



Review of time in school and 16 to 19 settings

Introduction

We have reviewed time spent in school and 16 to 19 settings and the impact this could have on helping children and young people to catch up from the effects of the coronavirus (COVID-19) pandemic.

We have considered:

- the scale and nature of lost learning
- the current use of time in schools and 16 to 19 settings in England
- international comparisons
- impact and deliverability

Scale and nature of lost learning

The latest evidence in [Pupils' progress in the 2020 to 2021 academic year](#) suggests that in summer 2021, pupils were still behind in their learning compared to where we would otherwise have been in a typical year although they made some progress in recovering lost learning when back in the classroom. In summer 2021, primary pupils were on average around 1 month behind in reading and around 3 months behind in maths which is an improvement from around 2 months in reading and around 3.5 months in maths in spring 2021. Data for secondary pupils suggest they were behind in their reading by around 2 months in summer 2021 which is also an improvement from around 2.5 months in spring 2021. However, we lack data on other subjects for secondary pupils which is particularly important given the greater number of subjects studied.

Disadvantaged pupils continue to be disproportionately affected by the pandemic although in primary there was an improvement between spring and summer 2021. In summer 2021, primary pupils eligible for free school meals were on average around an additional half a month further behind in reading and maths compared to their more advantaged peers, decreasing from around 1 month in spring 2021. In contrast, the situation for disadvantaged secondary pupils worsened between spring and summer 2021. In summer 2021, secondary pupils eligible for free school meals were on average around an additional 2 months further behind in reading compared to their more advantaged peers, which is an increase from around 1 month in spring 2021.

Levels of lost learning have also differed between places. Pupils in the north of England appear to have experienced more learning loss than pupils in the south in summer 2021. Moreover, levels of lost learning were higher for pupils in more deprived areas. However, regional data should be interpreted with caution due to small sample sizes and high degree of within-region variation.

The evidence that the COVID-19 pandemic has affected schools and pupils differently – with disadvantaged pupils having lost more learning than their more advantaged peers and secondary

pupils appearing to be further behind than primary pupils – suggests a targeted approach is required.

Recovery interventions have already supported pupils to spend more time learning including through tutoring delivered outside lessons, summer schools, and the use of the Recovery Premium for additional sessions. Evidence suggests teachers are the most important in-school factor affecting attainment and there is good evidence that high quality continuing professional development (CPD) drives improvement in teaching and leadership.¹ There is also extensive evidence that tutoring is one of the most effective ways to accelerate pupil progress.² Schools are best placed to determine how time is used to facilitate catch-up and to best support their pupils using interventions which meet their needs.

We are providing new recovery premium funding, which can be used by schools on evidence-based activities to support disadvantaged pupils, including additional instruction and activity before and after school. Given that disadvantaged pupils have experienced more learning loss and are even further behind their more advantaged peers, there is a clear need to target this support for recovery so that those hardest hit benefit most.

The school day and 16 to 19 learning hours in England

Pre-pandemic the average mainstream school day in England³ (for primary and secondary settings) was around 6 hours 30 minutes a day.

This is tightly distributed, with 75% of schools having a day that lasted between 6 hours and 15 minutes and 6 hours and 35 minutes. However, some schools have a day that is well below the average (8% of primaries and 5% of secondaries have a school day that lasted 6 hours and 10 minutes or shorter), or well above the average (2% of primaries and 22% of secondaries have a school day longer than 6 hours 50 minutes).

The difference in average between primary and secondary is minimal (9 minutes a day). Internationally the average annual number of compulsory instruction hours increases with level of education in most Organisation for Economic Co-operation and Development (OECD) countries, with more hours in secondary education than primary.⁴

Initial analysis suggests little or no difference in length of school day in England across other school characteristics in England such as:

- proportion of pupils eligible for free school meals within settings
- urban versus rural settings
- maintained schools versus academies

This does not include special school settings and alternative provision, where particular considerations may affect timetabling and the length of the school day.

Almost all primary and secondary schools (98%) offer some form of after- or before-school extracurricular activity or club.

¹ Visible Learning, (Hattie, 2009); [High Potential Middle Leaders \(secondary\) programme: an evaluation \(2017\)](#)

² [EEF Toolkit \(2021\)](#)

³ [School snapshot panel: COVID-19 - GOV.UK \(www.gov.uk\)](#)

⁴ Education at a Glance 2021, OECD (2021)

Providers of 16 to 19 education are expected to offer an average of 600 hours per year of teaching to students on full-time programmes. They must not offer less than 540 hours per year. Students are taught on a wide range of programmes so there will be variations, especially within settings as well as between settings, for example, the current average T level is 725 hours per year plus a 175 hour work placement.

International comparisons

Schools

Based on survey data from Trends in International Mathematics and Science Study (TIMSS)⁵ (international maths and science assessments):

- the average number of instructional hours per year in primary schools in England is above the median for pupils in year 5 compared to participating countries
- in secondary schools in England it is broadly at the median for pupils in year 9 compared to participating countries

Based on OECD data, average teaching hours for key stage 4 pupils (those in years 10 and 11) in England are 26.8 per week. For these older pupils, this is slightly below the OECD average of 27.5 for pupils of a similar age.⁶ Many other OECD countries stipulate minimum learning hours in regulations.⁷

16 to 19

The countries identified as having high-performing technical education systems are characterised by a relatively high number of teaching hours, when compared to England. On average, this is equivalent to 1,000 hours of education and training per year.⁸

There is some variation within this figure, for example in Germany, where education provision is devolved to the individual federal states, the number of teacher-supervised hours per year ranges from approximately 718 to 1,160.

Evidence of impact and deliverability

A number of studies have indicated a positive relationship between the quantity of instructional time and outcomes across educational phases, and across a range of education systems, although the evidence varies in scale, quality and applicability. For example:

- Lavy, 2020 used analysis of reforms to Israel's funding formula (that reduced instructional resources funding for some schools and increased them for others) to demonstrate that increased school resources and time spent at school and on key tasks leads to increased academic achievements, also finding that increasing subject-specific instructional time

⁵ TIMSS 2019 International Results in Maths and Science. Calculated based on principal and teacher reports of number of instructional hours per day and number of days in school year

⁶ PISA 2018 Results (Volume V) Effective Policies, Successful Schools, OECD (2020)

⁷ Education at a Glance 2021, OECD (2021)

⁸ Funding and Expenditure in Post-16 Education, An International Review (July 2017, DfE)

per week showed positive and significant effects on maths, science, and English test scores and small and nonsignificant effects on Hebrew test scores

- Kikuchi, 2014 (Japan) found that a reduction in instructional time is detrimental to outcomes, with a decrease in instructional time decreasing the probability of women continuing in education beyond the compulsory by 3 to 4% (only women were studied)
- Bellei, 2009 (Chile) found that a large increase in instructional time had a positive effect on high school students' achievement in maths and English,⁹ however this required a significant funding increase and major institutional changes

However, studies also show that the quantity of time is only one relevant factor (alongside for example teacher quality). Whether additional time in learning has a positive impact on attainment, and the extent of this impact, depends on the additional time being used well:

- Rivkin and Schiman, 2015 (analysis of PISA 2009 data) indicate that school circumstances are important determinants of the benefits and desirability of increased instruction time - teacher quality, classroom environment and students' ability to learn
- additional time appears to have a small positive impact on literacy and numeracy where led by a certified teacher (summarised in Kidron and Lindsay, 2014)

Furthermore, evidence on the role of instruction time in reducing the attainment gap is mixed. There are some studies indicating that high performers are the ones who benefit the most from extended hours (Cattaneo and others, 2017 and Bellei, 2009) while other studies (Pattall and others, 2010) suggest that extending school time can be an effective way to support student learning, particularly for students most at risk of school failure.

A number of studies, in the context of out-of-school programmes targeting vulnerable students implemented in the USA, illustrate that extra time does not always achieve a positive impact. (Heinrich and others, 2010; Chappell and others, 2011 & Deke and others, 2014).

Any universal change to the length of the school day would involve significant delivery considerations, particularly how to realise the additional teaching capacity required in order to facilitate delivery within existing legislative, contractual and workforce supply constraints. The challenge of ensuring that any additional time is not only delivered, but also used well, would require legislation and accountability measures sufficient to ensure quality.

As teaching hours currently delivered in 16 to 19 are lower than pre-16, delivering an increase in hours is much more feasible, particularly as the legislative and accountability frameworks to do so are already in place. Generally too, the structure of teaching and learning time in 16 to 19 education (for example, free periods) provides opportunities to more fully utilise a 'standard' day or week. Given international practice and engagement with the sector we have a high degree of confidence that there is capacity to deliver quality additional time in 16 to 19 education.

⁹ the effect-size on language achievement was 0.05–0.07 standard deviations, the effect-size on mathematics achievement ranged from 0.00 to 0.12 standard deviations

Relevant academic studies

Bellei C (2009) 'Does lengthening the school day increase students' academic achievement? Results from a natural experiment in Chile' *Economic Education Review* volume 28, 629–640.

Cattaneo M A, Oggenfuss C, & Wolter S C (2017) 'The more, the better? The impact of instructional time on student performance' *Education Economics*, volume 25, 433–445

Chappell S, Nunnery J, Pribesh S & Hager, J. (2011) 'A meta-analysis of Supplemental Education Services (SES) provider effects on student achievement' *Journal of Education for Students Placed at Risk*, volume 16 (1), 1-23.

Deke J, Gill B, Dragoset L, & Bogen, K (2014) 'Effectiveness of supplemental educational services' *Journal of Research in Educational Effectiveness* volume 7, 137-165.

Greatbatch D & Tate S (2017) 'Funding and expenditure in post-16 education: An international review' Department for Education (DFE).

Heinrich C J, Meyer R H & Whitten G W (2010) 'Supplemental Education Services under No Child Left Behind: Who signs up and what do they gain?' *Education Evaluation and Policy Analysis*, 32, 273-298'

Kidron Y & Lindsay J (2014) 'The effects of increased learning time on student academic and non-academic outcomes: Findings from a meta analytic review' (REL 2014-015). Washington, DC: U.S. Department of Education, Institute of Education Sciences, National Center for Education Evaluation and Regional Assistance, Regional Educational Laboratory Appalachia.

Kikuchi N (2014) 'The effect of instructional time reduction on educational attainment: Evidence from the Japanese curriculum standards revision' *Journal of the Japanese and International Economies*, Elsevier volume 32(C), pages 17-41.

Lavy V (2020) 'Expanding School Resources and Increasing Time on Task: Effects on Students' Academic and Non-cognitive Outcomes' *Journal of the European Economic Association* volume 18, 232–265.

Mullis I V S, Martin M O, Foy P, Kelly, D L & Fishbein B. (2020) 'TIMSS 2019 International Results in Mathematics and Science'

Patall E, Cooper H & Allen A (2010) 'Extending the School Day or School Year: A Systematic Review of Research (1985–2009) ', *Review of Educational Research*

Rivkin S G and Schiman J C (2015) 'Instruction Time, Classroom Quality, and Academic Achievement' *Economic Journal*, Royal Economic Society, volume 125(588), 425-448.

OECD (2021) 'Education at a Glance 2021: OECD Indicators' OECD Publishing, Paris

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