigenous	62	22	63
Non-Indigenous	65	15	60
Immigrant background			
Australian-born	60	16	60
First-generation	68	14	60
Foreign-born	74	16	62

FIGURE 6.13 Percentages of students who obtained information about money matters from various sources, for different demographic groups

Figure 6.14 shows that students who obtained information about money matters from their parents performed higher in financial literacy than students who did not. This was the case for Australian students as well as students across the OECD countries. Australian students who obtained information about money matters from their parents scored 24 points higher (or three-quarters of a year of schooling) than students who did not.

Students who reported that they obtained information about money matters from their friends, the television or radio and magazines performed lower in financial literacy than students who did not obtain information from these sources. Australian students scored 18 points lower when information was sourced from their friends, 26 points lower when information was sourced from television or radio, and 51 points lower when information was sourced from magazines. Similar results were also

found for students across the OECD countries; however, the difference in mean scores was smaller than that found for the Australian students.

Students across the OECD countries who reported that they obtained information about money matters from the internet performed higher in financial literacy (by 14 points), than students across the OECD countries who did not. This was not the finding for Australian students who obtained their information from the internet. Their financial literacy performance was not significantly different to students who had not obtained information from the internet.

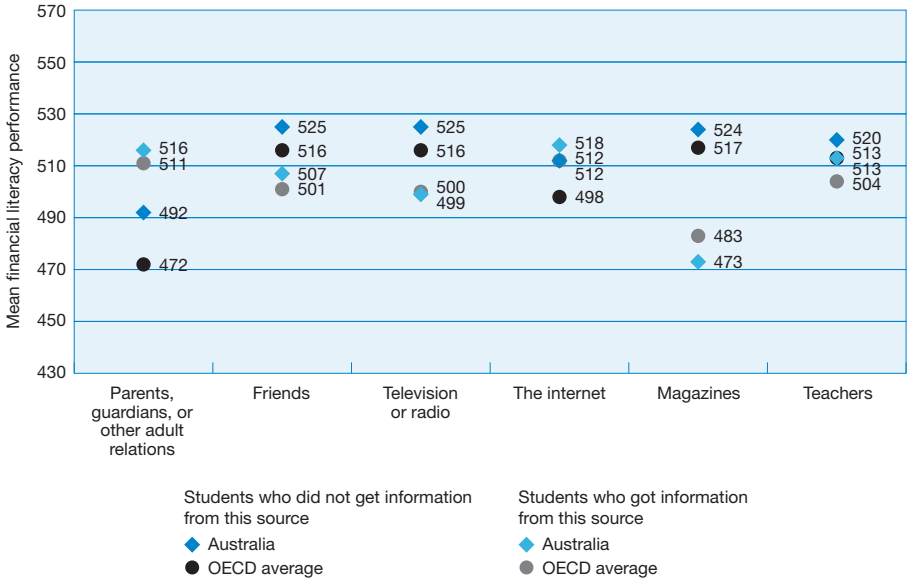


FIGURE 6.14 Mean scores on the financial literacy scale, by student sources of information about money matters, for Australia

Discussing money matters with parents or guardians

Using a four-point scale (never or hardly ever; once or twice a month; once or twice a week; almost every day), PISA 2018 collected information about five aspects of financial decisions that students discussed with their parents. Students were asked to rate the frequency with which they discussed financial decisions with their parents. The topics they were asked about were:

- *your spending decisions*
- *your saving decisions*
- *the family budget*
- *money for things you want to buy*
- *news related to economics or finance*.

An index of parental involvement in matters of financial literacy was constructed using student responses to these statements on how often they had encountered these five aspects. The index was standardised to have a mean of 0 and a standard deviation of 1 across OECD countries. Higher values on the index illustrate students who had parents more involved in helping their children develop financial literacy, while lower values indicate students who had parents who were less involved.

Figure 6.15 shows the mean index scores for each country and the OECD average on the parental involvement in matters of financial literacy index. More students in Bulgaria reported that their parents were the most involved in helping them develop their financial literacy than students in the other countries. Students in Bulgaria, Brazil, Lithuania, Serbia, Peru and Portugal reported that their parents were more involved in financial literacy matters than parents of Australian students.

Students in Canada, Italy, Indonesia, the Russian Federation and the United States reported having parents who had similar involvement in their financial literacy matters to parents of Australian students, while students in Finland, Estonia, Poland, the Slovak Republic, Chile, Spain, Georgia and Latvia, and across the OECD countries, had parents who were less involved in helping their children develop financial literacy than the parents of Australian students.

Country	All students	
	Mean index	SE
Finland	-0.15	0.0
Estonia	-0.15	0.0
Poland	-0.05	0.0
Slovak Republic	-0.04	0.0
Chile	-0.03	0.0
Spain	-0.01	0.0
Georgia	0.01	0.0
Latvia	0.02	0.0
Canada	0.05	0.0
Italy	0.05	0.0
Australia	0.08	0.0
Indonesia	0.10	0.0
Russian Federation	0.11	0.0
United States	0.12	0.0
Portugal	0.15	0.0
Peru	0.17	0.0
Serbia	0.24	0.0
Lithuania	0.26	0.0
Brazil	0.28	0.0
Bulgaria	0.33	0.0

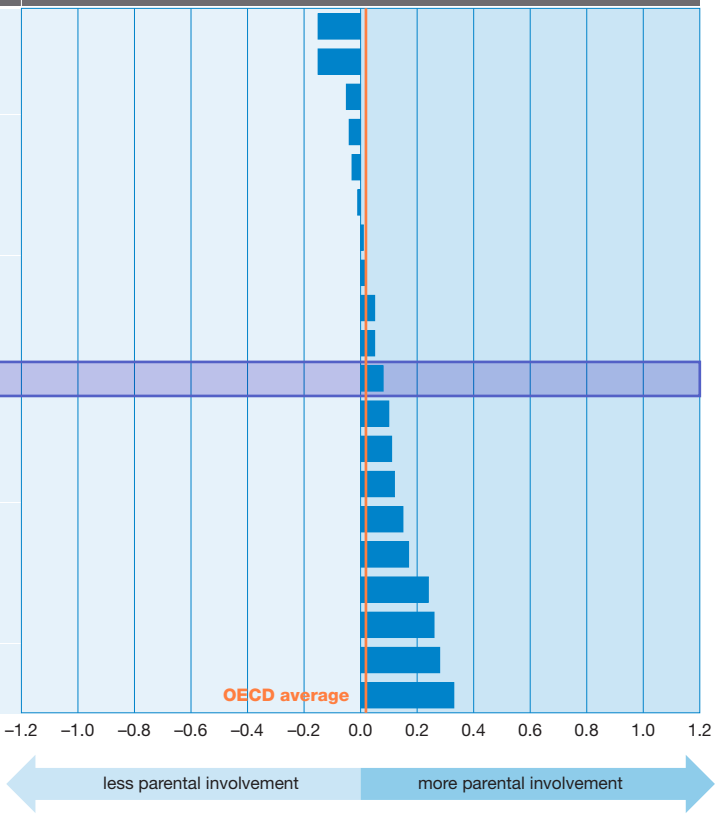


FIGURE 6.15 Parental involvement in matters of financial literacy index, by country

Figure 6.16 shows that students discussed *money for things you want to* buy at least once or twice a week or almost every day[4] with their parents more than other aspects of financial decisions, while *news related to economics and finance* was the least frequently discussed financial decision students spoke about with their parents.

- Forty-four per cent of Australian students reported that they frequently discussed *your spending decisions* with their parents. This was similar to the percentages of students in Latvia, the United States, Portugal and Canada, higher than the percentages of students in 12 countries, and lower than the percentages of students in Brazil, Lithuania, Bulgaria and Serbia.
- Forty-two per cent of Australian students reported that they frequently discussed *your savings decisions* with their parents. This was similar to the percentages of students in Canada, Chile, the United States and Serbia, higher than the percentages of students in 12 countries, and lower than the percentages of students in Portugal, Lithuania, Peru, Brazil and Bulgaria.
- Twenty-eight per cent of Australian students reported that they frequently discussed *the family budget* with their parents. This was similar to the percentages of students in Canada, Poland

4 For ease of reading, from this point onward 'once or twice a week or almost every day' will be referred to as 'frequently'.

and Spain, higher than the percentages of students in Finland and Estonia, and lower than the percentages of students in 13 countries.

- Fifty per cent of Australian students reported that they frequently discussed *money for things you want to buy* with their parents. This was similar to the percentages of students in Indonesia, Canada, Latvia, the Russian Federation and Peru, higher than the percentages of students in Finland, Georgia, Estonia, Poland, Indonesia and the Slovak Republic, and lower than the percentages of students in 9 countries.
- Twenty-one per cent of Australian students reported that they frequently discussed *news related to economics or finance* with their parents. This was similar to the percentages of students in Finland and Canada, and lower than the percentages of students in 17 countries.

Country	Percentages of students who discussed the following topics with their parents, guardians or relatives *at least once a week*				
	Student's own spending decisions	Student's own saving decisions	The family budget	Money for things the student wants to buy	News related to economics or finance
Finland	34	25	18	40	20
Estonia	32	27	22	42	23
Poland	37	32	26	47	24
Slovak Republic	34	34	30	48	28
Chile	37	40	30	53	24
Spain	37	37	26	54	23
Georgia	42	37	39	41	32
Latvia	43	31	31	50	24
Canada	44	40	26	49	22
Italy	39	38	33	60	27
Australia	44	42	28	50	21
Indonesia	37	38	33	47	36
Russian Federation	40	35	40	50	31
United States	43	40	33	53	24
Portugal	44	47	31	59	36
Peru	38	45	50	50	32
Serbia	48	42	41	58	29
Lithuania	49	45	41	55	34
Brazil	48	45	41	59	37
Bulgaria	52	45	43	58	34
Average	41	38	33	51	28
OECD average	40	37	29	51	25

FIGURE 6.16 Percentages of students who discussed various money matters with their parents, guardians or relatives, by country

Figure 6.17 shows the mean index scores on the parental involvement index for students from different demographic groups.

- Female students reported their parents were more involved in developing their financial literacy than male students.
- The least disadvantaged students reported their parents were more involved in developing their financial literacy than the most disadvantaged students.
- There were no observable differences in the mean index scores for students by geographic location of schools, Indigenous background and immigrant background.

Demographic group	All students	
	Mean index	SE
Sex		
Females	0.16	0.0
Males	-0.01	0.0
Socioeconomic background		
Most disadvantaged students	0.01	0.0
Socioeconomically average students	0.08	0.0
Least disadvantaged students	0.13	0.0
Geographic location of schools		
Metropolitan	0.08	0.0
Provincial	0.07	0.0
Remote	-0.01	0.1
Indigenous background		
Indigenous	0.02	0.1
Non-Indigenous	0.08	0.0
Immigrant background		
Australian-born	0.08	0.0
First-generation	0.08	0.0
Foreign-born	0.07	0.0

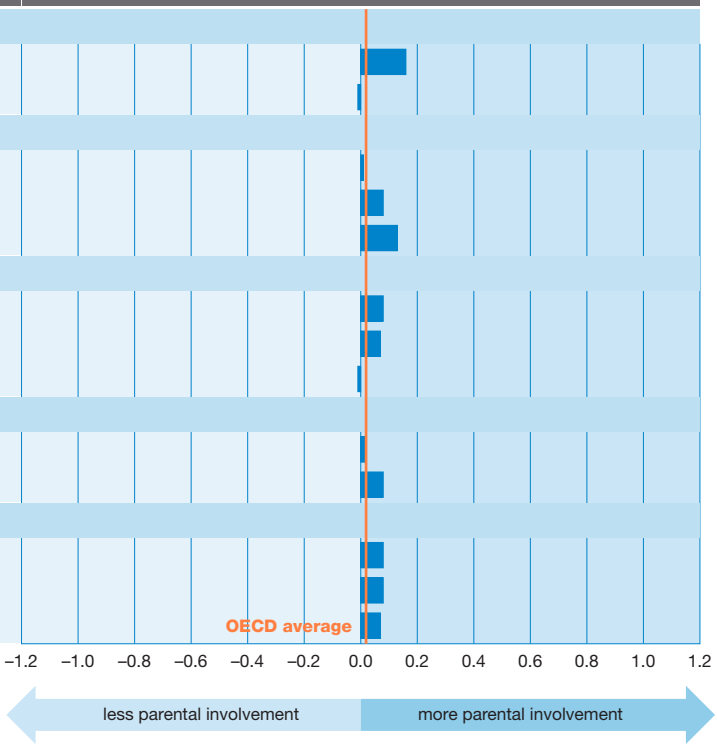


FIGURE 6.17 Parental involvement in matters of financial literacy index, for different demographic groups

Figure 6.18 shows the percentages of students who reported that their parents frequently discussed various topics about financial decisions for the different demographic groups.

- Female students reported more often than male students that they frequently discuss *your spending dec*isions (by 7 percentage points), *your saving decisions* (by 5 percentage points), and *money for things you want to buy* (by 8 percentage points).
- Male students reported more often than female students that they frequently discuss *news about economics or finance* (by 6 percentage points).
- The least disadvantaged students reported more often than the most disadvantaged students that they frequently discuss *your spending decisions* (by 6 percentage points), *your saving decisions* (by 4 percentage points), *money for things you want to buy* (by 4 percentage points), and *news related to economics or finance* (by 8 percentage points). On the other hand the most disadvantaged students reported more often than the least disadvantaged students that they frequently discuss *the family budget* (by 5 percentage points). Foreign-born students reported more often than Australian-born and first-generation students that they frequently discuss *the family budget* (by 5 and 4 percentage points respectively).
- First-generation students reported more often than Australian-born students that they frequently discuss *news related to economics or finance* (by 3 percentage points).

Demographic group	Percentages of students who discussed the following topics with their parents, guardians or relatives *at least once a week*				
	Student's own spending decisions	Student's own saving decisions	The family budget	Money for things the student wants to buy	News related to economics or finance
Sex					
Females	48	45	29	54	18
Males	41	40	27	46	24
Socioeconomic background					
Most disadvantaged students	41	39	30	48	18
Socioeconomically average students	45	43	28	50	20
Least disadvantaged students	47	43	25	52	26
Geographic location of schools					
Metropolitan	45	42	28	50	21
Provincial	44	42	27	49	21
Remote	41	42	35	44	26
Indigenous background					
Indigenous	42	41	32	50	21
Non-Indigenous	45	42	28	50	21
Immigrant background					
Australian-born	45	43	27	49	20
First-generation	45	42	28	50	23
Foreign-born	44	40	32	49	22

FIGURE 6.18 Percentages of students who discussed various money matters with their parents, guardians or relatives, for different demographic groups

Figure 6.19 shows the relationship between student performance and the frequency with which various topics about financial decisions were discussed with parents. Australian students who discussed *the family budget* once a month or less performed higher in financial literacy by 20 points (or around two-thirds of a year of schooling) than students who discussed these topics at least once a week. Similar results were also found for students across the OECD countries.

Australian students who discussed *money for things you want to buy* once a month or less performed higher in financial literacy by 9 points (or one-third of a year of schooling) than students who discussed these topics at least once a week. This association was not found for students across the OECD countries.

Students across the OECD countries who discussed *news related to economics or finance* performed higher in financial literacy by 11 points (or one-third of a year of schooling) than students who discussed these topics at least once a week. This association was not found for Australian students.

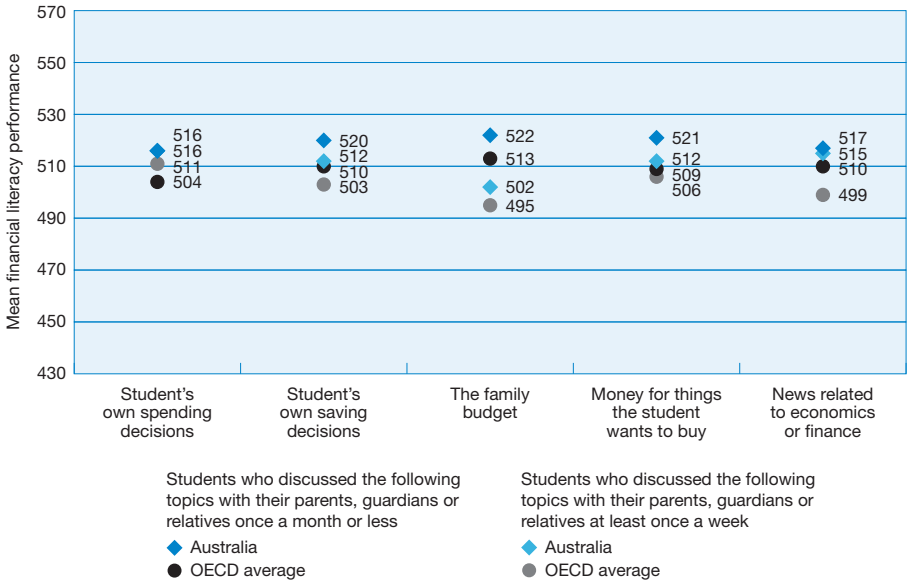
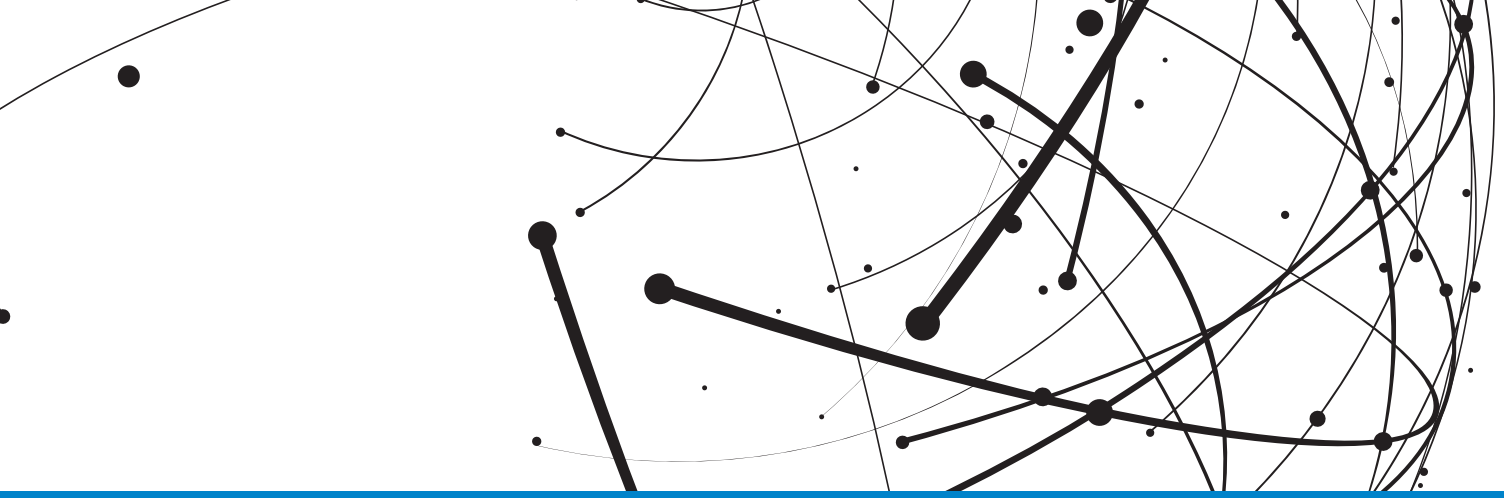


FIGURE 6.19 Mean scores on the financial literacy scale, by students who had discussed various money matters with their parents, guardians or relatives, for Australia



CHAPTER 7

Student experiences with financial matters

This chapter explores student experiences with money and how these relate to their financial literacy. The chapter also examines the similarities and differences between countries, different demographic groups, and the variations by student characteristics. It also explores the association between student experiences with money and financial literacy performance.

Key findings

- In Australia, 68% of 15-year-old students had *an account with a bank, building society or credit union*. Generally, this is positively associated with financial literacy performance. Australian students who held *an account with a bank, building society or credit union* scored, on average, 38 points higher than those who did not.
- Between PISA 2015 and 2018, there was an 11 percentage point decrease in the percentage of students who held *an account with a bank, building society or credit union*.
- In the previous 12 months, 75% of Australian students reported that they *bought something online (alone or with a family member).* These students scored 13 points higher, while 47% of students who had *made a payment using a mobile phone* scored 19 points lower.
- The most common source of money for Australian students was receiving *gifts from friends or relatives* (86%), followed by *working outside school hours (52%).*
- Receiving money as *gifts from friends or relatives* was positively associated with financial literacy performance. In Australia, students who received money in this way scored, on average, 38 points higher than students who did not. In contrast, Australian students who received money from *working in a family business* scored 46 points lower than students who did not.

The use of basic financial products

Students who are included in the financial system from a young age through their use of basic financial products develop knowledge, experience and understanding in product use.

Using a three-point scale (yes; no; I don't know what it is), PISA 2018 collected information about whether students held a variety of basic financial products and tools. The options they could choose were:

- *an account with a bank, building society or credit union*
- *a credit card/debit card*
- *a mobile app to access your account*.

Figure 7.1 shows the percentages of students who reported holding each basic financial product. Countries are ranked in alphabetical order. The OECD average has been included at the bottom of the figure for comparison, while the average across all countries that participated has been included as a second point of comparison.

- Sixty-eight per cent of Australian students reported holding an *account with a bank, building society or credit union.* This was lower than the percentage of students in Finland, and higher than the percentage of students in the other 18 countries.
- Sixty-one per cent of Australian students reported holding a *credit card/debit card*. This was lower than the percentages of students in Finland, Canada and Estonia reporting this, but higher than the percentage of students in the other 16 countries.
- Fifty-five per cent of Australian students reported holding a *mobile app to access your account*. Across all countries, this was the highest percentage of students holding this financial product.

Country	Percentages of students who hold …		
	Account with a bank, building society or credit union	Credit card/ debit card	Mobile app to access your account
Australia	68	61	55
Brazil	28	17	15
Bulgaria	36	31	24
Canada	64	67	46
Chile	37	27	22
Estonia	59	75	43
Finland	89	78	24
Georgia	22	24	17
Indonesia	36	27	24
Italy	44	41	16
Latvia	59	53	43
Lithuania	44	41	35
Peru	12	11	8
Poland	34	26	21
Portugal	45	24	9
Russian Federation	32	50	50
Serbia	21	13	15
Slovak Republic	50	41	30
Spain	55	19	11
United States	47	36	34
Average	44	38	27
OECD average	54	45	30

FIGURE 7.1 Percentages of students who held basic financial products, by country

In both PISA 2012 and 2015, students were asked whether they held *an account with a bank, building society or credit union*.[1] Figure 7.2 shows the percentage of Australian PISA 2012 students who reported holding *an account with a bank, building society or credit union* along with the change in the percentage of students between PISA 2012 and 2015, and 2012 and 2018, and the significance of these changes.

- Between 2015 and 2018, there was an 11 percentage point decrease in the percentage of students who held *an account with a bank, building society or credit union*.
- Between 2012 and 2018, there was a 13 percentage point decrease in the percentage of students who reported holding *an account with a bank, building society or credit union*.

	Percentages of students who hold ...											
	PISA 2012		PISA 2015		PISA 2018		Difference between 2012 and 2018 (PISA 2018–2012)			Difference between 2015 and 2018 (PISA 2018–2015)		
	%	SE	%	SE	%	SE	% point difference		SE	% point difference		SE
an account with a bank, building society or credit union	82	1.2	79	0.5	68	0.7	-13	▼	1.4	-11	▼	0.8

Notes: The symbols indicate the change over time is significantly higher (▲) or signifcantly lower (▼).
Comparisons of data for the item: *students holding a mobile app to access your account* are not available as this item was first administered in 2018.
Due to changes in the wording in 2015 and 2018, comparisons cannot be made for the item *do you hold a credit card/debit card*.

FIGURE 7.2 Percentages of students who held a bank account from PISA 2012 to 2018, and the differences between PISA 2012 and 2018, and 2015 and 2018, by country

Figure 7.3 presents the percentages of students who held each of the basic financial products for the different demographic groups.

- There was a higher percentage of female students (65%) than male students (58%) who reported they held a *credit card/debit card*, and again for female students (58%) who reported holding a *mobile app to access their account* compared to males (52%).
- There was a lower percentage of most disadvantaged students (56%) than least disadvantaged students (77%) who reported they held *an account with a bank, building society or credit union*, similarly a lower percentage of most disadvantaged students (55%) than least disadvantaged students (66%) who reported they held a *credit card/debit card*.
- There was a higher percentage of students in remote schools (69%) than students in metropolitan schools (60%) who reported they held a *credit card/debit card*, while a higher percentage of students in remote schools (67%) than students in provincial schools (58%) and students in metropolitan schools (54%) had a *mobile app to access their account*.
- There was a higher percentage of non-Indigenous students (69%) than Indigenous students (59%) who reported they held *an account with a bank, building society or credit union*.
- There was a higher percentage of Australian-born students (72%) than first-generation born students (68%) and foreign-born students (56%) who reported they held *an account with a bank, building society or credit union*, while a higher percentage of Australian-born students (63%) than both first-generation born (60%) and foreign-born students (56%) who reported they held a *credit card/debit card*.

1 Comparisons over time cannot be made for the item *do you own a credit/debit card* due to the wording of the item having changed between 2015 and 2018. The item *do you hold a mobile app to access your account* was asked for the first time in 2018.

Demographic group	Percentages of students who hold …		
	Account with a bank, building society or credit union	Credit card/ debit card	Mobile app to access your account
Sex			
Females	69	65	58
Males	67	58	52
Socioeconomic background			
Most disadvantaged students	56	55	51
Socioeconomically average students	70	62	57
Least disadvantaged students	77	66	56
Geographic location of schools			
Metropolitan	68	60	54
Provincial	69	65	58
Remote	76	69	67
Indigenous background			
Indigenous	59	64	55
Non-Indigenous	69	61	55
Immigrant background			
Australian-born	72	63	56
First-generation	68	60	55
Foreign-born	56	56	51

FIGURE 7.3 Percentages of students who held basic financial products, for different demographic groups

Table 7.1 shows the percentage of Australian students who reported holding *an account with a bank, building society or credit union*, for the different demographic groups, along with the changes in the percentage of students in each group between PISA 2012 and 2015, and 2012 and 2018, and the significance of these changes.

Between 2015 and 2018:

- There was a 12 percentage point decrease of female students who reported holding *an account with a bank, building society or credit union* and a 10 percentage point decrease among male students.
- There was a 14 percentage point decrease of the most disadvantaged students holding *an account with a bank, building society or credit union* and a 7 percentage point decrease among the least disadvantaged students.
- There was a 13 percentage point decrease of students in provincial schools holding *an account with a bank, building society or credit union* and a 10 percentage point decrease among students in metropolitan schools.
- There was a 13 percentage point decrease of Indigenous students holding *an account with a bank, building society or credit union* and an 11 percentage point decrease of their non-Indigenous counterparts.
- There was an 11 percentage point decrease of Australian-born students holding *an account with a bank, building society or credit union* and a 10 percentage point decrease among their foreign-born counterparts.

Between 2012 and 2018:

- There was a 17 percentage point decrease for female students who held *an account with a bank, building society or credit union*, while there was a 10 percentage point decrease for male students.
- There was an 18 percentage point decrease in the least disadvantaged students holding *an account with a bank, building society or credit union*, and a 12 percentage point decrease among socioeconomically average and least disadvantaged students.

- There was an 18 percentage point decrease in students in provincial schools holding *an account with a bank, building society or credit union*.
- There was a 17 percentage point decrease of Indigenous students holding *an account with a bank, building society or credit union*, while there was a 13 percentage point decrease of non-Indigenous students.
- There was a 15 percentage point decrease of foreign-born students, a 14 percentage point decrease of Australian-born students and a 10 percentage point decrease of first-generation students holding *an account with a bank, building society or credit union*.

TABLE 7.1 Percentages of students who held a bank account from PISA 2012 to 2018, and the differences between PISA 2012 and 2018, and 2015 and 2018, for different demographic groups

	Account with a bank, building society or credit union											
	PISA 2012		PISA 2015		PISA 2018		Difference between 2012 and 2018 (PISA 2018–2012)			Difference between 2015 and 2018 (PISA 2018–2015)		
Demographic group	%	SE	%	SE	%	SE	% point difference		SE	% point difference		SE
Sex												
Females	85	1.3	80	0.7	69	0.9	-17	▼	1.6	-12	▼	1.2
Males	77	2.0	78	0.7	67	0.7	-10	▼	2.2	-10	▼	1.0
Socioeconomic background												
Most disadvantaged students	74	2.4	70	1.1	56	1.4	-18	▼	2.8	-14	▼	1.8
Socioeconomically average students	81	1.5	82	0.7	70	0.8	-12	▼	1.7	-12	▼	1.1
Least disadvantaged students	89	1.8	84	1.0	77	1.1	-12	▼	2.1	-7	▼	1.4
Geographic location of schools												
Metropolitan	80	1.5	78	0.6	68	0.8	-12	▼	1.7	-10	▼	1.0
Provincial	88	2.2	82	0.8	69	1.2	-18	▼	2.5	-13	▼	1.4
Remote	64	11.2	80	3.0	76	5.7	12		12.6	-4		6.5
Indigenous background												
Indigenous	77	3.9	72	1.4	59	2.8	-17	▼	4.8	-13	▼	3.1
Non-Indigenous	82	1.3	79	0.5	69	0.7	-13	▼	1.5	-11	▼	0.9
Immigrant background												
Australian-born	85	1.4	83	0.6	72	0.7	-14	▼	1.6	-11	▼	0.9
First-generation	78	2.2	77	1.0	68	1.2	-10	▼	2.5	-9	▼	1.6
Foreign-born	72	4.1	66	1.3	56	1.7	-15	▼	4.4	-10	▼	2.1

Note: The symbols indicate the change over time is significantly higher (▲) or signifcantly lower (▼).

Figure 7.4 shows the relationship between students holding basic financial products and financial literacy.

- The largest performance gap was among Australian students who held *an account with a bank, building society or credit union*; these students scored 38 points higher (or one-and-a-quarter years of schooling) than students who did not, and this was higher than across the OECD countries.
- Students who held a *credit card/debit card* scored 8 points higher (equal to nearly one-quarter of a year of schooling) than students who did not hold this financial product.
- There was no observable difference in financial literacy performance for students who did or did not have a *mobile phone app to access your account*.

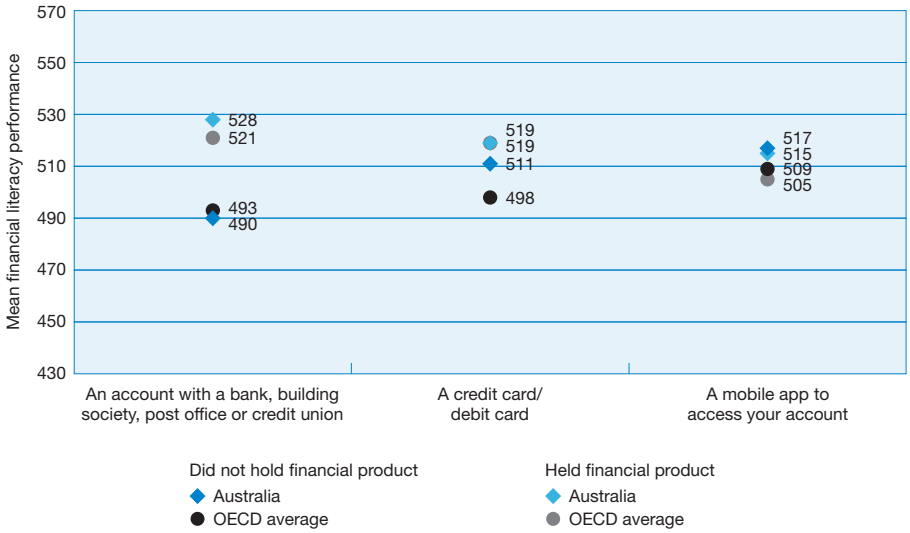


FIGURE 7.4 Mean scores on the financial literacy scale, for students who held basic financial products, for Australia

As mentioned in Chapter 3, there is a positive association in the relationship between financial literacy and the core assessment domains of mathematical literacy and reading literacy. When examining mathematical literacy and reading literacy performance, in terms of whether students held a financial product, Figure 7.5 shows:

- Students who held *an account with a bank, building society, post office or credit union* performed higher in mathematical literacy and in reading literacy (by 28 points and 29 points respectively) than students who did not hold this financial product. These results were similar to those reported for financial literacy.
- Students who held *a mobile app to access their account* performed lower in mathematical literacy and in reading literacy (by 9 points and 17 points respectively) than students who did not hold this financial product. These results were different to those reported for financial literacy, where no differences in performance were found between students who held or did not hold this financial product.
- There were no differences in mathematical literacy or reading literacy performance between those students who held *a credit card/debit card* and those students who did not hold this financial product. These results were different to those reported for financial literacy, where students scored higher in financial literacy if they held *a credit card/debit card*.

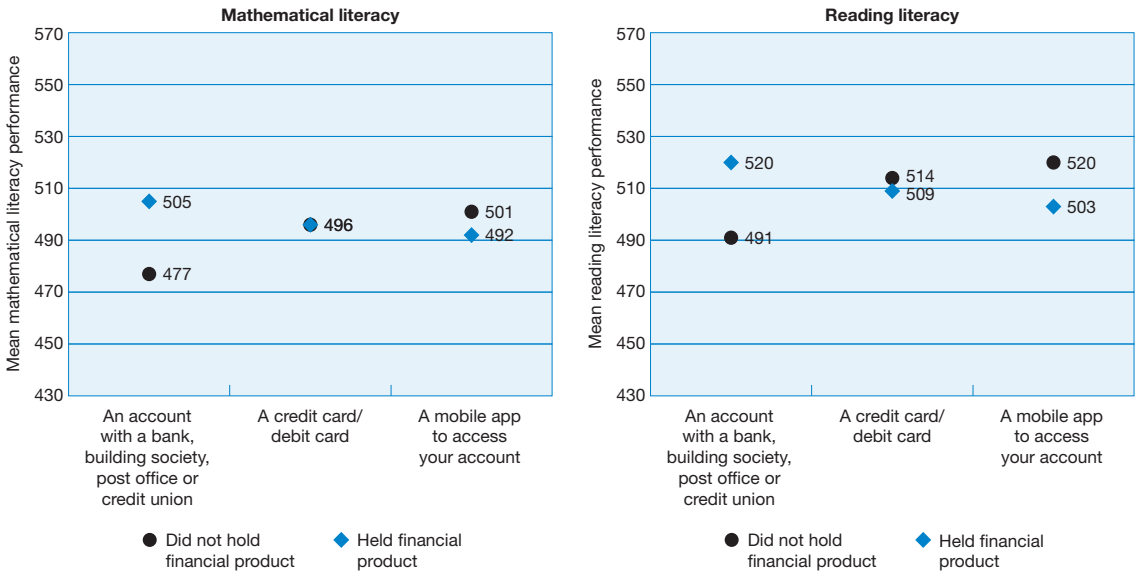


FIGURE 7.5 Mean scores on the mathematical literacy scale and on the reading literacy scale, for students who held basic financial products, for Australia

Online financial activities

Young people are increasingly reliant on digital devices and spend more time on them for a range of activities, from communicating with friends, playing games, and obtaining information, to engaging in transactions that involve the transfer of money.

Using a two-response item (yes; no) PISA 2018 collected information about student experiences with online financial transactions in the previous 12 months. Students were asked if they had:

- *bought something online (alone or with a family member)*
- *made a payment using a mobile phone.*

Figure 7.6 shows student experiences with online financial transactions. Countries are ranked in alphabetical order. The OECD average and the average across all countries are included for two points of comparison.

- Seventy-five per cent of Australian students reported that they *bought something online (alone or with a family member),* which was similar to the percentages of students in Italy, Latvia, Lithuania, the Russian Federation and the Slovak Republic, but lower than the percentages of students in Finland, Poland and the United States.
- Forty-seven per cent of Australian students reported that they *made a payment using a mobile phone,* which was similar to the percentages of students in Bulgaria, Georgia, Latvia, Lithuania and the United States but lower than the percentages of students in Indonesia and the Russian Federation.

Country	Percentages of students who, in the previous 12 months, had …	
	Bought something online (alone or with a family member)	Made a payment using a mobile phone
Australia	75	47
Brazil	52	34
Bulgaria	71	47
Canada	73	41
Chile	55	35
Estonia	73	40
Finland	80	26
Georgia	56	46
Indonesia	66	52
Italy	74	42
Latvia	77	47
Lithuania	74	48
Peru	31	21
Poland	79	33
Portugal	58	28
Russian Federation	76	69
Serbia	57	34
Slovak Republic	76	43
Spain	71	33
United States	78	45
Average	68	41
OECD average	73	39

FIGURE 7.6 Percentages of students who had experience with online financial transactions, by country

Figure 7.7 presents the percentages of Australian students who had experience with online financial transactions for the different demographic groups. The largest percentage point differences were:

- A higher percentage of male students (77%) than female students (74%) reported they had *bought something online (alone or with a family member)*, and a higher percentage of male students (50%) than female students (45%) reported that they had *made a payment using a mobile phone*.
- A higher percentage of the least disadvantaged students (79%) than most disadvantaged students (70%) reported they had *bought something online (alone or with a family member)*.
- A higher percentage of students from remote schools (55%) than students from metropolitan schools (47%) and provincial schools (47%) reported they had *made a payment using a mobile phone*.
- A higher percentage of non-Indigenous students (76%) than Indigenous students (70%) reported they had *bought something online (alone or with a family member)*.
- A higher percentage of Australian-born students (77%) than foreign-born students (72%) reported they had *bought something online (alone or with a family member)*, while a higher percentage of foreign-born students (50%) than first-generation born students (45%) reported they had *made a payment using a mobile phone*.

Demographic group	Percentages of students who, in the previous 12 months, had ...	
	Bought something online (alone or with a family member)	Made a payment using a mobile phone
Sex		
Females	74	45
Males	77	50
Socioeconomic background		
Most disadvantaged students	70	47
Socioeconomically average students	77	47
Least disadvantaged students	79	47
Geographic location of schools		
Metropolitan	75	47
Provincial	76	47
Remote	75	55
Indigenous background		
Indigenous	70	49
Non-Indigenous	76	47
Immigrant background		
Australian-born	77	48
First-generation	75	45
Foreign-born	72	50

FIGURE 7.7 Percentages of students who had experience with online financial transactions, for different demographic groups

Figure 7.8 shows the relationship between student experience with online transactions and financial literacy.

- Students who *bought something online (alone or with a family member)* scored 13 points higher than students who had not.
- Students who had *made a payment using a mobile phone* scored 19 points lower (just over half a year of schooling) than students who had not in the previous 12 months.

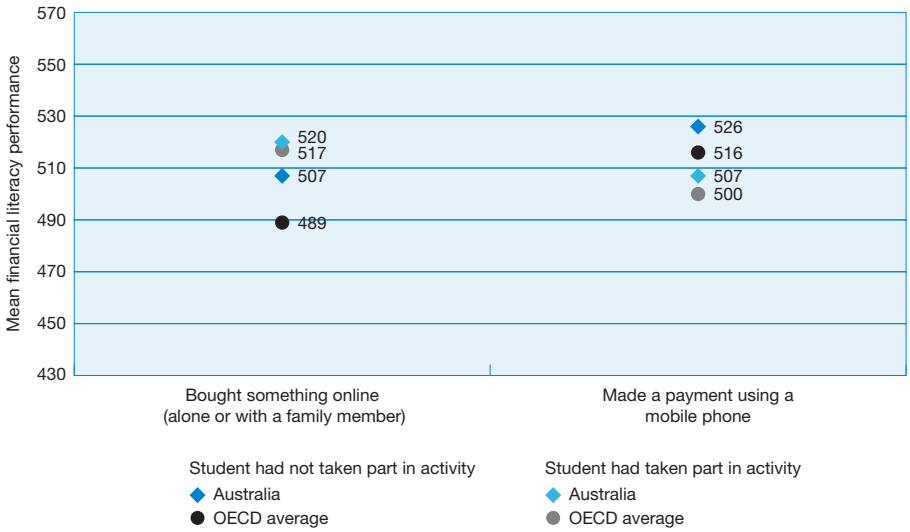


FIGURE 7.8 Mean scores on the financial literacy scale, by whether students had experience with online digital transactions, for Australia

Access to money

The previous sections examined whether students held basic financial products and whether they engaged in digital financial transactions. In order to have financial products or to transfer money to others, students must have a source of money, whether they earn it themselves or they receive it from family or friends.

PISA 2018 collected information about students' main sources of money. The options they could choose were:

- *an allowance or pocket money for regularly doing chores at home*
- *an allowance or pocket money, without having to do any chores*
- *working outside school hours (e.g. a holiday job, casual work)*
- *working in a family business*
- *occasional informal jobs (e.g. babysitting or gardening)*
- *gifts from friends or relatives*
- *selling things (e.g. at local markets or on eBay).*

Figure 7.9 shows the main sources of income for students. Countries are ranked in alphabetical order. The OECD average and the average across all countries participating are included for two points of comparison.

- Eighty-six per cent of Australian students reported receiving income as *gifts from friends or relatives*, which was similar to the percentages of students in Canada, the Russian Federation, Serbia, Spain and the United States but lower than the percentages of students in Estonia, Finland, Latvia and Lithuania.
- Fifty-two per cent of Australian students reported receiving income *working outside school hours (e.g. in a holiday job or part-time work)*, which was similar to the percentages of students in Estonia and Indonesia, and higher than the percentages of students in the remaining 17 countries including Canada, the Russian Federation, the Slovak Republic and Peru.
- Forty-three per cent of Australian students reported *an allowance or pocket money for regularly doing chores at home* as their source of income, which was similar to the percentages of students in the Russian Federation, but lower than the percentages of students in 9 countries including Indonesia, Bulgaria, Peru, Poland, the Slovak Republic and Latvia.
- Thirty-eight per cent of Australian students reported receiving money from *occasional informal jobs (e.g. babysitting, or gardening)*, which was similar to the percentages of students in Bulgaria, Indonesia, and the Slovak Republic, but lower than the percentages of students in Lithuania, the United States, Finland, Canada, Latvia and Estonia.
- Thirty-seven per cent of Australian students reported receiving money from *selling things (e.g. at local markets or on eBay)*, which was similar to the percentages of students in the United States, Chile and Latvia, but lower than the percentages of students in 8 countries including Lithuania, Bulgaria, Finland and the Russian Federation.
- Thirty-two per cent of Australian students reported receiving money from *an allowance or pocket money without having to do any chores,* which was similar to the percentages of students in the United States, higher than Brazil and lower than the percentages of students in the remaining 17 countries.
- Nineteen per cent of Australian students reported receiving money from *working in a family business*, which was similar to the percentages of students in Estonia, the United States and Italy, but lower than the percentages of students in the remaining 12 countries.

Country	Percentages of students who get money from …			
	An allowance or pocket money for regularly doing chores at home	An allowance or pocket money without having to do any chores	Working outside school hours (e.g. a holiday job, part-time work)	Working in a family business
Australia	43	32	52	19
Brazil	29	30	28	21
Bulgaria	55	71	48	41
Canada	38	36	47	17
Chile	35	40	31	22
Estonia	40	72	51	19
Finland	49	37	46	13
Georgia	37	62	26	23
Indonesia	72	73	52	42
Italy	37	40	21	18
Latvia	50	69	37	23
Lithuania	47	57	44	31
Peru	54	40	49	36
Poland	51	58	46	21
Portugal	32	49	17	14
Russian Federation	44	70	50	27
Serbia	47	70	45	28
Slovak Republic	51	54	48	23
Spain	34	43	18	14
United States	37	33	43	19
Average	44	52	40	24
OECD average	42	48	38	19

Country	Occasional informal jobs (e.g. babysitting or gardening)	Gifts from friends or relatives	Selling things (e.g. at local markets or on eBay)
Australia	38	86	37
Brazil	20	50	19
Bulgaria	39	77	48
Canada	46	85	34
Chile	18	70	38
Estonia	42	89	39
Finland	51	91	48
Georgia	25	64	20
Indonesia	37	69	42
Italy	23	80	25
Latvia	44	87	36
Lithuania	54	90	53
Peru	22	55	24
Poland	30	79	41
Portugal	13	83	20
Russian Federation	31	87	47
Serbia	31	85	32
Slovak Republic	38	79	43
Spain	21	85	33
United States	50	85	39
Average	34	79	36
OECD average	36	84	37

FIGURE 7.9 Percentages of students who had access to money from various sources, by country

Table 7.2 shows the percentages of students for each source, along with the changes in percentage between PISA 2012 and 2015, and 2012 and 2018, and the significance of these changes.

Between 2015 and 2018:

- There was a 7 percentage point decrease in students who received money from *occasional informal jobs such as babysitting or gardening*, and a 6 percentage point decrease in students who received money from *an allowance or pocket money for regularly doing chores at home*.
- There was a 2 percentage point decrease in the percentage of students who received money from *working in a family business* and as *gifts from friends or relatives*.

Between 2012 and 2018:

- There was a 10 percentage point increase in students receiving money from *selling things (e.g. at a local market or on eBay)*, and a 4 percentage point increase in the proportion of students *working in a family business*.
- There was an 8 percentage point decrease in students who received money from *occasional informal jobs (e.g. babysitting or gardening)*, and a 3 percentage point decrease in students who received money as a *gift from friends or relatives*.

TABLE 7.2 Percentages of students who had access to money from PISA 2012 to 2018, and the differences between PISA 2012 and 2018, and PISA 2015 and 2018, for Australia

	Percentages of students who get money from …											
	PISA 2012		PISA 2015		PISA 2018		Difference between 2012 and 2018 (PISA 2018–2012)			Difference between 2015 and 2018 (PISA 2018–2015)		
	%	SE	%	SE	%	SE	% point difference		SE	% point difference		SE
An allowance or pocket money for regularly doing chores at home	44	1.5	49	0.6	43	0.6	-1		1.6	-6	▼	0.9
An allowance or pocket money without having to do any chores	32	1.6	30	0.6	32	0.6	0		1.7	1		0.9
Working outside school hours (e.g. a holiday job, part-time work)	52	1.6	52	0.6	52	0.8	0		1.8	0		1.0
Working in a family business	15	1.1	20	0.4	19	0.5	4	▲	1.2	-2	▼	0.6
Occasional informal jobs (e.g. babysitting or gardening)	46	1.6	44	0.6	38	0.8	-8	▼	1.8	-7	▼	1.0
Gifts from friends or relatives	89	0.9	88	0.4	86	0.4	-3	▼	1.0	-2	▼	0.6
Selling things (e.g. at local markets or on eBay)	27	1.1	37	0.6	37	0.8	10	▲	1.3	0		1.0

Note: The symbols indicate the change over time is significantly higher (▲) or signifcantly lower (▼).

Figure 7.10 presents the percentages of students who had access to money from various sources for the different demographic groups. The largest percentage point differences were:

- A higher percentage of male students (44%) than female students (30%) reported *selling things (e.g. at a local market or on eBay)*, and more male students (45%) than female students (41%) received money as *an allowance or pocket money for regularly doing chores at home*. However, more female students (40%) than male students (35%) reported receiving money from *occasional informal jobs such as babysitting or gardening* than male students.
- A higher percentage of least disadvantaged students (92%) than most disadvantaged students (79%) reported receiving money as a *gift from friends or relatives*, while 45% of least disadvantaged students and 32% of most disadvantaged students reported receiving money from *occasional informal jobs such as babysitting or gardening*.
- A higher proportion of students from remote schools (58%) than students from metropolitan schools (36%) reported receiving money from *occasional informal jobs such as babysitting or gardening*, similarly, more students from remote schools (67%) than students from metropolitan schools (49%) received money from *working outside school hours in a holiday job or a part-time work*.

- A higher percentage of Indigenous students (49%) than non-Indigenous students (37%) reported receiving money from *occasional informal jobs such as babysitting or gardening*, while a higher percentage of non-Indigenous students (87%) than Indigenous students (75%) reported receiving money as a *gift from friends or relatives*.
- A higher percentage of foreign-born students (43%) than Australian-born students (27%) reported receiving money from *an allowance or pocket money without having to do any chores*, while a higher percentage of Australian-born students (57%) than foreign-born students (41%) reported receiving money from *working outside school hours in a holiday job or a part-time work*. A higher percentage of Australian-born students (41%) than foreign-born students (26%) also reported receiving money from *selling things (e.g. at a local markets or on eBay)*.

Demographic group	Percentages of students who get money from …			
	An allowance or pocket money for regularly doing chores at home	An allowance or pocket money without having to do any chores	Working outside school hours (e.g. a holiday job, part-time work)	Working in a family business
Sex				
Females	41	32	54	15
Males	45	32	51	22
Socioeconomic background				
Most disadvantaged students	43	35	48	20
Socioeconomically average students	41	31	54	20
Least disadvantaged students	45	31	53	16
Geographic location of schools				
Metropolitan	43	34	49	18
Provincial	44	26	61	22
Remote	42	36	67	29
Indigenous background				
Indigenous	51	37	50	23
Non-Indigenous	43	31	52	19
Immigrant background				
Australian-born	44	27	57	19
First-generation	41	35	49	18
Foreign-born	41	43	41	17

Demographic group	Occasional informal jobs (e.g. babysitting or gardening)	Gifts from friends or relatives	Selling things (e.g. at local markets or on eBay)
Sex			
Females	40	89	30
Males	35	83	44
Socioeconomic background			
Most disadvantaged students	32	79	34
Socioeconomically average students	36	87	38
Least disadvantaged students	45	92	37
Geographic location of schools			
Metropolitan	36	86	36
Provincial	43	87	39
Remote	58	74	50
Indigenous background			
Indigenous	49	75	40
Non-Indigenous	37	87	37
Immigrant background			
Australian-born	42	88	41
First-generation	34	85	35
Foreign-born	27	79	26

FIGURE 7.10 Percentages of students who had access to money from various sources, for different demographic groups

Table 7.3 shows the percentages of Australian students who reported receiving money from each source, for the different demographic groups, along with the changes in the percentages of students between PISA 2012 and 2015, and PISA 2012 and 2018, and the significance of these changes. The largest percentage differences were:

Between 2015 and 2018:

- There was a 7 percentage point decrease of female and male students receiving money from *occasional informal jobs such as baby sitting or gardening*, and a 7 percentage point decrease of male students receiving money from an *allowance or pocket money for regularly doing chores around the home* and a 5 percentage point decrease for female students.
- There was an 8 percentage point decrease of least disadvantaged students and socioeconomically average students receiving money from *occasional informal jobs*, while there was a 5 percentage point decrease of the most disadvantaged students and the least disadvantaged students receiving money from *an allowance or pocket money for regularly doing chores at home*.
- There was a 9 percentage point decrease of students in provincial schools and a 5 percentage point increase of students in remote schools receiving money from *occasional informal jobs*, while the proportion of students in provincial schools receiving money from *working in a family business* decreased by 5 percentage points.
- There was a 6 percentage point decrease of students in both metropolitan schools and provincial schools receiving money from *an allowance or pocket money for regularly doing chores at home*.
- While the percentage of Indigenous students receiving money from *an allowance or pocket money for regularly doing chores at home* decreased by 10 percentage points and by 6 percentage points for non-Indigenous students.
- There was an 8 percentage point decrease of Australian-born students and foreign-born students receiving money from *occasional informal jobs*, while the percentage of Australian-born students and first-generation born students receiving money from *an allowance or pocket money for regularly doing chores at home* decreased by 6 percentage points and by 5 percentage points for foreign-born students.

Between 2012 and 2018:

- There was a 13 percentage point increase of male students and a 7 percentage point increase in the proportion of female students receiving money from *selling things (e.g. at a local market or on eBay)*. There was an 11 percentage point decrease of female students and a 5 percentage point decrease in male students receiving money from *occasional informal jobs such as babysitting or gardening*.
- For the least disadvantaged students, there was an 8 percentage point decrease in receiving money from *occasional informal jobs*, and a 10 percentage point increase in receiving money from *selling things (e.g. at local markets or on eBay)*. Similarly, the most disadvantaged students reported a 10 percentage point increase in receiving money from *selling things at a local market or on eBay*.
- The percentage of students in metropolitan and provincial schools receiving money from *occasional informal jobs such as babysitting or gardening* decreased by 8 percentage points. Students in metropolitan schools reported a 10 percentage point increase in receiving money from *selling things (e.g. at local markets or on eBay)*, while students from remote schools reported a 27 percentage point increase.

- There was an 18 percentage point increase in the proportion of Indigenous students receiving money from *selling things (e.g. at local markets or on eBay)* while there was a 10 percentage point increase for non-Indigenous students. Indigenous students reported a 10 percentage point increase in receiving money from *working in a family business*, while non-Indigenous students reported a 3 percentage point increase.
- There was a 10 percentage point decrease in the proportion of Australian-born students and foreign-born students receiving money from *occasional informal jobs such as baby sitting or gardening.* A 13 percentage point increase was observed among the proportion of Australian-born students receiving money for *selling things (e.g. at a local market or on eBay)*, in contrast to a 10 percentage point increase among foreign-born students.

TABLE 7.3 Percentages of students who had access to money from various sources for PISA 2012 and 2018, and the differences between PISA 2012 and 2018, and PISA 2015 and 2018, for different demographic groups

	An allowance or pocket money for regularly doing chores at home										
	PISA 2012		PISA 2015		PISA 2018		Difference between 2012 and 2018 (PISA 2018–2012)			Difference between 2015 and 2018 (PISA 2018–2015)		
Demographic group	%	SE	%	SE	%	SE	% point difference		SE	% point difference		SE
Sex												
Females	42	2.0	46	1.0	41	0.8	0		2.2	-5	▼	1.3
Males	46	2.2	52	0.8	45	0.9	-2	▼	2.4	-7	▼	1.2
Socioeconomic background												
Most disadvantaged students	43	2.8	49	1.1	43	1.0	1		3.0	-5	▼	1.5
Socioeconomically average students	45	2.2	48	0.8	41	0.9	-3		2.4	-7	▼	1.2
Least disadvantaged students	43	3.1	50	1.3	45	1.2	2		3.3	-5	▼	1.8
Geographic location of schools												
Metropolitan	42	1.7	48	0.8	43	0.7	0		1.9	-6	▼	1.0
Provincial	49	2.4	51	1.0	44	1.2	-4		2.7	-6	▼	1.6
Remote	47	13.1	55	4.0	42	9.0	-5		15.9	-13		9.8
Indigenous background												
Indigenous	49	4.4	61	1.5	51	3.0	2		5.3	-10	▼	3.3
Non-Indigenous	44	1.5	48	0.6	43	0.6	-1		1.6	-6	▼	0.9
Immigrant background												
Australian-born	47	1.8	51	0.9	44	0.8	-2		2.0	-6	▼	1.2
First-generation	42	3.1	47	1.2	41	1.2	-1		3.3	-6	▼	1.7
Foreign-born	36	4.1	46	1.8	41	1.7	4		4.5	-5	▼	2.5

TABLE 7.3 (continued)

Demographic group	An allowance or pocket money without having to do any chores											
	PISA 2012		PISA 2015		PISA 2018		Difference between 2012 and 2018 (PISA 2018–2012)			Difference between 2015 and 2018 (PISA 2018–2015)		
	%	SE	%	SE	%	SE	% point difference		SE	% point difference		SE
Sex												
Females	33	2.1	31	0.9	32	0.8	-1		2.3	2		1.2
Males	30	2.3	30	0.8	32	0.9	2		2.4	1		1.2
Socioeconomic background												
Most disadvantaged students	33	2.8	32	1.2	35	1.3	2		3.1	3		1.7
Socioeconomically average students	30	1.7	29	0.8	31	0.9	0		1.9	1		1.2
Least disadvantaged students	33	3.3	30	1.3	31	1.0	-2		3.4	1		1.6
Geographic location of schools												
Metropolitan	35	1.9	32	0.8	34	0.8	-1		2.1	1		1.1
Provincial	24	2.7	25	1.0	26	1.1	2		2.9	1		1.5
Remote	18	8.1	33	3.7	36	5.7	17		9.9	2		6.8
Indigenous background												
Indigenous	38	4.8	40	1.6	37	2.6	-1		5.5	-3		3.1
Non-Indigenous	31	1.6	30	0.6	31	0.7	0		1.7	2		0.9
Immigrant background												
Australian-born	27	1.9	25	0.6	27	0.7	0		2.1	1		1.0
First-generation	37	2.6	35	1.1	35	1.2	-2		2.9	0		1.6
Foreign-born	40	4.8	40	1.7	43	1.6	3		5.0	3		2.4

Demographic group	Working outside school hours (e.g. a holiday job, part-time work)											
	PISA 2012		PISA 2015		PISA 2018		Difference between 2012 and 2018 (PISA 2018–2012)			Difference between 2015 and 2018 (PISA 2018–2015)		
	%	SE	%	SE	%	SE	% point difference		SE	% point difference		SE
Sex												
Females	54	1.8	54	1.0	54	1.1	-1		2.1	0		1.4
Males	49	2.3	50	0.8	51	1.0	2		2.5	1		1.3
Socioeconomic background												
Most disadvantaged students	48	3.3	50	1.2	48	1.4	0		3.5	-3		1.9
Socioeconomically average students	53	2.3	54	0.8	54	1.0	2		2.5	0		1.3
Least disadvantaged students	54	2.7	49	1.3	53	1.4	-1		3.0	4		1.9
Geographic location of schools												
Metropolitan	49	1.7	49	0.8	49	0.9	0		1.9	1		1.2
Provincial	60	3.2	61	1.1	61	1.7	1		3.6	0		2.0
Remote	67	11.9	60	2.5	67	6.9	0		13.7	7		7.4
Indigenous background												
Indigenous	51	4.4	53	1.5	50	2.9	-1		5.3	-3		3.3
Non-Indigenous	52	1.6	52	0.6	52	0.8	0		1.8	1		1.1
Immigrant background												
Australian-born	56	2.1	56	0.7	57	1.1	2		2.3	2		1.3
First-generation	48	2.8	49	1.3	49	1.3	1		3.1	3		1.8
Foreign-born	42	4.4	42	1.8	41	1.8	-1		4.8	-1		2.6

TABLE 7.3 (continued)

Demographic group	Working in a family business											
	PISA 2012		PISA 2015		PISA 2018		Difference between 2012 and 2018 (PISA 2018–2012)			Difference between 2015 and 2018 (PISA 2018–2015)		
	%	SE	%	SE	%	SE	% point difference		SE	% point difference		SE
Sex												
Females	12	1.3	16	0.6	15	0.7	3		1.5	-1		0.9
Males	19	1.7	24	0.6	22	0.7	4	▲	1.9	-2		0.9
Socioeconomic background												
Most disadvantaged students	17	2.2	21	1.0	20	1.1	3		2.4	-2		1.5
Socioeconomically average students	17	1.7	21	0.6	20	0.7	3		1.9	-2		1.0
Least disadvantaged students	11	1.9	16	0.9	16	0.9	5	▲	2.1	-1		1.3
Geographic location of schools												
Metropolitan	14	1.2	18	0.5	18	0.6	4		1.4	0		0.7
Provincial	19	2.3	27	1.0	22	1.1	3		2.5	-5	▼	1.5
Remote	19	9.2	30	2.6	29	7.1	10		11.7	-1		7.6
Indigenous background												
Indigenous	12	3.2	25	1.5	23	2.4	10	▲	4.0	-2		2.8
Non-Indigenous	15	1.1	20	0.4	19	0.5	3	▼	1.2	-2	▼	0.6
Immigrant background												
Australian-born	16	1.6	21	0.6	19	0.7	3	▲	1.7	-2		0.9
First-generation	14	1.9	20	0.8	18	0.8	4	▲	2.1	-2		1.2
Foreign-born	17	3.6	17	1.3	17	1.4	0		3.8	0		1.9

Demographic group	Occasional informal jobs (e.g. babysitting or gardening)											
	PISA 2012		PISA 2015		PISA 2018		Difference between 2012 and 2018 (PISA 2018–2012)			Difference between 2015 and 2018 (PISA 2018–2015)		
	%	SE	%	SE	%	SE	% point difference		SE	% point difference		SE
Sex												
Females	51	2.3	47	0.9	40	1.1	-11	▼	2.5	-7	▼	1.4
Males	40	2.2	42	0.8	35	0.9	-5	▼	2.3	-7	▼	2.3
Socioeconomic background												
Most disadvantaged students	42	3.6	41	1.4	32	1.3	-10	▼	3.8	-8	▼	1.9
Socioeconomically average students	44	2.2	44	0.8	36	1.0	-7	▼	2.4	-8	▼	1.3
Least disadvantaged students	53	2.7	48	1.4	45	1.2	-8	▼	2.9	-3		1.8
Geographic location of schools												
Metropolitan	44	2.0	42	0.7	36	0.9	-8	▼	2.2	-6	▼	1.1
Provincial	51	3.3	52	1.2	43	1.5	-8	▼	3.7	-9	▼	1.9
Remote	53	11.2	53	5.5	58	3.7	5	▲	11.8	5	▲	6.7
Indigenous background												
Indigenous	45	4.0	51	1.7	49	3.3	4		5.1	-2		3.7
Non-Indigenous	46	1.7	44	0.6	37	0.8	-9	▼	1.9	-7	▼	1.0
Immigrant background												
Australian-born	52	2.0	50	0.8	42	0.9	-10	▼	2.2	-8	▼	1.3
First-generation	38	2.7	38	1.1	34	1.2	-4		2.9	-4	▼	1.6
Foreign-born	37	3.8	34	1.7	27	1.8	-10	▼	4.2	-8	▼	4.2

TABLE 7.3 (continued)

Demographic group	Gifts from friends or relatives											
	PISA 2012		PISA 2015		PISA 2018		Difference between 2012 and 2018 (PISA 2018–2012)			Difference between 2015 and 2018 (PISA 2018–2015)		
	%	SE	%	SE	%	SE	% point difference		SE	% point difference		SE
Sex												
Females	91	1.1	89	0.5	89	0.5	-2		1.2	0		0.8
Males	87	1.5	86	0.6	83	0.6	-4	▼	1.6	-3	▼	0.8
Socioeconomic background												
Most disadvantaged students	82	2.4	84	0.9	79	0.9	-3		2.6	-5	▼	1.3
Socioeconomically average students	91	1.1	88	0.5	87	0.6	-4	▼	1.3	-1		0.8
Least disadvantaged students	93	1.3	91	0.7	92	0.7	-1		1.5	1		1.0
Geographic location of schools												
Metropolitan	90	1.1	88	0.4	86	0.5	-4	▼	1.2	-2	▼	0.7
Provincial	88	1.9	86	0.8	87	0.9	-1		2.1	1		1.3
Remote	69	11.8	81	5.1	74	4.4	5		12.6	-8		6.7
Indigenous background												
Indigenous	85	2.9	80	1.3	75	2.4	-10	▼	3.7	-4		2.8
Non-Indigenous	89	0.9	88	0.4	87	0.4	-3	▼	1.0	-1	▼	0.6
Immigrant background												
Australian-born	90	1.2	89	0.5	88	0.5	-2		1.3	0		0.7
First-generation	91	1.7	89	0.6	85	0.9	-6	▼	2.0	-4	▼	1.1
Foreign-born	83	3.2	80	1.4	79	1.5	-4		3.5	-2		2.1

Demographic group	Selling things (e.g. at local markets or on eBay)											
	PISA 2012		PISA 2015		PISA 2018		Difference between 2012 and 2018 (PISA 2018–2012)			Difference between 2015 and 2018 (PISA 2018–2015)		
	%	SE	%	SE	%	SE	% point difference		SE	% point difference		SE
Sex												
Females	23	1.5	29	0.9	30	1.0	7	▲	1.8	1		1.3
Males	31	1.8	44	0.8	44	1.0	13	▲	2.0	0		1.3
Socioeconomic background												
Most disadvantaged students	24	2.3	37	1.3	34	1.5	10	▲	2.7	-3		1.9
Socioeconomically average students	27	1.8	37	0.8	38	1.1	11	▲	2.1	2		1.3
Least disadvantaged students	27	2.6	35	1.1	37	1.2	10	▲	2.9	2		1.7
Geographic location of schools												
Metropolitan	26	1.5	35	0.8	36	0.9	10	▲	1.8	1		1.2
Provincial	27	2.6	41	1.2	39	1.2	12	▲	2.8	-2		1.7
Remote	23	7.4	43	2.8	50	7.3	27	▲	10.4	7		7.8
Indigenous background												
Indigenous	22	3.4	43	1.4	40	2.9	18	▲	4.4	-3		3.2
Non-Indigenous	27	1.1	36	0.7	37	0.8	10	▲	1.3	0		1.0
Immigrant background												
Australian-born	28	1.5	39	0.8	41	0.9	13	▲	1.8	2	▲	1.4
First-generation	28	2.4	33	1.0	35	1.1	7		1.2	2		1.5
Foreign-born	16	2.9	33	1.8	26	1.6	10	▲	3.3	-7	▼	2.4

Note: The symbols indicate the change over time is significantly higher (▲) or signifcantly lower (▼).

Figure 7.11 shows the relationship between student sources of money and financial literacy.

- The largest performance gap was observed among Australian students who received money from *working in a family business*: these students scored 46 points lower than students who did not receive money in this way, Australian student performance was higher than that of the students on average across OECD countries. This difference for Australia was equal to about one-and-a-half years of schooling.
- Students who received money as *gifts from friends or relatives* scored 38 points higher than students who did not receive money in this form, which was higher than for students from across the OECD countries. This difference for Australia was equal to nearly one-and-a-quarter years of schooling.
- There was a 33 score point difference in performance between students who had and those who had not received *an allowance or pocket money without having to do any chores*. This score point difference for Australia was equivalent to about one year of schooling. There was a 29 point difference between students who had and those who had not received *an allowance or pocket money for regularly doing chores at home*.

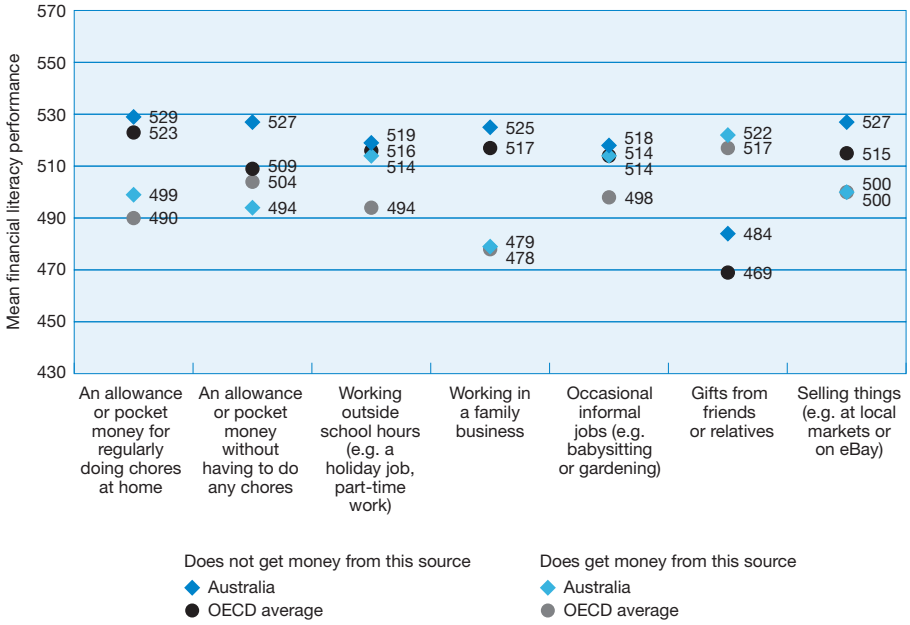
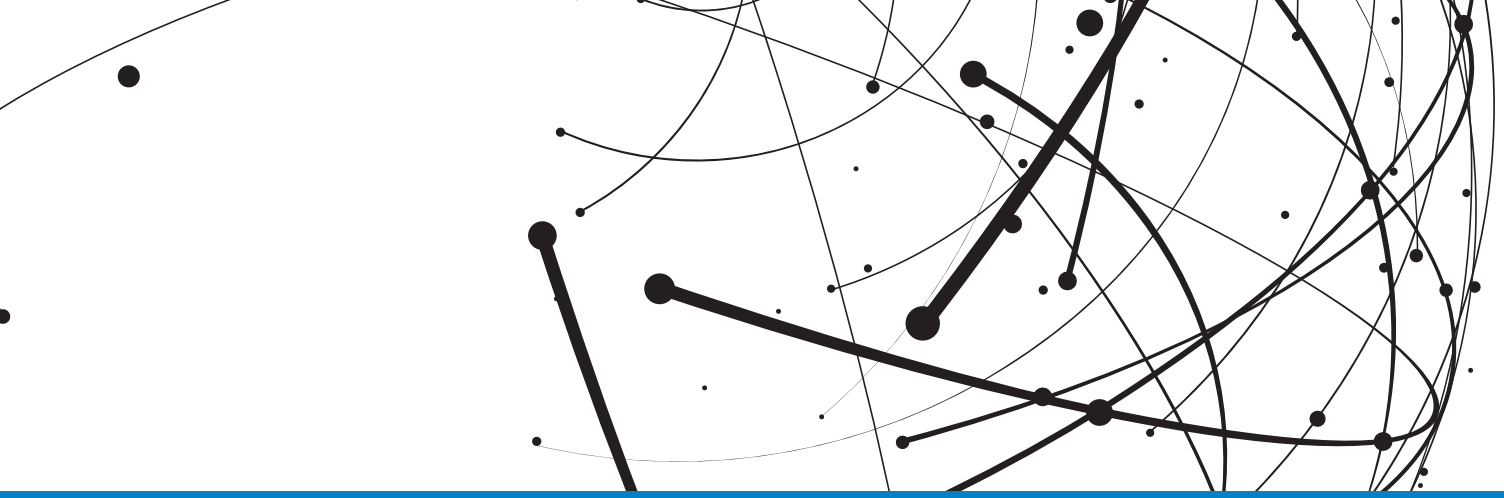


FIGURE 7.11 Mean scores on the financial literacy scale, by student sources of money, for Australia



CHAPTER 8

Student attitudes towards and confidence about financial matters

This chapter examines student attitudes towards and confidence about financial matters. It discusses the similarities and differences between countries and for different demographic groups and how these vary by student characteristics. It also explores the relationship between these attitudes and student financial literacy.

While Chapter 7 focused on student use of basic financial products, this chapter examines their confidence in dealing with money matters and interest in doing so. Their attitudes today about money matters might be indicative of their future behaviour and their readiness to take responsibility for their finances (OECD, 2020).

Key findings

- Fifty-one per cent of Australian students agreed with *I enjoy talking about money matters*, which was similar to the percentage of students across the OECD countries.
- A higher percentage of students across the OECD countries agreed with *money matters are not relevant for me right now* (37%) than Australian students (34%).
- In Australia, 54% of male students agreed with *I enjoy talking about money matters,* compared to 47% of female students. Fewer male students (31%) than female students (37%) agreed with *money matters are not relevant for me right now.*
- In Australia, 33% of non-Indigenous students agreed with *money matters are not relevant for me right now* compared to 43% of Indigenous students.
- In Australia, students who agreed with *I enjoy talking about money* scored 12 points higher (equivalent to one-third of a year of schooling) in the PISA 2018 financial literacy assessment than students who disagreed with this statement. In Australia, students who agreed with *money matters are not relevant for me right now* scored 43 points lower than students who disagreed.
- A higher percentage of Australian students (76%) reported that they were confident in *keeping track of my account balance* than for students from across OECD countries (65%).

- In Australia, male students reported significantly greater confidence in dealing with money matters than female students.
- In Australia, students who reported they were confident in *planning my spending with consideration of my current financial situation* scored 52 points higher (or almost one and three-quarter years of schooling) than students who reported that they were not very confident with this statement.

Interest in money matters

Using a four-point scale (strongly agree; agree; disagree; strongly disagree), PISA 2018 measured student interest in money matters by asking students to rate their level of agreement with the following statements:

- *I enjoy talking about money matters*
- *Money matters are not relevant for me right now*.

Figure 8.1 shows the percentages of students who reported their level of agreement with statements about interest in money matters for Australia and participating countries. The OECD average and the average across all participating countries have been included for two points of comparison.

- Fifty-one per cent of Australian students agreed[1] with *I enjoy talking about money matters,* which was similar to the percentages of students in 8 countries agreed with this statement than Australian students, while fewer students in Georgia, Bulgaria, the Slovak Republic, Serbia and Italy agreed with this statement.
- Thirty-four per cent of Australian students agreed with *money matters are not relevant for me right now*, which was similar to the percentages of students in Estonia, Canada and Portugal but lower than the percentages of students in 13 countries including Bulgaria, Georgia, Lithuania and the students from across the OECD. Fewer students in Finland, Latvia and United States agreed with this statement.

1 For ease of reading, from this point onward 'agreed' or 'strongly agreed' will be referred to as 'agreed'.

Country	Percentages of students who reported *agree* or *strongly agree*	
	I enjoy talking about money matters	Money matters are not relevant for me right now
Australia	51	34
Brazil	49	39
Bulgaria	42	48
Canada	53	33
Chile	51	50
Estonia	50	34
Finland	58	25
Georgia	43	46
Indonesia	70	59
Italy	36	44
Latvia	52	31
Lithuania	58	37
Peru	67	42
Poland	52	39
Portugal	64	34
Russian Federation	58	38
Serbia	40	45
Slovak Republic	42	45
Spain	52	41
United States	53	30
Average	52	40
OECD average	52	37

FIGURE 8.1 Percentages of students who agreed they were interested in money matters, by country

Figure 8.2 presents the percentages of students who reported their agreement with the statements related to interest in money matters for the different demographic groups.

- Higher percentages of male students agreed with *I enjoy talking about money matters* than female students (by 7 percentage points), and with *money matters are not relevant for me right now* than female students (by 6 percentage points).
- Higher percentages of the least disadvantaged students agreed with *I enjoy talking about money matters* than the most disadvantaged students (by 7 percentage points), while lower percentages of the least disadvantaged students agreed with *money matters are not relevant for me right now* than the most disadvantaged students (by 6 percentage points).
- Higher percentages of Indigenous students agreed with *money matters are not relevant for me right now* than non-Indigenous students (by 10 percentage points).

Demographic group	Percentages of students who reported *agree* or *strongly agree*	
	I enjoy talking about money matters	Money matters are not relevant for me right now
Sex		
Females	47	31
Males	54	37
Socioeconomic background		
Most disadvantaged students	46	38
Socioeconomically average students	51	33
Least disadvantaged students	53	32
Geographic location of schools		
Metropolitan	51	34
Provincial	48	34
Remote	48	37
Indigenous background		
Indigenous	49	43
Non-Indigenous	51	33
Immigrant background		
Australian-born	50	34
First-generation	50	33
Foreign-born	52	36

FIGURE 8.2 Percentages of students who agreed they were interested in money matters, for different demographic groups

Figure 8.3 presents the mean scores on the financial literacy scale by student interest in money matters, for Australia. Students who agreed with *I enjoy talking about money* scored 12 points (or over one-third of a year of schooling) higher in the financial literacy assessment than students who disagreed with this statement. Students who agreed that *money matters are not relevant for me right now* scored 31 points lower than students who disagreed.

On average across OECD countries, students who agreed with *I enjoy talking about money* scored 15 points higher than students who disagreed with this statement. On average across OECD countries, students who agreed that *money matters are not relevant for me right now* scored 31 points lower than students who disagreed.

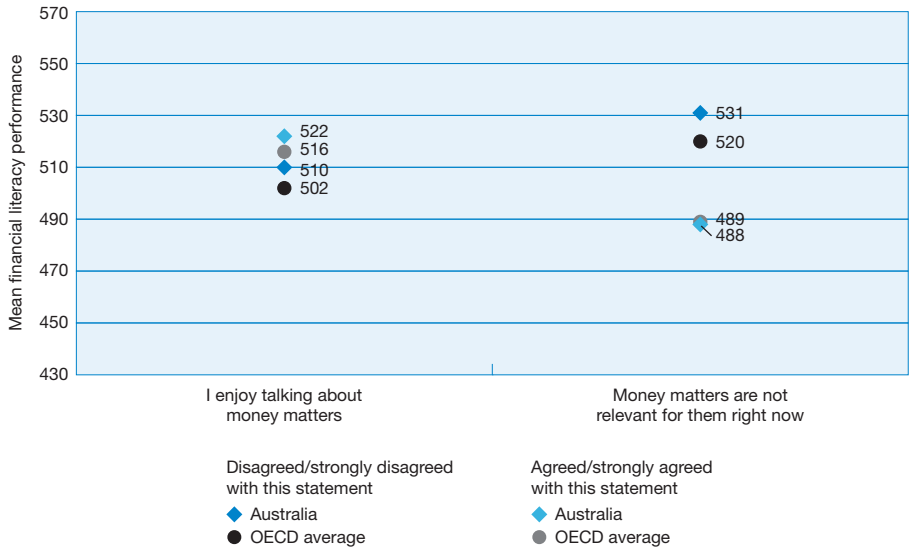


FIGURE 8.3 Mean scores on the financial literacy scale, by student interest in money matters, for Australia

Confidence in dealing with money matters

Using a four-point scale (not at all confident; not very confident; confident; very confident), PISA 2018 asked students to rate their level of confidence in dealing with the following non-digital money matters:

- *making a money transfer (e.g. paying a bill)*
- *filling in forms at the bank*
- *understanding bank statements*
- *understanding a sales contract*
- *keeping track of my account balance*
- *planning my spending with consideration of my current financial situation*.

An index of confidence in dealing with money matters was constructed using the responses to these statements. Positive values indicate higher student confidence and negative values indicate lower student confidence in these matters.

Figure 8.4 presents the mean index scores for Australia, participating countries, and the OECD average on the overall index of confidence in dealing with money matters. Students in the United States, Canada, Finland, Italy and students on average across the OECD reported lower confidence in dealing with money matters than Australian students, while students in Poland, Chile and Latvia reported similar levels of confidence to Australian students.

Students in Estonia reported the highest confidence in dealing with money matters, and achieved the highest mean index of all countries, while Serbia reported the lowest mean index score. The mean index score of 0.06 for Australia was higher than for students from across the OECD countries (-0.04).

Country	All students	
	Mean index	SE
Serbia	-0.40	0.0
Italy	-0.38	0.0
Peru	-0.35	0.0
Spain	-0.30	0.0
Brazil	-0.22	0.0
United States	-0.18	0.0
Slovak Republic	-0.13	0.0
Indonesia	-0.08	0.0
Georgia	-0.08	0.0
Bulgaria	-0.06	0.0
Portugal	-0.05	0.0
Canada	0.00	0.0
Finland	0.00	0.0
Poland	0.02	0.0
Chile	0.05	0.0
Australia	0.06	0.0
Latvia	0.08	0.0
Russian Federation	0.15	0.0
Lithuania	0.16	0.0
Estonia	0.20	0.0

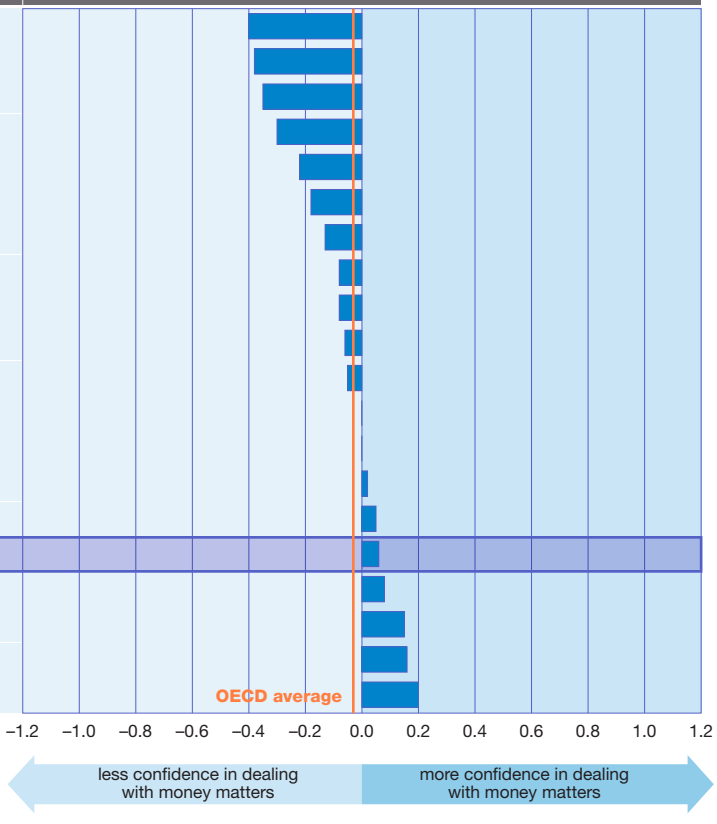


FIGURE 8.4 Confidence in dealing with money matters index, by country

Figure 8.5 shows the percentages of students who reported their level of confidence in dealing with non-digital money matters.[2] Countries with the lowest mean score on the index are placed at the top of the figure and countries with the highest mean score are placed at the bottom. The OECD average and the average have been included as two points of comparison.

- Fifty-one per cent of Australian students reported that they were confident in *making a money transfer*, which was higher than the percentages of students in 11 countries, similar to the percentage of students in Latvia, Canada, Portugal, Estonia and Georgia but lower than the percentages of students in Lithuania, the Russian Federation and Chile.
- Forty-three per cent of Australian students reported that they were confident in *filling in forms at the bank,* which was similar to the percentages of students in Estonia, Bulgaria, Poland, Lithuania, Georgia, Canada, Latvia and Chile, higher than the percentage of students in 8 countries, and lower than the percentage of students in Finland, Indonesia and the Russian Federation.
- Forty-five per cent of Australian students reported that they were confident in *understanding bank statements* which was similar to the percentages of students in Bulgaria, Portugal, Poland, Georgia, Chile and Indonesia, higher than the percentage of students in 9 countries, and lower than the percentage of students in Lithuania, the Russian Federation, Latvia and Estonia.
- Thirty-one per cent of Australian students reported that they were confident in *understanding a sales contract,* which was similar to the percentages of students in Canada and Spain, lower than the percentages of students in 15 countries and higher than the percentage of students in the United States.
- Seventy-six per cent of Australian students reported that they were confident in *keeping track of my account balance,* which was similar to the percentage of students in Estonia, higher than the percentages of students in the remaining countries.
- Sixty-eight per cent of Australian students reported that they were confident in *planning my spending in consideration of my current financial situation,* which was similar to the percentages of students in Estonia, the Russian Federation, Lithuania and Portugal, higher than students in 14 countries but lower than students in Finland.

2 For ease of reading, from this point onward, 'confident' and 'very confident' will be referred to as 'confident'.

Country	Percentages of students who reported feeling *confident* or *very confident* about the following activities					
	Making a money transfer (e.g. paying a bill)	Filling in forms at the bank	Understanding bank statements	Understanding a sales contract	Keeping track of my account balance	Planning my spending with consideration of my current financial situation
Serbia	38	33	36	35	41	45
Italy	34	31	30	34	42	56
Peru	45	28	31	39	39	51
Spain	39	35	32	31	54	58
Brazil	42	37	43	38	56	49
United States	42	37	35	28	68	60
Slovak Republic	39	38	39	40	63	59
Indonesia	42	48	45	39	42	54
Georgia	53	43	44	46	58	57
Bulgaria	43	43	42	45	55	54
Portugal	50	38	43	36	73	69
Canada	50	44	41	31	73	64
Finland	46	47	38	38	70	70
Poland	49	43	44	46	53	61
Chile	61	45	44	36	61	62
Australia	51	43	45	31	76	68
Latvia	49	45	53	45	66	63
Russian Federation	60	51	52	50	69	69
Lithuania	55	43	49	50	63	68
Estonia	51	42	65	41	77	68
Average	47	41	43	39	60	60
OECD average	47	41	43	37	65	64

FIGURE 8.5 Percentages of students who were confident with non-digital money matters, by country

Figure 8.6 shows the mean index scores on the index of confidence in dealing with money matters for different demographic groups.

- Male students reported greater confidence in dealing with money matters than female students.
- The least disadvantaged students reported greater confidence in dealing with money matters than the most disadvantaged students.

Demographic group	All students	
	Mean index	SE
Sex		
Females	-0.05	0.0
Males	0.16	0.0
Socioeconomic background		
Most disadvantaged students	-0.06	0.0
Socioeconomically average students	0.06	0.0
Least disadvantaged students	0.17	0.0
Geographic location of schools		
Metropolitan	0.06	0.0
Provincial	0.04	0.0
Remote	0.00	0.2
Indigenous background		
Indigenous	0.03	0.1
Non-Indigenous	0.06	0.0
Immigrant background		
Australian-born	0.04	0.0
First-generation	0.09	0.0
Foreign-born	0.04	0.0

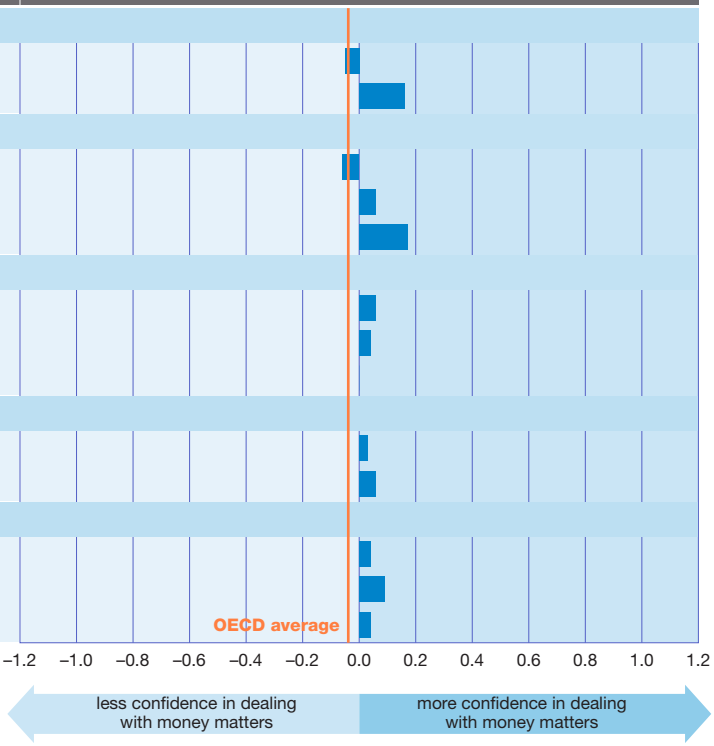


FIGURE 8.6 Confidence in dealing with money matters index, for different demographic groups

Figure 8.7 presents the percentages of students who reported they felt confident in dealing with money matters for the different demographic groups.

- Higher percentages of male students than females students reported they were confident in *making a money transfer* (by 6 percentage points), *filling in forms at the bank* (by 8 percentage points), *understanding bank statements* (by 11 percentage points), and *understanding a sales contract* (by 17 percentage points).
- Higher percentages of the least disadvantaged students than the most disadvantaged students reported they were confident in *understanding bank statements* (by 10 percentage points), *keeping track of my account balance* (by 12 percentage points), and *planning my spending with consideration of my current financial situation* (by 17 percentage points).
- Higher percentages of students in provincial schools reported they were confident in *filling in forms at the bank* than students in metropolitan schools (by 3 percentage points). Higher percentages of students in metropolitan schools also reported they were confident in *planning my spending with consideration of my current financial situation* than students in provincial schools (by 2 percentage points) and students in remote schools (by 8 percentage points).
- Higher percentages of non-Indigenous students than Indigenous students reported they were confident in *keeping track of my account balance* (by 7 percentage points) and *planning my spending with consideration of my current financial situation* (by 11 percentage points).
- Higher percentages of Australian-born students than foreign-born students reported they were confident in *keeping track of my account balance* (by 3 percentage points).

Demographic group	Percentages of students who reported feeling *confident* or *very confident* about the following activities			
	Making a money transfer (e.g. paying a bill)	Filling in forms at the bank	Understanding bank statements	Understanding a sales contract
Sex				
Females	48	39	39	22
Males	54	47	50	39
Socioeconomic background				
Most disadvantaged students	49	42	40	29
Socioeconomically average students	51	42	45	31
Least disadvantaged students	53	44	50	32
Geographic location of schools				
Metropolitan	51	42	44	31
Provincial	51	45	46	30
Remote	56	51	46	29
Indigenous background				
Indigenous	50	46	46	34
Non-Indigenous	51	43	45	30
Immigrant background				
Australian-born	51	43	45	30
First-generation	51	42	44	31
Foreign-born	52	45	45	31

Demographic group	Keeping track of my account balance	Planning my spending with consideration of my current financial situation
Sex		
Females	76	67
Males	77	69
Socioeconomic background		
Most disadvantaged students	70	58
Socioeconomically average students	76	68
Least disadvantaged students	82	75
Geographic location of schools		
Metropolitan	76	68
Provincial	77	66
Remote	70	60
Indigenous background		
Indigenous	69	57
Non-Indigenous	76	68
Immigrant background		
Australian-born	76	68
First-generation	77	69
Foreign-born	73	66

FIGURE 8.7 Percentages of students who were confident in dealing with non-digital money matters, for different demographic groups

Figure 8.8 presents the mean scores on the financial literacy scale, by student confidence in dealing with money matters, for Australia.

- Students who reported that they were confident in *making a money transfer* scored 12 points higher than students who reported that they were not very confident.
- Students who reported that they were confident in *understanding bank statements* scored 22 points higher than students who reported that they were not confident.
- Students who reported that they were confident in *understanding a sales contact* scored 9 points higher than students who reported that they were not confident.

- Students who reported that they were confident in *keeping track of my account balance* scored 44 points higher than students who reported that they were not very confident.
- Students who reported that they were confident in *planning my spending in consideration of my current financial situation* scored 52 points (or almost one-and-three-quarter years of schooling) higher in than students who reported that they were not confident.

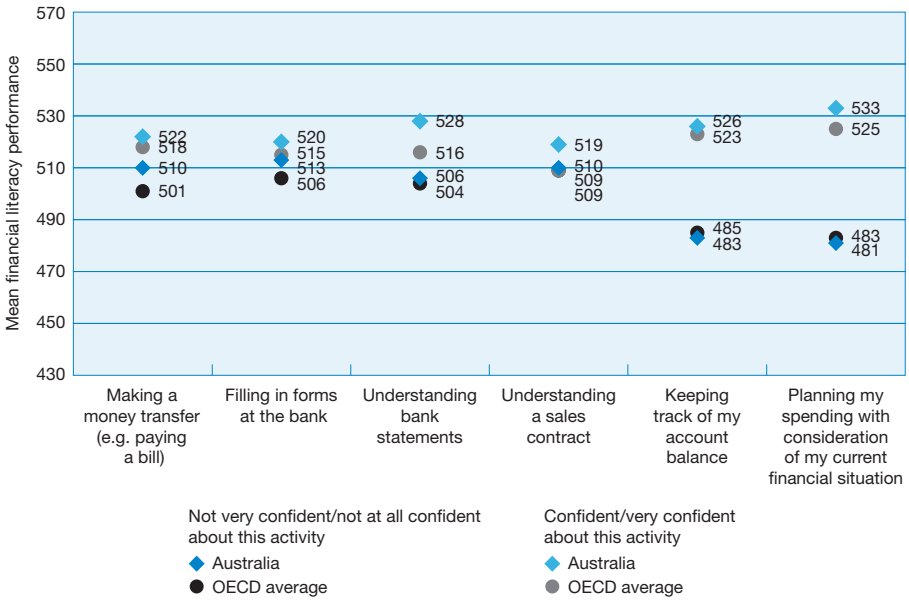
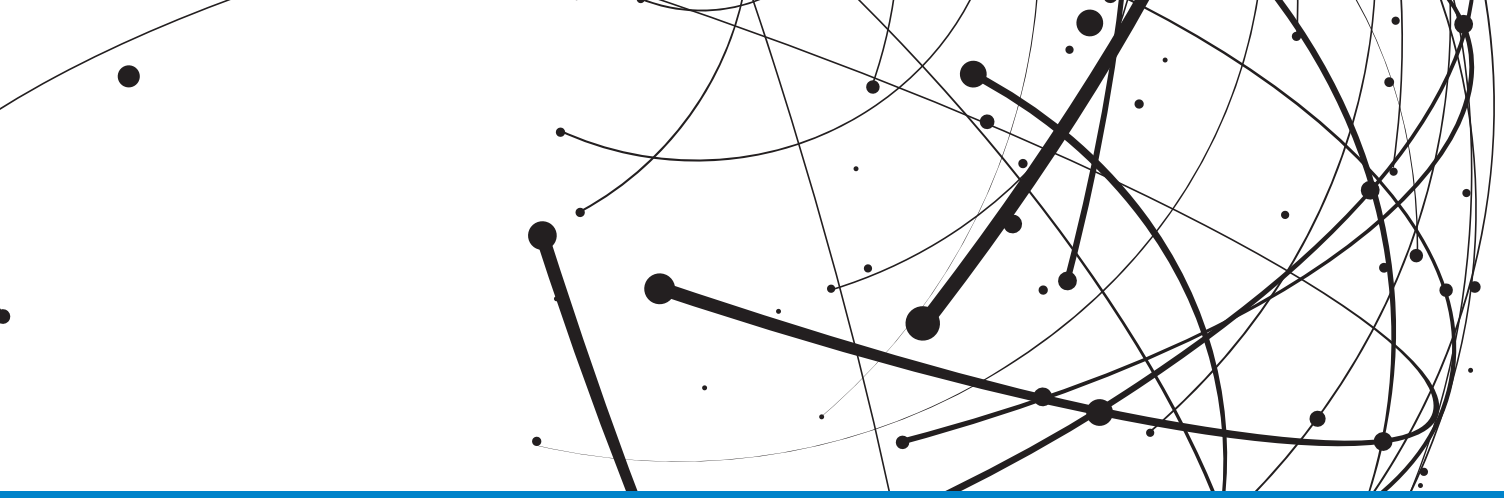


FIGURE 8.8 Mean scores on the financial literacy scale, by confidence in dealing with non-digital money matters, for Australia



CHAPTER 9

Student behaviour with financial matters

While 15-year-olds are limited in the financial decisions they can make, they can still engage in activities that will promote the development of financially responsible behaviour.

This chapter examines the levels of student engagement in basic money-related behaviours and whether these are associated with financial literacy performance. The chapter also examines the similarities and differences between countries and different demographic groups and how they vary by student characteristics.

Key findings

- In Australia, 92% of students had *checked how much money they have* over the previous 12 months. Students who reported this behaviour scored, on average, 53 points higher than those who did not (around one and three-quarter years of schooling).
- Students who reported that they had *bought something that cost more money than they intended to spend* in the previous 12 months scored 22 points lower than students who did not (or nearly three-quarters of a year of schooling).
- Sixty-nine per cent of female students compared to 59% of male students reported that in the previous 12 months they had *complained that they did not have enough money for something they wanted to buy.*
- Ninety-five per cent of the least disadvantaged students and 87% of the most disadvantaged students reported that they *complained that they did not have enough money for something they wanted to buy*.
- Ninety-two per cent of non-Indigenous students and 86% of Indigenous students reported that in the previous 12 months they had *complained that they did not have enough money for something they wanted to buy*.
- Forty-four per cent of Australian-born students and 39% of both first-generation born students and foreign-born students reported that they always *buy the product without comparing prices*.

- Students who reported that they *compare prices in different shops* in the previous 12 months scored 64 points higher than students who did not (around two years of schooling). In contrast, students who *buy the product without comparing prices* scored, on average, 41 points lower than students who did not (around one-and-a-third years of schooling).
- Thirty-seven per cent of male students compared to 27% of female students agreed with *I need to ask my parents or guardians for permission before I spend any money on my own*. Students who agreed with this statement scored 51 points lower than students who had greater autonomy over handling their money (nearly one-and-three-quarter years of schooling).

Money-related behaviours

Using a two-response item (yes; no) PISA 2018 collected information about the following money-related behaviours that students had demonstrated in the previous 12 months:

- *checked that they were given the right change when they bought something*
- *checked how much money they have*
- *bought something that cost more money than they intended to spend*
- *complained that they did not have enough money for something they wanted to buy.*

Figure 9.1 shows the percentages of students who reported that they had demonstrated these money-related behaviours in the previous 12 months. Countries are ranked in alphabetical order. The OECD average and the average across all countries are included for two points of comparison.

- Eighty-eight per cent of Australian students reported that they had *checked that they were given the right change when they bought something* in the previous 12 months. In other participating countries, these percentages ranged from 77% of students in Serbia to 94% in Portugal. Australia was higher than the OECD average of 86%.
- Ninety-two per cent of Australian students reported that they had *checked how much money they have*, which was similar to the percentage of students in Estonia. In other participating countries, these percentages ranged from 78% in Brazil and Bulgaria to 94% in Portugal. Australia was higher than the OECD average of 89%.
- Sixty-four per cent of Australian students reported that they had *bought something that cost more money than they intended to spend*, which was similar to the percentages of students in Poland, Latvia and Lithuania, but lower than the percentages of students in the Russian Federation, the Slovak Republic, Bulgaria, Canada and Estonia.
- Sixty-four per cent of Australian students reported that they *complained that they did not have enough money for something they wanted to buy*, which was similar to the percentages of students in Estonia, the United States, Chile, Georgia, the Slovak Republic, Bulgaria and Canada, but lower than the percentages of students from Brazil, Poland, Finland and Indonesia.

Country	Percentages of students who, in the previous 12 months, had ...			
	Checked that they were given the right change when they bought something	Checked how much money they have	Bought something that cost more money than they intended to spend	Complained that they did not have enough money for something they wanted to buy
Australia	88	92	64	64
Brazil	85	78	53	75
Bulgaria	84	78	67	63
Canada	83	90	67	63
Chile	91	86	58	64
Estonia	85	91	66	66
Finland	87	93	60	67
Georgia	86	82	60	64
Indonesia	91	84	61	66
Italy	90	85	60	54
Latvia	85	89	65	54
Lithuania	85	86	64	56
Peru	90	90	49	47
Poland	84	88	66	68
Portugal	94	94	55	59
Russian Federation	85	87	70	54
Serbia	77	80	61	54
Slovak Republic	85	85	69	64
Spain	82	87	60	61
United States	81	88	60	65
Average	86	87	62	62
OECD average	86	89	63	62

FIGURE 9.1 Percentages of students who reported various financial behaviours, by country

Figure 9.2 presents the percentages of students who had reported various financial behaviours for the different demographic groups in the previous 12 months. The largest percentage point differences were:

- Sixty-nine per cent of female students compared to 59% of male students reported they had *complained that they did not have enough money for something they wanted to buy*, while 67% of female students and 61% of male students reported they had *bought something that cost more money than they intended to spend*.
- Ninety-three per cent of female students and 90% of male students reported that they had *checked how much money they have*.
- Ninety-two per cent of least disadvantaged students and 85% of most disadvantaged students reported that they had *checked that they were given the right change when they bought something*, while 95% of the least disadvantaged students and 87% of the most disadvantaged students reported that they *complained that they did not have enough money for something they wanted to buy*.
- Ninety-two per cent of students from metropolitan schools and 91% of students from provincial schools reported that they complained that they *did not have enough money for something they wanted to buy* compared to 77% of students from remote schools.
- Seventy-two per cent of students from remote schools and 63% of students from metropolitan schools reported that they *checked how much money they have*, while 89% of students from metropolitan schools and 85% of students from provincial schools reported that they *checked that they were given the right change when they bought something*.
- Ninety-two per cent of non-Indigenous students and 86% of Indigenous students reported that they had *complained that they did not have enough money for something they wanted to buy*.

- Sixty-six per cent of Australian-born students, 63% of first-generation born students and 55% of foreign-born students reported that they *checked how much money they have*, while 92% of Australian-born and first-generation born students and 89% of foreign-born students reported that they *complained that they did not have enough money for something they wanted to buy*.

Demographic group	Percentages of students who, in the previous 12 months, had…			
	Checked that they were given the right change when they bought something	Checked how much money they have	Bought something that cost more money than they intended to spend	Complained that they did not have enough money for something they wanted to buy
Sex				
Females	88	93	67	69
Males	88	90	61	59
Socioeconomic background				
Most disadvantaged students	85	65	64	87
Socioeconomically average students	88	64	64	92
Least disadvantaged students	92	63	65	95
Geographic location of schools				
Metropolitan	89	63	64	92
Provincial	85	65	64	91
Remote	83	72	64	77
Indigenous background				
Indigenous	85	66	66	86
Non-Indigenous	89	64	64	92
Immigrant background				
Australian-born	88	66	65	92
First-generation	91	63	64	92
Foreign-born	86	55	61	89

FIGURE 9.2 Percentages of students who performed various financial behaviours, for different demographic groups

Figure 9.3 shows the association between student financial behaviours and financial literacy in the previous 12 months for Australian students and the OECD average.

- Australian students who reported that they *checked how much money they have* scored 53 points higher than students who did not (or nearly one and three-quarter years of schooling). The average achievement score for Australian students was 521 points, which was higher than for students from across the OECD countries (517 points).
- Australian students who *checked that they were given the right change when they bought something* scored 44 points higher than students who did not (or one-and-a-third years of schooling). The average achievement score for Australian students was 522 points, which was higher than for students from across the OECD countries (514 points).
- Australian students who reported that they had *bought something that cost more money than they intended to spend* scored 22 points lower than students who did not (or three-quarters of a year of schooling). This average achievement for Australian students was 531 points, which was higher than for students from across the OECD countries (507 points).

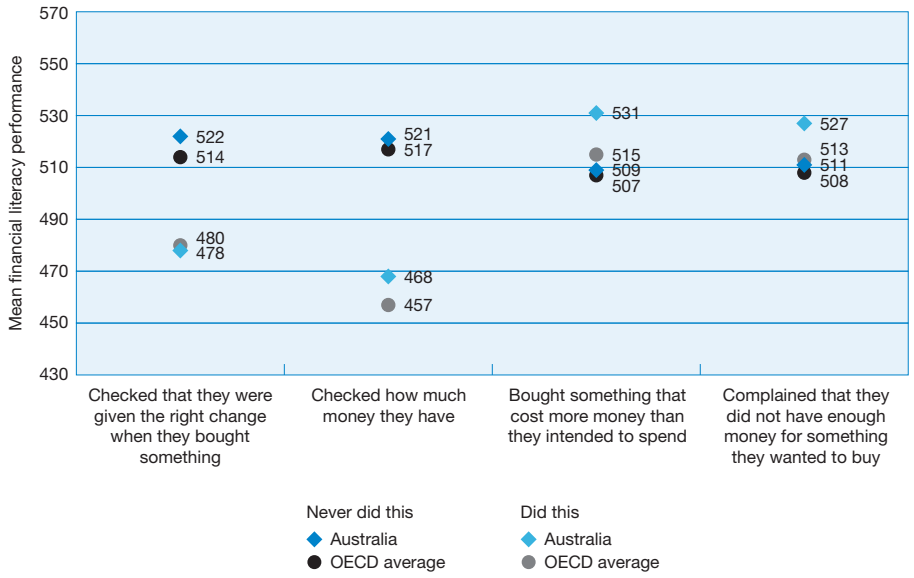


FIGURE 9.3 Mean scores on the financial literacy scale, by student financial behaviours, for Australia

Approaches to spending

Using a four-point scale (never; rarely; sometimes; always), PISA 2018 collected information about how frequently students used the following approaches *when they think about buying a product from their allowance*:

- *compare prices in different shops*
- *compare prices between a shop and an online shop*
- *buy the product without comparing prices*
- *wait until the product gets cheaper before buying it*.

Figure 9.4 shows the percentages of students who reported that they always used these approaches to spending.[1]

- Eighty-four per cent of Australian students reported that they always *compare prices in different shops* when thinking about buying a new product from their allowance. This was similar to Portugal and higher than the percentages for students in the remaining 18 countries.
- Seventy-eight per cent of Australian students reported that they always *compare prices between a shop and an online shop,* which was higher than the percentages for students in all other countries.
- Forty-two per cent of Australian students reported that they always *buy the product without comparing prices,* which was similar to the percentages of students in the Russian Federation, Lithuania, the United States, the Slovak Republic and Canada, but lower than the percentages of students in Indonesia, Georgia, Serbia and Bulgaria.
- Seventy-four per cent of Australian students reported that they always *wait until the product gets cheaper before buying it*, which was similar to the percentages of students in Canada, but higher than the percentages for students in the remaining 18 countries.

1 For ease of reading, from this point onward 'sometimes' and 'always' will be referred to as 'always'.

Country	Percentages of students who, when thinking about buying a new product from their allowance, sometimes or always			
	Compare prices in different shops	Compare prices between a shop and an online shop	Buy the product without comparing prices	Wait until the product gets cheaper
Australia	84	78	42	74
Brazil	73	65	34	59
Bulgaria	61	57	46	52
Canada	80	76	44	74
Chile	70	56	34	48
Estonia	72	65	38	51
Finland	81	74	40	57
Georgia	50	47	49	36
Indonesia	62	64	51	53
Italy	77	71	32	61
Latvia	69	70	40	52
Lithuania	72	72	42	55
Peru	77	51	37	65
Poland	78	74	34	55
Portugal	83	65	31	71
Russian Federation	69	69	41	41
Serbia	66	56	45	53
Slovak Republic	63	59	44	56
Spain	78	67	34	59
United States	76	74	42	66
Average	72	65	40	57
OECD average	76	69	38	60

FIGURE 9.4 Percentages of students who used various spending strategies when buying a new product from their allowance, by country

Figure 9.5 presents the percentages of students who had used various spending approaches for the different demographic groups. The largest percentage point differences were:

- More female students (46%) than male students (38%) reported that they always *buy the product without comparing pric*es and more female students (75%) than male students (72%) reported they *wait until the product gets cheaper* before buying it.
- More male students (79%) than female students (77%) reported that they always *compare prices between a shop and an online shop*.
- More least disadvantaged students (81%) than most disadvantaged students (70%) reported that they *compare prices between a shop and an online shop*, and more least disadvantaged students (89%) than most disadvantaged students (78%) reported that they *compare prices in different shops*.
- More most disadvantaged students (47%) than least disadvantaged students (39%) reported that they *buy the product without comparing prices*.
- More students in metropolitan schools (86%) than in provincial schools (81%) and in remote schools (59%) reported that they always *compare prices in different shops*. Similarly more students in metropolitan schools (79%) than in provincial schools (75%) and in remote schools (60%) always *compare prices in between a shop and an online shop*.
- More students in provincial schools (48%) than in metropolitan schools (40%) reported they always *buy the product without comparing prices.*
- More non-Indigenous students (85%) than Indigenous students (73%) reported that they *compare prices in different shops*, while more non-Indigenous students (78%) than Indigenous students (68%) reported that they always *compare prices between a shop and an online shop*.

- More first-generation born students (86%) than Australian-born students (84%) reported that they always *compare prices in different shops*, while more Australian-born students (44%) than first-generation born students and foreign-born students (39% respectively) reported that they always *buy the product without comparing prices*.

Demographic group	Percentages of students who, when thinking about buying a new product from their allowance, *sometimes* or *always*			
	Compare prices in different shops	Compare prices between a shop and an online shop	Buy the product without comparing prices	Wait until the product gets cheaper
Sex				
Females	85	77	46	75
Males	83	79	38	72
Socioeconomic background				
Most disadvantaged students	78	70	47	69
Socioeconomically average students	85	80	42	75
Least disadvantaged students	89	81	39	75
Geographic location of schools				
Metropolitan	86	79	40	74
Provincial	81	75	48	74
Remote	59	60	49	70
Indigenous background				
Indigenous	73	68	44	68
Non-Indigenous	85	78	42	74
Immigrant background				
Australian-born	84	77	44	74
First-generation	86	79	39	73
Foreign-born	84	77	39	73

FIGURE 9.5 Percentages of students who used various spending strategies when buying a new product from their allowance, for different demographic groups

Figure 9.6 shows the association between student approaches to spending and financial literacy performance for Australia and the OECD average. In general, having a spending strategy was positively associated with higher financial literacy performance.

- Australian students who reported that they *compare prices in different shops* scored 64 points higher than students who did not (or nearly two years of schooling). The average achievement score for Australian students was 526 points, which was higher than for students from across the OECD countries (521 points). The 64 score point difference for Australian students was equal to around two years of schooling.
- Australian students who reported that they *compare prices between a shop and an online shop* scored 41 points higher than students who did not (or around one-and-a-third years of schooling). The average achievement score for Australian students was 525 points, which was higher than for students from across the OECD countries (520 points).
- The strategy to *wait until the product gets cheaper* before buying it was also associated with higher financial literacy performance. On average Australian students scored 23 points higher than students who did not use this strategy. The average achievement score for Australian students using this strategy was 522 points, which was higher than for students from across the OECD countries (513 points) and equal to around three-quarters of a year of schooling.
- In contrast, Australian students who reported that they *buy the product without comparing prices* scored, on average, 41 points lower than students who did not (or around one-and-a-third years of schooling). The average achievement score for Australian students was 493 points, which was similar to students from across the OECD countries (492 points).

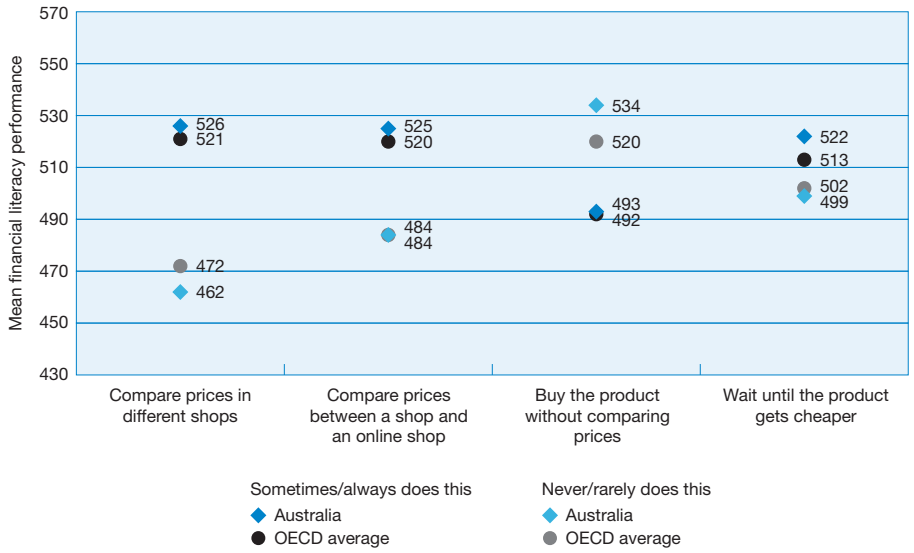


FIGURE 9.6 Mean scores on the financial literacy scale, by student spending strategies, for Australia

Decisions about spending money

Using a four-point scale (strongly agree; agree; disagree; strongly disagree) PISA 2018 collected information from students about their ability to handle their own money and demonstrate financial independence. The statements to which students responded were:

- *I can decide independently what to spend my money on*
- *I can spend small amounts of my money independently, but for larger amounts, I need to ask my parents or guardians for permission*
- *I need to ask my parents or guardians for permission before I spend any money on my own*
- *I am responsible for my own money matters (e.g. for preventing theft)*.

Figure 9.7 shows the percentages of students who agreed with each statement about their ability to handle their own money.[2] Countries are ranked in alphabetical order. The OECD average and the average across all countries are included for two points of comparison.

- Eighty-nine per cent of Australian students agreed with *I can decide independently what to spend my money on*, which was similar to the percentages of students in Finland and Canada.
- Sixty-seven per cent of Australian students agreed with *I can spend small amounts of my money independently, but for larger amounts, I need to ask my parents or guardians for permission*, which was similar to the percentages of students in the Russian Federation, Serbia, Bulgaria, the United States and from across the OECD countries, but lower than the percentages of students in Indonesia, Lithuania, Portugal, Peru, Spain, Italy, Georgia and Canada.
- Thirty-two per cent of Australian students agreed with *I need to ask my parents or guardians for permission before I spend any money on my own*, which was similar to the percentages of students in Canada and the United States, but lower than the percentages of students in 13 countries.
- Eighty-five per cent of Australian students agreed with *I am responsible for my own money matters (e.g. for preventing theft)*, which was similar to the percentages of students in Indonesia and Canada but lower than the percentage of students from Portugal.

2 For ease of reading, from this point onward 'agree' and 'strongly agree' will be referred to as 'agreed'.

Country	Percentages of students who *agreed/strongly agreed* with the following statements:			
	I can decide independently what to spend my money on	I can spend small amounts of my money independently, but for larger amounts I need to ask my parents or guardians for permision	I need to ask my parents or guardians for permission before I spend any money on my own	I am responsible for my own money matters (e.g. for preventing theft)
Australia	89	67	32	85
Brazil	66	63	47	65
Bulgaria	74	67	49	81
Canada	88	69	32	85
Chile	81	61	40	78
Estonia	87	64	22	82
Finland	89	60	15	79
Georgia	76	72	49	72
Indonesia	82	83	81	87
Italy	72	76	39	77
Latvia	73	63	28	82
Lithuania	86	78	47	82
Peru	65	77	48	76
Poland	81	62	29	73
Portugal	66	78	39	89
Russian Federation	82	69	42	80
Serbia	79	68	44	82
Slovak Republic	74	60	46	81
Spain	80	77	48	80
United States	86	65	31	83
Average	79	69	40	80
OECD average	81	68	34	81

FIGURE 9.7 Percentages of students who reported their agreement on handling money, by country

Figure 9.8 presents the percentages of students who agreed with the statements about their ability to handle their own money for the different demographic groups. The largest percentage point differences were:

- More male students (37%) than female students (27%) reported *I need to ask my parents or guardians for permission before I spend any money on my own*, and more female students (90%) than male students (88%) reported *I can decide independently what to spend my money on*.
- More students from the least disadvantaged students (71%) than most disadvantaged students (62%) reported *I can spend small amounts of money independently, but for larger amounts I need to ask my parents or guardians*. In contrast, more most disadvantaged students (36%) than least disadvantaged students (28%) reported *I need to ask my parents or guardians for permission before I spend any money on my own*.
- Less students in remote schools (80%) reported *I can decide independently what to spend my money on* than students in both metropolitan and provincial schools (89% respectively), while more students in metropolitan schools (86%) than students in remote schools (80%) reported *I am responsible for my own money matters (e.g. for preventing theft)*.
- More students in metropolitan schools (69%) than students in provincial schools (62%) reported *I can spend small amounts of money independently, but for larger amounts I need to ask my parents or guardians*.
- More non-Indigenous students (67%) than Indigenous students (59%) reported *I can spend small amounts of money independently, but for larger amounts I need to ask my parents or guardians*, while more Indigenous students (40%) than non-Indigenous students (32%) reported *I need to ask my parents or guardians for permission before I spend any money on my own*.

- Less Australian-born students (65%) than first-generation born students (69%) and foreign-born students (72%) reported *I can spend small amounts of money independently, but for larger amounts I need to ask my parents or guardians*, while less Australian-born students (30%) than foreign-born students (41%) reported *I need to ask my parents or guardians for permission before I spend any money on my own*.

Demographic group	Percentages of students who *agreed/strongly agreed* with the following statements:			
	I can decide independently what to spend my money on	I can spend small amounts of my money independently, but for larger amounts I need to ask my parents or guardians for permision	I need to ask my parents or guardians for permission before I spend any money on my own	I am responsible for my own money matters (e.g. for preventing theft)
Sex				
Females	90	67	27	84
Males	88	67	37	86
Socioeconomic background				
Most disadvantaged students	87	62	36	86
Socioeconomically average students	89	67	32	85
Least disadvantaged students	90	71	28	85
Geographic location of schools				
Metropolitan	89	69	32	86
Provincial	89	62	33	84
Remote	80	59	35	80
Indigenous background				
Indigenous	86	59	40	83
Non-Indigenous	89	67	32	85
Immigrant background				
Australian-born	89	65	30	84
First-generation	89	69	31	87
Foreign-born	86	72	41	84

FIGURE 9.8 Percentages of students who reported their agreement on handling money, for different demographic groups

Figure 9.9 shows the association between student autonomy in handling their own money and financial literacy. Overall, students who reported more independence in their financial matters performed better in the PISA financial literacy assessment.

- Australian students who reported *I can decide independently what to spend my money on* scored 37 points higher than students who did not (or nearly one-and-quarter years of schooling). The average achievement score for Australian students was 521 points, which was higher than for students from across the OECD countries (514 points).
- In contrast, Australian students who agreed *I need to ask my parents or guardians for permission before I spend any money on my own* scored 51 points lower than students who did not (or just under one-and-three-quarter years of schooling). The average achievement score for Australian students was 482 points, which was the same as for students from across the OECD countries.
- Australian students who agreed *I am responsible for my own money matters* and *I can spend small amounts of my money independently, but for larger amounts, I need to ask my parents or guardians for permission* achieved similar results in financial literacy.

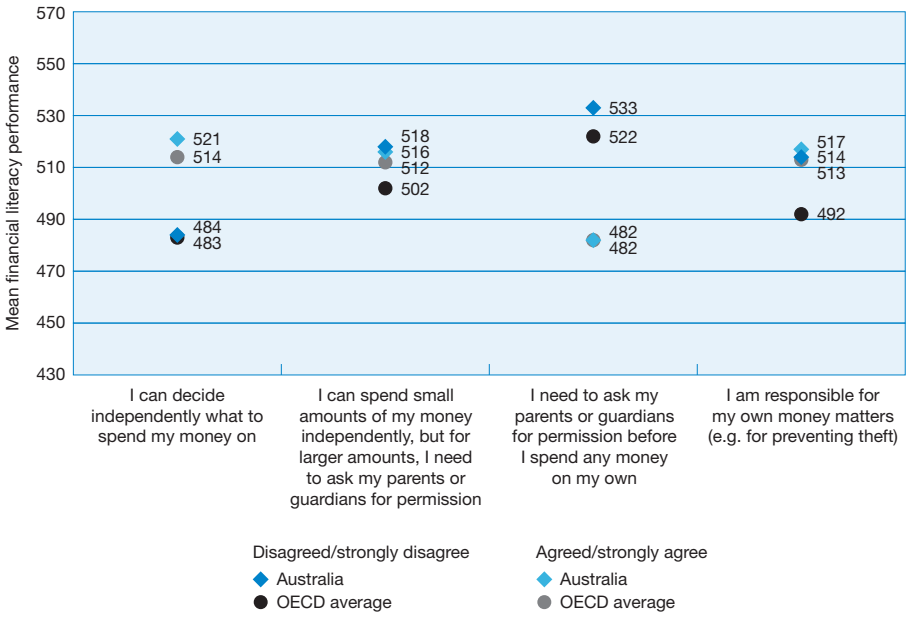


FIGURE 9.9 Mean scores on the financial literacy scale, by student autonomy in handling money, for Australia

Appendix A

Sample financial literacy items and responses

A small number of example items have been provided to show the types of assessment items included in the PISA assessment of financial literacy. The units, *At the Market, Invoice, New Offer, Pay Slip, Bank Error* and *Motorbike Insurance* are presented in this appendix to illustrate the range of assessment tasks that students encountered as a means of assessing their performance in financial literacy.

Table A.1 shows a mapping of the sample financial literacy items to their corresponding position on the described proficiency level.

TABLE A.1 Map of selected financial literacy items by proficiency level and process category

Proficiency level	Process category			
	Identify financial information	Analyse information in a financial context	Evaluate financial issues	Apply financial knowledge and understanding
5		New Offer: Item 1 (663) *Full credit*	Bank Error: Item 1 (797)	Invoice: Item 3 (660) *Full credit*
4	Pay Slip: Item 1 (551)		New Offer: Item 2 (582)	
3		New Offer: Item 1 (510) *Partial credit* Motorbike Insurance: Item 1 (494)		Invoice: Item 3 (547) *Partial credit*
2	Invoice: Item 2 (461)	At the Market: Item 2 (459)		
1	Invoice: Item 1 (360)		At the Market: Item 3 (398)	

At the Market

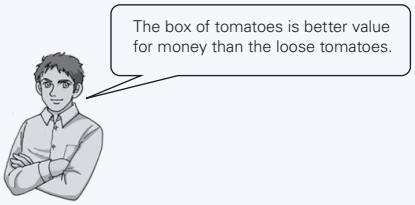
At the Market presents two constructed-response questions about money and transactions in a family context. The stimulus presents a situation where a person can buy tomatoes at different prices by the kilogram or by the box.

You can buy tomatoes by the kilogram or by the box.

2.75 zeds per kg

22 zeds for a 10 kg box

At the Market - Item 2



Give a reason to support this statement.

.....

.....

Item Details	
Item type:	Constructed-response (coded by a trained expert)
Description:	Recognise value by comparing prices per unit
Content:	Money and transactions
Process:	Analyse information in a financial context
Context:	Home and family
Difficulty:	459 (Level 2)

Scoring
Full Credit
Explicitly or implicitly recognises that price per kilogram of boxed tomatoes is less than the price per kilogram for loose tomatoes.
• It is 2.75 zeds per kg for the loose tomatoes but only 2.2 zeds per kg for the boxed tomatoes. • It is only 2.20 per kg for the box. • Because 10kg of loose tomatoes would cost 27.50 zeds. • There are more kgs for every 1 zed you pay. • Loose tomatoes cost 2.75 per kg but tomatoes in the box cost 2.2 per kg. • It is cheaper per kg. [Accept generalisation.] • It is cheaper per tomato. [Accept assumption that tomatoes are the same size.] • You get more tomato per zed. [Accept generalisation.]
No Credit
Other responses • The box is always better value [No explanation.] • You get more for less. [Vague.] • Bulk buying is better. • The price per kilogram is different. [Does not indicate that the box price is lower.]
Missing

Comment
This first constructed-response item in the At the Market unit requires students to apply the concept of value for money in a context familiar to 15-year-old students. Students are asked to make a logical comparison between boxed and loose tomatoes and to explain which option provides the best value for money. In order to support their argument, students can provide their answer in words or explain their idea with quantitative information by using the price ('Zed') and weight (kilogram). In this item, the unit of currency is the imaginary Zed. PISA items often refer to situations that take place in the fictional country of Zedland, where the Zed is the unit of currency. This artificial currency has been introduced to enhance comparability across countries and is explained to the students before the test begins. Using the context of shopping for groceries, which is a familiar, everyday context to 15-year-old students, this item assesses whether students can interpret and use financial and numeric information and explain their judgement based on proportional reasoning and single basic numerical operations (multiplication and division). Items about the buying of goods are generally categorised as being in the content area of money and transactions. To gain credit for this item, students have to demonstrate that they have compared the two ways of buying tomatoes using a common point of comparison.

At the Market – Item 3

Buying a box of tomatoes may be a bad financial decision for some people.

Explain why.

.....

.....

Item Details	
Item type:	Constructed-response (coded by a trained expert)
Description:	Recognise value by comparing prices per unit
Content:	Money and transactions
Process:	Evaluate financial issues
Context:	Home and family
Difficulty:	398 (Level 1)

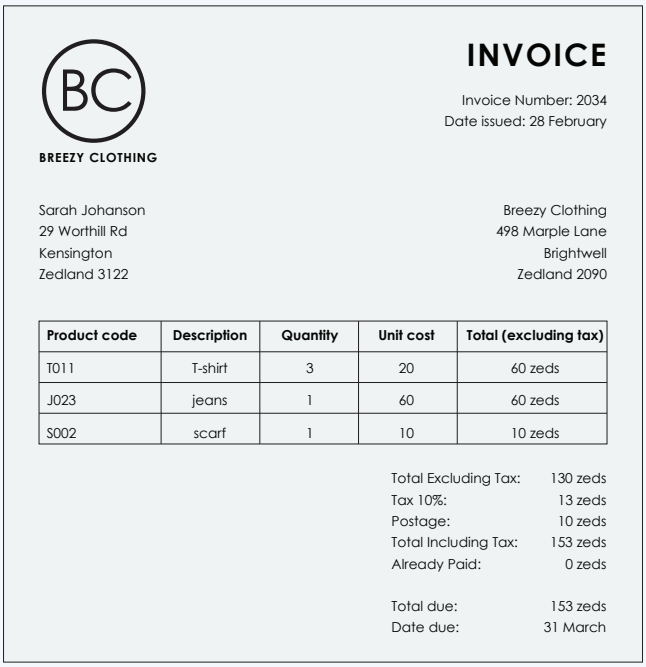
Scoring
Full Credit
Refers to wastage if a larger amount of tomatoes is not needed. • The tomatoes might rot before you use them all. • Because you may not need 10 kg of tomatoes. • The ones at the bottom of the box might be bad so you are wasting money.
OR
Refers to the idea that some people cannot afford the higher absolute cost of buying in bulk. • You may not be able to afford a whole box. • You have to spend 22 zeds (rather than 2.75 or 5.50 for 1 or 2 kg) and you might not have that amount to spend. • You might have to go without something else that you need to pay for the box of tomatoes.
No Credit
Other responses • It is a bad idea. • Some people don't like tomatoes *[Irrelevant.]*
Missing

Comment
This item asks students to evaluate financial information for decision making in shopping, which is a situation familiar to 15-year-old students. The item examines whether students can recognise that buying things in bulk may be wasteful if a large amount is not needed, and it may be unaffordable to bear the higher absolute cost of buying in bulk in the short term. Students are required to evaluate a financial issue in the situation presented and describe their conclusion in this open-constructed response item. Students can provide their answers either verbally, without quantitative information, or with quantitative information of the price and weight. Full credit will be given if students can explain that buying more tomatoes at a cheaper price may not always be a good decision for some people.

Invoice

Invoice consists of three questions in the content category of money and transactions, which are framed in an individual context. The stimulus presents an invoice received by post.

Sarah receives this invoice in the mail.



BC

BREEZY CLOTHING

INVOICE

Invoice Number: 2034
Date issued: 28 February

Sarah Johanson
29 Worthill Rd
Kensington
Zedland 3122

Breezy Clothing
498 Marple Lane
Brightwell
Zedland 2090

Product code	Description	Quantity	Unit cost	Total (excluding tax)
T011	T-shirt	3	20	60 zeds
J023	jeans	1	60	60 zeds
S002	scarf	1	10	10 zeds

Total Excluding Tax:	130 zeds
Tax 10%:	13 zeds
Postage:	10 zeds
Total Including Tax:	153 zeds
Already Paid:	0 zeds
Total due:	153 zeds
Date due:	31 March

Invoice - Item 1

Why was this invoice sent to Sarah?

A Because Sarah needs to pay the money to Breezy Clothing.
B Because Breezy Clothing needs to pay the money to Sarah.
C Because Sarah has paid money to Breezy Clothing.
D Because Breezy Clothing has paid the money to Sarah.

Item Details	
Item type:	Simple multiple-choice
Description:	Recognise the purpose of an invoice
Content:	Money and transactions
Process:	Identify financial information
Context:	Individual
Difficulty:	360 (Level 1)

Scoring
Full Credit
A. Because Sarah needs to pay the money to Breezy Clothing.
No Credit
Other responses
Missing

Comment
This simple multiple-choice item asks students to interpret a financial document, an invoice, and identifying its purpose in the context of any individual. Items about interpreting financial documents are generally categorised as being in the content area of money and transactions. Students are required to identify financial information by demonstrating a basic understanding of what an invoice is. Calculations are not required.

Invoice - Item 2

How much has Breezy Clothing charged for delivering the clothes?

Delivery charge in zeds: .....

Item Details	
Item type:	Constructed-response (computer scored)
Description:	Identify the cost of postage on an invoice
Content:	Money and transactions
Process:	Identify financial information
Context:	Individual
Difficulty:	461 (Level 2)

Scoring
Full Credit
10 Ten Tene *[Unambiguous mis-spelling of correct numerical value.]*
No Credit
Other responses
Missing

Comment
This short constructed-response item asks students to identify a delivery cost in an invoice for clothing. It asks a specific question, and the relevant information is explicitly stated. To answer this item correctly, students need to identify the relevant information, understanding that postage refers to the delivery charge. This is an example of the types of interpretation that they may need to make frequently in adult life. While calculations are not required, students are required to identify numerical information: the cost of postage.

Invoice - Item 3

Sarah notices that Breezy Clothing made a mistake on the invoice.

Sarah ordered and received two T-shirts, **not** three.

The postage fee is a fixed charge.

What will be the total on the new invoice?

Total in zeds: .....

Item Details	
Item type:	Constructed-response (computer scored)
Description:	Find a new total on an invoice, taking into account several factors (or demonstrate process required)
Content:	Money and transactions
Process:	Apply financial knowledge and understanding
Context:	Individual
Difficulty:	Full credit – 660 (Level 5); Partial credit – 547 (Level 3)

Scoring
Full Credit
131 One hundred and thirty-one One hudred and thirty-one *[Unambiguous mis-spelling of 131]*
Partial Credit
133 *[Leaves tax at 13 zeds]* OR 121 *[Omits postage]* One hundred and thirty-three One hudred and therty-thre *[Unambiguous mis-spelling of 133]* One hundred and twenty-one
No Credit
Other responses 123 *[Leaves tax at 13 zeds and omits postage.]*
Missing

Comment
This item asks students to interpret a financial document in a complicated situation that is likely to take place in real life. Students are required to calculate the correct amount due, given that the quantity described on the invoice is incorrect. In this task, full credit is given for the responses taking into account the tax change and postage, and partial credit is given to responses that only consider one of those factors. The partial-credit score is located at Level 3 while the full-credit score is located at Level 5. To get full credit, students need to interpret and use financial and numeric information in an unfamiliar context and solve a financial problem by using multiple numerical operations (i.e. addition, subtraction and calculation of percentages). To get partial credit, students need to interpret and use financial and numeric information and apply basic numerical operations (i.e. subtraction).

New Offer

New Offer consists of two questions in the content category of planning and managing finances, which are framed in an individual context. The stimulus presents details about two different personal loans.

Mrs Jones has a loan of 8000 zeds with FirstZed Finance. The annual interest rate on the loan is 15%. Her repayments each month are 150 zeds.

After one year Mrs Jones still owes 7400 zeds.

Another finance company called Zedbest will give Mrs Jones a loan of 10000 zeds with an annual interest rate of 13%. Her repayments each month would also be 150 zeds.

New Offer - Item 1

If she takes the Zedbest loan, Mrs Jones will immediately pay off her existing loan.

What are two other financial benefits for Mrs Jones if she takes the Zedbest loan?

1. .....

2. .....

.....

Item Details	
Item type:	Constructed-response (coded by a trained expert)
Description:	Recognise positive consequences of transferring a load to a lower interest rate
Content:	Planning and managing finances
Process:	Analyse information in a financial context
Context:	Individual
Difficulty:	Full credit: 663 (Level 5); Partial credit: 510 (Level 3)

Scoring
Full Credit
Refers to BOTH having extra money to use AND getting a lower interest rate.
• She will be paying 13% interest instead of 15%. • She has an extra 2600 zeds. • She has extra money to spend. • The interest rate is lower.
Partial Credit
Refers to only one of the above.
• She will only be paying 13% interest rate. • *[Blank]* • She has extra money to spend. • *[Blank]* • The interest rate is 2% lower. • She will pay off her loan to FirstZed. *[2nd benefit is a restatement of stem.]*
No Credit
Other responses She will pay off her debt. *[Repeats stem.]*
Missing

Comment
This item asks students to reflect on and evaluate the consequences of changing from one set of loan conditions to another. While having a loan from a financial institution may be unfamiliar to 15-year-old students, this question is relevant to them since many of them will borrow money from financial institutions once they become adults. While all of the necessary information is provided in the question, in order to gain credit, students need to identify what is relevant and reflect on the consequences of taking a particular financial action. Therefore, the item belongs to the content category of planning and managing finances. Students need to interpret financial and numeric information, reason about the effect that different financial actions (i.e. borrowing money from different loan providers) and variables have on financial wellbeing. No numerical operations are required. In this task, full credit is given for the responses including reference to both having extra money to use and getting a lower interest rate. Partial credit is given to responses that explain one of those.

New Offer - Item 2

What is one possible negative financial consequence for Mrs Jones if she agrees to the Zedbest load?

.....

Item Details	
Item type:	Constructed-response (coded by a trained expert)
Description:	Recognise a negative consequence of having a large loan
Content:	Planning and managing finances
Process:	Evaluate financial issues
Context:	Individual
Difficulty:	582 (Level 4)

Scoring
Full Credit
Refers to Mrs Jones having more debt.
• She will owe more money. • She will be unable to control her spending. • She is going deeper into debt.
Refers to paying more interest in total.
• 13% of 10 000 is greater than 15% of 8000.
Refers to taking longer to pay the loan off.
• It might take longer to repay because the loan is bigger and the payments are the same.
Refers to the possibility of paying a cancellation fee with FirstZed.
• She may have a penalty fee for paying the FirstZed loan early.
No Credit
Other responses
Missing

Comment
This item asks students to evaluate two complex financial products, two different personal loans, with competing information to explain a negative financial consequence of changing to a larger loan. Students need to interpret financial and numeric information, reason about the effect that different financial actions and variables have on financial wellbeing. In order to get full credit, students are required to describe a negative consequence of changing loans, such as the time taken to repay the money or the additional interest paid. No numerical operations are required.

Pay Slip

Pay Slip is set in the content category of money and transactions. The stimulus presents details of an employee pay slip.

Each month, Jane's salary is paid into her bank account. This is Jane's pay slip for July.

EMPLOYEE PAY SLIP: Jane Citizen	
Position: Manager	1 July to 31 July
Gross salary	2800 zeds
Deductions	300 zeds
Net salary	2500 zeds
Gross salary to date this year	19 600 zeds

Pay Slip - Item 1

How much money did Jane's employer pay into her bank account on 31 July?

A 300 zeds
B 2500 zeds
C 2800 zeds
D 19600 zeds

Item Details	
Item type:	Simple multiple-choice
Description:	Identify the net salary on a pay slip
Content:	Money and transactions
Process:	Identify financial information
Context:	Education and work
Difficulty:	551 (Level 4)

Scoring
Full Credit
B. 2500 zeds
No Credit
Other responses
Missing

Comment
This simple multiple-choice item asks students to identify financial information on a pay slip. While a pay slip is a common financial document, it may provide an unfamiliar financial context to 15-year-old students. Students need to understand the difference between gross and net pay, that is, the difference between pay before and after any deductions have been made (such as deductions for health care or tax). Numeric operations are not required.

Bank Error

Bank Error is set in the context category of financial landscape. The stimulus presents the scenario of a customer from the fictitious Zedbank receiving an email about a potential fraud.

Dear ZedBank member,

There has been an error on the ZedBank server and your internet login details have been lost.

As a result, you have no access to Internet banking.

Most importantly your account is no longer secure.

Please click on the link below and follow the instructions to restore access. You will be asked to provide your Internet banking details.

https://ZedBank.com/

ZedBank

Bank Error - Item 1

Which of these statements would be good advice for David?

Circle "Yes" or "No" for each statement.

Statement	Is this statement good advice for David?
Reply to the e-mail message and provide his internet banking details.	Yes / No
Reply to the e-mail mesage and ask for more information.	Yes / No
Contact his bank to inquire about the e-mail message.	Yes / No
If the link is the same as his bank's website address, click on the link and follow the instructions.	Yes / No

Item Details	
Item type:	Complex multiple-choice (coded by a trained expert)
Description:	Respond appropriately to a financial scam email message
Content:	Financial landscape
Process:	Evaluate financial issues
Context:	Societal
Difficulty:	797 (Level 5)

Scoring
Full Credit
Four correct responses: No, No, Yes, No (in that order).
No Credit
Other responses Fewer than four correct responses.
Missing

Comment
This item asks students to evaluate a financial issue (potential fraud) in the context of Internet banking, which is part of the broader financial landscape in which students are likely to participate, either now or in the near future. In this environment they may be exposed to financial fraud. This item investigates whether they know how to take appropriate precautions. Students are asked to respond appropriately to a financial scam email message. They must evaluate the presented options and recognise which piece of advice can be considered as good advice.

Motorbike Insurance

Motorbike Insurance consists of one question in the content category of risk and reward, which is framed in an individual context. The stimulus provides details about a motorbike insurance policy.

Last year, Steve's motorbike was insured with the PINSURA insurance company.

The insurance policy covered damage to the motorbike from accidents and theft of the motorbike.

Motorbike insurance - Item 1

Steve plans to renew his insurance with PINSURA this year, but a number of factors in Steve's life have changed since last year.

How is each of the factors in the table likely to affect the cost of Steve's motorbike insurance this year?

Circle "Increases cost", "Reduces cost" or "Has no effect on cost" for each factor.

Statement	How is the factor likely to affect the cost of Steve's insurance?
Steve replaced his old motorbike with a much more powerful motorbike.	Increases cost / Reduces cost / Has no effect on cost
Steve has painted his motorbike a different colour.	Increases cost / Reduces cost / Has no effect on cost
Steve was responsible for two road accidents last year.	Increases cost / Reduces cost / Has no effect on cost

Item Details	
Item type:	Complex multiple-choice (coded by a trained expert)
Description:	Recognise factors affecting motorbike insurance premiums
Content:	Risk and reward
Process:	Analyse information in a financial context
Context:	Individual
Difficulty:	494 (Level 3)

Scoring
Full Credit
Three correct responses: Increases cost, Has no effect on cost, Increases cost, in that order.
No Credit
Other responses Fewer than three correct responses.
Missing

Comment
This item relies on students understanding that the higher their risk exposure, with regards to measurable criteria, the more it will cost them to buy appropriate insurance. This item falls under the content area category of risk and reward because insurance is a product designed specifically to protect individuals against risk and financial losses that they would not otherwise be able to bear. Students need to be able to identify factors likely to affect the cost of motorbike insurance under given circumstances.

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