



The Impact of Reading Eggpress on NAPLAN Reading Performance: A Research Study

Executive Summary

This study provides compelling evidence that students using Reading Eggspress consistently outperform their peers in NAPLAN reading assessments. Analysis of schools with active Reading Eggspress usage reveals a strong, statistically significant link between program engagement and higher Year 3 reading scores.

NAPLAN and Reading Eggspress: A clear correlation

NAPLAN is Australia's nationwide benchmark for student performance in literacy and numeracy. For this study, we focused on reading results for Year 3 students and compared outcomes between schools using Reading Eggspress, as part of the Reading Eggs suite of literacy programs, (with active usage from June 2023–February 2024) and schools not using Reading Eggspress during the same period.

Our analysis reveals a strong, positive correlation: schools using Reading Eggspress consistently achieved higher NAPLAN reading scores than non-Reading Eggspress schools.

More importantly, we found a clear pattern within Reading Eggspress schools: the more students engaged with the platform through lesson completion, the better their results.

We used rigorous statistical techniques, including stratified sampling, bootstrapping and correlation analysis to ensure the findings are reliable and not the result of cherry-picked data.

Year 3 findings: Reading Eggspress delivers substantial gains

Reading Eggspress schools averaged 418.9 (95% CI [413.1, 424.6]) compared to non-Reading Eggspress schools at 395.7 (95% CI [387.0, 404.4]).

On average, Year 3 students in Reading Eggspress schools scored 23.2 points higher than their peers who did not use the program. This is a statistically significant improvement in performance.

Lesson completion matters: More engagement drives better results

Among Reading Eggspress users, students with higher weekly lesson completion achieved significantly better NAPLAN results than those with lower completion rates. High-performing schools completed between 5.2 and 6.6 lessons on average, while lower-performing schools completed between 3.4 and 4.5 lessons.

Conclusion: Reading Eggspress works

Using Reading Eggspress significantly improves student outcomes in reading and literacy. The correlation is strong, the analysis is statistically robust and the message is clear: Reading Eggspress is an effective tool for improving reading performance, particularly when students engage consistently with the program's comprehension lessons.

NAPLAN Reading Assessment

The National Assessment Program – Literacy and Numeracy (NAPLAN) is Australia's standardised testing framework for mathematical and literacy competencies. Conducted annually across Years 3, 5, 7 and 9, NAPLAN generates comparative performance data through consistent assessment protocols.

Reading assessment within NAPLAN evaluates students' literacy comprehension across curriculum-aligned domains. Assessment scores are calibrated on a continuous scale, enabling longitudinal tracking and cross-cohort comparison.

For this research, analysis focuses on reading outcomes for Year 3 cohorts. In the NAPLAN reading assessment, students read a variety of texts and answer comprehension questions to demonstrate their understanding of different writing styles and text type.

Reading Eggspress Digital Learning Platform

Reading Eggspress is an online reading program for students in Years 2–6, part of the Reading Eggs comprehensive literacy suite. Built on Science of Reading principles, the program delivers evidence-based, explicit and systematic reading instruction through interactive digital activities and carefully levelled texts.

The platform employs a structured progression model where students advance through comprehension strategies after demonstrating competency through lessons and assessments. All texts within the program are independently levelled using Lexile measures, ensuring accurate increases in text complexity as students progress.

The program incorporates immediate feedback mechanisms, differentiated content delivery, and detailed reporting functions that enable educators to track student progress and identify performance patterns across literacy domains. The platform is compatible with iPads and tablet devices, with intuitive navigation designed for independent student use.

Educational Components and Research Objectives

During the study period leading up to the 2024 NAPLAN testing, Reading Eggspress contained multiple instructional components designed to enhance reading performance and comprehension skills.

Comprehension Lessons form the core of Reading Eggspress, providing 220 structured lessons where students learn critical reading strategies including cause and effect, fact versus opinion, visualisation, making inferences and identifying main ideas. Students demonstrate mastery through interactive activities and quizzes before progressing to more challenging content, building foundational comprehension competency.

The platform also includes a library of over 4,000 levelled texts, English Skills lessons for spelling and grammar development and gamified learning activities that reinforce literacy skills across multiple domains.

This study examines whether schools using Reading Eggspress, particularly through engagement with comprehension lessons, achieve higher NAPLAN reading performance compared to schools not using the platform.

Study Design

We obtained 2024 NAPLAN reading scores for Year 3 students in participating schools from the Australian Curriculum, Assessment and Reporting Authority (ACARA). From the ACARA dataset, we are able to identify Reading Eggspress customers and non-customers.

In this study, we define Reading Eggspress customer schools as schools with continuous active access and above-median usage between at least June 2023 to February 2024. To ensure meaningful program engagement, schools were required to demonstrate above-median usage across all major Reading Eggspress components:

- Time spent on platform
- Lessons completed
- Books read
- Assignments completed
- Lesson quizzes completed
- Book quizzes completed
- Map quizzes completed

This rigorous selection criterion ensures that the analysis focuses on schools actively engaging with the program, providing sufficient time for students to benefit from Reading Eggspress instruction.

The following analysis aims to demonstrate that in terms of NAPLAN reading test results, schools using Reading Eggspress perform significantly higher than schools not using Reading Eggspress.

Year 3 NAPLAN reading test score comparison

We use a statistical technique called randomised stratified sampling to repeatedly draw samples from the Reading Eggspress customer and non-customer groups. In each sampling run, schools are stratified by sector in the following ratios:

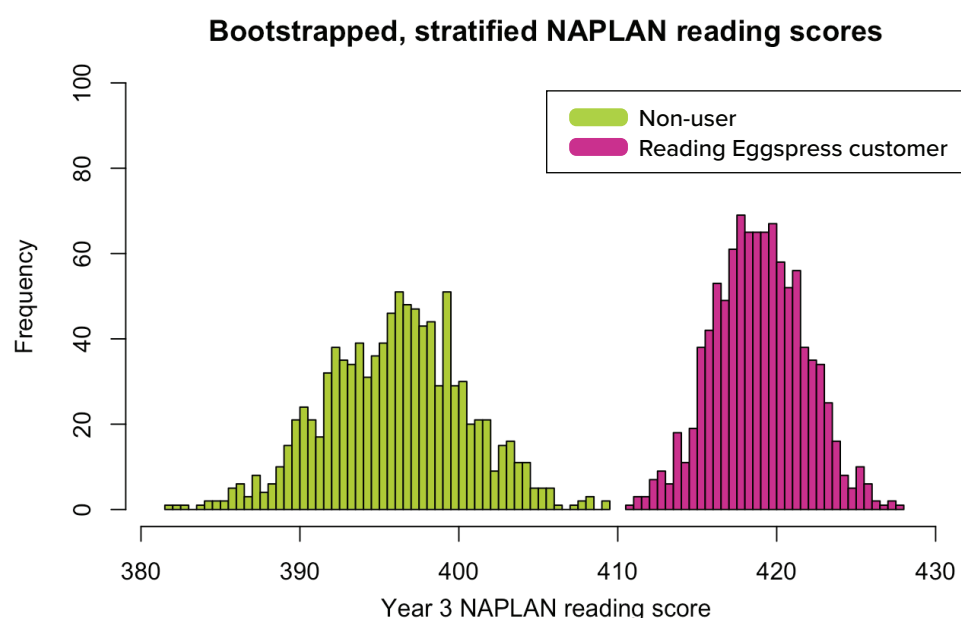
- Government: 70%
- Catholic: 18%
- Independent: 12%

Criticisms of studies conducted by other supplementary literacy products include that small sample sizes were handpicked to support their hypotheses. In contrast, by using bootstrapping and stratification for randomisation, we control for confounding factors and enhance the robustness of our analytical conclusions.

Based on repeated sampling, we show that Reading Eggspress customers have a higher mean score of 418.9 with a 95% confidence interval of [413.1, 424.6]. This contrasts with non-customers who have a lower mean score of 395.7 with a 95% confidence interval of [387.0, 404.4].

The following plot shows the bootstrapped and stratified NAPLAN score distributions of Reading Eggspress customer schools and non-customer schools.

The analysis demonstrates statistically significant differences between the two groups. While individual schools within each group show variation in performance, schools using Reading Eggspress consistently achieve higher average reading scores than those not using the platform. This systematic pattern observed across multiple sampling iterations indicates meaningful educational impact.



Lesson Completion and Performance

Next, we investigate the relationship between Reading Eggspress usage and NAPLAN scores. We already know Reading Eggspress schools scored higher than non-customer schools, but we want to know which specific engagement metrics drive this impact.

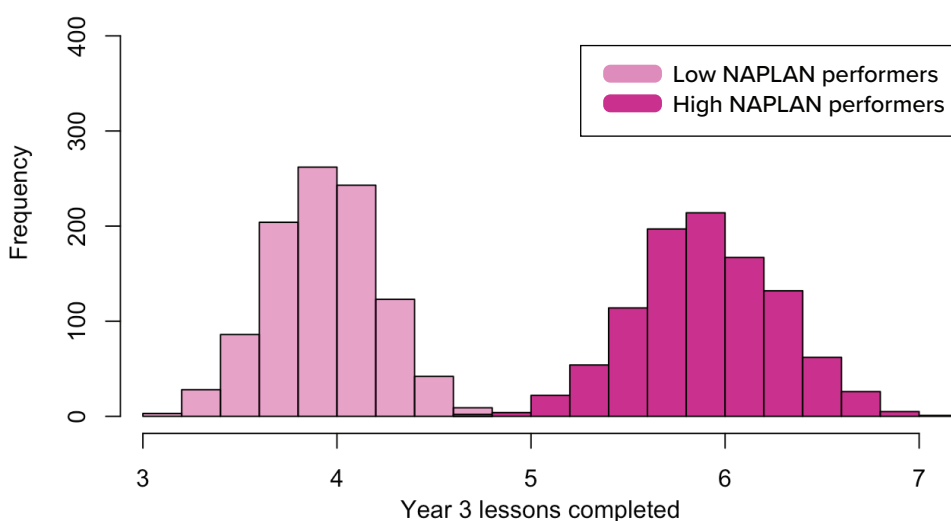
To that end, we bifurcate Reading Eggspress customers into high-performer and low-performer groups by comparing their scores to the customer school median. Among Reading Eggspress schools, the median score was 420. High performers were defined as schools with average scores above 420, while low performers had scores at or below 420. Reading Eggspress usage patterns for these groups are then compared.

Number of lessons completed: The key differentiator

Among all usage metrics tracked within Reading Eggspress, the number of lessons completed consistently separated high and low performers.

High-performing Reading Eggspress schools completed an average of 5.2 to 6.6 lessons, while lower-performing Reading Eggspress schools completed 3.4 to 4.5 lessons.

Bootstrapped Low vs High-Performer Lessons Completed



The following table summarises the groups' usage patterns:

Reading Eggspress schools	Lessons completed (range)
High NAPLAN performers	[5.182, 6.637]
Low NAPLAN performers	[3.378, 4.505]

The analysis shows that amongst Reading Eggspress schools, even modest differences in lesson completion are associated with measurable differences in NAPLAN performance. Schools with higher lesson engagement (5–7 lessons completed) achieved significantly higher reading scores than those with lower engagement (3–5 lessons), demonstrating that consistent participation in Reading Eggspress comprehension lessons drives improved outcomes.

Conclusion

This analysis shows that Reading Eggspress delivers measurable impact on reading achievement.

Schools using Reading Eggspress outperformed non-users in the 2024 NAPLAN reading results for Year 3, a statistically significant finding with a 23.2-point average difference between groups.

Furthermore, we identified a positive relationship between program engagement and academic outcomes: among Reading Eggspress schools, the number of comprehension lessons completed was the primary factor differentiating high and low performers. This finding highlights the critical role of structured, sequential instruction in developing reading proficiency.

We performed these analyses using advanced statistical techniques to avoid small, hand-picked samples and biases inherent in convenience sampling approaches. The use of bootstrapping, stratified sampling and robust statistical measures ensures that our findings are reliable and representative.

This study uses only Reading Eggspress usage and 2024 NAPLAN data from ACARA; therefore, it is not possible to compare the same school to itself before and after Reading Eggspress use. We aim to perform future studies using paired comparison methodology to address this limitation and strengthen causal inference.

The findings support the integration of systematic digital literacy instruction within comprehensive educational programs, particularly when implementation includes adequate usage intensity and engagement with evidence-based platform components designed to develop reading comprehension strategies and skills essential for academic success.

References

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