



# Successful school-to-school collaboration

At the heart of the self-improving school system is school-to-school collaboration, but how can collaboration work effectively for the benefit of all involved? **Claudia Sumner** and **Karen Wespieser** look at the research evidence

to as a 'self-improving' or 'school-led' system'. A school-to-school partnership approach can facilitate collaboration and allow schools to provide resources to support each other while retaining autonomy. Ideally, collaborative arrangements should involve institutions demonstrating excellent practice that can be shared, while recognising that such practice cannot be simply replicated between institutions.

Collaboration between institutions should be two-way. For example, the national schools commissioner, Sir David Carter, has spoken of the incentives for outstanding schools to engage with underperforming neighbours, explaining that "every school ... should be both a giver and a receiver of support" (ASCL et al, 2016) and that "there is as much, possibly even more, to learn from the teachers who have gone from special measures to good as there is from the ones who have gone from good to outstanding" (Busby, 2016).

## Collaboration in practice

In Wales, the Welsh government has been trialling a collaboration initiative called the Lead and Emerging Practitioner School Pathfinder Project. The project aims to raise the standards of educational practice and attainment within primary and secondary schools in Wales by facilitating school-to-school support. During the Pathfinder, a "Lead Practitioner School" works with an "Emerging Practitioner School" to share, disseminate and implement good practice approaches to teaching and learning on a systematic basis for 18 months.

The evaluation of the project found a range of collaborative practice is undertaken and could be grouped into three broad categories: teaching and learning, leadership, and using data and assessment.

Most schools engaged in activities which covered all three categories, with a main focus on teaching and learning.

The headteacher of one of the secondary lead practitioner schools said: "Effective and lasting change is attitudinal and cultural as opposed to structural. It requires change by all within the system, but particularly by schools which need to realise fully the advantages of collaboration over competition."

In England, initiatives such as the Department for Education's Gaining Ground Strategy have also focused on using school-to-school collaboration to drive improvement. Gaining Ground supported school improvement in secondary schools that have reasonable-to-good GCSE examination results, but have poor progression rates in English and mathematics. The intervention included, among other things, partnership with high-performing schools to support, challenge and inspire.

The evaluation of the strategy concluded that school-to-school partnership was most effective when:

- Schools have similar characteristics.
- Schools are within reasonable travelling distance.
- Schools have staff time and commitment from both parties and partnerships at different levels of seniority.

## Capacity for collaboration

In order for these types of approaches to work, there needs to be sufficient capacity in the system within reasonable travelling distances. In order to assess capacity within the system for collaboration, the National Foundation for Educational Research (NFER) conducted an analysis to identify and match

underperforming schools and high-performing schools within a limited radius using Ofsted data and Department for Education attainment data. To account for similar characteristics, the research only sought to match schools within the same phase (secondary or primary).

The analysis highlighted that there are more high-performing schools than underperforming schools, in both phases of education – in England there are 5,677 high-performing schools and 2,511 underperforming schools.

To assess the level of potential support, the research team looked at how many high-performing

schools each school in need has nearby. The analysis revealed that each secondary school in need of support has a median number of two high-performing secondary schools within the set radiuses.

While having support close at hand does not necessarily mean that the schools in question will want to or will be able to help (because, for example, they may already be working with other schools), it is nonetheless positive that schools in need have options nearby that they can explore for support.

As a result of this analysis, NFER created an interactive map plotting the location of high-performing schools and schools in need by phase (primary and secondary), as well as calculating the ratio of the two groups, by region, local authority and Parliamentary constituency.

The tool is intended to help teachers, governors and school leaders to identify potential collaborative partners in their area, with a view to improving outcomes for all pupils.

## Conclusion

Collaboration is a vital tool in the school improvement arsenal. It can be used to improve teaching and learning, leadership, and use of data and assessment. It works best when partners have similar characteristics, are nearby and both sides are fully committed at all levels.

There is clear evidence of capacity within the system to work in this way and NFER hopes this research, and the accompanying resources, can be used by headteachers, governing bodies and local authorities to embrace the opportunities offered by working with colleagues in other schools to raise attainment for all young people. SecEd

• *Claudia Sumner is a senior research manager and Karen Wespieser is head of impact at the National Foundation for Educational Research.*

## Further information

- *Evaluation of Tranche 2 of the Lead and Emerging Practitioner School Pathfinder Project*, NFER, March 2016: [www.nfer.ac.uk/publications/WGTW01/](http://www.nfer.ac.uk/publications/WGTW01/)
- *Evaluation of the Gaining Ground Strategy*, Department for Education, June 2012: <http://bit.ly/2gIT5hh>
- *Capacity for Collaboration? Analysis of school-to-school support in England*, NFER, July 2017: [www.nfer.ac.uk/publications/GRAM01](http://www.nfer.ac.uk/publications/GRAM01)

The self-improving system relies on high-performing schools and effective school leaders working beyond the parameters of their own institutions to support the wider school landscape.

At its heart is the notion that stronger and weaker schools should work together to drive up standards for the mutual benefit of both. But what does this look like in practice and does the system have the capacity to support it?

## The theory of the self-improving system

Describing the concept of a self-improving school system in 2010, the government stated: "Our aim should be to create a school system which is more effectively self-improving ... it is also important that

**“Ideally, collaborative arrangements should involve institutions demonstrating excellent practice that can be shared, while recognising that such practice cannot be simply replicated between institutions”**

we design the system in a way which allows the most effective practice to spread more quickly and the best schools and leaders to take greater responsibility and extend their reach." (Department for Education, 2010).

In its report on school collaboration in 2013, the Education Select Committee noted that "school partnerships and cooperation have become an increasingly important part of what has been referred



## NFER School Surveys

Survey, report and benchmarking service



Gain invaluable staff feedback to prepare for Ofsted inspection or to drive school improvement planning.

Gather insight on:

- Job satisfaction, community and goals
- Senior leaders and colleagues
- Professional development
- Pupil needs
- School policies
- Resources and facilities

Find out more:  
[www.nfer.ac.uk/ss7](http://www.nfer.ac.uk/ss7)







# UTCs: The reality behind the headlines

progress between key stage 2 and key stage 4. Some indication that this might be problematic comes from the analysis of absence data during key stage 3 and 4. Using the same matched comparison group already described, we found that levels of absence increase more sharply between year 7 and year 9 for those pupils who eventually attend a UTC in year 10. The gap then remains stable between years 10 and 11.

This suggests UTC pupils might be experiencing some degree of disaffection during the early secondary school years with possible negative implications for their academic progress.

Evaluating UTCs using standard performance and accountability measures is difficult

## Conclusion

In summary, our findings indicate a number of factors which make it difficult for UTCs to succeed when assessed in terms of standard performance measures.

UTCs are set up to focus on technical subjects, combining academic and vocational study, and devote a substantial part of their curriculum to practical skills and project-based learning, in accordance with their employer sponsors. This curriculum is not fully accounted for by headline performance measures.

Added to this, progress measures are calculated over five years between key stage 2 and 4, while UTCs are only responsible for the final two years.

This suggests that the perceived poor performance of UTCs may, at least to some extent, arise from the headline performance measures being used.

As these are important factors in influencing school choice, there are legitimate questions about whether these provide a fair assessment of the UTC curriculum.

Consideration should be given as to how these measures can be modified or integrated to present a more accurate picture of their educational provision.

SecEd

New research on University Technical Colleges has highlighted a number of key issues that might be preventing them from providing a viable route to improving technical and vocational education.

**Daniele Bernardinelli** looks at the findings

**U**niversity Technical Colleges (UTCs) are academy schools for 14 to 19-year-olds, combining a core academic curriculum with vocational and project-based learning.

At the start of the 2016/17 academic year, there were 48 UTCs open across England. According to the January 2017 school census, 11,032 pupils were on roll at a UTC, about 0.3 per cent of all mainstream secondary school pupils. There has been widespread criticism about the UTC model, and the data indicates clear challenges in both pupil recruitment and academic performance.

At the National Foundation for Educational Research (NFER), we looked beyond the headline figures, using data from the National Pupil Database to shed light on some of the key issues surrounding pupil recruitment and the performance of UTCs.

### Attracting new pupils is a key challenge

While some UTCs have been relatively successful at attracting pupils, most are operating well under capacity and several have closed or have been repurposed due to recruitment problems. While it is difficult for any new school to establish itself without a track record of performance, the challenge UTCs face is increased because they recruit pupils at age 14, which is an uncommon transition stage for students in England.

### In-take representative of local areas

To explore whether UTCs are meeting their policy aim of being a new technical option for students of all abilities, we analysed the characteristics of UTCs' pupil in-take at year 10 over several academic years.

This showed that the UTC in-take is, on average, similar to the average year 10 pupil population both nationally and in the local area.

UTCs have similar proportions of pupils eligible for free school meals (FSM) and only slightly higher proportions of pupils with SEN. Looking at the distribution of key stage 2 attainment for the UTC year 10 in-take compared to the national profile, we found that all levels of prior attainment are well represented, albeit with a slightly higher proportion of average attainers and a lower proportion of pupils from the top 20 per cent nationally.

One key characteristic that differentiates the UTC in-take from mainstream secondary schools is the low proportion of females on roll. While the proportion has been gradually increasing, from

23 per cent in 2014/15 to 28 per cent in 2016/17, females still comprise less than a third of all UTC pupils.

### UTC pupils perform less well at KS4

In contrast with their average prior attainment at key stage 2, UTC pupils tend to do less well at key stage 4, both on attainment and progress. We matched UTC pupils at the end of key stage 4 with a comparable group of pupils from schools they previously attended during key stage 3, based on attainment at key stage 2, gender, ethnicity, FSM and SEN eligibility. Our analysis shows significantly lower scores in both Attainment 8 and Progress 8. While there is substantial variability across different UTCs, even the higher achieving ones do not show particularly strong levels of progress.

“ **One key characteristic that differentiates the UTC in-take from mainstream secondary schools is the low proportion of females on roll** ”

To understand this, we looked at pupil attainment data in more detail. While the overall number of qualifications being taken is similar between UTC pupils and the comparison group, UTC pupils tend to have fewer qualifications that count towards their Attainment 8 score.

This is likely to be due to the emphasis on vocational qualifications and project-based learning within UTCs. Also, the UTC curriculum includes up to 40 per cent of time spent on practical learning, including but not limited to recognised vocational qualifications. On the other hand, the Attainment 8 calculations allow for no more than 30 per cent of vocational qualifications, and are restrictive in the type of such qualifications that count towards the final score.

Looking at specific subjects, we found that UTC

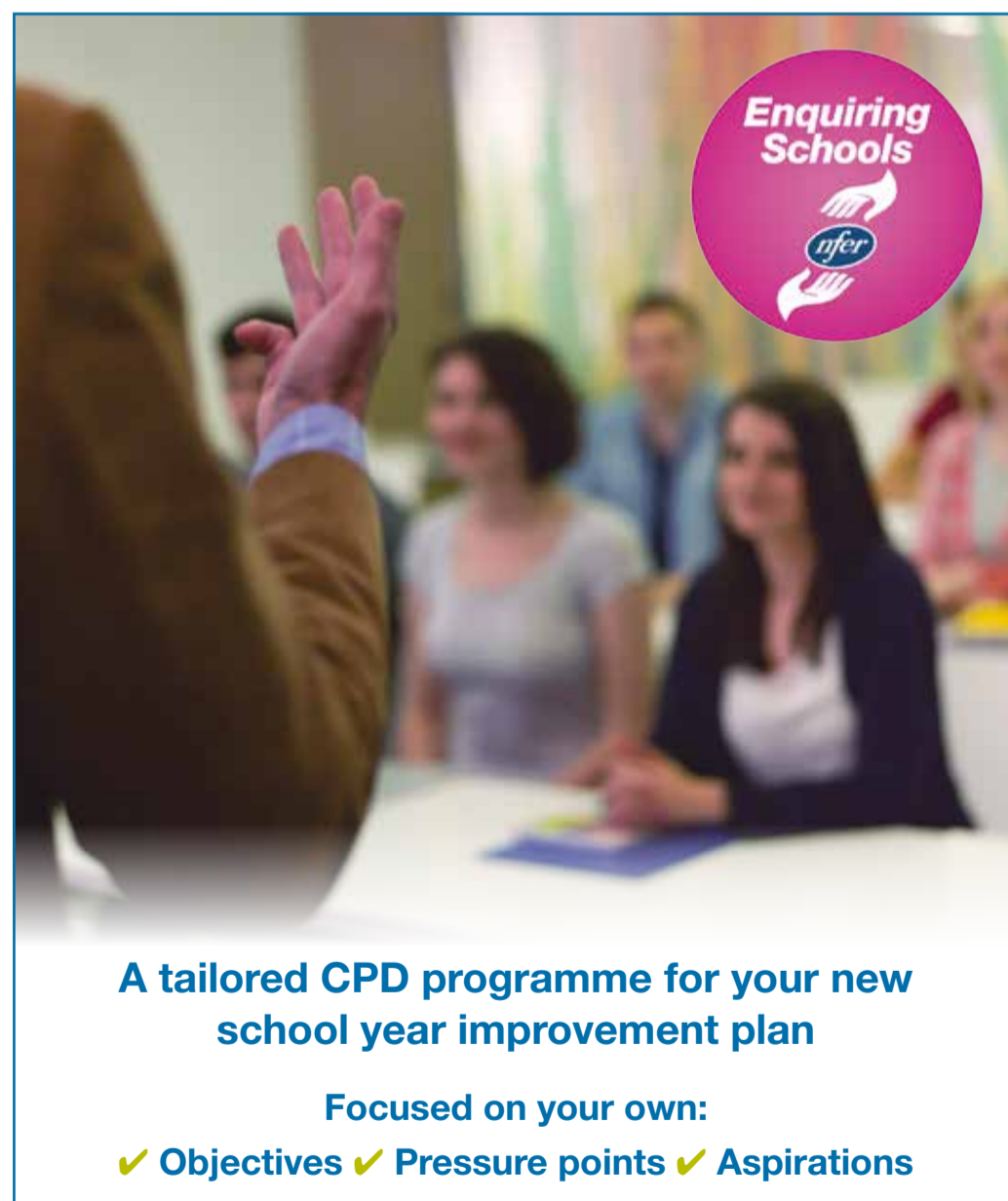
pupils tend to do worse than their peers in English but there is no evidence that they do any worse in maths or science. This is not surprising given the technical focus of the UTC curriculum.

Another important consideration is that UTC pupils attend different schools during their key stage 3 years. However, the lack of a national test at the end of key stage 3 makes it impossible to identify the actual contribution UTCs make to pupil

• *Daniele Bernardinelli is a research manager with the National Foundation for Educational Research.*

### Further information

The NFER report *University Technical Colleges: Beneath the Headlines – NFER Contextual Analysis* (June 2017) can be found at [www.nfer.ac.uk/publications/IMSA01/](http://www.nfer.ac.uk/publications/IMSA01/)



**Enquiring Schools**

**A tailored CPD programme for your new school year improvement plan**

**Focused on your own:**

✓ Objectives ✓ Pressure points ✓ Aspirations

To find out more and view our video visit: [www.nfer.ac.uk/es1](http://www.nfer.ac.uk/es1)



# 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](http://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/](http://www.nfer.ac.uk/research/teaching-workforce-dynamics/)

### References

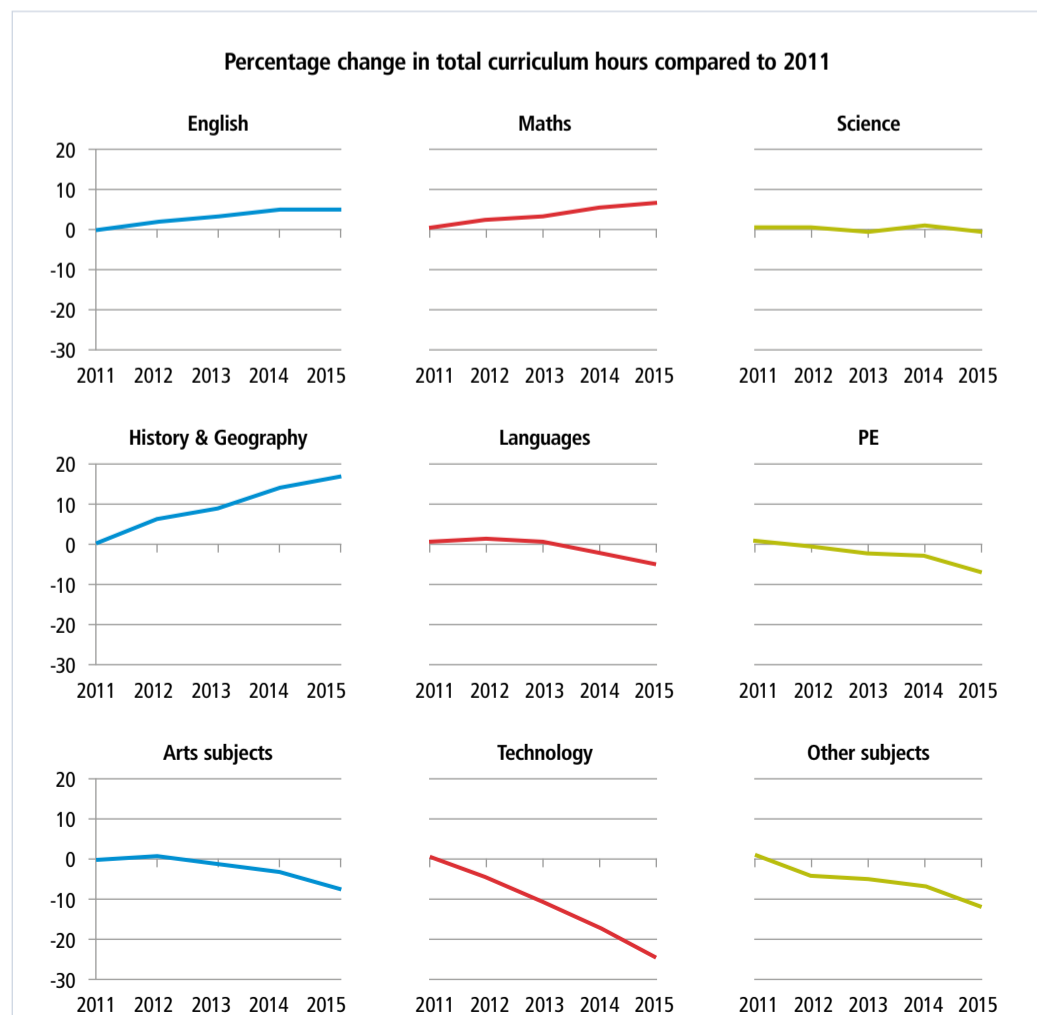
- Belfield C, Crawford C, Sibietta L, 2017, *Long-Run Comparisons of Spending Per Pupil Across Different Stages of Education*. London: The Institute for Fiscal Studies: <http://bit.ly/2r83yqo>
- Department for Education and National College for Teaching and Leadership, 2016, *Initial Teacher Training: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

workforce-dynamics/



Source: NFER analysis of School Workforce Census data



**A tailored CPD programme for your new school year improvement plan**

**Focused on your own:**

- ✓ Objectives ✓ Pressure points ✓ Aspirations

To find out more and view our video visit: [www.nfer.ac.uk/es1](http://www.nfer.ac.uk/es1)



Evidence for Excellence in Education





# Assessment: Develop your own approach

How are you getting on without levels? **Claire Hodgson** offers some evidence-based guidance on how schools can develop their own effective approaches to assessment

**A**ssessment in schools has always been a “hot topic”. The abolition of reportable national curriculum levels from September 2014 raised the heat. With that decision, a greater emphasis was placed on allowing teachers more flexibility in the way that they plan and assess learning.

It was also heralded as the opportunity to develop “an assessment system which enables schools to check what pupils have learned and whether they are on track to meet expectations” (*National Curriculum and Assessment from September 2014*, Department for Education, 2014) – a policy change which places a significant emphasis on embedding the use of formative assessment.

The NFER has long been involved in school assessment and has worked closely with schools to help provide assessments and other products and services that support effective teaching and learning.

Discussions with the Association of School and College Leaders (ASCL) and the Schools, Students and Teachers Network (SSAT) confirmed our own findings: the move from a single national assessment system (levels) to a more flexible, school-determined approach has provided new opportunities.

However, it has also created some uncertainty. What should the new assessment approach look like? How different should it be to the previous system of levels? How should a new approach be shared between staff and students?

In partnership with ASCL and SSAT, we have provided a free resource to help schools in developing

their own approaches to assessment. We agreed that the best and most effective assessment systems:

- Are clear, consistent and coherent – and can be readily understood by students, staff and parents/carers.
- Are shaped through structured dialogue with the whole school community.
- Maintain consistency across the school, while allowing sufficient flexibility for subject variance.

We also agreed that:

- Effective formative assessment is rooted in good pedagogy.
- Focusing on staff training in formative assessment and engaging all staff in assessment design have more impact than top-down approaches.
- One-size-fits-all approaches tend to be limited in their effectiveness.
- Approaches to teacher assessment should be determined by school leaders and practitioners – enabling schools to develop a system that works effectively in their own contexts.

## An effective assessment approach

We considered an approach, with formative assessment at its heart, which could be adopted by secondary schools. The resource was particularly designed for use in key stage 3 but it can (with a bit of adapting) be used in a wide range of situations and with all key stages. We considered the approach from two perspectives – whole-school and departmental.

## The whole-school approach

From the whole-school point of view, it is important to

a department to develop a more consistent approach to embedding formative assessment. Teachers should be encouraged to talk about students’ learning and progress outside of the pressures of accountability.

- Talking and listening to students enables teachers to fully grasp the students’ thought processes while the students are actively engaged in that thinking.
- Progress is not just about being able to “do more” or “do harder”. It includes students showing understanding of concepts, explaining how and why methods work, and how they might use the new knowledge and skills they are developing.
- Students reveal a lot about their understanding and misconceptions from the questions they ask of their teachers and peers. Progress may be evidenced by increasingly searching and complex questions which reflect current understanding and attempt to further develop and refine thinking.
- Teacher feedback to the student is vital. Feedback needs to be immediate if it is to inform the student’s thought processes. Prompt formative feedback (even if brief) often has more impact than detailed feedback delivered after the student has “moved on” from a topic.

## Key questions on assessment

The NFER devised a set of key questions to prompt thinking about a whole-school approach to assessment. These require school leaders and teachers to carefully consider the unique features and “big ideas” of each curriculum subject, the purpose of assessment and what progression within each subject looks like.

Departmental responses should be shared in order to develop the whole-school approach. We posed these key questions to a panel of experts – heads of department and representatives from key subject associations – to shape the resource and explore how assessment works best in different subject areas.

The in-depth discussions of the expert panel revealed much about the good formative assessment practice already going on in schools, which the resource aims to share. The intention is that teachers using the resource will be able to confirm whether what they are already doing is appropriate and in line with other schools’ practices and to pick up some alternative strategies to try out in their own classrooms. Key aspects included:

- Secure subject knowledge and fluency with specific techniques are important but are likely to contribute more strongly to success when combined with conceptual understanding.
- Shared tasks/assessments and moderation can help

the individual departments to adapt the assessment approach to reflect their specific curriculum and teaching requirements.

## The departmental approach

For formative assessment to aid students’ progression through a subject, it is important to be clear about progression signposts and to critically reflect on the “big ideas” of the subject. This will help with the identification of tasks likely to provide the best evidence of students’ progress and how the evidence can be used to plan teaching and learning.

It is also important to reflect on the “rarely linear” nature of progress through the subject and consider the timing of assessments to provide the most effective formative information. The resource focuses on English, mathematics, science, geography, history and modern foreign languages, but the approach can be applied to all subjects.

## Conclusion

Developing a whole-school approach to assessment can be a daunting task, particularly when given new freedoms and relatively little prescriptive guidance. However, it also provides an exciting challenge to determine an approach that meets the specific needs of your learners in your school.

We think that this resource provides a framework for school leaders and department heads to work together to plan a coherent whole-school approach to assessment that will support the learning of each and every student.

The resource highlights some of the effective formative assessment strategies that already exist and, hopefully, will engage schools in asking the right questions to ensure they have an assessment approach that works for them.

The demand for such a targeted resource among senior school leaders was strongly evidenced recently when the framework was presented at the ASCL annual conference. The interest in and engagement with the resource was very high with one conference attendee commenting that it is “a principled and practical approach to reviewing assessment”.

• *Claire Hodgson is a research director in the NFER’s Centre for Assessment.*

## Further information

You can download the NFER’s Refocusing Assessment Resource via [www.nfer.ac.uk/refocusing-assessment](http://www.nfer.ac.uk/refocusing-assessment)



## NFER School Surveys

Identify your school improvement objectives for the new school year





NFER School surveys is a complete school surveys service to obtain your parent, pupil and staff responses.

Our service will help you:

- Highlight strengths and areas for improvement
- Monitor year-on-year progress
- Save you valuable time and money

To find out more visit [www.nfer.ac.uk/ss5](http://www.nfer.ac.uk/ss5)



Evidence for  
Excellence in  
Education





# Analysing the UK's PISA results

The latest PISA findings shine a light on UK performance in maths, science and reading. However, they should be read in context and with caution.

**Dorothy Lepkowska** takes a look

The usefulness and veracity of the PISA tests divide opinion in the education world. But, in the UK at least, the international comparisons can offer a useful insight into how our 15-year-olds are performing against each other, and the world.

The main focus of the recently published 2015 PISA tests was science, but students also had to complete questions on maths, reading and problem-solving. The exercise did not test knowledge, but rather students' reasoning and interpretation skills and their ability to solve problems.

The PISA tests, administered by the Organisation for Economic Co-operation and Development (OECD), provide in-depth contextual information about different education systems, schools, teachers, students and how they live, and examine the relationships between these factors and levels of achievement.

**Headteachers in England and Scotland were more likely to report teacher shortages, while heads in England and Wales were more likely to cite inadequate or poorly qualified teachers as a concern**

This information enables governments to inform their own policy-making. However, caution is needed. How students perform could also be down to a range of other factors that are not accounted for in the tests.

The NFER's briefing paper, *Key Insights from PISA 2015 for the UK Nations*, urges caution on how much we can deduce from changes in students' performance.

It states: "Simply looking at whether the score for science, maths or reading is higher or lower than in a previous PISA cycle does not accurately tell us whether achievement has improved, is stable or is in decline."

It is crucial to consider whether a score is statistically

significantly different; in other words, that differences have not arisen solely by chance. It cites the example of Northern Ireland, where maths scores went up by six points since 2012 and yet the analysis found that performance had remained stable.

Furthermore, while it might be tempting to focus on rankings when trying to compare achievement between countries, this can be misleading as differences in scores might not be statistically significant. So while England is five positions higher in the rankings than Scotland, their scores are not significantly different.

## Science

So how did the home countries' performance compare? The PISA results show that students in England achieved significantly higher scores in science than their peers in the other three nations, with students in Wales scoring significantly lower.

Further analysis of the highest and lowest performers reveals that England had the highest number of top performers at 12 per cent, compared with Scotland at eight per cent, Northern Ireland at seven per cent, and Wales at five per cent.

England also had the lowest percentage of low performers, at 17 per cent, followed by Northern Ireland at 18 per cent, Scotland at 20 per cent, and Wales at 22 per cent. There were no significant gender gaps in performance in any of the four UK countries.

Wales recorded the smallest difference between the highest and lowest achievers, and England the largest – the equivalent of nearly nine years of schooling.

Performance in science had declined in Scotland and Wales since it was last the focus of PISA in 2006, while in England and Northern Ireland there were no significant differences.

## Mathematics

In maths, students in England, Northern Ireland and Scotland scored slightly above the OECD average, while in Wales the score was significantly lower.

Once again, England had the highest percentage of top performers at 11 per cent, followed by Scotland at nine per cent, Northern Ireland at seven per cent, and Wales at five per cent.

However, 22 per cent of students in England failed to reach the baseline ability in maths and lower performing students had lower average scores than their peers elsewhere in the UK. The percentage not reaching baseline ability in Northern Ireland was 19 per cent, in Scotland 20 per cent, and in Wales 23 per cent.

Wales had the smallest difference between high and low achievers, while England had the biggest gap, which was equivalent to eight years of schooling. Boys performed better in maths than girls in England and Wales, but this was not a pattern repeated in Northern Ireland or Scotland. Generally, maths scores have remained stable for all UK nations since maths was last the focus for PISA in 2012.

## Reading

In reading, no significant differences were recorded in scores in England, Northern Ireland and Scotland, but students in all three scored higher than young people in Wales.

England had the highest average reading score among top performers, followed respectively by Scotland, Northern Ireland and Wales. In England, one in 10 students were deemed as top performers, while in Scotland and Northern Ireland six per cent reached this level and just four per cent in Wales.

At the other end of the scale, 18 per cent of students did not reach the baseline level of ability in England,

compared with 15 per cent in Northern Ireland, 18 per cent in Scotland, and 21 per cent in Wales. Once again, Wales had the smallest difference between high and low achievers, and England, the largest, equating to more than eight years of schooling.

Overall, across the home countries, girls were found to be better readers than boys but there has been no major shift in reading performance since 2009, although there has been a decline in Scotland since 2012.

## Contextual data

As well as focusing on test scores, PISA seeks to explain how and why students perform as they do in different countries by looking at contextual data. An

analysis of socio-economic status (SES), for example, reveals that England has the largest gap in performance of students with high and low SES, and Wales, the lowest. This means that, in Wales, performance has less to do with affluence than in England, and that other factors will also have affected student success.

The school environment may have an impact on outcomes. Headteachers in England and Scotland were more likely than colleagues elsewhere in the UK to report teacher shortages, while heads in England and Wales were more likely to cite inadequate or poorly qualified teachers as a concern. Welsh heads were also most likely to report that teachers being poorly prepared for class was a barrier to learning.

## Maths in England

In its report *Is Mathematics Education in England Working for Everyone?*, the NFER analysed PISA data to find out how well England was supporting pupils from disadvantaged backgrounds in the teaching and learning of maths.

It found that, while no worse than in many other OECD countries, the gap between the most and least disadvantaged pupils was equivalent to three years of schooling at age 15. International evidence suggests this is a gap that is hard to plug.

Pupils in England were not found to be lacking in any particular aspect of maths but were weaker in the subject across the board.

In considering recommendations, the report highlighted evidence that grouping pupils by ability can have detrimental effects, and can lead to low-ability children being exposed to less rigorous maths and so fewer opportunities to reach their potential.

The report suggests that new methods of measuring deprivation need to be found and that summer-born children, who were found to be less likely to overcome disadvantage than their autumn-born classmates, need specific strategies to ensure they are not left behind.

Furthermore, new research is needed on those children who beat the odds to perform well, and on the sharing of successful, evidence-based strategies that schools are adopting to support disadvantaged pupils.

• Dorothy Lepkowska is a freelance education journalist.

## Further information

You can read NFER's education briefings *Key Insights from PISA 2015 in Scotland* and *Key Insights from PISA 2015 for the UK Nations*, via [www.nfer.ac.uk/research/pisa-2015/](http://www.nfer.ac.uk/research/pisa-2015/)



**FREE Registration**

**FREE Registration for the NFER Research Mark**

- Recognised national award scheme
- Gain accreditation for your school or college

**Find out more:**  
[www.nfer.ac.uk/resmark5](http://www.nfer.ac.uk/resmark5)



# Ready for Apprenticeship reform?

How prepared are providers and employers to meet the challenges of the Apprenticeship reforms?

**Dorothy Lepkowska**

looks at the latest research findings

**A**pprenticeships are undergoing their biggest reform in decades. Ministers have set an ambitious target of three million Apprenticeships by 2020, with delivery starting in May next year. The reforms aim to simplify funding, engage employers in the development of standards, offer more flexibility and engagement with employers, increase quality, and include the introduction of an Apprenticeship Levy for businesses with a wage bill larger than £3 million.

But how prepared are providers and employers to meet the timescale – and what do they think of the changes?

A joint report from the National Foundation for Educational Research (NFER) and the Association of Employment and Learning Providers (AELP), – *Providing for the Future: Providers' views on Apprenticeship reform* – examined in depth the views of 15 Apprenticeships providers to find out. Twelve were independent training providers (ITPs), one was a further education college, and two were other types of organisations providing Apprenticeships.

The research took place before more recent announcements on the future of Apprenticeships were made at the end of summer and in the early autumn. These included an additional £60 million of support for disadvantaged areas, a 20 per cent increase in levels of funding for standards for 16 to 18-year-olds, and the introduction of a large-scale scheme to increase the capacity to deliver independent end-point assessment (EPA) in Apprenticeships.

On the question of how well-informed providers were, the 15 interviewees said their organisations were as ready as they could be given the information available. One provider put it particularly succinctly: “I am as well-informed as anyone but I don't know what's going on.”

Providers said they accepted that the reforms placed employers at the centre of the new Apprenticeship system and had taken it upon themselves to educate employers about the changes.

However, planning was proving difficult because the rate of release of information from the government was slow, which in turn made engagement with employers “slower and more time-consuming than usual”.

Despite this, many were being proactive and holding discussions or staging events to raise awareness. One provider, who worked with 40 companies, said: “It is amazing how many don't see this coming down the line – 38 did not know it (reform) is coming.”

Perceptions of the Apprenticeship Levy, meanwhile, were mixed. Providers noted that many employers had not engaged in the details of the Levy and what it would mean for them. Some observed that employers considered it a “tax”, while others thought it complicated the system and hoped providers would “deal with the bureaucracy” for them.

On the other hand, several providers viewed the Levy as an opportunity because it could result in some of their larger clients having an increased budget. Additionally, they thought that some larger companies who have previously not employed apprentices at all might now engage with Apprenticeships.

While cognisant of the fact that many standards have not yet been developed, some providers said they were concerned about the lack of qualifications in many standards, and the lack of skills portability and transferability for individual apprentices. These had often been valued more highly by employers and learners than Apprenticeships achievement itself.

Their views on the quality of standards also varied. Some providers thought that the involvement of employers through trailblazers meant that specific skills requirements and competence levels would be met.

However, other providers thought that the content of standards was too specific to the relatively small number of large employers that had been involved in their development and so would be less useful to the wider occupational sector.

One said: “The usual suspects, the big boys, continue to set the agenda. I worry about fitness for purpose for smaller employers.”

There were also fears that standards were too brief and could be open to wide-ranging interpretation that might impact negatively on their reputation over time. The ability to negotiate rates for funding, rather than centrally fixing rates, led to concerns that employers will negotiate prices down “to levels that would not support high-quality provision”, the report said.

Providers were particularly concerned about the lack of information and understanding of the EPAs, or how this would work, how much it would cost and how quality would be monitored.

“We're happy with the standard but the assessment is not available yet and the funding has not been confirmed which is disappointing, not having all the component parts. This means we can't talk to employers in a meaningful way,” one interviewee told researchers.

Some warned that the strong emphasis on EPA would lead to “training to the test”. Interviewees said broad standards, poor quality assurance of EPAs and negotiated pricing could all drive down quality – a key point when the EPA is the final decision on whether or not an Apprenticeship has been completed successfully.

The balance between supply and demand of suitable Apprenticeships was another concern for providers, though the report found that young people and their parents were becoming increasingly aware of Apprenticeships, and schools were increasingly promoting them as a viable option for school-leavers.

**“ The ability to negotiate rates for funding, rather than centrally fixing rates, led to concerns that employers will negotiate prices down ‘to levels that would not support high-quality provision’ ”**

However, some employers continued to be reluctant to engage in discussion about Apprenticeships, partly due to the lack of information. Providers warned this could lead to reduced opportunities for young people at a time when demand was rising, and a lack of funding meant that 16 to 18-year-olds might not have access to the Apprenticeships they wanted.

But despite the challenges, there was acknowledgement that awareness of Apprenticeships had increased and that employers could select which providers to use, which added to transparency.

Other benefits mentioned included increased funding for maths, English and STEM subjects, the opportunities offered by the levy, and the increase in degree-level Apprenticeships that offered a real alternative to university.

At the same time, providers suggested increased training for employers and providers to make the new system work, enforcing qualifications as part of EPAs, piloting the new standards, and more funding for small and medium businesses.

They also wanted ring-fencing of funding for young people up to the age of 18. As one provider said: “16 to 18-year-olds will be blocked out. They should be funded fully until 18-years-old. They are receiving no careers advice and are rushing into things”.

The report said the findings “reflect the changing provider role and that their ways of working have to change in order to bring employers with them”.

But it went on: “To do this requires hard information and clarity. Strategic decision-making in a context of policy uncertainty is putting considerable strain on the provider market, without which quality Apprenticeships will not be delivered in the quantity that employers and the economy requires.”

The report said there continued to be “significant challenges ahead” if the reforms were to result in high-quality Apprenticeships that offered real value to apprentices, employers and the UK economy.

David Sims, a research director at NFER who led the research project, said: “NFER is always concerned that education policy and practice should be informed by evidence. On this occasion the evidence suggests that, at least for some Apprenticeship providers, they are missing key information about these major



reforms, including costs. This is limiting their ability to prepare for the government's given deadline and to engage with employers about the reforms as fully as they would wish.”

Mark Dawe, CEO of the AELP, said: “Providers need clarity and more detail to help them and their employers to strategically plan their future Apprenticeship provision. The government's October announcements may now have given them enough information but the research findings

certainly confirm how significant the gaps in required knowledge have been at such a critical juncture of the reform process.”

• Dorothy Lepkowska is a freelance education journalist.

#### Further information

The report, *Providing for the Future: Providers' views on Apprenticeship reform* can be found at [www.nfer.ac.uk/publications/APPE01](http://www.nfer.ac.uk/publications/APPE01)

## NFER Products and resources to help with school research, CPD and development goals

### Self-Review Tool



Free online CPD tool to help you review how research engaged your school is

### Enquiring Schools



Tailored high impact CPD programme to improve teaching & learning

### NFER Resources



Guide books & articles to help you engage in research to drive your CPD goals

### Research Mark



Recognised national award scheme. Gain accreditation for your school or college

Find out more: [www.nfer.ac.uk/ris7](http://www.nfer.ac.uk/ris7)



# Keeping hold of your teachers

New research into retention has uncovered some of the reasons why teachers quit the profession as well as those vital 'protective factors' that can help a school to retain, engage and motivate their teachers. Researcher **Sarah Lynch** takes a look

**R**ecruiting and retaining enough teachers to serve growing numbers of pupils is one of the key challenges facing education in England. Many of the policy interventions have focused on teacher recruitment, but far less attention has been paid to retaining teachers currently employed in state schools.

Headteachers and senior leaders have an important role to ensure that when a school employs a good teacher they do their best to retain them. NFER's new research – *Engaging Teachers: NFER Analysis of Teacher Retention* – found that teachers who are well supported and valued by school management are more likely to stay in the profession.

NFER surveyed a nationally representative sample of more than 2,300 teachers over the course of a year and interviewed a small sample of teachers who had either left teaching or were considering leaving.

The research found that while the majority of teachers are not considering leaving the profession, the proportion considering leaving has increased significantly in the last year, from 17 to 23 per cent.

Smaller proportions than this actually leave the profession (10 per cent in 2015 including retirees), but this figure too has increased in recent years, suggesting that retention pressures are growing. The research investigated how engaged and supported teachers feel and analysed how this relates to their intention to remain in or leave the profession.

## Keeping teachers engaged is key

Teachers were asked about the extent to which they agreed with 16 statements about school leadership, reward and recognition, resources, school culture and ethos, and their own professional development. Their responses were used to derive a measure of overall teacher engagement.

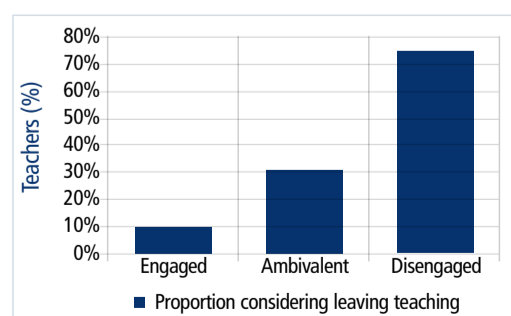
The research found a relationship between teacher engagement and retention. Around half of teachers were engaged in their role, and the more engaged they were, the less likely they were to consider leaving teaching. While most (90 per cent) of the engaged teachers were not considering leaving, 10 per cent of them were. Losing engaged teachers could be a serious problem for the education sector.

## Protecting teachers from the pressures

We interviewed a small sample of 21 teachers who had left the profession or were considering the move. They gave interesting insights into why some teachers may be leaving the profession and workload was at the centre of these.

This was thought to partly stem from trying to keep up with the pace of policy change. One teacher said: "It's ridiculously hard to keep on top of (policy change). I'm not really sure what I'm supposed to be doing and not really sure if I'm doing it right."

Workload was also perceived to result from the pressure to meet the measures in the inspection



framework and the effort it took to gather evidence that they were meeting requirements.

School leaders and school governors were identified as having an important role in protecting staff from these pressures, yet this was not always taking place.

Not all teachers had asked for support though, recognising that leaders are under pressure too, or because they were concerned it would show weakness. As one teacher commented: "The pressures for people in leadership are so great it puts a lot more pressure on people lower down."

Teachers wanted more non-teaching time to plan, to reflect on their own practices, and to learn from others. Managing workload had, in their view, prevented them from having spare time for effective planning and reflection.

Many of our 21 teachers reported that they did not feel sufficiently valued for all of their efforts, by government or leaders in their schools. For some, a tipping point was reached, such as stress-related illness. The pressure had taken its toll and they decided to leave the profession.

## Protective factors

Further analysis of teachers' responses to the engagement statements revealed a range of "protective factors" which were associated with intent to stay, and are therefore likely to be critical for improving retention.

Unsurprisingly, by far the strongest predictor was job satisfaction, but other significant predictors included being well supported and valued by management. Having an effective governing body in the teachers' school also increased the likelihood of them staying in the profession. These findings strongly suggest that the right support for teachers could help to retain them.

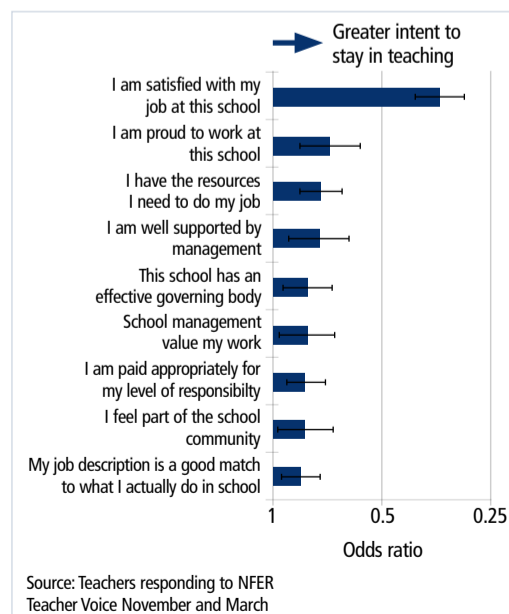
While receiving appropriate pay for their level of responsibility was a protective factor for teachers, a number of those interviewed felt that pay was not the main motivating factor. Rather, they felt other forms of reward and recognition would also make them feel more valued.

## How to support teacher retention

**Monitor teacher intentions and engagement:** The more engaged teachers are, the less likely they are to consider leaving. School leaders should monitor levels of engagement among their staff, either informally or through more formal methods such as teacher surveys. They may be able to improve retention rates by investigating the causes of any ambivalence or low engagement.

**Engage (or re-engage) the workforce:** School leaders should reflect on the protective factors found to be associated with teacher retention, which could help to engage staff. These include the support they themselves give as managers, but also job satisfaction, having adequate resources, and being paid (or rewarded) appropriately.

**Support staff wellbeing:** A greater focus should be placed on staff wellbeing. This could include schools having a governor or trustee responsible for staff welfare, or a member of the management team with specific time and responsibilities in this area. Mentoring and/or mental health provision could be beneficial for some staff. School leaders have a key role to play in protecting staff from what was described as a "tsunami of change". This should include being able to distil policy without it becoming burdensome for staff. School leaders should also help staff to juggle their responsibilities, including by looking more



Source: Teachers responding to NFER Teacher Voice November and March



closely at how flexible working opportunities could be implemented more widely and effectively, to ensure that they benefit both teachers and the school.

**Value and trust teachers:** Too much negativity about the profession and too little support can lead to teachers feeling undervalued. Methods of engaging teachers need to take place within a positive narrative, to ensure they feel valued and trusted. SecEd

• Sarah Lynch is a senior research manager at the National Foundation for Educational Research (NFER) and is part of a team of researchers who have been investigating the challenge of teacher retention.

## Further information

The full report, *Engaging Teachers: NFER Analysis of Teacher Retention*, is available for free via [www.nfer.ac.uk/publications/LFSB01/](http://www.nfer.ac.uk/publications/LFSB01/)

**Evidence for Excellence in Education**

## PISA-Based Test for Schools

**Gain insight into your students' readiness for the global economy**

The PISA-Based Test for Schools is a complete test administration, marking, analysis and reporting service for schools. It allows your school to:

- compare your students' performance to that of the best education systems worldwide
- identify strengths and weaknesses to support continual improvement

- access example strategies, policies and practices from international education systems
- become part of an international community of PISA-Based Test for Schools users.

**To find out more visit: [www.nfer.ac.uk/pb2](http://www.nfer.ac.uk/pb2)**