

dreambox[®]
READING PLUS

DreamBox Reading Plus efficacy study

in partnership with Derby Research School
and Spencer Academies Trust

September 2021 - May 2022



Daisy Education

At Daisy Education, we provide exceptional educational technology solutions that improve outcomes for schools, educators and young learners.

Together, we are a thriving and supportive team where everyone takes responsibility and can achieve personal growth. We are collaborative, we have integrity and we make a difference.

As we grow, we want to be recognised as the leading partner to the educational sector, delivering programmes that enable every child to achieve their full potential.

daisyeducationuk.com

Derby Research School

Derby Research School is based at Wyndham Primary Academy, an outstanding primary school serving an area of high social and economic challenge based in inner-city Derby. Their transformation is characterised by being outward-facing and engaged in evidence-based practice. Exploring what the research shows works best has allowed them to make a difference for their pupils in their context.

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Spencer Academies Trust

The Spencer Academies Trust is a multi-academy trust with schools across the East Midlands, and focuses strategically on Nottinghamshire and Derbyshire.

A high-performing regional MAT with a national reputation for excellence, Spencer Academies Trust schools include primary, secondary and sixth form provisions. Their academies work across the highly diverse city and rural communities, including a strong presence in Derby and Nottingham. Standards and expectations in trust schools are high – and the trust focuses on rapid improvement on the journey to outstanding education delivery.

satrust.com

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Executive summary

The study

Daisy Education collaborated with Derby Research School and Spencer Academies Trust to determine the efficacy of the online reading development programme DreamBox Reading Plus and its impact on disadvantaged pupils.

Reading Plus works by building upon the foundational skills of phonics and phonemic awareness to develop pupils' silent reading fluency, stamina, vocabulary and comprehension.

The study, which ran for the academic year 2021/22, involved 470 Y6 pupils from six Spencer Academies Trust schools. 245 pupils used Reading Plus for their reading development and 225 pupils acted as a comparison-controlled group with no access to the programme.

Each school had its own approach to reading to suit their curriculum mapping, but all followed similar strategies:

- Weekly reading lessons focusing on content domains (whole class/school).
- A focus on reading and writing skills through English lessons (whole school).
- Two 30-minute weekly shared reading lessons using the Reciprocal Reading structure (whole class/KS2).
- Book talk - reading for pleasure - pupil premium (group).
- Pupil premium fluency intervention (group).
- Daily story time using high-quality texts to model reading (whole class/school).

The Reading Plus schools timetabled usage to fit with their curriculum and were recommended to use the programme for a minimum of 30 minutes, three times per week. Pupils also had access to Reading Plus from home as the programme can be used on a variety of electronic devices, such as laptops and tablets.

To benchmark progress throughout the study, national standardised tests were used at the beginning, mid-point and end of the study.

Hypothesis 1

Using Reading Plus, pupils will make more significant progress in reading comprehension and fluency than pupils who have not used the programme.

Hypothesis 2

Using Reading Plus, disadvantaged pupils (pupil premium) will make more significant reading gains than non-disadvantaged pupils who have not used the programme.

Summary of findings

(Please note that ‘test scores’ refer to raw scores.)

- On average, pupils who used Reading Plus as a reading development tool made more significant progress in their reading ability than non-users.
- Control school pupils scored higher on average in their first test than pupils using Reading Plus. However, after one term of usage, Reading Plus pupils closed this reading gap, achieving the same scores as control school pupils.
- Average test scores for control school pupils increased by 29% from the first (September 2021) to the final SATs test (May 2022). Average test scores for Reading Plus pupils increased by 50% during the same period.

Demographic findings

- Pupil premium children using Reading Plus made 97% more progress than pupil premium children in the control schools.
- Average test scores for control school pupil premium pupils increased by 22% from the first (September 2021) to the final SATs test (May 2022). Average test scores for Reading Plus pupil premium pupils increased by 68% during the same period.
- Average test scores for control school EAL pupils increased by 34% from the first (September 2021) to the final SATs test (May 2022). Average test scores for Reading Plus EAL pupils increased by 68% during the same period.
- Boys who used Reading Plus for their reading development made, on average, 45% more progress than boys in the control schools who did not have access to the programme.
- Average test scores for boys in the control schools increased by 29% from the first (September 2021) to the final SATs test (May 2022). Average test scores for boys using Reading Plus increased by 54% during the same period.

Method

Study design

The study was a non-randomised control study which followed a difference-in-difference design using time trends to determine an outcome. Throughout the study, all pupils were assessed at three stages, September 2021, December 2021 and May 2022, to evaluate the effectiveness of Reading Plus on pupil outcomes. Both the intervention and control groups followed the same data collection procedure.

Testing

All pupils sat the same reading paper, at the same time, in each round of testing. Tests were standardised as past SATs reading papers were used to assess pupils in September 2021 and December 2021, and the latest SATs paper in May 2022. This allowed the opportunity to compare data from the study against national data.

Sample size

Derby Research School and Spencer Academies Trust determined which schools would use Reading Plus and which would act as the control group. Schools were selected based on similar school Ofsted ratings and pupil demographics. Control schools' Ofsted ratings were Outstanding, Good, and the third was a new academy so did not have a rating. Reading Plus schools' ratings were Good, Good and Outstanding.

The study comprised of 470 pupils, 245 Reading Plus pupils and 225 control school pupils. Both sample sizes were similar in their numbers and demographics, although there were more pupil premium pupils in the Reading Plus schools due to the nature of the schools involved.

Data collection and GDPR

All schools participating in the study signed a data and school project agreement before the launch.

What is Reading Plus?

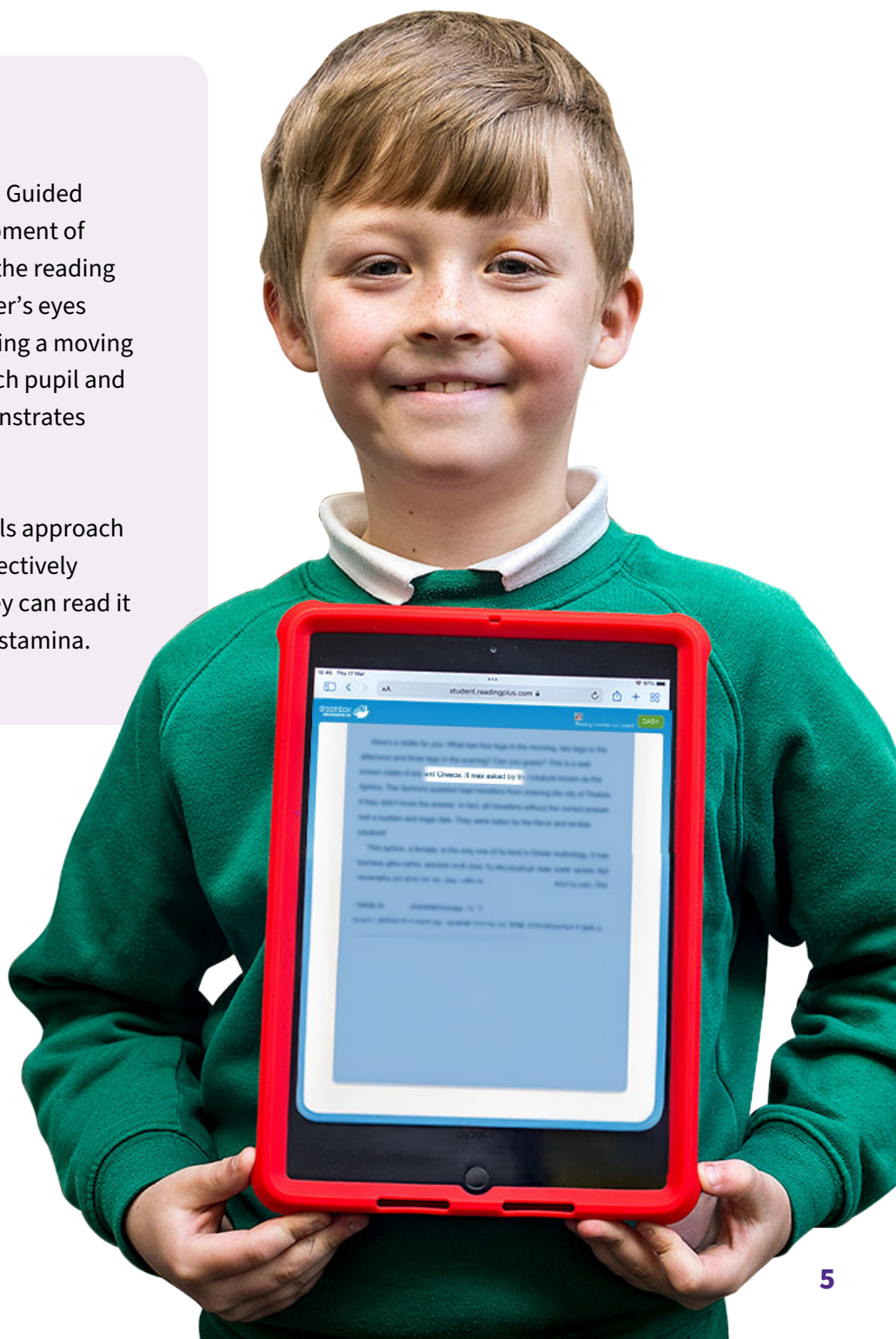
Reading Plus is an online, adaptive reading development programme designed to accelerate each pupil's reading achievement. It does this by improving fluency, stamina, vocabulary and comprehension.

Aimed at pupils in KS2 and above, Reading Plus has a readability range from Y2 to beyond GCSE. It supports pupils in developing their skills to read competently and confidently.

Guided Window

Reading Plus uses the patented Guided Window to support the development of reading fluency. This scaffolds the reading experience by guiding the reader's eyes left-to-right across a page utilising a moving box. The speed is specific to each pupil and increases when the pupil demonstrates mastery.

This scaffold changes how pupils approach the text while gradually and effectively increasing the rate at which they can read it with good comprehension and stamina.



How it works

Reading Plus can be used in school and at home, and begins with an adaptive assessment that pupils complete independently and without any intervention from their teacher. These results provide a baseline and the data-driven starting point for a pupil's journey through the programme.

Weekly assignments are set with personalised instructions for pupils, including visual skills development for eye-tracking, reading tasks for comprehension and fluency, and vocabulary tasks.



Measures efficiency, comprehension, vocabulary, and motivation.

Adaptive assessment

- Diagnostic profile for each pupil in under 40 minutes
- Data-driven starting point for practice and instruction



Adaptive, personalised learning



Online instruction adjusts dynamically based on pupil need.

- Proven instructional and practice activities in vocabulary, reading comprehension and writing
- Builds and strengthens the visual skills needed for efficiency using the patented Guided Window scaffold
- Continuous data collection to customise instructional scaffolds
- Assists pupils in developing capacity and independence
- Over 1,200 levelled texts with cross-curricular links
- Promotes choice and control, improving pupils' motivation to read for pleasure



Teacher-directed instruction



Integrated formative assessments drive differentiated instruction.

- Comprehensive online instruction and printable materials
- Tools for direct instruction and differentiation at the class, small group and individual levels

Results - Progress achieved

Figures 1.1 and 1.2 show that, on average, pupils who used Reading Plus for their reading development made more significant progress (36% more) than pupils who did not have access to the programme.

Girls made more progress than boys in the control schools, whereas boys made more progress than girls in the Reading Plus schools.

Control schools

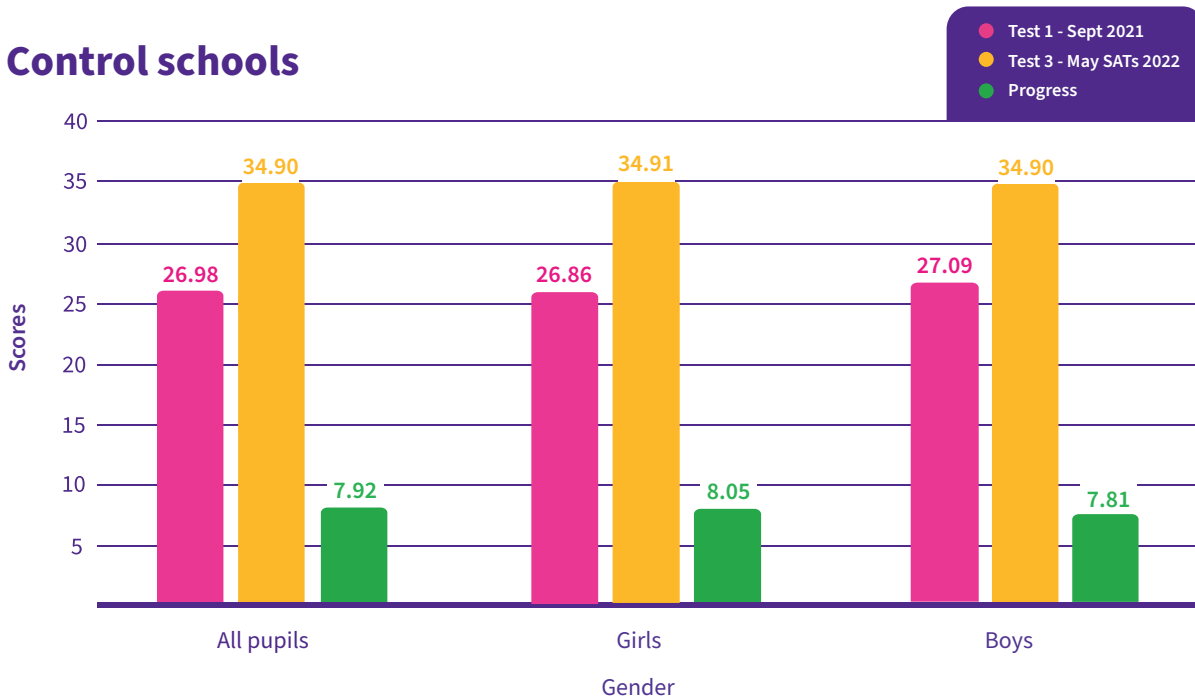


Figure 1.1. Control schools' average progress.

Reading Plus schools

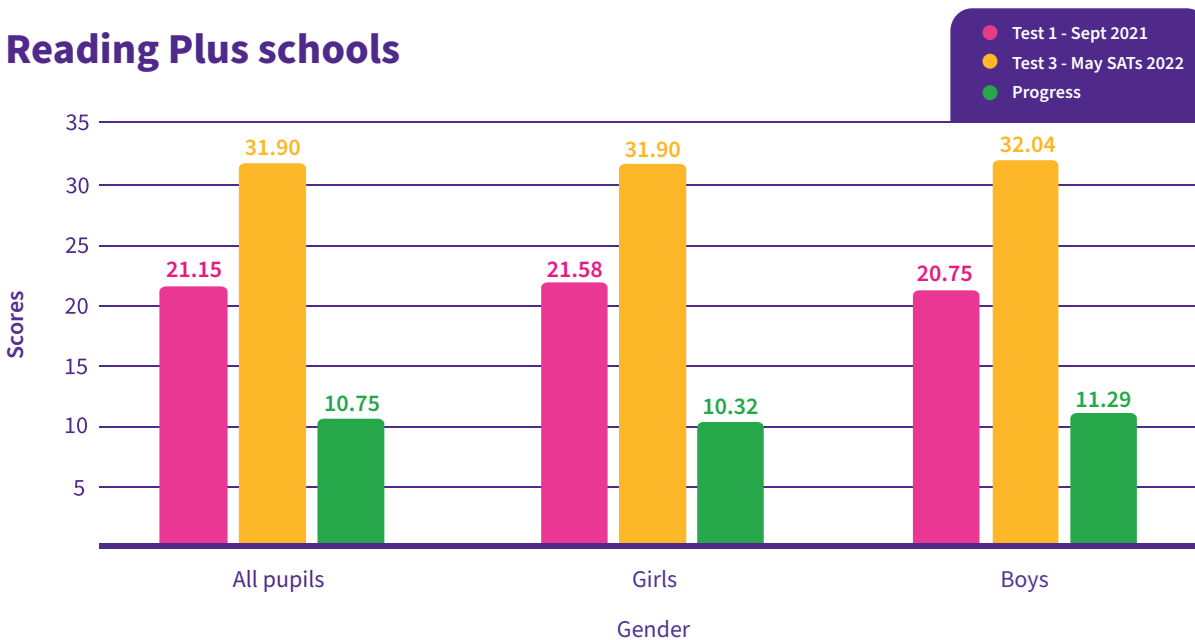


Figure 1.2 Reading Plus schools' average progress.

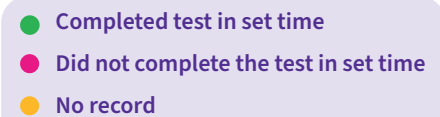
Results - Fluency gains

We measured fluency gains based on whether a pupil completed the test paper in the allocated time.

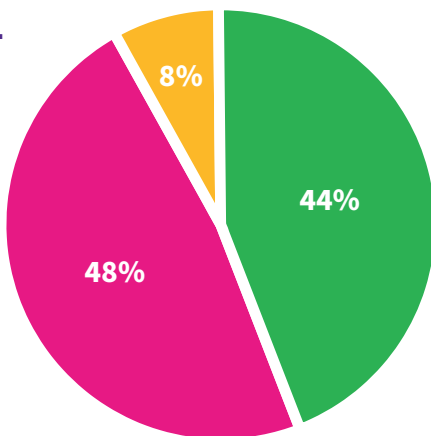
Incomplete school data has resulted in an inability to report fully on the impact of Reading Plus on pupils' fluency. The results below are from phase one of the study, which ran from September 2021 to December 2021.

Data from phase one showed that 11% more pupils in the control schools could complete the second test than the first (Figure 2.1). For the Reading Plus school pupils, a significantly higher number of pupils (25%) could finish the second test over the first (Figure 2.2). This shows that pupils using Reading Plus for one term achieved more significant fluency gains than non-users.

Control schools



Test 1



Test 2

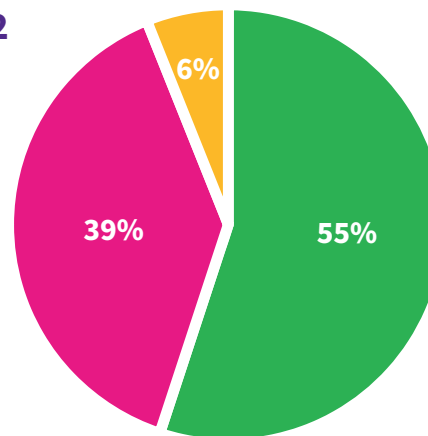
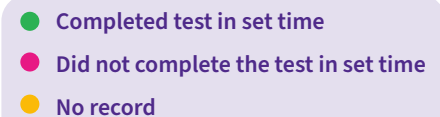
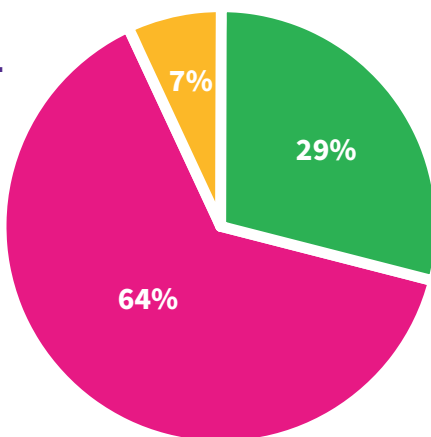


Figure 2.1 Control schools' fluency progress after the second standardised test.

Reading Plus schools



Test 1



Test 2

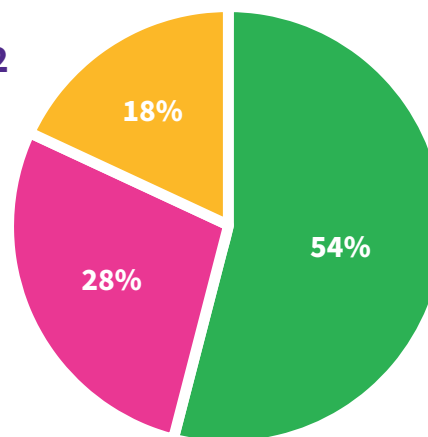


Figure 2.2 Reading Plus schools' fluency progress after the second standardised test.

Results - Demographic reporting

We segmented the data demographically and reported on pupil premium, English as an Additional Language (EAL) and Special Educational Needs (SEN) to test our second hypothesis.

Some pupils may fall into more than one of these categories; for example, they may be pupil premium and EAL.

We have also included data for all remaining pupils as a comparison.

Pupil progress against pupil demographics

Figure 3.1 shows that the average test scores for pupil premium children in the control schools increased by 22% from the first test (September 2021) to the final SATs test (May 2022). Figure 3.2 shows that the average test scores for pupil premium children who used Reading Plus increased by 68% during the same period.

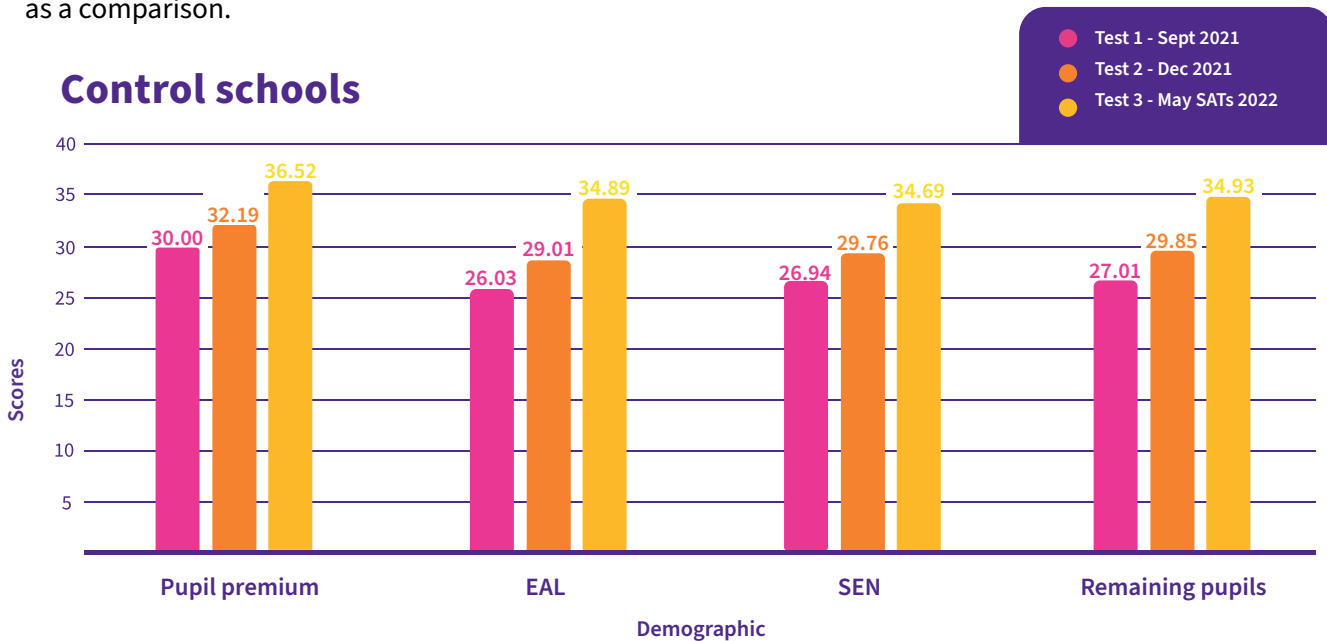


Figure 3.1 Control schools' average test scores against demographics.

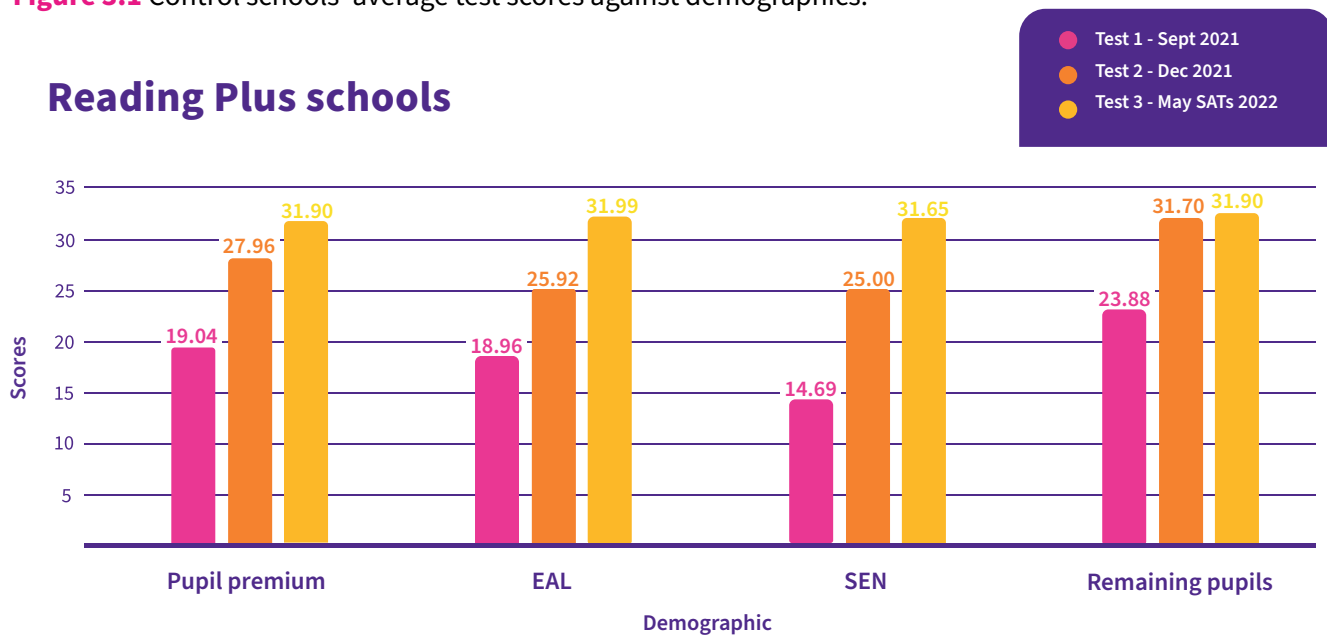


Figure 3.2 Reading Plus' average test scores against demographics.

Results - Demographic reporting continued

Figure 3.3 shows a comparison of progress across all demographics. Pupils identified as SEN who used Reading Plus made the most significant improvement throughout the study and achieved 119% more progress than SEN pupils in the control schools.

Pupil premium children using Reading Plus made 97% more progress than pupil premium children in the control schools.

EAL pupils in the Reading Plus schools made 50% more progress than EAL pupils in the control schools.

Control and Reading Plus schools' progress

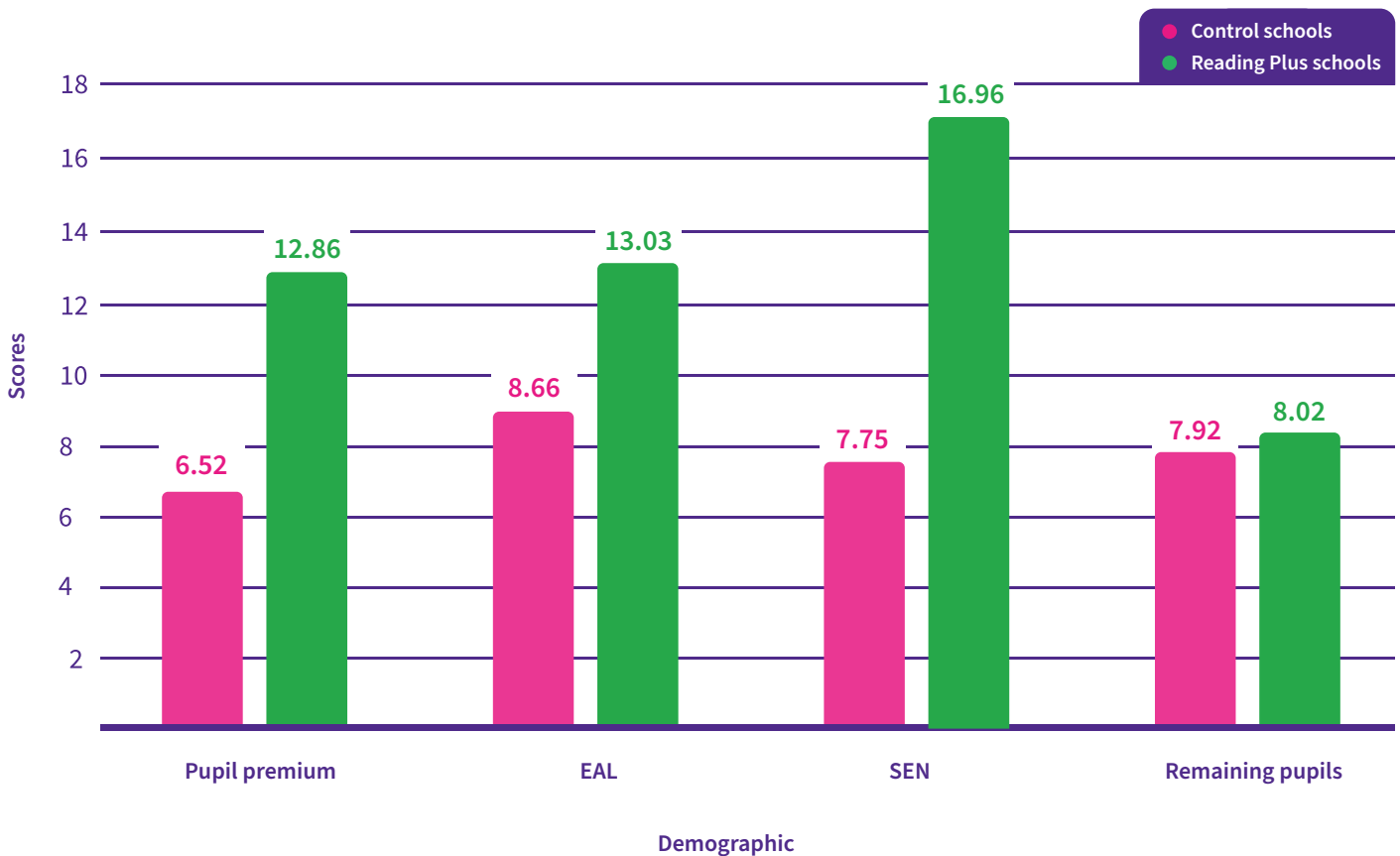


Figure 3.3 Demographic average progress.

Scaled score

Figure 4.1 shows the average scaled score for all pupils. Control pupils achieved a pass rate on all tests, progressing overall by five points.

Pupils using Reading Plus failed to reach a pass rate on test 1. However, they achieved a pass rate on test 2, catching up to control school pupils. They then continue to progress, increasing by six marks overall.

	Test 1 Scaled score Sept 2021	Test 2 Scaled score Dec 2021	Test 3 Scaled score May SATs 2022	Scaled score progress
Control schools	100	101	105	5
Reading Plus schools	96	101	102	6

Figure 4.1 Scaled score averages for all pupils.

Segmenting the data by demographics to see the progression levels for disadvantaged children, Figure 4.2 shows pupil premium children in the control schools achieved a pass in all tests, progressing by six marks.

Pupil premium children who used Reading Plus failed to reach a pass in both the first and second tests. However, in the final May SATs test, they passed and progressed by eight marks in total.

SEN pupils who had access to Reading Plus for the year achieved an 11-point increase in their scaled score, ending with a pass of 102.

Control schools

Control schools	Test 1 Scaled score Sept 2021	Test 2 Scaled score Dec 2021	Test 3 Scaled score May SATs 2022	Scaled score progress
Pupil premium	100	100	106	6
EAL	100	100	105	5
SEN	100	100	105	5

Figure 4.2 Control schools' scaled scores by demographics.

Reading Plus schools	Test 1 Scaled score Sept 2021	Test 2 Scaled score Dec 2021	Test 3 Scaled score May SATs 2022	Scaled score progress
Pupil premium	94	99	102	8
EAL	94	98	102	8
SEN	91	98	102	11

Figure 4.3 Reading Plus schools' scaled scores by demographics.

Limitations

One of the limitations of this study is the number of disadvantaged pupils from the control group and the Reading Plus group. More pupil premium children are in the Reading Plus schools due to the demographic split of the schools involved in the study. The impact of the smaller control group is that it could have adversely impacted the margin for error.

As the researchers, we had no control over how pupils were given access to Reading Plus; other than the recommended usage of three 30-minute sessions per week, the authority lay with each school individually. As a result, some pupils may not have been given access to the programme as instructed, which could have adversely impacted the data.

Access to computer hardware could have been a limiting factor for the Reading Plus schools; if this were compromised, the pupils' access would be limited, further influencing the data.

Incomplete school data regarding pupils completing tests in the allocated time has affected testing the efficacy of Reading Plus on improving pupils' fluency. More data is required to test this thoroughly.

Conclusion

Hypothesis 1

In summary, results from the study favour our first hypothesis; when used as a reading development programme, Reading Plus has supported pupils to make more significant gains than pupils who did not have access to the programme.

Over the academic year, Reading Plus pupils achieved on average:

- A 50% increase in their results from the first to the last test.
- A rise of six marks on their scaled scores.

Control school pupils achieved on average:

- A 29% increase in their results from the first to the last test.
- A rise of five marks on the scaled scores.

Hypothesis 2

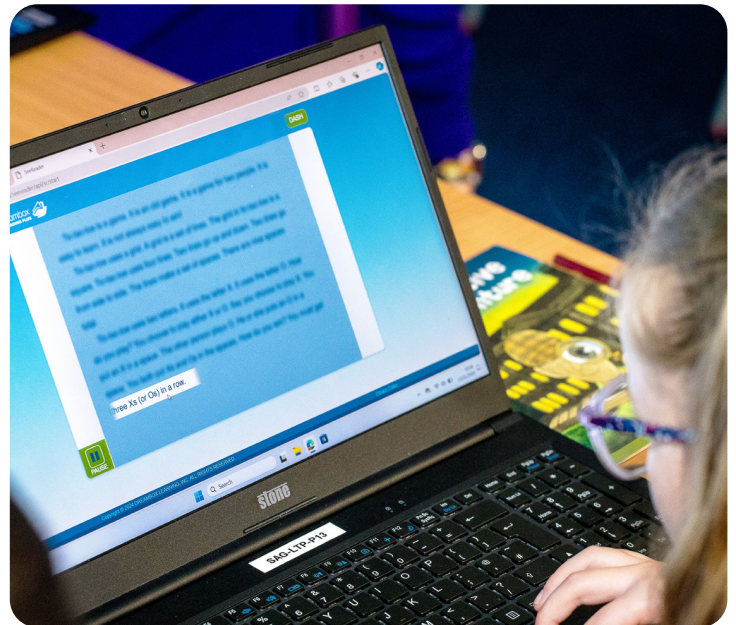
Results from the study support our second hypothesis; using Reading Plus, disadvantaged pupils (pupil premium) have made more significant reading gains than non-disadvantaged pupils who have not used the programme.

Pupil premium children in the Reading Plus schools achieved on average:

- Triple the progress of pupil premium children who didn't use Reading Plus in the first term of use.
- 97% more progress than pupil premium children in the control schools across the academic year.
- A 68% increase in test scores from their first to the last test.
- A rise of eight marks on their scaled scores.

Pupil premium children in the control schools achieved on average:

- A 22% increase in test scores from their first to the last test.
- A rise of six marks on their scaled scores.



Further information

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