



3.5 How are we faring in education?

This article looks at Australia's progress in educational engagement and attainment. It presents key statistics on school attendance, literacy and numeracy, and considers some major international comparisons.

School attendance

Attendance rates are the number of days that students attend school as a percentage of all possible school attendance days.

Nationally in 2016:

- the attendance rate for primary school students in Years 1 to 6 was 94%
- attendance rates for students in the compulsory high school years (Years 7 to 10) were generally lower than for younger students, and declined for more senior years (from 93% in Year 7 to 90% in Year 10)
- rates of school attendance were slightly higher for non-government schools than government schools for Years 1 to 6 (94% and 93%, respectively, across all years) and for secondary school students (for example, 94% and 92% for Year 7, and 92% and 88%, respectively, for Year 10 non-government and government schools) (SCRGSP 2017).

Attendance rates have been steady since 2014 (SCRGSP 2017); however, there are some notable variations within the Aboriginal and Torres Strait Islander population (see Chapter 7.4 'Closing the gap in education' for detailed information on school attendance for Indigenous and non-Indigenous students).

Literacy and numeracy


Literacy and numeracy skills are essential for successful learning, healthy child and youth development, active participation in society and, ultimately, the economic productivity and performance of nations (DECD 2013). The National Assessment Program—Literacy and Numeracy (NAPLAN) tests are conducted annually for all students across Australia in Years 3, 5, 7 and 9. The data provide nationally comparable results on the performance of students in the assessment domains of reading, writing, language conventions (spelling, grammar and punctuation) and numeracy (ACARA 2016). Two main measures are used to report achievement: the percentage of students achieving at the agreed national minimum standard (NMS) and the mean score.

The most recent report (ACARA 2016) showed that, at the national level, results had largely plateaued for students since 2008. Exceptions are shown in Table 3.5.1 and represent the few 2016 national results for which differences in achievement at the NMS, or improvements in mean scores, were significantly different from those for 2008.





Table 3.5.1 NAPLAN national results by domain—significant change 2008 to 2016

NAPLAN domain	National results where a significant difference was recorded	Direction of change	2008	2016
 Reading	Year 3 achievement at or above the NMS	↑	92.1%	95.1%
	Year 5 mean score	↑	484.4	501.5
 Writing	Year 9 mean score	↓	565.9 (in 2011)	549.1
	Year 3 mean score	↑	399.5	419.8
AB_ Spelling	Year 3 achievement at or above the NMS	↑	91.7%	95.5%
	Year 3 mean score	↑	399.5	419.8
“ ? ! * Grammar and punctuation	Year 3 achievement at or above the NMS	↑	91.7%	95.5%
	Year 3 mean score	↑	399.5	419.8
+ - X ÷ Numeracy	Year 5 mean score	↑	475.9	493.1

Notes

1. The NMS is the agreed minimum acceptable standard of knowledge and skills without which a student will have difficulty making sufficient progress at school. The mean score refers to the NAPLAN 'scale score'. Any given scale score represents the same level of achievement over time within a domain. For example, a score of 700 in reading in 1 year represents the same level of reading achievement in other testing years (ACARA 2016).
2. The year 9 writing score comparison was based on 2011 as this is the earliest year against which 2016 results can be compared.

Source: ACARA 2016.

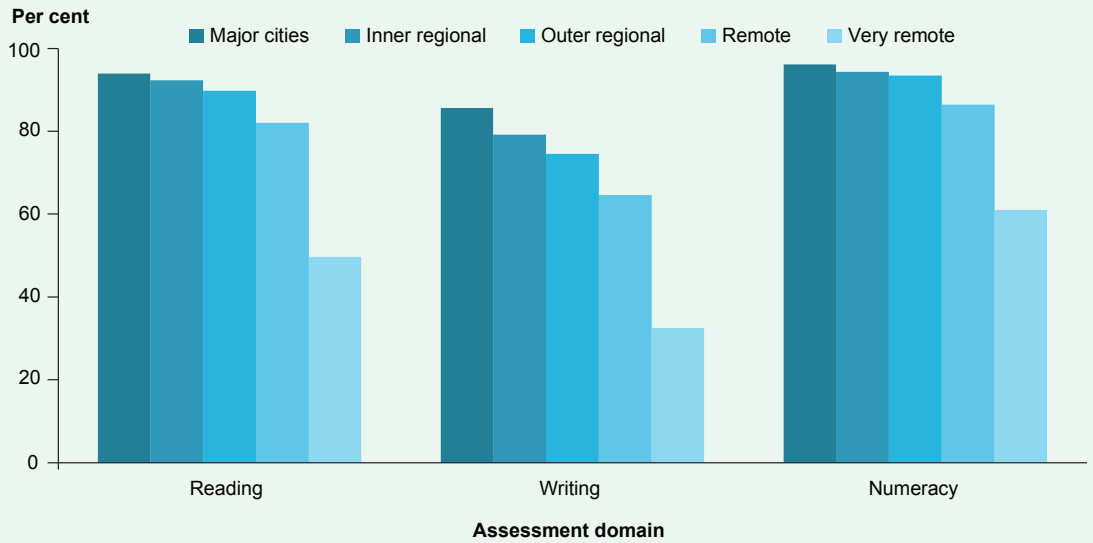
Other points of interest are:

- There were improvements in some domains in each state and territory, particularly for Western Australia and Queensland. The Australian Capital Territory, New South Wales and Victoria have the highest mean achievement across the domains for Years 3, 5 and 7.
- There have been significant improvements for Indigenous students in some domains, but the gap between Indigenous and non-Indigenous achievement is still wide (see Chapter 7.4 'Closing the gap in education').
- Lower levels of achievement persist for disadvantaged groups, including students living in *Very remote* areas (see the example for Year 9 students in Figure 3.5.1), students whose parents have relatively low levels of education (see the example for Year 3 students in Figure 3.5.2), students whose parents work in unskilled occupations (ACARA 2016), and children involved in the statutory child protection system (see AIHW 2015).



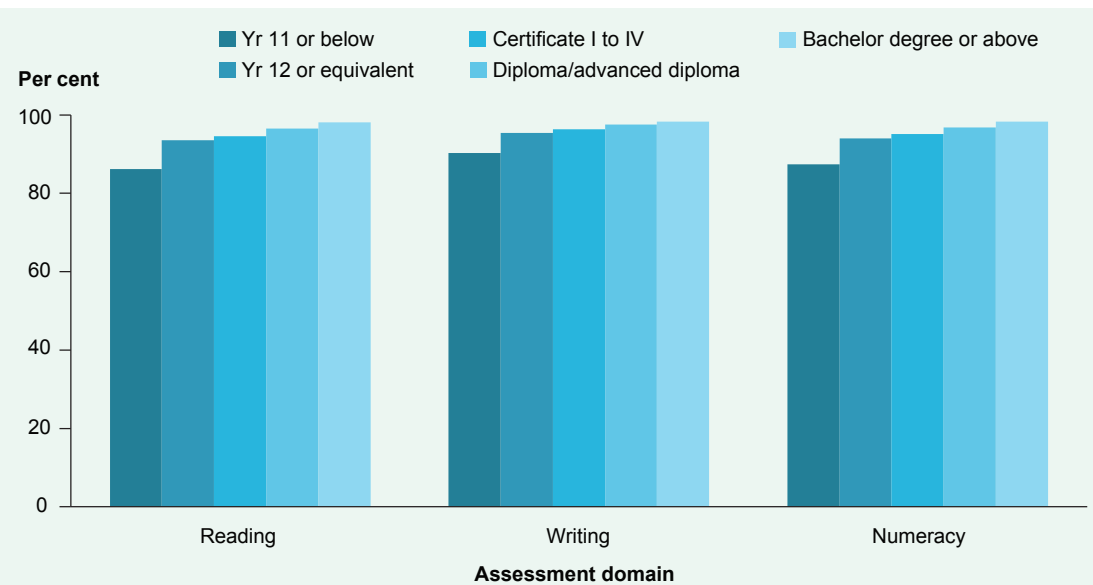


Australia's welfare 2017



Source: ACARA 2016.

Figure 3.5.1: Year 9 achievement at or above NMS, by NAPLAN assessment domain and remoteness area, 2016



Source: ACARA 2016.

Figure 3.5.2: Year 3 achievement at or above NMS, by NAPLAN assessment domain and parental educational level, 2016





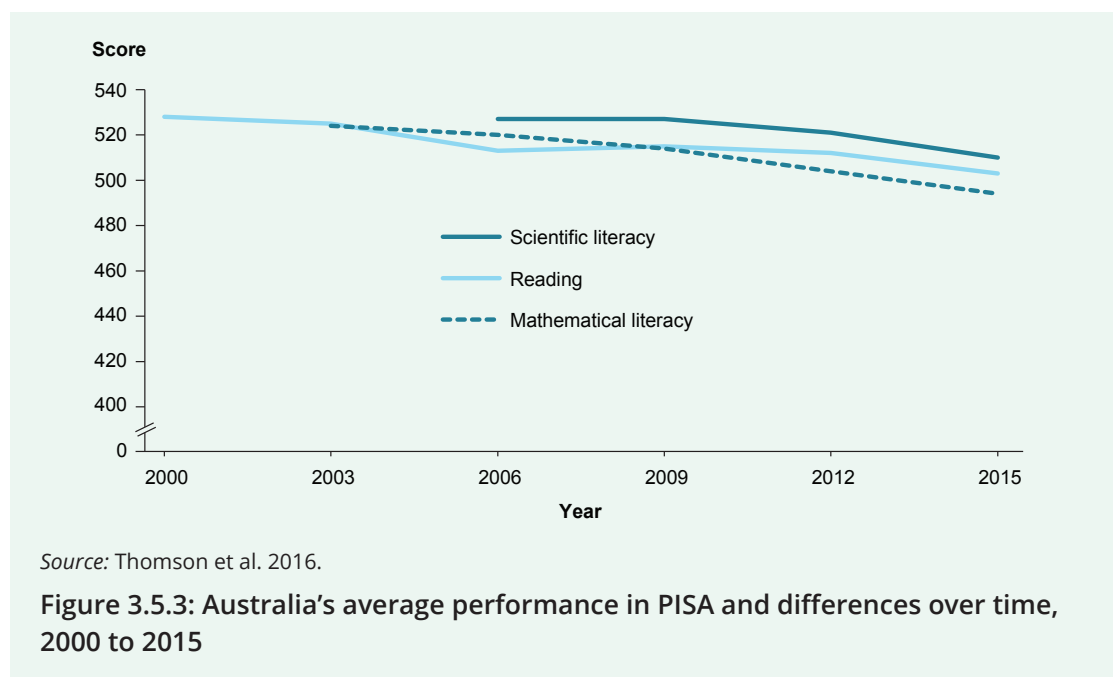
How do we compare internationally?

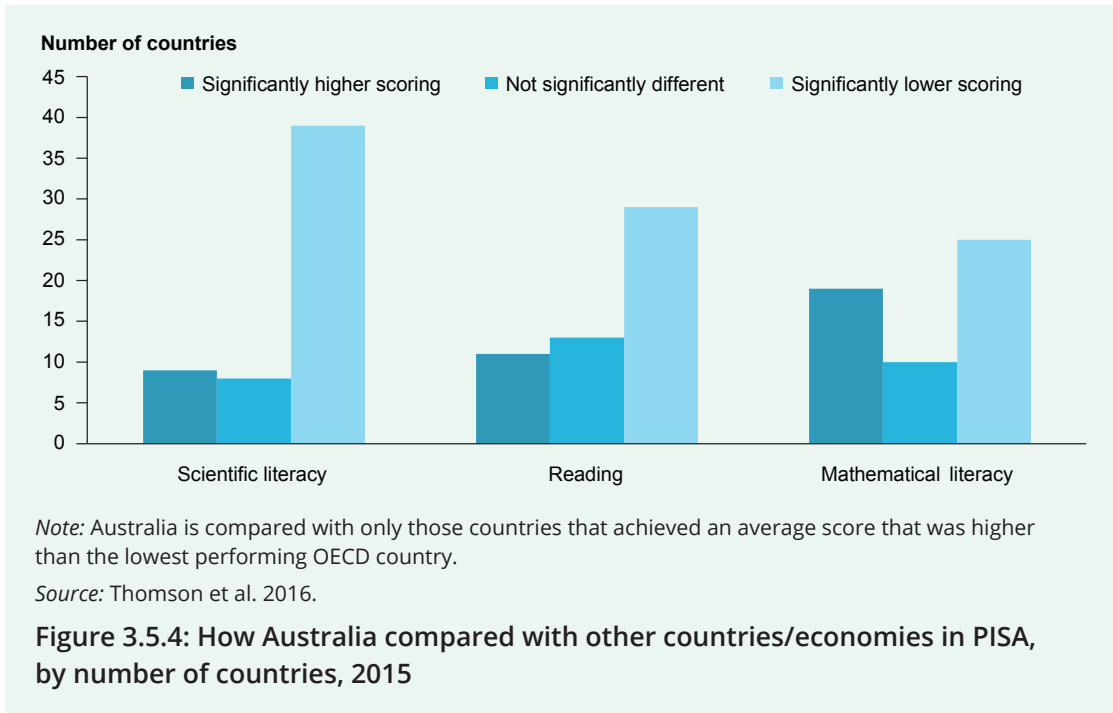
The Programme for International Student Assessment (PISA) is a survey of the competencies of 15-year-olds in reading, scientific literacy and mathematical literacy. Results from the 2015 PISA show that Australia's recent performance has been mixed. Masters (2016) notes that the ability of Australian students to apply higher order skills and thinking—as indicated by results in the three literacy competency areas—has been declining since 2000.

In 2015:

- Australia's average scores had decreased significantly since 2009 for reading; since 2006 for scientific literacy; and since 2003 for mathematical literacy (see Figure 3.5.3)
- the scores for reading (503), scientific literacy (510) and mathematical literacy (494) were still higher than the average scores across the 35 participating Organisation for Economic Co-operation and Development (OECD) countries (out of the 72 participating countries and economies) in each domain (493 for both reading and scientific literacy and 490 for mathematical literacy)
- Australia's performance was significantly below that of 11 countries for reading, 9 countries for scientific literacy and 19 for mathematical literacy (see Figure 3.5.4)
- the national scores on all 3 domains were generally comparable to those of New Zealand and the United Kingdom, but were significantly lower than Canada's, and significantly higher than those for the United States
- Australia's scores were about 1 year of schooling lower for reading, 1.5 years of schooling lower for science and 2.3 years of schooling lower for mathematics than the scores of Singapore, the highest performing country on all three domains in 2015.

See other international comparisons in Box 3.5.1.





Box 3.5.1: Other international comparisons—TIMSS and PIRLS

The Trends in International Mathematics and Science Study (TIMSS) monitors trends in mathematics and science achievement every 4 years, at the Year 4 and Year 8 levels. TIMSS 2015 was the sixth assessment. TIMSS results consistently show East Asian countries and economies (mainly Singapore, Hong Kong, Chinese Taipei, Korea and Japan) as the highest performers.

Australia was outperformed by 12 countries (out of 39) in Year 8 mathematics and by 21 countries (out of 49) for Year 4 mathematics. Australia's performance in mathematics has not differed significantly since the last survey in 2011. In science, Australia was outperformed by 17 countries (out of 47) for Year 4, and by 14 countries (out of 39) for Year 8. Australia had higher average achievement for Year 4 science than in 2011 and the same level for Year 8.

The Progress in International Reading Literacy Study (PIRLS) has monitored trends in reading achievement at Year 4 level since 2001. It is conducted every 5 years, making 2016 the fourth assessment (results available in December 2017). In 2011, Australia, in its first year of participation, was outperformed by 21 countries (out of 45 participating countries) (Mullis et al 2012).

Source: IEA 2017.





In terms of tertiary education attainment, in 2015, Australia ranked eleventh out of 35 OECD countries for Bachelor degree or above qualifications for those aged 25–64 (32%). Switzerland was ranked first (42%), followed by Belgium (36%). Australia's proportion was slightly lower than that for the United States (34%) and the United Kingdom (33%) but was above that for New Zealand and Canada (both 30%) and the OECD average (28%) (OECD 2016).

What is missing from the picture?

International studies may not discern important factors influencing school achievement in different countries, such as the social, political and cultural environment. To understand a country's academic performance, it is necessary to also consider country-specific data and research, particularly for differing population groups and geographic regions. It is interesting, though, that both domestic and international data, as described here, highlight potential issues with Australia's educational performance. This has implications for its future direction.

Where do I go for more information?

More information about NAPLAN is available at www.nap.edu.au/. For PISA, see www.acer.edu.au/ozpisa/, and for TIMSS and PIRLS, visit <https://timssandpirls.bc.edu/>.

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