

## Auditor-General's Report: Literacy and Numeracy Achievement

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### Introduction

The Department of Education and Early Childhood Development (DEECD) has overall responsibility for improving student literacy and numeracy in government schools. DEECD supports schools and teachers to improve student literacy and numeracy through a range of programs. DEECD and the Victorian Curriculum and Assessment Authority (VCAA) assess and monitor student achievement at selected year levels through statewide testing across all government schools.

The objective of the audit was to determine whether student literacy and numeracy are improving in Victoria's government schools. This primarily involved a detailed analysis of DEECD's and VCAA's statewide student achievement data covering the period 1998 to 2007.

The results from the new national testing program, the National Assessment Program – Literacy and Numeracy (NAPLAN), which replaced the statewide tests in 2008 were not used in this audit. This is because the minimum standards for student achievement set under NAPLAN are not comparable with those set for the government school sector in Victoria, and the published data do not specifically identify and separate the performance of the government and non-government school sectors.

### Overall conclusion

The government has made a significant commitment to improving literacy and numeracy, investing \$1.19 billion in initiatives over the past six years. Nevertheless, based on trends in state average achievement against the expected performance level set for Victorian students, over the period 1998 to 2007 DEECD's efforts have not resulted in a marked improvement across age groups. Although improvements were more noticeable for students in their early years, these gains were not sustained as they progressed through school. For numeracy there were more signs of declining than improving performance.

It is clear that in order to make a difference, both the nature and the scale of the literacy and numeracy strategies currently being applied need to be thoroughly re-assessed. There is a need to focus effort early, on the students that need support, and for that support to be closely monitored and sustained as they progress through school. This focus is needed for both low-socio-economic status (SES) schools and for low-achieving students in higher-SES schools.

### Key findings

#### Literacy and numeracy assessments

DEECD and VCAA collect student achievement data each year through four statewide assessments. The four assessments had a range of limitations when used to analyse long-term trends. For example, not all students were assessed in the same way, some data sets were not consistent over time, and the capacity to track the progress of individual students was restricted.

## Literacy and numeracy achievements since 1998

Our analysis of trends in average literacy achievement found that between 1998 and 2007:

- The most substantial improvements were made by students in Prep to Year 2 for recognising written words, although there is not data to confirm whether word comprehension also improved. Moderate improvements also occurred for other areas of literacy at these year levels.
- Some slight improvements were made between Years 3 and 7 but average literacy achievement declined over time at higher year levels. Average student performance dropped further below the expected level each year as students progressed from Year 3 to Year 9.
- No improvement was recorded by VCE students in Years 11 and 12. Average VCE achievement was slightly below the standardised mean.

Our analysis of trends in average numeracy achievement found that between 1998 and 2007:

- Achievement in the set of maths skills called 'Number' for Years 3 and 5 students showed some moderate improvements between 1999 and 2007. Improvements in other areas of numeracy were slight.
- Numeracy achievement declined in recent years in some other areas of maths for students in Years 3 to 9. In Years 11 and 12, although achievement in the more difficult maths subjects improved, overall, achievement declined and was below the state average.
- Numeracy achievement declined more in Years 7 to 12 than in Prep to Year 6. Average student performance also dropped further below expected levels each year from Year 3 to Year 9.

Our analysis of trends in achievement for students from key sub-groups found that between 1998 and 2007:

- The achievement gap between students from high- and low-SES schools was considerable at all year levels and had not narrowed over time for either literacy or numeracy.
- The Eastern Metropolitan region consistently outperformed all other regions. There were some improvements for students in the low-SES metropolitan regions, however student achievement declined in several non-metropolitan regions.
- The lowest-achieving students were well behind their higher-achieving counterparts. There were, however, some encouraging signs of improvement among the lowest-achieving students in literacy though not in numeracy. There was also improvement amongst the highest-achieving students in numeracy but not literacy.

## Ways to improve literacy and numeracy

### Support for literacy and numeracy

DEECD needs to routinely evaluate, at a system-wide level, the ongoing effectiveness of its support to schools, teachers and students and sustain targeted support and interventions beyond the early years for students who need it.

Effective programs are needed to better support all teachers in further developing their numeracy teaching strategies. Programs need to be appropriate to the different stages in the development of students' mathematical understanding as they progress through school. There is also an urgent need for early intervention and for sustained support for students who need it.

### Support to address social disadvantage and low-achieving students

Funding to address social inequity in literacy and numeracy achievement is very low in light of the large achievement deficit of students from low-SES schools.

There is a need to target the large numbers of students who are achieving well below the expected level, especially for numeracy. The focus needs to be on schools with low achievement as well as individual students with low achievement in higher SES schools.

## Continuous improvement

DEECD needs to use a consistent and evidence-based continuous improvement approach for improving student literacy and numeracy achievement. For example, it has not evaluated the success of the Early Years programs for literacy and numeracy, in place for over seven years. DEECD also needs to improve the usefulness of its statewide student assessment data. For example, there is no standardised assessment of numeracy for Prep to Year 2 students.

The teacher judgments of student achievement provide a holistic assessment of student progress over each year from Prep to Year 10 but do not accurately differentiate the great range in student achievement that exists. Until a national curriculum is implemented, teacher judgments provide the only statewide assessment of student achievement against the challenging standards of learning set for Victorian students.

The lack of a student identifier is a fundamental deficiency because it limits student tracking, system-wide monitoring of student achievement, evaluations of support initiatives and targeting of support to individual students.

## Recommendations

The report has six recommendations for DEECD: adopt a stronger focus on numeracy; address the performance gap between high- and low-SES schools; identify and address issues contributing to declining achievements and share successful approaches; improve identification and targeting of students achieving well below the expected level; implement a consistent and evidence-based continuous improvement approach and improve the value of achievement data for monitoring student progress.

This report was tabled in the Victorian Parliament on 4 February 2009.

The full text of the report is available on the office's website: <[www.audit.vic.gov.au](http://www.audit.vic.gov.au)>

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