

**SAVE OUR SCHOOLS**

# **Declining Standards and Inequity in ACT Education**

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## Key Points

1. The ACT has high average school outcomes but they have declined over the past decade. It also has amongst the largest achievement gaps between the top and bottom students of all countries participating in international tests and the largest achievement gap between rich and poor in Australia. The gaps have not reduced over the last decade.

### **The ACT has high average school outcomes**

2. The ACT has high average outcomes in the OECD's Programme for International Assessment (PISA) tests for 15 year-olds. Average reading, mathematics and science results in the ACT are amongst the highest in the world. It has the highest average scores in reading and science in Australia and the second highest in mathematics.
3. High proportions of ACT 15 year-old students are performing at the most advanced levels. In 2009, 18 per cent were at the most advanced reading levels, 22 per cent in mathematics and 20 per cent in science. These are amongst the highest proportions in the OECD and are well above the average for the OECD.
4. Relatively low proportions of ACT 15 year-old students are performing at the lowest levels in reading, mathematics and science compared to other states. Eleven to 13 per cent of ACT students are at the lowest levels compared to 12 to 16 per cent for Australia. These are lower than the average for the OECD.
5. The average ACT results in the national literacy and numeracy (NAPLAN) tests are the highest or equal highest in Australia.
6. Retention rates from Years 7/8 to 12 and completion rates for Year 12 are also the highest in Australia.

### **The ACT has large achievement gaps**

7. The ACT has amongst the largest spread of test scores for reading, mathematics and science in the 65 countries and cities participating in PISA; in the case of science it is the largest. It also has the largest spread of test scores in Australia, except for the Northern Territory. The gaps between the highest and lowest 5% of 15 year-old ACT students are equivalent to 7 to 9 years of schooling.
8. These differences are strongly associated with student background. The ACT has the largest achievement gap in reading between high and low socio-economic status (SES) students in Australia. On average, low SES ACT students are over three years in learning behind high SES students.
9. Low SES ACT students are doing worse than those in most other states. Their average reading results are about six months or more of schooling behind low SES students in all other states except Tasmania and the Northern Territory. The latest national PISA report says that low SES students in the ACT "are not particularly well served by their education system".
10. The latest NAPLAN results also show large achievement gaps between children of highly educated and highly skilled parents and those from lowly educated and low-skilled families in the ACT.

- Year 9 students of low-educated and low-skilled parents are about four years behind students of high educated and highly skilled parents in reading and numeracy.
- ACT Year 9 students whose parents did not complete Year 12 have a similar reading level to Year 5 students whose parents have a university degree.

### **Average results have declined while achievement gaps remain**

11. Average reading and mathematics results for ACT 15 year-olds have fallen over the last decade. Students are now about six months behind their counterparts of 2001 and 2003.
12. The proportion of ACT students not achieving international benchmarks has increased while the proportion at the most advanced levels has fallen.
  - For example, the proportion of students not achieving the reading benchmark increased from 8 to 13% between 2000 and 2009 while the proportion achieving at the most advanced levels fell from 25 to 18%.
13. The gaps between the highest and lowest 5 per cent of students in the ACT increased slightly over the last decade while the achievement gaps between low and high SES have continued without reduction.

### **Urgent action is needed on declining education standards and inequity**

14. ACT education performance over the past decade has been shameful.
15. The decline in standards and continuing large achievement gaps warrant urgent action:
  - A new ACT Government should commit to implementing the funding model recommended by the Gonski review of school funding to deliver a large funding increase for low SES students in government and private schools.
  - An independent public inquiry should be established to advise on how to reverse the decline in education outcomes and on policies and approaches to reduce the achievement gaps between rich and poor.

## 1. The ACT has a high quality school system

Student outcomes in the ACT are very high by national and international standards. The OECD's Programme for International Assessment (PISA) shows that the ACT has high average outcomes for 15 year-old students. It has the highest average point scores in reading and science in Australia and the second highest in mathematics, just one point behind Western Australia [Charts 1 – 3 below]. When statistical uncertainty is taken into account, the ACT is achieving at a higher level than four states and similar to three states in reading, mathematics and science.

Average reading, mathematics and science results in the ACT are amongst the highest in the world. The ACT average (mean) score in reading is similar to that of Finland and Korea, as well as Canada, Hong Kong and Singapore (not shown in the charts) taking statistical uncertainty into account, and is exceeded only by Shanghai [Chart 1].<sup>1</sup> The average score in mathematics is statistically similar to that of many top performing countries including Canada, Finland, Korea and Switzerland and is exceeded only by Shanghai, Singapore and Hong Kong [Chart 2]. In science, the ACT has statistically similar results to the top performing countries of Finland, Hong Kong, Japan, Korea and Singapore and is exceeded only by Shanghai [Chart 3].

High proportions of ACT 15 year-old students are performing at the most advanced levels. In 2009, 18% were at the most advanced reading levels, 22% in mathematics and 20% in science [Charts 4 – 6 below]. These proportions are higher than in any other state apart from Western Australia in mathematics which has a similar proportion.

They are amongst the highest proportions in the OECD and well above the average for the OECD. The reading proportion is the higher than any OECD country and only Shanghai and Macao had a slightly higher proportion at the top levels. The proportion achieving at the highest mathematics levels is the same as in Finland but is below Korea, Hong Kong, Shanghai, Singapore, Switzerland and Taipei. In the case of science, the ACT proportion is higher than in any OECD country and is exceeded only by Macao and Shanghai.

Relatively low proportions of ACT students are performing at the lowest levels compared to other states, with only Western Australia matching the ACT. Eleven to 13% of ACT students are at the lowest levels compared to 12 to 16% for Australia. However, Finland, Korea and Shanghai have only 3 to 8% of students at the lowest levels of achievement.

ACT average results in the national literacy and numeracy (NAPLAN) tests are the highest or equal highest in Australia. In 2012, ACT Year 5 results in reading, grammar and punctuation, and numeracy were the highest in Australia while writing was similar to NSW and Victoria and higher than in all other states and the Northern Territory. Year 5 spelling results were below NSW, similar to Victoria and above that of all other jurisdictions. Year 9 reading, grammar and punctuation, and numeracy results were the highest in Australia. Writing was the highest except Victoria and spelling was the highest except for NSW.

Retention rates from Years 7/8 to 12 and completion rates for Year 12 are also the highest in Australia. In 2010, 78% of ACT Year 12 students gained a Year 12 certificate compared with 66% across Australia [ACARA 2012]. Ninety-one per cent of ACT students who started

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<sup>1</sup> The statistical uncertainty intervals for the mean scores are not shown in the charts but are published in Thomson et.al. 2010.

secondary school in 2005 remained until Year 12 in 2010 compared with an average of 78% in Australia [PC 2012].

## **2. Low equity school system**

The ACT has a low equity school system. There is a massive difference between the results of the highest and lowest achieving students and between low and high socio-economic status (SES) students.

The ACT has the largest spread of test scores for reading, mathematics and science in Australia, except for the NT. The gap between the highest and lowest 5% of students in the ACT in reading is 339 points on the PISA scale [Chart 1]. This is a huge gap which is equivalent to over eight years of schooling at age 15. The highest performing 5% of students are about four years above the mean score for 15 year-olds and the lowest performing students are about four years behind. It is the largest gap in Australia except for the NT. It is much larger than the average for the OECD and is exceeded in only five of the 65 countries and cities participating in PISA [Thomson et.al. 2010, Table 3.1).

The mathematics gap between the top and bottom 5% of students is 323 points, which is also the largest in Australia except for the NT [Chart 2]. It is exceeded by only seven of the countries and cities participating in PISA [Thomson et.al. 2010, Table 5.2]. In science the gap is 353 points, or nearly nine years of learning [Chart 3]. This is the largest in Australia except for the NT and is larger than that of any other country or city participating in PISA [Thomson et.al 2010, Table 6.2].

These differences are strongly associated with student background. The PISA results show that SES background has a larger impact on student results in Australia than in nearly all countries and cities participating in the PISA program. PISA reports on how much students' performance changes, on average, with a change of one unit on its SES index (this is termed the "socio-economic gradient"). For Australia, there is an average increase of 46 points on the PISA scale in reading for a one unit increase in the index compared to the average of 38 points for all OECD countries. France, New Zealand, Colombia and Dubai are the only other countries out of 65 participating in PISA with a significantly higher gradient than Australia.

The PISA results also show that, within Australia, the impact of socio-economic background on student results is stronger in the ACT than in any other state or territory - the socio-economic gradient is larger than elsewhere in Australia. The ACT has the largest achievement gap in reading between high and low SES students in Australia. On average, low SES students in the ACT are over three years in learning behind high SES students.

In addition, low SES students are doing worse than those in most other states. Their average reading results are about six months or more of schooling behind low SES students in all other states except Tasmania and the Northern Territory. The latest national PISA report effectively condemns the ACT Government's record in meeting the needs of low SES students. It says:

....low socioeconomic students in the Australian Capital Territory are not particularly well served by their education system, with average scores for these students only just above those for Tasmania and the Northern Territory, and between 19 and 24 score points lower than students of the same socioeconomic level in the other five states. [Thomson et.al. 2010: 281]

The latest NAPLAN results also show large achievement gaps between children of highly educated and highly skilled parents and those from lowly educated and low-skilled families. ACT Year 9 students of low-educated and low-skilled parents are about four years behind students of high educated and highly skilled parents in reading and numeracy.

The achievement gap in reading between ACT Year 9 students from highly and lowly educated families in 2011 was the largest in Australia except for the Northern Territory [Chart 7]. The ACT gap was 85 points on the NAPLAN scale, which is equivalent to about four years of schooling. ACT Year 9 students whose parents did not complete Year 12 achieved a similar reading level to Year 5 students whose parents had a university degree. The gap for numeracy was 86 points, which was the largest in Australia except for the NSW and the NT [Chart 8].

The achievement gaps between students from high-skilled and low-skilled families were also very large. The reading gap in the ACT was 85 points compared to the average for Australia of 74 points [Chart 9] while the numeracy gap was 86 points compared to 75 for Australia [Chart 10]. The ACT gaps were the largest in Australia except for the NT.

ACT Year 9 students from lowly educated and low-skilled families achieve at about the same average level as their counterparts in the rest of Australia in reading [Charts 7 & 9] but below the average in numeracy [Charts 8 & 10].

The *My School* results provide another perspective on inequality in Canberra's schools. They show that the large majority of primary schools that consistently achieve in the top 10 results are high socio-economic status (SES) schools. The large majority of schools that achieve in the bottom 10 results are amongst the lowest SES schools in the ACT. The achievement gaps in average Year 5 literacy and numeracy results between primary schools range from 100 to 160 points, which is equivalent to five to eight years of schooling.

The picture is similar in the high school sector. The three wealthiest private schools in Canberra consistently achieve in the top 5 results. In contrast, schools serving the poorest families in Canberra are consistently in the bottom 10 results. The achievement gaps in Year 9 are between 80 and 120 points, or four to six years of schooling.

### **3. Declining performance and continuing inequity**

Average school results in the ACT have declined over the last decade or more while no reduction has occurred in the achievement gaps.

Average reading and mathematics results for 15 year-olds fell by about 20 points on the international PISA scale since 2000 and 2003 respectively, which represents about six months of learning [Chart 11]. There has been little change in science results since 2006.

The proportion of students not achieving international benchmarks in the ACT has increased while the proportion at the most advanced levels has fallen. The proportion of students not achieving the reading benchmark increased from 8% to 13% between 2000 and 2009 and the proportion not achieving the mathematics benchmark increased from 11% to 14% between 2003 and 2009 [Chart 12]. The proportion of students achieving at the most advanced level in reading fell from 25% to 18% between 2000 and 2009 while the proportion achieving at the most advanced level in mathematics fell from 27% to 22% between 2003 and 2009. There was little change in the science proportions since 2006.

The gaps between the highest and lowest 5% of students in the ACT have increased slightly [Chart 13]. The gap for reading increased by 12 points between 2000 and 2009, the mathematics gap increased by only 2 points between 2003 and 2009 but the science gap increased by 16 points in 2009 compared to 2006. These changes may not be statistically significant, but it is clear there has been no reduction in the very large gaps between the top and bottom 5% of students.

The ACT is one of only three regions in Australia not making any progress in reducing the achievement gap between the bottom and top 5% of students. Victoria, Queensland, South Australia, Tasmania and the Northern Territory have all reduced the achievement gap in at least two of the tested domains. Only the ACT, NSW and Western Australia have failed to make any reduction. In contrast, OECD countries have secured large reductions in the gaps in reading and mathematics.

The achievement gaps between low and high SES students in the ACT do not appear to have reduced since 2000, but it is very hard to make definite judgements on the available data from PISA. The NAPLAN results by educational and occupational background for each jurisdiction have only been published for the last two years.

School retention rates from Years 7 to 12 in the ACT have increased slightly. The average retention rate for all ACT schools increased from 89% in 2001 to 91% in 2010 while national retention rates showed a larger increase - increasing from 73% to 78%. The proportion of ACT students completing Year 12 increased from 75% in 2001 to 78% in 2010.

#### **4. Conclusion**

ACT education performance under successive Labor governments has been shameful. Average education results have declined since 2001. Despite all the rhetoric about improving social equity in education, large inequities remain. No progress has been made in reducing the very large achievement gaps between the highest and lowest performing students and between high and low SES students. The ACT still has amongst the largest achievement gaps between the top and bottom 5% of students in all the countries participating in the PISA tests.

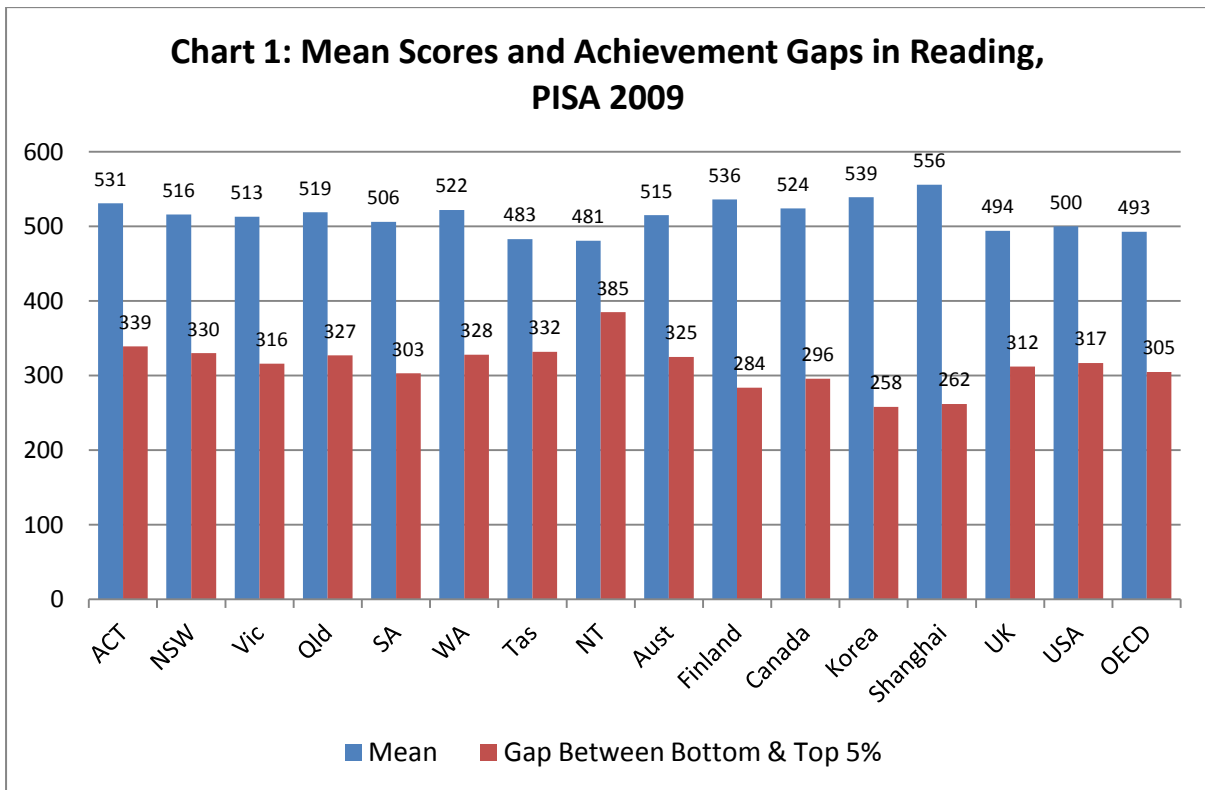
An immediate response from a new ACT Government should be to commit to implementing the funding model recommended by the Gonski Review of School Funding. This would deliver a large funding increase for low SES students in government and private schools.

The decline in standards and continuing large achievement gaps also warrant an expert public review of ACT education. An independent public inquiry should be established to advise on how to reverse the decline in education outcomes and reduce the achievement gaps.

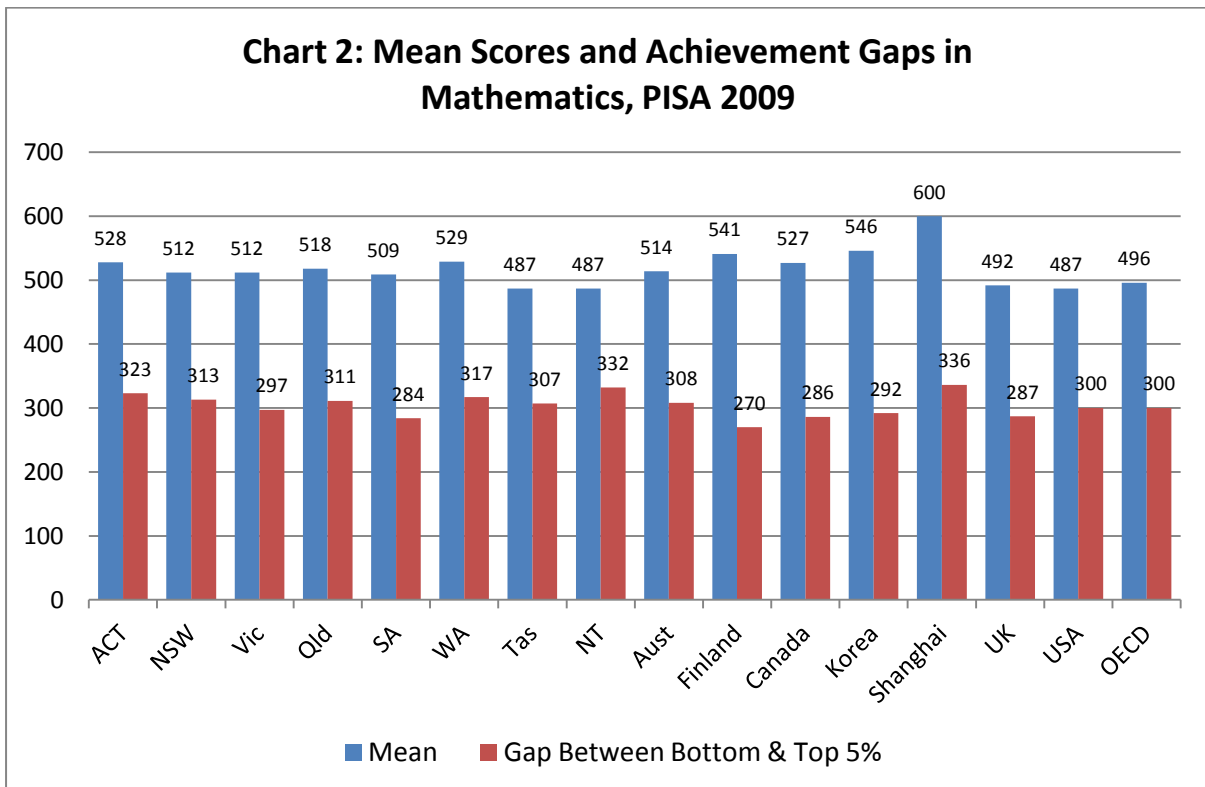
It should examine results at both the higher and lower achievement levels. It should advise on how to reduce the proportion of students whose outcomes are at the lowest levels and increase the proportion achieving at the most advanced levels. It should review results in both government and private schools.

It should establish new priorities in education expenditure to address the declining results and the achievement gaps and what additional expenditure is needed to support schools serving disadvantaged communities.

## Charts on School Achievement in the ACT

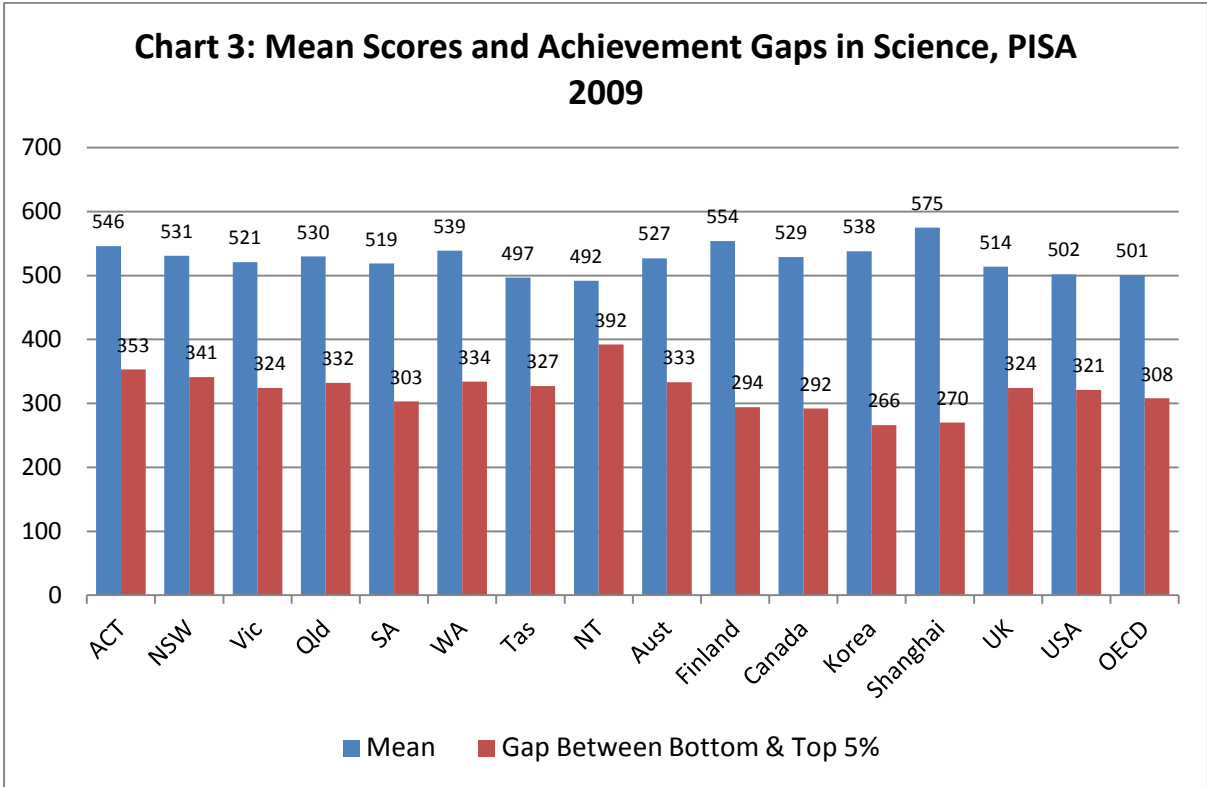


**Source:** Thomson et.al. 2010, *Challenges for Australian Education: Results from PISA 2009*, Australian Council for Educational Research, Camberwell, Tables 3.1 & 3.3.

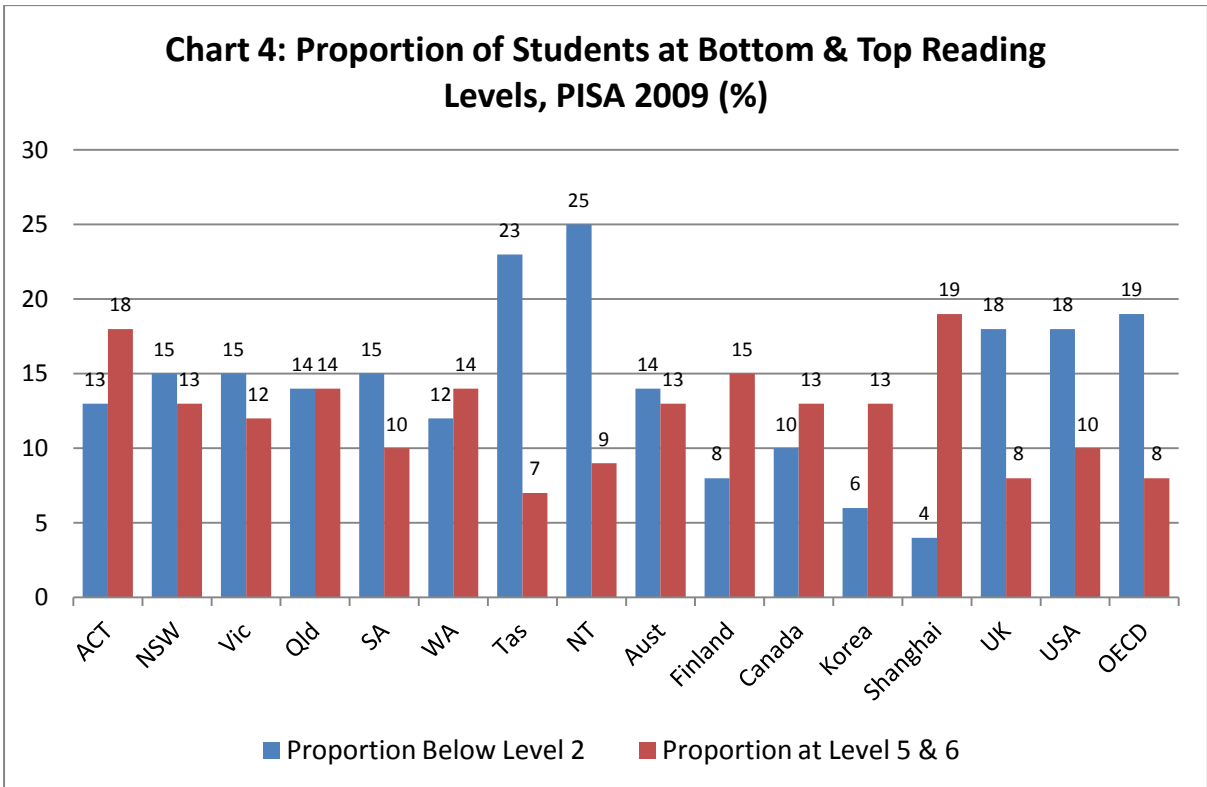


**Source:** Thomson et.al. 2010, *Challenges for Australian Education: Results from PISA 2009*, Australian Council for Educational Research, Camberwell, Tables 5.2 & 5.4.



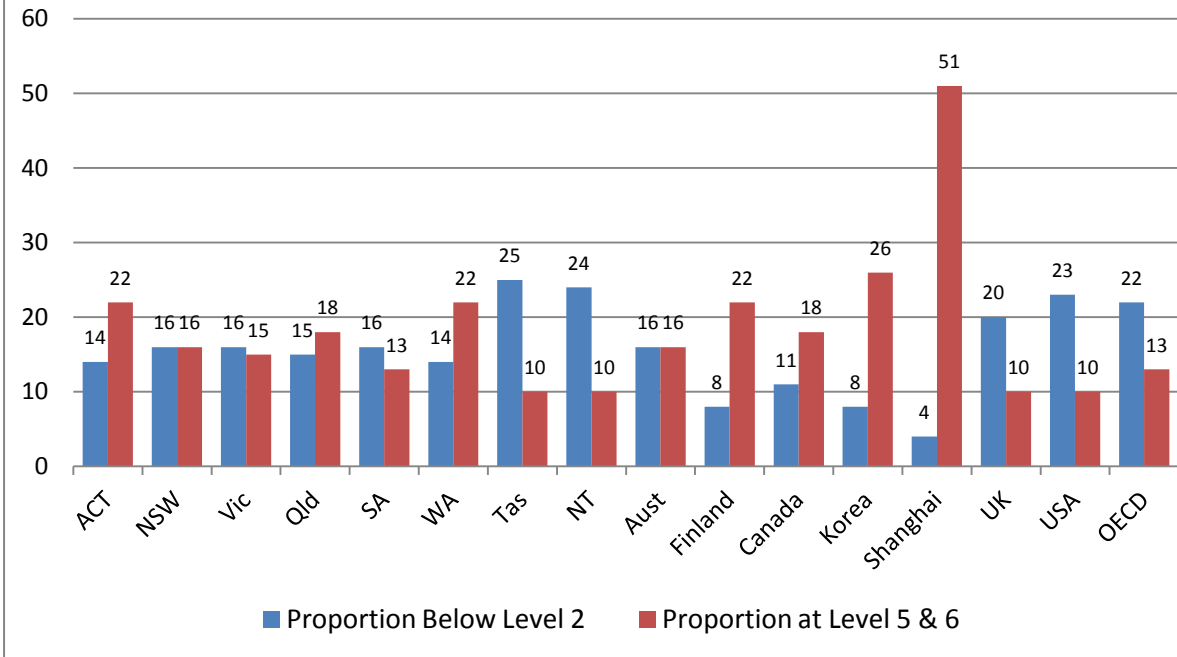


**Source:** Thomson et.al. 2010, *Challenges for Australian Education: Results from PISA 2009*, Australian Council for Educational Research, Camberwell, Tables 6.2 & 6.4.



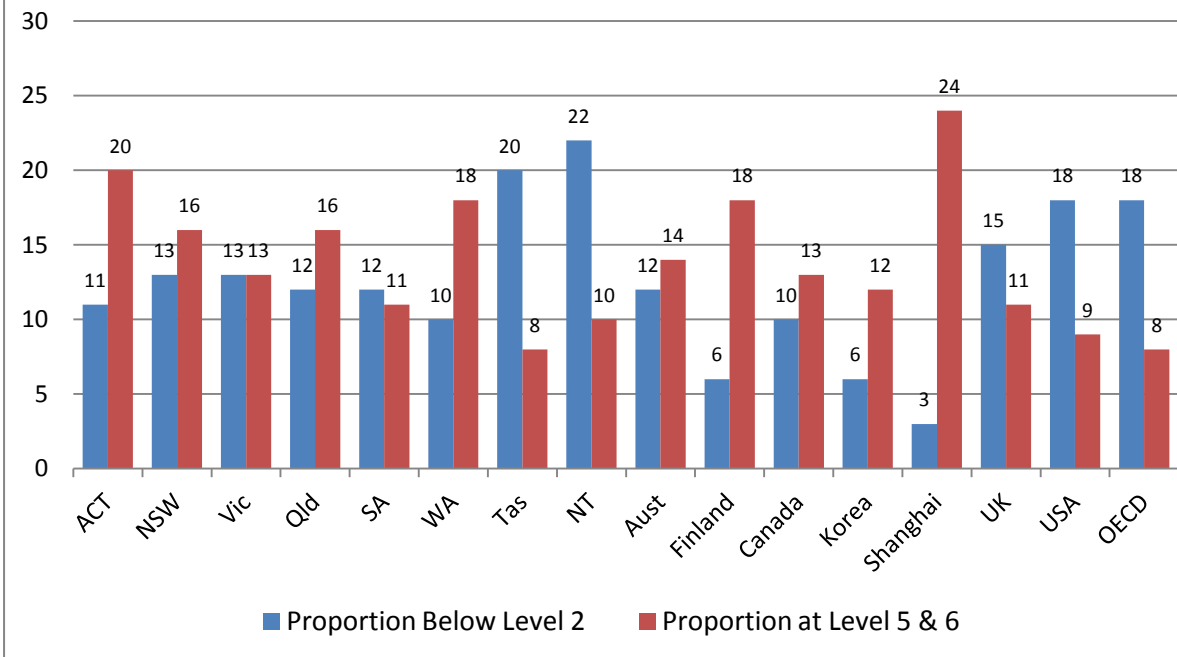
**Source:** Thomson et.al. 2010, *Challenges for Australian Education: Results from PISA 2009*, Australian Council for Educational Research, Camberwell, Figures 3.1 & 3.3.

**Chart 5: Proportion of Students at Bottom & Top Mathematics Levels, PISA 2009 (%)**

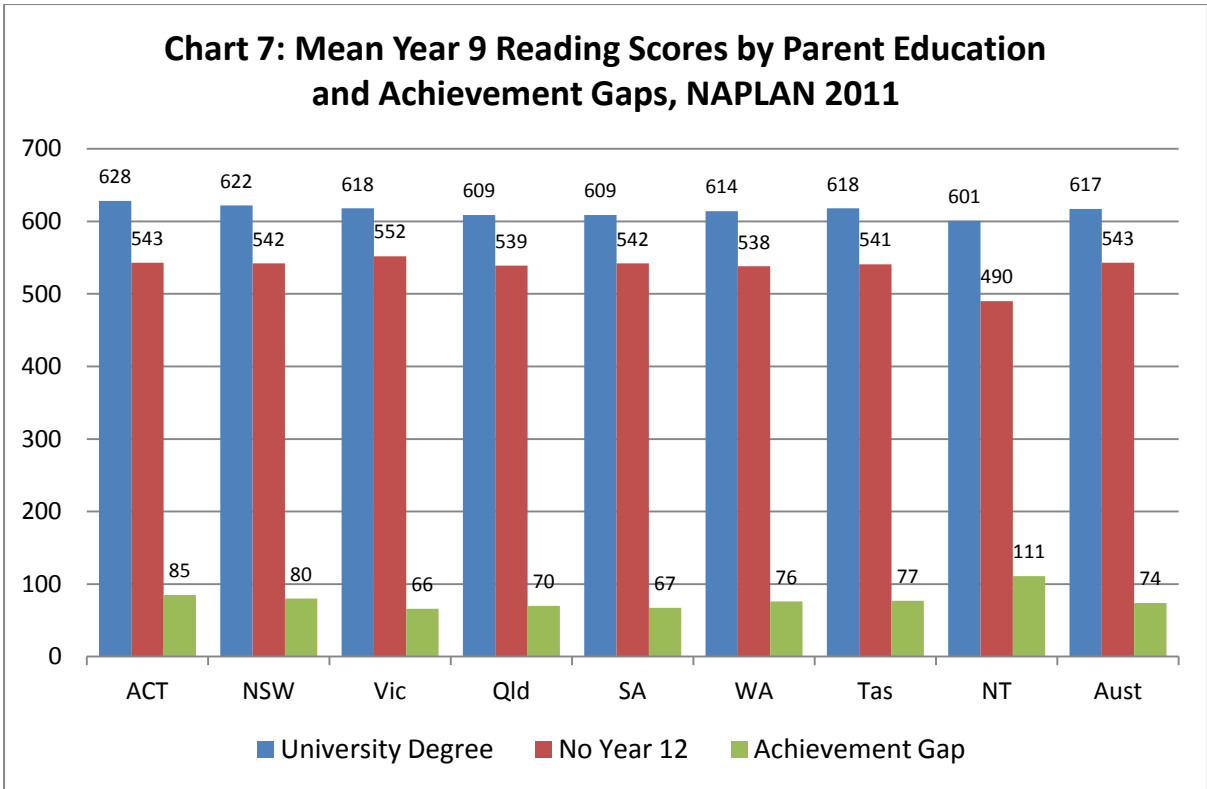


**Source:** Thomson et.al. 2010, *Challenges for Australian Education: Results from PISA 2009*, Australian Council for Educational Research, Camberwell, Figures 5.4 & 5.6.

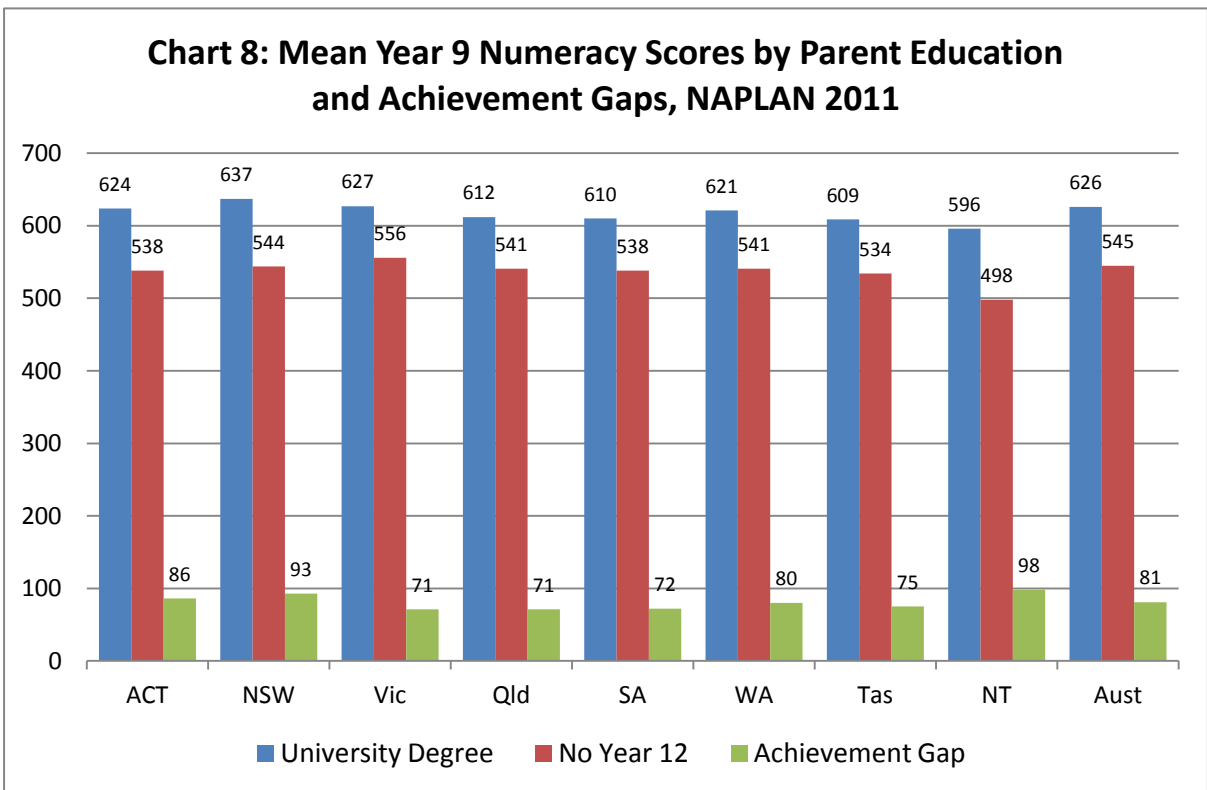
**Chart 6: Proportion of Students at Bottom & Top Science Levels, PISA 2009 (%)**



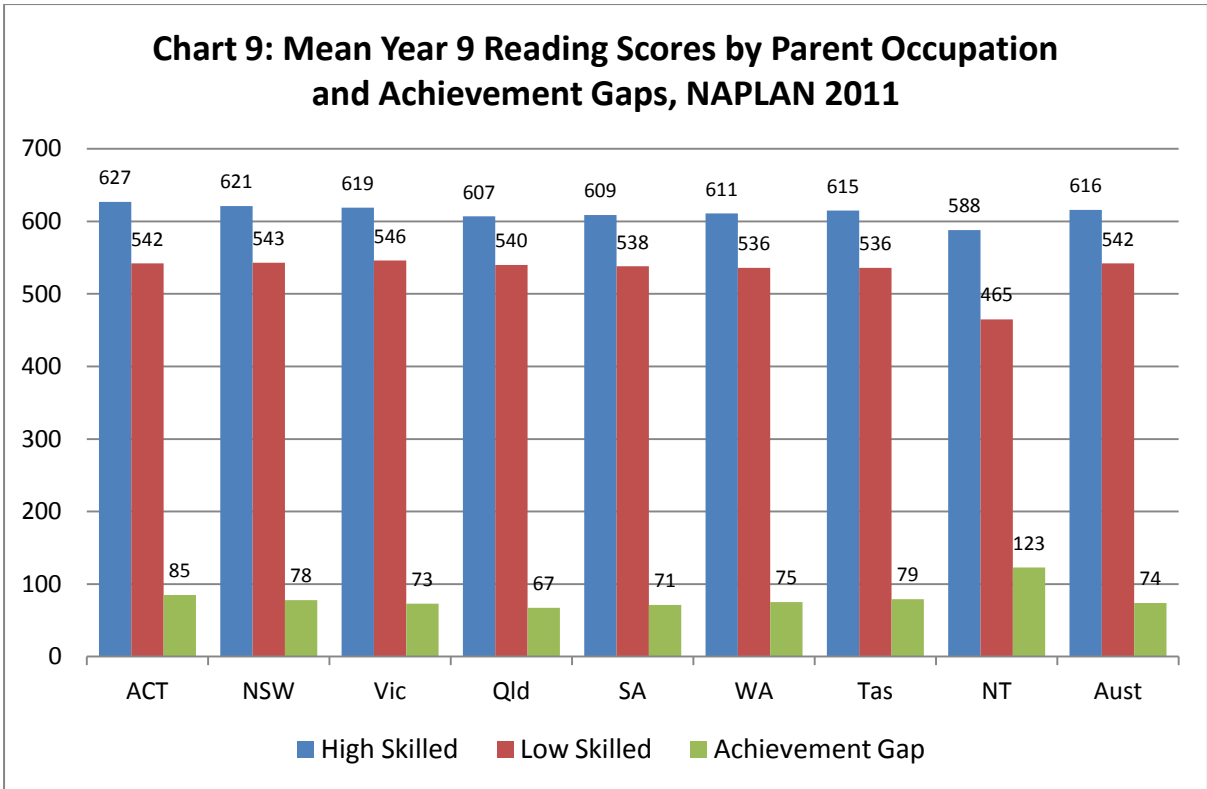
**Source:** Thomson et.al. 2010, *Challenges for Australian Education: Results from PISA 2009*, Australian Council for Educational Research, Camberwell, Figures 6.8 & 6.10.



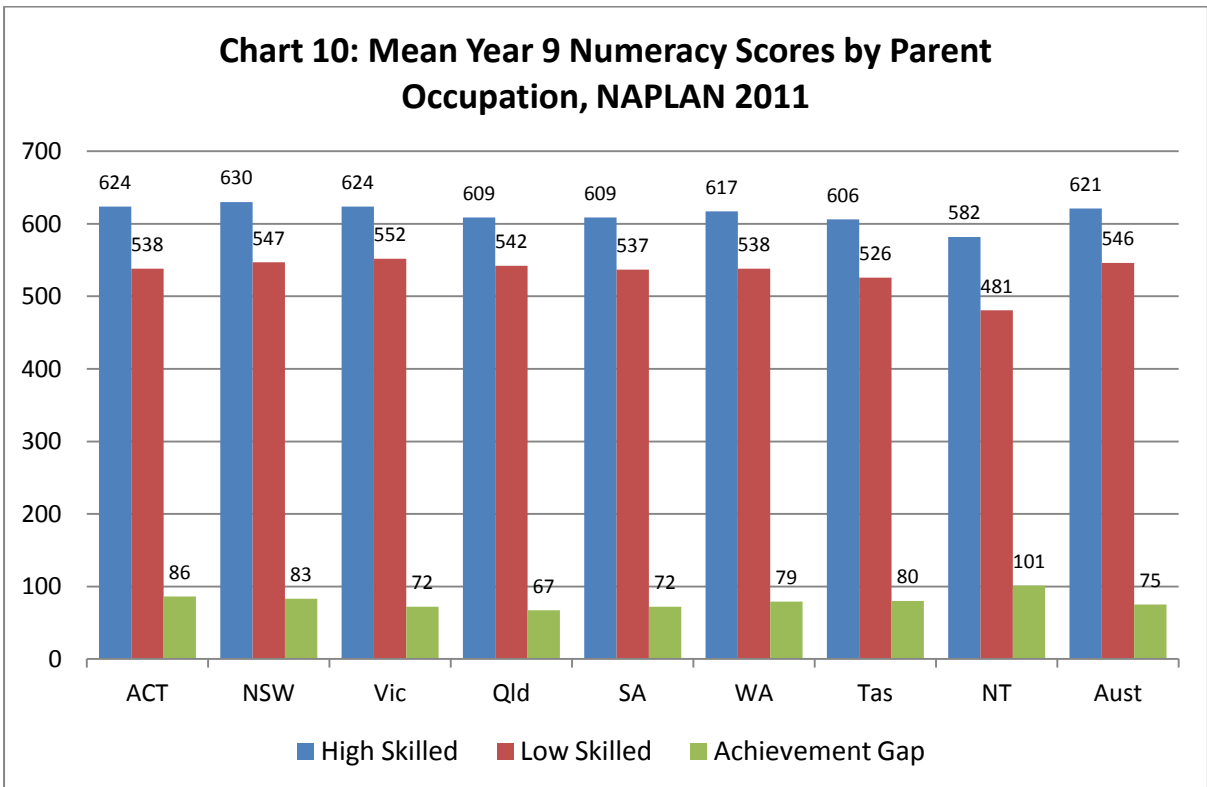
**Source:** Australian Curriculum, Assessment and Reporting Authority 2012, *NAPLAN Achievement in Reading, Persuasive Writing, Language Conventions and Numeracy: National Report for 2011*, ACARA, Sydney.



**Source:** Australian Curriculum, Assessment and Reporting Authority 2012, *NAPLAN Achievement in Reading, Persuasive Writing, Language Conventions and Numeracy: National Report for 2011*, ACARA, Sydney.

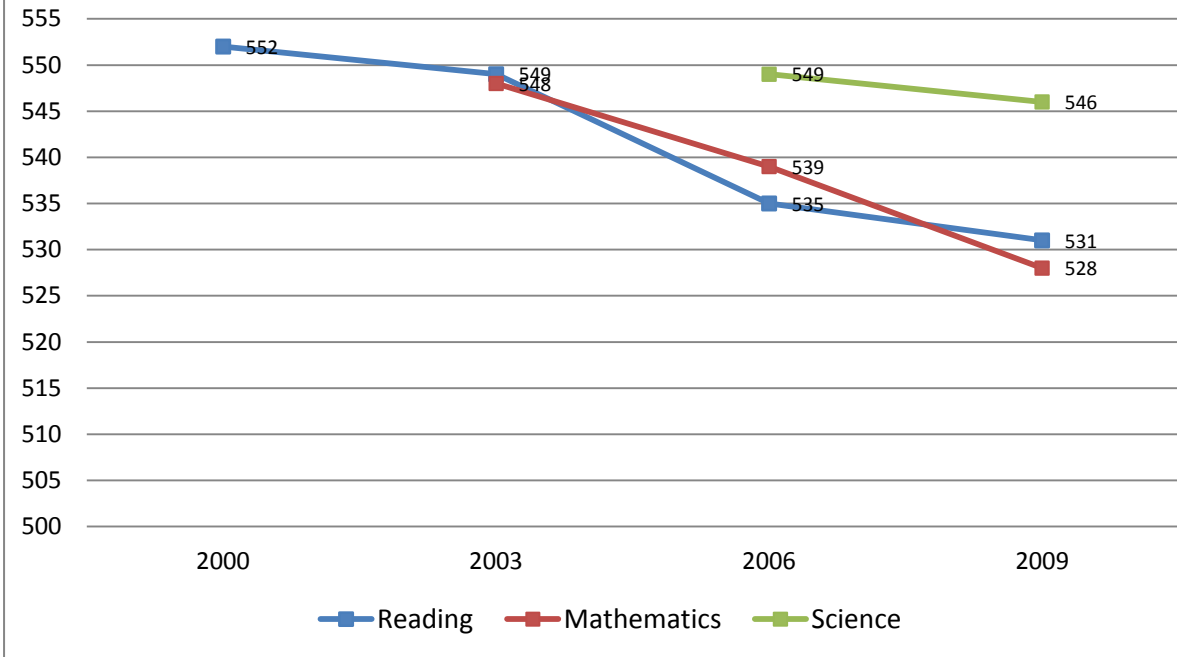


**Source:** Australian Curriculum, Assessment and Reporting Authority 2012, *NAPLAN Achievement in Reading, Persuasive Writing, Language Conventions and Numeracy: National Report for 2011*, ACARA, Sydney.



**Source:** Australian Curriculum, Assessment and Reporting Authority 2012, *NAPLAN Achievement in Reading, Persuasive Writing, Language Conventions and Numeracy: National Report for 2011*, ACARA, Sydney.

**Chart 11: Average Reading, Mathematics and Science Results, ACT 2000 - 2009 (PISA point scale)**

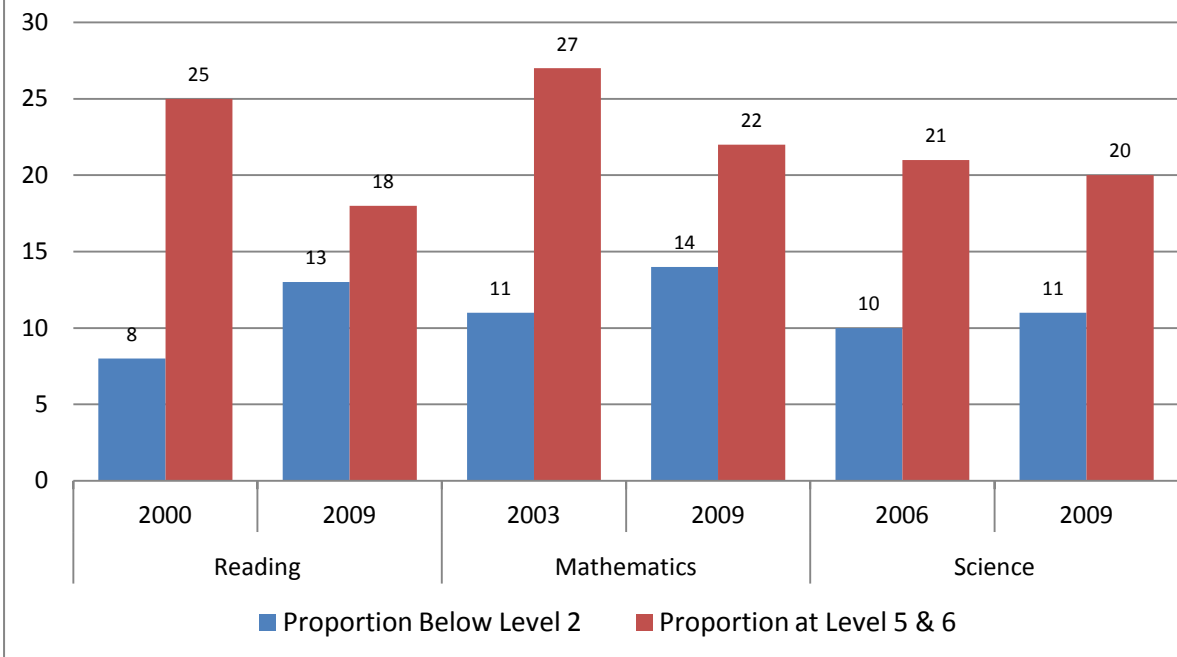


**Sources:**

Thomson et.al. 2010, *Challenges for Australian Education: Results from PISA 2009*, Australian Council for Educational Research, Camberwell, Tables 3.40, 5.16 & 6.16.

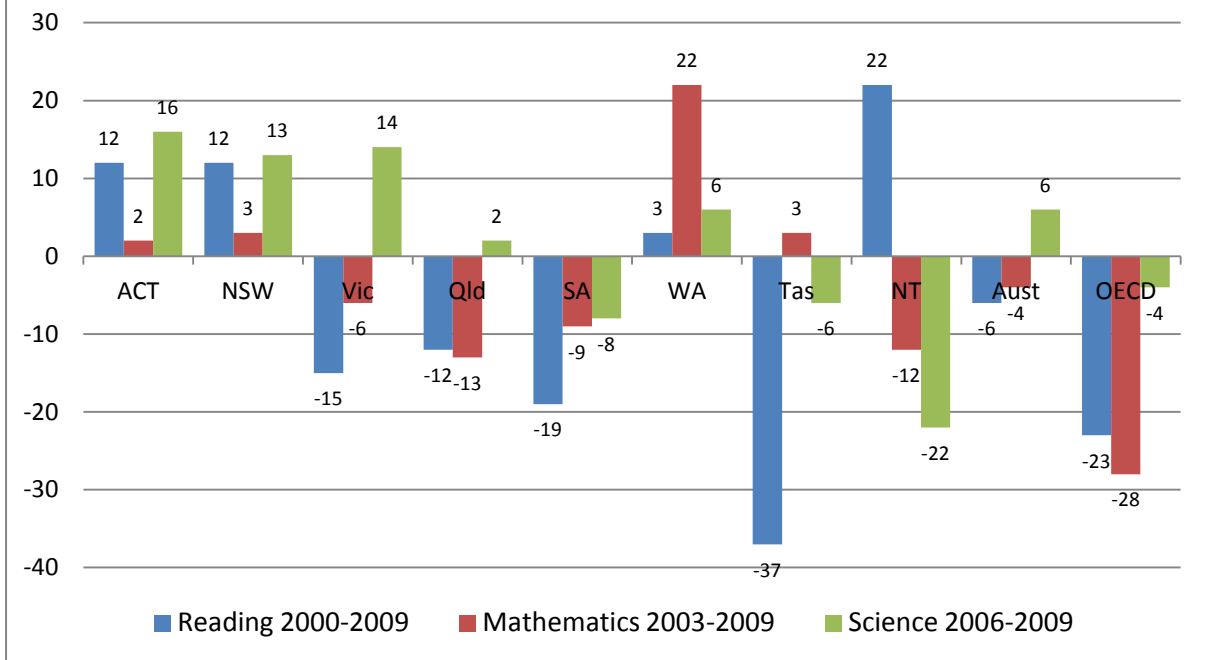
Thomson & de Bortoli 2007, *Scientific Literacy: How Australia Measures Up*, Australian Council for Educational Research, Camberwell, Table 5.5.

**Chart 12: Proportion of ACT Students at Bottom & Top PISA Proficiency Levels (%)**



**Source:** Thomson et.al. 2010, *Challenges for Australian Education: Results from PISA 2009*, Australian Council for Educational Research, Camberwell, Tables 3.41, 5.17 & 6.17.

**Chart 13: Changes in Achievement Gaps Between the Bottom & Top 5% of Students (PISA point scale)**



**Sources:**

Thomson et.al. 2010, *Challenges for Australian Education: Results from PISA 2009*, Australian Council for Educational Research, Camberwell.

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