

Writing development: what does a decade of NAPLAN data reveal?

October 2022

This document summarises the key findings and recommendations from the Australian Education Research Organisation's (AERO) 2022 analysis of National Assessment Program – Literacy and Numeracy (NAPLAN) writing data.

For full background and explanation of this work, including methodology, please access the full research report.

Background

AERO's 2022 analysis of student writing data is the most extensive investigation into this area ever conducted in Australia. Our researchers analysed more than 10 million NAPLAN writing results, spanning 2011 to 2021, and 366 samples of students' NAPLAN writing. This report primarily focuses on analyses of students' Persuasive writing from 2011 to 2018 (excluding 2016).¹

NAPLAN is an annual assessment of literacy and numeracy skills, undertaken with students in Years 3, 5, 7 and 9. Our analyses demonstrate the value of NAPLAN data for tracking national performance in specific writing skills and how actual student performance aligns with the expectations of curriculum documents and the National Literacy Learning Progression.

¹ Students may be tested on Persuasive or Narrative writing as part of their NAPLAN assessment. Narrative writing exercises were provided for 2016, 2019, 2021 and 2022 assessments. The full AERO report includes limited analysis of Narrative data from 2016, 2019 and 2021. NAPLAN was not held in 2020 due to COVID-19 and thus is not included in this report.

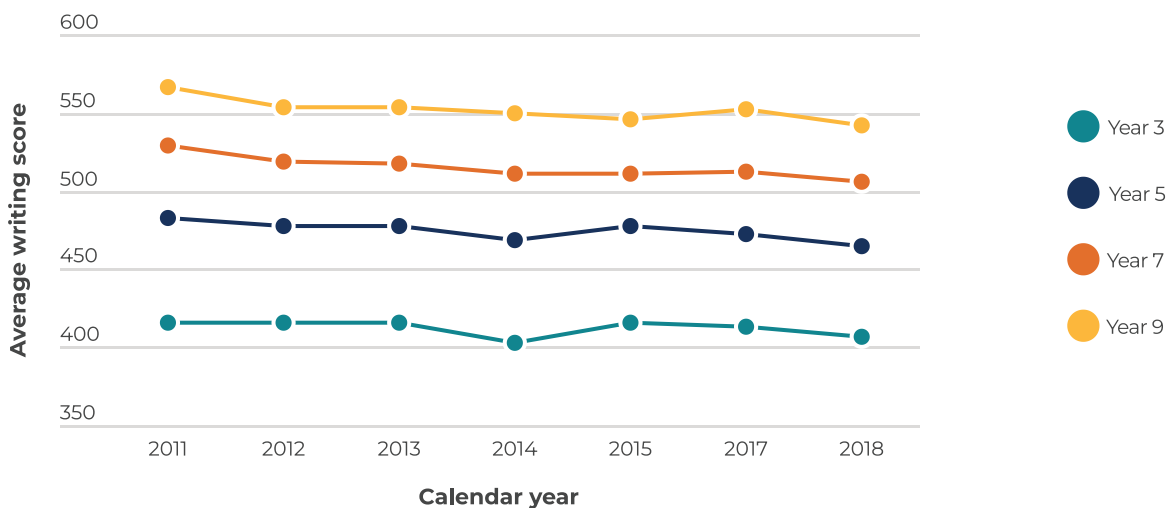
Research into NAPLAN writing data was conducted as one element of AERO’s ‘[Literacy and numeracy](#)’ project. The overall aim of this project is to identify the areas of literacy and numeracy in which Australian students need the most support. As these areas are identified, AERO is also generating practical evidence-based resources for teachers and educators aimed at improving the teaching of these skills across all areas of the curriculum.

Key findings

Student achievement in Persuasive writing skills has declined

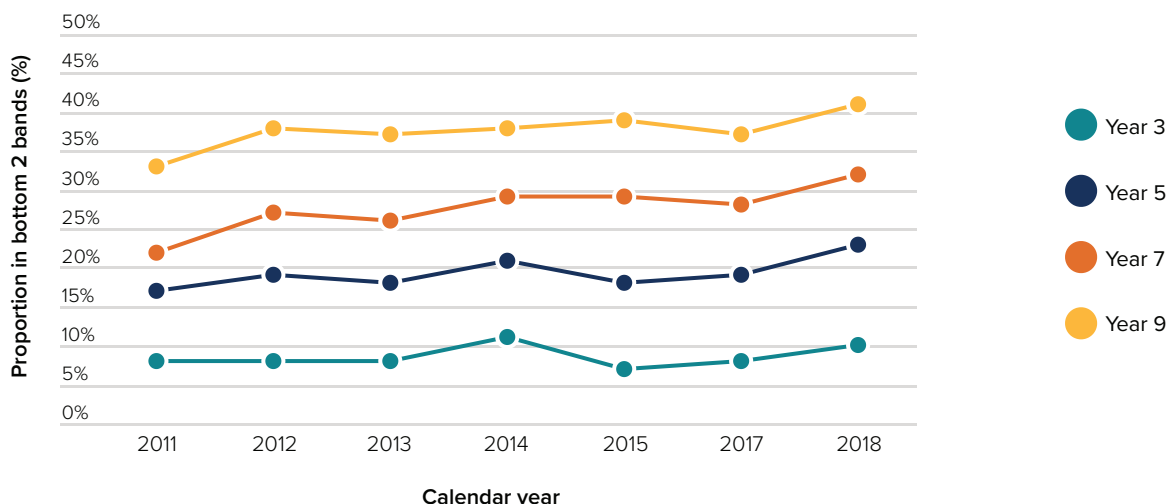
Average (mean) scores for Persuasive writing have declined since 2011 with the trend more pronounced in Years 7 and 9. This is true for overall Persuasive writing scores as well as scores for most specific writing skills.

Figure 1. Mean writing score across Year levels for Persuasive writing (paper and online) from 2011 to 2018



Over the period of 2011 to 2018 the share of Year 5, 7 and 9 students who are at risk of falling behind, that is performing at or below national minimum standards, has increased by 6 percentage points for Year 5, to 8 percentage points for Year 9.

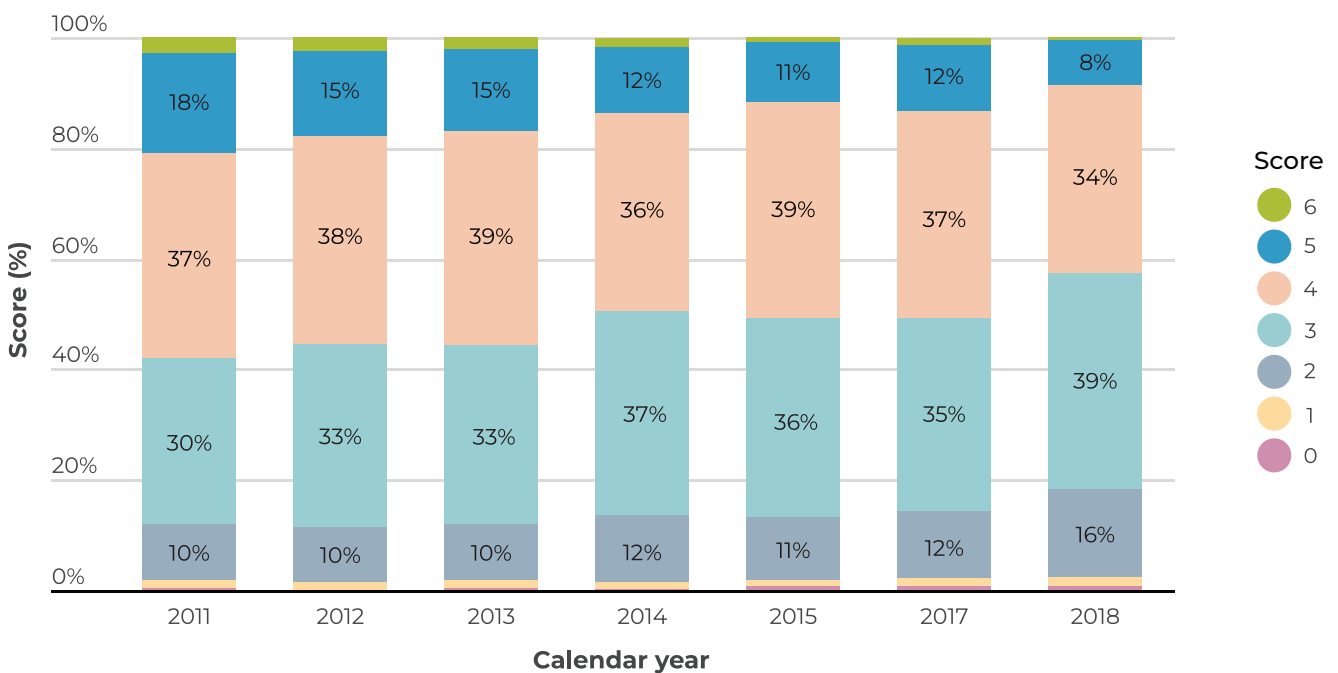
Figure 2. Percentages of bottom 2 bands across Year levels for Persuasive writing (paper and online) from 2011 to 2018



The writing performance of high-achieving students in Persuasive writing performance has declined over time

For all criteria except Spelling, the percentage of Years 5, 7 and 9 students who achieve a high NAPLAN score has decreased. Taking the example of Year 9 results for the Sentence Structure skill (or criterion²), the percentage of high achieving students who attained a score of 5 or 6, out of 6, has declined over time. To attain a score of 5 or 6, students need to demonstrate that they are able to effectively convey meaning by writing sentences that vary in length and structure. In 2011, 21% of high achieving students scored 5 or higher. This percentage of students reduced to 18% in 2012 and 17% in 2013, before declining further, to 9%, in 2018.

Figure 3. Sentence Structure Year 9 – Persuasive writing (paper and online)



The gap between low- and high-achieving students has widened across learning stages

The performance gap between low- and high-achieving students widened for overall persuasive writing skill and most individual writing criteria as students progressed from primary to secondary. This indicates that it is critical to provide targeted and intensive support to students who are significantly behind others in their age group early on, as without the support, they are likely to fall further behind their peers as they get older.

² In NAPLAN, writing skills are assessed using a scoring rubric that describes the skills as ‘criteria’. The rubric and criteria are described at pp 12–13 and in Section 4 of the full report.

There is misalignment between expected performance standards in curriculum documents and actual student achievements

Most students' writing skills are not meeting what is expected of them as indicated in curriculum documents (such as the Australian Curriculum: General Capabilities, NSW Syllabus and Victorian Curriculum). This misalignment is far more significant for secondary than for primary year levels.

Our analysis of 2011 to 2018 Persuasive writing data shows that students in Year 9 are finding it challenging to achieve the higher scores in Audience (4% scored a 6 out of a possible 6), Text structure (15% scored a 4 out of a possible 4) and Sentence Structure (see below) criteria. This means, they struggle to write engagingly or clearly organise and articulate an argument supported by reasoning and evidence. These skills are essential to success in many Year 11 and 12 subjects, tertiary courses, and workplaces.

Overview of individual criteria findings

Sentence structure

On average between 2011 and 2018, few students achieved scores of 5 (13%) or 6 (2%) out of 6 in Sentence Structure in Year 9. This indicates that students do not have control over a range of different sentence structures, which affects their ability to express meaning with precision. These are writing skills expected of students at a Year 7 level according to the Australian Curriculum General capabilities aligned to the National Literacy Learning Progression.

Punctuation

Only 26% of Year 9 students scored 4 or 5 out of 5 meaning that students have all sentence level punctuation correct and most other punctuation (for example, apostrophes, commas, colons) also correct. The majority of Year 9 students are applying punctuation to their writing at a Year 3 level (according to the expectations of the General Capabilities aligned to the National Literacy Learning Progression).

Spelling

The largest percentage of students in Year 7 (45%) and Year 9 (40%) were able to score a 4 out of a possible 6 for Spelling. To score a 4, students can demonstrate the correct spelling of simple words, most common words and some difficult words (at least 2), ensuring that the incorrect 'difficult' words do not outnumber the correct spelling of difficult words. A third of Year 9 students (35%) were able to score a 5 out of 6, which highlights the ability to spell difficult words consistently.

Vocabulary

The largest proportions of students in Years 7 and 9 scored 3 out of 5 (46% and 43% respectively) indicating the ability to write 4 or more precise words or word groups. There are, however, low percentages of students in Years 7 (15%) and 9 (34%) scoring 4 or 5, which highlights that the majority of students are unable to sustain the consistent use of precise words and word groups to enhance meaning.

Paragraphing

Over half of students in Years 7 (51%) and 9 (52%) scored 2 out of 3 indicating the ability to focus on one idea or set of like ideas and demonstrate some logic in the text. A score of 2 indicates that not all paragraphs are correct but there is some demonstrated logic in the text.

Audience

Over one-third (38%) of Year 9 students achieved a score of 3 or less out of a possible 6 for the criterion addressing Audience. This indicates the students have not developed a broad understanding of how to support, engage and persuade the reader through writing, a skill required for senior secondary study.

Text structure

Most students in Year 9 (85%) are finding it challenging to score the maximum score of 4 in this criterion. A score of 4 demonstrates a student's control over text structure and an ability to clearly articulate a position with reasons, supported by evidence and a reinforced conclusion. This is a skill required in many Year 11 and 12 subjects.

Ideas

The majority of students from Year 5 (65%) scored 3 out of 5 on this criterion. This means that their writing demonstrated some elaboration and development of ideas, but those ideas are not generated, selected and crafted to be highly persuasive. Few students demonstrate growth in this skill over time, with a majority of Years 7 (64%) and 9 (51%) students also scoring a 3 on this criterion.

Persuasive Devices

A large percentage of students in Years 3 (49%), 5 (58%) and 7 (46%) scored 2 which means they used 3 or more instances of Persuasive Devices in their writing. However, a very low percentage of Year 9 students achieved the maximum score of 4 (15%) indicating that effective use of Persuasive Devices is not sustained through their writing.

Cohesion

Most students in Year 3 (79%), Year 5 (75%) and Year 7 (59%) scored 2 out of 4, demonstrating some correct links between sentences and some control of cohesion in their writing. This result is quite problematic as it suggests minimal progression from Year 3 to 9. Even in Year 9, 41% of students are still only scoring 2 out of 4.

Online and paper assessments produce different results

There are some differences in students' writing performance between computer-based, online NAPLAN tests compared to paper-based tests. When writing on a computer, students' punctuation was worse, but they were better at using paragraphs. The impact of mode of writing on the writing process and the quality of written products need to be further investigated to understand its implications for the teaching and learning of writing.

Implications

The findings of this research have strong implications for students, teachers and policymakers alike.

For students, writing well is a crucial skill for achieving success during the final years of school across all subjects, and in working life. The decline in students' persuasive writing ability is something that needs to be acted on quickly through effective, evidence-based and explicit teaching.

Key implications for both policymakers and teachers emerging from our research include the following:

- Increasing focus on teaching and learning writing across the curriculum can help reverse the decline in student performance.
- Existing syllabus and curriculum guidance expect students to write at levels beyond what the data shows they can demonstrate.
- Investigating the decline in performance of high-achieving students can help identify strategies to reverse this trend.
- Examining differences in performance between online and paper tests, considering the increasing expectation in school and beyond for online writing, can provide valuable teaching and assessment information.
- Providing targeted and intensive support for low-achieving students can stop them from falling further behind on their learning trajectories.

Recommendations and next steps

Based on the research findings and their wider implications, our recommendations focus on 3 areas – policy, teaching practices and research – to drive improvement in student writing.

Policy recommendations

Recommendation 1

Acknowledge, at a national level, the importance of writing and increase the focus on the teaching and learning of writing across the curriculum.

- 1a.** Initiate a national conversation involving curriculum developers, policymakers, teaching representatives and writing experts.
- 1b.** Increase access to high-quality and systematic professional learning resources about writing for school leaders and teachers.

Recommendation 2

Re-examine the National Literacy Learning Progression and various state and territory curriculum documents with evidence from current students' actual writing development and achievements.

- 2a.** Apply the evidence from this research to re-examine the progression levels within each sub-element in the National Literacy Learning Progression with specific focus on re-examining the levels within the 'Creating Text', 'Grammar', 'Punctuation' and 'Spelling' sub-elements.
- 2b.** Apply the evidence from this research to re-examine the alignment between expected outcomes as indicated in the Australian Curriculum – general capabilities and states and territories curriculum documents and demonstrated student achievement.

Teaching practice recommendations

Recommendation 3

Elevate the importance of the teaching and learning of writing across the curriculum in schools.

- 3a.** Initiate a whole-school approach to writing so that the explicit teaching of writing skills across all subject areas is prioritised. A whole-school approach emphasises the importance of incorporating the explicit teaching of writing throughout all learning areas.
- 3b.** Prioritise 'time to write' across the whole school to provide more opportunities for sustained writing time in the classroom.

Recommendation 4

Increase teacher access to evidence-based resources on best practice writing pedagogies.

- 4a.** Create, collate and disseminate evidence-based resources on writing instruction for teachers.

Research recommendations

Recommendation 5

Further analyse NAPLAN writing data for information about specific student groups, genres and modes of writing, to maximise its instructional value.

- 5a.** Analyse patterns of strength and weakness in student writing for students of different backgrounds (inclusive of socioeconomic status, Aboriginal or Torres Strait Islander background, students learning English as an additional language or dialect and coming from a regional, rural or remote area).
- 5b.** Further investigate the impact of the mode of the writing through a more detailed comparative analysis of writing features between texts generated online and on paper to understand any implications for the teaching of writing.
- 5c.** Analyse NAPLAN writing data for the Narrative genre as more data become available, starting with the 2022 assessment data.
- 5d.** Examine the impact of keyboard skills on writing in the context of NAPLAN, which is an online writing assessment. Handwriting and Keyboarding appear in curriculum documents and have the potential to impact on writing performance.

Recommendation 6

Conduct qualitative research with key stakeholders to explore and better understand the quantitative analysis findings, particularly regarding the potential reasons for and solutions to the decline in student persuasive writing performance, overall and for higher-achieving students.

- 6a.** Apply qualitative research methods to explore and unpack the factors which may have contributed to the findings of this study, such as why high achieving students' results are falling. This work could also uncover any effective strategies already implemented in schools.
- 6b.** Conduct further research to co-design and evaluate appropriate supports for the teaching of writing. Pilot teacher professional development and initial teacher training to support explicit teaching of writing strategies for areas of potential concern identified by this research.

Next steps

Based on our research findings, AERO is developing practical guides for teachers and leaders to help students strengthen their writing skills in areas of greatest need.

These new resources will supplement our existing writing resources for school leaders and teachers:

- [Sentence combining practice guide](#)
- [Writing instruction framework for primary level](#)
- [Writing and writing instruction literature review.](#)

More information

Our findings are based on [NAPLAN](#) writing data sets. For more information on the methodology behind our research, please see section 3 of the [full research report](#).