Education recovery and resilience in England

Phase two report

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Foreword from the Education Policy Institute

This is the second major 2021 report from the Education Policy Institute on the extent and costs of learning loss during the COVID pandemic; and on the policy actions that are likely to be necessary to recover lost learning, tackle rising mental health incidence, and reduce the long-term costs of the pandemic.

We are particularly grateful to Pearson for their generous funding for this project, including support for two roundtables, on online learning and on the future of the National Tutoring Programme.

In this paper, we provide updated estimates on the scale and costs of learning loss, and we build on the analysis in our Spring 2021 report (sponsored by Unbound Philanthropy) to look in particular detail at three policy challenges which are topical during and beyond the pandemic.

The first issue we look at is how any education recovery funding should be allocated to properly target the lost learning, as effectively as this can be achieved. Our analysis of learning loss demonstrates that disadvantaged pupils and those in the North and Midlands look to have suffered disproportionately from learning losses, while other research indicates that non-disadvantaged children situated in disadvantaged areas are likely to have lost out too. It is only, therefore, sensible to consider how extra funding should broadly follow this extra need.

Our second area of focus has been online learning. How effective has this been during the pandemic? What more needs doing to ensure all pupils can benefit from online learning while this is necessary? And what are the long-term, post pandemic, challenges and opportunities?

Finally, we have looked at the new and developing government policy on tutoring, which has become a major part of the government's recovery strategy. How well is this working? What are the short-term risks? And what are the challenges and opportunities for the long term?

We are grateful to all those who have taken time to discuss these issues with us, and we welcome comments on our analysis and conclusions.

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David Laws Executive Chairman, Education Policy Institute

Foreword from Pearson

The impact of the last 18 months on all aspects of our lives has been profound. Schools shifted from classrooms to online learning almost overnight. Teachers were required to create, from scratch, new ways to teach and interact with students. And for young people, their experiences of the pandemic were individual and unique - many have suffered mental health challenges, older children have had exams cancelled and all have missed out on social interaction. The spotlight was thrown even more greatly than before on the digital divide that exists in this country – both geographic and demographic.

The education sector pulled together to ensure young people kept learning. At Pearson, we offered free resources to schools, students and families. More than 450,000 families signed up, free of charge, to our popular app The Maths Factor in the three months following schools' closures, with children answering a staggering 99 million maths questions.

Yet as we emerge into a new world and consider life post-pandemic, focus has increasingly – and rightly - turned to robust analysis of the impact on young people's education and a plan for recovery.

We are proud to support EPI's work in this critical area – seeking to deepen understanding of the extent of lost learning and produce impactful recommendations for the DfE and HM Treasury to consider.

The evidence presented in this new report is a stark but necessary picture of the need for substantial additional investment in education. It provides compelling and thorough recommendations for how and where funding can have the greatest impact.

We welcome the report's focus on the future of two such areas: online learning and the Government's National Tuition Programme.

As this report outlines, it is imperative that we harness the potential of online learning and the transformational impact it can have. It can provide resilience for future disruption and give young people the digital literacy and skills they will need to be successful in the workplace.

As a partner in the Government's National Tuition Programme too, the insight from this report will, I'm sure, help it continue to build upon the success it has achieved so far and help inform the place that tutoring can have in the educational landscape moving forward.

2022 and onwards will continue to be incredibly challenging for the education sector and young people. Yet there is cause for optimism if the sector continues to work together, invests in the future and uses insights to drive change for the benefit of those at the heart of the system, our young people.

Hague

Sharon Hague Managing Director, Pearson School Qualifications

Introduction

In May 2021, the Education Policy Institute published its first report on education recovery and resilience. In that report, we estimated the impact of lost learning on future labour market earnings and economic growth. We then summarised the evidence of interventions which, when implemented effectively, can help to accelerate learning and close the gap between disadvantaged pupils and the rest. Our report concluded by making a series of recommendations to government, centred around a three-year funding plan costing between £10-15bn. While that is a significant amount of public spending, Chapter 1 of this report reiterates the long-term consequences of failing to tackle learning loss. Indeed, the government's own Education Recovery Commissioner, Sir Kevan Collins, also asked the government to spend an additional £15bn on post-Covid recovery.

In June 2021, the Department for Education announced that it would spend a further £1.4bn on education recovery, bringing total recovery spending to £3.1bn. This fell significantly short of what EPI and Sir Kevan Collins had recommended, leading to the resignation of Collins from his Commissioner role.

The Department for Education (DfE) has hinted that more money for education recovery might be announced in the Spending Review, details of which are due to be made public on 27th October 2021.

In this report, we summarise the most recent, published evidence of the extent of lost learning (using Renaissance Learning Star Assessment data which we have analysed for the DfE) and update our estimates of the impact of lost learning on the economy.

Based on the lost learning data and existing evidence about the demographics of pupils who are falling behind, we also make recommendations about how new funding should be targeted and allocated.

We then explore, in more detail, two important and developing features of the education system: online learning and the National Tutoring Programme.

Online learning has grown exponentially as a result of the pandemic and we are now left with the question of how the sector should utilise the infrastructure and innovation that has emerged. In Chapter 3, we explore some of the challenges and opportunities that have arisen from the growth of online learning and set out further recommendations to government and the sector.

Meanwhile, the government has committed to spending a total of £1.56bn on tutoring over five years, delivered primarily through the National Tutoring Programme. In Chapter 4, we discuss some of the challenges and successes of the programme so far and make recommendations to support the successful roll-out of the programme over the next three years.

We conclude with a summary of our recommendations, with the intention that these are adopted by the DfE and HM Treasury as both departments continue to make crucial decisions about education recovery and resilience. Such decisions need to be made as a matter of urgency, with funding commitments set out in the forthcoming spending review.

Executive Summary

The most recently published research into learning loss caused by the Covid-19 pandemic suggests that pupils have fallen behind by between two to three months. It also finds that disadvantaged pupils have fallen behind even further and are catching up at a slower rate to their peers. Learning loss has also affected some parts of the country, particularly the North East and Yorkshire and the Humber, more than others – jeopardising the government's aims of "levelling up" opportunity.

The long-run effects of this degree of learning loss are stark. Even under our most optimistic scenario, a consequent 1 per cent earning loss would equate to between £78-154bn in lost lifetime earnings. Under our pessimistic scenario, that figure rises to £463bn in lost income.

These figures relate to a narrowly defined economic impact. The true extent of learning loss is also likely to affect health outcomes, engagement with civic society and wellbeing.

These long-term consequences highlight the need for an urgent and more ambitious recovery package from the government.

The government's current plans to spend £3.1bn in total pales in comparison to the £10-15bn we estimate is needed over the next three years. That figure, in turn, is dwarfed by the long-run economic impact of lost learning which runs into the hundreds of billions if left unaddressed.

Other countries, such as the United States and the Netherlands, are leading the way in providing a well-funded recovery package to young people which encompasses wellbeing support as well as academic programmes.

The government also needs to rethink how it allocates additional funding in order to maximise its impact and mitigate against learning loss. While it might be tempting to use the existing national funding formula to channel money into schools we need something more nuanced and aligned with the patterns of learning loss that are beginning to emerge.

Funding must be progressive in order to tackle the disadvantage gap. But, as our analysis shows, non-disadvantaged children have also lost a significant amount of learning too. We therefore need an education recovery grant which provides funding to all schools, but progressively more to those in the most disadvantaged parts of the country and then even more based on the proportion of pupils eligible for the Pupil Premium.

As well as addressing the size and scale of education recovery funding the government also needs to learn lessons from the past 18 months and focus on how it will support the growth of online learning and the National Tutoring Programme – two dominant features that have emerged during the pandemic.

The difficulties in accessing online learning from the start of the pandemic shed a harsh light on the state of inequalities across the country. Many families reported not having internet connectivity, a dedicated device for their child(ren) and a safe or quiet place for them to study. In addition, the inability to see pupils day-to-day meant that teachers and school staff were no longer able to identify wellbeing and safeguarding issues in the usual way.

Government efforts to get free laptops to disadvantaged pupils were worthy, but were late and, at times, overly bureaucratic undermining the need for a rapid response to support pupils in need.

Although the growth of online learning was a sudden and necessary response to the pandemic it has created an infrastructure and some opportunities which we should harness. The ability to offer inclusive education, to pupils with Special Educational Needs or those who cannot attend school due to a long-term illness such as cancer or a temporary injury, is now well within our grasp.

The inclusion and engagement of parents can also be improved with digital solutions. More efficient parent evenings have been a popular example of how online platforms have made it easier and more efficient for parents to engage with teachers.

It is clear that online learning and digital platforms can provide new solutions for long-standing problems such as inclusion, parental engagement and even improvements to assessment techniques.

But it is crucial that teachers and school staff are well-equipped and trained to deliver online learning while also understanding its limitations particularly in relation to spotting any safeguarding or wellbeing concerns. Online learning should not replace consistent and in-person support for pupils and parents.

The National Tutoring Programme is rooted in evidence and has the potential to support pupils, particularly the most disadvantaged, to catch up with their learning. But, as with any large delivery programme, there are significant implementation challenges that need to be overcome. These include scaling up tuition partners so that they are able to work with schools across the country and particularly in hard-to-reach areas in parts of the North and in coastal areas. Failing to do so is likely to undermine the government's levelling up agenda. At the same time scaling up must not impede quality. The government must prioritise steady and successful implementation of the NTP in order to maintain the confidence of the public and the longevity of the programme.

For implementation to be successful the NTP may also need to be more flexible in terms of who delivers the tuition and how it is delivered, whilst also ensuring that the quality of provision remains high.

A significant concern is the ability of schools to provide a financial contribution towards tuition, particularly as government subsidies are set to fall over the coming years. Affordability should not be a barrier for schools and so the government must consider the financial health of schools in making decisions about how and when to reduce subsidies.

There is cause for optimism. The disruption caused by the pandemic can be overcome by increasing funding for evidence-based interventions and building on the innovation that has necessarily emerged over the past 18 months. But the government and policy makers need to make this an urgent priority and focus their efforts on addressing the widening disparities between the North, the Midlands and the South of the country. This must be prioritised in the forthcoming spending review in order to prevent significant and long-term economic, health and wider societal losses and to deliver on the government's levelling up ambitions.

Summary of recommendations

Funding

- The government should commit to an education recovery and resilience package of around £13bn over the next three years;
- 2. Additional funding should be spread across all schools, but with more funding given to schools in disadvantaged areas of the country and serving larger proportions of pupils eligible for the Pupil Premium; and
- 3. Education recovery funding should form a separate and transparent grant to schools

The future of online learning

- 4. Develop an increased evidence base more research into the effectiveness of online learning and the features of effectiveness
- 5. Ensure digital access is not a barrier to learning extending and expanding government programmes to provide all pupils with the equipment required for a successful home-learning environment
- 6. Continued upskilling of the sector more teacher training to provide teachers with the skills and resources to do their jobs in the changed circumstances and not lose the gains made through increased accessibility and familiarity with online learning
- 7. Further cross-sector collaboration schools and EdTech providers working together to put in place lasting digital solutions
- Ensure there are clear processes for monitoring wellbeing and safeguarding any move away from face to face interactions must keep pupil and staff wellbeing at the forefront of what comes instead
- Make use of online platforms for parental engagement building on successes such as improved engagement around parents' evenings without stopping schools from having real life interactions with carers

The future of the National Tutoring Programme

- 10. The government should provide clear guidance to schools on how to make use of all three strands of the second phase of the NTP to ensure that pupils who need it are getting right kind of support as well as facilitating sharing of best practice
- 11. Phase 2 of the programme must be informed by evidence and the government must prioritise steady implementation and quality over the temptation to secure a low-cost, rapid-roll out.
- 12. The government should commission an evaluation of the effectiveness of each phase 2 strand to inform distribution of resources as the programme progresses
- 13. The government should issue clear guidance for schools about the workforce skills needed to deliver tuition to ensure effectiveness of the school-led strand

- 14. Programme administrators should release a quarterly publication of regional uptake data for each strand of the NTP to ensure transparency and ability to respond rapidly to regional "cold spots"
- 15. The government must employ a joined-up approach in localities, involving the regional schools commissioner and local authority, to embed structures to support roll-out in underserved regions
- 16. As the programme moves forward the government must take into account the cost of tuition per place, especially for children with additional needs
- 17. The government should explore the feasibility of additional ring-fenced infrastructure funding for providers expanding into new areas
- 18. There should be further consultation with advocacy and parent groups around the appropriateness of the current model for disadvantaged groups of pupils and to inform more granular targeting
- 19. The government should explore how to involve parents in the commissioning of tutoring, as well as using feedback from parents and pupils to inform the promotion and rollout of the programme in the next phases
- 20. The government should make targeted tutoring part of a long-term strategy to reduce entrenched education inequities, with an accompanying funding commitment. How this funding will be used (tuition partner vs. school-led tutoring) should be informed by a robust impact evaluation of the different strands of the tutoring programme.
- 21. Any subsidy taper must take into account existing inequalities in schools' budgets and the fact that cost-per-place of tuition will be higher for schools with higher levels of disadvantage and additional needs

1. The impact of learning loss on earnings and the economy

Understanding the extent of learning loss

Since the autumn term of 2020/21, EPI has been analysing Renaissance Learning's Star Reading and Star Maths Assessment data. In this section, we report published findings which cover assessments taken up to the end of the spring term in the 2020/21 academic year.¹

In October 2020 we found that, nationally, average learning losses were 3.7 months in maths for pupils in primary school and 1.8 months in reading for pupils in primary school. Learning losses amongst secondary aged pupils were 1.7 months in reading (the sample size did not allow us to derive a reliable estimate in maths for secondary aged pupils).

By the second half of the autumn term (December 2020), average learning losses had temporarily recovered to 2.7 months in maths for pupils in primary school and 1.2 months in reading for pupils in primary school. We find no statistically significant difference in our modelled learning loss for the first and second half-terms of autumn for pupils in secondary schools.

However, by the second half of the spring term (March 2021), following the national lockdown and restrictions to in-person teaching, primary pupil learning losses returned to a similar level as at the start of the autumn term, standing at an average loss of 3.5 months in maths for pupils in primary school and 2.2 months in reading for pupils in primary school.





We also found that pupils from disadvantaged backgrounds have been amongst the biggest losers from the pandemic.

By the first half of the autumn term, average learning losses for disadvantaged pupils were 4.3 months in maths for pupils in primary school (compared to 3.4 months for non-disadvantaged

¹https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/994350/ Understanding_Progress_in_the_2020_21_Academic_Year_Report_2.pdf

pupils) and 2.2 months in reading for pupils in primary school (compared to 1.7 months for nondisadvantaged pupils). By the second half of the autumn term average learning losses for disadvantaged pupils recovered to 3.3 months in maths for pupils in primary school (compared to 2.3 months for non-disadvantaged pupils) and 1.6 in reading for pupils in primary school (compared to 1.1 months for non-disadvantaged pupils).

Due to the relatively small sample size at secondary, our analysis of catch-up by pupil characteristics is restricted to primary aged pupils.

We found that in primary reading:

- both boys and girls recovered some learning in the latter half of the autumn term, but girls recovered a greater amount of learning than boys;
- Girls recovered around 0.7 months of learning loss by the second half of the autumn term, compared with approximately 0.5 months for boys;
- pupils from disadvantaged backgrounds (defined as pupils eligible for free school meals at any point in the last six years) recovered around 0.4 months of learning, compared with non-disadvantaged pupils who recouped 0.6 months of learning;
- most ethnic groups appeared to experience some degree of recovery, though due to sample sizes these are not all statistically significant;
- pupils with English as an additional language experienced catch-up of around 0.4 months, compared with around 0.6 months for all primary aged pupils; and
- pupils with special educational needs experienced catch-up of around 0.4 months, compared with around 0.6 months for all primary aged pupils.

In mathematics we found that:

- both girls and boys recovered around a month of learning, although learning loss for mathematics in the second half of the autumn term remains large at around 2.8 months for girls and around 2.3 months for boys; and
- both disadvantaged pupils and non-disadvantaged pupils recovered around one month of learning,



Figure 1.2 Estimated mean learning loss by autumn 1 and 2, in months, in reading (primary schools) by characteristics

Figure 1.3 Estimated mean learning loss by autumn 1 and 2, in months, in maths (primary schools) by characteristics



EPI findings on losses for disadvantaged pupils in the spring term is due to be published by the DfE later this year.

This analysis provides further evidence that restrictions to in-person teaching following the pandemic have led to a widening of the "disadvantage gap" – the gap in school attainment between disadvantaged pupils and their peers.

The relative learning loss for disadvantaged pupils was the equivalent of losing between a third and two-thirds of the progress made over the past decade in closing the disadvantage gap in primary schools.

We also found evidence of disparities in learning losses at a regional level (though results should be treated with some caution due to sample sizes), as shown in Figures 1.4 and 1.5 below. In particular we found that by the first half of the autumn term average learning losses in reading for pupils in primary school were:

- 1.5 months in the South West and 1.3 months in London but
- 2.3 months in the North East and 2.6 months in Yorkshire and the Humber.

By the second half of the autumn term, average losses in reading for pupils in primary school were:

- 0.8 months in the South West and 0.7 months in London but
- 2.0 months in the North East and 1.7 months in Yorkshire and the Humber.

We found larger learning losses and regional variation in primary maths where average learning losses in the first half of the autumn term were:

- 2.0 months in the South West and 2.5 months in London but
- 5.2 months in the North East and 5.8 months in Yorkshire and the Humber.

By the second half of the autumn term, average losses in mathematics for pupils in primary school were:

- 0.5 months in the South West and 0.9 months in London but
- 4.0 months in the North East and 5.3 months in Yorkshire and the Humber.

All regions appear to have shown some degree of recovery in both reading and maths, though due to sample sizes these are not all statistically significant.



Figure 1.4 Estimated mean learning loss by autumn 1 and 2, in months, in reading (primary schools) by region

Figure 1.5 Estimated mean learning loss by autumn 1 and 2, in months, in maths (primary schools) by region



What will be the long-run consequences?

The precise long-run economic consequences of learning losses are uncertain, but all the evidence points to them being substantial. In this section we illustrate the likely long-run consequences for individual earnings. Further details of the approach are described in the Appendix of our earlier report from May 2021.

As we saw in the previous section mean lost learning in primary schools amounted to 2.2 months in reading and 3.5 months in maths by spring 2021, with considerable variation across different groups

of pupils and areas. There is, however, lots of uncertainty around these figures too. We still know very little about lost learning amongst older pupils (particularly those in Key Stage 4). Learning loss could be lower for this group if remote schooling was more effective, but some pupils could equally have got stuck and disengaged, including from subjects beyond English and maths where we do not have any data on learning losses.

With this uncertainty in mind we construct three different scenarios for lost learning, with the central scenario based on observed lost learning up to spring 2021:

- Optimistic scenario: Pupils are 1.5 months behind in their educational progress.
- Central scenario Pupils are about 3 months behind in their educational progress.
- Pessimistic scenario: Pupils are about 4.5 months behind in their educational progress.

Building on existing IFS analysis we then assume an 8 per cent increase in adult earnings for each additional year of schooling, the average for high-income countries.² UK-specific evidence shows higher returns of 10-15 per cent based on increases in the school leaving age.³ This body of evidence further suggests that most of the returns to schooling are likely to reflect skills gained rather than just being a signal of innate ability.⁴

Based on these assumptions, our range of scenarios for lost learning would result in **lost lifetime** earnings of 1 per cent in the optimistic scenario, 2 per cent in central scenarios and 3 per cent in the pessimistic scenario.

What this means in monetary terms is hard to calculate due to high levels of uncertainty about future levels of lifetime earnings and how much we value future income. We assume two quite different figures for expected lifetime earnings based on recent IFS modelling: £780,000 and £1.5m per child in school.⁵ This range reflects the uncertainty about the future and how much we value income in the future. The figure of £780,000 reflects a discount rate of 3.5%, as used in the Green Book (the government's guidance for evaluation and appraisal), whilst £1.5m reflects a lower discount rate of 0.7% as used in the way the government accounts for future student loan repayments by graduates.⁶

Based on these two figures Figure 1.6 shows how the long-run cost of lost learning varies with different assumptions for the percentage effect of lost learning on lifetime earnings. Under the lower assumptions for lifetime earnings of £780,000 the long-run cost of lost learning ranges from £8,000 (under the optimistic scenario for lost learning) to £16,000 in the central scenario and

lifetime earnings," IFS Research Report (<u>https://www.ifs.org.uk/publications/14729</u>).

² https://www.ifs.org.uk/publications/15291; Psacharopoulos, G. and Patrinos, H (2018) "Returns to investment in education: a decennial review of the global literature", Education Economics, 26:5, 445-458, DOI: 10.1080/09645292.2018.1484426

³ Oreopoulos, P. (2006) "Estimating Average and Local Average Treatment Effects of Education When Compulsory Schooling Laws Really Matter" American Economic Review, Vol. 96, No. 1 (Mar., 2006), pp. 152-175.

 ⁴ Ander, J., Macmillan, L. and Wyness, G. (2021) "Does education raise people's productivity or does it just signal their existing ability?" CEPEO Briefing Note, (<u>https://repec-cepeo.ucl.ac.uk/cepeob/cepeobn12.pdf</u>)
 ⁵ Britton, J., Dearden, L., van der Erve, L. and Waltmann, B. (2020), "The impact of undergraduate degrees on

 $^{^{\}rm 6}$ https://www.gov.uk/government/publications/the-green-book-appraisal-and-evaluation-in-central-governent ,

£23,000 in the pessimistic scenario. Under the higher figure of £1.5m for lifetime earnings, this range goes from £15,000 to £46,000 per pupil.



Figure 1.6 Estimated lost lifetime earnings per pupil under different scenarios

Notes and sources: see Appendix A <u>https://epi.org.uk/wp-content/uploads/2021/05/Education-</u> <u>Recovery EPI.pdf</u>

Figure 1.6 then shows what this translates to in total lost earnings (or GDP) across the cohort. It equates to a total long-run cost between £78bn and £234bn across the 10 million children in state-funded early years settings, schools or colleges in England under the assumption that lifetime earnings are £780,000, or between £154bn and £463bn under the higher figure of £1.5m. These figures show a higher GDP loss for a given value of lost earnings than our previous report as we now additionally include children and young people in early years settings and colleges for consistency with our analysis of catch-up spending.



Figure 1.6 Total lost lifetime earnings over all pupils in England under different scenarios

Notes and sources: see Appendix A https://epi.org.uk/wp-content/uploads/2021/05/Education-Recovery_EPI.pdf

Large as they are these are likely to be significant under-estimates of the true long-run costs of lost learning. The evidence on returns to schooling mostly relate to situations where small groups of individuals have been affected by reforms to school ages. When applied to an entire generation of young people across different ages there are likely to be further costs in terms of reduced productivity, investment and innovation leading to lower economic growth. Estimates including these effects put the full long-run cost of lost learning at more like £3 trillion over an 80-year period.⁷ There is even more uncertainty around these estimates, but extremely large costs are entirely plausible.

Furthermore, we know there are many wider benefits to higher levels of schooling and education, including improved health, civic engagement and many other factors.⁸

There are also likely to be significant inequalities which could introduce further costs. For example, even a small increase in disengagement amongst young people could be highly damaging and persistent. Research has shown there are high costs of young people not being in employment, education or training ("NEET").⁹ Considerable time and money has been spent on this problem.

⁷ https://www.oecd.org/education/The-economic-impacts-of-coronavirus-covid-19-learning-losses.pdf ⁸ Oreopoulos, P., & Salvanes, K. G. (2011). "*Priceless: The nonpecuniary benefits of schooling,*" Journal of

Economic perspectives, 25(1), 159-84.

⁹ https://www.york.ac.uk/inst/spru/pubs/pdf/RR346.pdf

Comparison with past crises

If these figures seem implausibly large it is worth looking at the experience of other countries in crises. Nationwide teacher strikes in Argentina between 1983 and 2014 led to pupils missing out on about half a year of schooling. This led to reduced educational attainment and reduced lifetime earnings of 2 per cent for women and 3 per cent for men.¹⁰ Children in Germany and Austria saw massive disruptions to schooling as a result of the Second World War with research showing that a full year of lost schooling led to 9-10 per cent lower earnings later in life.¹¹ Crucially, there is little evidence of any coordinated catch-up activities after these disruptions so they can be seen as uncompensated effects of lost learning. This evidence suggests our range for the likely long-run effects of lost earnings (1-3 per cent) without significant policy action is quite plausible.

There are reasons to be optimistic too. In the wake of the devastation caused by Hurricane Katrina, pupils' test scores understandably fell. However, these turned into long-run positive effects as the crisis was used as a trigger to improve a failing school system.¹² The Christchurch earthquake in New Zealand destroyed many school buildings but ultimately led to massive cooperative efforts between schools and teachers to share facilities.¹³ Modelling further implies that significant and sustained parental efforts can reduce the long-run effects on earnings to about 1 per cent (our optimistic scenario).¹⁴

In West Germany in the 1960s many states implemented two short school years to switch to a September start date. This led to reduced schooling time of about 2/3 of a school year. Surprisingly, there is little evidence of any long-run effects on earnings or employment.¹⁵ However, teachers and schools made preparatory plans to cover the same curriculum in shorter school years, primary grade repetition increased for those unable to cope with the faster pace of learning and many colleges/universities implemented extra foundation years. There is limited evidence that the curriculum was scaled back.

The international evidence therefore shows that long-run negative effects are considerable, but can be mitigated by significant government, school and parental responses. In other words, catch-up is not a natural process: it requires active and sustained efforts.

¹⁰ Jaume, D. and Willén, A. (2019) "The Long-Run Effects of Teacher Strikes: Evidence from Argentina," Journal of Labor Economics vol. 37(4) pp. 1097 – 11

¹¹ Ichino, A. and Winter-Ebmer, R. (2004) "<u>The Long-Run Educational Cost of World War II</u>, <u>Journal of Labor</u> <u>Economics</u>, University of Chicago Press, vol. 22(1), pages 57-86, January.

¹² Sacerdote, B. (2012) "When the Saints Go Marching Out: Long-Term Outcomes for Student Evacuees from Hurricanes Katrina and Rita," American Economic Journal: Applied Economics, 4(1):109-35

¹³ https://www.educationcounts.govt.nz/publications/schooling/115174

¹⁴ Fuchs-Schündeln, N., Krueger, D., Ludwig, A. and Popova, I. (2020) <u>The Long-Term Distributional and Welfare</u> <u>Effects of Covid-19 School Closures</u>, <u>NBER Working Papers</u> 27773, National Bureau of Economic Research, Inc.

¹⁵ Pischke, J-S. (2007), 'The impact of length of the school year on student performance and earnings: evidence from the German short school years', Economic Journal, 117, 1216–42.

How much should we spend on education recovery?

Current government plans imply catch-up spending of about £3.1bn or £310 per pupil in England in total between 2020-21 and 2024-25. Our analysis and international benchmarking implies that these plans need to be much larger to have a real chance of catching up on lost learning.

To put the planned additional expenditure into context consider that the annual schools' budget in England was about £48bn in 2020-21.¹⁶ In our central scenario, pupils have missed out on about 3 months of effective learning. In other words, we would normally spend about £12bn or £1,500 per pupil delivering this.

The question is then whether expenditure on this scale would be needed to achieve the expected level of learning recovery.

First, there is a strong body of evidence showing that extra school spending can lead to significant improvements in long-run outcomes, particularly amongst disadvantaged pupils.¹⁷ UK evidence based on the late-2000s implies that an extra £1,000 spending per pupil can improve primary test outcomes by 30-35 per cent of a standard deviation (equivalent to about the assumed 3 months of learning loss in our central scenario).¹⁸ That might imply spending of more than £10bn in today's money, maybe less if the learning loss turns out to be lower. However, other US evidence implies lower effects of spending and a need for even greater spending, with an extra £6,000-£7,000 over ten years improving educational outcomes by the equivalent of about 2-3 months educational progress.¹⁹ That would equate to almost a whole extra year of the schools' budget spread over ten years.

Second, other countries are already engaging in significant levels of education recovery investment. Figure 1.7 shows our best estimates of education catch-up spending per pupil across the four nations of the UK as compared with two example of countries with highly ambitious plans: the US and Netherlands. Within the UK, total planned spending per pupil is currently highest in Wales (£400 per pupil), followed by England (£310 per pupil), whilst it is about £230 in Scotland and Northern Ireland.

In stark contrast, education catch-up plans for the Netherlands (£2,100 per pupil) and US (£1,800 per pupil) are far larger and more ambitious. Indeed, planned spending in the Netherlands is already seven times larger than for England.

The plans for the Netherlands are extremely extensive with the vast majority of the €8.5bn plans taken up by support for catch-up programmes in schools across three years (2021-2023), but also

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https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/938052/ SR20_Web_Accessible.pdf

¹⁷ Jackson, C. K. (2018), 'Does school spending matter? The new literature on an old question', National Bureau of Economic Research (NBER), Working Paper 25368, <u>https://www.nber.org/papers/w25368</u>; Jackson, C. K., Johnson, R. C. and Persico, C. (2016), 'The effects of school spending on educational and economic outcomes: evidence from school finance reforms', Quarterly Journal of Economics, 131, 157–218, https://doi.org/10.1093/qje/qjv036.

¹⁸ Gibbons, S., McNally, S. and Viarengo, M. (2018), "*Does additional spending help urban schools? An evaluation using boundary discontinuities*" Journal of the European Economic Association, 16, 1618–68, https://doi.org/10.1093/jeea/jvx038.

¹⁹ Lafortune, J., Rothstein, J. and Schanzenbach, D.W. (2018) "School Finance Reform and the Distribution of Student Achievement." American Economic Journal: Applied Economics, 10 (2): 1-26.

including support for post-secondary learners, vocational education and tuition fee reductions in higher education.²⁰

The US government currently plans to spend about \$130bn on education catch-up in K-12 education in public schools (Kindergarten through to the 12th Grade). This represents about £1,800 in per pupil spending. How these funds are used will be largely determined by individual states, but they can be used to implement catch-up interventions, employ additional staff, run summer schools and activities, provide support for children with special educational need and to pay for social distancing measures.

Plans for the US and the Netherlands also include some support for social distancing and safety measures, which are not included in the figures for UK nations. However, these measures are unlikely to be the driving force of the scale of these plans. Indeed, it is important to remember that many schools in England did not receive sufficient funding to cover the full cost of these measures and had to, at least partly, meet these costs from their existing budgets.²¹





Notes and sources: <u>https://epi.org.uk/publications-and-research/comparing-education-catch-up-spending-within-and-outside-the-uk/</u>

There is no single or simple answer to the question as to how much money we should be spending on education recovery. However, there are very good reasons to be believe that current plans for £3.1bn of catch-up spending fall short of what is needed. We'd normally be spending £12bn to deliver 3 months of educational progress. The academic evidence shows that higher spending on schools can improve educational outcomes over the long-run, particularly amongst disadvantaged pupils who are likely to have fallen furthest behind during the pandemic.²² The government's own

²⁰ https://www.rijksoverheid.nl/documenten/kamerstukken/2021/02/17/nationaal-programma-onderwijs-steunprogramma-voor-herstel-en-perspectief

²¹ https://epi.org.uk/publications-and-research/covid-19-cost-pressures-on-schools/

²² Jackson, C. K. (2018), 'Does school spending matter? The new literature on an old question', National Bureau of Economic Research (NBER), Working Paper 25368, https://www.nber.org/papers/w25368; Jackson, C. K.,

Education Recovery Commissioner is reported to have recommended a fully costed package of £15bn for education recovery in England, and our previous EPI report recommended a similarly sized package of £13.5bn. In Figure 1.8 below, we show a breakdown of interventions that should be funded over the next three years. Other countries, such as the US and the Netherlands, have already implemented highly ambitious packages of this size in response to the pandemic. Furthermore, the sheer scale of the potential long-run costs without significant policy action (an absolute minimum of £78bn and potentially into the trillions) provide a rock-solid case for investment in the tens of billions if it can genuinely mitigate lost learning. In many ways, this demonstrates the incredible long-term value of investing in education, far larger than most infrastructure projects.

Johnson, R. C. and Persico, C. (2016), 'The effects of school spending on educational and economic outcomes: evidence from school finance reforms', Quarterly Journal of Economics, 131, 157–218, https://doi.org/10.1093/qje/qjv036.

Figure 1.8: Breakdown of EPI recommendations for £13.5bn catch up funding over the next three years

Education recovery intervention	Cost
	2 year each of increases \$700m 2 year each to extend to OPP \$200m
An increase and extension of the Pupil Premium	3-year cost of increase: £/20m. 3-year cost to extend to CPP: £390m
Extended school hours	3-year cost: £3.9bn
Summer wellbeing programmes	3-year cost: £2bn
One-to-one and small group fultion	£340m cost in total for 2022-23 and 2023-24
Greater incentives for teachers to work in chanenging areas	S-year cost. £155m
Extra funding for schools to hire a mental health support worker	3-year cost: £1.5bn
New guidance to schools to support better wellbeing and inclusion	3-year cost: neutral
Softer accountability measures for schools in 2021-22	
A new continuous professional development (CPD) fund for teachers	3-year cost: £1.2bn
Allow pupils to repeat a year if appropriate:	2-year cost: £180m
ncrease funding for the Early Years Pupil Premium	3-year cost: £400m
Fund a pilot study i <mark>nto the effect of h</mark> igher quality early years education on young children	3-year cost: £83m
Extend the 16-19 Tuition Fund for a further two years	2-year cost: £204m
Extend 16-19 courses for an additional year where there is demand	3-year cost: £990m
Fund a new 16-19 Student Premium	3-year cost: £740m
Target subsidies towards younger apprentices aged 18-24	3-year cost: neutral
Fund next 40 places in Alternative Prevision	2 years each COCOm
runu post-ro places in Alternative provision by 63,000 per place per veer	3-year cost: £240m

2. How should education recovery funding be allocated?

The funding context going into the pandemic

The school funding system in England is compensatory in nature. Pupils with characteristics that are typically associated with lower outcomes (such as economic disadvantage) or with other additional educational needs attract, in general, higher funding than their peers. The majority of core funding for schools is allocated through the national funding formula with additional funding targeted at pupils from disadvantaged backgrounds through the Pupil Premium.

The introduction of the national funding formula represented a significant change in the way that schools in England are funded and was designed to address historic inequalities in school funding. But the combination of funding reforms and the government's ambition to "level-up" funding did not necessarily address inequalities in opportunity. We know that progress in closing the gap between disadvantaged pupils and their peers had stagnated even before the COVID-19 pandemic. In some areas, poorer pupils were over two full years of education behind their peers by the time they took their GCSEs, yet there is only a weak relationship between the areas that have seen the largest increases in funding and the size of the disadvantage gap.

In seeking to 'level-up' funding through the national funding formula and additional money for schools since 2018, the government has in fact weakened the link between funding and need.²³ While there have been large differences in funding across schools and local authorities, recent policies have meant that pupils from more affluent backgrounds have attracted larger increases to funding rates compared to those from more disadvantaged backgrounds.

Meanwhile, as this report set out earlier, it is disadvantaged pupils who have been disproportionately affected by the pandemic.

How to target catch-up funding

Whilst there are robust estimates of the degree of learning loss in reading and mathematics at a national level and a good sense of the variation at regional level, there is not a comprehensive dataset that would allow targeted funding towards individuals, particular institutions, or even particular local areas based on their degree of learning loss. Therefore, as with school funding more generally, funding for catch-up needs to be based on proxy measures that are associated with learning loss that are available in established data collections (for example the school census).

Whilst learning loss research shows that pupils from disadvantaged backgrounds have been disproportionately affected by the pandemic, it is also clear that the pandemic's effects were experienced by groups not usually labelled as disadvantaged. For example, by the end of the autumn term, the estimated degree of learning loss in reading for primary aged children from disadvantaged backgrounds was 1.6 months, but for non-disadvantaged pupils it still averaged 1.1 months. So, there is certainly an argument that funding should not simply be targeted at a single set of characteristics.

²³ https://epi.org.uk/publications-and-research/the-national-funding-formula-consideration-of-bettertargeting-to-disadvantaged-pupils/

There are also likely to be a range of circumstances within these two groups. We know from our own annual report that those who have been identified as persistently disadvantaged (those who have been eligible for free school meals for at least 80 per cent of their time in school) have considerably worse outcomes than those who have moved in and out of free school meal eligibility.

The variation in outcomes within the 'non-disadvantaged' group is often even greater, which is not surprising given that it encompasses pupils from highly affluent backgrounds and those who are on the cusp of eligibility for free school meals. This can be illustrated by looking at the GCSE outcomes of pupils by a combination of their own free school meal eligibility and income deprivation in the area in which they live. Pupils from 'non-disadvantaged' backgrounds in highly deprived communities often have outcomes that are more like pupils from disadvantaged backgrounds than they do non-disadvantaged pupils in less deprived communities.



Figure 2.1: Average Attainment 8 score by Pupil Premium eligibility and area-based deprivation 2019

If this pattern of results is reflected in measures of learning loss, then it suggests that a combination of individual and area-based recovery funding may reach the pupils that need it most without the need to directly measure learning loss for those pupils. The simplest approach would entail a formula with two factors, one based on eligibility for the Pupil Premium and one based on the deprivation of a pupil's home postcode. The pupils that would attract the most funding would be those eligible for the Pupil Premium and living in highly deprived areas, the pupils that would attract the least would be non-disadvantaged pupils in affluent areas.

Unlike the current national funding formula, deprivation funding should be spread across all bands in the Income Deprivation Affecting Children Index (IDACI). The Department for Education should not rely on its existing IDACI bandings as these are too broad and group together areas of very low deprivation with those where deprivation is around average. By allocating a proportion of recovery funding to schools in all IDACI bands, but with a weighting that provides more funding per-pupil to schools in the most deprived bands, all schools would receive some funding. Schools in the most disadvantaged areas geographically would receive more, as would those with greater proportions of pupils eligible for the Pupil Premium.

For 16-19 year olds, the government should introduce a new Student Premium (mirroring the Pupil Premium).

The Department for Education should adjust and test the value of these formula factors to ensure that the funding received by any given group of pupils is then proportionate to the degree of learning loss measured in national data. They should also consider how this varies by area of the country to examine the extent to which they are able to broadly address those parts of the country that have experienced the greatest losses without introducing direct area-based measures. We do not recommend area-based measures due to the uncertainty around regional estimates of learning loss. Further refinement could include the use of a persistent poverty factor, which would target additional funding to pupils who have been eligible for free school meals for at least 80 per cent of their time in school.

While these factors are already in the national funding formula, we believe that this funding should remain as a separate grant. This both emphasises its purpose (though schools should be free to determine how it is best spent) and also protect against its targeting effects being diminished by interactions with other factors.

Figure 2.2 illustrates just one of many different ways in which funding might be allocated under this model. In this example:

- half of funding is assumed to be allocated on the same basis as the Pupil Premium;
- the other half is based on the level of deprivation where a pupil lives. This is broken down to ten categories with all areas receiving some funding with the most deprived areas receiving around five times that of the least deprived.

Overall, under these assumptions, the highest funded local areas would receive around three and half times that of the lowest funded.

Figure 2.2: Illustrative relative distribution of funding based on a combination of local area deprivation (IDACI) and pupil level disadvantage (eligibility for the Pupil Premium). Darkest colours represent areas that would receive the largest per pupil funding.



3. The future of online learning

This chapter summarises the challenges and opportunities afforded by the enforced shift to online learning over the last 18 months, drawing from EPI's research and events over that period.

We take a broad definition of online learning to reflect the specific circumstances we are considering. In this instance, online learning is taken to mean the replacement method of online teaching that was implemented during school lockdowns and subsequently.

Pupils' experiences during lockdown

The growth and use of online learning soared due to the pandemic. Schools and pupils have had to adjust rapidly and online learning providers have had to expand and respond to an exponential increase in demand. Nearly all pupils experienced at least two periods of remote learning delivered online since March 2020. In the lockdown at the beginning of January, 85 per cent of parents reported that their child was learning at home some or all of the time.²⁴

Evidence shows that there was significant variation in how schools were implementing online learning. In the first lockdown, schools in deprived areas were less likely to be using online learning, as were primary schools compared to secondary.²⁵ '*With such short notice of the shutdown, most UK schools turned to their existing digital tools to help their pupils continue learning. For some this meant simply uploading links to worksheets to school websites, while others gave live lessons via video conferencing.'²⁶ Significant gaps in provision were recorded during this period between private and state schools, and within the state sector. For example, 91% of teachers in private secondary schools had hosted an online streamed lesson, compared to 79% in the most affluent state secondaries and 68% in the least affluent.²⁷ As shown in Figure 3.1 below, there was generally an increased in online provision from schools between the first and second lockdown.*

²⁶ https://www.theguardian.com/education/2021/jan/23/after-covid-will-digital-learning-be-the-new-normal

²⁴ <u>Learning-in-Lockdown.pdf (suttontrust.com)</u>

²⁵ Digital divide in UK education during COVID-19 pandemic: Literature review (cambridgeassessment.org.uk)

²⁷ Ibid





Notes and sources:

As of January 2021, all schools were engaging more with online provision and moving towards more 'active' strategies such as live lessons.

This tallied with the experience of school leaders who participated in the EPI Roundtable, 'The Future of Online Learning', held in September 2021. Participants highlighted that the pre-existing circumstances of the schools were a major determinant of how they responded initially, such as whether the school had suitable EdTech in place already. Similarly, if they were a stand-alone school or part of a MAT potentially had implications for their capacity to deliver a digital strategy.

Challenges

Evidence shows that the effectiveness of online learning varies depending on its implementation, with major challenges having arisen in creating the right conditions for it to effectively support pupils' education.

Equity in access to technology and a suitable home learning environment

Access to technology is arguably the most important issue on the online learning agenda as it is a prerequisite for effective remote learning. There are clear variations between the quality of home learning environments, including access to technology, for different pupils. According to the Institute for Fiscal Studies, disadvantaged pupils are more likely to have limited access to devices and internet connections and may not have a suitable space or area to work quietly from home.²⁸

While the government committed to providing 1.3 million laptops to the most disadvantaged children and young people as part of the Get Help with Technology Programme launched in April 2020, the rollout of the programme has faced much criticism with fewer than one in four devices reaching pupils in the 20/21 school year.²⁹

Teacher training

Teachers must be provided with training and advice on how to implement digital learning strategies. Teachers have been trained to deliver one-to-one support for children in person in classrooms but have not necessarily had training on how to embed technology into the curriculum. When the pandemic first began in March 2020, teachers and schools were faced with the task of improving their digital strategies by necessity overnight; a situation which many were not prepared or trained for. At the virtual panel discussion 'Digital learning lessons for leadership' in November 2020, speakers suggested that technology could enable teachers and pupils to have access to more tailored resources, such as using a digital thesaurus when undertaking an English language task.³⁰

The EdTech Demonstrator programme, a scheme launched in 2019 by the DfE to support the use of technology in education, that was rapidly adjusted and scaled up to focus on remote teaching during the school closures, for the 2021/22 academic year and beyond will be essential to both ensure that teachers are well-trained to continue a hybrid learning approach and to encourage those pupils who have fallen behind to recover some of their lost learning.³¹ How to manage this hybrid learning in the future was a key issue raised by participants at the EPI Roundtable, 'The Future of Online Learning' in September 2021. This mixed state proved the most challenging during the disrupted period of schooling and participants noted that considerations of how best to incorporate online and face-to-face learning is part of a wider uncertainty about school planning beyond this year.

Pupil and staff wellbeing

Tracking pupils' wellbeing during the periods of school closures has been difficult and made more so where pupils lack regular access to their peers and teachers, raising significant safeguarding concerns. Although schools remained open for vulnerable pupils it was not compulsory, which meant that school staff did not always have daily contact. In addition, it was also difficult for teachers to spot pupils at risk of being vulnerable while they were at home.

Support is also needed for teachers who themselves are dealing with wellbeing issues due to the multiple pressures of working in the school system during the pandemic. It is important that

²⁸ Learning during the lockdown: real-time data on children's experiences during home learning -Institute For Fiscal Studies - IFS

²⁹ <u>Government still sitting on three quarters of laptops bought to help vulnerable children during lockdown</u> <u>PublicTechnology.net</u>

³⁰ Moving forward: digital learning lessons for leadership - Education Policy Institute (epi.org.uk)

³¹ <u>https://edtechdemo.ucst.uk/</u>

additional efforts are made by policymakers to keep the workforce well-motivated. EPI research has shown that, while teacher retention improved over the pandemic, this may prove short-lived, with teachers indicating that they are more likely to quit the profession now, than before the onset of Covid-19.³²

Limited evidence

There is limited data and research about the efficacy of online learning, particularly in the context of a pandemic. This was echoed by sector leaders at the EPI Roundtable, 'The Future of Online Learning'. The existing literature, including that covered by a comprehensive DfE review, is largely out of date and focused on Higher Education. This lack of evidence hampers efforts to establish best practice, with particular concerns about what works best when engaging younger pupils. Participants at the roundtable stressed that the applicability and success of online learning reduced significantly amongst younger children.

Opportunities

Whilst enforced online learning over the course of the pandemic has undoubtedly affected the delivery of and engagement with education, there has been evidence highlighting opportunities that can be built into future school practice.

Tracking and measuring learning loss

At the May 2021 EPI event, "Towards recovery: Embedding digital learning in education catch-up strategy", there was a strong consensus among panellists that use of digital technology has enabled schools to derive detailed insights into pupils' academic progress.³³ When carrying out internal assessments, many schools have shifted online, such as project-based assessments in which pupils can submit their response to their teachers. Assessment data has already been useful in analysing pupil learning loss over the pandemic.³⁴

Online assessments have the dual benefit of both reducing the administrative burden on teachers by automating some tracking processes and also providing increased "real-time" assessment data. One speaker at the above event described an engagement tracker they had employed at their school for student learning which tracks task completion, turning up to lessons and shows who is and isn't engaging with feedback.

Online assessment has also emerged as a key area for future enquiry, both in terms of innovation such as Adaptive Assessment recently highlighted by the Assocation of School and College Leaders (ASCL), and data gathered, which has the potential for improved targeting of pupil need. More generally, participants at the EPI Roundtable, 'The Future of Online Learning' highlighted the improved relationship between schools and EdTech suppliers with all parties having a better understanding of what's needed and what's possible.

 ³² The pandemic and teacher attrition: an exodus waiting to happen? - Education Policy Institute (epi.org.uk)
 ³³ Towards recovery: Embedding digital learning in education catch-up strategy - Education Policy Institute (epi.org.uk)

³⁴ EPI research for the Department for Education on pupil learning loss - Education Policy Institute

Engagement with parents

School leaders have reported improved, more frequent engagement with parents and carers, particularly from those seeking guidance on how best to assist their child.³⁵ These engagements can be as frequent as two to three times per week and take place digitally, enabling parents and teachers to build stronger relationships and provide more tailored wellbeing support and guidance.

It is, however, harder to engage and motivate pupils remotely than when they are in the classroom. Communicating and working with parents, without putting an unreasonable burden on them, can help engage and motivate pupils and support home learning. Establishing good communication channels with parents and carers helps schools better understand their challenges and in turn helps them identify what additional support is needed. This was repeatedly emphasised by participants at the EPI Roundtable 'The Future of Online Learning' who pointed to preliminary Ofsted findings that showed pupil motivation as a key factor in the success of online learning.

Boosting recovery learning

Technology can not only support schools to assess pupils' learning losses but also to overcome these gaps as a component of education recovery. Across EPI events there was a strong belief that technology has an important role to play not as an end in itself but rather as a "turbo booster" to enable catch-up learning to be accelerated.

More research is needed on the use of focused technology in learning, in addition to research on pedagogical and cognitive theory. One MAT leader at the May 2021 EPI event, 'Towards recovery: Embedding digital learning in education catch-up strategy' emphasised the opportunity to use digital technology to support retrieval practice.³⁶ Similarly, MAT leaders at the September EPI Roundtable 'The Future of Online Learning' emphasised how online learning offered solutions to pressing resourcing issues with teachers able to provide lessons for other schools in need and offering open-source lessons.

Teacher development

The move to digital learning has improved access to CPD for teachers, increasing the opportunity for upskilling by reducing the time and resource required. For example, one speaker at EPI's 'Digital learning for sustainability and skills' event series noted that they found that webinars provided more opportunity to interact than in-person conferences, all whilst saving the limited hours of teaching staff in travelling.

Schools and teachers have moved incredibly fast to move learning online in a short space of time, but they will need support around this new technology use and on embedding it into learning.

Inclusion

³⁵ EPI-Apple policy paper July21 -2.pdf

³⁶ Ibid

At an EPI event in July 2020, 'Enabling a blended learning approach for all pupils and teachers', several MAT leaders cited a lack of guidance for pupils with special educational needs and disabilities (SEND). While those with an education, health and care (EHC) plan were able to remain in school, some parents chose to keep their children at home. This variation in learning has impacted pupils differently. Indeed, some school leaders at this event suggested that digital learning has had a positive impact for some pupils with SEND, such as those with autism who may be more comfortable in a home learning environment.

More generally, research suggests that online learning approaches can effectively support learning in some pupils with SEND, as long as its design is inclusive and accessible.³⁷

There are also other ways in which the use of online learning can improve inclusion. For example, it can facilitate access to teaching for pupils with long-term illnesses or short-term injuries, as well as those in rural areas whose journeys to school may be affected by severe weather, such as flooding. In the event that more pupils may need to isolate over the winter period, online learning should continue to be available to them.

Recommendations

As education provision gradually returns to pre-pandemic conditions, it is crucial that we learn the lessons of the past 18 months. Despite the unique circumstances of the shift to online learning, we can draw some recommendations from the challenges and opportunities faced by schools and pupils:

- An increased evidence base more research into the effectiveness of online learning and the features of effectiveness
- Ensure digital access is not a barrier to learning extending and expanding government programmes to provide all pupils with the equipment required for a successful homelearning environment
- Continued upskilling of the sector more teacher training to provide teachers with the skills and resources to do their jobs in the changed circumstances and not lose the gains made through increased accessibility and familiarity with online learning
- Further cross-sector collaboration schools and EdTech providers working together to put in place lasting digital solutions
- Ensure there are clear processes for monitoring wellbeing and safeguarding any move away from face-to-face interactions must keep pupil and staff wellbeing at the forefront of what comes instead

³⁷ POSTnote PN639 Distance learning (parliament.uk)

 Make use of online platforms for parental engagement – building on successes such as improved engagement around parents' evenings, without stopping schools from having real life interactions with carers.

4. The future of the National Tutoring Programme

Background

The National Tutoring Programme (NTP) is at the forefront of the government's strategy to mitigate the impact of the pandemic on learning in English state-funded primary and secondary schools. It is focused specifically on raising the attainment of disadvantaged pupils who are more likely to have experienced educational losses throughout the pandemic.³⁸ The programme was designed by five charities, Education Endowment Foundation (EEF), Sutton Trust, Impetus, Nesta, and Teach First, working in partnership with the Department for Education.

Launched in November 2020, the NTP was originally designed to run for a year but has been extended for a further three years; Randstad has taken over delivery of the programme from EEF in its second year. A total of £1.4bn in funding has been committed: £350m in June 2020, £83m in February 2021, and a further £1bn in June 2021 for the next three years. This latest allocation includes £222m to fund an extension to the 16–19 Tuition Fund, on top of £96m committed in July 2020 and £102m in February 2021, and training and resources for the Nuffield Early Language Intervention (NELI) programme.

The NTP comprised two pillars in the 2020/21 academic year: 1) academic mentors led by Teach First, and 2) tuition partners led by the EEF. The first involves placing up to two Teach First training graduates in the most disadvantaged schools. The second strand subsidises additional tuition for pupils delivered by a list of approved providers operating throughout the country; schools could purchase one 15-hour block of tuition per pupil, with 80 per cent of sessions delivered on a 1:3 tutor to pupil ratio, and sessions of 1:1 and 1:2 mainly reserved for pupils with additional needs. A third strand, school-led tutoring, is being introduced in the 2021/22 academic year; under this strand, all eligible schools will receive a direct, ring-fenced grant to spend on local tutoring provision including on internal staff, similar to the tuition fund for 16-19 providers launched in July 2020.

Evidence on one-to-one and small group tuition

The NTP and 16-19 Tuition Fund are grounded in research which shows that one-to-one and small group tuition can be highly effective in supporting learning outcomes. The EEF's Learning and Teaching Toolkit summarises the evidence base for both approaches and shows that one-to-one tuition has a more extensive and consistent evidence base compared to small group tuition.³⁹ UK-based interventions which have aimed to increase literacy and numeracy skills amongst vulnerable and underperforming Key Stage 1 and 2 pupils through training teaching assistants to provide one-to-one tuition have been broadly successful, resulting in between three and six months of additional progress compared to pupils who did not receive tuition.

³⁸ https://epi.org.uk/publications-and-research/department-for-education-publishes-new-epi-research-on-pupil-learning-loss/

³⁹ <u>https://educationendowmentfoundation.org.uk/evidence-summaries/teaching-learning-toolkit/</u>

The effectiveness of tutoring is context dependent. A recent meta-analysis examines how the overall effects of literacy and maths tutoring are moderated by programme characteristics and context.⁴⁰ Below are a few influential factors that are relevant to the NTP:

- Teacher-student ratio: Though the EEF's Learning and Teaching Toolkit distinguishes between one-to-one and small group tuition, Nickow and colleagues report that the effect sizes for one-to-one tutoring are statistically similar to tutoring sessions with a higher pupilteacher ratio
- Grade level and subject matter: Effects tend to be strongest in earlier years for literacy
 programmes, while maths tutoring appears more effective in later years. Most tutoring
 studies have been conducted on primary-aged pupils and there is scope for expansion in
 secondary-level tutoring
- Time of delivery: Impact of tutoring has been found to be greater when delivered during school hours compared to after school, but effect sizes remain sizeable
- Tutor type: Teacher tutoring programmes have the highest impact, but effects are still large when tutoring is undertaken by well-trained teaching assistants or other learning support staff
- Frequency: Effects increase positively with the number of tutoring sessions per week. There
 is little evidence that once-weekly tutoring sessions generate large effect sizes.

Research also suggests that tutoring can be especially effective for improving the attainment of disadvantaged pupils. In their meta-analysis, Dietrichson and colleagues evaluated 14 academic interventions targeted at disadvantaged primary and early secondary pupils; tutoring was the intervention with the largest effect size (0.36).⁴¹

It is important to note that the NTP deviates from previous interventions on at least two important dimensions: mode of delivery and scale.

Firstly, existing research is focused on in-person tutoring whereas the NTP offers both online and inperson tuition. Online tutoring is likely to present a different set of challenges, including that the very children the NTP is meant to target may lack access to digital technologies or quiet study space; research into effective online tutoring is understandably lacking given its novelty. However, Italy's Tutoring Online Programme (TOP), a five-week intervention to support disadvantaged grade 6-8 pupils in response to the pandemic, facilitated a marked improvement of participating pupils' standardised test scores, compared to the control group (ES = 0.26). ⁴² These are promising and relevant results, though the intervention was intensive (three or six hours of tutoring a week) and the sample size of pupils was small relative to the target participation rates of the NTP. Scaling up

⁴⁰ Nickow, Andre, Philip Oreopoulos, and Vincent Quan. "The impressive effects of tutoring on preK-12 learning: A systematic review and meta-analysis of the experimental evidence." (2020).

⁴¹ Dietrichson, Jens, Martin Bøg, Trine Filges, and Anne-Marie Klint Jørgensen. "Academic interventions for elementary and middle school students with low socioeconomic status: A systematic review and meta-analysis." *Review of Educational Research* 87, no. 2 (2017): 243-282.

⁴² Carlana, Michela, and Eliana La Ferrara. "Apart but Connected: Online Tutoring and Student Outcomes during the COVID19 Pandemic." (2021).

academic interventions nationally presents obvious design and implementation challenges and academic research has begun to address how these might best be overcome.⁴³⁴⁴

Given the evidence on the effectiveness of tutoring, and the existence of a large attainment gap between disadvantaged pupils and their more affluent peers prior to the pandemic, there is a strong case for embedding a national targeted tutoring scheme as a permanent part of the educational landscape. According to research by the Sutton Trust, prior to the pandemic, 11- to 16- year-old pupils from richer families were twice as likely to have ever received private tuition (30 per cent v 15 per cent), and between a third and a half of families who did not purchase private tuition cited affordability as the reason.⁴⁵ Before the pandemic, private tuition had become substantially more common: over a quarter of children in the country had had a private tutor at some point – and 40 per cent in London - up from 18 per cent a decade ago.

Implemented effectively, the NTP could be a key component of the levelling up agenda and contribute to reducing long-standing inequities in the system. However, the DfE must ensure that it prioritises quality and targeting provision above rapid roll-out. There is a risk that, if this strategically important programme is poorly implemented and fails to deliver improved results, it will lose the confidence of the public and any appetite to continue to fund it.

Reach and take-up of the NTP

The NTP targeted uptake of 250,000 pupils and 6,000 schools by the end of August 2021. The targets rise for the 2021/22 academic year to enrolling 524,000 pupils. According to the latest government figures:

- Over 5,700 schools had signed up and 240,200 pupils were enrolled, nearly 10,000 pupils short of the target⁴⁶
- Almost 27,000 tutors have been recruited by tuition partners, exceeding the end of year target
- 1,000 academic mentors have been placed in almost 950 schools, supporting over 62,000 pupils as of 18 May, and 83 per cent of placements have been in schools with a greater than average proportion of Pupil Premium pupils

However, figures provided by the NTP at the end of February show considerable regional variation in take up:

• schools in the South were reaching 96 per cent or more of their target pupil enrolment figures (around 75 per cent in London);

⁴³ <u>https://edworkingpapers.com/sites/default/files/ai20-335.pdf</u>

⁴⁴ https://www.socialscienceregistry.org/trials/2258/history/66461

⁴⁵ The Sutton Trust. (2016). Shadow Schooling: Private tuition and social mobility in the UK. London: Kirby

⁴⁶ <u>https://www.gov.uk/government/publications/national-tutoring-programme-ntp/national-tutoring-programme-ntp</u>

- schools in the North East and North West were reaching around 59 per cent of their targets;
- take-up in the middle of the country ranged from 61 per cent in the East to 67 per cent in the West Midlands.

Challenges and recommendations

As the NTP enters its second year, there are a number of significant challenges facing the programme which must be addressed. Along with reviewing the existing evidence on roll-out and impact, EPI and Pearson hosted a stakeholder roundtable in which former programme administrators, DfE and Ofsted representatives, a range of providers, school leaders, and union representatives discussed takeaways from phase 1, as well as challenges and direction for phase 2. These contributions are reviewed below and inform a series of recommendations.

Ensuring high-quality provision while scaling up to meet need

In year 2 of the NTP, external tuition providers are expected to reach over 500,000 pupils in the 2021/22 academic year and academic mentors are expected to reach 250,000 pupils. While this would be a substantial and rapid increase, more than doubling the number of pupils supported last year by external providers and quadrupling the number supported by academic mentors, the programme is only projected to reach 43 per cent of pupils on free school meals. The government projects the new strand of the programme, school-led tuition, will reach over one million pupils.

International research suggests a trade-off between effectiveness and scale for education interventions. There is a risk that, in order to maintain quality as the programme scales, average costs may rise due to inelasticity in the labour market.⁴⁷ A number of further concerns were raised in our discussions with providers and sector leaders:

- that lessons from phase 1 have not been fully embedded partly because the pandemic has delayed release of data to inform the programme's development;
- that there is a risk that the programme will not meet its phase 2 targets, due to lack of capacity and delays to the start of Phase 2
- that introducing a school-led strand will hinder the scaling up of provision as schools will inevitably choose to not work with some providers, creating challenges particularly for smaller and/or newer organisations;
- that schools might use the new grants to cover the costs of existing teaching assistants thereby reducing the programme's additionality, and;
- that there are no mechanisms in place to share best practice between schools and between providers

⁴⁷ Davis, Jonathan MV, Jonathan Guryan, Kelly Hallberg, and Jens Ludwig. *The economics of scale-up*. No. w23925. National Bureau of Economic Research, 2017.

Recommendations

- The government should provide clear guidance to schools on how to make use of all three strands of the second phase of the NTP to ensure that pupils who need it are getting the right kind of learning support as well as facilitating sharing of best practice.
- Phase 2 of the programme must be informed by evidence and the government must prioritise steady implementation and quality over the temptation to secure a low-cost, rapid-roll out.

Balancing flexibility with an evidence-based approach

A major area of concern for schools associated with phase 1 of the programme was its rigidity. The National Association of Head Teachers (NAHT) report head teachers' frustrations of having to choose from the list of approved partners, restrictions on the 3:1 pupil to tutor ratio and limiting enrolment to one 15-hour block per pupil.⁴⁸ A recent NAHT poll of 728 heads throughout England revealed their opinions on how the government should be focusing additional funding:⁴⁹

The top three priorities for head teachers were:

- 1:1 / small group tutoring run by schools themselves (70%)
- Better support for student mental health and wellbeing (63%)
- Increased Pupil Premium allocations (42%)

The lowest priorities were:

- The National Tutoring Programme (3%)
- Extending the school day for additional learning (2%)

The misalignment of educational priorities between schools and the government was echoed by Sarah Mulholland, head of policy at the Northern Powerhouse Partnership, who stated that the government's choice to use a very narrow definition of subject tutoring meant that providers who had asked schools what they actually wanted, which was often to address the specific pandemic-related issues such as mental health problems, were cut out.⁵⁰

The government has responded to this concern by introducing school-led tutoring in phase 2, giving schools the option to source their own tuition provision for 2021/22, including using existing staff, instead of choosing from the approved list of providers.⁵¹ Ring-fenced funding will be granted based on the number of Pupil Premium students and still cover 75 per cent of the costs.

⁴⁸ https://www.theguardian.com/education/2021/apr/29/schools-struggling-to-access-tutoring-programme-for-disadvantaged-children

⁴⁹ <u>https://www.naht.org.uk/edge/ArtMID/694/ArticleID/1009/Tutoring-is-a-top-priority-for-education-recovery-but-notvia-the-National-Tutoring-Programme-say-school-leaders</u>

⁵⁰ <u>https://schoolsweek.co.uk/data-reveals-scale-of-national-tutoring-programmes-northern-challenge/</u>

⁵¹ https://nationaltutoring.org.uk/academic-year-2021-22/tutoring-2021-22

Stakeholders expressed different perspectives on school-led v a tuition-partner approach, with some providers supporting the introduction of a school-led strand and emphasising the importance of schools' knowledge of experiences and challenges within the local community. However, some participants expressed concern that a school-led approach means that some schools will choose to spend their grant money on existing staff, which will fuel the challenge to a number of providers that are trying to scale quickly and slow down the national ramping up of tuition capacity.

Recommendations

- The government should commission an evaluation of the effectiveness of each phase 2 strand to inform distribution of resources as the programme progresses
- The government should issue clear guidance for schools about the workforce skills needed to deliver tuition to ensure effectiveness of the school-led strand

Addressing regional inequities

Data from February shows a marked disparity in take-up of the NTP between the North (59 per cent of schools) and South (upwards of 96 per cent of schools) of the country. This is especially concerning given the higher rates of disadvantage and learning loss in the North.⁵² There are concerns that this disparity reflects tuition partners' lack of strong ties to the region,⁵³ a lack of high-quality local providers, and tutoring not being embedded as a 'normal' part of academic life compared with schools in the South.^{54 55}

In late March, Emily Yeomans, Director of the NTP Tuition Partners, reported that their data shows the NTP is successfully starting to address the regional gap.⁵⁶ On the problem of supply, Yeomans explained that the NTP introduced regional targets for tuition partners, ensuring that tuition partners collectively covered every region of England. On the problem of familiarity with tutoring, she said that publishing schools' experiences of the NTP, hosting regular webinars and publishing resources to support implementation have all helped in closing the gap.⁵⁷ However, the latest figures are not publicly available and the list of tuition partners by region does not provide information about the reach of each provider in their respective regions. The list of partners is included in Annex 1.

On the issue of regional disparities, roundtable participants commented on the lack of local docking infrastructure in some areas, particularly if they were not opportunity areas. Commenting on their experience of launching in a new city, one provider mentioned that embedding structures took time

⁵² https://epi.org.uk/publications-and-research/department-for-education-publishes-new-epi-research-on-pupil-learning-loss/

⁵³ <u>https://schoolsweek.co.uk/data-reveals-scale-of-national-tutoring-programmes-northern-challenge/</u>

⁵⁴ https://www.tes.com/news/national-tutoring-programme-too-restrictive-say-heads

⁵⁵ <u>https://www.independent.co.uk/news/education/education-news/school-tutoring-catch-up-north-</u> englandb1806147.html

⁵⁶ <u>https://schoolsweek.co.uk/how-the-ntp-is-solving-the-northern-tutoring-challenge/</u>

⁵⁷ <u>https://nationaltutoring.org.uk/news/categories/school-stories</u>

and that it is not realistic to plan for full adoption in one academic year. Others discussed the necessity of building grassroots support through direct experience and the importance of gathering testimonials within the teaching profession in the area.

Providers also spoke about taking on the risk of expanding into 'hard-to-reach' places and variability in cost per place for different providers. This is likely to be higher for pupils with SEND or other additional needs, putting schools with a higher proportion of these children at a disadvantage. Given the relationship between socio-economic challenge and additional needs, this adds to the financial burden of schools and colleges with relatively high levels of disadvantage amongst their pupils. This will become a growing concern if subsidy tapers are introduced.

Left unaddressed, the regional disparities in coverage of the NTP are likely to undermine the government's levelling up agenda.

Recommendations

- Programme administrators should release a quarterly publication of regional uptake data for each strand of the NTP to ensure transparency and ability to respond rapidly to regional "cold spots".
- The government must employ a joined-up approach in localities, involving the regional schools commissioner and local authority, to embed structures to support roll-out in underserved regions.
- As the programme moves forward, the government must take into account cost of tuition per place, especially for children with additional needs
- The government should explore the feasibility of additional ring-fenced infrastructure funding for providers expanding into new areas.

Effective targeting of disadvantaged learners

Whilst the tutoring scheme is primarily aimed at disadvantaged pupils, a feature of the programme in phase 1 was the freedom it gave schools and colleges to decide which pupils would benefit most from additional tuition. As of 2 July, 46 per cent of the 5,700 enrolled schools had a greater than average percentage of pupils receiving Pupil Premium funding. Under half of pupils reached by tuition partners (46 per cent) were in receipt of Pupil Premium funding. In response to valid criticism that the programme is not reaching enough of the pupils who are likely to need it most, DfE has set a target of 65 per cent of pupils receiving tutoring must be in receipt of the Pupil Premium for 2021/22.

According to the EEF, schools have plausible explanations for the children they have identified as requiring extra tuition who are not in receipt of Pupil Premium funding. Some of the reasons given

include the imperfect overlap between social and economic disadvantage and Pupil Premium eligibility, and that some children who have become disadvantaged as a result of the pandemic aren't yet receiving Pupil Premium funding, but detailed reasons have not yet been published.

Roundtable participants debated the usefulness of the 65 per cent target set by the government for phase 2, with some arguing that although it is not a perfect proxy it nevertheless sets the direction for schools. However, school leaders argued that the inflexibility of the target could disincentivise schools to take up the offer and limit the possibility of a necessary cultural shift in schools toward viewing tutoring as a valuable and effective part of the education system. Other participants argued that there is flexibility as 35 per cent of pupils do not have to be eligible for the Pupil Premium.

One provider also commented that the 15-hour model does not work well for some of the most disadvantaged pupils, including those with special educational needs, a history of attending different schools, and/or school phobia and high levels of absence. On the 15-hour block, the government has not said it will limit the number of courses schools can buy for individual pupils in phase 2.

Roundtable participants reported that feedback from parents and carers, particularly those unable to afford private tuition previously, has been highly positive. Research is clear that parental involvement contributes to the success of interventions to raise attainment, and participants were in agreement that engaging parents in commissioning tuition could be useful and help to boost uptake.

Recommendations

- There should be further consultation with advocacy and parent groups around the appropriateness of the current model for disadvantaged groups of pupils and to inform more granular targeting.
- The government should explore how to involve parents in the commissioning of tutoring, as well as using feedback from parents and pupils to inform the promotion and rollout of the programme in the next phases.

Funding

In February, the DfE Director for Qualifications, Curriculum and Extra-curricular, Graham Archer, told MPs that the department's plan was for tutoring to become a normal part of academic life in all schools and pushed for ongoing funding.⁵⁸ Despite this, it is expected that the government will taper its subsidies over the next few years. A recent policy paper reveals that the subsidy rate of tuition partners will fall from 75 per cent to 70 per cent for the 2021/22 academic year with other sources saying it may fall further to 50 per cent for 2022/23 and 10 per cent for 2023/24. Similarly, the salaries of academic mentors fell from a 100 per cent subsidy rate to 95 per cent for the 2021/22 academic year, with the remaining 5 per cent covered by recovery premium or Pupil Premium payments. Preliminary findings indicate that nine out of ten of the schools not participating in the NTP cite insufficient funds as the primary barrier to signing up. They also find that the most

⁵⁸ <u>https://schoolsweek.co.uk/school-funding-chiefs-at-education-committee-9-things-we-learned/</u>

disadvantaged schools are taking up the NTP at a lower rate than other schools and, therefore, that a decrease in subsidies could skew provision away from the most disadvantaged schools. As it stands, the programme is not ambitious enough and will not reach the majority of disadvantaged children this academic year.

Recommendations

- The government should make targeted tutoring part of a long-term strategy to reduce entrenched education inequities with an accompanying funding commitment. How this funding will be used (tuition partner vs. school-led tutoring) should be informed by a robust impact evaluation of the different strands of the tutoring programme.
- Any subsidy taper must take into account existing inequalities in schools' budgets and the fact that cost-per-place of tuition will be higher for schools with higher levels of disadvantage and additional needs

Appendix 1: Approved tuition partners (as of October 2021)

Action Tutoring Appla Tuition BYT Centres Cambridge Tuition Limited, T/A Tutor Doctor Cambridge **Career Tree** CER, Monarch Education & Sugarman Education CoachBright **Conexus Tuition Connex Education Partnership EM Skills Enterprise CIC Engage Partners Equal Education Equal Education Partners FFT Education** Fledge Tuition **Fleet Education Services** Lancashire County Council, Ethnic Minority, Gypsy, Roma and Traveller Achievement Service TLC Live Learning Academies Manning's Tutors **MyTutor Pearson Education** Pet-Xi Training **Protocol Education** Quest for Learning **Randstad HR Solutions LTD Reed Tutors Schools PArtnerships Tutors Step Teachers Talent-Ed Education Targeted Provision Teaching Personnel Tempest Resourcing** The Brilliant Club **Tute Education Tutor Doctor Tutor Trust Tutors Green** White Rose Maths Zen Educate