



## **National Assessment Program – Literacy and Numeracy 2018**

### **Final report**

NAPLAN 2018 summary information, released on Tuesday, 28 August 2018, provided preliminary results without disaggregation into subgroups. This summary information included comparisons of these preliminary 2018 results with the final results from 2017 and 2008.

The *NAPLAN National Report* (National report) was released by the Australian Curriculum, Assessment and Reporting Authority (ACARA) on Monday, 8 April 2019.

Prior to release, NAPLAN results were reviewed and endorsed by independent measurement advisory experts. These measurement experts confirmed that the results for online and paper NAPLAN assessed the same content and could be placed on the same NAPLAN assessment scale.

While NAPLAN results can be compared between assessment modes and years, individual student experiences for any single test may differ due to a range of factors, including the mode of delivery or a student's performance on the day.

The 2018 NAPLAN National Report, in PDF format, is available on ACARA's NAP website <https://www.nap.edu.au/> and consists of three parts:

- Part 1: 2018 Results
- Part 2: 2008, 2012–2018 Time series
- Part 3: 2014–2016, 2015–2017 and 2016–2018 Cohort gain.

It should be noted that the Time series and Cohort gain sections of the National report available as a PDF only provide information in relation to Reading and Numeracy.

In addition to the PDF report format, full details of the results are available online, in a searchable format, on the 'NAPLAN results' subsection of the ACARA's NAP website. This includes time series and cohort gain data for all domains, including subgroup data by State/Territory.

The PDF report present tables, graphs and commentary providing comparisons of State/Territory performance disaggregated by sex, Indigenous status, language background and geolocation. Information is also provided on exemption, withdrawal and participation rates.

The section on cohort gain includes disaggregation by sex, Indigenous status and language background other than English (LBOTE). Geolocation splits are not included for cohort gain as there is insufficient data for a number of states and territories in the remote and very remote categories.

The Western Australian performance is based on all Western Australian schools.

### **Key points**

1. The overall achievement of students in the NAPLAN tests across Australia, including Western Australia (WA), continues to be stable, with the exception of Writing which has shown an Australia-wide decline.

2. In 2018 the mean scores for Western Australian students were **above** those achieved in the base year (2008 for all assessments, except writing for which the base year is 2011) in 14 of the 20 assessments, which was the highest number of improved mean scores of any state. As in 2017, the mean score in Year 7 Writing was below that achieved in 2011.
3. Areas of improvement since the base year are:
  - Year 3 – Reading, Spelling, Grammar and Punctuation, and Numeracy
  - Year 5 – Reading, Spelling and Numeracy
  - Year 7 – Spelling, Grammar and Punctuation, and Numeracy
  - Year 9 – Reading, Spelling, Grammar and Punctuation, and Numeracy.
4. As was the case last year, between 2017 and 2018 the nature of the difference between means in all assessments was small, with the only significant improvement in Year 9 Grammar and Punctuation.
5. Western Australia’s mean scores were close to the Australian means in Year 7 and higher than the Australian means in all Year 9 assessments. Western Australian Years 3 and 5 means are lower than the Australian means, though the gap continues to diminish.
6. The 2018 Western Australian means were the highest we have ever achieved in Numeracy (Years 3, 5 and 9), Reading (Years 3, 5 and 9), Spelling (Years 5 and 9) and Grammar and Punctuation (Years 5 and 9).
7. In 2018, Western Australia’s percentages at or above national minimum standard were higher than the Australian percentages in Year 7 Numeracy and all Year 9 assessments. In all other Years 3, 5 and 7 assessments, the percentages at or above national minimum standard were within 1.1 percentage points of the Australian percentages.
8. For all 20 assessments the Western Australian participation rate is higher than the Australian average. In comparison to other jurisdictions, Western Australia had the highest participation rate across all tests in Year 9 and was ranked second in all tests across Years 3, 5 and 7.
9. A reduction in absences and a halving of withdrawals by Western Australian Years 7 and 9 students, which was noted in 2015, was maintained in 2018.
10. Across Australia the mean scale score for LBOTE students is higher than the mean scale score for non-LBOTE students in Years 3, 5, 7 and 9 Spelling and Years 7 and 9 Numeracy. In the other domains, mean scale scores are not substantially different for LBOTE and non-LBOTE students. In WA, the mean scale score for LBOTE students is higher than the mean scale score for non-LBOTE students in Years 3, 5, 7 and 9 Spelling. A substantial difference for LBOTE and non-LBOTE students is not seen in any other domain.

Note: Key points 1–9 present information that was initially provided in the NAPLAN summary information briefing released in August 2018, and are also included in the final National Report. It should be noted that these points have been updated, where necessary, to reflect the final data set which is slightly different so the various comparisons have changed marginally. The remaining point (10) relates to information being provided for the first time in respect of the final National Report.

### **Sex**

- In WA, female students outperformed males in all literacy related assessments, both in terms of means and the percentage of students achieving above the national minimum standards. The mean scale score results are not statistically different for Years 3, 5, 7 and 9 Reading, Years 3 and 5 Spelling and Year 3 Grammar and Punctuation. The differences are substantial for all other literacy assessments and in

particular Writing, with mean scale scores for females ranging from 25 to 31 score points higher than for males. The percentage of female students at or above the national minimum standard is significantly higher than male students in all literacy assessments. Male scores are above female mean scores in Numeracy for all year levels; however, females do slightly better in terms of the percentage at or above national minimum standard. The differences for Numeracy are smaller and not statistically significant.

### **Indigenous student achievement and participation rates**

- In WA and across Australia, the mean scale scores and percentages at or above national minimum standard for Indigenous students are substantially below the mean scale scores for non-Indigenous students for all assessments.
- In comparison to 2017, Indigenous participation rates were generally lower. The largest decrease of 2.4 per cent was seen in Year 9 Numeracy.
- The 2018 mean scores for Indigenous students in WA were above that of the base year (2008 or 2011) for 14 of the 20 assessments – Year 3 Reading, Spelling and Grammar and Punctuation; Year 5 Reading, Spelling, Grammar and Punctuation, and Numeracy; Year 7 Spelling and Grammar and Punctuation, and Numeracy; and Year 9 Reading, Spelling, Grammar and Punctuation, and Numeracy. The 2018 mean score for Indigenous students in WA was below the 2011 mean score in Year 7 Writing. In 2017, improvement was only seen in nine assessments of 20 assessments.
- WA Indigenous students in very remote locations in Years 3, 5, 7 and 9 have means for all assessments higher than the Australian means for Indigenous students in these geolocations.
- Participation rates for Indigenous students remain considerably lower than for non-Indigenous students in all years and in all assessments. In 2018, this disparity ranged from 13.7 per cent less in Year 3, 13.4 per cent less in Year 5, 19.8 per cent less in Year 7 to 29.9 per cent less in Year 9.

### **Geolocation**

- Across all assessments, there is a consistent pattern in the results for Australia overall and WA. Students attending schools in major cities geolocations have the highest mean scale score, followed by students attending schools in inner regional geolocations, then students attending schools in outer regional geolocations, then students attending schools in remote geolocations, and then students attending schools in very remote geolocations. This pattern holds for both mean scale scores and the percentage of students who achieved at or above the national minimum standard.
- When considering Indigenous status and geolocation together, while the same patterns of performance as for geolocation alone are evident for both Indigenous and non-Indigenous students, the extent of the differences in achievement is more pronounced for Indigenous students.
- The achievement of WA students in very remote locations was higher than the Australian means and percentages at or above national minimum standard for this geolocation across all year groups and all assessments. This pattern was also evident in the remote geolocation for all assessments, with the exception of Year 3 Writing and Spelling.

### **Participation**

- When comparing Australia's Reading and Numeracy participation rates for the period 2008 to 2017 there has been a decrease of approximately 2.5 per cent for all year levels. In Western Australia, participation rates have remained steady for Years 3, 5 and 7 and improved slightly for Year 9 Reading.

### **Cohort gains – across two, four and six years**

- WA 's cohort gains for Reading and Numeracy, whether two year, four year or six year gains are higher than the Australian average cohort gains.
- The Year 3 to Year 5 Reading gains in Western Australia (87 score points) were greater than the national gain (84 score points) and greater than the corresponding gains for Victoria and New South Wales (82 score points). The Year 3 to Year 5 gain for male students in Western Australia was greater than the gain for female students in the same cohort.
- The Year 7 to Year 9 Reading gains for Western Australia (52 score points) were significantly greater than the gains in any other state (38 to 44 score points).
- The largest Numeracy gains over four years for the 2014 Year 3 cohort were in Western Australia (156 score points).
- The largest gains over four years in all assessments for the 2014 Year 5 cohort were in Western Australia.
- The largest gains over four years in all assessments for the 2014 Year 5 cohort were in Western Australia.
- The largest Numeracy, Reading, Spelling and Writing gains over six years for the 2012 Year 3 cohort were in Western Australia.






The following information provides more detailed advice in relation to the 2018 NAPLAN results.

## Summary of NAPLAN 2018 Results from WA's perspective

The NAPLAN Report presents results in two main ways – mean scores and percentages at or above the national minimum standards.

'Effect size' measures, used for quantifying the difference between two groups or the same group over time, have been used to complement the statistical assessments of significance of differences and focus on the magnitude of any difference. In the tables, the term 'significance of difference' has been replaced with the term 'nature of the difference' to reflect that the results indicate both the statistical significance of the difference as well as the effect size of the difference.

The nature of the difference is displayed symbolically in tables using the following key:

|  |  |
|--|--|
|   | Average achievement is <b>substantially above and is statistically significantly different</b> from the base year (or previous year) for this state/territory. |
|   | Average achievement is <b>above and is statistically significantly different</b> from the base year (or previous year) for this state/territory.               |
|   | Average achievement is <b>close to or not statistically different</b> from the base year (or previous year) for this state/territory.                          |
|   | Average achievement is <b>below and is statistically significantly different</b> from the base year (or previous year) for this state/territory.               |
|  | Average achievement is <b>substantially below and is statistically significantly different</b> from the base year (or previous year) for this state/territory. |

The nature of the difference is reported as 'substantially above or below', 'above or below' or 'close to' the comparative mean or percentage of students at or above the national minimum standard. The base year (First year of data collection for the purposes of time series comparisons) for Persuasive Writing is 2011 and for all other assessments is 2008.

## Means

The nature of the differences between mean scores in 2018 and 2017 were small and close.

In 2018, WA's mean achievement was above that of the base year of 2008 (2011 for Writing) in 14 of the 20 assessments, the largest number of improved mean scores of any state. Mean achievement was below 2011 in Year 7 Writing.

Areas of improvement are:

- Year 3 – Reading, Spelling, Grammar and Punctuation, and Numeracy
- Year 5 – Reading, Spelling and Numeracy
- Year 7 – Spelling, Grammar and Punctuation, and Numeracy
- Year 9 – Reading, Spelling, Grammar and Punctuation, and Numeracy.

Across Australia for the same period there were means above the base year in eight assessments and below in one. There are no statistically significant differences between the Australian and Western Australian means. As has been the case since 2008, for all assessments in Years 3 and 5 the WA means are lower than the Australian means, though the gap is diminishing. For example, Year 5 Numeracy had a gap of 15.2 points in 2008, 5.2 points in 2017 and 4.0 points in 2018. For the first time the Year 7 Numeracy mean is slightly higher than the Australian mean. The WA means for all other Year 7 assessments are still slightly lower than those for Australia. WA's means are slightly higher than the Australian means in all Year 9 assessments.

Relative to other states, WA's ranking in 2018 improved in 10 assessments (Year 5 Spelling, Grammar and Punctuation, and Numeracy; Year 7 Reading, Writing and Grammar and Punctuation; Year 9 Reading, Writing, Grammar and Punctuation, and Numeracy). All other rankings were the same as in 2017.

WA performs at a level which is statistically higher than the Northern Territory in all year groups and assessments.

Compared to the other jurisdictions, WA now performs at a level which is statistically lower

- for Year 3 students than:
  - the ACT and Victoria in Reading, and Numeracy
  - Victoria and NSW in Writing.
- for Year 5 students than:
  - the ACT and Victoria in Reading
  - Victoria in Writing
  - the ACT in Numeracy.
- for Year 7 students than:
  - the ACT in Reading.

WA's Year 9 students perform at a level that is statistically higher than South Australia and Tasmania in Reading; Queensland, South Australia and Tasmania in Writing; Tasmania in Spelling; Tasmania in Grammar and Punctuation; and Queensland, South Australia and Tasmania in Numeracy.

### **Percentages at or above the national minimum standards**

When compared with the base year of 2008 (2011 for Writing), there were significant improvements in the percentages of students achieving at or above the national minimum standard in 12 assessments: Year 3 Reading, Spelling, and Grammar and Punctuation; Year 5 Reading, Spelling, Grammar and Punctuation, and Numeracy; Year 7 Grammar and Punctuation and Year 9 Spelling, Grammar and Punctuation, and Numeracy. The percentages of WA students in 2018 reaching the national minimum standards remained very similar to those in 2017 for 17 of the 20 assessments. There were significant improvements for Years 5 and 9 Grammar and Punctuation and Year 9 Reading. WA's percentages at or above national minimum standard were similar to the Australian percentages (within 1.6 percentage points) in all assessments, with the exception of Year 9 Writing (3.4 per cent higher).

WA's relative ranking in 2018 with other States/Territories improved from 2017 on 12 of the 20 assessments (Year 3 Reading, Writing, and Grammar and Punctuation; all Year 7 assessments; and Year 9 Reading, Writing, Spelling, and Grammar and Punctuation). The ranking declined for Year 9 Numeracy. Other rankings were the same as in 2017.

### **Sex**

In Years 3, 5, 7 and 9 for Reading, Writing, Spelling, and Grammar and Punctuation, the mean scale scores for female students are higher than the mean scale scores for male students for Australia overall and for all jurisdictions.

In WA, the higher results for female students is not statistically different for Year 3 Reading, Spelling, and Grammar and Punctuation; Years 5 Reading and Spelling; and Year 7 and 9 Reading. The differences are substantial for all other literacy assessments and in particular Writing, with differences in mean scale scores ranging from 25 to 31 score points.

In all jurisdictions, the Numeracy mean scores for males are higher than those for females with one exception in the Northern Territory. Females do slightly better in terms of the percentage at or above national minimum standard. In WA neither differences in mean scores or percentages at or above national minimum standard are significant.

For all jurisdictions, greater percentages of male students than female students scored in the highest achievement band in Numeracy in Years 3, 5, 7 and 9.

In all literacy assessments the percentages of female students in the highest achievement bands was greater.

Between 2008 and 2018, the means for both males and females in WA showed increases in Years 3, 5 and 9 Reading; Years 3, 5, 7 and 9 Spelling; Years 3, 7 and 9 Grammar and Punctuation; and Years 3, 5, and 9 Numeracy; and decreases in Year 7 Writing. Males only showed increases for Year 5 Grammar and Punctuation. Females only showed improvement in Year 7 Reading and Numeracy.

The percentages of students at or above the national minimum standard showed increases for males and females in Year 3 Reading, Spelling and Grammar and Punctuation; Year 5 Reading, Spelling, Grammar and Punctuation, and Numeracy; Year 7 Grammar and Punctuation; and Year 9 Reading, Spelling, Grammar and Punctuation, and Numeracy; and a decrease in Year 7 Writing. Females only increased in Year 7 Numeracy and decreased in Year 3 Writing.

Between 2017 and 2018, the Grammar and Punctuation mean for male students increased significantly. The percentages of students at or above the national minimum standard showed increases for males and

females in Year 9 Reading and Grammar and Punctuation and males only in Year 5 Grammar and Punctuation. Percentages at or above the national minimum standard were below 2017 for females in Year 3 and 5 Writing.

### **Language Background other than English (LBOTE) status**

Across Australia, mean scores for LBOTE and non-LBOTE students in Reading, Writing and Grammar and Punctuation are close across all year levels. Numeracy means are close for Years 3 and 5 students and LBOTE mean scores are higher for Years 7 and 9 students. In Spelling, the mean scores for LBOTE students are higher than non-LBOTE students across all year levels.

Percentages of students at or above the national minimum standards are higher for non-LBOTE students in Years 3, 5, 7 and 9 Reading and Years 3, 5 and 7 Numeracy.

In WA, the mean scores for LBOTE and non-LBOTE students in Reading, Writing, Grammar and Punctuation, and Numeracy were close across all year groups. The mean scores were higher for LBOTE students in all Years in Spelling. Percentages of students at or above the national minimum standards are higher for non-LBOTE in Year 3 Numeracy, Year 5 Reading and Numeracy, Year 7 Reading and Grammar and Punctuation and Year 9 Reading. The WA mean scores and percentages of students who were at or above the national minimum standard showed no significant change between 2018 and 2017 with the exception of Year 9 Grammar and Punctuation with non-LBOTE students having a significant increase.

Between 2008 and 2018 in WA, increases in mean scores for both LBOTE and non-LBOTE students occurred in Year 3 Reading, Spelling, Grammar and Punctuation, and Numeracy; Year 5 Reading, Spelling and Numeracy; Year 7 Spelling, Grammar and Punctuation, and Numeracy; and Year 9 Reading, Spelling, Grammar and Punctuation, and Numeracy. Performance for non-LBOTE students was below 2011 for Year 5 Writing. LBOTE and non-LBOTE student performance was below 2011 for Year 7 Writing. For LBOTE students only there were increases in Years 5 Grammar and Punctuation and Year 7 Reading.

### **Indigenous status**

Across Australia and in all domains the mean scale score for Indigenous students is substantially lower than the mean scale score for non-Indigenous students. The differences between Indigenous and non-Indigenous students in WA are also substantial for all assessments and remain largely unchanged in 2018. For example, 26.3 per cent of Indigenous students were below the national minimum standard in Year 3 Reading compared to 3.4 per cent of non-Indigenous students. When considering the geolocation of these Year 3 Indigenous students, this percentage ranged from 16 per cent in the metropolitan area to 46 per cent in the very remote areas.

The mean scores of WA's Indigenous students in a particular year level are often lower than the mean scores for the previous year groups for non-Indigenous students. For example, for WA's Year 9 Indigenous students, despite significant improvements in their mean scores in Numeracy, Reading, Spelling and Grammar and Punctuation since 2008, the 2018 mean scores were between those for Year 5 and Year 7 non-Indigenous students for Numeracy, Grammar and Punctuation, Spelling and Reading and between those for Year 3 and Year 5 non-Indigenous students for Writing.

The 2018 mean scores for Indigenous students in WA were significantly higher than those of 2017 in Years 5, 7 and 9 Grammar and Punctuation. The 2018 mean scores for Indigenous students were close to those of 2017 in all other assessments.

The 2018 mean scores for Indigenous students in WA were above that of the base year (2008 or 2011) for 14 of the 20 assessments – Year 3 Reading, Spelling and Grammar and Punctuation; Year 5 Reading,



Spelling, Grammar and Punctuation and Numeracy; Year 7 Spelling, Grammar and Punctuation, and Numeracy; and Year 9 Reading Spelling, Grammar and Punctuation, and Numeracy. In 2017 this improvement was only seen in nine of the 20 assessments. The mean scores in 2018 were below those of 2011 for Year 7 Writing.

Between 2017 and 2018, the percentages of Indigenous students working at or above the national minimum standards increased for Years 5, 7 and 9 Grammar and Punctuation; Year 7 Numeracy; and Year 9 Reading and decreased for Year 3 Writing. For all other assessments the percentages were close.

For non-Indigenous students the mean score for Year 9 Grammar and punctuation was significantly higher than in 2017. The means in all other assessments were close to those of 2017. The mean scores in 2018 were above those of the base year (2008 or 2011) in Year 3 Reading, Spelling, Grammar and Punctuation, and Numeracy; Year 5 Reading, Spelling and Numeracy; Year 7 Reading, Spelling, Grammar and Punctuation, and Numeracy; and Year 9 Reading, Spelling, Grammar and Punctuation, and Numeracy. The mean scores in 2018 were below those of 2011 for Year 7 Writing.

### **Geolocation**

Geolocation is based on the location of schools in relation to the access of the population to services and is used to disaggregate the data into Major Cities, Inner Regional, Outer Regional, Remote and Very Remote. In the geographically larger states there are typically larger differences between the geographic locations in terms of mean scores and percentages of students at or above the national minimum standards.

Across Australia the percentage of students working at or above the national minimum standards, as well as the mean performance, declines from Major Cities to Very Remote areas across all domains and year levels.

The achievement of WA students in very remote locations was well above the Australian means and percentages at or above national minimum standard for this geolocation across all year groups and all assessments. This pattern was also evident in the remote geolocation for all assessments with the exception of Year 3 Spelling and Writing.

When considering Indigenous status and geolocation together, while the same patterns of performance as for geolocation alone are evident for both Indigenous and non-Indigenous students, the extent of the differences in achievement are more pronounced for Indigenous students. In 2018, Year 3 Indigenous students in WA living in very remote areas had a mean Reading score that was 120 score points (2.3 bands) lower than that of the non-Indigenous in the same geolocation and was 78 score points (or 1.5 bands) lower than that of Indigenous students from major cities. For non-Indigenous students the difference for Year 3 students between very remote and major cities is 38 score points (0.7 of a band).

WA's Indigenous students in remote and very remote areas in Years 3, 5, 7 and 9 have Reading and Numeracy means higher than the Australian means for Indigenous students in these geolocations with the exception of Year 3 Reading in remote areas.

## **Parental education and parental occupation**

For each year group and across each domain, student mean scores and percentages of students at or above the national minimum standard are higher for students with parents who have higher levels of education and a higher occupation status. The relationships between the achievement of students and parental education and occupation categories are consistent with those found in research, in sample assessments and in previous state-wide assessments.

Due to incomplete data collection across Australia in these categories these results can only be considered as indicative. In WA, the percentage of missing data is between 9 per cent and 11 per cent for parental education and 13 per cent to 17 per cent for parental occupation.

## **Participation**

Participating students include those who are exempt, who are deemed not to have reached the national minimum standard, and those who sat the assessment. Students who are absent or have been withdrawn are considered not to have participated. The report focuses on participation in Reading and Numeracy for the time series across the year levels.

Across Australia the participation rates have steadily declined for Years 3, 5, 7 and 9 between 2008 and 2018. The decrease across all year levels and the two domains is approximately 2.4 percentage points, or an average of 0.2 percentage points per year. In Western Australia for the same time period participation rates have improved slightly for all Reading and Numeracy assessments. When compared to other jurisdictions, Western Australia has the highest participation rate for Year 9 Reading and Numeracy and the second highest participation rate behind New South Wales for Years 3, 5 and 7.

Absences contribute substantially to non-participation in all year groups, especially for Indigenous students whose absence rate for Numeracy in Year 9 was 34.0 per cent.

Participation rates for Indigenous students remains considerably lower than for non-Indigenous students in all years and in all assessments. In 2018 this disparity ranged from 12 per cent less in Year 3 to 30 per cent less in Year 9. The participation rate of the non-Indigenous population is similar across all years, averaging around 96 per cent.

The percentages of exempted and withdrawn students in WA were again among the lowest in the country and well below the Australian averages. Withdrawn students contribute about 1 per cent to non-participation in WA. There is very little difference in the rates of withdrawal or exemption of Indigenous and non-Indigenous students.

## **2008, 2013 – 2018 Time series**

The time series shows trends in mean scale scores in Reading and Numeracy from 2008 to 2018.

At the Australian level, there has been an improvement for Years 3 and 5 Reading. Year 3 mean reading achievement increased by 33 score points and there was also an increase of 3.5 percentage points in the number of students performing at or above the minimum standard. Year 5 mean reading achievement has improved by 25 score points and 3.9 per cent. In Western Australia this improvement is also noted, with Year 3 gaining 36 score points and 5.5 per cent, and 29 score points and 5.2 per cent at Year 5. Across Australia there was no change in the achievement for Years 7 and 9 students. In Western Australia improvement in Year 9 Reading is noted, with a gain of 20 score points and 3.2 per cent.

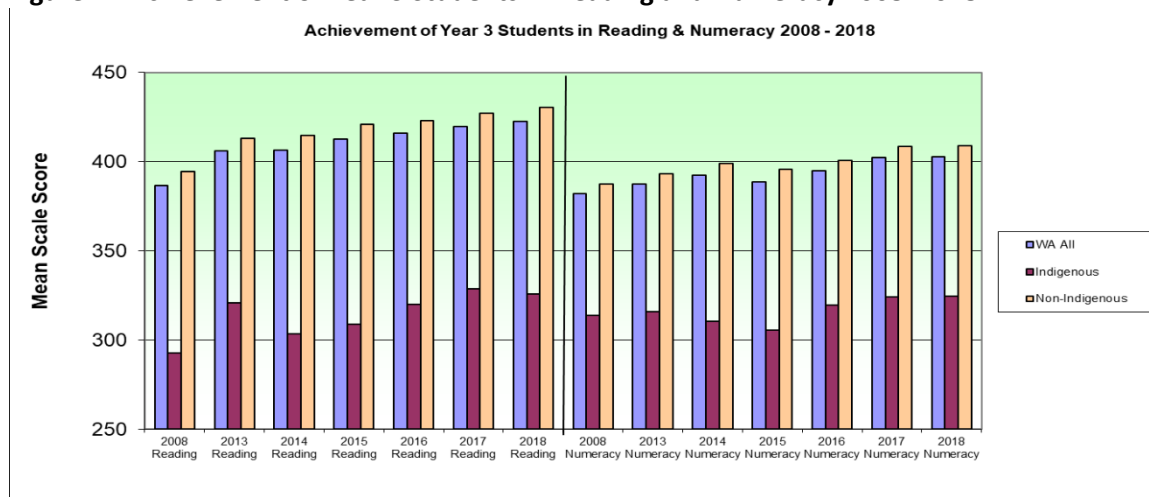
Numeracy mean achievement at the national level in Year 5 has increased by 18 score points and there was also an increase of 3 per cent in the number of students performing at or above the minimum

standard. Year 9 numeracy achievement has improved by 14 score points and 1.9 per cent. In Western Australia the Numeracy mean achievement has increased for Years 3, 5, 7 and 9 students by 21, 29, 15 and 31 score points respectively over the period from 2008 to 2018. The percentage of students at or above the national minimum standard in WA remained unchanged for Years 3 and 7 students and improved by 4.4 per cent for Year 5 students and 4.3 per cent for Year 9.

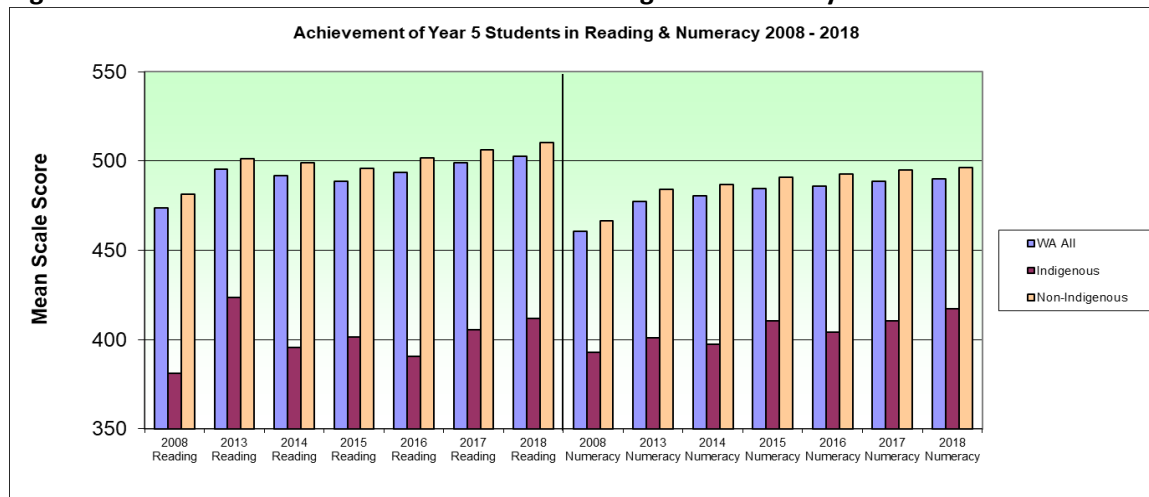
### Comparing mean scores of WA students 2008 and 2013–2018

The following four graphs compare the mean scores for all WA students with those of Indigenous and non-Indigenous students in Reading and Numeracy over the period from 2008 and 2013–2018.

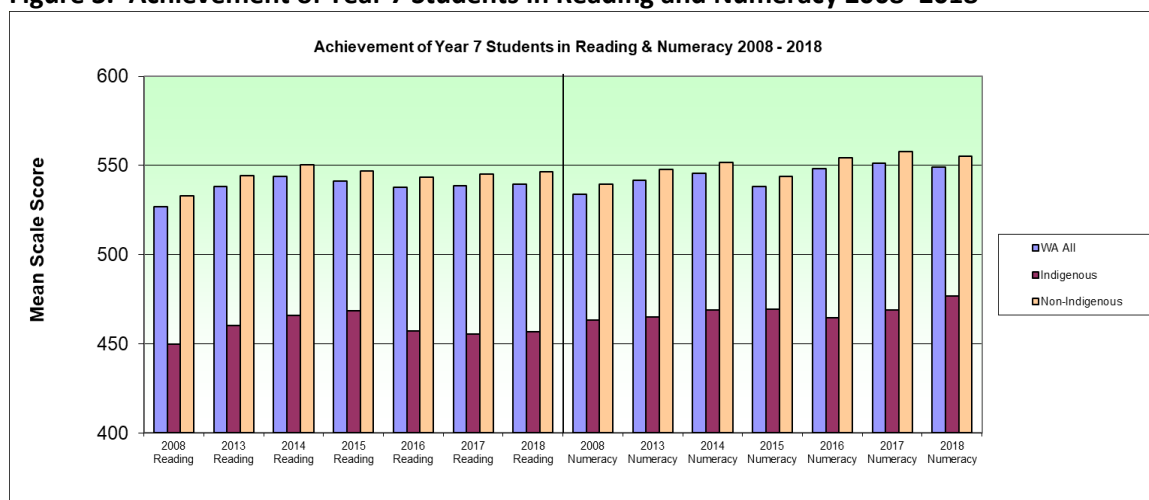
**Figure 1. Achievement of Year 3 Students in Reading and Numeracy 2008–2018**



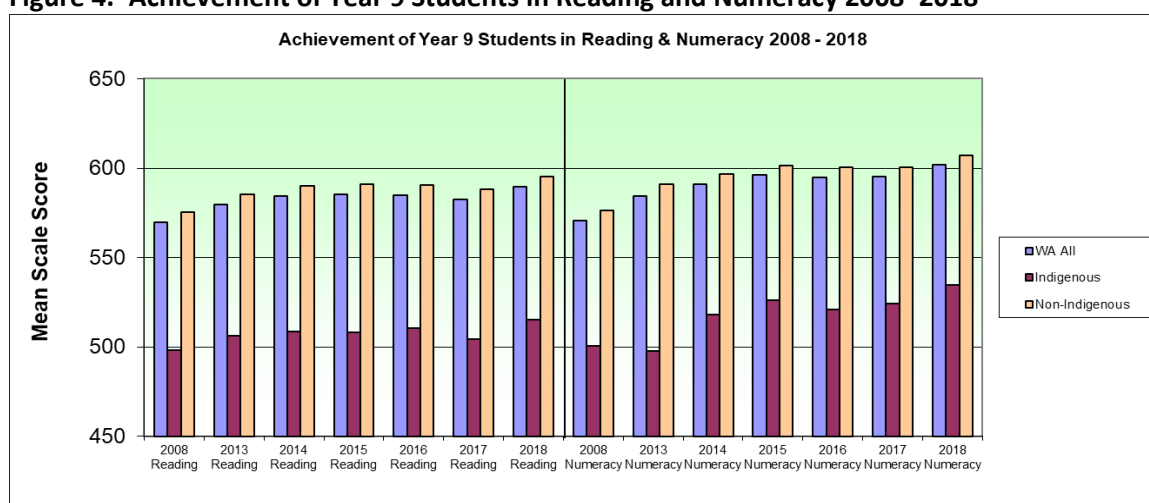
**Figure 2. Achievement of Year 5 Students in Reading and Numeracy 2008–2018**



**Figure 3. Achievement of Year 7 Students in Reading and Numeracy 2008–2018**



**Figure 4. Achievement of Year 9 Students in Reading and Numeracy 2008–2018**



### Cohort gains in Reading and Numeracy

In this report, gains are computed as the difference in mean scores in NAPLAN cycles two years apart (2014–2016, 2015–2017, and 2016–2018, four years apart (2014 to 2018 for Year 3 to 7 or Year 5 to Year 9); or six years apart (2012 to 2018) for the same cohort of students. The report focuses on gains in Reading and Numeracy only.

#### Reading Year 3 in 2016 to Year 5 in 2018

The gains in Reading achievement from Year 3 to Year 5 ranged from 82 to 87 score points across Australia. The largest gain (87 score points) was in Western Australia; however, this gain was not significantly different from the Australian gain (84 score points). Australian gains were greater for male (89 score points) than female students (78 score points). In Western Australia, the gain for male students was not statistically different from that of female students.

#### Reading Year 5 in 2016 to Year 7 in 2018

The gain in reading achievement in Western Australia (46 score points) was not significantly different from the Australian gain (41 score points). Australian gains were greater for Indigenous students (53 score points) than for non-Indigenous students (40 score points). Across Australia and in Western Australia, there were no significant differences in gain between male and female students or LBOTE and non-LBOTE students.

### **Reading Year 7 in 2016 to Year 9 in 2018**

The gains in Western Australia (52 score points) were greater than the national gain (43 score points). The gains for Western Australia were significantly greater than the gains for Victoria (43 score points), Queensland (40 score points), South Australia (40 score points) and Tasmania (39 score points). There were no significant differences in gain between male and female students, Indigenous and non-Indigenous students or LBOTE and non-LBOTE students across Australia and in Western Australia.

### **Numeracy Year 3 in 2016 to Year 5 in 2018**

The gain in numeracy achievement in Western Australia (95 score points) was not significantly different from the Australian gain (92 score points). Differences between the gain scores were not evident in any subgroup across Australia and in Western Australia.

### **Numeracy Year 5 in 2016 to Year 7 in 2018**

The gain in Western Australia (63 score points) was greater than the Australian gain (55 score points). The gains for Western Australia were significantly greater than the gains for New South Wales (54 score points), Victoria (52 score points) and Queensland (54 score points). Differences between the gain scores were not evident in any subgroup across Australia and in Western Australia.

### **Numeracy Year 7 in 2016 to Year 9 in 2018**

The gains in numeracy between Year 7 and Year 9 for the 2016 to 2018 cohort was 46 score points across Australia. Western Australia's gain score (54 score points) was not significantly different from the national gain score. The gains for Western Australia were significantly greater than the gains for Victoria (44 score points) and Queensland (43 score points), South Australia (41 score points) and Tasmania (42 score points). The Australian and Western Australian gains were significantly greater for Indigenous students than non-Indigenous students.

### **Four year gains: Year 3 to Year 7; Year 5 to Year 9**

Achievement of students is shown over three consecutive assessment periods for Reading and Numeracy (i.e. Year 3 in 2014, Year 5 in 2016 and Year 7 in 2018 or Year 5 in 2014, Year 7 in 2016 and Year 9 in 2018).

WA's Years 3 to 7 cohort in 2014 was 12 points below the Australian mean score in Reading when in Year 3. By 2018, when this cohort was in Year 7, the gap between the Australian mean score and WA had reduced to 2.8 points.

The largest Reading gains over four years for the 2014 Year 5 cohort were evident in Western Australia (98 score points). WA's Years 5 to 9 cohort in 2014 was ranked sixth in Reading and was 8.9 points below the Australian mean score when in Year 5. By 2018, in Year 9, the cohort's ranking had improved to second with WA exceeding the Australian mean score by 5.3 points.

The results for Numeracy are similar with the Years 3 to 7 cohort in 2014 9.3 points below the Australian mean score when in Year 3. By 2018, the WA cohort's mean in Year 7 was above the Australian mean score by 0.6 points.

The Years 5 to 9 cohort in 2014 was ranked fifth in Numeracy and was 7 points below the Australian mean score when in Year 5. By 2018, the ranking was second and the mean was 6.3 points above the Australian mean.

**Six year gains: Years 3 to 9**

Across Australia there was a gain of 165 score points in Reading from Year 3 in 2012 to Year 9 in 2018. The Reading gain in Western Australia of 182 score points was the highest six year gain across all jurisdictions. In Numeracy, there was a national improvement of 200 score points over the six years. Among jurisdictions Western Australia had the highest gain of 218 score points.