Sparx Reader

The Impact of the Sparx Reader Trial

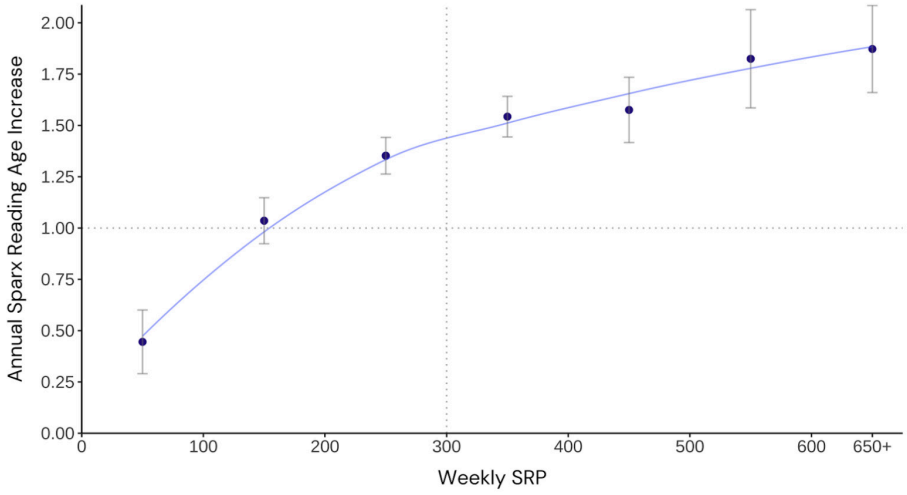
During the 2023/24 academic year, over 700 schools took part in a trial of Sparx Reader. A strong positive relationship was found between **amount of reading** and **increase in reading age.**

1. Introduction

Sparx Reader gives students access to a range of fiction texts suitable for their reading age. As students read, they answer questions. This makes their reading visible to teachers, empowering them to actively build a culture of reading. This reading data can also be used to measure students' improvement.

2. Students who read more on Sparx Reader, improved more

We found a strong positive correlation between the amount of reading done on Sparx Reader and increase in reading age: **students who read more saw a greater improvement in their reading age[1].**



The relationship between SRP earnt each term-time week and annual Sparx Reading Age improvement (n = 70,277 students)

To measure the amount of reading, we used the average SRP (Sparx Reader Points) earned each term-time week. 300 SRP is equivalent to 30 minutes of careful reading[2]. This is the default weekly homework target set by most schools using Sparx Reader.

Students who earned 300 SRP per term-time week progressed at an average rate of 1.44 years per year: an additional 5.3 months' progress.

[1] For further details on Sparx Reading Age, and on validating with independent tests, see appendix.

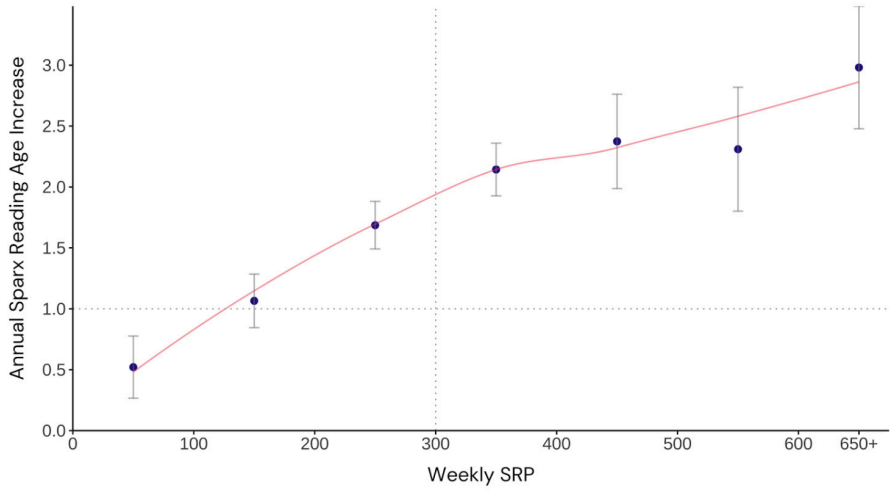
[2] 10 SRP is equivalent to about 1 minute of careful reading, adapted to each student's typical reading speed.

2.1 Lower-ability readers

To investigate lower-ability readers, we took the lowest-ability third[3] and performed the same analysis.

Not only did more reading lead to more improvement, but **weaker readers progressed faster** than the group average.

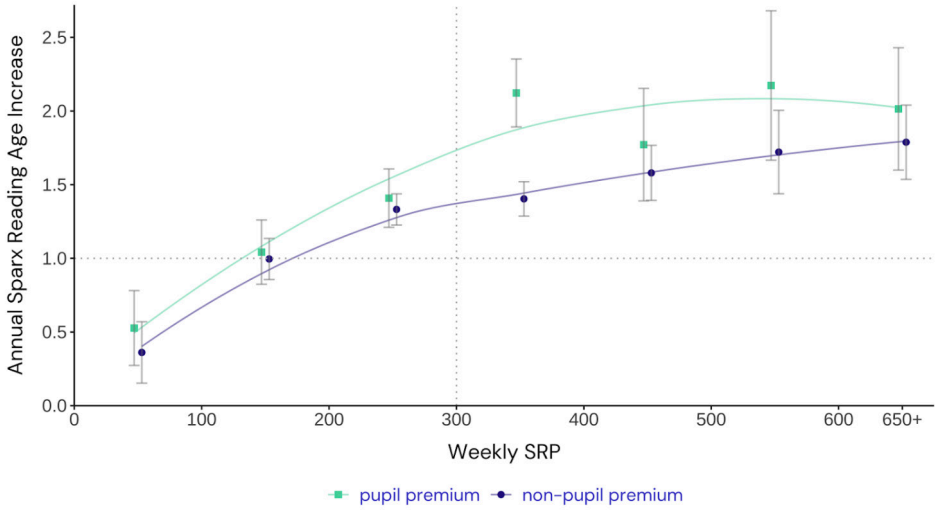
Of course, we would not expect students to sustain these high rates of progress over multiple years, but these weaker readers are likely to catch up if they continue reading.



(n = 17,047 students)

2.2 Pupil Premium

We investigated whether this result held for pupil premium (PP) students.
The results were striking: **pupil premium students made more progress** for each given amount of weekly reading than non-PP students.



(n = 15,801 PP students; 49,551 non-PP)

[3] Lowest third relative to chronological age, based on their initial Sparx Reading Test.

Appendix 1 – Validating these results

To validate these results, we wanted to use **independent** assessment data. It's not practical to gather this for all 700+ schools, so we partnered with a smaller subset of schools. A group of 27 schools agreed to share their own results from the NGRT: a well-known, nationally-benchmarked reading test. This group of schools represents a wide range of regions and demographics, so can be assumed to be fairly representative of the wider group in the analysis above.

Our analysis (n = 4217 students) confirmed the same result: **students who read more on Sparx Reader saw a greater improvement in their reading age** as measured by that independent national assessment.

Appendix 2 – Further details

Which students are included

This data set includes only students who used Sparx Reader for at least 6 months, but even this is a very short time period over which to measure improvement in reading.

Students who did not read at all cannot be included, because there is no way to give an estimate of their reading ability without seeing how their reading behaviour changes. This also means that, while the lowest group is shown to include students with between 0 and 100 SRP per week, the true lower bound is higher than zero.

Excluding artificial early gains

When students start using Sparx Reader, their reading performance appears to jump up very rapidly over their first 20 or 30 question checks as they get used to the platform. This 'warm-up' period is **excluded** from this analysis to ensure we're measuring true improvement.

Error bars

All graphs include error bars representing the variability within the data. On the pupil premium graph, it should be noted that most pairs of points have error bars that overlap, so caution should be taken when interpreting the results.

Appendix 3 – Sparx Reading Age

With hundreds of thousands of students and hundreds of millions of question attempts, we're able to build a picture of the relative difficulty of each book. As we know the age of each student, we can estimate the 'real-world difficulty' of each book. For example, a book that is read well by thousands of 14-year-olds has a reading age of 14.

As students read, Sparx Reader monitors their reading and continually refines the estimate of their ability. This measure of ability is used to offer books.

To give an intuitive understanding of the Sparx Reading Age measure, let's look at an example student based on real student data.

RA 13.1
82.8% accuracy
153 wpm

- 'Nathan' started in September 2023 with *Maggie Blue and the Dark World*, which has a reading age of 13.1. On average, he read this book with good accuracy and speed.

  As such, our estimated Sparx Reading Age for Nathan was 13.2.

- *Nathan continued reading through the year, and our model continued to refine and recalculate his estimate.*

RA 13.7
90.4% accuracy
112 wpm

- In May 2024, Nathan finished reading *When the Sky Falls*, a harder book. He read with higher accuracy, but at a slightly slower reading speed.

  At this point, our estimated Sparx Reading Age was 14.0.

  This makes intuitive sense: Nathan is reading a harder book, so he needs to read slightly slower to process the more complex language, but he's still reading accurately and so we can see that his reading has improved.

Individual student performance will of course be affected by a wide range of factors such as mood and motivation, so the analysis above aggregates across a larger number of students to explore trends that are preserved across all the individual variability.