Reflections on year 6 reading attainment

The key stage 2 national curriculum tests can give us far greater insights than just a scaled score. Sarah Gibb explores what individual question data can tell us about which skills pupils successfully demonstrate in year 6 and which areas prove more challenging

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Trying to cover the breadth of the English national curriculum presents a substantial challenge for any year 6 teacher. Determining which aspects of the subject and which skills to focus on during precious literacy time can be difficult: everything seems to warrant attention, especially with the need to be ready for end of key stage national curriculum tests.

To support year 6 teachers with their curriculum planning, the NFER has scrutinised the data and the papers from the 2017 and 2018 key stage 2 national curriculum tests and combined these findings with some of the key diagnostic points from our own year 6 NFER tests.

In this article you will see which skills have generally been well-embedded by the end of primary education, which tend to be a work-in-progress, and which require more substantial focus and teaching.

Pupils can...

One reading skill confidently demonstrated by pupils in the 2018 national curriculum tests was scanning for discrete information in straightforward texts.

Pupils were able to use headings/sub-headings within a text to help locate information, as well as locate information that featured at the very beginning of a text. Pupils were also able to show understanding of the most explicit ideas presented. For instance, 87 per cent were able to draw-out two reasons for pandas being under threat from the given text.

When looking at short sections of text, the majority of pupils were also capable of sequencing events. However, results from the NFER year 6 tests reveal that this capability diminishes when sequencing events across a whole text, especially when ordering less memorable details.

For instance, the autumn test required pupils to identify several things that occurred on a journey and was only answered correctly by nine per cent; in contrast, when dealing with shorter sections of text in the 2017/18 national curriculum tests, 84 per cent gained the mark.

Pupils find it harder to...

One key skill that year 6 pupils are still developing at the end of key stage 2 is inference. Although pupils can often make simple inferences which are grounded in basic general knowledge, many struggle with more demanding inferences. Pupils seem more confident in drawing inferences about character/personality rather than something more abstract, such as the mysterious nature of an animal. This was demonstrated in the both the 2017 and 2018 tests as pupils were more likely to attempt to answer character-based questions.

"One key skill that year 6 pupils are still developing at the end of key stage 2 is inference. Although pupils can often make simple inferences which are grounded in basic general knowledge, many struggle with more demanding inferences"

Many pupils were also able to support characteristics already identified in a question with suitable evidence. However, the diagnostic commentary from the NFER tests highlights that confidence in how to do this differs between ability groups, i.e. whether to paraphrase or use quotations.

Lower achieving pupils appear less likely to lift quotations directly from the text than middle and higher achieving groups, perhaps indicating a lower level of confidence in this area.

Turning now to language, pupils' ability to identify words or phrases with similar meanings was a little inconsistent. As is to be expected, they were more likely to be able to do this in the context of a multiple-choice question, where the correct answer was offered along with some other, incorrect possibilities.

In the NFER test, for example, almost three-quarters of pupils were able to select synonyms of words such as "draped" and "critically". In contrast, only 49 per cent of pupils correctly chose "seemed" from a paragraph when asked to identify a word that suggested something may not be true, with almost half of lower achieving pupils not attempting the question.

Pupils find it hardest to...

By the end of year 6, many pupils are still somewhat limited by their vocabulary, which feeds into their ability to explain their inferences. A common error made on both three mark questions in NFER's year 6 autumn test was providing textual evidence on its own, without also offering an acceptable point. While pupils can identify the evidence and see the text at work, they are unable to synthesise this into a statement which summarises their overall understanding.

Pupils also struggle with making multiple inferences: in the 2018 national curriculum tests, only some pupils were able to make two points about a character's personality traits. It is quite probable that they struggled to distinguish different traits from each other, such as "understanding" and "tolerant", which were both on the mark scheme.

Similarly, making inferences about characters' motivations is difficult, even when texts provide multiple possibilities. This difficulty increases when the question requires pupils to make mental leaps from evidence in the text to explaining a character's thoughts and feelings, such as in 2018 when only 34 per cent of pupils were able to explain the reasons for a character's hesitation in a poem. Empathy is clearly a crucial element, so tasks allowing pupils to develop this skill are likely to be beneficial.

Moving forwards

Overall, it is evident that most pupils need to develop their skills and/or resilience when searching for ideas in more extensive texts with fewer structural pointers.

They should therefore be encouraged to draw links and comparisons between information and ideas in disparate, localised sections of texts to allow them to attain a more in-depth and coherent understanding of texts as a whole.

The ability to express ideas, synthesising what they have gleaned from a text into an effective summary, is also a particularly demanding aspect of reading that pupils need support with.

As such, time spent enriching pupils' vocabularies and providing opportunities for them to practise explaining more abstract concepts can only be helpful, and may prove more fruitful than repeatedly attempting to answer practice question after practice question.

Empathy, too, is a crucial skill, especially when exploring character-based texts, as is the ability to view texts from different angles in order to try to perceive alternative meanings and interpretations. hu

• *Sarah Gibb is a research manager at the National Foundation for Educational Research (NFER). Follow @NFERClassroom*

Further information & research

- For further information on the points raised here, visit the NFER Classroom Assessment Hub to read the free "implications for teaching" summary alongside a series of complementary articles: www.nfer.ac.uk/assessment-hub
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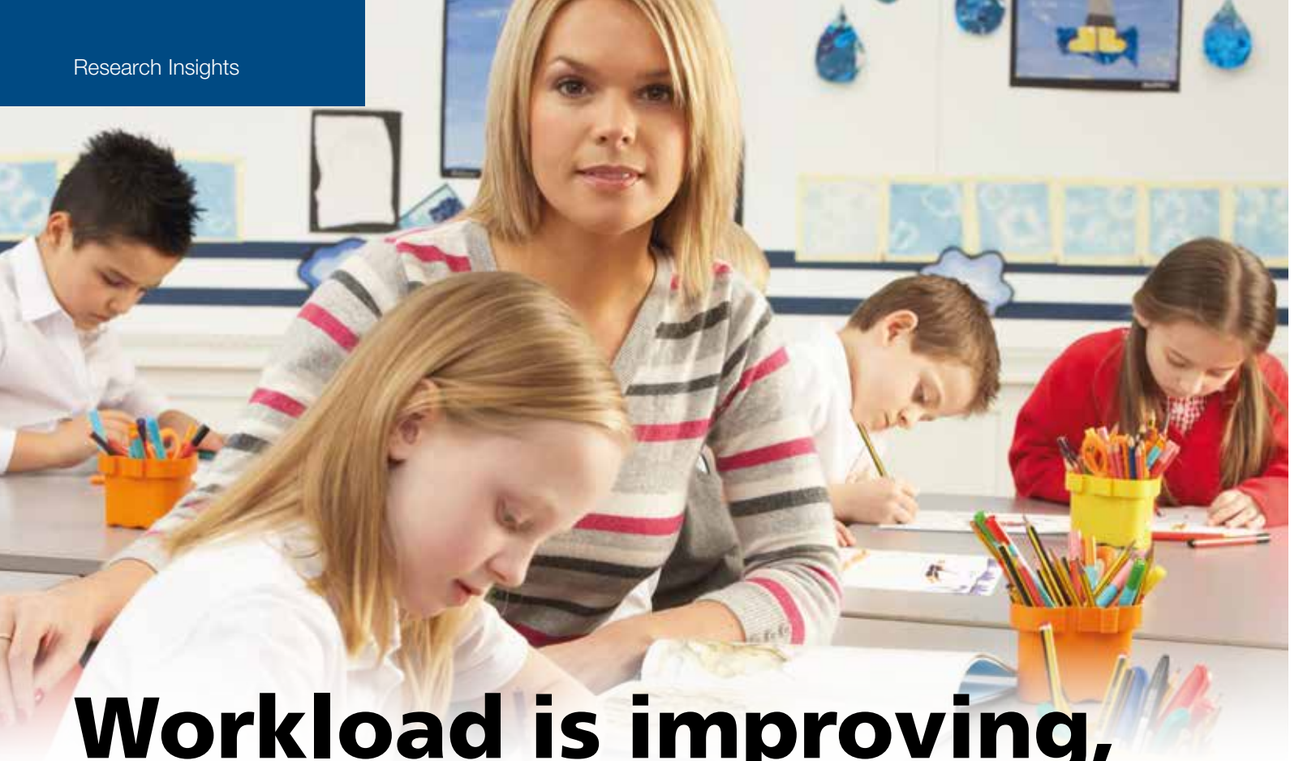

Workload is improving, but there is more to do...

The Department for Education's latest Teacher Workload Survey results show that teacher workload is improving, but there is still a way to go. Jack Worth and Matt Walker investigate the latest research findings

Teacher workload remains one of the major issues facing the profession. The work/life balance of school staff affects the satisfaction and wellbeing of practitioners and their likelihood of staying in the profession long-term.

At a time when more teachers are needed to serve growing numbers of pupils and not enough new teachers are being trained, retention is of great importance to the quality of education.

As workload is a key factor affecting teacher retention, reducing teacher workload has become a key policy priority for the Department for Education (DfE).

The workload associated with marking, tracking and monitoring pupil progress coupled with accountability measures can seriously impact on stress and job satisfaction. Long working hours and constant changes to working practices, as outlined in our previous *Engaging teachers* report (Lynch et al, 2016), which presented an analysis of teacher retention, have led to challenges in recruiting and retaining teachers.

In October, the DfE published the findings from the latest Teacher Workload Survey (DfE, 2019), which was conducted by the National Foundation for Educational Research (NFER) in March this year. It is the most recent evidence on teacher workload and acts as a national barometer for the working conditions of teachers, middle leaders and senior leaders.

A key finding from the report is that teachers, middle leaders and senior leaders all report working fewer total hours per week, as compared to the 2016 survey.

Teachers' working hours

So, what does this latest study show about teachers' working hours? The survey found that, on average, primary teachers and middle leaders report working 50 hours per week in 2019, which was a decrease of 5.5 hours since 2016.

During weekends, evenings and other out-of-school hours, that figure was 12.5 hours, down by five hours since 2016. The proportion of time spent working out-of-school hours was down by seven percentage points in three years to 25 per cent.

However, the study found that teachers working in primary academies work almost two hours longer a week than their colleagues in maintained primary schools.

The survey, based on full-time and part-time workers combined, also found that senior leaders report working fewer hours per week than in the previous survey. Total recorded working hours in the reference week for primary senior leaders in the 2019 survey was 54.4 hours per week, down 5.4 hours from the 59.8 hours reported in 2016.

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Why have teachers' working hours dropped?

The Teacher Workload Survey adds to our understanding of teacher workload because it goes beyond estimating the total number of hours that teachers work. It also looks at how teachers spend their time on different activities, how they feel about the amount of time they spend on these various activities, and how they perceive their workload and their ability to manage it effectively.

The main factor driving the reduced total working hours in 2019 was that primary teachers and middle leaders report spending less time on non-teaching activities, such as planning and preparation, marking, administration and, to a lesser extent, data management, than in previous years.

Compared to 2016, primary teachers and middle leaders report spending 1.3 hours less a week on "individual planning/preparation of lessons", 2.2 hours less on "marking/correcting of pupils' work", and 1.8 fewer hours "undertaking pupil supervision". Smaller reductions were also reported in the "recording, inputting, monitoring and analysis of pupil data" – down 0.5 hours in the primary phase.

It is significant that these reductions are concentrated in the areas of focus for DfE's independent workload review groups on marking, planning and resources, and data management (DfE, 2016) as well as the Workload Advisory Group's recent report on data management (DfE, 2018). The findings therefore suggest that the work of the review groups may have contributed to progress in reducing teacher workload.

However, despite reporting spending less time on non-teaching activities, large proportions of teachers and middle leaders still reported that they feel they spend too much time on these activities. More than half of primary teachers and middle leaders report spending too much time on planning and preparing lessons, administration, marking and data management.

"More than half of primary teachers and middle leaders report spending too much time on planning and preparing lessons, administration, marking and data management"

However, the proportions that reported spending too much time on these activities were lower than in the 2016 survey, suggesting that time spent on these activities is moving in a positive direction.

Primary senior leaders' workload

Depending on how it is achieved, reduced teacher workload could impact negatively on senior leaders' workload. However, as mentioned earlier, the survey found that primary senior leaders have also seen their working hours fall in the 2019 survey, compared to 2016.

Primary senior leaders report spending the most time on "teaching and related tasks" (16 hours a week) and "leadership and management within the school" (11.5 hours). Compared to 2016, primary senior leaders report working fewer hours on "leadership and management within the school" (6.4 fewer hours) and "administration within the school" (2.1 fewer hours).

However, senior leaders report working more hours on "performance management of staff" (1.5 more hours) and "recruitment" (0.6 more hours).

Perceptions of workload

Teachers' perceptions of workload involve more than just working hours. The findings show that teachers who report working longer hours are generally more likely to report that workload is a problem in their school. However, they also show that primary teachers and middle leaders – who generally report working longer hours than their secondary counterparts – are less likely to perceive teacher workload to be a "very serious problem" in their school.

How teachers view the severity of their workload is more complex than just their working hours: manageability of workload is a defining factor in their perceptions. Studies by the NFER (Worth et al, 2018) and Education Datalab (Sims, 2017) show that when it comes to determining teachers' job satisfaction and likelihood of remaining in the profession, the issue of unmanageable workload is more important than the hours worked.

Greater efforts are needed to reduce workload

Around seven out of 10 primary respondents – compared with nine out of 10 secondary practitioners – report that workload was a "fairly" or "very" serious problem in their school.

Teachers', middle leaders' and senior leaders' perceptions of their workload have improved relative to 2016, but nearly three-quarters still report not achieving a good work/life balance and 79 per cent report not having an acceptable workload.

The Teacher Workload Survey 2019 findings therefore give some grounds for cautious optimism about the direction that teacher workload is going. But they also highlight that there is more work to do to reduce working hours and to improve teachers' day-to-day experiences in the workplace.

The survey is just one of a range of data sources that measure working hours in England. The findings highlight the need to continue monitoring trends in teachers' working hours. The DfE is committed to collecting robust evidence on teacher workload every two years, and the next survey in 2021 will be an important part of this continued monitoring. the NFER also intends to provide further monitoring and insights through our analysis of Labour Force Survey data in our Teacher Labour Market annual report, the next instalment of which we will publish early next year.

• *Jack Worth is school workforce lead and Matt Walker is a research manager at the National Foundation for Educational Research (NFER). Follow @TheNFER*

Further information & research

- *Engaging teachers: NFER analysis of teacher retention*, Lynch, Worth, Wespieser & Bamford, NFER, September 2016: www.nfer.ac.uk/engaging-teachers-nfer-analysis-of-teacher-retention
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- *Making data work*, DfE Workload Advisory Group, November 2018: http://bit.ly/2QGbZCd
- The original DfE Workload Challenge working group reports (March 2016) can be found at:
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Retaining our new and experienced teachers

With more teachers leaving the profession than joining, improving retention rates is crucial to tackling the on-going supply challenges. The government has recently announced new plans to boost teacher retention, particularly with additional support for new teachers. Dorothy Lepkowska reports

In January, the Department for Education (DfE) published its long-awaited *Teacher Recruitment and Retention Strategy*.

A central focus of the new government strategy is teacher retention. Among the report's four key strategic priorities, it listed the need for high quality support for early career teachers – a move welcomed by school leaders and the wider education community as a step in the right direction.

It promises to transform support for early career teachers – teachers in the first two or three years in the job – with the "most significant reforms to teaching since it became a graduate-only profession". This is to be backed by "substantial investment" including the launch of an Early Career Framework (ECF), with an entitlement to two years of structured support for early career teachers linked to research evidence and funded time off timetable in the second year of teaching to access additional support.

There will also be new incentives for early career teachers in the form of phased bursaries in shortage subjects, with staged retention payments to encourage more teachers to remain in the profession.

Two of the other three key points also relate to early career teachers. Ministers are proposing "clear pathways" for career development for those who seek promotion to leadership and teachers who want to remain in the classroom, and reforms to the accountability system to try and tackle excessive workload.

In recent years, the National Foundation for Educational Research (NFER) has helped inform the discussion around teacher retention and the development of the government's strategy by exploring the factors and challenges that result in thousands of teachers quitting every year.

The NFER's report, *Teacher Workforce Dynamics in England*, published last year, found that rates of teachers leaving the state sector have increased since 2010, particularly among early career teachers. Its research showed that it is getting harder to retain early career teachers in the profession, especially in key subjects such as maths, science and modern foreign languages.

Image: Adobe Stock

Why are our teachers leaving the profession?

When teachers leave the profession, it affects our schools and students so it is important to understand the factors influencing teacher retention. The report highlighted that a lack of job satisfaction was a key reason for teachers leaving the profession, and that this was influenced by how supported and valued they felt by colleagues and senior leaders, whether workload expectations were manageable, and how supportive the culture was of tackling and alleviating those challenges in their school.

Long working hours and a lack of work/life balance, frequent policy changes and the impact of accountability, such as Ofsted inspections, also had negative effects on teacher health and wellbeing. It found that many teachers left the profession and took on lower-paid jobs because the demands were less, and they offered a better work/life balance and increased job satisfaction.

The report suggested that more and better flexible and part-time working opportunities may help to support some teachers to stay in teaching for longer.

At the same time, salary increases needed to be structured and targeted at those groups within the profession likely to be most responsive – such as early career teachers and those teaching shortage subjects.

What support new teachers need to stay

The research emphasises that engagement underpins retention, especially for new teachers. The NFER's *Early Career Continuing Professional Development Exploratory Research*, published in November, and commissioned by the DfE, examined how CPD can support, develop and retain teachers in the early stages of their careers.

Researchers found that in the first year of teaching, NQTs needed support in developing knowledge and skills in behaviour management, pupil assessment, pedagogy and supporting children with learning needs.

The reality of work in schools can lead to "practice shock" for early career teachers, so support from colleagues to help them settle into their new roles and to adjust to the school environment is critical.

Teachers who felt supported and had a positive experience of induction included those who had had a balanced package of support (which personalised opportunity), who had worked in supportive whole-school cultures and who could access guidance from a range of colleagues, including senior leaders and mentors.

In the second and third year, however, teachers needed training and development to support progression in their subject or key stage, or into middle leadership or other specialist roles.

Researchers found that as teachers progressed in their careers, they needed to broaden their skill-set, to reflect the fact they were encountering new challenges, such as teaching pupils in examination years and with different support needs.

However, dedicated CPD for them was found to be limited, even though many continued to receive support from a senior colleague and to access CPD available to all staff. There is currently no statutory requirement for schools to provide training and support for recently qualified teachers (RQTs), and in most schools involved in this study, there was no formal mentoring support (though informally this was still available from senior colleagues).

The study also found that many RQTs were keen to take on progression opportunities, and that these were essential to ensuring they maintained levels of job satisfaction. However, such opportunities often did not exist, or there was a lack of recognition of the RQT as being able to fulfil the role.

The proposed Early Career Framework

It is evident that improving the retention of new teachers is an important issue for current and future teacher supply. The government has set out the first steps to improve the offer of support new teachers receive through the ECF.

Published in January alongside the *Teacher Recruitment and Retention Strategy*, the ECF has been designed to support early career teachers in the key areas of behaviour management, pedagogy, curriculum, assessment and professional behaviours – as highlighted in NFER's findings for the DfE.

However, it is also crucial that we retain our experienced teachers so new teachers can gain experience and support from more experienced teachers, which is important to their professional development.

Carole Willis, NFER's chief executive, agreed that while more teachers did need to be recruited, retaining those already in post was just as important.

"Our current teachers have already been recruited, trained, and have gained valuable experience in the classroom. If more of them stay that will reduce the number of new recruits that need to be found and trained; it will ensure that experienced teachers can continue to contribute their expertise, and it will secure the pipeline of future leaders."

• *Dorothy Lepkowska is a freelance education journalist.*

"The reality of work in schools can lead to 'practice shock' for early career teachers, so support from colleagues to help them settle into their new roles and to adjust to the school environment is critical"

Further information

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Research Insights

- This article was published as part of *Headteacher Update*'s NFER Research Insights series. A free pdf of the latest Research Insights best practice and advisory articles can be downloaded from www.headteacher-update.com/knowledge-bank/nfer-research-insights-2019/200714/

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School accountability in England: A critique

No school accountability system is perfect, but will mooted changes to inspection in England tackle some of the unintended consequences that school leaders face? Hilary Grayson draws some lessons from international practice

The school accountability regime in England has met with a lot of scrutiny in the past year. The National Association of Head Teachers (NAHT) led an expert commission in considering the case for a reformed school accountability system, and coinciding with publication of the commission's report in September 2018, there was a lot of media coverage on the issue.

The Department for Education (DfE) has recently published a brief paper entitled *Principles for a clear and simple school accountability system* (May 2018), which is to be followed by more detailed proposals and a future full consultation.

And Ofsted's chief inspector, Amanda Spielman, in her Annual Report for 2017/18, noted that: "Where (an) accountability measure becomes the sole driver of a school, college or nursery's work, their real purpose – to help young people learn and grow – is lost."

NFER's chief executive, Carole Willis, was invited to participate on the NAHT commission, whose subsequent report *Improving school accountability* launched with the key message: "We want to create an education system that rivals the best in the world. However, too many of the incentives and sanctions are working against this ambition."

Alongside the commission's deliberations, a team of researchers at NFER produced a rapid literature review – *What impact does accountability have on curriculum, standards and engagement in education?* – on the impact of accountability on curriculum, standards and engagement in several international jurisdictions (September 2018).

We selected a mixture of countries that we thought would provide learning for England – some were top achievers in the highly visible international comparative studies, others had similar achievement to England but perhaps a different way of "doing" accountability.

We defined accountability broadly as a government's mechanism for holding educational institutions to account for the delivery of high-quality education. We reviewed a small body of the best available evidence on the accountability systems in Australia (New South Wales), England, Japan, New Zealand, Singapore and Wales, focusing for reasons of manageability on evidence relating to primary education.

It was clear even from the limited evidence studied that no country has all the answers. There is no perfect accountability system and all methods have their pros and cons. However, two themes emerged strongly from the literature in terms of reported accountability impacts: the phenomenon of curriculum narrowing, and the professional capacity of teachers to engage with accountability data.

Curriculum narrowing and 'teaching to the test'

Curriculum narrowing as a consequence of "teaching to the test" was addressed in literature from a number of the jurisdictions we studied. Where pupil performance is used as a high-stakes accountability measure, there is concern that schools feel constrained to prioritise those parts of the curriculum that are tested at the expense of others that are not.

"We could see the more 'horizontal' structures, such as school-to-school networks, complementing the 'vertical' accountability system of assessment and Ofsted inspection"

Ofsted's latest Annual Report, referred to earlier, acknowledges such perceptions and promises to put the curriculum – "the substance of education" – back at the heart of the inspection system in the new inspection framework from September 2019.

We also found suggestions that some pupils may receive an impoverished experience of the school curriculum as a result of targeted teaching where accountability systems focus on "borderline" or "cliff edge" measures. This may occur, for example, if there is (actual or perceived) pressure to ensure that a certain percentage of pupils attains a threshold standard, leading teaching efforts to be concentrated on raising the performance of "borderline" pupils.

Pupils may furthermore become less engaged learners when the performance of some groups is emphasised at the expense of others. In this case, the application of accountability measures could be said to increase the achievement gap; although conversely they could be used to reduce the gap, such as when they inform funding programmes for disadvantaged pupils.

Our discussion explored whether there is a way of breaking the reported link between schools feeling compelled to focus on curriculum areas that are most salient for accountability purposes at the expense of other areas that do not have accountability consequences. We noted that clarity over what is expected through the inspection regime is a key driver of school behaviour, and whether schools focus on those subjects which are assessed or take a wider view of the curriculum.

Training teachers to engage with data

Another recurring theme in the literature was the complexity of accountability and the suggestion that the training teachers receive may not align with the requirements that their jurisdictions' accountability systems place on them.

Several studies suggested that teachers' initial training might not adequately prepare them to be fully assessment literate and data literate – to have a comprehensive understanding of how to implement assessment or of how to interpret assessment or other outcome data. This echoes the findings of two recent explorations of aspects of the education system in England – the Carter Review of Initial Teacher Training (DfE, January 2015) and the Commission on Assessment without Levels (DfE, September 2015).

This could be seen as a positive impact of accountability, in that it has exposed an area of weakness in professional development that should be addressed anyway, irrespective of the accountability system in place. In other words, support for teachers to understand how to use assessment data to support their teaching and learning should be part and parcel of any professional set of teaching skills.

Future directions

Recent reforms in England have aimed to address some of the unintended consequences this review has discussed, with the removal of assessment levels and refocusing of the accountability system onto progress measures rather than absolute standards.

Ofsted is about to launch a consultation on its draft new inspection framework (expected this month). It will be interesting to see how far these approaches reduce unintended consequences in the system in the future, and likewise what sort of "clear and simple" system results from the forthcoming DfE consultation.

Andreas Schleicher, the lead PISA expert at the OECD, suggests that effective approaches to accountability may involve a move in emphasis towards "professional accountability" systems and collaborative, less hierarchical approaches where "teachers are accountable not so much to administrative authorities but primarily to their fellow teachers and school principals".

Translating this to England, we could see the more "horizontal" structures, such as school-to-school networks, complementing the "vertical" accountability system of assessment and Ofsted inspection. Interestingly, our research found examples of such peer-to-peer support in all the systems we explored.

• *Hilary Grayson is an information and reviews manager at the National Foundation for Educational Research (NFER).*

Further information

- Keep up-to-date with the latest NFER research and resources relevant to school leaders and practitioners by signing up to its monthly e-newsletter, NFER Direct for Schools: www.nfer.ac.uk
- *Improving school accountability*, Accountability Commission, NAHT, September 2018: http://bit.ly/2yapeng
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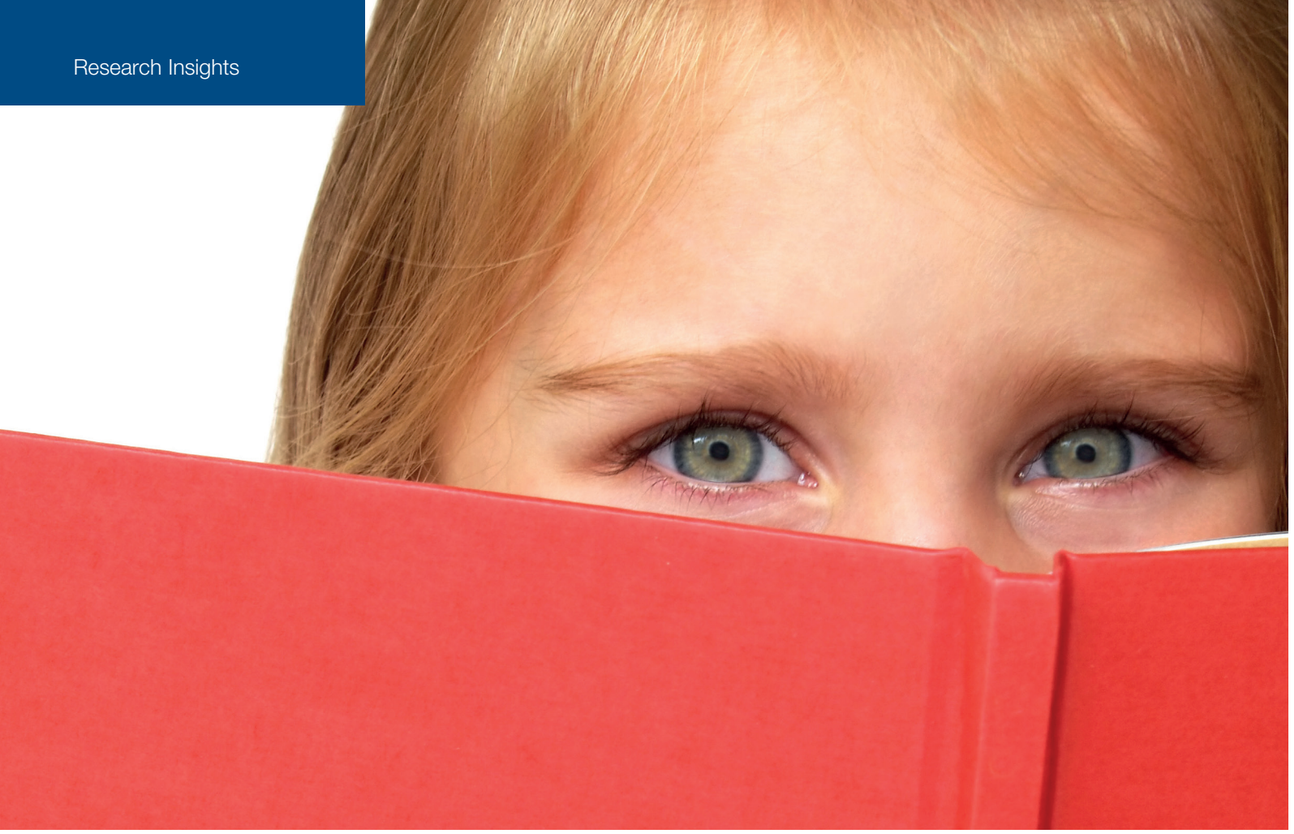

Choosing to read – what the evidence tells us...

Literacy and numeracy are critical skills for pupils to develop if they are to reach their potential and achieve rewarding outcomes during and after education. Liz Twist highlights the evidence showing why reading – including reading out loud – must be at the heart of the curriculum in the primary years

Children who enjoy reading tend to read more frequently than those who don't – and they are better at it.

There's nothing unexpected in that statement and nothing to disagree with. We can always find exceptions but, yes, it's a virtuous circle. Reading is generally accepted to be "a good thing", and each time a child chooses to curl up with a book, they are practising and improving their reading skills.

The national curriculum in England is explicit: "All pupils must be encouraged to read widely across both fiction and non-fiction to develop their knowledge of themselves and the world in which they live, to establish an appreciation and love of reading, and to gain knowledge across the curriculum." (DfE, 2014)

Reading – what the evidence says

The American psychologist Keith Stanovich (1986) coined the term the Matthew Effect to describe the reciprocal relationship between the development of reading comprehension and the development of vocabulary knowledge.

The term is referring back to the Bible passage in which the rich-get-richer and the poor-get-poorer. Cunningham and Stanovich (2001) explored the differential amount of practice in reading children get and how this contributes to the reciprocal relationship between reading and not just vocabulary but also background knowledge, familiarity with syntax, and so on.

In a British context, data from the 1970 British Cohort Study shows how reading leads not only to improvements in vocabulary and hence better reading but has an even wider effect. Using the data from this longitudinal study, Sullivan and Brown (2013) found an impact of voluntary reading beyond that of developing better reading skills.

They found that frequency of reading for pleasure was linked to increases in the rate of cognitive progress over time. So while reading makes children better at reading, it has an even greater significance. It is linked to improvements in other skills that are important to success – in school and in life. And these skills aren't just those which we might intuitively associate with reading, such as vocabulary, but also others, such as mathematics. This has implications across the school, for all year groups and all abilities.

Reading for enjoyment

A well-known study by McKenna, Kear and Ellsworth (1995) looked at attitudes to reading among US elementary-aged pupils and found that there was a steady fall in interest from Grade 1 to Grade 6 among pupils of all abilities.

There were positive attitudes from most pupils in the youngest grade, with similar measures across high, medium and low ability groups. By Grade 6 not only were attitudes in each group much less positive, but the differences in attitudes had become more marked, with lower attaining pupils having much less positive attitudes than higher attaining pupils.

Image: Adobe Stock

"While reading makes children better at reading, it has an even greater significance. It is linked to improvements in other skills that are important to success. And these skills aren't just those which we might intuitively associate with reading, such as vocabulary, but also others, such as mathematics"

In addition, there was a wide gender difference, with boys much less engaged than girls – boys had a lower engagement level at the start and the gap had widened substantially by Grade 6.

Given that McKenna et al noted that enjoyment in reading was at its peak at the start of schooling and fell with increasing age (and presumably growing reading competence), it seems reasonable to recognise it as a whole-school issue.

More recent data from the OECD's 2016 Progress in International Reading Literacy Study (PIRLS) endorses the links between reading competence, reading engagement and frequency of reading (Mullis et al, 2017). Across almost all participating countries, higher reading performance within a country is associated with greater enjoyment of reading and reading more frequently. This isn't just an issue in England or even the UK.

What reading offers

In a rare moment of lively prose, the national curriculum points out that: "Reading ... feeds pupils' imagination and opens up a treasure-house of wonder and joy for curious young minds."

Sullivan et al (2013) emphasised the impact reading for pleasure had on children and young people's vocabulary scores – and the contrast between the complexity of vocabulary used in written texts compared to the spoken word is well-established.

Cunningham and Stanovich (2001) compared the relative complexity of spoken and written speech, describing the former as "lexically impoverished". They emphasised the vast range in the amount of words children who read out of school are exposed to, depending on the volume of their reading.

So what can school leaders do?

There are enormous pressures on schools to ensure pupils make progress and are happy, engaged and challenged learners. What can schools do that does not add to the pressures they are already under?

Ofsted's *Bold Beginnings* report (2017) put language and literacy at the heart of the curriculum for the Reception year. But it is not just needed at the heart of the curriculum for the youngest children in school. There are ways of putting reading at the heart of every classroom.

Reading aloud – not just while children are in the early stages of learning to read – fulfils the vital task of exposing children to books that they are, as yet, unable to read independently. Books they hear should be those that they would not otherwise come across or that they could not read themselves, that give them a flavour of the world of books that lies ahead of them.

This is clearly stated in the national curriculum and its statutory requirements for years 3 and 4, and years 5 and 6: "Pupils should be taught to ... participate in discussion about both books that are read to them and those they can read for themselves." (DfE, 2013)

Sometimes it can be tempting to choose the "easy win" books – few children dislike Roald Dahl's creations. But the most effective approach will be to read books that will expand children's horizons – stories that they aspire to read but can't yet or non-fiction books providing information that builds on what they already know rather than just reinforcing existing knowledge. To engage those 20 per cent of children in the PIRLS 2016 study who said that they didn't like reading and rarely read outside school, perhaps sharing a great story or a fascinating information book will show them what they're missing – particularly if they're not going to pick up a book voluntarily.

The importance of school leaders encouraging this passion for reading throughout the school shouldn't be overestimated. The evidence shows us how reading fully justifies its place at the heart of the curriculum. hu

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Interpreting the outcomes of standardised tests

Many schools use standardised tests as part of their assessment practices. To help you get the most out of standardised tests, **Liz Twist** outlines some of the key terms and information

Thousands of primary schools choose to use standardised tests as part of their approach to assessment. For many, the benefit lies in the reliable outcomes, the results of the tests having been trialled with a large nationally representative sample during development. Standardised tests also enable pupil performance to be benchmarked against the national average and meaningfully compared with other pupils and standardised scores from other tests.

While most tests will provide a raw score (the actual mark or score obtained by a pupil), these do not enable meaningful comparisons between tests or between pupils. From standardised tests there are at least three further outcomes that can be obtained: standardised scores, age-standardised scores, and age-related expectations.

It is easy to confuse standardised scores with scaled scores, and to misinterpret the results without appreciating the role that confidence bands have to play. To help you get the most out of standardised tests, below is an outline of the key terms you need to know.

Department for Education scaled scores

At the end of key stage 1 or key stage 2, the scaled score of 100 on the national curriculum tests represents the "expected standard" as defined by the Department for Education (DfE). This is not the average and is not the same as, nor equivalent to, a standardised score of 100. For standardised tests, a score of 100 represents the average performance, based on a normal distribution, of the sample of pupils on which the tests were standardised.

Standardised scores

Standardised scores compare a pupil's performance to that of a nationally representative sample of pupils from the relevant year group, who will have all taken the same test at the same time of year.

The average score on most standardised tests is 100. Technically a score above 100 is above average and a score below 100 is below average. About two-thirds of pupils will have standardised scores between 85 and 115. Almost all pupils fall within the range 70 to 140, so scores outside this range can be regarded as exceptional.

If you wish to group pupils according to standardised (or age-standardised) scores, the following descriptions may be useful. These may vary between test providers, but this example from NFER tests gives you an idea of what the range of scores may mean:

Below 70	70-84	85-94	95-104	105-114	115-129	Above 129
well below average	below average	low average	average	high average	above average	well above average

Confidence bands

Confidence bands (sometimes called confidence intervals) are used to show the extent of the margin of error in the standardised scores. In other words, how accurately the test measures a pupil's attainment. The margin of error is simply a statistical estimate, based on the fact that tests can only sample the particular area of learning which they assess and therefore the score a pupil achieves may vary within a few points of their "true score". In NFER tests, to indicate how wide this margin of error is likely to be, a "90 per cent confidence band" has been calculated. This means that you can have 90 per cent certainty that the true score lies within the confidence band.

Image: Adobe Stock

Age-standardised scores

These follow the same principle as standardised scores in that they are comparing performances of pupils based on their raw (total) score. However, age-standardised scores take the pupil's age into account and compare their performance with that of pupils of the same age at the time of testing (in years and months). Again, this uses information derived from the large scale trial. In practice, age-standardised scores mean that, with two pupils who have the same raw score, it is likely that the younger pupil will have a higher age-standardised score.

Age-related expectations

The Standards and Testing Agency (STA) scaled score of 100 on the year 2 and year 6 national curriculum tests represents the "expected standard" for the end of the relevant key stage. It is inappropriate to apply this standard to tests in other year groups when pupils have not been taught all the relevant content.

Instead, in order to provide a curriculum-related outcome, some standardised test providers undertake a standard setting exercise. NFER uses "bookmarking", an internationally recognised procedure that combines statistical information from the large scale trial with the judgements of groups of teachers who scrutinise the new assessments.

As part of this exercise at NFER, teachers worked with the test developers to identify the knowledge, skills and understanding that can be expected by the end of a given year, in the 2014 national curriculum. This information was combined with statistical information from the large trial to arrive at a guide to the number of marks a pupil needs to achieve on a particular test in order to have achieved an appropriate standard on the curriculum, given that they are part way through the programme of study. A range of marks, rather than a definitive mark, is published.

Continuing with bookmarking, teachers also scrutinised the tests to look at high achievement and this was combined with the statistical information to arrive at a range of marks. This range, generally of three or four marks, gives an indication of a pupil's standard of achievement not in comparison to his or her peers (which is what standardised scores do) but in relation to the expectations of the national curriculum for that particular year group.

In NFER's view, it is important that teachers use their professional judgement when interpreting test outcomes and for this reason a range of marks is used to suggest where the age-related threshold lies.

An example of how to interpret results

Emma's date of birth is November 27, 2008, and she took the year 4 summer maths test on June 12, 2017, scoring 64.

Jay, whose date of birth is March 3, 2009, took the same test on the same day and scored 68.

Emma's standardised score is 109. With a confidence interval of –5 and +4, there is a 90 per cent likelihood of her "true" score being between 104 and 113 and her performance on the test could broadly be described as "high average".

Jay's raw score of 68 converts to a standardised score of 111 which is also "high average". The confidence band around Jay's score (also –5 and +4) indicates that his "true" score has a 90 per cent likelihood of being between 106 and 115.

Their age-standardised scores are 114 for Emma and 118 for Jay. This takes into account the difference in their ages.

A total score of 64 suggests that Emma is comfortably reaching age-related expectations as measured by the summer year 4 maths test. Jay's 68 suggests that his teacher should consider whether other evidence of his work supports a grading of "high achievement" as he is at the borderline between the age-related expectation and the high achievement band.

"Standardised tests should form just one part of a school's approach to assessment, with on-going formative assessment informing teaching throughout the year"

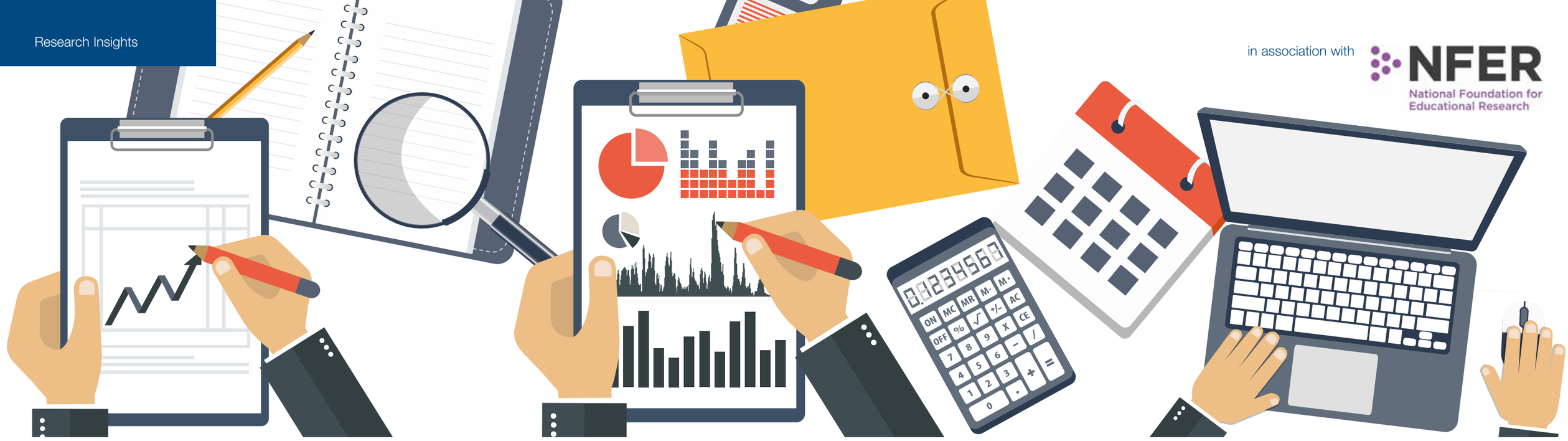
Conclusion

By utilising standardised tests and applying their own professional judgements when interpreting the results, teachers can build a profile of attainment and progress for their pupils and be confident in their conclusions and next steps. Standardised tests should form just one part of a school's approach to assessment, with on-going formative assessment informing teaching throughout the year. But when it comes to choosing summative assessments to assess learning at the end of a teaching period, high-quality standardised tests can ensure the data gained is reliable and meaningful. hu

• *Liz Twist is head of assessment research and product development at the National Foundation for Educational Research (NFER).*

Further information

If you found this valuable and would like further guidance to help the teachers in your school to brush up on their understanding of assessment, there is a wealth of free support on the NFER website. You can also sign up to receive a series of free assessment guides direct to your inbox this autumn. Visit www.nfer.ac.uk/assessment-hub



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Making the most of assessment data

Collecting assessment data is easy – but with so much data available, collecting the right information and ensuring you are using it effectively to support pupils' learning can be more difficult. Emily Jones explains

With the end of the academic year fast approaching, schools across the country will have their summative assessment processes well underway.

However, while it is relatively easy to collect assessment data, interpreting it can be harder. Schools hold and generate a large amount of data. In order to make the most of it, teachers need to know what data they have, how to interpret it and, crucially, how best to use it to promote further learning.

What data are schools likely to have?

In terms of numerical or statistical attainment data, there are several types which schools commonly collect. These include individual raw scores, standardised scores or scaled scores from national or optional assessments, information drawn from question-level analysis of tests, and teacher assessment data expressed numerically. Schools are also likely to have background data on pupils, which can be used to analyse and compare attainment of particular groups, such as boys and girls or eligibility for Pupil Premium.

When used effectively, data is valuable in enabling schools to highlight gaps in attainment, identify patterns of achievement and make insightful comparisons. For example, by comparing pupils' standardised scores over time, schools are able to identify pupils making more, the same or less progress than the national average. These scores can also be used to compare pupil attainment and progress across different subjects.

Despite the opportunities that data offers schools in terms of improving teaching and learning, it is important to remember that data recording and tracking should not be burdensome and all data recorded should have a useful purpose.

As Sean Harford, the national director for education at Ofsted, warned in a recent blog post, an over-reliance on "meaningless data" is currently the biggest flaw in assessment across schools (April 2018).

He writes: "I think there is too much marking being expected compared with the resultant benefits to pupils' learning; too much reliance on meaningless data; and too little meaningful assessment of the right things at the right point in the curriculum."

Schools should therefore ensure that any assessment information collected can be used to support better pupil achievement.

With this in mind, schools may want to consider the following when collecting and recording assessment data:

- Rationalise the data you record to make sure it meets your needs.
- Ensure that you comply with legal requirements such as those in the General Data Protection Regulation (GDPR).
- Centralise responsibility for managing the school's database and entering data to make the process more efficient and to minimise the risk of errors or lost data.
- Seek out training and keep skills up-to-date. Allow teachers to invest time in working with the system to increase familiarity. This time will be repaid in what they can then achieve with it.
- If paper records are kept in classrooms, be aware of confidentiality issues.
- Be wary of tracking systems which reduce the curriculum to a series of points and which claim to help teachers to track termly and half-termly progress.

Using assessment data to improve teaching and learning

Data is useful on different levels: for monitoring individuals, developing learning targets, grouping pupils, allocating resources, evaluating teaching initiatives, and for whole-school accountability and reporting.

Data from early or mid-year assessments is particularly useful for identifying areas for development or further consolidation, since there is time following the assessments to respond to identified needs. A question-level analysis of the data at this stage can highlight areas of individual or class misunderstanding and so can help teachers to identify exactly what they need to clarify for their pupils.

Data from year-end assessments offers a valuable way to evaluate pupil progress over the duration of a learning period, measure success of interventions and teaching strategies implemented, and help schools plan for the following year.

"Effective use of data should stimulate questions about the standards achieved, the learning that is taking place and inform the next steps for teaching and learning"

It is worth bearing in mind that in summarising data numerically, some detail is inevitably lost. Therefore it is important to review your data and draw conclusions with care. Don't be afraid to ask critical questions. For example, if data for a particular pupil or class is not what you expected, think about contextual factors that may explain the differences.

Ultimately, assessment data should be used to deliver better learning outcomes for pupils. To do this effectively, schools may want to consider the following:

- Look not only at present attainment, but at pupils' rates of development as they move through the school and use this insight to shape classroom practice.
- Refer to assessment data regularly throughout the year, comparing achievement across subjects to guide evaluations of progress.
- Remind teachers that pupils' progress may not be linear: they appear not to progress at some times (e.g. while consolidating learning) and may progress more rapidly at others.
- Teachers can use question-level analysis (of national or published tests) to inform subject, class or year-group planning, but should draw conclusions carefully (e.g. avoid bold statements about attainment in a particular subject on the basis of just a few questions about part of that subject).
- Remember that, in a small school, class or year group, individual pupils can have a disproportionate impact on percentages.
- Aim for a culture of using data constructively for positive, supportive change.

As the academic year draws to a close, schools should remain mindful that data collection should not be viewed solely as a means of accountability. Effective use of data should stimulate questions about the standards achieved, the learning that is taking place and inform the next steps for teaching and learning.

• *Emily Jones has been developing tests for more than 15 years, mainly for primary-age pupils. She now leads the development of the National Foundation for Educational Research's (NFER) own suite of standardised curriculum tests.*

Further information

- For more information on NFER's work in assessment, visit www.nfer.ac.uk/key-topics-expertise/assessment/
- *Assessment – what are inspectors looking at?* Sean Harford, Ofsted April 2018: http://bit.ly/2IMrE2Q