

AT A GLANCE

PAT trends: What the evidence shows, and what it cannot



Fifteen years of assessment data on mathematics, reading, and equity in Years 4 to 8

The results are encouraging. The causal claims go too far.

New research from the New Zealand Council for Educational Research (NZCER) examines 15 years of Progressive Achievement Test (PAT) data, from 2012 to 2026, to track changes in mathematics, reading comprehension, and reading vocabulary.

The findings support neither a story of general decline nor one of general recovery. Mathematics has improved in recent years; reading comprehension declined over a longer period, with only a first small rise in 2026; and reading vocabulary has followed a more positive course. The evidence also highlights persistent differences in achievement between groups and school contexts.

On 14 October 2026, Education Minister Erica Stanford presented the results as evidence that the Government's education reforms are lifting achievement. Her media release, *It's all adding up: More maths gains for Kiwi kids*, concluded that "the evidence is mounting that we are turning things around".

The mathematics improvement is consistent across year levels, regions, and ethnic groups. But improvement is not proof that a particular policy caused it, and NZCER is explicit that its analysis cannot isolate the effects of individual policies or teaching approaches. Reforms should be judged on evidence of their effects, not on whether positive results happened to follow their introduction.

What the research covers

NZCER analysed more than three million Term 1 assessment records from 647,213 students in Years 4 to 8 across 1,306 English-medium state and state-integrated schools between 2012 and 2026. PAT is not a nationally representative sample, so the findings describe the large population of students and schools using the assessments, not all primary and intermediate students.

Three qualifications apply:

- **Timing:** Term 1 results mainly reflect learning during the previous school year, so the 2026 results largely capture learning during 2025.
- **Assessment changes:** Mathematics was redesigned for 2024 and reading comprehension for 2025 (the 'refreshed' assessments). These were linked to the existing PAT scales and are broadly comparable with them, but the match is not exact. NZCER therefore analyses each series separately and does not estimate change across the refresh. Reading vocabulary was not redesigned and runs continuously from 2012 to 2026.
- **Participation:** From 2026, schools were required to assess students in Years 3 to 8 twice a year, which may have changed who uses PAT. NZCER's checks indicate that participation changes do not appear to be the main explanation for the 2026 improvement, but NZCER advises some additional caution when interpreting those results.

Mathematics: widespread improvement, cause not established

Mathematics achievement was broadly stable through much of the 2010s, began declining in 2019, and reached its lowest point in the earlier assessment series in 2022. By 2023, most of that decline had been recovered. In the refreshed series, scores rose in both 2025 and 2026, finishing 1.64 PAT scale points above 2024, about one-third of the progress students typically make in a year.

The improvement appeared at every year level, in every region, and in every ethnic group. The 2026 Year 4 average was 2.36 points above 2024, almost half a year's typical progress. However, lower-scoring Year 8 students benefited less.

NZPF welcomes this progress and recognises the work of principals and teachers. The next questions are whether the stronger Year 4 results persist as these students move through school, and whether the benefits reach students currently achieving at lower levels.

Reading: a small comprehension rise after a long decline

Reading comprehension declined from before COVID-19 through to 2024. By then, the adjusted average was about 1.76 points below its 2012 level, roughly one-quarter of a year's typical progress between Years 4 and 8. The direction of the decline persisted across alternative analyses, although its estimated size varied with modelling choices. NZCER also notes that exploratory modelling suggests the shift to online testing may account for part of the fall after 2021.

The refreshed assessment recorded a 0.51-point rise between 2025 and 2026, less than one-tenth of typical annual progress. Year 7 improved most, while Year 8 changed very little.

The Minister describes this rise as following a prolonged decline in reading results. That requires qualification. Comprehension did decline over a long period, but vocabulary did not. And because the comprehension assessment was refreshed in 2025, the rise from 2025 to 2026 cannot show how much of the earlier decline has been recovered. NZCER describes the rise as encouraging but notes that it does not yet establish that the longer decline has ended.

Reading vocabulary finished 2026 at 1.34 points above its 2012 level, about one-fifth of typical annual progress. Yet students in the lower part of the achievement distribution improved by less than a quarter as much as the rest of the distribution. A rising average does not mean all learners are benefiting equally.

What the evidence does not establish

The Minister draws together PAT, phonics, Curriculum Insights, and PISA results as evidence that the Government's reforms are working. She puts the mathematics improvement at four months of additional progress and reading comprehension at about one month. These estimates are in line with NZCER's analysis. The issue is not the size of the gains but what they tell us about the effects of the reforms, and whether the improvement will last.

The phonics, Curriculum Insights, and PISA results are useful, but they measure different students, skills, and periods. They cannot simply be added together to show that the reforms worked, and they do not all point the same way.

The Minister cites Year 6 results from the Curriculum Insights and Progress Study as evidence of improvement. NZCER reports that the same study found Year 6 mathematics improved between 2024 and 2025, but mathematics was broadly stable at Years 3 and 8, and reading in 2025 was broadly similar to 2023 at Years 3, 6, and 8. That is a more mixed picture than a claim of system-wide recovery implies.

NZCER notes that the refreshed PAT increases are annual signals among PAT users and still require confirmation in nationally representative monitoring.

Four findings are particularly important.

1. The mathematics recovery began before the key reforms.

The rebound was already under way in 2023, before the daily one-hour mathematics requirement began in 2024 and before the revised mathematics curriculum was introduced in schools in 2025. Term 1 results mainly reflect the previous year's learning, so the 2023 result reflects learning in 2022. The first results that could follow a full year of the daily hour came in 2025, and of the revised curriculum in 2026. These reforms therefore cannot explain how the recovery began. They may have helped sustain it, but the PAT analysis cannot determine whether, or to what extent, they did.

Twice-yearly progress assessments, which the Minister also lists among the reforms that "are working", became mandatory only in 2026, after the year of learning that the 2026 results largely reflect. They are therefore unlikely to explain any improvement in that learning. Their main relevance is to participation, as noted above.

2. Much of the mathematics rise was already present by Year 4.

The 2026 Year 4 average was 2.36 points above 2024, and progress between year levels was also slightly higher than in 2024. Much of the improvement was therefore already evident when students first took PAT in Year 4. The pattern does not explain why, and the data cannot separate the contribution of policy from other influences. The 2027 and 2028 Year 4 cohorts, who began school in 2024 and 2025, will show whether the improvement continues. NZCER adds that, because several changes occurred together, the 2028 cohort's results will not provide a simple test of policy effectiveness.

3. Higher averages do not, by themselves, demonstrate that the equity gap is closing.

The Minister describes raising achievement and closing the equity gap as the Government's number one priority in education. She cites equity progress from phonics checks and PISA but reports no PAT equity results. The PAT analysis, however, finds large and persistent differences. After accounting for other characteristics, students in schools serving communities with greater socio-economic barriers scored about 10 scale points below those in schools serving communities with fewer barriers. That is more than a year of typical progress in every subject. This compares school contexts, not individual students.

NZCER also cautions that a narrowing gap can reflect falling scores among higher-scoring groups rather than improvement among lower-scoring students, as in the earlier mathematics and reading comprehension series. Real progress on equity means students who have historically achieved at lower levels are improving, not simply that averages are rising or gaps are narrowing.

4. The evidence does not yet establish what is working, for whom, or why.

NZCER raises post-COVID cohort recovery and improved attendance as other plausible explanations for the mathematics improvement. The findings neither prove that the reforms have worked nor indicate that they have failed. They point to trends that warrant continued monitoring and careful evaluation before firm conclusions can be drawn about policy effectiveness.

What principals need

Principals are implementing significant changes while evidence of their effects is still emerging. They need more than headline figures or claims of success. They need reliable, consistent evidence that answers three questions:

- Are improvements sustained as students progress through school?
- Are gains reaching students who have historically achieved at lower levels?
- Which policies and teaching approaches are making a demonstrable difference?

Answering these questions requires assessment that stays comparable over time, clear baselines, evaluation designed before implementation, and enough time for effects to emerge.

Why this strengthens the case for a Curriculum and Assessment Council

The mathematics results are welcome, and the first rise in reading comprehension is encouraging. But positive outcomes alone cannot demonstrate that the Government's reforms were responsible. New Zealand needs a system that can show whether an improvement is the result of a particular policy, and distinguish early promise from demonstrated impact.

That is why NZPF continues to advocate for a permanent, statutory Curriculum and Assessment Council. Responsible for the long-term stewardship of curriculum and assessment from early childhood through secondary school, the Council would be co-designed with iwi and Māori education partners, recognising existing constitutional relationships. It would provide continuity across governments, rigorous scrutiny, and transparent public reporting, and help ensure that major curriculum and assessment changes are evaluated from the outset.

The aim is not to slow improvement but to find out what works, for whom, and under what conditions, so that decisions rest on evidence and gains can be sustained.

Coblentz, D. (2026). *PAT trends in Aotearoa New Zealand: Evidence in mathematics, reading comprehension, and reading vocabulary from 2012 to 2026*. New Zealand Council for Educational Research (NZCER).
<https://www.nzcer.org.nz/research/search-publications>