

## Introduction

Over the last four years, our study, funded by the Education Endowment Foundation (EEF), has aimed to understand the long-term impact of Covid-19 and partial school closures on pupils' attainment and social skills. We have followed the journey of two cohorts of pupils who, at the start of the study, were in Year 1 and Year 2, and in Year 4 and Year 5 respectively at the end of the study. Each year, these pupils have completed NFER reading and maths assessments which we compared with pre-pandemic data, allowing us to understand how their learning has recovered since 2020. Each year, teachers also provided information on pupils' social skills; and headteachers' and senior leaders' survey responses gave us insights into school practices and challenges.

The following table summarises the study across the four years:

Year of study	First year (2020-2021)	Second year (2021-2022)	Third year (2022-2023)	Fourth year (2023-2024)
Year group	Year 1 Year 2	Year 2 Year 3	Year 3 Year 4	Year 4 Year 5
Reading	Assessed in autumn*, spring, summer	Assessed in spring		
Maths	Assessed in autumn*, spring, summer	Assessed in spring		
Social Skills	CSBQ** assessed in autumn and summer	PSMAT*** assessed in spring		
Further information	Diagnostic analysis of assessment data: spring-summer 2021, summer 2022. School survey completed each year.			

\* Year 2 only.  
\*\* (CSBQ) Child Self-Regulation and Behaviour Questionnaire.  
\*\*\* (PSMAT) Peer Social Maturity Scale - supplemented with additional items.



Links to the reports for all four years of the study are available on the back page.

### First year

In autumn 2020, schools in England had just re-opened following a period of partial closures related to the Covid-19 pandemic that started in March 2020. To explore the impact of these closures from the earliest point, we worked with 168 schools to assess children's reading and maths across the school year. Despite a second lockdown in which schools were closed for most pupils from January-March 2021, schools managed to collect results from NFER assessments in reading and maths for pupils in autumn, spring and summer (the 2019 KS1 national curriculum test paper was used for Year 2 pupils in the summer).

Reading and maths assessments were marked by NFER markers to minimise the workload for teachers, however this meant that assessment results were not immediately available for schools. We were keen to provide teachers with timely information about the areas of children's learning most affected, and so two leaflets were produced with diagnostic information from the reading and maths assessments.

The social skills of a sample of 12 children in each class were measured by the teacher-completed Child Self-Regulation and Behaviour Questionnaire (CSBQ) in autumn and again at the end of the year.

### Second year

By the end of the first year of the study, we saw the beginning of children's learning recovery (more information on page 3) and so, after consulting with schools, a decision was made to reduce the reading and maths assessments to only the spring term.

To meet schools' requests for more prompt feedback, teachers marked the assessments and provided the results to us for analysis. This was possible because the mark schemes were designed to be used by teachers, but this change did mean a difference from the first years' methodology. Nevertheless, the number of schools involved dropped to around half (81 schools) with workload being cited as the main reason.

Given the children were now a year older than when the study started, the CSBQ was replaced with a more age-appropriate measure: the Peer Social Maturity Scale (PSMAT). Additional items were developed alongside the PSMAT to ensure that it had a similar coverage to the CSBQ.

### Third and fourth year

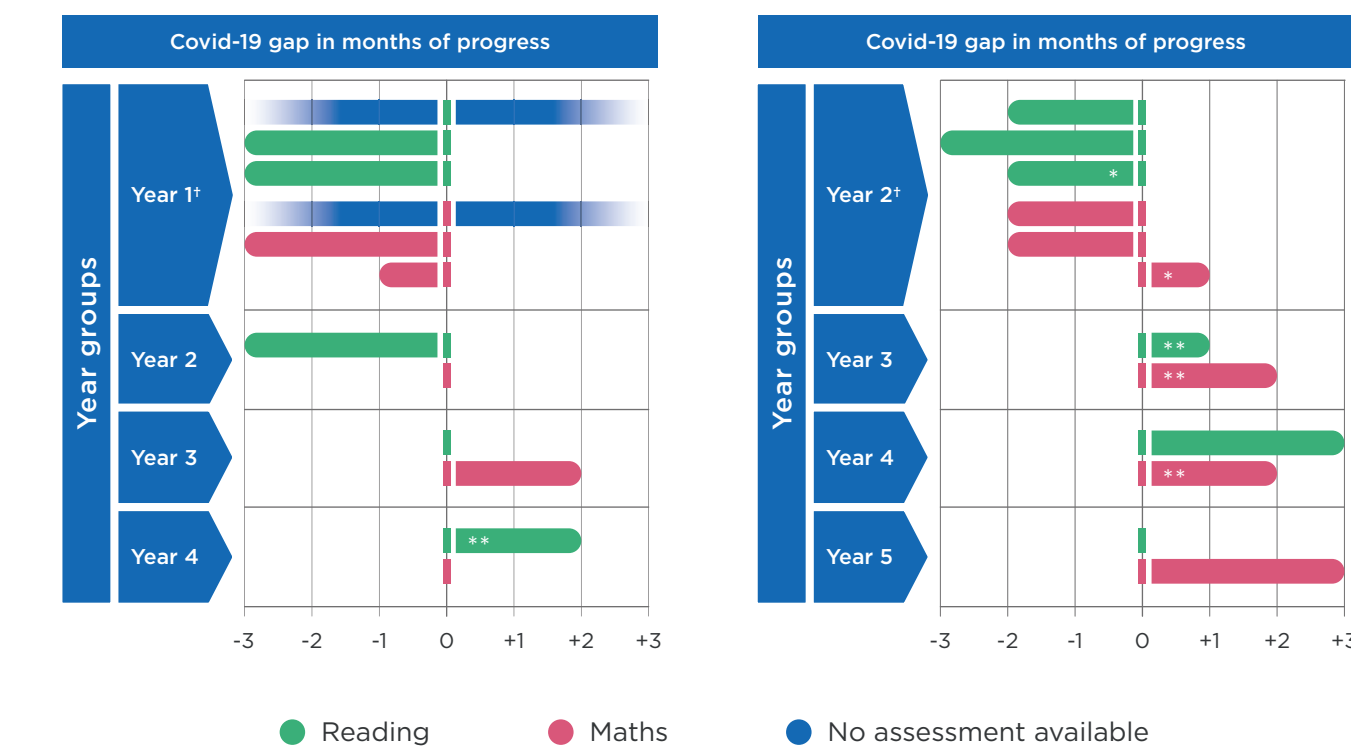
Further school feedback indicated that marking and uploading the results was too time-consuming and so our markers were employed again to mark the assessments. Efforts to guarantee a quick turnaround of results were successful and meant that we were able to keep the number of schools involved almost the same between the second and third years. In the fourth year, this reduced to 59 schools. The PSMAT was retained for the third and fourth years of the study.

## Across the four years of the study, most pupils have shown a journey of improvement in both reading and maths

Throughout the study, we compared the pupils' performance on NFER assessments of reading and maths to their peers who took the same assessments before the pandemic (samples of pupils who took part in the standardisation of the assessments). Any differences observed between their assessment scores was referred to as the **Covid-19 gap** and translated into an equivalent estimate of the months of progress.

Although these findings were measured year on year, they cannot be compared directly. This is because each year provides a snapshot for all pupils who completed the assessments in our study, rather than matching pupils across academic years. A separate longitudinal analysis was undertaken to track a smaller sample of pupils who were involved across multiple academic years of the project. This analysis indicates how the Covid-19 gap has changed between 2021-2024.

The graphs below show the Covid-19 gap, measured in months of learning progress, for each cohort across the four years of the study:



\* 2019 KS1 national curriculum test  
\*\* These findings were not statistically significant. All other findings reported in the table were statistically significant.  
† Assessment results were collected in autumn, spring and summer for the first year of the study.

What we see across the four years of the study is reassuring. Although the reading performance of Year 1 pupils was behind their pre-pandemic peers until spring 2022, the children in our study closed the Covid-19 gap by spring 2024. Their performance in maths appeared to show a quicker recovery.

In the longer term, children who began the study as Year 2 pupils appeared less impacted by the school closures of 2020. There was no negative Covid-19 gap between this cohort and their pre-pandemic peers from spring 2022 onwards and in some cases, they scored even higher than the pre-pandemic standardisation samples.

These journeys of improvement were supported by the findings of the longitudinal analysis comparing a smaller sample of the same pupils across multiple academic years.

In 2021 and 2022, we were able to conduct diagnostic analyses looking at the different curriculum areas assessed by the reading and maths papers.

In spring 2021, this revealed that the areas of the curriculum that pupils struggled with post-pandemic were broadly the same as for pupils pre-pandemic. For example, making inferences in texts was consistently an area of challenge for reading, as was interpreting division questions in maths.

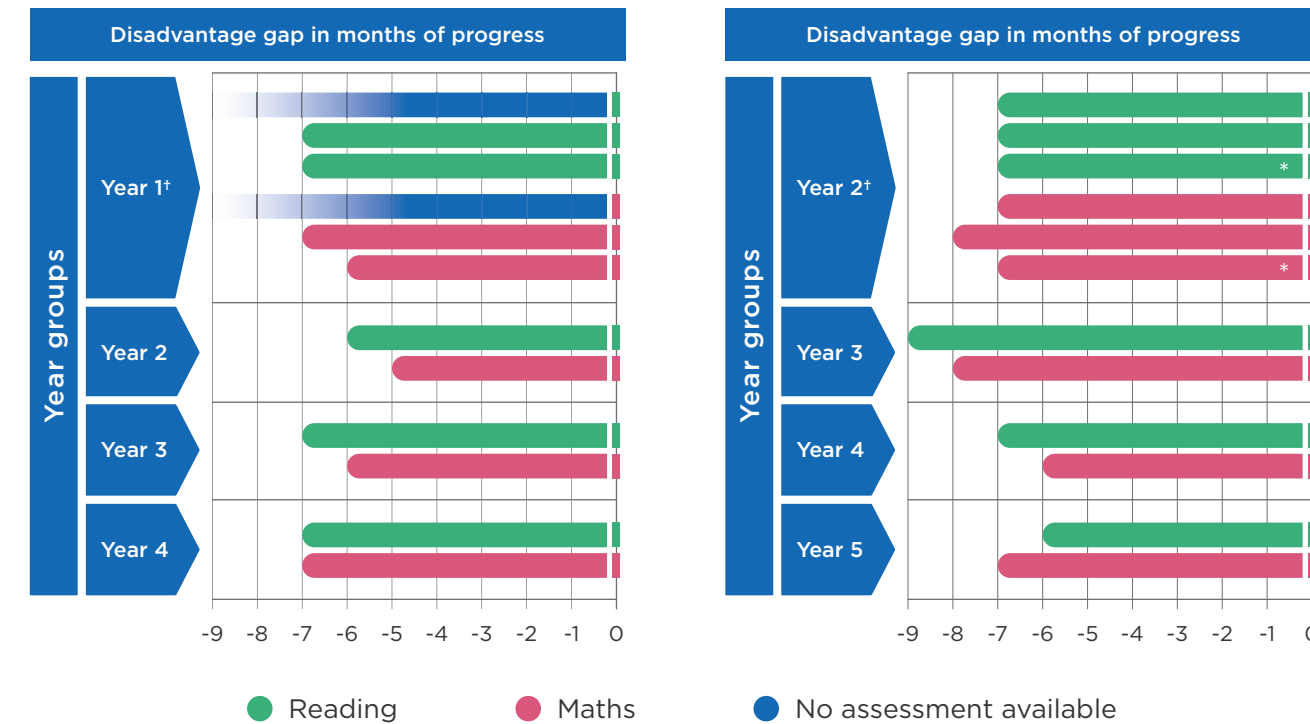
By spring 2022, the younger cohort continued to find areas of the curriculum more challenging than their pre-pandemic peers, particularly in reading. In contrast, the older cohort generally showed improvements in curriculum areas, reflecting a decrease in the Covid-19 gap overall.



## Throughout the study, although disadvantaged pupils have progressed, the gap between them and their peers has proved persistently wide

Since it began, the study has placed a spotlight on understanding the impact of school closures for pupils from disadvantaged backgrounds. Each year, we compared the performance of pupils eligible for free school meals with their non-eligible peers. Any difference between their assessment scores was referred to as the **disadvantage gap** and translated into an equivalent estimate for the months of progress. There was no pre-pandemic measurement for reference. As with the Covid-19 gap, these measures are snapshots within each year. A separate longitudinal analysis was conducted to compare the performance of the same pupils across multiple academic years.

Across the four years of the study, disadvantaged pupils' reading and maths has shown a journey of recovery similar to their non-disadvantaged peers. Whilst disadvantaged pupils have improved in both subjects, this has only been at a similar rate to their peers. This means that, as the table below shows, the disadvantage gap for both cohorts has remained relatively consistent and persistently wide. The longitudinal analysis comparing a smaller sample of pupils across 2021-2024 found evidence of a slight reduction in the disadvantage gap over time for the younger cohort.



\* 2019 KS1 national curriculum test  
 † Assessment results were collected in autumn, spring and summer for the first year of the study. All findings reported in the table were statistically significant.

In 2021 and 2022, we were able to conduct diagnostic analyses to understand the different curriculum areas that pupils from disadvantaged backgrounds may have found easier or more challenging than their peers. For example, in spring 2021, this indicated that Year 2 children from disadvantaged backgrounds may need additional support with early writing skills, non-fiction texts and abstract ideas in fiction. In spring 2022, Year 3 children from disadvantaged backgrounds found the same areas of the curriculum challenging as their peers but performed significantly lower in all areas with large differences observed when completing calculations.

In 2023 and 2024, our survey asked school leaders whether their schools had provided particular targeted support to aid the recovery of disadvantaged pupils. In 2023, 74% of headteachers said this was the case and 65% did in 2024. The most common support, provided by these schools was maths and reading support in both years.

## The proportion of low attaining pupils has reduced over four years, but this may be hiding a bigger picture

Throughout the study, we have been concerned about the proportion of children considered to be 'low attaining' in reading and maths. These are the children who did not score enough marks on each paper to be awarded a standardised score, indicating that they were unable to engage effectively with the assessments. Before the pandemic, this was typically between 1-2% of pupils. Across the four years, we were able to compare the figures in each year of the study to pre-pandemic samples. As with the other measures, these are snapshots within each year.

Across all three terms in the first year of the study (2020-2021), we observed significantly higher percentages of pupils who were low attaining in both cohorts for reading and maths, in some cases up to two or three times higher than the proportion expected pre-pandemic. As the study continued into its second year, the proportion of very low attaining pupils continued to be significantly higher than before the pandemic, particularly for both cohorts in reading.

But in the third year of the study in spring 2023, the story began to change. The percentages of low attaining pupils reduced to pre-pandemic levels in both Year 3 mathematics and Year 4 reading.

Furthermore, in spring 2023 the number of low attaining Year 4 pupils in mathematics actually decreased compared to pre-pandemic levels, echoing the idea that the older cohort – and maths as a subject – was perhaps less affected by school closures. For the younger cohort, the proportion of very low attaining pupils appeared to fall back in line with pre-pandemic figures by the fourth year of the study.

Although most of these findings initially appear encouraging, we also observed a relatively high number of pupils who were deemed 'unable to access the curriculum' in spring 2024, compared to figures for national assessments. These are pupils who were withdrawn from the assessments by their teachers, possibly due to concerns over pupil wellbeing as indicated in our school survey (see page 7). Investigations indicated that these pupils may have been low attainers who scored the lowest standardised score in previous years. As NFER papers are optional, teachers may have decided not to include pupils in an assessment that they may have found difficult. It is possible that this hides the real story of low attaining pupils because they were not assessed and so the journey of these pupils over the four years of the study should be interpreted with caution.



## Over the years, Covid-19 disruption has decreased along with catch-up support for pupils, however challenges remain for schools

As part of understanding the wider impact of the pandemic, our project gathered further information through a school survey and measurements of pupils' social skills. Each year, participating headteachers or school leaders responded to a questionnaire asking about practices put in place to deal with Covid-19 and the impact of the pandemic on the school, staff and pupils. In addition, pupils' social skills were assessed by class teachers.

### Maths and reading learning recovery

On average between 2022 and 2024, the most common strategy implemented by schools to aid pupils' maths and reading recovery was small-group work. Two other common strategies to aid maths and reading learning recovery were staff redeployment and one-to-one catch-up support. In 2022, around three quarters of schools reported using staff redeployment to aid with reading and two thirds for maths. This reduced in 2023 and 2024 but was still reported by more than half of schools for both subjects. In 2022, a revised curriculum was also reported to be in place (in 66% of schools for maths and 58% of schools for reading), but this was much less common in 2023 and 2024 (falling to 26% and 22%, respectively, for maths and 29% and 20% for reading).

### Supporting social skills and wellbeing

As mentioned above, schools reported that challenges with pupil behaviour or wellbeing were a prominent cause of disrupted learning. In response to this, the most common strategy implemented by schools to provide support for pupils' social skills and wellbeing was small-group wellbeing sessions. In 2022, 2023 and 2024, around two thirds of schools reported that this was the case. Three other strategies were reported by about half of participating schools: additional PSHE sessions; staff redeployment (e.g. greater use of TAs to support individuals); and the use of external support (e.g. counsellors). Additional PSHE sessions were provided by around 60% schools in 2022 and 2023, when the pupils were in Years 2, 3 or 4, reducing to 40% by 2024. Nevertheless, in 2024 the use of external support was greatest, reported by just over half of schools, however accessing this support remained a key challenge for schools.

### Causes of disruption to schools

As would be expected, disruption to schools including Covid-19 control measures and practicalities for learning at home affected the majority of schools in the first year of the survey. By 2022, seven out of ten schools were still reporting pandemic-related disruption, with the most common causes being Covid-19 pupil and staff absences and having to cover learning that had been missed in earlier years.

These challenges shifted in 2023 and 2024 with pupil behaviour or wellbeing being reported as the greatest causes of disrupted learning. Pupil and staff absences continued to be an issue for half of schools reporting disruption in 2023 and 2024, as did covering learning from earlier years.

### Pupils' social maturity

Each year, pupils' social skills were assessed by teachers using the CSBQ in 2020-2021 or the PSMAT in 2022-2024 (see page 2 for more information). These were chosen as the most appropriate measures, but unfortunately, neither had scores for English pupils' social maturity that could be used as a pre-pandemic comparison. A random sample of 12 pupils was selected from each year group in every participating school and teachers rated the social maturity of each pupil. While schools found it necessary to provide support for pupils with wellbeing and social skills, these specific measures did not show any consistent indication of a widespread decline in the social maturity of pupils. The general finding was that pupils were broadly in line with the average level of maturity expected for their age. Additional information from the surveys indicated that disadvantaged pupils were less socially mature than their peers and that this was also the case for boys in comparison with girls. It is not possible to conclude whether these findings were as a result of Covid-19 school closures, or whether this has been a pattern since before the pandemic.

## Learning from the last four years

This unique and long-running project has produced incredible insights into the journey of pupils who were in the earliest stages of their school career when the pandemic hit. With the dedication and commitment of schools, we have been able to track these pupils since 2020 to understand how their reading, maths and social skills have been impacted by school closures.

From this, a story of mixed fortunes has emerged. Whilst most pupils have shown a positive journey of recovery across the four years, there remains consistent and persistently wide gaps between them and their lower attaining and disadvantaged peers. It appears that pupils who were older at the time of school closures were generally impacted less, and mathematics as a subject seemed to be more receptive to recovery teaching. Although schools continue to focus their efforts on supporting lower attaining and disadvantaged pupils, to be able to tackle these consistent and persistent gaps, they must be adequately funded.

Yet, the picture is not clear cut. Findings must be interpreted with caution and within the context of all available measures. Indeed, some of the findings raise questions which invite further exploration, such as the experience of those pupils who were withdrawn by teachers from taking assessments. Although this study has aimed to understand the holistic impact of school closures for pupils through a variety of measures, this does not represent individual experiences of the impact of the pandemic on learning and teaching.

Finally, we would like to take this opportunity to reiterate our thanks to the schools and pupils who participated in our study. We hope these findings have helped to provide a voice to all the conversations, catch-up strategies and unflinching hard work that has gone into the past four years.



### More information:



<https://educationendowmentfoundation.org.uk/projects-and-evaluation/projects/nfer-impact-of-school-closures-and-subsequent-support-strategies-on-attainment-and-socioemotional-wellbeing-in-key-stage-1>  
<https://www.nfer.ac.uk/for-schools/free-resources-and-advice-for-schools/research-bites-for-schools/impact-of-ks1-school-closures-on-attainment/>



## Four years on:

What has been the impact of KS1 school closures on later attainment and social skills?