GL Assessment

GL Education

Weathering the storm: the impact of the pandemic on attainment two years on

Introduction

Two years after the outbreak of the pandemic and almost a year after schools returned to in-person teaching, how have students and schools fared? What can the latest data tell us about the state of children's learning?

The answer appears to be that, overall, schools and students have bounced back, despite the unprecedented nature of the disruption. The enormous efforts teachers have made to support their learners have paid dividends in key areas. According to our data, the average attainment levels in English, maths and science have almost returned to pre-pandemic levels, while reading has been less affected than first feared.

However, there are areas of concern. Average figures are just that – they can obscure details as well as illuminate trends. Delve deeper into the data, which for the purposes of this analysis were drawn from our Progress Tests in English, Maths and Science, New Group Reading Test (NGRT) and New Group Spelling Test (NGST), and some potential issues emerge.

There is, for instance a wide range in attainment, which means that while some schools have matched and even exceeded the scores they last achieved in 2019, others are struggling to recover.

The same is true at the individual student level, with students on free school meals finding the situation especially challenging – not only have their scores continued to decline but the gap between them and their peers has also widened. Moreover, there are indications that the pandemic has taken a toll on some children who wouldn't normally find learning difficult. Identifying exactly who they are and what support they need will continue to be a challenge for teachers.

Nevertheless, as this analysis makes clear, there are grounds for optimism. Thanks to the hard work of schools and the dexterity with which they have adapted to novel and difficult circumstances, most students are making good progress.

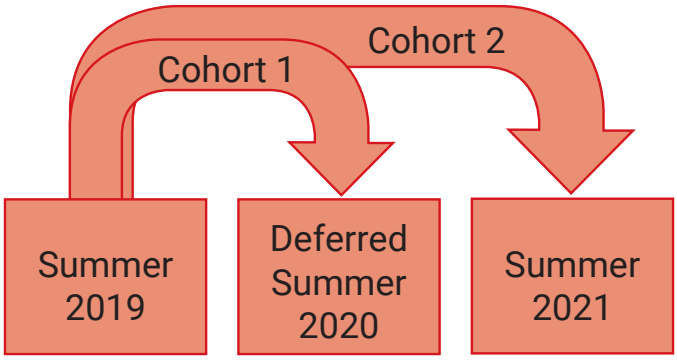
We hope this report will help teachers to further support their students and enable them to see how their own school's data fits into the wider national context, and we will continue to monitor trends on the impact of Covid-19 on students' learning.

Methodology

The main score we use in our assessments is called the Standard Age Score (SAS). Student attainment is benchmarked to a norm group of performances from children of the same age who are representative of the UK student population.

In other words, a child is given a score of 100 whose average level of attainment is where we would expect for their age. Scores above 100 indicate a level of attainment above average and scores below indicate a level of attainment below.

Our initial analysis - which was conducted in 2020 - compared schools that sat assessments in 2018 and 2019 with schools that sat tests in 2019 and 2020. We wanted to see if the differences we saw during the first year of the pandemic (cohort 1 in the diagram below) had been maintained or had changed this year. In this updated analysis, we have included data from schools that assessed their students in 2019 and 2021 (cohort 2). Schools were matched in each cohort to ensure comparability.



The analysis includes English primary, secondary and independent schools, Northern Ireland state schools and overseas schools. The data used was extracted from assessments students sat in summer 2019, autumn 2020 and summer 2021.

Group	Cohort 1[1]		Cohort 2	
	2019	2020	2019	2021
PTM	199,000	153,000	273,000	270,000
PTS	71,000	56,000	98,000	99,000
PTE	179,000	138,000	262,000	257,000
NGRT	140,000	160,000	157,000	161,00
NGST	-	-	20,000	22,000

Table 1: Number of students in each cohort sample

Main findings

In a typical year, without the legacy of the pandemic, we would expect little variation from a mean score of 100 within a population. Any movement greater than 3 SAS points is deemed significant in such large datasets. Table 2 shows where there have been changes of 3 or more SAS points, highlighted in yellow.

School type	PTM		PTS		PTE		NGRT		NGST	
	2019 to 2020	2019 to 2021	2019 to 2020	2019 to 2021	2019 to 2020	2019 to 2021	2019 to 2020	2019 to 2021	2019 to 2020	2019 to 2021
England State Primary	-6.6	-1.3	-5.5	-3.1	-3.4	-1.8	-1.9	-0.5	-	-1.1
England State Secondary	-4.0	-1.8	-3.0	-2.5	-2.9	-2.0	-0.5	0.9	-	2.0
England Independent	-2.6	-0.3	-5.3	-0.8	-2.7	-0.2	-2.1	0.8	-	0.3
Northern Ireland	-3.4	-3.1	-2.2	-1.7	-2.4	-2.5	-3.7	-0.8	-	-1.1
International Schools	-4.9	0.4	-6.2	1.3	-3.0	1.0	-0.1	2.3	-	2.3

Table 2: Progress Test in Maths (PTM), Progress Test in Science (PTS), Progress Test in English (PTE), New Group Reading Test (NGRT) and New Group Spelling Test (NGST) average score differences by school type

As can be seen, schools have almost regained their pre-pandemic scores in most subjects, with the exception of science.

The data shows that:

- On average, school attainment has bounced back to 2019 means, whereas last year it had fallen across all subjects. The average school in summer 2021 increased its mean score from the previous year to a level similar to that of 2019
- English and maths scores are now almost back to where they were in 2019. Science scores are the exception, particularly in primary schools, where there is a statistically significant decline from 2019 (-3.1 SAS points)
- Reading and spelling scores have been relatively stable during the pandemic, remaining around 1 SAS point difference in 2021 when compared with 2019
- Independent schools have almost returned to the scores they registered in 2019 with less than 1 SAS point difference across all subjects. They have also made particularly strong progress in science
- Overseas schools too have made rapid progress and have now matched or exceeded the levels observed in 2019
- Northern Ireland's schools have not made as much progress as their counterparts in England, with statistically significant lower scores in maths (-3.1 SAS points) and to a lesser extent English (-2.5 SAS points). Reading scores have improved markedly, though this could be a sample effect as NGRT is often used as an intervention measure for specific groups.

Gender and FSM analysis

Data from 2020 showed that on average girls had been more affected by the disruption caused by the pandemic than boys. A year on, and trends have returned to patterns we observed before the pandemic – girls outperforming boys in English and boys outperforming girls in maths. There is no gender difference in science scores.

It's a different story when it comes to free school meal students[2]. They have not recovered the levels they were attaining in 2019 and the gap in performance between them and their peers in all subjects has continued to widen:

- In English and science, FSM student scores dropped by 3.7 SAS points from 2019 levels
- In maths, the decline has been greater – down by 4.6 SAS points
- In English, the gap between FSM and non-FSM students is even more pronounced. It has widened from 6.3 SAS points in 2019 to 7.9 points now
- In science, the gap was 6.0 SAS points in 2019 – it is 8.4 now
- In maths, the gap was 6.6 SAS points in 2019 – and the gap has continued to increase, reaching 8.8 now

The spread of school mean scores

To get a clearer understanding of what is happening at the school level, see the graph below, based on our Progress Test in Maths. We've compared the spread of school mean standard age scores over three periods in figure 1 – 2018-19 (blue), 2019-20 (red) and 2019-21 (green) – to show the spread of school mean SAS change over time.

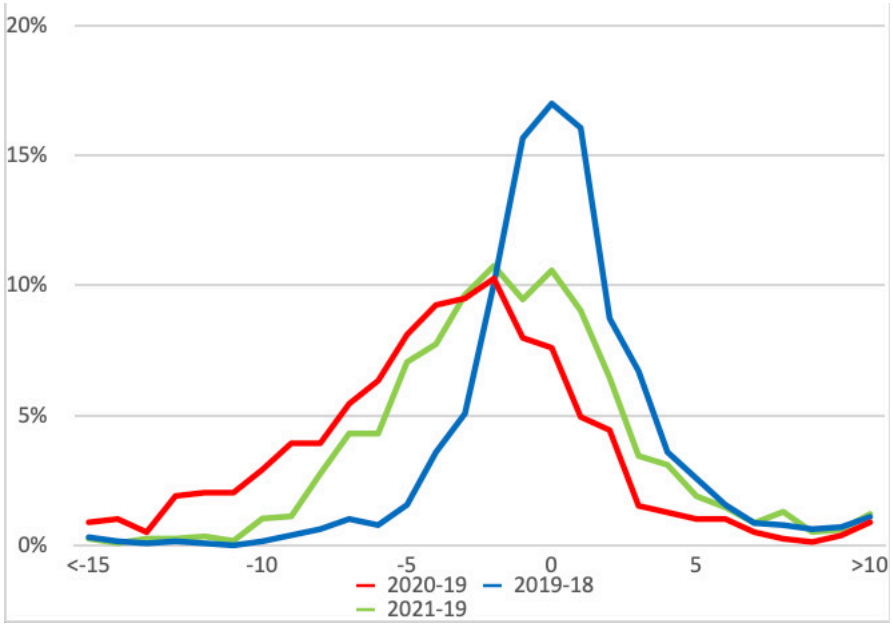


Figure 1: School mean SAS change in maths

Normally, we would expect some variation in a school's mean scores from year to year, though less by school than by student. Some school scores should rise, some should fall – but the majority would register changes near zero. If Covid-19 had not had an impact on children's learning, then the red and green lines in figure 1 would have matched the pre-pandemic distribution of the blue line.

It's clear that some schools have registered an improvement on their mean 2019-20 scores. More schools have seen a rise in student attainment – the green line has shifted to the right, towards zero, and is now closer to the spread of the blue line.

However, despite the overall improvement, the distribution of mean scores is wider than it was pre-pandemic, with a higher number of schools declining by 10 SAS points or more compared to 2018-19.[3]

We shouldn't overlook the fact that some schools, despite the improvements made by most, are still struggling to regain the attainment levels their students reached pre-pandemic.

What does it all mean for your school?

It's important to remember that this report is an analysis of large-scale trends across schools, so the findings may differ from your own school's data or that of individual groups. What is most important is to understand the scores in your school/s.

To help you do that, there are five key questions you should ask of your own data:

1. Does your school's data match our findings? Comparing your data to the national benchmark will allow you to see how your school has adapted during and after the pandemic compared to others.

2. How does your data compare to other assessment data you have on individual students? Cross-referencing datasets will allow you to pinpoint more accurately what you know about each student.

3. What does the data look like by key groups and at an individual/curriculum level? Mean score distributions have not fully returned to pre-pandemic ranges and remain wide, which means there is a risk of more students falling behind. Use the curriculum analysis in individual and group reports to understand what is happening in more detail.

4. Can you identify areas of comparative success? These will allow you to celebrate and share best practice internally. Use the curriculum content analysis to identify gaps or successes at cohort level and to support future curriculum planning.

5. Can you separate short-term impacts on student scores from longer-term patterns? The latter may need further investigation with follow-on assessments on reading for example.

Conclusion

Schools are bouncing back strongly from serial lockdowns as student attainment nears pre-pandemic levels. Despite the unprecedented disruption faced by schools over the past two years, teachers and students have shown remarkable resilience and performance in most schools and subjects has recovered to where it was in 2019.

That said, overall sector performance should not lead us to overlook the fact some schools and students are still struggling to achieve the scores they could have expected before Covid-19 struck.

At the school level, as our analysis of Progress Test in Maths scores shows, although most schools have registered an improvement compared to 2020, a minority are still struggling to recover their 2019 form.

At the student level, the distribution of scores is wider and the challenges arguably greater. FSM students in particular have not only fallen further behind as a group on their 2020 performance across all subjects, but the gap with their better-off peers has continued to widen too.

We may be cautiously optimistic that the worst effects of the pandemic on our education system are, thankfully, behind us. But sadly, that won't be the case for all schools or all students.

If you're in the UK or Ireland, please contact us on **0330 123 5375**; if you're based overseas, you can call us on **+44 (0)20 8996 3369**. If you would like a free one-to-one consultation about your data and what it means for your school, email our Assessment Insights team – **assessment.insights@gl-assessment.co.uk**.

Footnotes

1. Based on previously conducted analysis in 2020
2. Some have suggested that 'free school meals' may not be as accurate an indicator of deprivation as researchers would like. However, in the absence of any other indicator in our datasets we feel it is still important to use FSM as a metric
3. Figure 1 includes all schools in our dataset. It is possible that the double peak seen in the green line distribution (2019-21) reflects data from Northern Ireland's schools, which are continuing to register an overall decline in the mean scores