

Changes in subject teaching time

NFER research on teacher retention has highlighted how both the accountability system and teacher supply are influencing changes in the teaching time secondary schools dedicate to different subjects. **Jack Worth** explains

A number of different forces have influenced secondary schools' allocation of curriculum time between different subjects over the last five years, including policy changes and a changing labour market for teachers. Three key forces have been:

- New accountability measures introduced by the government have provided schools with an incentive to particularly prioritise teaching of English Baccalaureate (EBacc) subjects: English, maths, science, history/geography and modern languages.
 - School spending per-pupil has been stable in real-terms, so increases in a particular subject area may have often meant reductions in other subjects (Belfield et al, 2017).
 - Teacher supply in particular subjects has also acted as a constraint on the ability to expand, or even maintain, the amount of teaching in some subjects.
- Disentangling what effect each of these factors has had on the curriculum is a challenge because all three have been happening together. There have also been other relevant changes, such as the introduction of a new curriculum and changes to exam specifications.
- Researchers at the National Foundation for Educational Research (NFER) have analysed what changes schools have made to the amount of curriculum time they allocate to different subjects, using data from the School Workforce Census. We attempted to infer what the different impacts have been by considering what affect we might expect policy changes to have through the incentives they create.

The graph below shows the percentage change in total curriculum hours since 2011 for each subject group, after accounting for changes in pupil numbers. We have also undertaken new analysis of teacher retention

rates and how they differ by the subject they teach. This analysis is part of a major new NFER research project on the dynamics within the teacher workforce in England, funded by the Nuffield Foundation.

So, what has happened to teaching time of different subjects since 2011?

English and maths teaching time has, on average, increased by around five per cent since 2011. Both are EBacc subjects and are double-weighted in the Progress 8 measure, which gives schools an additional incentive to expand curriculum time. English and maths are also the first subjects to have new exam specifications, and the expanded content in the maths GCSE will probably require a greater amount of teaching time.

Science is a statutory subject up to age 16, but Progress 8 provides an additional incentive for schools to offer more science teaching to fill EBacc slots. However, total curriculum hours have been unchanged since 2011. This could be because schools had smaller classes which they have filled up, and school and pupil preferences may also be influencing this trend. It may also be that low recruitment and retention rates have limited schools' ability to expand science teaching hours.

Our analysis of teacher retention rates found that science and maths teachers have the highest rates of leaving the profession and that rates of leaving are particularly high in the first few years after training.

Better employment prospects outside of teaching for those with training in a STEM subject are likely to raise the leaving rate, but other subject-specific factors may also have an influence. Teacher training entries for science subjects have also consistently been below the government's target for the last few years (DfE, 2016).

History/geography and languages are EBacc subject groups, but Progress 8 incentivises schools to fill EBacc GCSE slots for one of these subject groups more strongly than it incentivises them to fill both. This is because science (which is compulsory) typically fills two of the three EBacc slots, leaving one EBacc slot for either history, geography or languages. History and geography curriculum hours have risen by 17 per cent since 2011, while languages hours have fallen slightly.

Our analysis of teacher retention rates found that history and geography have some of the lowest rates of teachers leaving the profession whereas leaving rates for language teachers are as high as those for science and maths teachers.

Entries for teacher training in languages are below the government's target, whereas there is a surplus of entries for history and geography (DfE, 2016). This

suggests that lower recruitment and retention rates in language subjects have constrained schools' ability to offer more language teaching in response to an incentive to do so. This also constrains the government's ability to achieve its aim for 90 per cent of pupils to be entered for GCSEs qualifying them for the EBacc.

Meanwhile, the accountability system seems to have encouraged schools to increase history and geography

We also found that the leaving rate for early-career teachers of technology subjects is below average, whereas the rate for those with more than five years' experience is above average.

This may also be a sign that schools have been looking to reduce expenditure on teaching technology, since experienced teachers are more expensive to employ. However, it could also be a sign of schools preferring teachers with more up-to-date subject knowledge.

School budgets are expected to fall in real terms over the next few years (Belfield et al, 2017) and Progress 8 will continue to be the main accountability measure for secondary schools.

Therefore, unless they are protected, other non-EBacc subjects that have not seen such large falls in curriculum time, particularly arts subjects, may see reductions in teaching time and staff numbers over the next few years. **SecEd**

• Jack Worth is a senior economist at the National Foundation for Educational Research.

Further information

- The research update *Teacher Retention and Turnover* is available at www.nfer.ac.uk/publications/NUFS01
- To find out more about this research project or to register your interest, visit www.nfer.ac.uk/research/teaching-workforce-dynamics/

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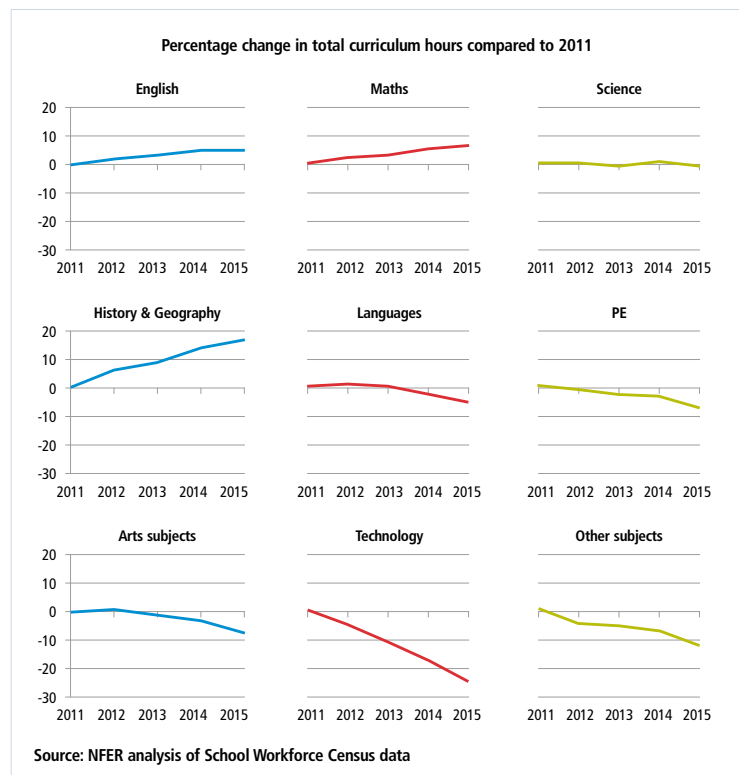
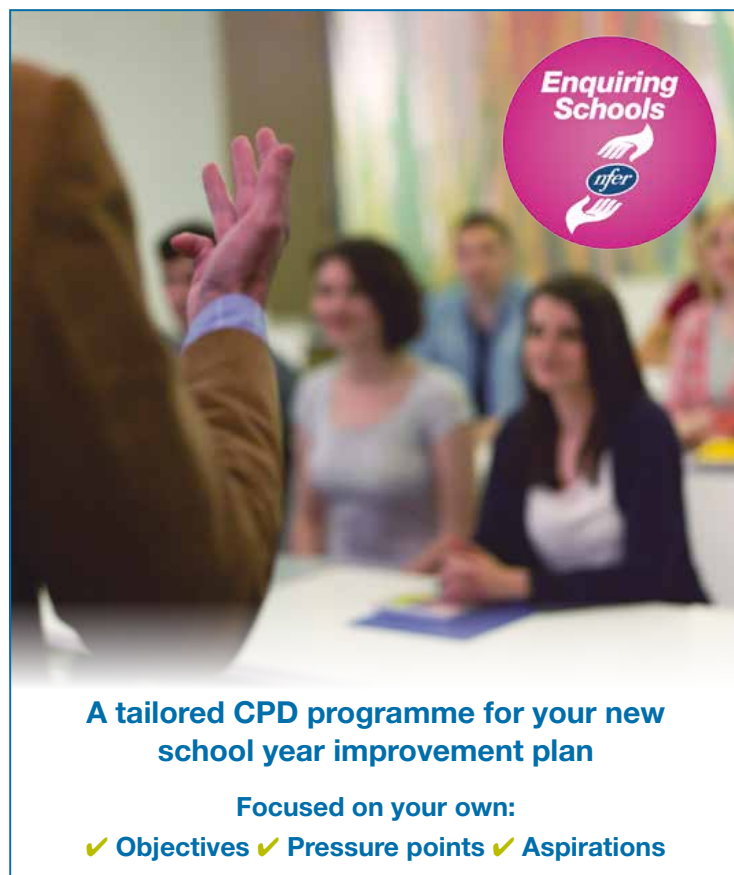
References

- Belfield C, Crawford C, Sibbi L, 2017, *Long-Run Comparisons of Spending Per Pupil Across Different Stages of Education*. London: The Institute for Fiscal Studies: <http://bit.ly/2r83yqo>
- Department for Education and National College for Teaching and Leadership, 2016, *Initial Teacher Training: Trainee Number Census – 2016 To 2017*: <http://bit.ly/2s9YrpG>



teaching time, perhaps enabled by a relatively plentiful supply of teachers. High retention rates and the number of trainees meeting the government's entry targets may have made history and geography the path of least resistance for schools to increase their Progress 8 scores.

Curriculum time for technology subjects has fallen dramatically since 2011. We found that technology teachers have a higher leaving rate, which may be driven by schools' reduced demand for teachers as well as teachers' own career decisions.

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