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This report is supported by Unbound Philanthropy, an independent private grantmaking foundation that invests in leaders and organisations in the US and UK working to build a vibrant, welcoming society and just immigration system.

About the Authors

Whitney Crenna-Jennings is an Associate Director at EPI. Whitney is the author of 'Young people's mental and emotional health: Trajectories and drivers in childhood and adolescence', 'Unexplained pupil exits from schools: Further analysis and data by multi-academy trust and local authority', 'Education in England: Annual Report 2019' and 'Access to child and adolescent mental health services in 2019'. Prior to joining EPI, she worked as a research assistant in the Department of Epidemiology and Public Health at University College London. Whitney graduated with an MSc in Social Epidemiology (with Distinction) from UCL in 2015.

Natalie Perera is Chief Executive of EPI which she co-founded in 2016. Prior to that, Natalie worked in the Department for Education where she led on research and policy interventions including on narrowing the gap between disadvantaged children and the rest and reform of the school funding system. Between 2014 and 2015, Natalie was seconded to the Cabinet Office where she worked in the Deputy Prime Minister's Office.

Luke Sibieta is a Research Fellow at the Education Policy Institute. Luke has worked on the economics of education since 2005 when he joined the Institute for Fiscal Studies. He has produced numerous influential pieces of research on school funding, educational inequalities and has undertaken a range of impact evaluations. He led the Education and Skills research team at the Institute for Fiscal Studies from 2012 to 2017 and continues as a Research Fellow.

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Foreword

The Covid-19 pandemic has, since March 2020, caused huge disruption to education in England and indeed across the globe. Schools and colleges have been closed to most pupils for lengthy periods of time, and even when institutions have been open, many children have had to stay at home for periods of self-isolation.

School leaders, teachers and other staff have had to adjust quickly to new ways of supporting home learning - including moving teaching online for prolonged periods of time. For some students, home learning has been more challenging than for others. And while some schools have been able to adapt well to online learning, others have struggled to make the adjustment.

It is not, therefore, surprising that early attempts to measure student attainment and progress all appear to indicate that students have lost significant learning over the last year, and they are often behind where similar students would have been in previous years. Disadvantaged students seem to have been particularly adversely affected, and (as might also be expected) learning losses appear to be higher in the parts of the country where Covid-19 has had a more significant impact on school attendance.

Education research indicates that, if unmitigated, these large learning losses could cause long term damage to children's education and to their future earnings and our national income. This creates a strong case for policymakers, working with school and college leaders, to put in place an ambitious set of policies to help deliver education recovery. This means reversing any widening of the gap between disadvantaged pupils and their peers that has occurred since March 2020 and improving attainment, so that we "catch up" on the losses over this period. Policymakers should also consider the impact of the pandemic on child wellbeing and mental health - and respond to any setbacks in these areas too.

Recovering from the crisis of the last year should also be viewed as an opportunity to be more ambitious about the future. The disadvantage gap at GCSE level was already 18 months of learning before the pandemic hit, and we need to be much more ambitious about the future than simply seeking to "recover" to that level.

Over the last few months, researchers at the Education Policy Institute have been considering the above issues, and we are publishing in this paper our first set of proposals on how policy makers should support the education and wellbeing recovery. We hope that this will be a useful contribution to the current work being undertaken for the government by the Education Recovery Commissioner, Sir Kevan Collins.

We are hugely grateful to Unbound Philanthropy for supporting this project - we could not have undertaken this work without their very generous support.

As ever, we welcome views on the contents of this paper. We plan to publish a second report this autumn.



David Laws
Executive Chairman, Education Policy Institute

Introduction

In March 2020, the Secretary of State for Education required schools to close to most pupils in light of the increasing spread of Covid-19.¹ While schools reopened to some year groups in June of that year, it wasn't until September 2020 that schools could fully reopen to all year groups. Even then, high transmission rates meant that, in some parts of the country, schools continued to be closed or partially closed as the virus continued to take hold.

Previously published EPI analysis of Department for Education data found that, in the autumn term of 2020, average attendance in secondary schools was between 80 to 85 per cent (compared to a pre-pandemic average of 95 per cent). There was, however, significant variation across local authorities of between 70 to 90 per cent most weeks.

In the last week of the autumn term, average attendance in secondary schools fell to 72 per cent, mirroring the upsurge in Covid-19 cases in mid to late December. During this period, attendance rates were particularly low around the Thames Estuary areas, ranging from under 25 per cent to 45 per cent in some areas.

Primary school attendance was higher over the autumn term, about 90 per cent in most weeks, varying from 80 to 95 per cent across local authorities (compared to a pre-pandemic average of over 90 per cent). Primary school attendance also dropped sharply in the last week of term, falling to a low of 86 per cent across England. As with secondary schools, there were sharp drops in primary attendance around London and the Thames Estuary, falling to between 40 to 60 per cent in some areas.

With rapidly rising Covid-19 rates in December, schools were then closed (to most pupils) between January and 8th March 2021.²

In this paper, we provide the first of two reports which aims to inform how the government should respond to the biggest post-war disruption to our education system. We use existing analysis of assessment scores during the autumn term to estimate how far behind pupils have fallen compared with a "normal" year. We then use wider evidence about the economic cost of lost learning to estimate how much new funding will be needed in order to mitigate against the impact of lost learning and minimise the long-run effects. Finally, we set out a series of evidence-based interventions, taken from our own research and other resources including the Education Endowment Foundation's Teaching and Learning Toolkit, which the government should fund over the next three years in order to support pupils learning and wellbeing.

While the immediate priority will be to recover the learning loss that has taken place as a result of the pandemic, we are also clear that simply returning to pre-pandemic levels of attainment, wellbeing and equity is not good enough. In 2019, the year before the pandemic hit, disadvantaged pupils were already over 18 months behind their peers by the end of secondary school and that gap had stopped closing in recent years.

¹ Schools remained open for vulnerable children and children of key workers

² During the period of school closures between January to March 2021, the definition of key workers expanded to include a wider range of professions compared to the initial period of closure in March 2020.

And so we need not only a plan for education recovery, but also resilience, ensuring that all young people are given the opportunities and support they need to succeed.

Our package therefore is aimed at using the best, evidence-based policies and programmes to repair lost learning in the short-term but also to put the education system on a stable-footing to close the disadvantage gap in the longer-term.

We provide an estimate of how much the government should be spending on education recovery during this Parliament. This will be updated in the autumn as we learn more about the extent of lost learning, particularly in light of the period of national school closures during January to March 2021. In our second report, we will also be looking at how funding should be targeted to pupils based on their levels of disadvantage and the extent to which there has been differential learning loss across different areas of the country and different groups of pupils.

The package and costs we set out here applies to England, as the data we have available to use largely covers pupils in England only. In our concluding section, we set out some of the headline implications for Scotland, Wales and Northern Ireland.

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

How far behind are children?

In January 2021, the Department for Education published analysis carried out by EPI using Renaissance Learning's Star Assessment data, which looked at pupils' attainment in the first half of the autumn term in 2020, compared with pupils in previous years (essentially comparing pupils affected by the pandemic to those who were not).³ The available sample sizes mean that the analysis is focused on year groups 3 to 9.

When we compared outcomes of pupils in autumn 2020 to those of earlier cohorts, we found that:

- All year groups experienced a learning loss in reading. In primary schools, this was typically between 1.7 and 2.0 months, and in secondary schools (years 8 and 9), 1.6 and 2.0 months respectively.
- The learning losses in mathematics were greater. We estimate that, on average, pupils in primary schools experienced a learning loss of just over three months. We were unable to derive robust estimates for pupils in secondary school in mathematics due to small sample sizes.
- There were also some regional disparities in the level of learning loss in reading, with pupils in the North East and in Yorkshire and the Humber seeing the greatest losses.
- We also found that schools with high levels of disadvantage experienced higher levels of learning loss than other schools, particularly in secondary (2.2 months in schools with high rates of free school meal eligibility and 1.5 months in schools with low rates of free school meal eligibility).

Further analysis of this data, including a break-down of results by pupil characteristics, will be published by the DfE later this year. Further assessments were also carried out during the spring term and this will enable the measurement of learning loss during the most recent period of school closures between January and March 2021. This will provide us with a much better sense of the scale of learning loss over the period of the pandemic and should also be used to inform the scale and targeting of the government's recovery plan.

Our findings are so far consistent with a number of other reports which have also sought to compare children's skills in autumn 2020 with what we'd normally expect.⁴ This emerging evidence is quite consistent, showing that children in primary school were about 1-3 months behind in their literacy and numeracy skills, they were likely to be further behind in maths, and pupils from disadvantaged backgrounds were furthest behind, as had been widely predicted.

We also know, from data that has been collected throughout the pandemic, that young people's wellbeing has been affected over the past year. A number of studies have found that wellbeing has

³ Department for Education, "Understanding progress in the 2020/21 academic year. Interim findings", January 2021.

⁴ <https://educationendowmentfoundation.org.uk/eef-support-for-schools/covid-19-resources/best-evidence-on-impact-of-school-closures-on-the-attainment-gap/>

fallen as the pandemic has progressed and diagnosable mental health problems have become more prevalent.⁵

There is, however, lots of uncertainty too. We know remarkably 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 from different subjects, including English and maths, but also in other subjects where we do not have any data on learning losses. There is little hard evidence to show whether improved remote learning this term has mitigated learning losses. There is also the possibility of significant inequalities and disengagement as a result of heavily localised disruption over the 2020 autumn term.⁶ Some pupils might only have been in school for a matter of weeks over the past year. More evidence is required to properly understand these issues.

With this uncertainty in mind, we create three different scenarios for lost learning over the last year based on pupils missing 23 weeks of normal face-to-face schooling and different assumptions for the effectiveness of remote schooling (further details are available in Appendix A). These are based on the rate of learning loss observed after the first lockdown:

- Optimistic scenario (remote schooling is 80 per cent as effective as normal schooling): Pupils are just over a month behind.
- Central scenario (remote schooling is 50 per cent as effective as normal schooling): Pupils are about 3-4 months behind.
- Pessimistic scenario (remote schooling is 30 per cent as effective as normal schooling): Pupils are about 5 months behind.

What will be the long-run consequences?

The precise long-run economic consequences of current likely learning losses are uncertain, but all the evidence points to them being substantial. In this section, we estimate the likely long-run consequences for individual earnings. Further details of the approach are described in Appendix A.

Building on existing IFS analysis, we assume an 8 per cent increase in adult earnings for each additional year of schooling, the average for high-income countries.⁷ UK-specific evidence shows higher returns of 10-15 per cent based on increases in the school leaving age.⁸ This body of evidence

⁵ Waite et al, 2020; Raw et al, 2021; Newlove et al,; 2021NHS Digital, 2020

⁶ <https://epi.org.uk/publications-and-research/school-attendance-2020-autumn-term/>

⁷ <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](https://doi.org/10.1080/09645292.2018.1484426)

⁸ 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.

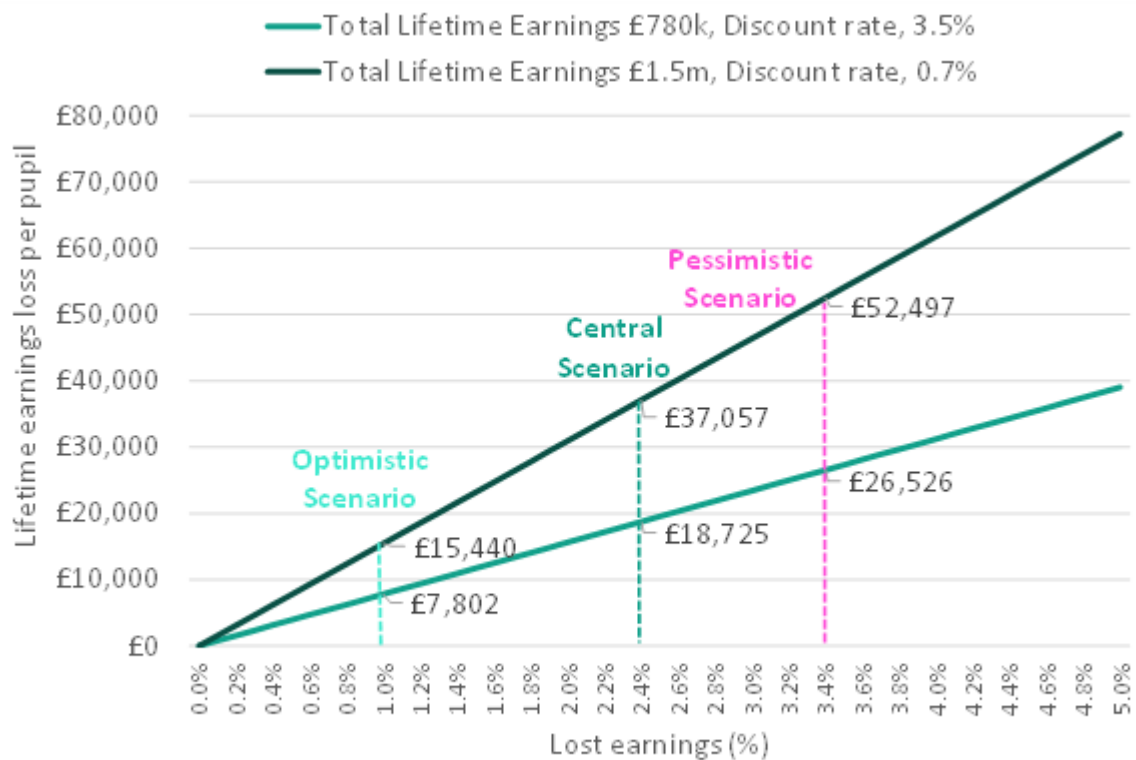
further suggests that most of the returns to schooling are likely to reflect skills gained rather than just being a signal of innate ability.⁹

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, 2.4 per cent in central scenarios and 3.4 per cent in the pessimistic scenario.**

What this means in economic 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.¹⁰ This range reflects the uncertainty about the future and how much we value income in the future.

Based on these two figures, Figure 1.1. 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 £19,000 in the central scenario and £26,500 in the pessimistic scenario. Under the higher figure of £1.5m for lifetime earnings, this range goes up to £15,500 to £52,500 per pupil.

Figure 1.1 Estimated lost lifetime earnings per pupil under different scenarios



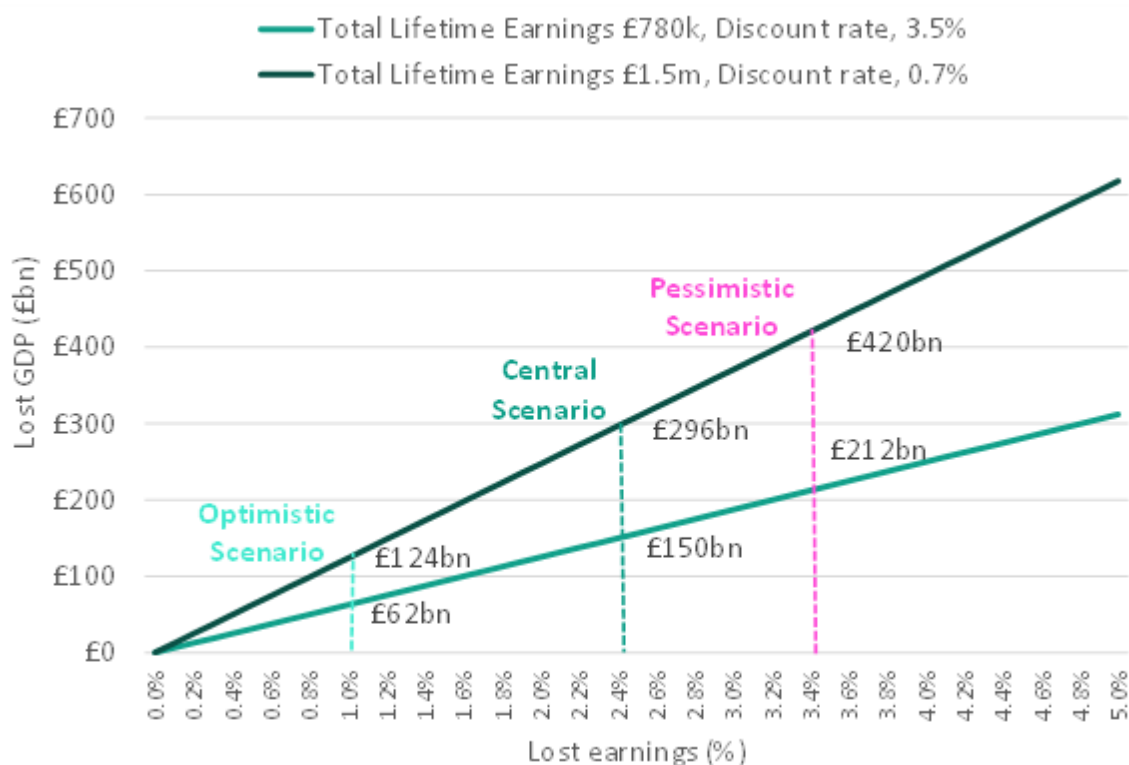
Notes and sources: see Appendix A.

⁹ <https://repec-cepeo.ucl.ac.uk/cepeob/cepeobn12.pdf>

¹⁰ Britton, J., Dearden, L., van der Erve, L. and Waltmann, B. (2020), "The impact of undergraduate degrees on lifetime earnings," IFS Research Report (<https://www.ifs.org.uk/publications/14729>).

Figure 1.2 then shows what this translates to in total lost earnings (or GDP) across the cohort. It equates to a total long-run cost between £62bn and £212bn across the 8 million children in school in England under the assumption that lifetime earnings are £780,000, or between £124bn and £420bn under the higher figure of £1.5m

Figure 1.2 Total lost lifetime earnings over all pupils in England under different scenarios



Notes and sources: see Appendix A.

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.¹¹ 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.¹²

¹¹ <https://www.oecd.org/education/The-economic-impacts-of-coronavirus-covid-19-learning-losses.pdf>

¹² Oreopoulos, P., & Salvanes, K. G. (2011). "Priceless: The nonpecuniary benefits of schooling," *Journal of Economic perspectives*, 25(1), 159- 84.

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”).¹³ Considerable time and money has been spent on this problem.

Learning from past crises and other countries

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, on average. This led to reduced educational attainment and reduced lifetime earnings of 2 per cent for women and 3 per cent for men.¹⁴ 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.¹⁵ 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 (1.0-3.4 per cent) without extra 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 (although, as we explain in Chapter 2, the context in New Orleans means it’s not realistic to expect the same interventions and improvements elsewhere).¹⁶ The Christchurch earthquake in New Zealand destroyed many school buildings, but ultimately led to massive cooperative efforts between schools and teachers that had to share facilities.¹⁷ 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).¹⁸

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.¹⁹ 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 learners and many colleges/universities implemented extra foundation years. There is limited evidence that the

¹³ <https://www.york.ac.uk/inst/spru/pubs/pdf/RR346.pdf>

¹⁴ 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

¹⁵ Ichino, A. and Winter-Ebmer, R. (2004) “[The Long-Run Educational Cost of World War II](#),” *Journal of Labor Economics*, University of Chicago Press, vol. 22(1), pages 57-86, January.

¹⁶ 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

¹⁷ <https://www.educationcounts.govt.nz/publications/schooling/115174>

¹⁸ Fuchs-Schündeln, N., Krueger, D., Ludwig, A. and Popova, I. (2020) [The Long-Term Distributional and Welfare Effects of Covid-19 School Closures](#), *NBER Working Papers* 27773, National Bureau of Economic Research, Inc.

¹⁹ 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.

curriculum was scaled back (e.g. in Schleswig-Holstein, pupils only had to study 2 authors, rather than the normal 3, for the Great Latin exam in year 13).

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.

How much should we spend on education recovery?

Current government plans imply catch-up spending of about £1.7bn or nearly £250 per pupil in England in 2020-21 and 2021-22 only.²⁰ 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 2020-21.²¹ In our central scenario, pupils have missed out on about 3-4 months of effective learning. In other words, we would normally spend about £12-16bn delivering this, or in the range of about £1,500 or £2,000 per pupil.

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.²² 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 3-4 months of learning loss in our central scenario).²³ That might imply a 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.²⁴ 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. The US has recently allocated about \$123 bn in extra funding for schools to aid reopening and catch-

²⁰ <https://www.gov.uk/government/news/new-education-recovery-package-for-children-and-young-people>

²¹ https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/938052/SR20_Web_Accessible.pdf

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., 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>.

²³ 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>.

²⁴ 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.

up (the equivalent of about £1,600 per pupil in K12 education).²⁵ The Netherlands has announced an education recovery package equivalent to more than £7bn or over £2,500 per pupil.²⁶

The range of these figures show that there is no single or simple answer to the question as to how much money we should be spending on education recovery. The only reliable way of doing this is through collating all the detailed policies and interventions needed for recovery. However, our judgement is that £10-15bn would represent a useful benchmark or guide for the required scale of an education recovery package to help pupils catch-up on lost learning in England. This is based on what we'd normally spend, the academic evidence on the effects of spending and the plans of other countries. Furthermore, the sheer scale of the potential long-run costs without significant policy action (an absolute minimum of £62bn 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.

²⁵ <https://www.ed.gov/news/press-releases/department-education-announces-american-rescue-plan-funds-all-50-states-puerto-rico-and-district-columbia-help-schools-reopen>

²⁶ <https://www.rijksoverheid.nl/actueel/nieuws/2021/02/17/85-miljard-euro-voor-nationaal-programma-onderwijs>

2. A review of the evidence

Prior to the Covid-19 pandemic, English education was characterised by marked inequalities along the lines of socio-economic position, race and ethnicity, language, and mental and emotional health. EPI research shows that, in 2019, the attainment gap between disadvantaged pupils and their peers had stopped closing for the first time in a decade, driven partly by the increasing proportion of disadvantaged children in persistent poverty.²⁷ At GCSE-level, disadvantaged pupils were 18 months behind their peers and the eight-month gap at the end of primary school had begun increasing for the first time since at least 2007. Compared to white British pupils at GCSEs, Gypsy/Roma pupils were almost three years behind and black Caribbean pupils almost 11 months behind, a gap that grew by four months in the last eight years. Some of the most vulnerable pupils, those in contact with social services (looked-after children, children with protection plans, and children in need), were between one and a half and two and a half years behind their peers.

A growing body of evidence suggests that these inequalities have worsened as a result of the pandemic. Disadvantaged pupils are likely to have experienced greater disruption of their education due to lack of access to technology, teacher guidance, learning materials and supplemental private tutoring, less time spent learning, and barriers to parental support for home learning.²⁸ Pupil engagement in remote learning was found to be lower in schools with the highest levels of deprivation.²⁹ Disadvantaged pupils, particularly those from certain ethnic minority groups, are also more likely to have parents who work in sectors affected by the shutdowns and lack savings as a buffer for lost income, and as a result are at risk of increasing poverty.³⁰ The prevalence of diagnosable mental health conditions amongst children aged five to sixteen appears to have increased to one in six from one in nine in 2017, and children in households that had fallen behind on bills because of the pandemic were over 2.5 times more likely to have a disorder.³¹ Evidence from charities and hospitals show a surge in domestic child abuse during the pandemic.³²

It follows that any recovery programme must go beyond returning to the pre-pandemic position, and aim instead to create a more equitable system resilient to future challenges.

While there is increasing and emerging research on the impact of school closures on learning and wellbeing, there is a notable scarcity of evidence about effective interventions to support children's recovery in these domains. This is expected, given the unprecedented, global, nature of the pandemic.

²⁷ Jo Hutchinson, Mary Reader, and Avinash Akhal, "Education in England: Annual Report 2020", *Education Policy Institute*, August 2020.

²⁸ Alison Andrew, Sarah Cattan, Monica Costa-Dias, Christine Farquharson, Lucy Kraftman, Sonya Krutikova, Angus Phimister, and Almudena Sevilla, "Learning during the lockdown: Real-time data on children's experiences during home learning", *Institute for Fiscal Studies*, May 2020.

²⁹ Megan Lucas, Julie Nelson, and David Sims. "Schools' responses to Covid-19: Pupil engagement in remote learning", *National Foundation for Educational Research*, June 2020.

³⁰ Lucinda Platt and Ross Warwick. "Are some ethnic groups more vulnerable to COVID-19 than others?", *Institute for Fiscal Studies*, May 2020.

³¹ NHS Digital. "Mental Health of Children and Young People in England, 2020: Wave 1 follow up to the 2017 survey." *Mental Health of Children and Young People Surveys*, October 2020.

³² Esther Crawley, Maria Loades, Gene Feder, Stuart Logan, Sabi Redwood, and John Macleod. "Wider collateral damage to children in the UK because of the social distancing measures designed to reduce the impact of COVID-19 in adults." *BMJ Paediatrics Open* 4, no. 1 (2020).

In seeking to find some evidence of existing effective practice, we looked at how education systems responded following national and regional school closures as a result of Hurricane Katrina in Louisiana in 2005, the SARS outbreak in China and Hong Kong in 2009 and the Christchurch earthquake in New Zealand in 2011.

The research literature from these events focuses largely on the logistical arrangements of reopening schools and the impact of lost learning time during the period of closures. We found very little research about how pupils were supported to catch up with their learning once schools reopened. A notable exception to this was in New Orleans, following Hurricane Katrina, which caused most schools to close for the entire autumn term with some not reopening until the following academic year.

The scale of learning loss following Hurricane Katrina was much larger than we are currently observing from the Covid-19 pandemic. Estimates from New Orleans suggested that pupils were around two years behind their expected levels with the largest losses in mathematics.³³ Researchers also found that it took multiple years to recover those learning losses. The effects of Hurricane Katrina also resulted in higher than usual numbers of pupils (particularly those from low-income families) in New Orleans dropping out of high school and not progressing into college.³⁴ Researchers state that this was, in part, due to the wider economic impact of the hurricane, including on parental employment and the need to care for younger siblings.

Partly in response to Hurricane Katrina and partly because educational standards were already relatively low in New Orleans, the state took over all city-run schools and handed control over to non-profit organisations, turning them into “charter schools”. Like the academies model in England, charter schools are centred around the principle that giving schools greater autonomy will lead to improved outcomes. In New Orleans, this approach has proved successful. By 2012, there were significant increases in student achievement, high school graduation rates and college entry, retention and graduation rates.³⁵ These improvements were also observed amongst disadvantaged pupils and led to reduced social inequality.

The researchers, however, guard against expecting similar, positive results outside of New Orleans for a number of reasons including the low levels of attainment prior to the reforms, significant increases to both funding and collective action, and attention to the city following Hurricane Katrina and the fact that it is often easier to offer parents choice in urban areas as opposed to more rural locations.

In the context of Covid-19, it is clear that many other countries are still developing their own education recovery strategies. In Japan, for example, the government has put together a plan which

³³ <https://www.crpe.org/thelens/what-post-katrina-new-orleans-can-teach-schools-about-addressing-covid-learning-losses>

³⁴ <https://www.edutopia.org/article/what-past-education-emergencies-tell-us-about-our-future#:~:text=It%20Will%20Take%20Time%20to,years%20to%20recover%20lost%20learning>

³⁵ Douglas N. Harris and Matthew F. Larsen. “The Effects of the New Orleans Post-Katrina Market-Based School Reforms on Student Achievement, High School Graduation, and College Outcomes.” Education Research Alliance for New Orleans, 2018

includes increasing the number of teaching assistants and school staff, increasing social workers and mental health support and boosting access to online learning for pupils.³⁶

In the Netherlands schools are able to apply for extra funding to support learning loss as a result of the pandemic. Funding is available for primary, secondary and special schools as well as settings delivering vocational education and training (VET), adult training and early years education. So far, the interventions that schools have applied to run include one-on-one tuition, remedial teaching, additional support resources, summer/holiday schools, teacher professional development, strengthening parental engagement, support during school hours, extended school days and peer tutoring.³⁷ Analysis of the funding applications from schools finds that most programmes are aimed at language and maths recovery. Another priority group is those for whom Dutch is an additional language. In primary, there is a large focus on social and emotional development while in secondary, special and VET settings, interventions are focused on pupils who have missed out on practical experience due to the Covid-19 enforced restrictions.

The US has also made available \$123bn dollars for what they are calling an “Education Stimulus Package” for K-12 students as well as a further \$7bn for digital technology. Survey data collected from school and district leaders suggest that funding will be used to support similar priorities as the Netherlands, including social and emotional learning, strategies to mitigate against learning loss, summer programmes, diagnostic and formative assessment tools, digital devices and teacher professional development. In urban areas, there is also a focus on support for children for whom English is a second language.

It is clear that, while there does seem to be consensus about the emerging post-Covid priorities for young people, there is certainly no “silver bullet”. Our discussions with the education and wellbeing sectors over recent months instead stressed the need for the government and schools to focus on the evidence of what works in everyday practice to improve attainment and wellbeing and to close the disadvantage gap.

Our starting point for understanding the best available evidence was the Education Endowment Foundation’s Teaching and Learning Toolkit. The Toolkit provides a summary of evidence on a range of interventions relating to the education of 5–16-year-olds. For the purposes of this review, we filtered out interventions that scored two or lower on evidence strength or had an impact of 2 months or fewer. We did not filter out any interventions based on cost. This left us with interventions that had a strength rating of 3 or higher and achieved an impact of 3 months progress or more. These are set out in the table below:

³⁶ https://www.mext.go.jp/en/content/20200904_mxt_kouhou01-000008961_1.pdf

³⁷ Dr. A. Fleur Kortekaas-Rijlaarsdam, Prof dr. MEhren, Prof dr. M Meeter, “Catch-up programmes in primary education in the Netherlands: overview of programmes (first tranche) and a literature review of effectiveness of programmes”, August 2020

Intervention	Description	Months progress	Cost (per pupil)
Behaviour interventions	Behaviour interventions seek to improve attainment by reducing challenging behaviour, from low-level disruption to aggression, violence, bullying, substance abuse and general anti-social activities. The interventions can be split into three broad categories: approaches to developing a positive school ethos or improving discipline across the whole school; universal programmes which seek to improve behaviour and generally take place in the classroom; and more specialised programmes	3	Ranges from around £80 per pupil (for CPD costs) to £600 for one-to-one support.
Collaborative Learning	Involves pupils working together on activities or learning tasks in a group small enough for everyone to participate on a collective task that has been clearly assigned.	5	£20
Digital technology (in schools)	Approaches in this area vary widely, but generally involve: technology for students, where learners use programmes or applications designed for problem solving or open-ended learning; or technology for teachers, such as interactive whiteboards or learning platforms.	4	£320
Extending school time	Extending time in school could refer to a longer school day or longer school year and could be targeted to different groups of pupils. There are also often wider benefits for low-income students, such as increased attendance at school, improved behaviour, and better relationships with peers. Some school programmes aim to provide stimulating environments and activities or develop additional personal and social skills. These programmes are more likely to have an impact on attainment than those that are solely academic in focus.	2	£300
Feedback	Information given to the learner or teacher about the learner's performance relative to learning goals or outcomes.	8	£80
Individualised instruction	Individualised instruction involves different tasks for each learner and support at the individual level. It is based on the idea that all learners have different needs, and that therefore an approach that is personally tailored — particularly in terms of the activities that pupils undertake and the pace at which they progress through the curriculum — will be more effective.	3	Very low
Mastery Learning	Mastery learning breaks subject matter and learning content into units with clearly specified objectives which are pursued until they are achieved. Learners work through each block of content in a series of sequential steps and must demonstrate a high	5	£80

	level of success on tests, typically about 80%, before progressing to the next unit. Those who do not reach the required level are provided with additional tuition, peer support, small group discussions, or homework, so that they can reach the expected level.		
Metacognition and self-regulation	Metacognition and self-regulation approaches aim to help pupils think about their own learning more explicitly, often by teaching them specific strategies for planning, monitoring and evaluating their learning.	7	£80
One to One tuition	One to one tuition involves a teacher, teaching assistant or other adult giving a pupil intensive individual support.	5	£700
Oral language interventions	Oral language interventions emphasise the importance of spoken language and verbal interaction in the classroom. They are based on the idea that comprehension and reading skills benefit from explicit discussion of either the content or processes of learning, or both.	5	£40
Outdoor adventure learning	Typically involves outdoor experiences, such as climbing or mountaineering; survival, ropes or assault courses; or outdoor sports, such as orienteering, sailing and canoeing. These can be organised as intensive residential courses or shorter courses run in schools or local outdoor centres.	4	£500
Parental Engagement	Approaches and programmes which aim to develop parental skills such as literacy or IT skills; general approaches which encourage parents to support their children with, for example reading or homework; the involvement of parents in their children's learning activities; and more intensive programmes for families in crisis.	3	£80
Reading comprehension strategies	Reading comprehension strategies focus on the learners' understanding of written text. Pupils are taught a range of techniques which enable them to comprehend the meaning of what they read.	6	£48

Social and emotional learning	Interventions which target social and emotional learning (SEL) seek to improve pupils' interaction with others and self-management of emotions, rather than focusing directly on the academic or cognitive elements of learning. SEL interventions might focus on the ways in which students work with (and alongside) their peers, teachers, family or community.	4	£80
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We then looked more broadly at individual research reports and research summaries which pointed to effective strategies in improving outcomes and closing the disadvantage gap. The most relevant research related to the importance of teacher quality and the enduring impact of increased investment in education. Alongside this, we also reviewed a range of literature which pointed to specific strategies to support young people's mental health and to improve outcomes for disadvantaged groups, particularly those for whom English is an additional language and those from typically underperforming ethnic groups.

For example, work by Hanushek and others consistently finds that the quality of teachers can have a significant impact on pupil outcomes.³⁸ More effective teachers can improve maths and reading scores by between 0.12 to 0.36 of a standard deviation, with larger effect sizes in more disadvantaged schools.^{39 40} It is, however, difficult to identify effective teachers because effectiveness is unrelated to things we can observe (i.e. degree class, university attended). But some recent evidence does show a positive relationship between teachers' numeracy and literacy, and pupils' attainment.⁴¹

Recent research from the US finds that increased spending in years K-12 led to significant improvements in educational and economic outcomes for non-disadvantaged children.⁴² Those improvements were larger still for disadvantaged children (and included lower incarceration rates), with additional positive effects coming from increases in both the Head Start programme *and* primary and secondary school spending. The marginal effect of the same increase in Head Start spending was more than twice as large for students from K-12 school districts that spent at the seventy-fifth percentile of the distribution than those from K-12 school districts that spent at the twenty-fifth percentile.

Similarly, the benefits of K-12 school-spending increases on adult outcomes were larger among disadvantaged children who were exposed to higher levels of Head Start spending during their preschool years. In other words, the combined benefits of greater Head Start spending and K-12 per pupil spending are significantly greater than the sum of the independent effects of the two investments in isolation. The authors of this study make some important caveats to these findings. First, because childcare and paediatric care is likely to be better now than in the 1960s and 70s, we may view smaller marginal effects and secondly, if school spending is higher in real terms now than in the study period, again, the marginal impact may be lower. Nevertheless, these remain important findings about the impact of extra spending and, as we set out in section one of this paper, are particularly relevant as the economic returns to education grow larger over time.

As well as considering effective strategies for economically disadvantaged pupils, we were also concerned about the impact of school closures on pupils for whom English is an Additional Language (EAL) and those from low-attaining ethnic groups. In our most recent annual report, we found that

³⁸ E. Hanushek & S Rivkin, "Generalisations about using Value-Added Measures of Teacher Quality", 2010

³⁹ Thomas J. Kane, Jonah E. Rockoff, Douglas O. Staiger,, "What does certification tell us about teacher effectiveness? Evidence from New York City", 2008

⁴⁰ Nye, Barbara, Spyros Konstantopoulos, and Larry V. Hedges. "How Large Are Teacher Effects?" September 2004

⁴¹ Eric A. Hanushek, Marc Piopiunik and Simon Wiederhold, "The Value of Smarter Teachers International Evidence on Teacher Cognitive Skills and Student Performance", March 2017

⁴² Johnson, Rucker C., and C. Kirabo Jackson. 2019. "Reducing Inequality through Dynamic Complementarity: Evidence from Head Start and Public School Spending." November 2019

pupils from some ethnic groups continue to be significantly behind their white British peers. This is particularly the case for newly-arrived pupils with EAL (20.7 months), Gypsy / Roma pupils (34 months), Travellers of Irish Heritage (23.8 months), and black Caribbean pupils (10.9 months). In the case of black Caribbean pupils we found that, between 2011 and 2019, these pupils fell behind their white British peers by a further 4.4 months.

Our rapid review of the evidence on this issue finds that, while attainment amongst ethnic groups varies and pupils from white working class backgrounds are also among low attaining groups, the strategies for improvement are likely to benefit all ethnic groups. Studies point to a range of school practices associated with more effective use of funding for raising ethnic minority attainment.

Research by the DfE, Ofsted and the Runnymede Trust has shown that schools which achieve successful outcomes for their minority ethnic pupils are characterised by certain principles:

- Strong leadership: The headteacher and senior teachers lead an effective strategy that is applied across the whole school.
- Effective teaching and learning: Lessons are planned and delivered as effectively as possible, with support provided for bilingual pupils. Teachers are able to reflect the cultures and identities of the communities represented in the school in their lessons.
- High expectations: Every pupil is expected and encouraged to achieve their potential by teachers and parents. These expectations are underpinned by the practical use of data and monitoring. Policies and exam results are monitored for their effect on particular groups of pupils to pinpoint and tackle underperformance.
- Ethos of respect with a clear approach to racism and bad behaviour: There is a strong ethos and culture of mutual respect where pupils are able to have their voices heard. There are clear and consistent approaches to bad behaviour, bullying and tackling racism across the whole school with a focus on prevention.
- Parental involvement: Parents and the wider community are positively encouraged to play a full part in the life and development of the school

Language and communication skills are a particular concern for teachers following Covid-19. A recent survey conducted by the EEF found that 96 per cent of the participating schools reported being 'very concerned' or 'quite concerned' about their pupils' language and communication skills due to the Covid-19 pandemic and 76 per cent reported that children who started school in autumn 2020 needed more support than children in previous cohorts.⁴³

Anecdotal evidence suggests that EAL pupils have found it more difficult to engage with remote learning, particularly children who are new to the country and had not had a chance to meet their teacher(s) in person. The use of face masks in schools can also hinder how teachers model pronunciation and therefore affect children's language acquisition.

The importance of fluency and proficiency in the English language is a prominent factor in the success of pupils with EAL and is reflected across a range of studies. For example, EAL pupils tend to catch up with their non-EAL peers by age 16, if they join in Reception. At age 5, only 44 per cent of EAL pupils had achieved a good level of development, compared with 54 per cent of other pupils. By

⁴³ EEF, "The impact of Covid-19 on School Starters: Interim briefing 1, Parent and school concerns about children starting school", April 2021.

age 16, this gap has narrowed significantly with 58.3 per cent of EAL pupils achieving five A*- C GCSEs including English and maths, compared with 60.9 per cent of other pupils. There was no EAL gap at all in the average GCSE best 8 points score.

The scale of this challenge is not insignificant. The most recent data published by the DfE shows that, in 2018, 38 per cent of pupils with EAL were assessed as having proficiency levels of ‘developing competency’ or lower. We estimate that this equates to over 600,000 pupils at risk of under attainment due to their lower proficiency in English this year. Around 19 per cent of EAL pupils were still acquiring proficiency in English by year 11, suggesting that this is not an issue that fades out entirely when children get older.

A recent report conducted by the University of Oxford for the Bell Foundation and Unbound Philanthropy highlighted the huge variation in the educational results achieved by pupils classified as EAL.⁴⁴ As well as risk factors generic to both EAL and non-EAL pupils, such as Special Educational Needs, family and neighbourhood socio-economic deprivation, gender, and season of birth, there were other risk factors for low achievement that were particularly strong among EAL pupils: certain first languages within the black-African and white-other ethnic groups, absence of a prior attainment score from the beginning of the key stage, and pupil mobility between schools – all of which are proxies for international arrival from overseas. The report concludes that proficiency in the English language is the major factor influencing the educational achievement, and the degree of support, an EAL pupil will require and schools must be able to assess this accurately.

This chimes with an earlier study conducted by EPI which found that there is a severe attainment penalty for pupils arriving late into the English school system.⁴⁵ In Key Stage 2 assessments, on average, EAL pupils who started school in reception scored 2 points above the expected standard in reading and maths. However, performance of EAL pupils who joined in year 3 was 2 points below the expected level, and EAL pupils who arrived in the final year of primary school were a striking 17 points below the expected level.

At GCSE level, pupils with EAL scored an average grade of a C if they arrived between Reception and year 7. This decreased to a grade of around a D if they arrived in year 8, 9 or 10 – falling further to below an E if they arrived in year 11. These penalties apply to all language groups. Even for groups that seem to perform well when arriving late, such as Chinese pupils, attainment is still greatly affected, with performance significantly worse than early arriving Chinese pupils.

In our discussions with representatives of the education sector, there were also concerns raised about the accessibility for pupils with EAL of some online learning platforms. We plan to explore this in our follow-up report late this year.

⁴⁴ S. Strand & A. Lindorff, “English as an Additional Language, Proficiency in English and rate of progression: Pupil, school and LA variation”, March 2021.

⁴⁵ J. Hutchinson, “Educational Outcomes of Children with English as an Additional Language”, February 2018.

3. An education recovery and resilience plan

In light of the evidence we have collated so far, our proposed education recovery and resilience plan is composed of three strands.

1. Support for primary and secondary schools
2. Support in the Early Years
3. Support in Post-16 provision

In this section, we set out the core recommendations under each of these strands. It is important to note that we plan to develop these recommendations further in light of both our ongoing analysis of the impact of lost learning time and feedback from stakeholders. Where provided, costs are illustrative only and based on EPI's best estimates of participation and pricing. A full breakdown of our cost assumptions is included in Appendix 2.

Support for primary and secondary schools

In this section, we make a number of recommendations designed to support pupils with their learning and wellbeing. These proposals are intentionally ambitious as we are seeking to reverse the negative effects caused by Covid-19 and the stagnation of the disadvantage gap that was already happening before the onset of the pandemic.

Our headline recommendation is for more high-quality professional development for teachers in order to deliver evidence-based classroom and whole-school interventions. This isn't about taking teachers out of the classroom but instead improving the quality of the time they spend with pupils. A better, properly funded offer for teacher development is supported by a series of recommendations to increase the time that pupils spend in school, either on academic, social or sporting activities, both before and after school and during the summer holidays.

It is crucial that schools provide a safe and happy environment for children and young people to thrive and to ensure that nobody is left behind as a result of the pandemic. This means that schools need to have a sharp focus on pupils who are most at risk of poor education and mental-health outcomes, typically those from economically disadvantaged families, children in care, those from certain ethnic backgrounds, those with Special Educational Needs and Disabilities and those for whom English is an additional language. In most cases, children from these backgrounds were already considerably behind their peers before the pandemic.

We are therefore also making a number of recommendations to provide more resources to schools serving disadvantaged areas through an increased Pupil Premium, with expanded eligibility for vulnerable children, as well as increased pay for teachers in shortage subjects working in challenging schools. Wellbeing is also an integral part of our package as we call for dedicated mental health professionals in schools and updated guidance to support schools to implement more inclusive practices and, where possible, avoid temporary or fixed-term exclusions.

i) A new Continuous Professional Development (CPD) fund for teachers

Existing research finds that high-quality CPD for teachers has a significant effect on pupils' learning outcomes and has the potential to close the gap between beginner and more experienced teachers.⁴⁶ Evidence also suggests that high-quality CPD has a greater effect on pupil attainment than other interventions schools may consider, such as implementing performance-related pay for teachers or lengthening the school day. CPD programmes are also, generally, positively received by teachers, in contrast to other interventions. Large, structural changes to the school system, while as effective at improving pupil outcomes, incur substantial costs in terms of staff turnover and dissatisfaction.

A recent report published by EPI evaluated the costs and benefits of entitling all teachers to 35 hours of high-quality, CPD every year. It found that, as well as having an average effect on pupil attainment equivalent to one month of extra learning in the year the CPD is undertaken, the lifetime earnings of pupils could also be improved by over £6,000 (as a result of achieving higher GCSE grades). However, within that average effect, there are also many CPD programmes that have no

⁴⁶ J. Zuccollo & H. Fletcher-Wood, "The effects of high-quality professional development on teachers and students", February 2020.

measurable effect on pupils' attainment and so it is important that CPD is of proven high-quality. The study also found that having a CPD entitlement could also improve the health and wellbeing of both teachers and pupils and reduce attrition from the teaching profession. The best available data suggests that around 12,000 more full-time equivalent teachers may remain in the profession each year because of the CPD entitlement.

Reflecting the existing evidence, including the raft of EEF evidence that shows the importance of teacher CPD in delivering evidence-based interventions, we recommend that the government creates a new and distinct CPD fund for all teachers in primary, secondary and special schools, as well as in alternative provision. While the intention is not to distract teachers from their important job in the classroom, it is important that they are given the time and support needed to improve the quality of teaching to support pupils to thrive.

At present, funding for teacher CPD is notionally made available through the Dedicated Schools Grant. But spending is variable across schools and poorly measured, and we know very little about the quality of CPD that is being accessed. The most recent analysis of direct CPD spending in schools finds that, in 2017-18, around £284m was spent across schools in England.⁴⁷ On a per-teacher basis, primary schools spent an average of £709 in 2018 compared to £522 among secondary schools. The comparable figures per pupil were £32 and £29, respectively. Special schools spent £959 per teacher or £143 per pupil – reflecting their smaller numbers.⁴⁸

We also see high levels of variation across the country with schools in London and the South East generally spending more on teacher CPD than those in the South West and the East and West Midlands. However, these figures are unlikely to account for CPD that is delivered internally by schools or through software platforms. The true spending on CPD may be several times greater than measured by direct spending alone.

Given the importance of teacher quality, a higher priority needs to be given to the quality of CPD along with greater transparency and accountability.

A new CPD fund should be allocated to schools with clear guidelines on the quality and standards of CPD for which it should be used. The CPD fund should be allocated directly to schools and should be weighted towards schools with higher proportions of disadvantaged pupils. Schools should have autonomy as to how the fund is used. For example they could use it to buy-in specific training, to pay for teachers to enrol onto externally-run course, to pay for supply cover or a combination of all of those options. The fund should be used for CPD that has been demonstrated to be effective at improving student attainment but might ordinarily be unaffordable to schools. In order to review the effectiveness of the fund and nudge schools to access high quality CPD, the government should also consider evaluating the fund after three years.

While the content of CPD should be decided by schools and should reflect their local circumstances and needs, we would expect the funding to be used to support the delivery of evidence-based practices. This includes:

- Social and emotional learning.

⁴⁷ T.Hannay, "Development in staff Development", March 2020.

⁴⁸ These figures relate to expenditure in 2017/18. The equivalent figures in 2019/20 and 2020/21 (when published) could show very different spending levels due to the Covid-19 pandemic.

- Using assessment tools to monitor pupil wellbeing and mental health.
- Managing behaviour.
- Assessing proficiency in English and supporting pupils with low proficiency, including by providing sufficient opportunities for listening and speaking development for both social and academic communication purposes.
- Pedagogical approaches including feedback, collaborative learning, mastery, metacognition and self-regulation.
- Engaging and working with parents, particularly those from disadvantaged or immigrant backgrounds and supporting them to strengthen the home-learning environment.

Schools will need to provide some transparency about how the fund is spent, this could include requiring them to publish details on their websites.

Estimated cost over 3 years: £1.2bn over three years. Assumes £80 per pupil, per CPD intervention and two interventions per pupil.

ii) Extended schools

The term ‘extended schools’ can be applied in a lot of different ways from a formal, longer school day to a range of informal activities and clubs. In this context, we are recommending that schools should be open before and after normal school hours for pupils to engage in a range of programmes, including sports clubs, social activities, games, pastoral support and academic programmes.

This approach reflects EEF evidence which shows that there can be gains in attainment of up to 2 months (closer to 3 months for disadvantaged pupils) as well as improved attendance, behaviour and relationships with peers. Programmes which provide stimulating environments and activities or develop additional personal and social skills are more likely to have an impact on attainment than those that are solely academic in focus.

These programmes do not necessarily need to be run directly by schools. School leaders should decide which activities (including academic support) are most appropriate for their pupils and then, where appropriate, work with existing providers, including from the voluntary and charitable sectors, to deliver those activities. Where after-school clubs or extended schools are already available, the government and schools should consider how these can be adapted to deliver a variety of academic and social activities and whether they are able to access government subsidies.

Estimated cost over 3 years: £3.2bn over 3 years. Assumes £300 per pupil with a 100 per cent subsidy for disadvantaged pupils and a 50 per cent subsidy for the rest. While there might be an expectation for parents or carers to contribute to some activities, any academic support should be provided free of charge for all pupils.

iii) Summer wellbeing programmes

Existing EEF evidence finds that summer programmes can result in gains equivalent to around 2 months progress. When combined with more resources and small group tuition by trained and experienced teachers, the gains can increase by up to 4 months. The EEF also states that programmes without a clear academic component are not usually associated with learning gains.

While summer programmes need to have an academic component to secure learning gains, it is also important that they provide an opportunity for young people to socialise with their peers through sports, games and other activities.

The DfE has already made £200m available for ‘summer schools’ in 2021 but this is only available for secondary schools (including special schools and Pupil Referral Units) with strong guidance to use funding to support incoming year 7 pupils.⁴⁹ Funding will be based on half of the incoming year 7 pupils accessing a two-week programme or all incoming year 7 pupils accessing a one-week programme (£597 per mainstream pupil, or £1,791 per pupil in a special school or PRU, per two-week placement).

The government is also providing a further £220m for the Holiday Activities and Food Programme which is intended to provide food and enrichment activities to disadvantaged children over the Easter, Summer and Christmas holidays in 2021.⁵⁰ Local authorities are responsible for designing and delivering the programmes and, subject to their plans, will receive funding based on the number of children currently eligible for Free School Meals and the expected participation rates. The published information does not give details of per-child expenditure but, if the programme reached all eligible children during each of the three holiday periods, we estimate that it would cost around £138 per child (this includes deductions of £2m for the national contractor and a £19m contingency fund).⁵¹

Given the evidence of the decline in children’s wellbeing during the pandemic, we think there is a strong case for summer programmes to be open to all pupils aged 5 to 16.

We know that participation is one of the biggest barriers for summer programmes. Making the programmes available to all pupils will avoid any stigma that this is aimed at poor pupils and / or for academic catch up only.

Other ways of maximising attendance amongst pupils are to shape activities with families so that they feel ownership of the programme, communicating the benefits to children and their families, providing fun activities such as trips, and providing a variety of options for pupils to choose what they would like to do.⁵²

It is also important to note that, while schools should be involved in shaping these programmes and providing premises where necessary, they do not necessarily need to deliver the programmes themselves. There are a number of voluntary organisations who are experienced in delivering these programmes and are able to work closely with schools in doing so.

Estimated cost over 3 years: £2.0bn. This assumes that, in 2021, the existing programme is offered to all secondary pupils with take up rates of 50 per cent amongst FSM and 25 per cent amongst non-

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https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/975835/Summer_schools_guidance.pdf

⁵⁰ <https://www.gov.uk/government/publications/holiday-activities-and-food-programme>

⁵¹

https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/968125/Grant_determination_letter_-_holiday_activities_and_food_programme_2021.pdf

⁵²

https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/975835/Summer_schools_guidance.pdf

FSM pupils and a 50 per cent contribution (£300) from non-FSM families. For 2022 and 2023, we make the same assumptions for take-up and contribution but extend to primary pupils as well.

iv) Fund schools to hire a mental health support worker (this could be an educational psychologist, pastoral worker, counsellor etc)

Although the long-term impact remains unclear, there are [indications](#) that the mental health and wellbeing of young people, already deteriorating prior to the pandemic, has worsened particularly amongst those who were already vulnerable.⁵³ According to England's Mental Health of Children and Young People Survey, probable mental health conditions increased from 10.8 per cent of children aged five to sixteen in 2017 to 16 per cent in July 2020 across all age, sex, and ethnic groups.

There is growing evidence showing that wellbeing and attainment are closely linked: mental health difficulties have been linked cross-sectionally to poor attainment and persistent absenteeism, while poor emotional, behavioural and social wellbeing, poor mental health, and depressive symptoms have been shown to predict poorer later attainment, independent of other factors.⁵⁴⁻⁵⁷ Research on children's learning and development shows that learning environments which support the whole child – their social, emotional, cognitive and physical needs – help all pupils to do well.

The best evidence on how to support children's mental health in schools is through a 'whole-school approach'. This means school leaders prioritise mental health and wellbeing alongside attainment, in recognition of the evidence that they are interlinked. A whole school approach entails enabling student voice to influence decisions, supporting staff wellbeing, working collaboratively with parents and carers, identifying need and monitoring the impact of interventions, a school culture that promotes respect and values diversity, and curriculum, teaching and learning to promote resilience and support social and emotional learning. Coming out of the pandemic, this should also include working with pupils to rebuild confidence around learning, motivation, and aspirations, given the evidence that these have been battered. The literature on adverse childhood experiences shows that positive experiences and relationships accessed through schools can be a crucial source protective against some traumatic experiences in children's lives and help to mitigate the impact of trauma on long-term outcomes.⁵⁸

Schools should receive additional, ring-fenced funding to hire new mental health support workers. These new staff members should work closely with school leadership, staff, pupils and parents to embed a whole-school approach to mental health, as well as to deliver targeted, evidence-based

⁵³ Tamsin Ford, Ann John, and David Gunnell, "Mental health of children and young people during pandemic" *BMJ*, 2021.

⁵⁴ Suzet Tanya Lereya, Meera Patel, Joao Pedro Garcez Aurelio Dos Santos, and Jessica Deighton, "Mental health difficulties, attainment and attendance: a cross-sectional study." *European child & adolescent psychiatry* 28, no. 8 (2019): 1147-1152.

⁵⁵ Leslie Morrison Gutman and John Vorhaus, "The impact of pupil behaviour and wellbeing on educational outcomes", *Institute of Education*, 2012.

⁵⁶ Neil Smith and Lydia Marshall, "The impact of mental health and wellbeing on GCSE performance in England: A longitudinal analysis of the National Pupil Database linked to Understanding Society." *BMJ Paediatrics Open* 3 (2019)

⁵⁷ José A López-López, Alex SF Kwong, Liz Washbrook, Kate Tilling, Mina S. Fazel, and Rebecca M. Pearson. "Depressive symptoms and academic achievement in UK adolescents: a cross-lagged analysis with genetic covariates." *Journal of Affective Disorders* 284 (2021): 104-113.

⁵⁸ Christina Bethell, Jennifer Jones, Narangerel Gombojav, Jeff Linkenbach, and Robert Sege. "Positive childhood experiences and adult mental and relational health in a statewide sample: associations across adverse childhood experiences levels." *JAMA pediatrics* 173, no. 11 (2019): e193007-e193007

support to children who need it. Particular attention should be paid to children who are most at risk of being left behind and practitioners should consider ways in which support can be delivered in a culturally appropriate way. Recognising that there needs to be an increase in the current capacity of the mental health workforce, schools should have the flexibility to use the additional funding to buy in counselling services for their pupils in the short-term, where needed. Counselling [has been shown](#) to reduce psychological distress and [research suggests](#) it has been inaccessible for many pupils due to Covid-19 restrictions.

Estimated cost: £1.5bn over three years, assuming salary plus oncosts of £60,000 per support worker in every secondary school, college and AP setting, and one for every two primary schools.

v) A continuation of one-to-one and small group tuition

The DfE has already made funding available for one-to-one and small group tuition for primary and secondary pupils through the National Tutoring Programme (NTP). While the DfE has stated that the NTP will continue for a further two years beyond 2021-22, it has said that funding for the programme will be subject to future spending reviews.

The focus on tuition reflects existing evidence that it can secure progress of around 5 months, on average. However, the implementation of tuition is key to securing impact. The EEF teaching and learning toolkit finds that, in order to secure optimal impact, tuition should be high-quality, supported by normal teaching, and that teachers should monitor progress of tuition. Tuition should ideally be delivered by experienced and trained teachers but, where this is not possible, teaching assistants and volunteers should have access to training and a structured programme to deliver tuition. More training should be available to support tutors working with children with SEND and EAL.

The EEF also finds that the impact of tuition is larger for primary-aged pupils and those from disadvantaged backgrounds.

There is therefore a strong case for continuing to fund one-to-one and small group tuition over the next three years as part of an education recovery package. However, it is not yet clear whether the funding should be channelled through the National Tutoring Programme (as now) or whether it should be passed straight on to schools who can decide whether to use existing teachers, teaching assistants, or private and voluntary providers to deliver tuition.

Over the summer, we will be conducting further research on the advantages and drawbacks of the current NTP before providing further steers in our Phase 2 report in September.

Estimated cost over 3 years: £340m in total for 2022-23 and 2023-24. The government has already announced £170m for the NTP for 2021-22 and so this amount carries that forward for a further two years.⁵⁹ Funding should also be targeted towards disadvantaged and vulnerable pupils.

vi) Extend the Pupil Premium to pupils with a Child Protection Plan

The Pupil Premium covers those who currently claim free school meals or have in the last six years, as well as looked-after or previously looked-after pupils, leaving out a group at high risk of poor

⁵⁹ This is our best estimate of the money that has been allocated in total to the NTP to deliver primary and secondary tuition, academic mentors, 16-19 tuition and support with early language in the early years. We have asked the DfE for a detailed breakdown but, at the time of publishing this report, had no reply.

outcomes. Prior to the pandemic, pupils with a child protection plan – those who have had a plan drawn up by their local authority to ensure their safety and prevent them from suffering further harm, promote their healthy development, and support their families to do the same – were, on average, over two years behind their peers by the end of secondary school. This gap is significantly wider than the gap between Pupil Premium-eligible pupils and their peers.

The latest government data shows 51,510 children with a child protection plan as of 31st March 2020 but it is plausible that this number has increased in the last year.⁶⁰ While there is likely to be considerable overlap between pupils with a protection plan and those currently or formerly eligible for free school meals, there will nevertheless be a number of children who are vulnerable, with a child protection plan in place, but who nevertheless do not attract any additional funding.

Estimated cost: £390m over three years (this is a top-end cost as there will be some pupils from this group who are already eligible as a result of free school meal eligibility or looked after children status).

vii) Increase the Pupil Premium to reflect the fact that the gap is likely to have widened significantly as a result of the pandemic and consider additional targeting to persistently disadvantaged groups

Pupil Premium rates have only increased by £25 per pupil in primary, £20 in secondary and £45 for looked after children since 2015. We do not yet have the data to quantify the precise impact of the pandemic on the gap, but teachers and school leaders agree there is a real risk of existing inequalities widening. Funding to schools to support vulnerable pupils should be increased in accordance with the significant evidence of the unequal impact of the pandemic and school closures.

Given the growth in the proportion of persistently disadvantaged pupils (those on free school meals for at least 80 per cent of their time at school), which has contributed to the rate of closing of the disadvantage gap stalling, the government should consider targeting additional funding to these pupils.

Estimated cost: £720m over three years (assumes a ten per cent increase to the current Pupil Premium rates).

viii) Double the extra payments for teaching in “challenging areas” to £2,000 per year, extend them to existing teachers and focus them on the most disadvantaged 20-25 per cent of schools

Given the evidence that teacher quality is the most important in-school driver of pupil outcomes, the government must increase efforts to ensure pupils at risk of lower attainment, in general and as a result of the pandemic, have access to high-quality teaching.

EPI research finds that only around 1 in 5 maths teachers and even fewer physics teachers have a degree in their taught subject in the most disadvantaged areas outside London. We also find shortages in qualified language teachers in the poorest areas outside London.⁶¹

The DfE already runs a similar scheme, the Mathematics and Physics Teacher Retention Payments Pilot, which gives eligible mathematics and physics teachers a £2,000 retention payment in the 2019 to 2020 and 2020 to 2021 academic years. However, the payment is made to those teaching in

⁶⁰ Department for Education, “Characteristics of Children in Need”, November 2020.

⁶¹ L. Sibieta, ‘Teacher shortages in England: Analysis and pay options’, March 2020.

certain eligible local authorities and misses schools outside of those local authorities but with high proportions of poorer pupils. It also does not extend to science teachers more widely or to language teachers.

We recommend that the current scheme should be extended to schools with between 20-25 per cent disadvantaged pupils and should be eligible to all early maths science and language teachers in these schools.

Estimated cost: £135m over three years, based on expanding the current scheme to schools with between 20-25 per cent disadvantaged pupils and to all STEM and language teachers.

ix) Issue new guidance to schools to support better wellbeing and inclusion

Schools must gain a better understanding of the full impact of the pandemic and school closures on wellbeing at the child level to better target support. Existing evidence points to a disproportionate impact on disadvantaged children, those from certain minority ethnic backgrounds, and those with certain additional needs, on average. This puts them at greater risk of falling further behind, given the link between poor wellbeing and attainment. Mental health issues and wellbeing have worsened in general over the last year, with some research suggesting a graded relationship between time spent out of school and mental health concerns: pupils who were ineligible to return to school during the summer reported higher levels of social and emotional difficulties compared to eligible peers.⁶²

New guidance should be issued to support schools to use existing assessment tools to measure and monitor pupil wellbeing and mental health upon their return to school, and identify pupils who are struggling in the short- and long-term (making clear this is for internal use only). The guidance should signpost schools to existing validated measurement tools with a clear explanation of what each tool measures.⁶³ For example, the Manchester Institute of Education at the University of Manchester, in partnership with the Anna Freud Centre, have developed a comprehensive wellbeing measurement framework for primary and secondary schools and colleges, as part of their current pilot project to measure young people's wellbeing in all secondary schools in the Greater Manchester area.⁶⁴ The goal is to develop an accessible online dashboard with the anonymised data to help schools and other local agencies supporting children and families to improve their wellbeing offer.

DfE should make clear that this data is not being collected for external accountability purposes but rather for schools and other local actors working with children and families to improve their understanding of need and targeting of support.

There should also be clear guidance from the government to schools about the need to avoid exclusions and on monitoring attendance. The DfE and local authorities should monitor closely both attendance levels and any increase in the number of children being moved out of individual schools.

⁶² Jo Blanden, Claire Crawford, Laura Fumagalli, and Birgitta Rabe, "School closures and children's emotional and behavioural difficulties", *Institute for Social and Economic Research*, March 2021.

⁶³ The Anna Freud Centre have developed a [toolkit for schools and colleges](#) which includes a list of and information about different measures. The Centre have also developed the [Wellbeing Measurement Framework](#) for schools in collaboration with CORC, the University of Manchester, and the consultancy Common Room.

⁶⁴ The Anna Freud National Centre for Children and Families' Wellbeing Measurement Framework for Schools is available here: <https://www.annafreud.org/schools-and-colleges/resources/wellbeing-measurement-framework-for-schools/>

We know from existing EPI research that disadvantaged and vulnerable children are far more likely to be excluded or subject to an unexplained move out of their school than their peers.⁶⁵ If we want to protect the outcomes of this group of pupils, then exclusions and other school moves should be avoided as far as possible.

For pupils with attendance issues, government guidance should encourage schools to understand why attendance is a problem and put in place support for the child and/or family who may be struggling to re-engage with the school and learning after the last year, rather than opting for a punitive approach. Mentoring support should also be offered to pupils, particularly those from disengaged families or communities.

Newly arrived pupils should be also prioritised and offered targeted pastoral and learning support. Again, schemes including mentoring or “buddying” should be made available as well as support in developing English language and proficiency, including plenty of opportunities for speaking and listening.

Estimated cost: Neutral

x) Enable pupils to repeat a year if necessary and appropriate

The requirement or option to repeat a year is very rare in the UK. It is more prevalent in the US and some European countries where grade repetition is used for remedial purposes, usually where a pupil has not reached a set standard. In these contexts, the evidence of grade repetition shows a negative impact of around minus four months progress. The evidence also suggests that pupils who repeat a year are less likely to catch-up with their peers and more likely to drop out of school entirely.

Nevertheless, the context for repeating a year in these circumstances is clearly different and there is no evidence about its effectiveness following a prolonged period of school closures. The evidence does suggest that grade repetition can be effective in some circumstances and in the short-term.

There is, therefore, a case for allowing some pupils, in exceptional circumstances to repeat the academic year if, for example, they have missed longer periods of schooling due to needing to shield, either for their own health vulnerabilities or vulnerabilities within their household, or in cases where the pupil has undertaken very little or no remote learning and has fallen significantly behind their peers.

We do not expect this option to be taken up by the majority of pupils. Indeed, if a combination of all options explored/recommended in this paper are implemented, we consider that demand to repeat a year will be extremely low. Where it is implemented, it should be supported by high-quality teaching, monitoring of pupil progress and provision of pastoral care to support the pupil’s wider wellbeing needs. We would also expect this to apply to secondary pupils (and particularly those in Key Stage 4) only.

Estimated cost: £180m in total. This assumes a repeat rate of 0.5 per cent amongst secondary pupils only for two years, funded at £6000 per pupil.

⁶⁵ Jo Hutchinson and Whitney Crenna-Jennings, “Unexplained pupil exits from schools: Further analysis and data by multi-academy trust and local authority”, *Education Policy Institute*, October 2019

xi) Continue with softer accountability measures in 2021-22

Ofsted cannot expect schools to be operating a “business as usual” model when the evidence is clear that there has been a significant amount of lost learning time and some impact on pupils’ mental health and wellbeing. Ofsted inspections should focus on how well schools are supporting pupils following the pandemic. Inspections should look specifically at support for mental health and wellbeing, use of the new CPD fund and should also allow some flexibility when considering the curriculum choices of schools (e.g. if schools want to focus on core subjects on a temporary basis). In addition, Ofsted needs to take into account the context of schools, particularly those with large cohorts of disadvantaged pupils – contrary to its current approach.

The DfE has already confirmed that qualification grades achieved using alternative assessment arrangements in 2020 and 2021 will not be used to produce the normal suite of institution level performance measures. Even if formal exams are reinstated in the summer of 2022, we do not consider that the results will be reliable enough to produce fair and comparable performance tables. Performance tables should therefore continue to be suspended for the 2022 cohort.

Support in the Early Years

The evidence is clear that high quality early education and care plays a positive role in raising attainment and narrowing the achievement gap between children from disadvantaged backgrounds and their wealthier peers. EPI research has found that around 40 per cent of this gap is already evident by age 5.⁶⁶ For some groups of children, the gap is even more stark: children with SEND without a statement or Education and Health Care Plan (EHCP) and, therefore, likely considered to have less acute needs, are almost 10 months behind their peers by age 5.⁶⁷

The organisations and individuals who provide early education in England have faced considerable challenges in the last year. During the first national lockdown in 2020, early years settings had to restrict their provision to vulnerable children and children of key workers. During lockdown, the proportion of children attending early years dropped to 5 per cent of what would have been expected in the absence of a pandemic.⁶⁸ While attendance rates have increased since settings were allowed to reopen in June 2020, rates have consistently remained below levels seen before the pandemic, and were at 67 per cent on 4 March 2021.⁶⁹ This, along with the need to abide by social distancing measures and to close partially or fully when staff or children are forced to self-isolate, has led to a substantial blow to many settings' finances.

Early education providers remain highly reliant on Government support, which has come in many forms, and which some organisations suggest is insufficient for them to continue operating.⁷⁰ Crucially, low uptake has meant that settings have less income from both parents' fees and government-funded hours. Those settings which rely more heavily on parent fees for their income may be the most susceptible to financial instability, since much of the Government support available to providers in England in 2020 was contingent on Government-funded places.⁷¹ A survey in July 2020 found that just 45 per cent of open providers reported that they expected it to be financially sustainable to continue for another year or longer.⁷² From January 2021, financial support for settings for providing Government-funded places in England has returned to being based on the number of places a setting is registered to provide, likely leading to a significant reduction in Government spending on childcare.⁷³

⁶⁶ Jo Hutchinson, Mary Reader, and Avinash Akhal, "Education in England: Annual Report 2020", *Education Policy Institute*, August 2020

⁶⁷ Gillian Paull and Ivana La Valle, "Evaluation of the first year of the national rollout of 30 hours free childcare", *Department for Education*, September 2018.

⁶⁸ Luke Sibieta and Josh Cottell, "Education policy responses across the UK to the pandemic", *Education Policy Institute*, October 2020

⁶⁹ Department for Education, "Attendance in education and early years settings during the coronavirus (COVID-19) outbreak", May 2021

⁷⁰ Trades Union Congress & Institute for Public Policy Research, "A family stimulus: Supporting children, families and the economy through the pandemic", October 2020

⁷¹ Blanden, Jo, Claire Crawford, Elaine Drayton, Christine Farquharson, Megan Jarvie, and Gillian Paull. "Challenges for the childcare market: The implications of COVID-19 for childcare providers in England", *Institute for Fiscal Studies*, September 2020

⁷² Laura Hunnikin and Jonathon Blackburn, "Survey of Childcare and Early Years Providers and COVID-19", *Department for Education*, October 2020

⁷³ Claire Crawford and Christine Farquharson, "Today's early years census likely to reduce government spending on childcare significantly", *Institute for Fiscal Studies*, January 2021

In recognition of the importance of quality, particularly for the most disadvantaged children, we are making two recommendations in this area:

i) Increase funding for the Early Years Pupil Premium (EYPP), bringing it up to the same rate as primary aged pupils.

The EYPP is funded at a considerably lower rate compared with the Pupil Premium: £302 per child per year in pre-reception, compared to £1,345 in primary school. This current lower EYPP is not rational given that we know that around 40 per cent of the disadvantage gap is already evidence by age 5. The difference in the rate of support is not associated with any clear change in the costs associated with supporting disadvantaged pupils when children are aged five vs. aged four.

Alongside this, new research should investigate how it is being used by providers and the impact it is having on children.

Estimated cost: £400m over three years

ii) Fund a pilot study, including a robust evaluation, of nursery settings in England that will deliver integrated high-quality early education and care.

There is clear evidence that the quality of early years provision can have an impact on children. Yet the funding provided by the government to early years providers in England is below the OECD average of funding per child and the hourly rate has received criticism for not taking into account the costs involved in providing high-quality ECEC. Very little evidence is available on the impact of high-quality ECEC provision that is funded at a higher rate than what is currently provided through government entitlements.

A pilot study should fund integrated early education and childcare but at a higher price point than the government's current funding rate. It should fund 15 hours for some 2-year-olds in line with the current entitlement and fund 30 hours for all 3 and 4 year olds. Childminders could also play an important role in supplementing the hours both for 2 year olds (i.e. beyond the 15 hours per week) and for 3 and 4 year olds (if working parents need more hours during the day). Ideally the nursery, school or a childminding agency would help coordinate a network of childminders and establish strong relationships between early years settings and childminders.

The key features of the pilot should include:

- Staff working in the classroom with children are led by a Lead Teacher / Manager, supported by a teacher and staff holding full and relevant level 3 qualifications.
- There is one member of staff for every four 2-year-olds, and one member of staff for every eight 3 and 4 year olds. In addition to this, a nursery nurse is employed to provide one-to-one support to children with SEND.
- A Management & Oversight Lead is employed (with their time split across several settings) and an Office Manager is employed (with time split across settings).
- 10 per cent of staff time is earmarked for training, with the costs of temp staff factored in to cover this. A Staff Training Lead is employed part-time to oversee staff training.
- Enrichment activities are planned for children, costing £200 per registered place per year, plus dedicated time with a teacher.
- A teacher is employed (split across several settings) to conduct family support work.

We recommend that the pilot should include approximately 200 settings in disadvantaged areas in England. For settings to be eligible, at least 30 per cent of 3 and 4 year olds who attend must be eligible for the Early Years Pupil Premium. The full pilot, excluding the set-up year, should be at least three years long to allow the two year olds in the first cohort to reach EYFSP stage

Estimated cost: Around £83m over three years. This is the net cost of providing extra government-funded hours at a higher price point and then deducting the increase to the EYPP rates as described above.

Support in the 16-19 phase

Prior to the Covid-19 pandemic, the 16-19 sector faced steep challenges in relation to both funding sustainability and equity of access and destinations. The 16-19 phase saw the largest real-terms loss of funding in any phase of education since 2010/11, as well as less investment relative to other phases aimed at supporting disadvantaged groups, despite evidence that disadvantaged students fall further behind in this period.^{74,75} The gap in entry to universities between disadvantaged young people and their more affluent peers persisted despite a rise in the number of disadvantaged young people entering higher education, and the increasing proportion of young people choosing vocational pathways faced a challenging labour market, with a rise in zero hours contracts, and involuntary temporary or part-time work.⁷⁶

The pandemic now brings fresh challenges in relation to lost time on academic or work-based courses and apprenticeships and the risk of long-term unemployment for those leaving full-time education in a period of economic uncertainty. The overall number of young people not in education, employment or training (NEET) has risen slightly; however, this masks a significant rise amongst 18-to 24-year-old men to over 15 per cent – similar to levels seen in the aftermath of the financial crisis.⁷⁷

In this section, we focus on support for the 16-19 phase of education rather than Higher Education, as we consider that these younger students need greater support and are more likely to face challenges in entering the labour market before the age of 19.

Specific recommendations for a targeted approach to mitigate the inequitable impact of the pandemic and support young people during transitions, between the latter phases of education and out of education and into employment, are laid out below.

i) Extend the 16-19 Tuition Fund for a further two years

The government has already announced that funding for the 16-19 Tuition Fund will continue into 2021-22, bringing total spending up to £198m across 2020-21 and 2021-22. As with tuition for school-aged pupils, we think there is a strong case for funding to continue for a further two years. This is particularly important as, due to teacher assessed grades being used in place of GCSE exams in 2020 and 2021 (with uncertainty about the 2022 cohort), we are likely to see significant grade inflation amongst young people entering into 16-19 provision. This could mask their true attainment levels and therefore remedial support may well be needed in order to support young people to catch up. The government, in consultation with the sector, should consider ways in which tuition can be delivered more flexibly for this group, considering their age and their mix of academic and vocational qualifications.

Estimated cost: A further £204m across 2022-23 and 2023-24

⁷⁴ Gerard Dominguez-Reig and David Robinson, “16-19 education funding: trends and implications”, *Education Policy Institute*, May 2019.

⁷⁵ Sam Tuckett, David Robinson and Felix Bunting, “Measuring the disadvantage gap in 16-19 education”, *Education Policy Institute*, March 2021

⁷⁶ David Robinson, “Further education pathways: Securing a successful and healthy life after education”, *Education Policy Institute*, November 2019

⁷⁷ Office for National Statistics, “Young people not in education, employment or training (NEET)”, March 2021

ii) Provide funding to extend 16-19 courses for an additional year where there is demand

The risk of an economic downturn and high unemployment rates resulting from the pandemic means it is possible that many young people not continuing to university could leave education with limited prospects of employment. Many sectors which disproportionately employ people with vocational or lower-level qualifications have been hardest hit by the pandemic and may face long-term structural scarring. Entering the labour market during an economic downturn can have a long-lasting harmful impact on employment trajectories and associated outcomes like earnings, health and life expectancy.

To guard against this, we recommend that the Education and Skills Funding Agency should make additional funding available to extending provision, up to the end of year 14, where there is demand from students who would otherwise have completed their programme of study. This extra time would not only insulate young people against the adverse effects of the pandemic on the job market but also allow them to build upon existing qualifications and prepare for the transition to work, putting them at an advantage once they do enter the labour market.

Students should be funded at the same rates as years 12 and 13, although they may not require a full year. Post-16 settings should be able to bid to the ESFA for funding for these purposes.

At present, young people with an Education, Health and Care Plan can be funded to stay in education up to the age of 25. The ESFA should consider what further support these learners may need, including an extension to remain in education beyond the statutory entitlement where appropriate.

Estimated cost: £990m over three years, assumes that the policy is eligible to all year 13 pupils in each of the three years.

iii) Fund post-16 places in Alternative Provision

At present, there is no funding available to enable pupils in Alternative Provision (AP) to stay on in their setting after year 11. The statutory duty on local authorities to provide education to pupils who are too ill or unable to attend school only extends to 16, despite the participation age having been raised to 18.

According to the latest, pre-pandemic data, 60 per cent of pupils from alternative provision went to a sustained destination after GCSEs, compared with 94 per cent from state-funded mainstream schools.⁷⁸ Pupils in AP are disproportionately vulnerable and at-risk of poor outcomes, so requiring them to leave their current provision to go on to an FE college or employment following a significant period of lost learning time is likely to significantly increase their chances of becoming NEET. To mitigate this, the government should fund post-16 places in alternative provision to ensure continuity of support for vulnerable young people's learning and wellbeing. The government should also increase pre-16 funding in AP to better reflect the actual cost of providing education for these pupils.

Estimated cost: £263m over three years. This includes the cost of uplifting AP funding to £21,000 per pupil for all pupils and extending provision to 18 year olds.

⁷⁸ Department for Education, "Key Stage 4 destination measures", November 2020

iv) Fund a new 16-19 Student Premium

Exploratory EPI analysis has found that disadvantaged students are, on average, around 3 A Level grades behind their peers.⁷⁹ For persistently disadvantaged students, the gap increases to almost 4 A Level grades. While much of the gap is explained by pupils' prior attainment, the gap nevertheless grows during the 16-19 phase. Critically, these findings predate the Covid-19 pandemic and the resulting lost learning and disruption to exams, factors which may have exacerbated the disadvantage attainment gap.

For the disadvantage attainment gap to close, an increase in efforts to limit the impact of disadvantage during the 16-19 phase is required. Student-level disadvantage measures should be included within the 16-19 funding formula, alongside the area-based measures currently used. Introducing such funding as a 16-19 Student Premium, alongside the associated accountability and transparency requirements for providers, would help heighten the focus on disadvantaged students during this phase. The 16-19 Student Premium could be used to fund a combination of academic and enrichment support, including extra-curricular activities such as sport, music, drama and volunteering to rebuild engagement.

Estimated cost: £740m over three years covering disadvantaged students in years 12, 13 and, where applicable, year 14.⁸⁰

v) Target subsidies towards younger apprentices aged 18-24

The number of apprenticeships for young people (those under 25) were decreasing prior to the pandemic and this trend has accelerated. Compared with the same period last year, the proportion of apprenticeship starts taken up by 16- to 18-year-olds between August and October fell by 42 per cent and the proportion taken up by 16- to 18-year-olds at levels 2 and 3 fell by 45 per cent and 41 per cent respectively; the effects were smaller for apprentices aged 25+ overall at 15 per cent.⁸¹ The number of older apprentices at lower and mid-levels of study also fell, while the higher-level apprenticeships started by older apprentices rose by 12 per cent compared with last year.

Given these trends, policymakers must ensure that young people and new starters are prioritised in their recovery plans. In the recent budget, the government announced increases to employer incentives for apprenticeships: £4000 for the 16-18 age group and £3000 for all other groups. While increases are welcome, the funding would be most effective if targeted at all younger apprentices e.g. 16-18 year olds and 19-24 olds.

Estimated cost: We propose this is implemented in a cost neutral way, by paying for increased subsidies for 19-24 year olds through reduced subsidies for those aged over 24.

⁷⁹ Sam Tuckett, David Robinson and Felix Bunting, "Measuring the disadvantage gap in 16-19 education", *Education Policy Institute*, March 2021

⁸⁰ This work was produced using statistical data from ONS. The use of the ONS statistical data in this work does not imply the endorsement of the ONS in relation to the interpretation or analysis of the statistical data. This work uses research datasets which may not exactly reproduce National Statistics aggregates.

⁸¹ Kathryn Henahan, "Apprenticeships: why new starters are so important," *Times Educational Supplement*, January 2021

vi) Support for young people entering the labour market for the first time

There is a high level of uncertainty around the degree of long-term structural impairment to the economy as a result of the pandemic. International evidence from past economic downturns shows that young people leaving full-time education during recessions have more difficulty securing employment, especially in well-paid occupations.⁸²

Currently, programmes to support 16-24-year-olds are offered by both the Department for Education and Department for Work and Pensions, but they do not operate in tandem and are difficult to navigate for students and people who are unemployed, for employers and for colleges. The government should take a more joined-up approach to support 16-24-year-olds to navigate employment and education pathways and ensure incentives do not prevent higher take up of longer-term training (the current pilot to extend the length of time unemployed people can receive Universal Credit while undertaking work-focused study is a step in the right direction). This requires ongoing joint working between the Department for Education and Department for Work and Pensions to create programmes that complement each other.

⁸² Brian Bell, Mihai Codreanu, and Stephen Machin, “What can previous recessions tell us about the Covid-19 pandemic?”, *Centre for Economic Performance*, August 2020

Conclusion

Our proposals for education recovery and resilience are ambitious. But, as we set out in Chapter 1, the impact of the pandemic on lost learning, and therefore on young people's earning potential, contributions to public services and wellbeing, is significant and requires urgent attention and prioritisation.

Over the course of this Parliament, we estimate that the government needs to spend between £10-15bn on education and wellbeing interventions in order to support young people to get back on track. But additional spending of this scale can only be justified if the underlying set of activities and interventions actually do help pupils catch-up. As we set out in Chapter 3, the proposed package must be based on solid and robust empirical evidence as to their effectiveness. We must also be confident that we can recruit and retain the staff needed to deliver the package. This is no mean feat given the scale of package we are proposing. This strongly suggests that a multi-year package will be required. To enable activities, interventions and plans to begin from September 2021, this multi-year package will need to be put in place soon, and certainly well before the coming Spending Review this Autumn.

It is clear that a policy or funding package which only seeks to reverse the impact of the pandemic will not go far enough. In the summer of 2019, disadvantaged children were already over 18 months, on average, behind their more affluent peers by the time they sat their GCSEs. That gap was already starting to widen well before the onset of Covid-19. And so, we also recommend that support should continue beyond this Parliament, in order to address the inequalities that were already widening pre-Covid.

The additional spending that we are recommending should be accompanied with some accountability measures to ensure that the money is being targeted on evidence-based policies and to the pupils who are most in need. In our follow-up report later this year, we will be making further recommendations on how funding should be targeted and any new reporting mechanisms that should also be put in place.

Our follow-up report will also provide further consideration of the future of online learning and the National Tutoring Programme.

Addressing inequalities through wider public policies

We cannot leave schools alone with the responsibility to address societal inequalities. While they have an important role to play, evidence shows that factors outside of school are more important for children's educational and wellbeing outcomes.⁸³

The recovery programme must take into account the role of other local actors that support children and families, as well as target the root drivers of educational challenges and poor wellbeing. There are several examples of improved joint working between agencies at the local level, including

⁸³ Joseph Rowntree Foundation, "Poorer children's educational attainment: how important are attitudes and behaviours," March 2010

schools, and better understanding of vulnerability as a result of the challenges of the pandemic – and the government should seek to support this moving forward.⁸⁴

The government should also seek to address inequalities through wider public policies including:

Increasing funding for wider children’s services: Analysis by the Institute for Fiscal Studies found that local authority spending on children’s services was cut by 20 per cent per child in real terms between 2009/10 and 2019/20; this includes a cut of £1bn to Sure Start Children’s Centres and £900m to youth services.⁸⁵ Separate research conducted by the Sutton Trust found that around 1000 Children’s Centres have closed since 2009.⁸⁶ Cuts have been focused outside of so-called late intervention services (looked after children’s and safeguarding services), with some research showing significantly more pronounced cuts in more deprived areas.⁸⁷ Given the impact of the pandemic on the wellbeing of many children and families, accessible and robust local support services are even more necessary.

Increase funding for and access to CAMHS: The £79 million recently announced for children and young people’s mental health, part of the wider £500 general mental health funding package, is a positive first step, but more investment is necessary to address pre-pandemic and widening gaps in available support. Before the pandemic, despite some progress in recent years, services were failing to meet the level of need: only around a third of children with a diagnosable mental health condition were accessing specialist treatment. Since the advent of COVID-19, the prevalence of mental illness has risen from one in nine to one in six young people and referrals to CAMHS have risen by 70 per cent compared to 2019 figures. It is unclear if these are long-term shifts, and the government should continue to closely monitor prevalence and referral data. Unaddressed mental health issues can present as behavioural issues in the classroom and are linked to poor attainment and can adversely affect a range of later outcomes including employment prospects and social relationship and health and wellbeing.⁸⁸ There also needs to be a sharp focus on children and young people who are at greater risk of not securing a referral to CAMHS services, particularly those from minority ethnic backgrounds and non-English speaking families.

An urgent and serious child poverty strategy that seeks to bring down the number of families in poverty: There is a wealth of evidence about the impact of poverty on educational outcomes and mental health and wellbeing. Even before the pandemic, relative child poverty had increased from 27 per cent in 2011–12 to 30 per cent in 2018–19 (after housing costs) and, left unaddressed, risks rising further as the impact of the pandemic continues.

⁸⁴ Ben Bryant, Natalie Parish, and Andrew Bunyan, “ Better connected: How local education and children’s services in England have responded to the pandemic”, *Isos Partnership & Local Government Association*, March 2021

⁸⁵ Elaine Kelly, Tom Lee, Luke Sibieta, and Tom Waters. “Public spending on children in England: 2000 to 2021”, *Children’s Commissioner*, June 2018.

⁸⁶ Smith, George, Kathy Sylva, Teresa Smith, Pam Sammons, and Aghogho Omonigho. “Stop Start: Survival, decline or closure”, *Sutton Trust*, April 2018.

⁸⁷ Webb, Calum JR, and Paul Bywaters. “Austerity, rationing and inequity: trends in children’s and young peoples’ services expenditure in England between 2010 and 2015.” *Local Government Studies* 44, no. 3 (2018): 391-415.

⁸⁸ Margaret Murphy and Peter Fonagy, “Mental health problems in children and young people”, *Annual Report of the Chief Medical Officer*, 2012

There are many documented mechanisms through which poverty affects child outcomes⁸⁹: toxic stress in the early years of life which affects the architecture of the developing brain, material deprivation and lack of nutritious food and toys and games for cognitive development, poor housing and home learning environment, parental stress which affects family functioning and quality of relationships, and lack of access to private tutoring and structured extra-curricular activities. Once in school, disadvantaged young people tend to encounter psychological stressors including a disconnect between the home and school environment, a low sense of belonging, loss of control, and role model visibility, and stereotype threat. They are treated differently, on average, by schools and teachers, including being marked down and placed in bottom streams, regardless of prior attainment, and are less likely to have access to a broad curriculum, enrichment activities and robust careers guidance.

We need to go beyond addressing mechanisms and develop a strategy to address the root cause. This strategy must go beyond getting parents into work, given the substantial rise of in-work poverty over the last two decades; prior to the pandemic, more than half of people living in poverty were in a household where someone worked.⁹⁰

Education Recovery Plans in Wales, Scotland and Northern Ireland

Whilst our proposals are focused on education recovery in England, there are also strong implications for addressing the similar set of challenges facing policymakers in Wales, Scotland and Northern Ireland.

First, if the UK government were to allocate £10-15bn for a multi-year education recovery package in England, this would result in additional funding for the devolved administrations through the Barnett formula:

- Scotland - £1bn-£1.5bn
- Wales - £600m-£900m
- Northern Ireland - £350m-£500m

Just as with the figures for England, these represent useful benchmarks for how much is likely to be needed in total in each country for education recovery.

Many of our recommendations are relevant to all countries, such as a need for a focus on the quality of provision, continuous professional development, disadvantaged learners and well-being. The precise plans will, however, need to be suited to the specific challenges and context in each country. For example, policymakers in Wales will undoubtedly want to place a high emphasis on professional development in preparation for the rollout of the new curriculum from 2022. In Scotland, policymakers will also need to respond to a major report by the OECD on the Curriculum for Excellence, due to be published in June 2021. In Northern Ireland, policymakers will need to respond to an ongoing review of educational under-achievement and have already placed a high emphasis on a resumption of youth services in light of recent violence.

⁸⁹ Whitney Crenna-Jennings, “Key drivers of the disadvantage gap: Literature review”, *Education Policy Institute*, July 2018

⁹⁰ Dave Innes, “What has driven the rise of in-work poverty?”, *Joseph Rowntree Foundation*, February 2020

Our concluding report in September will provide further estimates of lost learning, using the most recent data. This, in turn, will enable us to formulate advice about how funding should be targeted and weighted towards the pupils, schools and local areas most in need. The report will also look in detail at specific policy interventions, including the role of the National Tutoring Programme and the evolution of digital learning.

Appendix A – Projecting long-run costs of lost learning

This appendix describes the methods and data sources we use to estimate the long-run costs of lost learning. The calculations involve various assumptions about highly uncertain factors and should thus be viewed as illustrative of the scale of the likely effects, rather than precise point estimates.

Cost of lost learning

To calculate the costs of lost learning, we make assumptions about three factors multiplied together:

Months of lost learning x Relative effectiveness of lost schooling x Effect of on lifetime earnings

To calculate the months of lost learning, we make broad assumptions about weeks of lost normal schooling. First, we assume that pupils missed about 14 weeks of normal schooling in the 2019-20 academic year given that there were about 14 weeks of school left when schools were closed to most pupils in March 2020. Second, we assume that pupils missed about 9-10 weeks of normal schooling in the 2020-21 academic year. This includes about 1 week of normal schooling in the 2020 autumn term for primary school pupils and 2 weeks for secondary school pupils.⁹¹ It then includes 8 weeks of normal schooling across the 2021 spring term up to March 8th 2021 when schools began to return. This equates to about 23 weeks for primary school pupils and 24 weeks for secondary school pupils, or about 23.5 weeks on average and about 60 per cent of a normal 39-week school year.

There will be a lot of variation around this average. Pupils in Reception (as of September 2021) will have lost less schooling time as they were not in school until September 2020, though many will have lost time in early years settings in Spring 2020. Many Year 12 pupils (as of September 2020) would have been on exam leave for much of the 2020 summer term in a normal year. Some pupils were also able to return to school from June 2020, though this only applied to some year groups (Reception, years 1, 6, 10 and 12). Attendance rates of returning year groups were also relatively low, about 30 per cent on any given day for the primary school year groups and 10-15 per cent for the returning secondary school year groups.⁹² During the 2020 autumn term, many pupils will also have missed much more schooling if they had to self-isolate for one or more occasions.⁹³

With this large variation and uncertainty in mind, we adopt three different scenarios for lost learning. These are based on the range of lost learning observed across studies in the 2020 Autumn term after 14 weeks of lost normal schooling. Effectively, we assume the same rate of lost learning occurred over 23.5 weeks as seemed to occur after 14 weeks.

These are then multiplied by a rate of return to a year of schooling (8%) based on the average rate of return to schooling across high-income countries.⁹⁴ The three scenarios are then as follows:

- **Optimistic scenario** (remote schooling is 80 per cent as effective as normal schooling): Pupils are just over a month behind. This reduces lifetime earnings by 1% ($0.6 \times (1-0.8) \times 0.08$).
- **Central scenario** (remote schooling is 50 per cent as effective as normal schooling): Pupils are about 3-4 months behind. This reduces lifetime earnings by 2.4% ($0.6 \times (1-0.5) \times 0.08$).

⁹¹ <https://www.childrenscommissioner.gov.uk/report/school-attendance-since-september/>

⁹² <https://epi.org.uk/publications-and-research/education-responses-uk-pandemic/>

⁹³ <https://epi.org.uk/publications-and-research/school-attendance-2020-autumn-term/>

⁹⁴ 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](https://doi.org/10.1080/09645292.2018.1484426)

- **Pessimistic scenario** (remote schooling is 30 per cent as effective as normal schooling): Pupils are 5 months behind. This reduces lifetime earnings by 3.4% ($0.6 \times (1-0.3) \times 0.08$).

Effects on lifetime earnings

To calculate the effects on lifetime earnings, we must multiply these scenarios by an estimate of lifetime earnings. However, projecting lifetime earnings for today's young people involves making a number of assumptions about the level and dynamics of highly uncertain economic factors for the next 50-60 years. It also requires one to make some strong assumptions about how society values income for today's adults relative to today's children when they become adults.

We therefore adopt two (quite different) values for average lifetime earnings of child in school today: £780,000 and £1.5m. The lower value is based on a discount factor of 3/3.5 per cent, the value used in the government's Green Book for evaluation methods.⁹⁵ The higher value is based on a discount factor of 0.7%, the same used by the government to value student loan repayments.

Both draw on modelling of lifetime earnings conducted by IFS researchers.⁹⁶ This analysis provides projected gross lifetime earnings for men and women with and without higher education qualifications. The group without higher education qualifications is, however, selected to only include individuals with a Key Stage 5 record, which is likely to upwardly bias the level of lifetime earnings relative to all individuals without higher education.

To get an average value, we therefore combine the figures for men and women with and without higher education based on the share of 25-29 year olds with a qualification at Level 3 or above (71 per cent of men and women) and the share of 25-29 year olds with a qualification at Level 4 or above (51 per cent).⁹⁷ This provides an average value for the selected sample under the two different discount rates.

We then downrate these figures to account for the sample selection criteria. In particular, we use the Labour Force Survey to calculate the average difference in gross earnings (including zeros for those not working) between the whole population and those with qualifications at Level 3 or above. This leads us to downrate our average values for lifetime gross earnings by 25 per cent.

The last factor we must account for is the fact that these IFS projections relate to a cohort aged 19 in 2019. To account for real earnings growth over time for today's school children, we allow for 9 years of earnings growth of 1.5% per year up to 2028, when the middle cohort of today (Year 6) will be turning 19. The figure for long-run earnings growth is based on the OBR Fiscal Sustainability Report from July 2020.⁹⁸

We then calculate a total figure for all pupils based on the number of pupils in reception through to year 13 in England in January 2020.⁹⁹

⁹⁵ <https://www.gov.uk/government/publications/the-green-book-appraisal-and-evaluation-in-central-government>

⁹⁶ Britton, J., Dearden, L., van der Erve, L. and Waltmann, B. (2020), "The impact of undergraduate degrees on lifetime earnings," IFS Research Report (<https://www.ifs.org.uk/publications/14729>).

⁹⁷ <https://explore-education-statistics.service.gov.uk/find-statistics/education-and-training-statistics-for-the-uk/2020>

⁹⁸ <https://obr.uk/fsr/fiscal-sustainability-report-july-2020/>

⁹⁹ <https://explore-education-statistics.service.gov.uk/find-statistics/school-pupils-and-their-characteristics>

Appendix B – estimated costs of proposals

		2021-22	2022-23	2023-24	Total (millions)
Early years	Increase the early years pupil premium to £1,345 Number of children eligible for the early years pupil premium in each year assumed to be the same as the number of 3- and 4-year-olds eligible in January 2020 (https://explore-education-statistics.service.gov.uk/data-tables/permalink/c4cb6884-0705-4f2f-a978-3717fb38809e). Current rate £302.	£110	£110	£110	£330
	Pilot high quality early years Assumes that eligible 2-year-olds are funded at £11.85 per hour for 15 hours and 3- and 4-year-olds are funded at £7.17 for 30 hours across 200 pilot settings. The total cost is approx £53m but once we net off existing free entitlement funding and the increase to the EYPP, the net annual cost is around £27.7m. We then assume 50% funding in year 1 for start-up costs.	£15	£30	£30	£75
Schools	A new Continuous Professional Development (CPD) fund for teachers Assumes cost of CPD intervention of £80 per pupil (based on examples within the EEF Teaching and Learning Toolkit - https://educationendowmentfoundation.org.uk/evidence-summaries/teaching-learning-toolkit/) with the equivalent of two interventions per pupil over 2021-22 to 2023-24. Pupil numbers based on headcount of pupils in Years R-11 in state-funded primary, secondary, and special schools and PRU/alternative provision in January 2020 (approx 7.5m pupils). Roll-out is backloaded in the ratio 1:2:3 over the three years.	£200	£400	£600	£1,200
	Summer schools Assumes a cost of £600 per pupil in mainstream position and £1,800 for pupils in special schools and alternative provision (https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/975835/Summer_schools_guidance.pdf). In 2021-22 the expansion is assumed to be in secondary schools only net of £200m already announced for summer 2021. Pupil numbers based on headcount of pupils in Years R-1 in state-funded primary, secondary, and special schools and PRU/alternative provision in January 2020 (approx 7.5m pupils). Assumed take up of 50% amongst pupils eligible for FSM and 25% amongst non-FSM, with a £300 contribution to the cost from non-FSM pupils.	£140	£930	£930	£2,000
	Extended schools Assumes the cost of a once a week session for 39 weeks of £300, and assume two sessions per pupil (i.e £600 in total) (https://educationendowmentfoundation.org.uk/evidence-summaries/teaching-learning-toolkit/extending-school-time/) with pupils who are not eligible for free school meals making a £300 contribution towards costs. Pupil numbers based on headcount of pupils in Years R-11 in state-funded primary, secondary, and special schools and PRU/alternative provision in January 2020 (approx 7.5m pupils) with assumed take up of 100% for pupils eligible for free school meals and 50% for pupils who are not eligible for free school meals. 20% pilot in 2021-22	£350	£1,750	£1,750	£3,850

	2021-22	2022-23	2023-24	Total (millions)
Repeating a year	£90	£90	£0	£180
Assumes applies to secondary school pupils only at a take-up rate of 0.5% with per pupil funding of £6,000. Pupil numbers based on headcount of pupils in Years 7-11 in state-funded secondary schools. Intended to target those most affected by the pandemic and as such only relates to the next two years.				
Tuition	£0	£170	£170	£340
Assumes that announced expenditure in 2021-22 is repeated in each of the following two years. Consists of programme management cost of £62m for May 2021 - August 2022 (https://www.contractsfinder.service.gov.uk/notice/cd9bd44c-daf1-4896-9366-12ae70f77670?origin=SearchResults&p=1) pro-rated to 12 months, with the addition of £120m per year in subsidy payments. The related procurement documents suggest that subsidies would reduce in later years, we have assumed held constant.				
Extend the pupil premium to all those with a child protection plan	£130	£130	£130	£390
Assumes the pupil premium rate for CPP pupils will be the same as that for LAC - currently £2,345 but we have proposed a general increase in the pupil premium of 10%, i.e. increase to £2,580. Number of pupils with CPP taken from https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/843046/Characteristics_of_children_in_need_2018_to_2019_main_text.pdf and rounded to 50,000 due to uncertainty given age of this estimate. We have no data on the overlap between CPP and current eligibility for the pupil premium, therefore we have assumed no overlap and hence this is likely to be a slight overestimate of the true cost.				
Increase the pupil premium by 10 per cent	£240	£240	£240	£720
Estimate derived from total pupil premium allocations in 2020-21 https://www.gov.uk/government/publications/pupil-premium-allocations-and-conditions-of-grant-2020-to-2021 . In other words, this assumes pupil premium numbers remain flat over the next three years, but numbers may have increased further. Allocations for 2021-22 will be published in June 2021.				
Mental health support worker in schools	£250	£500	£750	£1,500
Assumes one MH support worker in each state-funded secondary school, alternative provision / PRU, FE college, and sixth form college and one in every two state-funded primary schools. School and college numbers taken from https://www.gov.uk/government/statistics/schools-pupils-and-their-characteristics-january-2020 and https://www.aoc.co.uk/about-colleges/research-and-stats/key-further-education-statistics . Yearly cost per MH support worker of salary and on-costs assumed at £60,000. Roll-out assumed to take three years with one third of institutions added each year.				
Extra payments for teachers in challenging areas	£45	£45	£45	£135
Based on an estimate of £55m calculated in 'Teacher shortages in England: analysis and pay options' https://epi.org.uk/publications-and-research/teacher-shortages-in-england-analysis-and-pay-options/ (page 40) net of £10m of existing expenditure trialling similar schemes https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/752202/Budget_2018_reduced_web.pdf				

		2021-22	2022-23	2023-24	Total (millions)
Post-16	Extend 16-19 for a year as optional Assumes that twice the number that currently stay to year 14 do so (https://www.gov.uk/government/statistics/participation-in-education-training-and-employment-2019 - table 4 and 4a), that students stay on average for an extra 6 months, and that students are funded at the overall average rate for FE colleges (https://www.ifs.org.uk/publications/15150 - table 4.4).	£330	£330	£330	£990
	Extend tuition for another two years Assume funding for 21-22 is extended for two years (https://www.gov.uk/government/news/new-education-recovery-package-for-children-and-young-people)	£0	£100	£100	£200
	16-19 Student Premium Assumes the secondary school pupil primum rate (£955) is continued into 16-19 education. Uses the Key Stage 4 definition of PP eligible students to continue into 16-19. Assumes twice the number in year 14, and those additional students continue for 6 months on average, to account for our proposal to extend 16-19 for an extra year. Figures derived directly from NPD analysis.	£290	£290	£290	£860
	Greater subsidies for 18–24-year-olds on apprenticeships Assume cost neutrality as levy subsidies are moved from 24+ apprenticeships to 16-18 and 18-24 apprenticeships	£0	£0	£0	£0
Alternative provision	Extend alternative provision to post-16 settings Assumes that students who were in alternative provision in year 11 move into post-16 AP for a period of three years. Number of students based on the headcount of aged 15 pupils in AP in January 2020 (https://explore-education-statistics.service.gov.uk/data-tables/permalink/51f243ee-ed98-44d7-a1f7-644f05fa3774) multiplied by 0.6 to reflect that 40% of students are currently estimated to reach sustained educational pathways. The number of students in AP is assumed to grow in line with recent year on year trends (around 15 per cent per year). Expenditure is assumed to be £18,000 per place based on estimates of current provision (https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/752548/Alternative_Provision_Market_Analysis.pdf)	£60	£120	£200	£380
	Increase expenditure in alternative provision by £3,000 per place per year Student numbers based on all students aged 15 and under in alternative provision in January 2020 and (https://explore-education-statistics.service.gov.uk/data-tables/permalink/51f243ee-ed98-44d7-a1f7-644f05fa3774) post 16 numbers derived as per assumptions in our costings for extending AP to post-16. The number of students in AP is assumed to grow in line with recent year on year trends (around 15 per cent per year).	£90	£110	£140	£340
Total		£2,340	£5,345	£5,815	£13,490

Appendix B can also be accessed in a separate document [here](#).

