Institute for Fiscal Studies

IFS Report R195

Sarah Cattan
Christine Farquharson
Sonya Krutikova
Angus Phimister
Adam Salisbury
Almudena Sevilla

Home learning experiences through the COVID-19 pandemic

Economic and Social Research Council

Nuffield Foundation

Home learning experiences through the COVID-19 pandemic

Sarah Cattan
Christine Farquharson
Sonya Krutikova
Angus Phimister
Adam Salisbury
Almudena Sevilla

Copy-edited by Judith Payne

Published by **The Institute for Fiscal Studies**

7 Ridgmount Street
London WC1E 7AE
+44 (0)20 7291 4800
mailbox@ifs.org.uk
http://www.ifs.org.uk/
@TheIFS

ISBN 978-1-80103-054-0

Preface

The authors are grateful to the Nuffield Foundation for funding this work under grant EDO/FR-000022584. The Nuffield Foundation is an independent charitable trust with a mission to advance social well-being. It funds research that informs social policy, primarily in Education, Welfare and Justice. It also funds student programmes that provide opportunities for young people to develop skills in quantitative and scientific methods. The Nuffield Foundation is the founder and co-funder of the Nuffield Council on Bioethics and the Ada Lovelace Institute. The Foundation has funded this project, but the views expressed are those of the authors and not necessarily the Foundation. Visit www.nuffieldfoundation.org.

The support of the ESRC Centre for the Microeconomic Analysis of Public Policy (ES/T014334/1) is also gratefully acknowledged.

The authors would like to thank other members of the research team who collaborated on the data collection: Alison Andrew, Monica Costa Dias and Lucy Kraftman. Finally, they wish to thank all of the parents who gave up their time to complete the survey during the pandemic.

Contents

Executive summary

The COVID-19 pandemic has dealt a monumental blow to the education of English school children. Over the past 18 months, English school pupils experienced two long periods of nationwide school closures. The first round of universal school closures lasted 10 weeks (from 23 March to 1 June 2020); some pupils were not able to return to school until the start of September that year. This unprecedented action was repeated at the start of 2021, with pupils across England sent home for 9 weeks (from 5 January to 8 March 2021). Even when schools were open outside these periods, in-school provision was hampered by social distancing protocols, staff shortages and self-isolation.

There is growing evidence that disruption during the pandemic has undermined children's education and increased inequalities between those from disadvantaged backgrounds and their better-off peers. So far, most of the evidence focuses on the initial period of school closures in Spring 2020. But as teachers and pupils start a new academic year, understanding how children's experiences changed over the course of the pandemic – and how these experiences differed for those from different backgrounds – will be an important step in assessing the extent of learning loss, and what can be done to help pupils to catch up.

Learning throughout the pandemic

In this report, we therefore examine how the learning experiences of English school children evolved over the course of the first 12 months of disruption, from the beginning of the first lockdown in March 2020 until the end of the second period of school closures in March 2021. We consider learning experiences during both periods of nationwide school closures as well as during the 2020 autumn term – when schools were open but periodically disrupted. Specifically, we look at how learning time changed between the closures, the extent of self-isolation during the autumn, and the nature of school remote learning provisions throughout. We also examine how inequalities between richer and poorer pupils evolved over the course of the pandemic, and what this implies about catch-up policies in the future.

To do this, we use data from two online surveys that were administered to parents of English school children during the two phases of closure. This gives us real-time insights into how parents and pupils coped during these periods of unprecedented disruption. In the second survey, we also asked recall questions about the 2020 autumn term, to get a sense of how schools and families coped when schools were open but disrupted – a model that has since characterised the 2021 spring and summer terms as well.

Understanding how learning experiences changed in the 12 months since the first round of school closures gives an important indication of the extent to which parents, pupils and schools adapted as the pandemic progressed. The findings of this report can help shape policies aimed at helping students 'catch up' as schools return to more familiar modes of education delivery, as well as ensuring appropriate access to education in a likely future of continued disruption because of self-isolation.

Key findings

1 **Home learning in early 2021 was more successful than during the first period of school closures.** Among out-of-school pupils, learning time rose from 22 hours a week in April/May 2020 to 26 hours a week in February/March 2021 for primary pupils (22 to 29 hours a week for secondary pupils). The quality of learning time also improved. Schools were far more likely to offer active learning resources; while 40% of children were offered online classes during the first round of school closures, this rose to 67% by February/March 2021. Children were more likely to have access to tablets and laptops, and parents reported finding it easier to support home schooling.

2 **However, even in the second round of school closures, home learning still fell below policymakers' expectations.** In early 2021, the Department for Education introduced guidelines for the minimum daily amount of time children should spend on remote learning. However, around 40% of pupils did not meet the suggested amount of time during the second period of school closures.

3 **Even when national school closures were lifted, learning time continued to be disrupted, largely due to extensive self-isolation.** On average, children in our survey lost out on 8 days of in-school instruction during the 2020 autumn term because they needed to self-isolate (compared with less than 3 days of absence per term in pre-pandemic times). When they were isolating, most children had limited resources to continue to learn at home: just 40% of pupils had access to interactive learning resources when asked to self-isolate during the 2020 autumn term. This is a substantial fall from the 55% of pupils who had been offered such resources during national school closures the previous term.

4 **Inequalities in remote learning time between richer and poorer children improved between the two rounds of school closure, with little if any gap in learning time during early 2021.** This was driven by an improvement in home learning experiences for poorer children, with substantially improved access to online learning resources (and to the technology needed to access them). Expanded access to in-person schooling also meant that some children who struggled with remote learning had the option to attend school in person.

5 **However, during the autumn term, poorer pupils spent longer in self-isolation, and had less access to school provisions when doing so.** This suggests that inequalities may have worsened outside of the periods of school closure – including since March 2021.

6 **Targeted interventions are probably essential to closing educational inequalities.** During the second round of school closures, inequalities in home learning experiences started to close, so disadvantaged students had a more similar experience to their better-off peers. However, on their own, similar experiences going forward are unlikely to be enough to offset the educational gaps that opened up during the first period of school closures.

7 **Catch-up policies need to be carefully designed to meet the scale of the challenge, as well as targeting the pupils most in need.** After a year of COVID-related disruption to education, 25% of parents

think their child will take at least a school year to catch up on lost learning; 7% think that their child will never catch up. While most parents support tutoring, parents of richer pupils are more likely to have taken up the offer of catch-up tuition. Catch-up policies need to be carefully designed and incorporated into the school day where possible, to ensure that they are accessed by the pupils who stand to benefit the most.

1. Introduction

Schools, teachers and pupils are preparing for the start of a new school year. They – along with policymakers, parents and the rest of the population – will be hoping that the public health situation allows for schooling to proceed much more normally than it has done for the past 18 months. However, the start of this school year is also a chance for schools to take stock of what the disruption since March 2020 has meant for children's education, and what can be done to help them recover from lost learning and get back on track.

The first national lockdown, in March 2020, was marked by blanket national school closures (with only children of key workers and the most vulnerable allowed to continue to attend school in person, for childcare). There is a large and growing body of evidence showing that the learning experiences of children during the first round of school closures fell far below the standards of their pre-pandemic experiences (e.g. Andrew et al., 2020; Cullinane and Montacute, 2020). Further, the abrupt transition to home learning was a surprise to most schools, parents and pupils – meaning that it favoured those who already had resources in place that could be repurposed towards remote education. This contributed to a substantial widening of educational inequalities between those from disadvantaged families and their better-off peers (Rose et al., 2021; Renaissance Learning and Education Policy Institute, 2021a).

While this first period of school closures was unprecedented at the time, the situation would repeat itself in early 2021, when – during the third national lockdown – schools again closed to most pupils. This second round of school closures was announced very suddenly, with children returning to schools for a single day following the Christmas break before being sent home again. Still, families, schools and policymakers had had more time to get used to remote learning and may have been able to adapt to learning outside the classroom. There was also a much greater effort from policymakers to establish expectations of what remote learning should look like, and to provide at least some resources to help pupils access it.

Between these two periods of school closures, pupils were allowed to return to school. However, their daily experiences likely felt far from normal, with social distancing measures and self-isolation periods affecting the nature and intensity of in-school provision.

Now, at the start of a new academic year, it is vital for schools, teachers and policymakers to understand the scale of learning loss over the past 18 months in order to design policies to support children to catch up. Understanding how learning experiences evolved over the course of the pandemic is critical to estimating the scale of learning loss. Did pupils learning remotely continue to fare as badly during the second round of school closures as they did during the first? Or were families, schools and policymakers able to adapt to remote learning over the course of the pandemic? And were children able to catch up on some of their lost learning during the 2020 autumn term, or did they instead fall further behind during this period?

To shed light on some of these questions, we use data collected in two online surveys of parents of English schoolchildren. The first survey, in April/May 2020, asked 5,400 parents about their experiences during the first round of school closures. In February/March 2021, we followed this up by asking a different group of 6,100 parents about their experiences during the second round of school closures, as well as over the previous autumn when schools were open. In both surveys, we asked parents about how much time their children had spent on different learning activities, what resources they had been provided with, and how easy they found supervising home schooling.

Chapter 2 provides further detail about our data sources and samples of analysis, and also contextualises the time frame of each survey. In Chapter 3, we examine how learning experiences changed between the first and second rounds of school closures – documenting both changes in learning time and changes in the home environment. In Chapter 4, we examine how children fared during the 2020 autumn term, when schools were open but periodically disrupted. Chapter 5 looks at the different experiences of pupils from more and less disadvantaged backgrounds throughout the pandemic, both during and outside periods of nationwide closures. Chapter 6 documents parents' concerns about learning loss, as well as initial inequalities in provision of and access to catch-up tuition. Chapter 7 brings together these findings, drawing out specific policy recommendations that our analyses support.

2. Data sources

In this report, we rely primarily on a dedicated survey that asked parents about their family's experiences of home learning during the pandemic. We supplement this with additional survey data collected before the pandemic, to provide information about learning experiences in more normal times.

2.1 Survey of home learning experiences

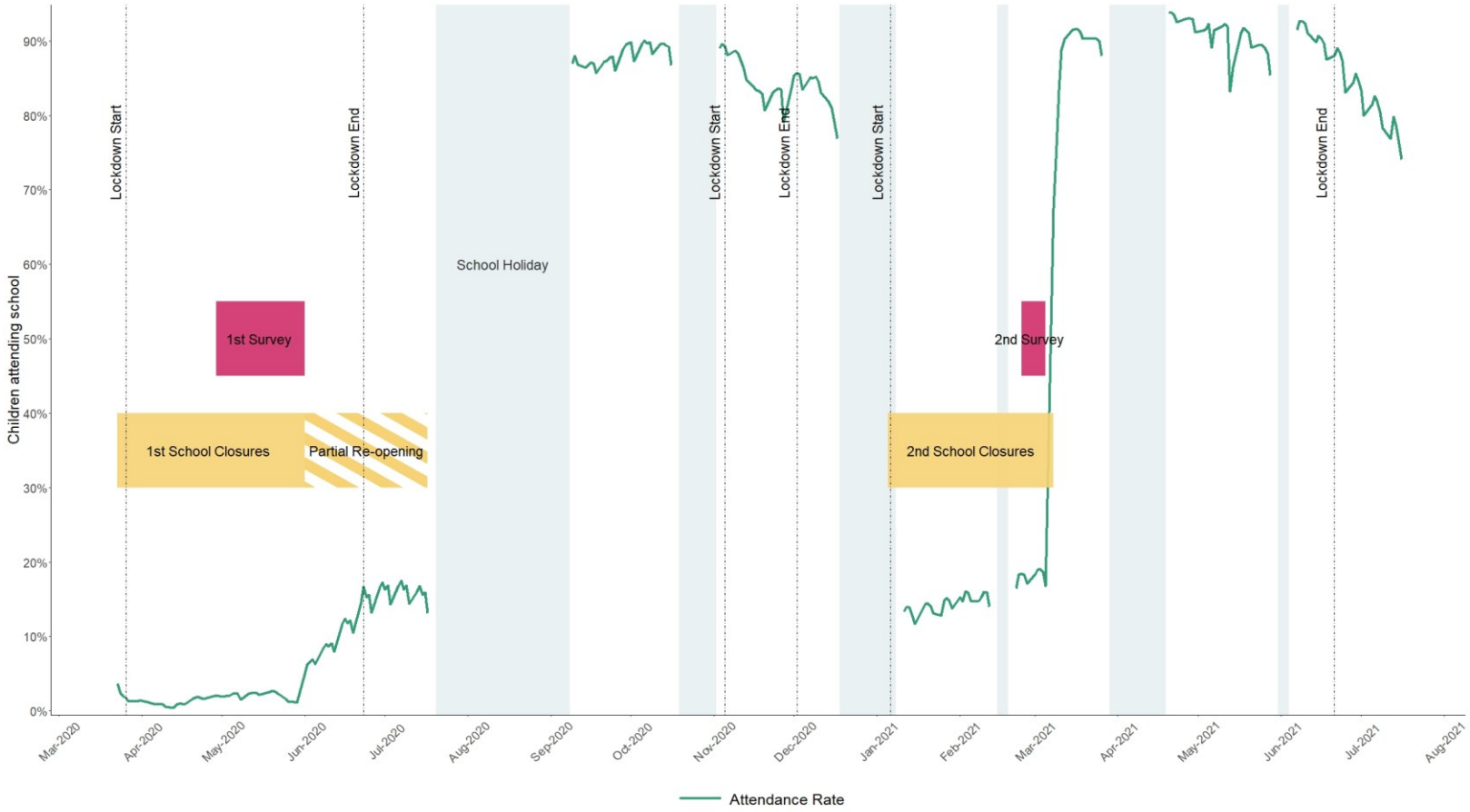
As Figure 2.1 shows, there have been two periods of blanket national school closures in England: from 23 March until 1 June 2020, and from 5 January to 8 March 2021. The Institute for Fiscal Studies and the Institute of Education together conducted an online survey during each period (referred to as the 'IFS–IoE survey').

Our first (wave 1) survey began on 29 April 2020, running until the partial reopening of schools on 1 June.[1] It gathered responses from 5,401 parents, selected to be diverse in terms of their gender, location, employment status, marital status and educational qualifications. In 2021, we recruited a separate group of 6,095 parents to respond to our wave 2 survey, which was administered between 23 February and 5 March 2021 – the tail end of the second national school closure. Hence, both surveys offer crucial 'snapshots' into the experiences of parents and children during these periods of unprecedented disruption.

Our wave 2 survey also asked recall questions about children's experiences in the autumn term, i.e. in-between our sample periods. We did this to provide a more comprehensive overview of learning experiences throughout the pandemic, and – in particular – what this might imply for inequalities between different groups.

[1] The partial reopening saw the vast majority of schools reopen, at least for some children. Schools were initially asked to prioritise children in certain year groups, but a significant minority of children in non-priority year groups also returned to school at least part-time during this period. However, since the decision to return was voluntary, attendance rates remained relatively low: for example, less than half of primary school children who had the opportunity to return to school chose to do so (Cattan et al., 2021).

Figure 2.1. Overview of the timeline of COVID-related educational disruption in England



Source: Attendance data drawn from '[Attendance in education and early years settings during the coronavirus (COVID-19) outbreak]'.

Survey recruitment

The survey recruitment and administration were conducted by an established online survey company, which recruited parents from its pool of existing respondents.[2] In wave 1, we focused on parents of children in Reception and in Years 1, 4, 5, 8, 9 and 10.[3] In wave 2, we dropped this focus (in part because of changes to the national assessment regime during the pandemic), so this survey targets parents with children in any year of primary or secondary school.

Survey content

In both surveys, we asked parents about their experiences of home learning, as well as the experiences of one of their school-age children selected at random. To enable reliable comparisons across waves, we ensured that the phrasing and layout of the questions remained broadly similar across the two surveys.

To measure children's learning time, we asked parents how much time their child had spent per week on different learning activities via a series of 'sliding scale' questions. We removed obvious outliers, such as parents who had selected the maximum possible time (60 hours) for any activity.[4]

To get a sense of the child's home learning environment, we asked parents whether their child had been provided with different home learning resources (e.g. online classes) by their school at various times during the pandemic. We also asked whether they had access to a private study space at home and whether they had access to a laptop/tablet whenever needed. Finally, we asked about parents' own perceptions of home learning, such as whether they had found it easier to home school during the 2021 school closures than during the first round of closures in 2020.

[2] Parents received a small payment in compensation for their time. We aimed for the survey to be around 25 minutes: the median completion times for wave 1 and wave 2 were 22 minutes and 29 minutes respectively.

[3] We focused on these year groups because we plan to link some of our sample to the National Pupil Database, and these year groups correspond to children who will have national attainment results at the end of a Key Stage (Reception and Years 2, 6 and 11) within 1–3 years.

[4] Specifically, we drop any observation that recorded a weekly learning time above the 95th percentile for any of the learning activities. Though it varies by activity, the 95th percentile corresponds to around 50 hours per week. As a result of this procedure, we drop 463 observations in wave 1 and 868 in wave 2.

We also collected information on families' characteristics to help understand how experiences of home learning differed across children from different family backgrounds. In this report, we focus on differences in socio-economic status, which we identify using data on pre-pandemic family earnings adjusted by the number of adults and children in the household. We categorise children into different socio-economic groups, such as whether their family was in the top or bottom fifth of families based on this measure of pre-pandemic equivalised earnings.

Survey weights and representativeness

To make our samples as representative as possible, we first imposed a series of quotas based on the characteristics of the respondent. Our aim was to use these quotas to ensure a broadly representative mix of parents.

To probe the effectiveness of this, we compared our unweighted samples and the nationally representative 2019 Labour Force Survey (LFS). From the LFS, we constructed a subsample roughly equivalent to the population targeted by our surveys: households with at least one child between the ages of 3 and 15. We then compared the extent to which our survey samples differed across a range of key characteristics, such as respondent earnings, education and family structure. Tables A.1 and A.2 in the appendix show these comparisons. In both waves of our data, parents are more educated than would be expected in a representative sample of the population. In wave 1 households on average earned more than expected before the pandemic, while in wave 2 they earned less.

To further improve the representativeness of our data, we reweighted our samples in each wave to achieve a closer match to the distribution of characteristics observed in the LFS. In particular, we reweighted on: family structure, parents' education, parents' pre-COVID earnings, geographic region, whether parents worked in industries likely to be locked down, and whether they worked in occupations amenable to home working.[5] The second column of each table in the

[5] The sample sizes of the LFS and our own survey, while large, are not large enough to allow us to reweight on individual industries or occupations without over-fitting the data. We therefore focus on these broad characteristics of parents' jobs, in order to approximate how they might have been affected during the pandemic.

appendix shows that, after the reweighting, the characteristics of our samples look very similar to the nationally representative LFS.

2.2 2014–15 UK Time Use Survey

To contextualise our learning time estimates, we construct a benchmark of 'pre-pandemic' learning time using the 2014–15 UK Time Use Survey (UKTUS). The UKTUS asks a nationally representative sample of 4,230 respondents to record what activity they were doing in each 10-minute time slot of a 24-hour day. We focus on a subset of households with children in primary or secondary school – or those aged 8–16, since UKTUS only surveys children aged 8 or above.

We define learning time as time spent in school[6] as well as time spent on homework or private study. We then construct a weekly UKTUS learning time measure using a combined estimate of weekday, Saturday and Sunday learning time.[7]

[6] 'Hours in school' likely overstates total learning time, since it includes time spent in assemblies/breaks. However, given that our survey asks parents about learning activities over an entire week, we do not expect them to subtract time for breaks/admin when they recall the amount of time their child spent in online classes etc. Therefore, we consider the total time spent in school a more accurate comparison.

[7] While our survey asks parents to report the total time their child spent on particular activities over the course of the previous week, the UKTUS collects higher-frequency data related to a specific day. Each of these methods has its own advantages – while our survey captures all the activities that took place during the week, it also asks parents to remember a longer period of time (and so may be more prone to misremembering).

3. Learning experiences during national school closures

The two periods of nationwide school closures in England were one of the most significant consequences of the COVID-19 pandemic for children and their families. In this chapter, we explore how children's learning experiences changed over the course of the two national school closures – and how they compared with a pre-pandemic baseline.

Because our survey respondents were parents, we focus primarily on the experiences of children who were learning remotely. We start by analysing the amount of time that children spent learning, before turning to the tools and resources they had available to help them use that time effectively.

However, while the vast majority of pupils were learning exclusively from home during the first period of school closures, in early 2021 a substantial minority of pupils were in their classrooms at least some of the time. To help contextualise how these changing attendance patterns might have affected learning time among the group that remained at home, we also provide an overview of changes in the prevalence of in-person attendance between the two rounds of school closures, as well as providing some evidence on the patterns of attendance for those who attended school in person at least some of the time.

3.1 Learning time during school closures

The first round of school closures was abrupt and almost entirely unanticipated, leaving schools, teachers, parents and children with very little time to prepare for an entirely new mode of learning. Perhaps unsurprisingly, this period saw well-documented decline in learning time (e.g. Andrew et al., 2020; Cullinane and Montacute, 2020; Elliot Major, Ayles and Machin, 2021). The second round of

school closures took place in a somewhat different context: by the time it was imposed in January 2021, schools and families had experienced over 9 months of COVID-related disruption, giving them more time to get acquainted with distance learning. Policymakers and schools had also introduced some programmes to improve access to technology and the internet, including distributing laptops to some pupils and working with telecom companies to offer some families higher mobile data limits (Sibieta and Cottell, 2020; Department for Education, 2021b).

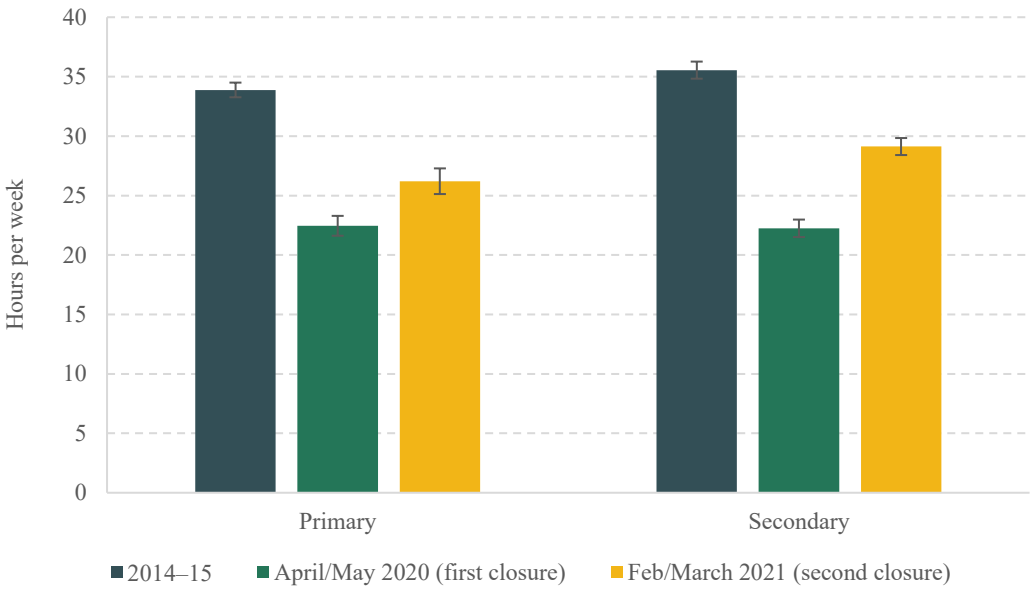
There was also substantially more guidance on what home learning was 'supposed' to involve. Unlike during the first period of school closures, when schools were almost completely free to decide what goals they set for home learning, at the start of the second period of school closures the Department for Education (DfE) confirmed that all schools should be setting 'meaningful and ambitious work' across a range of subjects on a daily basis. The DfE also set expectations on how much work there should be, with a minimum expectation of at least 3 hours a day of remote learning for pupils in Key Stage 1 (ages 5–7), 4 hours a day for those in Key Stage 2 (ages 8–11) and 5 hours a day for those in secondary school (Department for Education, 2021a).[8]

As Figure 3.1 shows, this greater preparedness and more explicit standards seem to have translated into improvements in total learning time among those who were learning at home. For primary pupils, weekly learning time rose from 22 hours to 26 between the two periods of school closure; for secondary pupils, learning time rose from 22 to 29 hours a week.

These numbers relate to the average amount of learning time among those learning at home in each wave. However, as we discuss below, the population of home learners changed between the two waves, with more children attending school in person at wave 2. This means that simple comparisons between the two waves will also be affected by the compositional change of the home learning group: for example, if pupils who struggled most with home learning were more likely to attend school in person at wave 2 than their peers, simply removing them from the average will have boosted average learning time among the group that remained at home.

[8] This could involve live online classes, pre-recorded lessons, or time for pupils to independently complete assigned work.

Figure 3.1. Average weekly learning time among children not attending school in person



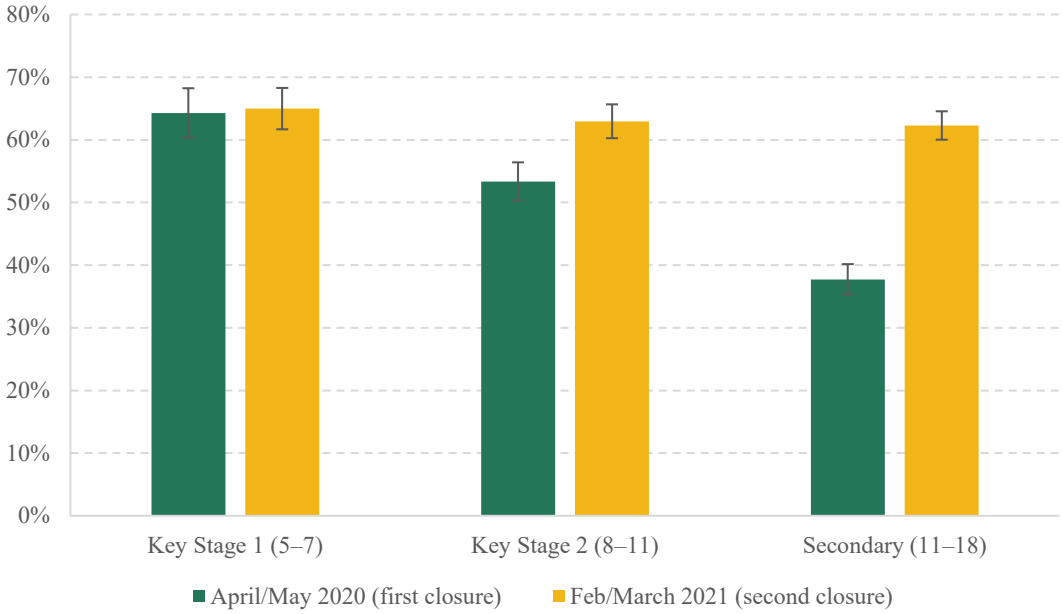
Note: Pandemic sample is based on children aged 8 and above who are not attending school in person. Vertical lines represent 95% confidence intervals.

Source: UK Time Use Survey (2014–15); IFS–IoE survey, waves 1 and 2.

Figure 3.2 shows that this overall rise in learning time also saw many more pupils meeting the 2021 guidelines for remote learning time, at least at Key Stage 2 and secondary school. For example, 62% of secondary school pupils spent at least 5 hours a day learning remotely during the second period of school closures (when the guidance was in place), compared with just 38% during the first round of closures.

However, even with such substantial improvement, weekly learning time during both rounds of school closures remained significantly below pre-pandemic benchmarks, and a substantial minority of pupils still failed to meet the recommended minimum amount of learning time. For example, even in the second phase of closure, primary and secondary pupils still spent 8 and 6 hours less per week on learning activities, respectively – and nearly 40% did not meet the minimum guidelines for learning time set out by the DfE.

Figure 3.2. Share of children meeting 2021 remote learning time guidelines

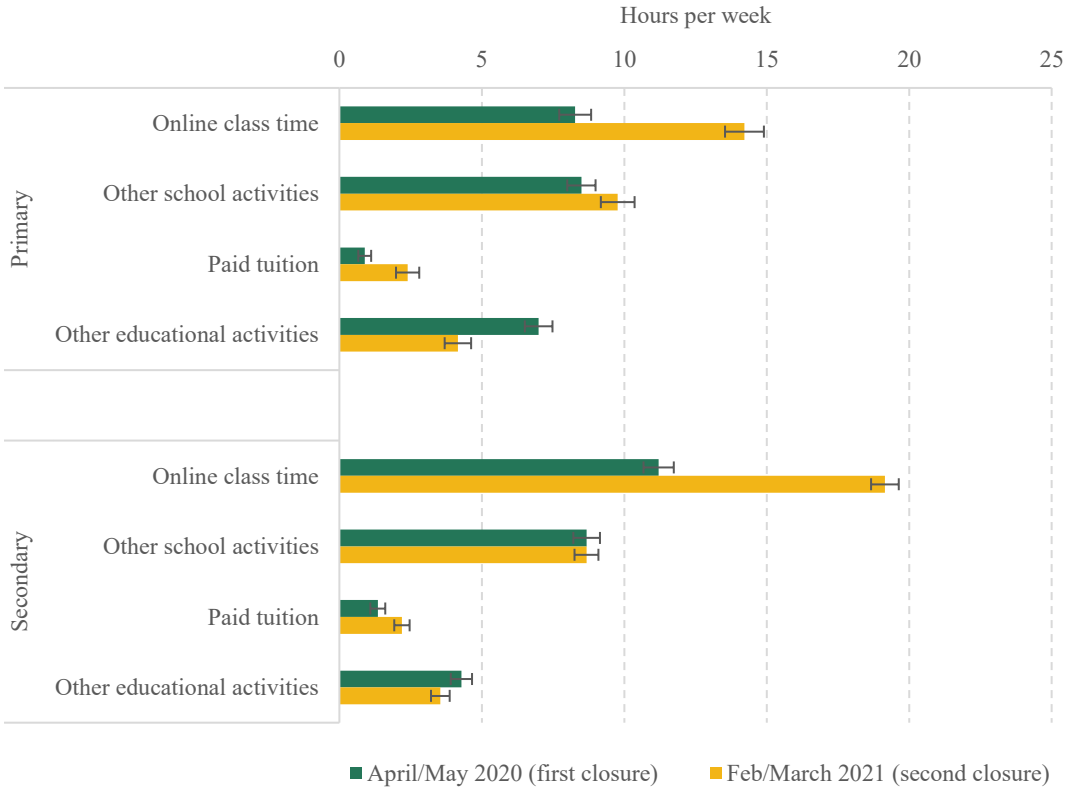


Note: Guidance issued at the start of January 2021 stated that children in Key Stage 1 should do at least 3 hours a day of remote learning; those in Key Stage 2 should do a minimum of 4 hours; and those in secondary school should have at least 5 hours a day of remote learning. This included both lessons and time for pupils to complete tasks independently (Department for Education, 2021a). Sample is based on children who are not attending school in person. Vertical lines represent 95% confidence intervals.

Source: IFS–IoE survey, waves 1 and 2.

Figure 3.3 breaks down total learning time during the first and second school closures into different activities. Among out-of-school primary and secondary pupils, the biggest gains in learning time came from time spent in online classes (which include both live and pre-recorded lessons). Partly in response to substantial public discontent with inequalities in provision during the first period of school closures, there was a strong push among policymakers, schools and the voluntary sector to develop resources for online lessons (such as the Oak National Academy) and to put in place support to help pupils to access these online lessons. This reflects a belief that online classes were the most similar substitute for in-person learning, and therefore likely to be the most effective replacement for time in the classroom.

Figure 3.3. Time spent on different learning activities each week



Note: Sample is based on children aged 8 and above who are not attending school in person. Horizontal lines represent 95% confidence intervals.

Source: IFS–IoE survey, waves 1 and 2.

Children attending school in person

Another major change between the two periods of school closure was the substantial increase in the share of children attending school in person, which jumped from around 2% of pupils on an average day during the 2020 school closures to 15% during the second round of school closures in 2021.

Since our surveys focus on home learning and targeted parents, we do not have good data to document the learning experiences of children who attended school in person during school closures. However, in Box 3.1, we provide a brief discussion of these, relying on government guidelines and secondary surveys that were more focused on what was happening inside schools.

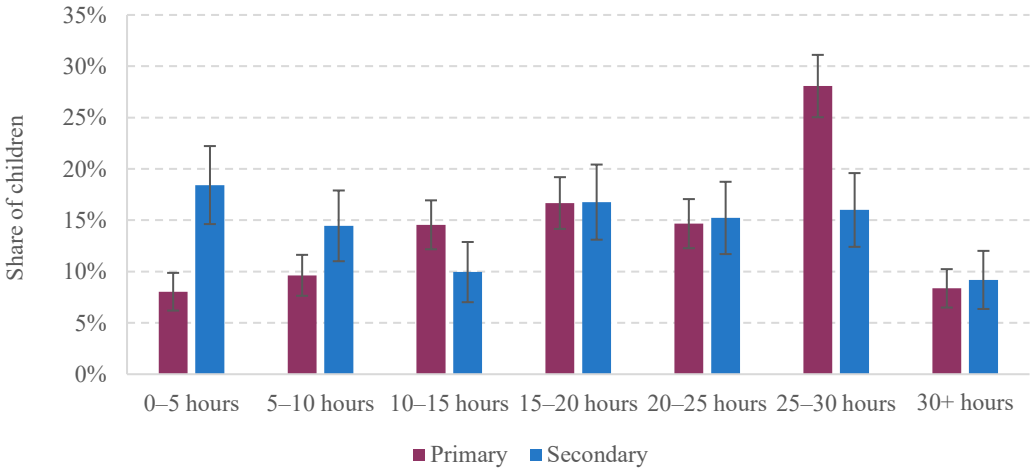
Box 3.1. Learning experiences of children attending school in person

Who was attending school in person during periods of school closure?

During the first round of closures, schools were open to children who had at least one key worker parent or who were considered vulnerable (e.g. those with special educational needs, with social workers or in care). While nearly half of school-aged children had at least one key worker parent (and around 5% had an education, health and care plan), in practice on average just 2% of children were in school on a given day.[a]

Before the second round of closures, the definition of 'vulnerable' was expanded to include those who struggled to access remote learning at home – e.g. because of a lack of technology or a quiet study space.[b] Coupled with higher take-up among key worker families, this wider definition of vulnerability meant that the fraction of children who remained in school was substantially higher, at around 15% on average.

Figure 3.4. In-school learning time among those who attended school in person during early 2021



Note: Sample is children aged 8 and above who attended school in person at least some of the time during the second round of school closures. Vertical lines represent 95% confidence intervals.

Source: IFS–IoE survey, wave 2.

However, as Figure 3.4 shows, most children who attended school in person during the second round of school closures did not spend the whole week in the classroom. Around half of pupils attended school for 20 hours a week or less. This means that, even among

those attending in person during the second round of school closures, hybrid learning experiences and remote learning remained important.

How did in-school learning compare with remote learning?

Assessing the relative benefits of learning at home versus attending school in person during the periods of school closures is difficult, since the school experience during the pandemic was very different from that in normal times. During the first round of school closures, government guidance made clear that children were attending school for childcare rather than education purposes, with no requirement on schools to teach the national curriculum.

Childcare remained a key emphasis during the second period of school closures; however, it is likely that the in-school learning experience improved between 2020 and 2021. Stricter guidelines for home learning provided a 'floor' for educational experiences in school, since schools had the option of asking these children to join in with remote learning from their desks. Teachers were also able to leverage their experiences from the autumn term, when they had to similarly juggle the simultaneous demands of in-person and remote instruction. And the move to allow children who could not learn effectively from home to attend school in person also signalled a wider educational purpose to in-person attendance.

While it seems reasonably clear that in-school experiences were better during the second round of school closures than the first (though still not as educational as in more normal times), it is much less obvious how in-school experiences compared with the experiences of children learning at home. These questions are further complicated by a lack of comparable data on the two learning environments and by the choices that parents, teachers and pupils made to select into or out of in-person provision.

[a] Statistics on education, health and care plans are based on the total number of pupils aged 5–15 with an EHC plan in 2020 (Department for Education statistics). Analysis by the Office for National Statistics finds that 45% of households with dependent children had at least one key worker parent (table 8).

[b] Guidance around key workers was also extended slightly, allowing children whose parents were working on Brexit arrangements to attend school in person.

3.2 Home learning resources

Putting the in-school experience aside, the fact that home learning experiences improved between the school closures is important, and warrants further investigation. In this section, we examine potential drivers of this, by looking at changes in the resources that children had to support remote learning.

One striking finding in the previous section was that much of the increase in learning time came from greater time spent on online classes. In this section, we explore whether this was driven by a widening of access to online classes (rather than simply an increase in the number of hours spent in online classes for those who already had access). We first explore changes in the resources offered by schools, with a focus on active learning resources, such as online classes, which had been prioritised by policymakers. Of course, these virtual resources are only helpful if pupils are able to access them – so we next turn to changes in access to technology and quiet study spaces at home. Finally, we also look at whether parents reported finding supporting home learning easier in the second round of closures than in the first.

School provision for remote learning

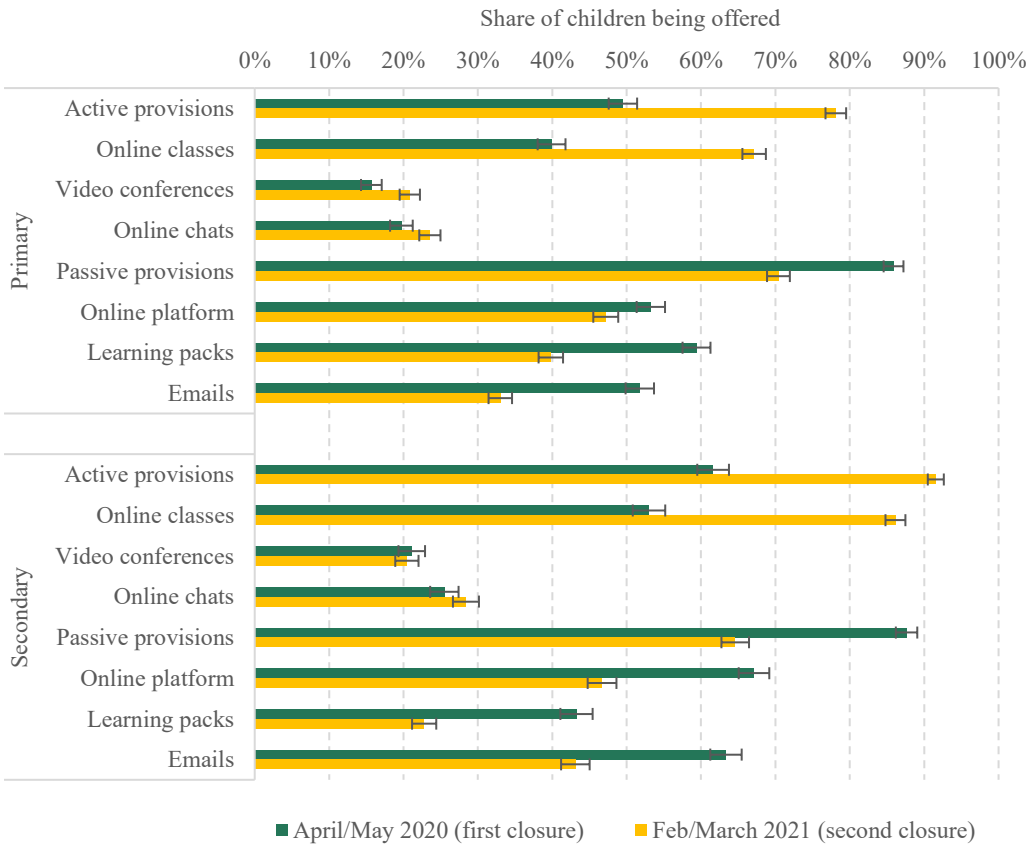
Figure 3.5 shows the share of parents who report that their child's school offered different types of learning resources, split by primary and secondary school pupils. We group resources into 'active' teaching resources, such as live or pre-recorded online classes or online chats, and 'passive' learning resources such as learning platforms or worksheets.

Schools dramatically changed their home learning provisions between the lockdowns, transitioning towards more active resources. Amongst primary pupils, the share of parents reporting that their child's school offered any active provisions increased from 49% to 78%, while for secondary pupils the share increased from 62% to 92%. In both cases, this is almost entirely driven by an increase in the provision of online classes.

This transition towards active provisions was accompanied by a transition away from passive provisions, such as physical learning packs, emails and online platforms. In part, this will have reflected stronger central guidance on what remote learning 'should' look like; for example, new DfE guidance stated that all schools

'are expected to use a single, interactive platform such as Microsoft Teams or Google Classroom for their remote education provision' (Department for Education, 2021c). A stronger commitment to providing centralised active resources may have crowded out some passive resources, such as physical learning packs. At the same time, the push to increase access to technology (see the next subsection) may have eased schools' concerns about equality of access to virtual resources among their pupils.

Figure 3.5. Change in school-provided resources between periods of school closure



Note: Active provisions include online classes (both live and pre-recorded), video conferences and online chats. Passive provisions include online learning platforms, physical learning packs and emails. Sample: all children. Horizontal lines represent 95% confidence intervals.

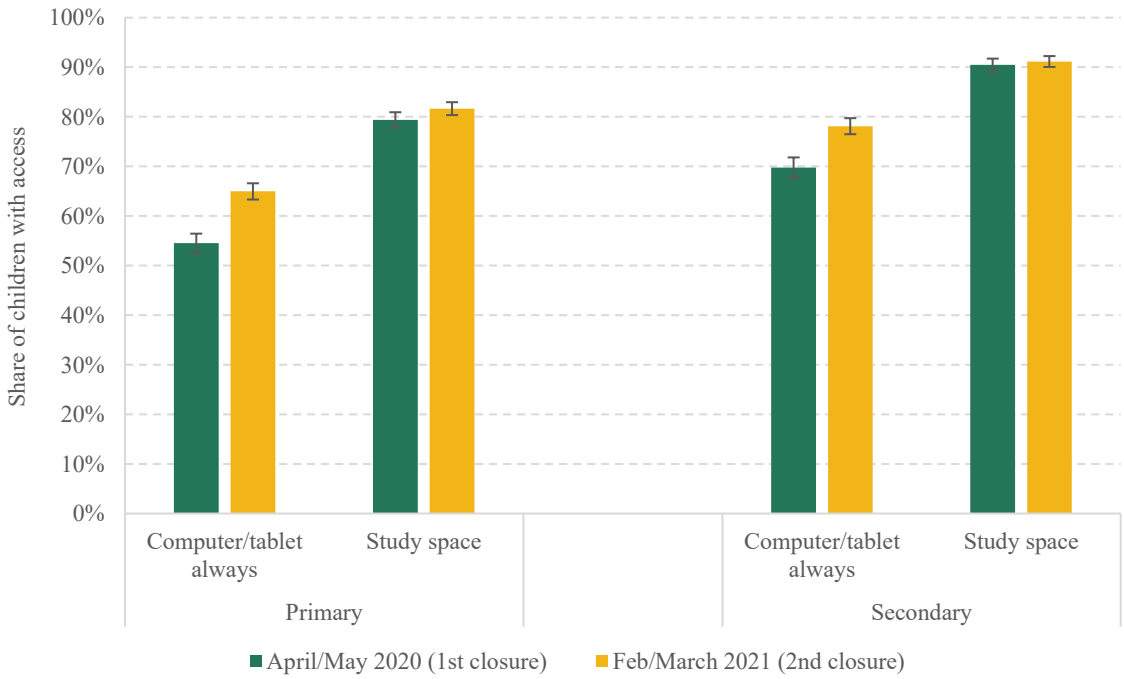
Source: IFS–IoE survey, waves 1 and 2.

These changes were on the whole welcomed by parents. Asked how home learning support from schools in the third lockdown compared with the first lockdown, over 70% of parents said that their child's school was providing more support. The fact that schools changed their offerings substantially – in a direction favoured by parents – suggests that schools learnt considerably during the pandemic, taking on board feedback about which resources were most useful.

Home equipment and resources

Figure 3.6 shows the share of children who had access to a computer or tablet all of the time during the first and second school closures, and those who had access to a dedicated study space at home.

Figure 3.6. Share of children with access to home resources



Note: 'Computer/tablet always' is defined as children who have access to a computer or tablet whenever they need it. 'Study space' is those who have access to their own or shared study space. Sample: all children. Vertical lines represent 95% confidence intervals.

Source: IFS-IoE survey, waves 1 and 2.

In the second round of closures, there was a large improvement in the fraction of pupils with access to computers or tablets.[9] For primary school pupils, 65% had access to a tablet or laptop whenever they needed it – an 11 percentage point increase from the first round. This will reflect, in part, a push by policymakers and individual schools to increase access to technology: by July 2021, for example, the government had dispatched 1.3 million devices[10] and many schools and charities had developed their own programmes. Faced with a prolonged period of remote learning and home working, families may also have chosen to purchase or upgrade their own home technology.

By contrast, access to private study spaces saw comparatively little change between lockdowns. This is unsurprising – study space is limited by the space available in people's houses, which is not obviously amenable to government policy.

Parental support

The school closures transferred the primary responsibility for overseeing a child's learning from the school to parents. The amount of time that parents could devote to this, and how easy they found it, are likely to at least partially determine the quality of a child's home learning environment.

Compared with the 2020 school closures, parents reported spending around a third less time supervising their child's learning during the second period of school closures. This is likely related to increased active provisions offered by schools – with children spending more time in online classes, there was less need for parental oversight. Parents also found it much easier to support home learning the second time around, with over 51% of parents agreeing with the statement 'It's been easier to home school this lockdown compared to the first lockdown last year' (compared with just 21% who disagreed). This was probably partly due to the smaller time demands on parents as schools improved their remote learning provision, but it may also reflect parents learning which approaches worked best with their children.

[9] Because our data come from an online survey requiring at least one parent to have access to a mobile phone or computer, we likely overestimate the overall share of pupils with access to technology.

[10] https://explore-education-statistics.service.gov.uk/find-statistics/laptops-and-tablets-data/2021-week-28#dataDownloads-1.

Overall, these findings suggest that both schools and families adapted during the COVID-19 pandemic to create a more effective home learning environment for their children. Schools increased their provision of online classes; pupils were more likely to have access to the home resources they needed; and parents generally found the ordeal less taxing. Coupled with an increase in overall learning time, these results suggest that home learning was likely more effective during the second period of school closures than it had been the first time around.

4. Learning experiences during the 2020 autumn term

While the two periods of school closures were the most visible and extreme form of COVID-related disruption to education, there was also substantial disruption even when nationwide school closures were not in place. Understanding children's learning experiences during these periods is essential to estimating the scale of the lost learning challenge. In this chapter, we therefore analyse children's experiences in the 2020 autumn term – in between the two periods of closures analysed in Chapter 3. During this term, most schools were ostensibly open (even through a second national lockdown), but children were made to periodically isolate due to infection or exposure to COVID-19. Documenting these experiences is vitally important, since this model of in-school provision with periodic disruption has now characterised the majority of the pandemic, including since March 2021.

In this chapter, we first briefly explain how the in-school offering in Autumn 2020 differed from that in pre-pandemic times. We then document how many days of in-person schooling children lost during the autumn term, including as a result of sickness or self-isolation. Finally, we examine school provisions during these disruptions, showing what resources children forced to isolate were provided with.

4.1 Disruptions during the autumn term

Though schools had reopened, the 2020 autumn term was likely a far-from-normal experience for most children. First, in line with official guidance, schools adhered to social distancing measures in both the classroom and other communal areas. For example, many schools split classes into smaller groups, staggered break times, restricted movement around the school, asked staff to socially distance and rearranged desks into forward-facing rows (Sharp, Sims and Rutt, 2020). These

protocols likely inhibited the ability of teachers to provide interactive and engaging instruction, as well as children's ability to socialise outside the classroom.

The autumn term was also affected by staff absences, as many teachers were forced to isolate due to COVID infection or exposure. Figure 4.1 shows the proportion of teachers who were absent for COVID-related reasons between October and December 2020, with figures fluctuating between 3% and 6%. These temporary staff absences were undoubtedly disruptive for children, since many lost the teacher they were most familiar with and who was most attuned to their specific educational needs.

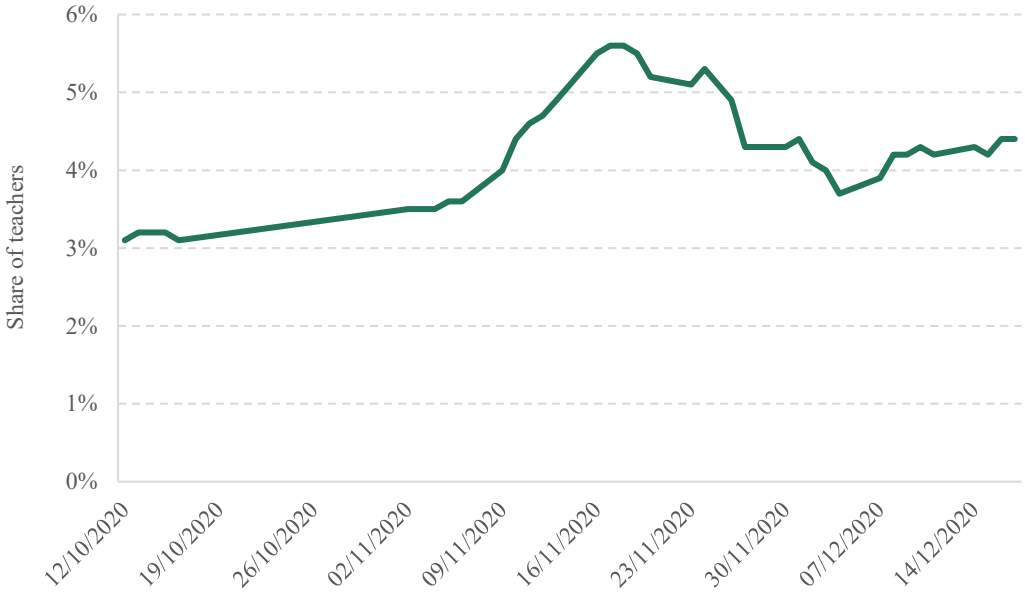
In addition to changes in the in-school experience, the autumn term also saw many children having to isolate, and hence revert to learning from home. As Figure 4.2 shows, 51% of primary and 62% of secondary pupils in our wave 2 sample lost at least some in-school time during this term.[11] Over 28% of primary and 37% of secondary pupils lost more than 2 weeks of in-school provision, while over 9% and 13% lost more than 4 weeks.[12] Overall, we find that the average child lost about 8 days of in-person schooling – more than 10% of their autumn term. In a normal term, pupils on average miss less than 3 days of school for any reason.[13] These COVID-related absences varied substantially by region, with areas of the North West, Yorkshire and the Midlands particularly affected (Sibieta and Robinson, 2020).

[11] While our survey asked parents specifically about absences related to COVID-19, it is possible that they were not able to accurately remember whether absences were COVID-related or not. We therefore assume that these absence figures represent total absences (not just COVID-specific absences). Our figure of 10% absence during Autumn 2020 corresponds closely with official DfE statistics on total absences during the autumn term.

[12] The higher rates of self-isolation among older pupils might reflect the greater difficulties of keeping students distanced in (typically larger) secondary schools, or the fact that more extensive lateral flow testing in secondary schools led to higher rates of detection.

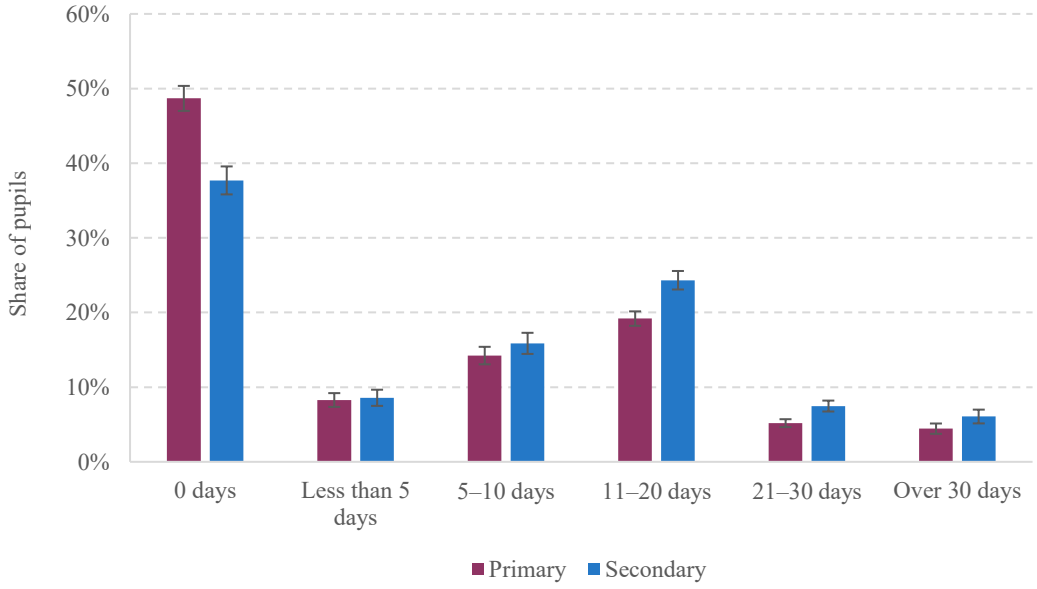
[13] Statistics from 2018/19 show that, on average, pupils were absent for 8.4 days over the course of a year. This equates to just under 3 full days during a single term.

Figure 4.1. Share of teachers absent for COVID-related reasons



Source: Table 1D, 'Attendance in education and early years settings during the coronavirus (COVID-19) outbreak'.

Figure 4.2. Days of in-school provision lost during 2020 autumn term



Note: Sample: all children. Vertical lines represent 95% confidence intervals.

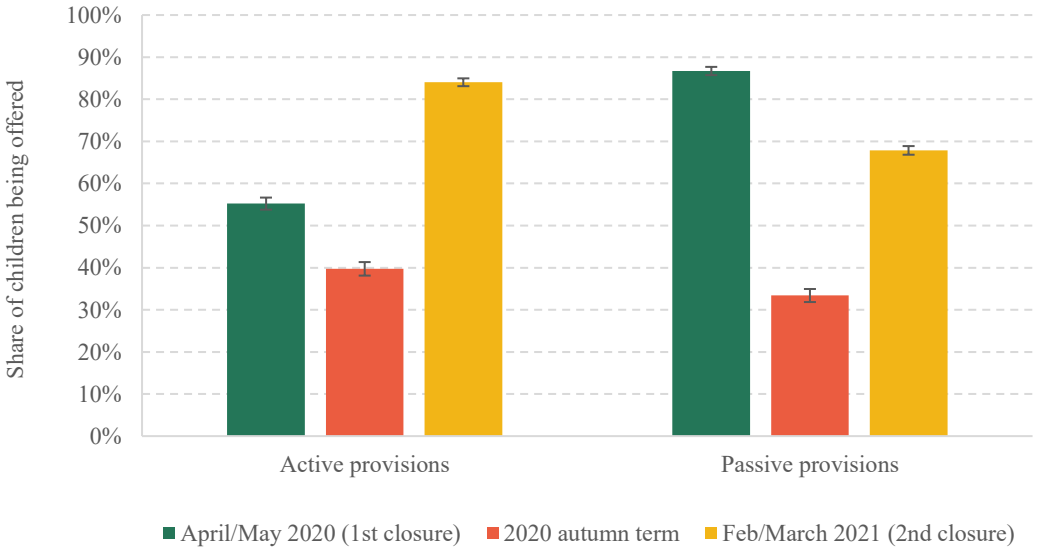
Source: IFS–IoE survey, wave 2.

4.2 School provisions during disruption

Measuring the extent of remote provisions offered during Autumn 2020 helps get a better sense of how disruptive these periods were for pupils forced to isolate. As Figure 4.3 shows, the resources provided by schools for those isolating were orders of magnitude less than what were available during the first set of school closures – which were themselves significantly less than what were available during the second. There was a fall in provisions across the board, though the most dramatic reductions were in the provision of passive home learning resources, which fell from 87% during the first closures to 33% during the autumn term.

This dramatic reduction was likely driven by the fact that schools had fewer resources to devote to home learning in Autumn 2020, since they were more preoccupied by the needs of the majority of children, who remained in school. It suggests that home learning during the autumn term was possibly even more challenging than during the periods of school closures – especially given the break in continuity of learning experience it implied.

Figure 4.3. School resources provided for remote learning



Note: Active provisions include online classes (both live and pre-recorded), video conferences and online chats. Passive provisions include online learning platforms, physical learning packs and emails. Sample: all children (for Autumn 2020, only children who had been asked to self-isolate at least once). '2020 autumn term' figures are for provisions during periods of self-isolation. Vertical lines represent 95% confidence intervals.

Source: IFS–IoE survey, waves 1 and 2.

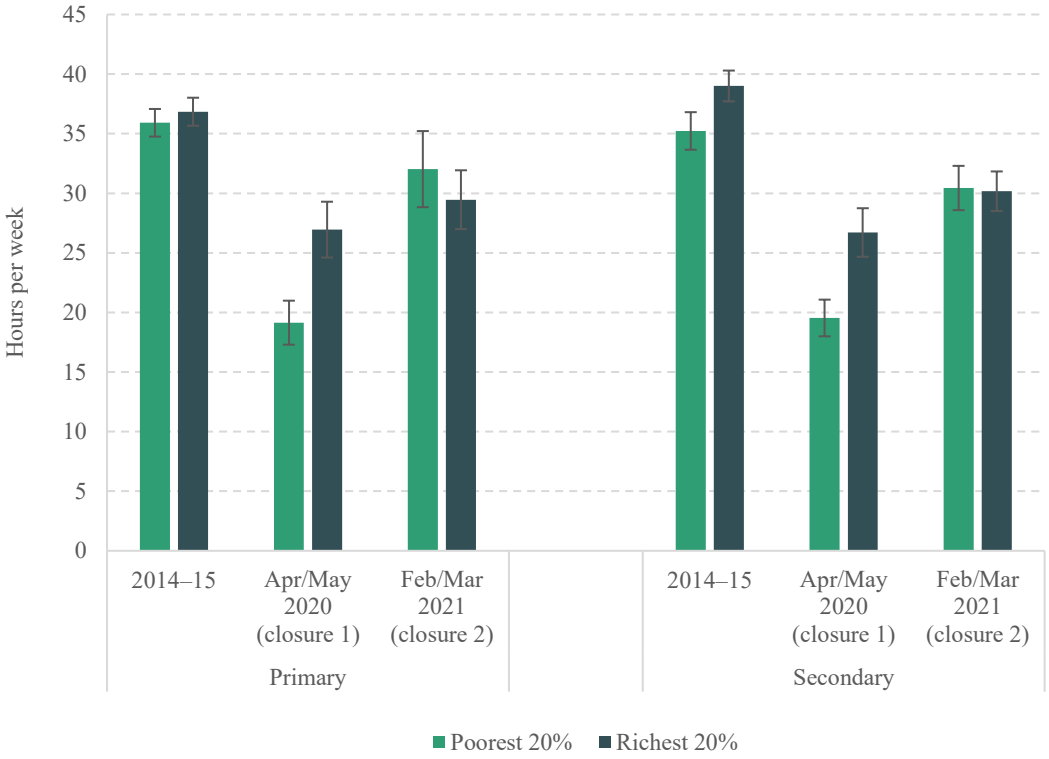
5. Inequalities in learning experiences

So far, we have focused on the overall experience of educational disruption during the pandemic. However, the extent of this disruption and the scale of the difficulties with home learning were not at all evenly distributed. Many studies have shown that pupils in disadvantaged families had a much worse experience of home learning during the first round of school closures: they spent less time learning and they had less access to the school and home resources to help them learn effectively (Andrew et al., 2020; Anders et al., 2020). So far, we have shown that the home learning experience improved in aggregate by the time the second round of school closures was introduced in January 2021; in this chapter, we assess whether this overall improvement reduced the inequalities between disadvantaged pupils and their better-off peers.

5.1 Inequalities during school closures

As Figure 5.1 shows, in the first round of closures, alarming differences in total learning time between the richest and poorest emerged amongst children who remained at home. At the primary level, children in the poorest 20% of families (based on their pre-pandemic equivalised earnings) spent just 19 hours a week on learning activities, compared with 27 hours a week for the richest 20%. This inequality was new: before the pandemic, learning time during primary school was almost exactly equal between these two groups. At the secondary level, learning gaps were present in 2014–15, but these were exacerbated during the first lockdown, as the richest fifth of pupils spent 27 hours a week learning – 7 hours more than the poorest fifth. These gaps in learning time are reflected in the widening of inequalities in educational attainment throughout the first round of school closures (Rose et al., 2021; Renaissance Learning and Education Policy Institute, 2021a; Blainey and Hannay, 2021).

Figure 5.1. Inequalities in total learning time among pupils learning remotely



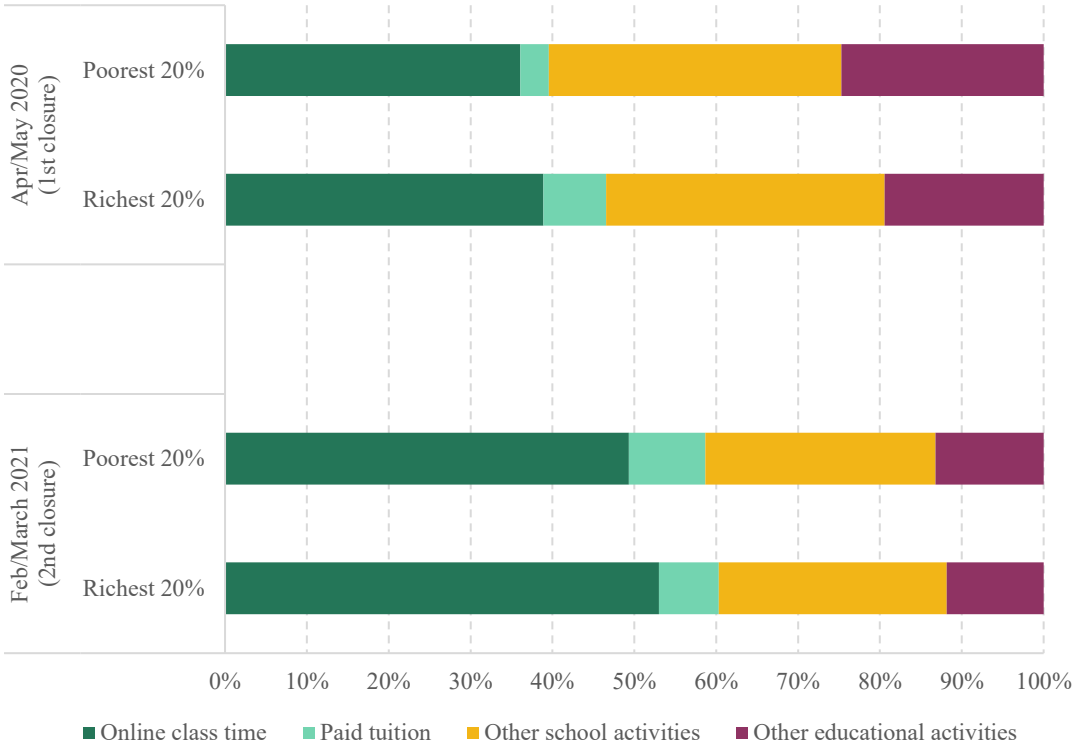
Note: Pandemic sample is based on children aged 8 and above who are not attending school in person. Vertical lines represent 95% confidence intervals.

Source: UK Time Use Survey (2014–15); IFS–IoE survey, waves 1 and 2.

However, in the second round of closures, learning time gaps between richest and poorest students reduced significantly, at both primary and secondary levels. At primary school, the poorest 20% of children actually spent slightly longer per week on learning activities than their richer peers (although within-period differences are not statistically significant). At secondary school, learning time was essentially equivalent, with both the richest and poorest 20% of pupils spending around 30 hours per week on learning activities.

In addition to total learning time, we also find evidence that inequalities in the *composition* of learning time became less pronounced. As Figure 5.2 shows, in the first lockdown, the richest fifth of pupils spent around 47% of their total learning time on interactive activities (such as paid tuition and online classes), compared with just 40% for the poorest fifth. However, in the second round of school closures, this difference had vanished, with both the richest and poorest fifth of pupils spending roughly 60% of their time on interactive activities.

Figure 5.2. Inequalities in the composition of learning time among pupils learning remotely

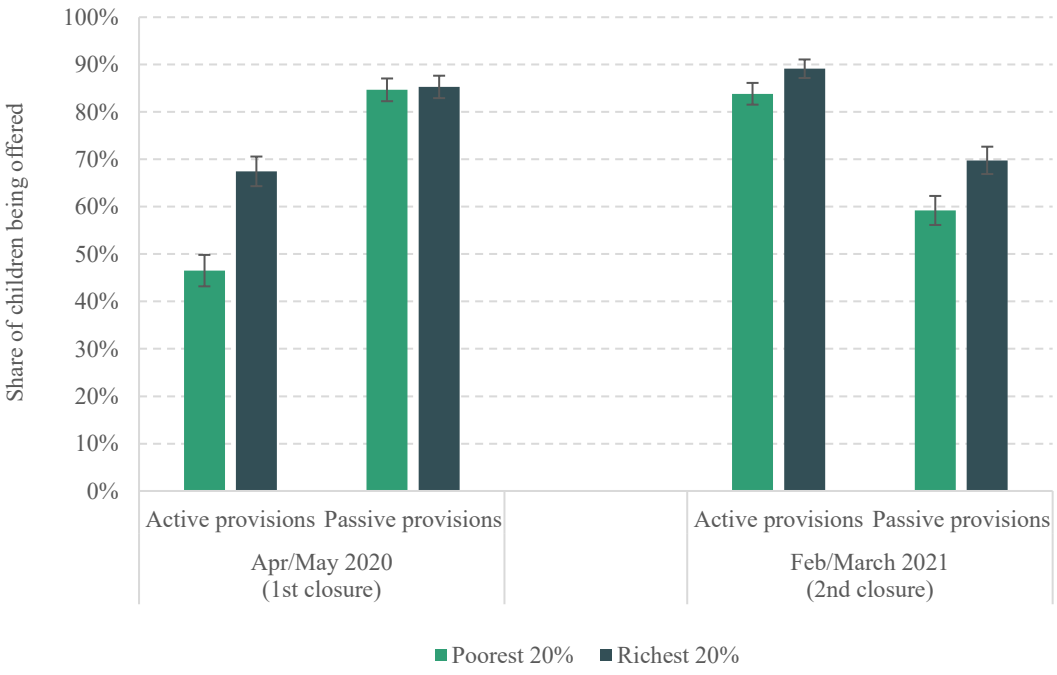


Note: Sample is based on children aged 8 and above who are not attending school in person.

Source: IFS–IoE survey, waves 1 and 2.

This substantial rise in interactive learning activities among disadvantaged pupils coincided with a widening of access to online learning resources. Access to these active learning resources was very unequal during the first round of school closures: as Figure 5.3 shows, while 67% of pupils from the richest fifth were offered active home learning provisions by their school, just 47% of those in the poorest fifth of families were offered similar resources. This is a substantial difference, and – as other analysis shows – explains a large fraction of the overall learning inequalities that emerged in the first lockdown (Andrew et al., 2020). These differences were far less pronounced in the second period of school closures as wider access to active resources helped to even out provision; during this period, 84% of children in the poorest fifth had access to active provisions – just 5 percentage points less than in the top fifth. However, the sharper fall in the provision of passive resources for disadvantaged pupils suggests that their schools were substituting to these more active resources, while better-off pupils' schools were more likely to provide both.

Figure 5.3. Inequalities in school-provided resources across the two periods of school closures



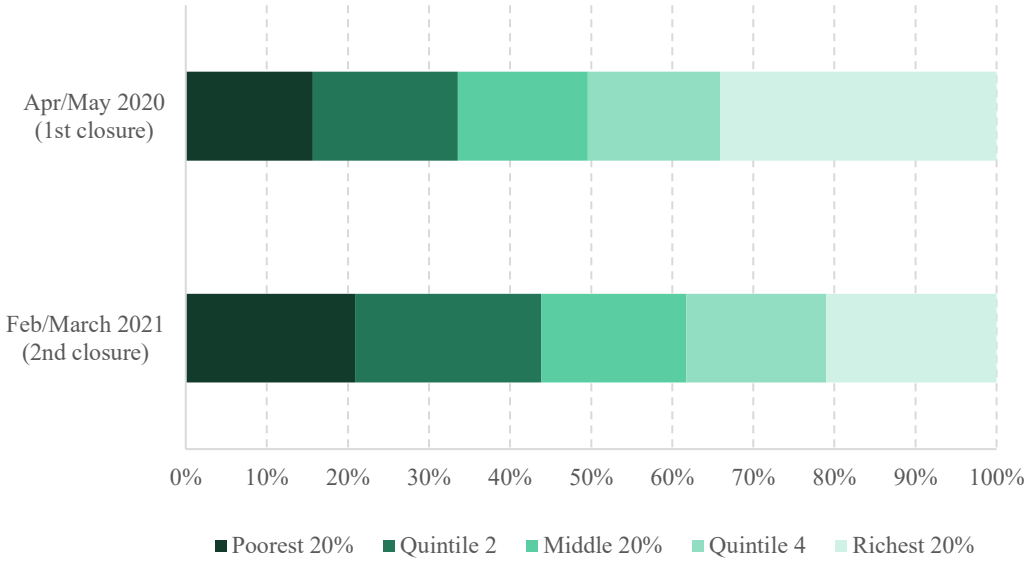
Note: Active provisions include online classes (both live and pre-recorded), video conferences and online chats. Passive provisions include online learning platforms, physical learning packs and emails. Sample: all children. Vertical lines represent 95% confidence intervals.

Source: IFS–IoE survey, waves 1 and 2.

Despite the change in access to school resources, we find little evidence that inequalities in home resources fell during the second period of school closures. While we find that both richer and poorer children were more likely to have access to technology in the second period of school closures, we find that the difference in access between the groups remained broadly the same. We also find that poorer parents were no more likely than richer parents to report that supporting home learning was easier in the second round of school closures than in the first.

These results indicate that the improvement in learning time inequalities was predominantly driven by more equal access to active learning resources from schools. National policy almost certainly played a role, both in setting expectations and in supporting resources such as Oak National Academy to reduce the costs to schools and teachers of offering online lessons. Our results suggest that adopting these strategies earlier in the pandemic may well have prevented some of the enormous widening of inequalities during the first period of school closures.

Figure 5.4. Socio-economic composition of children who accessed some in-person learning during school closures



Source: IFS–IoE survey, waves 1 and 2. Sample: all children.

Similarly, many poorer children likely benefited from the expansion of the definition of vulnerable children to include those unable to access remote learning at home, who were able to attend school in person during the second period of closures. As Figure 5.4 shows, around 34% of children who remained in school during the first closures came from the richest fifth of families, while only 16% came from the poorest fifth. The second time round, the composition was much more equal across quintiles, with both the richest and poorest fifth of pupils comprising about 21% of the total.

5.2 Inequalities in Autumn 2020

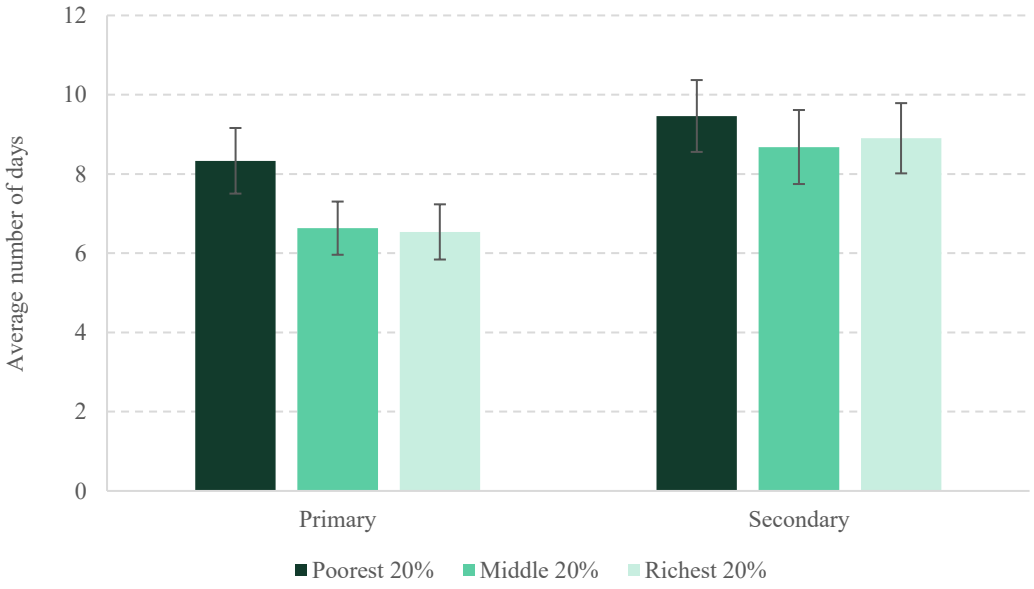
During the 2020 autumn term, there was significant COVID-related disruption from pupils and teachers self-isolating. Since poorer communities tended to have higher case rates, these absences disproportionately affected children in more disadvantaged families. Figure 5.5 shows that the poorest fifth of primary school children lost around 8.5 days on average in the autumn term, compared with 6.5 days among pupils in the middle and at the top of the earnings distribution.[14] The

[14] Since parents recorded the number of days lost to self-isolation in bins, this is based on a weighted average of the midpoint of each bin.

poorest fifth of secondary students also lost more days on average, though the differences between groups are not statistically significant.

As argued in Chapter 4, how disruptive these periods of absence were likely depended on the resources offered by schools to those forced to isolate. Poorer pupils were not only more likely to be required to self-isolate; they were also less likely to have access to effective resources such as online classes to help them learn while they were at home. Figure 5.6 shows that 31% of primary school children in the poorest fifth of families had access to online classes (either their own live class or pre-recorded videos) while they were self-isolating, compared with 36% of their peers in the richest fifth of families. The difference was larger at secondary school, with 43% of children in the richest fifth having access, compared with 35% in the poorest fifth. Since online classes probably represent the best resource – as they allow children to keep track with their in-school peers – this suggests that periods of isolation during the autumn term were both more extensive *and* more disruptive for poorer children.

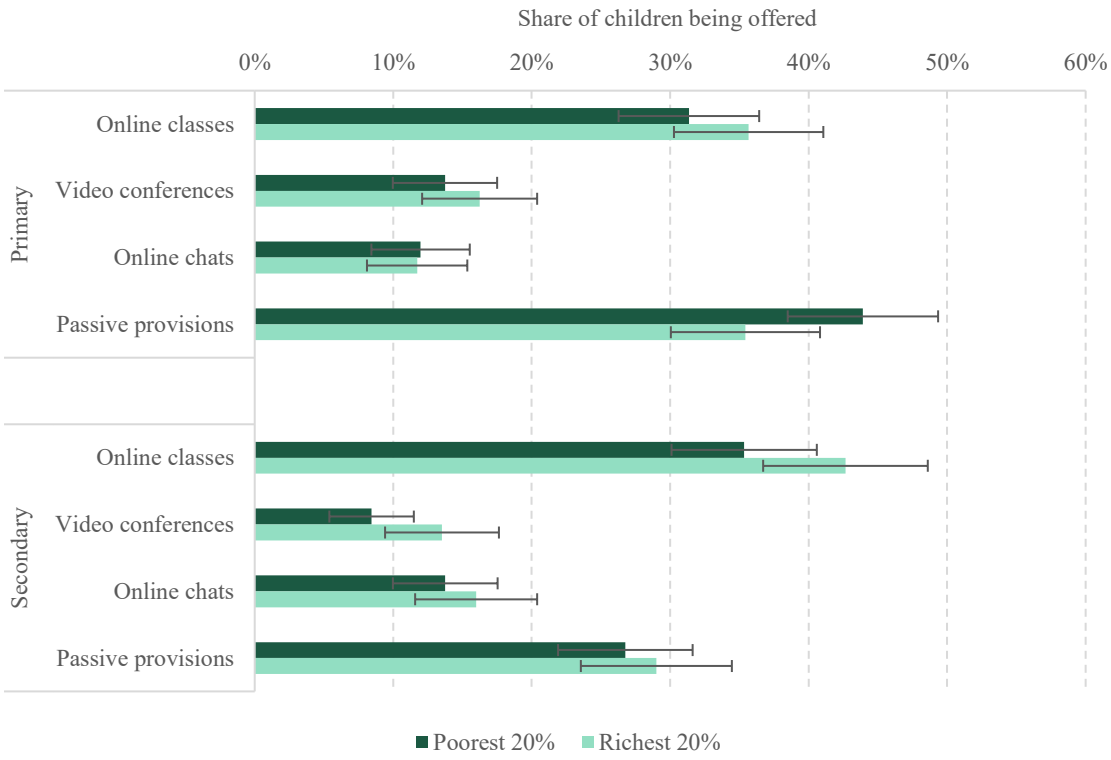
Figure 5.5. Average days of in-school provision lost during the 2020 autumn term



Note: Averages are calculated based on the midpoint of each bin (bins are shown in Figure 4.2). Sample: all children. Vertical lines represent 95% confidence intervals.

Source: IFS–IoE survey, wave 2.

Figure 5.6. Home learning provisions during periods of isolation in the 2020 autumn term



Note: Graph disaggregates active provisions. Passive provisions include online learning platforms, physical learning packs and emails. Sample: all children. Horizontal lines represent 95% confidence intervals.

Source: IFS–IoE survey, wave 2.

5.3 Summary

The findings of this chapter offer mixed messages about how learning inequalities evolved during the pandemic. On the one hand, there was a marked improvement in learning inequalities between the first and second rounds of school closures, as the home learning experiences of poorer children improved and more poorer children were able to remain in school. This is encouraging – and is testament to the efforts of policymakers and of the schools and parents of children from more disadvantaged socio-economic backgrounds.

On the other hand, this improvement on its own is not enough to offset the large inequalities that emerged during the first round of school closures. While learning gaps diminished, we find no significant evidence that poorer pupils spent more time

learning than their richer peers in early 2021. This means that learning time itself is unlikely to drive a significant improvement in the educational inequalities that grew during the first period of school closures, and so schools and policymakers need to focus on other interventions (such as tutoring or targeted catch-up support) that can improve the effectiveness of that learning time. Unless this happens, the attainment gap post-pandemic is likely to be larger than it was before – with consequences for inequalities throughout these children's lives.

In addition, we find evidence that the 2020 autumn term was more disruptive for poorer children than for their richer peers. Not only did they lose out on more in-person schooling due to isolation periods, they also had less access to active home learning resources when this happened. This is particularly concerning, given that the autumn term model of in-school provision with periodic disruption has now characterised most of the pandemic. Whether inequalities have worsened further since March 2021 may depend crucially on whether schools attended by poorer children adapted to this model – in the same way that they adapted between the periods of closures.

These inequalities in the autumn term build on the effects of an unequal return to school in June and July 2020. While schools were no less likely to reopen to poorer children, their parents were far less likely to voluntarily send their children back to school – where their learning time was better protected (Cattan et al., 2021). This finding has relevance to the next chapter, where we discuss catch-up policies to mitigate the learning lost during the pandemic.

6. Learning loss and educational recovery

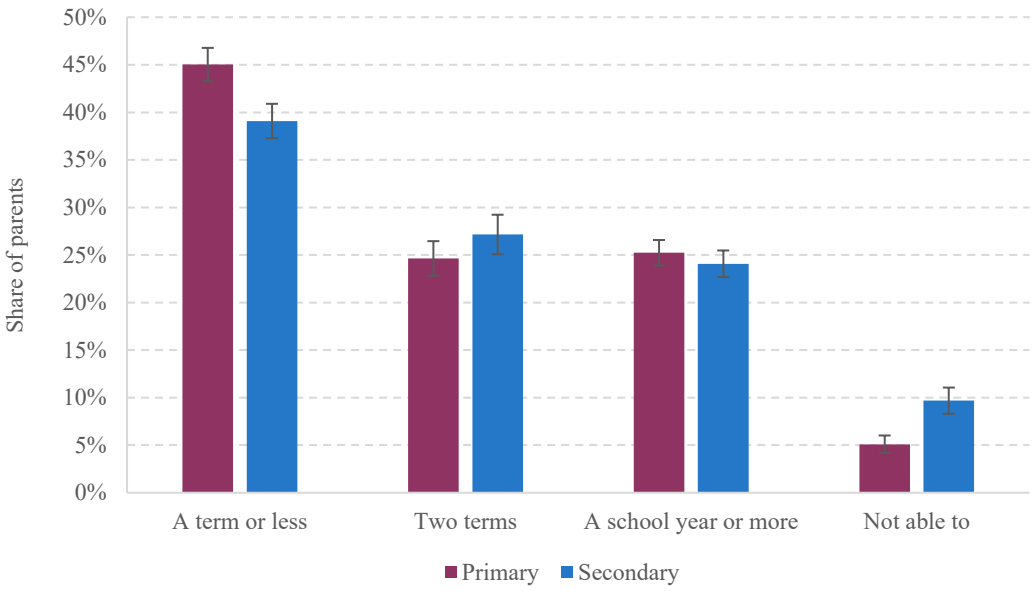
So far in this report, we have examined the learning experiences of children during the pandemic both within and outside the nationwide school closures, and the impact they had on inequalities. In Chapter 3, we found that weekly learning time was significantly lower during phases of closure compared with pre-pandemic, while Chapter 4 showed that children continued to lose out on in-school provision during the autumn term. Chapter 5 documented a reduction in learning inequalities between the two periods of school closure, but noted that disruption during the 2020 autumn term fell disproportionately heavily on children from disadvantaged backgrounds. This chapter brings these findings together, exploring their implications for both learning loss and appropriate catch-up policies.

6.1 Perceptions of learning loss

In the absence of test scores, we lack reliable measures of learning loss. In future, we plan to link our sample to the National Pupil Database, comparing the test scores of pupils with different lockdown experiences to get a better sense of the magnitude of the pandemic's impact. In the meantime, a helpful albeit imperfect measure of this is to ask parents about how long they think it will take for their children to catch up, once things return to normal.

We asked this question in our second survey – when pupils had faced almost a year of COVID-based disruption. As Figure 6.1 shows, we find that around 25% of parents thought it would take their child a school year or more to catch up to where they would have been without COVID, while a concerning 7% of parents thought their child would never catch up. In keeping with our focus on inequalities, this extent of concern is more common among poorer parents: 9% of parents in the lowest-income fifth think their child will never catch up compared with 5% in the richest. Parents of secondary pupils are also more pessimistic – perhaps because their children have less time to make up for lost ground.

Figure 6.1. Parental beliefs about how long it will take their child to catch up on lost learning



Note: Responses to the question: 'Once schools reopen, how long do you think it will take [child] to catch up to the level of learning they'd have been at had the pandemic never happened?'. Sample: all children. Vertical lines represent 95% confidence intervals.

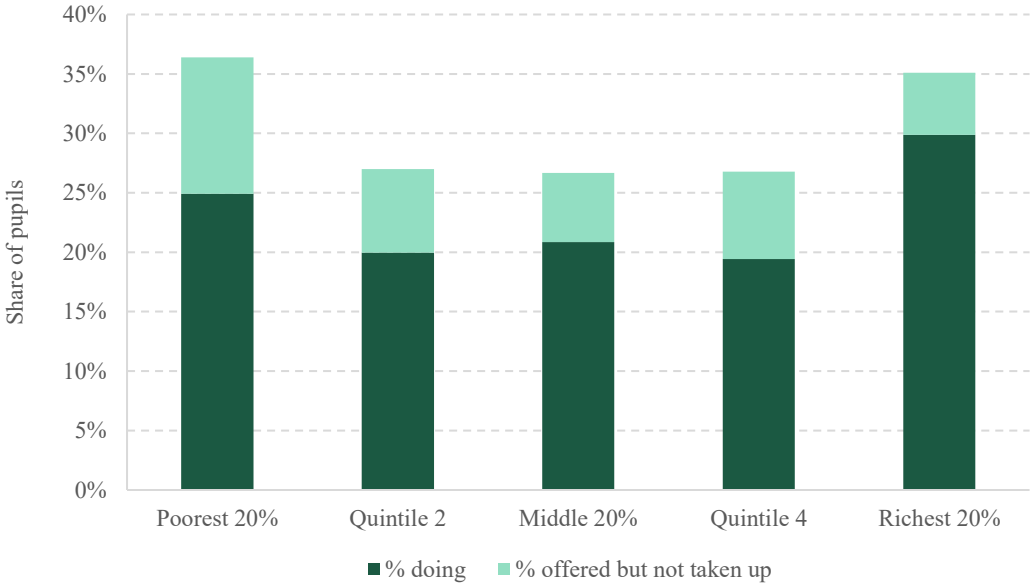
Source: IFS–IoE survey, wave 2.

6.2 Inequalities in catch-up provisions

To combat learning loss, the government and schools have started to mobilise resources towards remedial provisions such as catch-up tuition. Following the announcement of an additional £1.4 billion in June 2021, the total amount of funding for educational recovery now stands at just over £3 billion. Policies to support educational recovery are popular – over 90% of parents are in favour of at least some academic policies for catch-up, and 80% support tutoring (Farquharson et al., 2021). But while additional resources for catch-up will certainly be welcome, the current budget falls far short of the £15 billion that the government's Education Recovery Commissioner estimated would be necessary,[15] amounting to just over 5% of the total schools budget in a regular year.

[15] See, for example, https://www.bbc.co.uk/news/education-57335558.

Figure 6.2. Share of students offered and taking up catch-up tutoring



Note: Percentage of parents who say their child has been offered and has taken up extra one-to-one or group tuition. Sample: all children.

Source: IFS–IoE survey, wave 2.

Particularly given this severe squeeze on resources, prioritising effective catch-up policies that will help to mitigate the pandemic's effect on inequalities is especially important. Our second survey provides an insight into the types of pupils that are most likely to have benefited from early catch-up resources. Figure 6.2 shows the percentage of pupils who had been offered some form of catch-up tuition by March 2021 – either by the government or from their school – as well as the percentage who had voluntarily taken up this offer.

For the richest and poorest pupils, there are similar rates of catch-up offers, represented by the total heights of the bars in Figure 6.2. For example, 36% of the poorest children had been offered catch-up tuition, compared with 35% of the richest. By contrast, the middle 60% of pupils have significantly fewer offers, with only around 27% of children receiving one.

This U-shaped relationship warns that middle-income children may end up missing out on catch-up provision, being too high-income for direct government help, but attending schools that lack the resources to provide tuition from their own funds.

The government's catch-up policy should be mindful of these children, perhaps by expanding the threshold of those eligible for direct government support.

In addition to differences in the offer of these provisions, there are also substantial differences in the acceptance rate amongst parents. In general, richer parents are more likely to accept catch-up provisions when offered. For example, only 68% of parents from the poorest quintile accepted catch-up tuition, compared with 78% and 85% from the middle and top quintiles respectively.

This highlights an important message: when it comes to reducing educational inequalities, policymakers need to consider not just who is offered opportunities, but who is able to take them up. This challenge has come up repeatedly during the pandemic: for example, when families were allowed to choose whether to send their child back to school in June and July 2020, richer families were far more likely to opt for in-person schooling (Cattan et al., 2021). Going forward, if catch-up provisions remain voluntary, this will skew access towards richer children. To prevent this from happening, the government should consider making some catch-up policies obligatory, or – failing that – at least focusing resources and communications on poorer families. Schools will also play a significant role in identifying the pupils who most need support, and in helping and encouraging them to access it.

7. Conclusion

The COVID-19 pandemic has had a huge impact on the education of English school children. In this report, we have focused on how children's learning experiences evolved over the course of the first year of disruption. We use data collected in April/May 2020 and in February/March 2021 to document how children's experiences of home learning changed during these two periods of school closure, as well as the extent of educational disruption in the 2020 autumn term.

Overall, we find that home learning worked far better in the second round of school closures than it did the first time around. Total weekly learning time rose and the quality of learning activities improved as well, as pupils transitioned towards more interactive learning activities such as online classes. Importantly, these improvements were disproportionately large at the bottom end of the income distribution, making for a much more effective and equal home learning experience than during the first round of school closures.

Schools and families continued to be disrupted during the autumn term, when staff shortages, social distancing requirements and self-isolations posed consistent problems. On average, pupils spent around 10% of this term learning from home – but they had far less access to resources from their school than during either of the nationwide school closures. These challenges were not equally distributed: poorer pupils spent more of their term self-isolating, and they were less likely than their richer peers to have access to the resources that would help them continue to learn.

This improvement is reflected in some of the initial assessments of learning loss: on average, pupils fell substantially behind during the first period of school closures (most estimates suggest the learning loss was around 2–3 months of expected progress). They then made a small recovery during the 2020 autumn term, before falling behind again during the Spring 2021 school closures – though the 'cost' of this round of school closures was closer to 1 month than to the 2–3 months seen in the first round of school closures (Renaissance Learning and Education Policy Institute, 2021b).

After over a year of educational disruption, there remain several areas of grave concern. Most notably, learning loss remains considerable – compared with a pre-pandemic baseline, even the second round of school closures saw average learning time fall by around a fifth. About a quarter of parents believed in March 2021 that their child would need more than a year to make up for learning lost during the first year of the pandemic. And while inequalities in home learning experiences improved during the second round of school closures, there is little evidence that disadvantaged pupils started to close the gaps that had widened during the first round of closures in early 2020.

The scale of the challenge – and its long-term implications for children's life chances and for society as a whole – makes it especially important that government and schools design and properly resource a recovery programme that is big enough to meet these needs.

However, funding these programmes will not be enough to tackle the huge challenge of the inequalities that opened up during the pandemic, unless they are designed with the needs of the most vulnerable children in mind. While early tutoring support did seem to be targeted towards disadvantaged pupils, these families were less likely to actually take up an offer of a tutoring spot. Assessing some of the barriers to using these services should be a priority for schools and for policymakers. In addition, both schools and government should develop strategies to encourage the most vulnerable families to make use of these services – including, where appropriate, making services such as catch-up tutoring a mandatory part of the school day.

Appendix

Table A.1. Unweighted and reweighted means of sample characteristics compared with the nationally representative LFS sample: wave 1 (April/May 2020)

	Unweighted	Reweighted	Comparable LFS sample
Family structure			
Single mother	0.184	0.252	0.222
Single father	0.079	0.022	0.017
Couple	0.737	0.726	0.761
Women's education			
GCSEs or less	0.265	0.343	0.367
A levels	0.310	0.260	0.249
University degree	0.425	0.397	0.384
Men's education			
GCSEs or less	0.306	0.375	0.416
A levels	0.259	0.231	0.229
University degree	0.435	0.394	0.354
Single mothers' education			
GCSEs or less	0.358	0.454	0.495
A levels	0.423	0.291	0.272
University degree	0.219	0.254	0.233
Pre-crisis employment			
Women	0.728	0.752	0.745
Men	0.877	0.920	0.935
Single mothers	0.732	0.703	0.678
Women's pre-crisis earnings			
£0–£9,999	0.306	0.451	0.476
£10,000–£24,999	0.427	0.295	0.285
£25,000–£39,999	0.128	0.152	0.151
£40,000+	0.139	0.102	0.089

	Unweighted	Reweighted	Comparable LFS sample
Men's pre-crisis earnings			
£0–£9,999	0.095	0.133	0.131
£10,000–£24,999	0.338	0.215	0.206
£25,000–£39,999	0.251	0.305	0.301
£40,000–£59,999	0.163	0.187	0.188
£60,000+	0.153	0.159	0.174
Working in an industry where 50%+ of jobs have been locked down			
Women	0.330	0.255	0.231
Men	0.331	0.288	0.264
Single mothers	0.394	0.307	0.282
Working in an occupation where 0–15% of workers report being able to work from home			
Women	0.314	0.327	0.327
Men	0.347	0.351	0.362
Single mothers	0.351	0.388	0.392
Working in an occupation where 15.1–75% of workers report being able to work from home			
Women	0.211	0.219	0.237
Men	0.271	0.214	0.192
Single mothers	0.228	0.276	0.300
Working in an occupation where 75.1–100% of workers report being able to work from home			
Women	0.474	0.453	0.436
Men	0.382	0.435	0.445
Single mothers	0.421	0.336	0.309
Region			
Greater London	0.184	0.123	0.118
South East	0.148	0.212	0.235
South West	0.102	0.105	0.097
West Midlands	0.109	0.110	0.107
North West	0.145	0.143	0.136
North East	0.072	0.065	0.061
Yorkshire & Humber	0.091	0.105	0.113
East Midlands	0.079	0.087	0.092
East of England	0.071	0.050	0.041

Table A.2. Unweighted and reweighted means of sample characteristics compared with the nationally representative LFS sample: wave 2 (February/March 2021)

	Unweighted	Reweighted	Comparable LFS sample
Family structure			
Single mother	0.215	0.282	0.222
Single father	0.062	0.021	0.017
Couple	0.723	0.697	0.761
Women's education			
GCSEs or less	0.317	0.371	0.367
A levels	0.269	0.254	0.249
University degree	0.415	0.374	0.384
Men's education			
GCSEs or less	0.324	0.392	0.416
A levels	0.256	0.232	0.229
University degree	0.420	0.377	0.354
Single mothers' education			
GCSEs or less	0.416	0.495	0.495
A levels	0.281	0.271	0.272
University degree	0.303	0.234	0.233
Pre-crisis employment			
Women	0.800	0.735	0.745
Men	0.914	0.909	0.935
Single mothers	0.764	0.671	0.678
Women's pre-crisis earnings			
Less than £1,000 per month	0.551	0.532	0.542
£1,000 to £2,500 per month	0.362	0.351	0.353
£2,500 or more per month	0.087	0.116	0.105
Men's pre-crisis earnings			
Less than £1,000 per month	0.307	0.166	0.150
£1,000 to £2,500 per month	0.489	0.478	0.449
£2,500 to £3,500 per month	0.115	0.195	0.219
£3,500 or more per month	0.089	0.161	0.182
Working in an industry where 50%+ of jobs have been locked down			
Women	0.340	0.260	0.231
Men	0.363	0.293	0.264

	Unweighted	Reweighted	Comparable LFS sample
Working in an occupation where 0–15% of workers report being able to work from home			
Women	0.354	0.351	0.327
Men	0.389	0.376	0.362
Single mothers	0.363	0.405	0.392
Working in an occupation where 15.1–75% of workers report being able to work from home			
Women	0.231	0.222	0.237
Men	0.269	0.210	0.192
Single mothers	0.247	0.275	0.300
Working in an occupation where 75.1–100% of workers report being able to work from home			
Women	0.414	0.427	0.436
Men	0.343	0.414	0.445
Single mothers	0.390	0.320	0.309
Region			
Greater London	0.159	0.122	0.118
South East	0.158	0.215	0.235
South West	0.105	0.102	0.097
West Midlands	0.118	0.104	0.107
North West	0.146	0.140	0.136
North East	0.069	0.068	0.061
Yorkshire & Humber	0.081	0.104	0.113
East Midlands	0.077	0.093	0.092
East of England	0.086	0.053	0.041

References

Anders, J., Macmillan, L., Sturgis, P. and Wyness, G. (2020), 'Homeschooling during lockdown deepens inequality', LSE Covid-19 blog, 5 June, http://eprints.lse.ac.uk/105147/1/covid19_2020_06_05_homeschooling_during_lockdown_will_deepen.pdf.

Andrew, A., Cattan, S., Costa Dias, M., Farquharson, C., Kraftman, L., Krutikova, S., Phimister, A. and Sevilla, A. (2020), 'Inequalities in children's experiences of home learning during the COVID-19 lockdown in England', *Fiscal Studies*, 41, 653–83, https://doi.org/10.1111/1475-5890.12240.

Blainey, K. and Hannay, T. (2021), 'The impact of school closures on autumn 2020 attainment', https://www.risingstars-uk.com/media/Rising-Stars/Assessment/RS_Assessment_white_paper_2021_impact_of_school_closures_on_autumn_2020_attainment.pdf.

Cattan, S., Farquharson, C., Krutikova, S., Phimister, A., Salisbury, A. and Sevilla, A. (2021), 'Inequalities in responses to school closures over the course of the first COVID-19 lockdown', Institute for Fiscal Studies (IFS), Working Paper W21/4, https://ifs.org.uk/publications/15302.

Cullinane, C. and Montacute, R. (2020), 'COVID-19 and Social Mobility Impact Brief #1: school closures', Sutton Trust, https://www.suttontrust.com/wp-content/uploads/2021/01/School-Shutdown-Covid-19.pdf.

Department for Education (2021a), 'What should remote education look like?', The Education Hub, blog, 8 January, https://educationhub.blog.gov.uk/2021/01/08/what-should-remote-education-look-like-how-can-your-child-learn-remotely-if-you-dont-have-a-laptop-we-answer-your-remote-learning-questions/.

Department for Education (2021b), 'Laptops and tablets data', 13 July, https://explore-education-statistics.service.gov.uk/find-statistics/laptops-and-tablets-data.

Department for Education (2021c), 'Remote education good practice', 24 March, https://www.gov.uk/government/publications/remote-education-good-practice/remote-education-good-practice.

Elliot Major, L., Ayles, A. and Machin, S. (2021), 'Learning loss since lockdown: variation across the home nations', Centre for Economic Performance, Covid-19 Analysis 23, https://cep.lse.ac.uk/pubs/download/cepcovid-19-023.pdf.

Farquharson, C., Krutikova, S., Phimister, A., Salisbury, A. and Sevilla, A. (2021), 'The return to school and catch-up policies', Institute for Fiscal Studies (IFS), Briefing Note BN318, https://ifs.org.uk/publications/15336.

Renaissance Learning and Education Policy Institute (2021a), 'Understanding progress in the 2020/21 academic year: interim findings, January 2021', Department for Education, https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/962330/Learning_Loss_Report_1A_-_FINAL.pdf.

Renaissance Learning and Education Policy Institute (2021b), 'Understanding progress in the 2020/21 academic year: initial findings from the spring term – June 2021', Department for Education, https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/994364/Understanding_Progress_in_the_2020_21_Academic_Year_Initial_Report_3_.pdf.

Rose, S., Twist, L., Lord, P., Rutt, S., Badr, K., Hope, C. and Styles, B. (2021), 'Impact of school closures and subsequent support strategies on attainment and socio-emotional wellbeing in Key Stage 1: Interim Paper 1', Education Endowment Foundation, https://educationendowmentfoundation.org.uk/public/files/Publications/Covid19_Resources/Impact_of_school_closures_KS1_interim_findings_paper_-_Jan_2021.pdf.

Sharp, C., Sims, D. and Rutt, S. (2020), 'Schools' responses to COVID-19: returning pupils to schools', National Foundation for Education Research, https://nfer.ac.uk/return-of-pupils-to-school-schools-responses-to-covid-19/.

Sibieta, L. and Cottell, J. (2020), 'Education policy responses across the UK to the pandemic', Education Policy Institute, https://epi.org.uk/wp-content/uploads/2020/10/UK-Education-Policy-Response_Pandemic_EPI.pdf.

Sibieta, L. and Robinson, D. (2020), 'School attendance and lost schooling across England since full reopening', Education Policy Institute, https://epi.org.uk/wp-content/uploads/2020/12/ANALYSIS_School-attendance-and-lost-schooling-across-England.pdf.