

HEADTEACHER UPDATE

2015-2017

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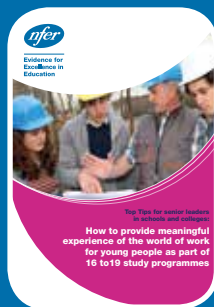
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Jane Parrack

Head of Marketing and Communications



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Get in touch

Editor: Pete Henshaw
pete.henshaw@markallengroup.com
020 7501 6771
@pwhenshaw (Twitter)

Sales: Robbany Khan
robbany.khan@markallengroup.com
020 7501 6759

Circulation Director: Sally Boettcher
sally.boettcher@markallengroup.com

Managing Director: Matt Govett

Chief Executive Officer: Ben Allen

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How do parents choose a school for their child?

What do parents look for and prioritise when it comes to choosing a primary school for their children? A research project has sought to answer this question. **Karen Wespiesser** reports

As the end of the summer term approaches schools across the country will begin thinking about the 2016 round of new pupil admissions. In doing so, you might like to consider NFER's new data on the factors that inform school choice. In particular, NFER has uncovered stark differences in what parents are looking for, dependent on their personal background factors.

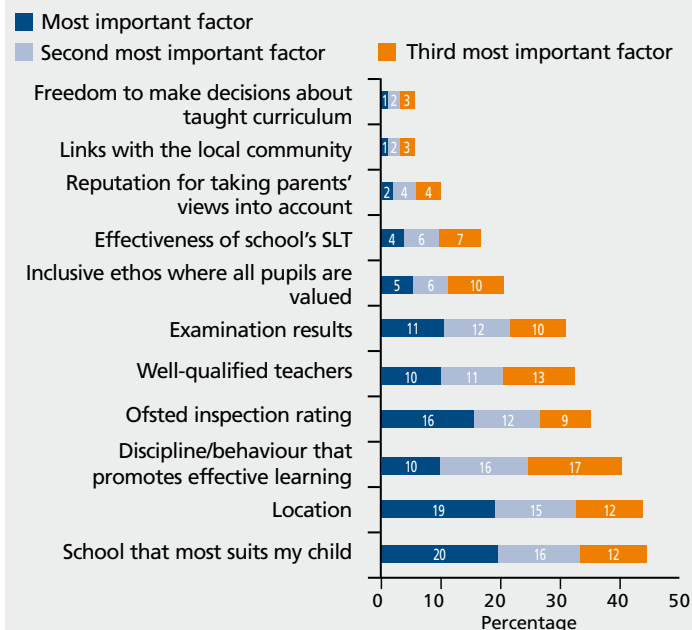
Choosing a school is one of the key times when parents reflect on what is important to them in terms of their child's education. Some commentators hail this ability to choose as a key feature of our education system – an important right valued by parents, and a way of driving up standards. But to what extent is this view shared by parents, do they feel they have a genuine choice, and if so how do they choose? At the beginning of the year, NFER commissioned a nationally representative survey of 1,005 parents of children aged five to 18 to find out more.

Parents feel they have a genuine choice

One of the first things we wanted to understand was whether parents genuinely felt they had a choice when choosing a school. In 2014, according to Department for Education (DfE) figures, nearly 90 per cent of parents got their first choice of primary school for their children. Most respondents to our survey (72 per cent) also felt they had a choice, although slightly fewer than this got their first choice – highlighting that in some instances there may only be one real option available.

It should be noted that while research has shown that it appears choice is supported in theory, the reality is more complex. For example, analysis of the British Social Attitudes Survey suggests that support for choice is counterbalanced by, among other things, opposition to vouchers, school diversity, and by strong support for the idea of sending children to the "nearest state school" (1).

1, Local factors are the most important to parents when choosing a school



But local factors are the most important

Once we established whether parents felt they had a choice, we wanted to know what elements they consider important when making their decision. In line with existing research we found that local factors are paramount – "school that suits my child" and "location" of the school were each identified by almost half of respondents to our survey (see graph 1, below).

Obviously there are some factors that schools cannot influence – you can't change the location of your school or its catchment zone. However, there are some things that may seem important to you – such as exam results – which this data suggests is less important to parents.

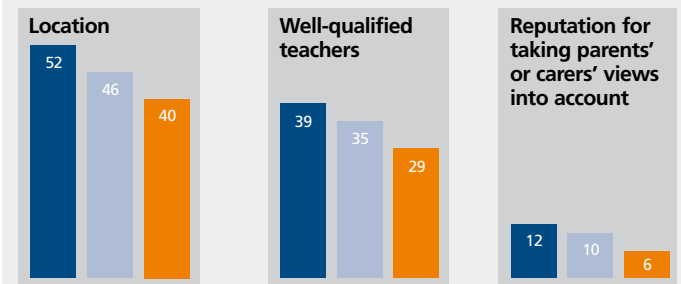
When talking to parents, writing your prospectus or updating your website, you may therefore want to think about how you describe the overall ethos of the school, and the extent to which this enables parents to make informed choices about how well this will suit their children. And where you have a strong record on discipline and behaviour, the responses to our survey suggest this is likely to be appealing to parents, too.

Looking more closely at the detail, the data also reveals some interesting differences between the importance attributed to different factors by parents with different levels of household income. Location, well-qualified teachers and community links are more important to parents with a lower household income, while discipline, exam results and the effectiveness of the

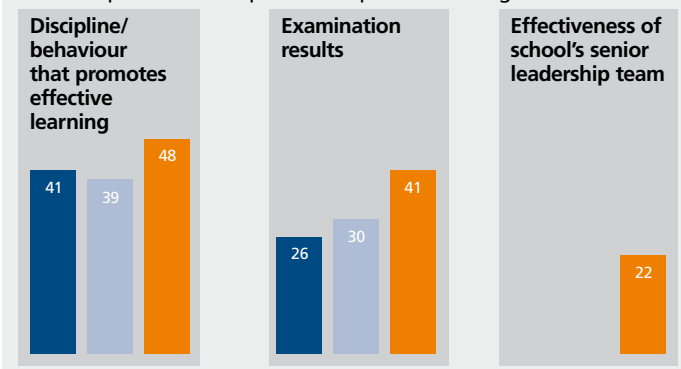
2, Household income affects school choice

■ Lower income (<£25,000) ■ Middle income (£25-50,000) ■ Higher income (>£50,000)

Location, well-qualified teachers and reputation for taking parent views into account are more important to parents on lower incomes



Discipline, exam results and the effectiveness of the school's leadership are more important to parents on higher incomes



school's senior leadership team are more important to parents with a higher household income. Depending on the demographic of your local area, you may want to consider this when talking to prospective parents (see graph 2).

How are parents making these decisions?

Most parents undertake a range of activities to help decide which school their child should attend, in particular undertaking their own research and attending open evenings or school visits.

Headteachers should be heartened to see the high take-up of the opportunities provided by schools such as open evenings. It is well worth remembering the effectiveness of these activities when putting in the extra hours that many of these tasks require of school staff.

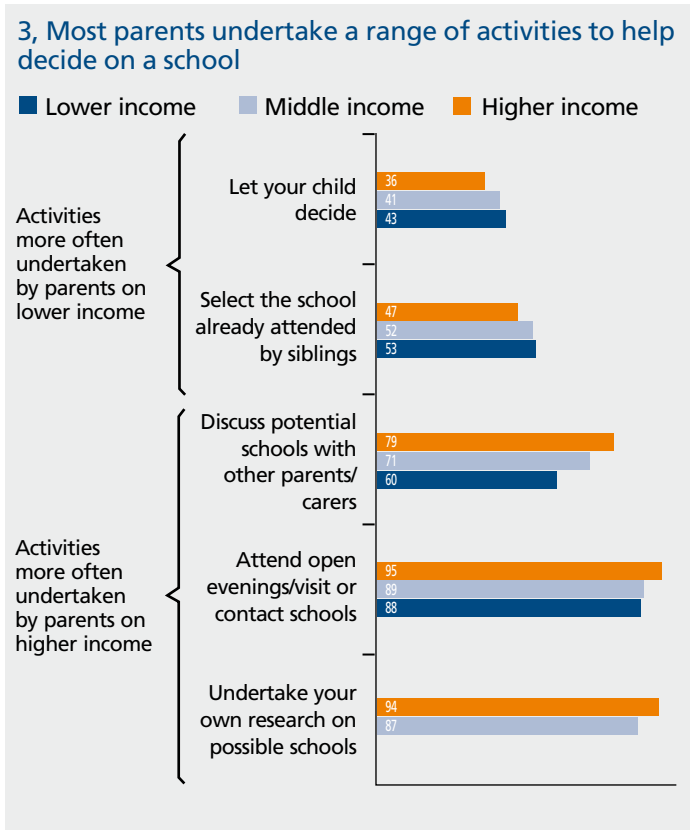
Again though, there are some differences by household income (see graph 3). Parents' on a lower income are more likely to let their child decide or select the school already attended by siblings. One of the activities where there is greatest disparity between income levels is the extent to which parents discuss potential schools with others. Facilitating these opportunities for parents – perhaps at open evenings – might be an interesting way to try to increase the use of this type of activity.

What are the wider implications?

The reality is that making a choice about a school depends on a myriad of local factors as well as a parents' understanding of their own child. Better understanding these factors could prove helpful to schools targeting limited resources at the best strategies for attracting applications. Our findings also have significant policy implications.

The new government backs changes to the *School Admissions Code* which will prioritise children eligible for the Pupil Premium. Yet this evidence suggests that parents of these children are least likely to take advantage of any increase in their school choice as they are more concerned with location.

NFER is not the first to raise these concerns. In 2013, the Sutton Trust reported that "those who adopt the choice behaviours anticipated by government policy ... are disproportionately, though by no means exclusively, middle class" (2). Similarly, a DfE report last year found that "lower socio-economic status groups may look for (factors that)... may lead (them) to select themselves out of high-performing schools" (3). The extent to which this is considered in any changes to the *School Admissions Code* will be an important policy consideration for the new government.



“Location, well-qualified teachers and community links are more important to parents with a lower household income, while discipline, exam results and the effectiveness of the school’s senior leadership team are more important to parents with a higher household income”

Our research was based on a national sample, and so was not able to explore local variation in any detail. These issues are likely to vary considerably between areas, so why not undertake some local research of your own with existing and/or prospective parents to better understand what factors are most important to them?

• Karen Wespieser is senior research manager at NFER.

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As easy as riding a bike

The government-funded Bikeability scheme trains children to be confident and safe cyclists and has so far reached 1.5 million young people. **Claire Hodgson** looks at how the initiative engages with schools and reports on research into its impact

How many of your pupils cycle to school, pedal to the park or go on cycle rides with their family? How confident are these children about riding on the road – and how confident are you in their cycling abilities?

Data gathered from a sample of more than 500 year 5 children in England showed that 92 per cent of them had their own bicycle, or had access to one. Nearly half of the children reported that they cycle with their families while just under a quarter cycle with their friends. About a fifth of children reported that they go cycling on their own.

When asked about how they are most likely to travel to other activities or places nearby, nearly a quarter of children indicated that they would cycle to the local park or play area, while just under a fifth reported cycling when going out to play with their friends. Despite three-quarters of the children living 10 minutes or less from their school, fewer than 10 per cent of children reported that they cycled to school.

Why cycle?

Learning to ride a bicycle can be a developmental milestone for some children because it can offer a route to independence. Regular cycling can help to improve physical and mental fitness while bicycles offer an affordable, “green” mode of transport.

But, despite the advantages of cycling there is no denying the potential, associated safety issues – the risk of someone who cycles being killed or seriously injured is reported to be highest for young

cyclists aged 10 to 15 years. So, what can we do to help children be more competent and confident cyclists?

Bikeability is a government-funded training scheme described as “cycling proficiency for the 21st century”. The training is practical, skill-based and designed to “boost the confidence of the trainee and to minimise risk”.

“Learning to ride a bicycle can be a developmental milestone for some children because it can offer a route to independence. Regular cycling can help to improve physical and mental fitness while bicycles offer an affordable, ‘green’ mode of transport ”

There are three levels of training and children typically start Bikeability lessons once they have learnt to ride a bike. Level 2 training is generally provided to children in year 5 or 6. The policy purpose of Bikeability is to give children the skills and confidence needed to

cycle on today's roads and so encourage more people to cycle more often with less risk. Hundreds of thousands of young cyclists have already received Bikeability training and it is estimated that more than 1.5 million had been trained by March 2015.

But how effective is Bikeability?

The NFER recently carried out some research to investigate the impact of Bikeability training on children's ability to perceive and appropriately respond to on-road hazards faced by people who cycle. The research also sought to establish whether or not Bikeability increases on-road cycling confidence.

What did the research involve?

The research involved pupils who were in year 5 in summer 2014 and tracked them as they moved into year 6 in the autumn term. A total of 668 pupils were involved in taking one or more on-screen quizzes and a questionnaire to find out about their attitudes towards cycling.

Participating schools and their pupils were either in the intervention or comparison group. Schools in the intervention group had pupils who participated in Bikeability training during the summer term (trained pupils). Pupils in the comparison schools did not receive any training in the summer term, although they were expected to be given training while in year 6.

What did the assessments involve?

The NFER developed an on-screen quiz to measure pupils' hazard perception and appropriate response ability. In order to engage respondents, the quiz told the story of three children's cycling journeys. As it was presented on-screen, the quiz included photographs and film clips showing different aspects of the children's journeys, for example choosing where and when to start their ride, considering road position and priorities for different manoeuvres, and completing the journey. Children completed the quizzes on PCs or laptops, taking about 30 minutes to answer a series of closed response questions.

The results of the quiz were converted into a single measure of each child's ability to perceive and appropriately respond to hazards. Differences in these scores over time and comparing the two groups of children could be analysed to assess the impact of the training.

When did the assessments take place?

The research took place over three phases:

- Phase 1: background information about the pupils' cycling experience and confidence was gathered and an initial on-screen quiz assessment was carried out early in the summer term before any training took place.
- Phase 2: on-screen quiz assessment information was gathered one to three weeks after the training took place (in the summer term).
- Phase 3: on-screen quiz assessment information was gathered at least two months after the training took place (in the autumn term). Children also completed the questionnaire to indicate their cycling experience and confidence.

So, does Bikeability work?

Essentially, yes. The research revealed some interesting findings relating to the two groups of children involved:

- Children who participated in Bikeability Level 2 training scored significantly higher on the quiz than the children who had not received training. Interestingly, this effect was undiminished even when the children re-took the quiz more than two months later.
- Children who received training reported that they felt more confident when cycling on the road after training. This increase was statistically significant.

It is worth noting that while children may score highly on the on-screen quiz, demonstrating that they can perceive hazards and know how to appropriately respond to hazards, this does not necessarily mean that they would be able to apply the skills in a real life, on-road situation. However, this does not detract from the finding that children do appear to respond positively to the training and that it increases their understanding and identification of hazards and equips them with the knowledge of how best to respond to a range of on-road situations.

“Children do appear to respond positively to the training and it increases their understanding and identification of hazards and equips them with the knowledge of how best to respond to a range of on-road situations”

What next?

The policy purpose of Bikeability is to give children the skills and confidence needed to cycle on today's roads and so encourage more people to cycle more often with less risk. While the research has shown that Bikeability does help children to develop skills and confidence, this does not necessarily translate into an increase in cycling.

Why is this? It could be that the opportunities for children to practise their new-found skills are limited. Perhaps adults lack the confidence to allow children out on their bikes. Encouragement to get out and about on two wheels could help to further develop and promote the learning and confidence – and allow children to demonstrate what they can do. **hu**

- *Claire Hodgson is a research director in the NFER's Centre for Assessment.*

Further information

- The full report on the Bikeability research can be found at www.nfer.ac.uk/publications/BIKE01/
- More information about Bikeability can be found at <http://bikeability.org.uk/>


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What ingredients make for an effective test?



Photo: iStock

What elements make for an effective and reliable assessment? Test developer [Catherine Kirkup](#) outlines the key criteria that primary schools should consider when selecting their approaches to pupil tests

As a test developer in NFER’s Centre for Assessment, I am proud of the tests we develop for schools. As a researcher working to improve the learning and the lives of pupils, my primary concern is that schools choose valid and reliable tests. So what makes a good test? In this article, I will attempt to explain what questions schools should ask when they are considering purchasing any new tests.

Do these tests assess what we want to measure (i.e. are they valid tests)?

The validity of a test is important because teachers draw conclusions about a pupil’s attainment or progress based on those test results (alongside other classroom evidence such as homework, etc).

You may think that it goes without saying that a mathematics test will measure mathematical ability but unfortunately not all tests have good validity.

For example, a maths test that contains only questions about number will not provide a valid assessment of a pupil’s understanding of shape. So how do you know if a test you are thinking of using is a valid one?

First, the content should include adequate coverage of the underlying curriculum, the attainment of which you want to measure. There will always be some aspects of the curriculum that cannot be assessed within a paper and pencil assessment, but a valid test should include a comprehensive range of questions addressing the assessable domain, particularly focusing on any key skills or learning milestones that indicate progress within the subject for the particular year group.

Examine any sample materials and read any information about how and when the tests were developed. Look for evidence that the content:

- Has been mapped to the latest version of the national curriculum.
- Assesses essential aspects of the curriculum (key skills).
- Is age-appropriate.
- Has been written by authors with curriculum expertise and experience in assessment.

“The purpose for which the test was developed should ideally match how you intend to use it. Some tests are designed to provide diagnostic information on particular topics whereas others have been written to provide summative information”

- Has undergone a rigorous development process, e.g. reviewed by curriculum experts and teachers.

Second, the purpose for which the test was developed should ideally match how you intend to use it. Some tests are designed to provide diagnostic information on particular topics whereas others have been written to provide summative information. If you wish to prepare pupils for end of key stage tests, choose ones that have a similar look and feel so that you are giving them realistic test-taking practice.

Pupils do not always perform in a similar way if the format of the test is different, so online tests may not accurately indicate pupil performance on a paper and pencil test. That doesn't mean you should not use both paper and online tests, just be aware of the potential mode effects and be clear about why you are using them.

Will they provide accurate and reliable results?

Perhaps the most important feature of a good test is that it should provide reliable outcomes. In order to do this a test needs to be technically sound. The reliability of a test will be adversely affected by ambiguously worded questions, biased questions, poor administration guidance, poor mark schemes, etc.

The length of the test should also be appropriate – short tests can be unreliable because they provide insufficient evidence, whereas very long tests can result in pupil errors due to fatigue. Effective quality-assurance and extensive trialling enable test developers to minimise sources of error such as these and to establish a test's reliability, i.e. the extent to which the test provides consistent results.

Test developers may report reliability in a number of different ways (correlation coefficients, standard deviations of measurement error, etc), but you do not need to be a technical expert. Simply make sure that information about the test's reliability is available. If not, look at other sources of tests.

The size of the pupil sample is also important if you wish to benchmark your pupils against pupil attainment nationally. If you intend to use tests for this purpose then you should buy tests that have been trialled on a nationally representative sample of pupils. Usually this requires a minimum of around 1,200 pupils per test across a range of schools representing different regions, different types of schools, different school performance bands, etc.

Slightly larger samples will give more accurate standardised scores because these will have been calculated on larger numbers of pupils. It is important to use tests that have been standardised at an appropriate time, e.g. if there has been a significant change to what is taught in a particular year group.

Because there have been substantial changes to the mathematics curriculum in England, tests purporting to give outcomes relating to attainment of the 2014 national curriculum should have been trialled with pupils who have been taught the new content, e.g. at the end of 2014/15 or later. So ask questions or look for information on the following:

- Have the tests been trialled in schools?
- If yes, what was the size of the sample? Was it nationally representative?
- When was the standardisation carried out?

How useful will the outcomes be?

If a test has been standardised you will usually be provided with look-up tables or online software to convert raw scores to scaled scores or standardised scores. This allows you to do a number of things:

- It makes it easier to compare the performance of pupils (a score of 35 out of 50 is not very useful unless you know the average score and spread of scores for all pupils). Usually tests are standardised by converting raw scores to a scale (e.g. 70 to 130) with the average set at 100. This allows you to easily see whether a pupil is above or below the average of all the pupils that took the test.
- Assuming a sufficiently large and representative sample, scaled scores will also allow you to compare individual pupil performance and the cohort performance against the national average.
- Some test publishers will offer both standardised scores (no adjustment for age) and age-standardised scores. In calculating age-standardised scores pupils are only compared with other pupils of

a similar age. These scores can be useful particularly for putting the performance of younger pupils into context (e.g. in discussions with parents).

The above scores are often referred to as “norm-referenced” because performance is compared with the average or “norm”. However, some test publishers may also provide some criterion-referenced outcomes that describe how a pupil's performance compares against a set of predetermined criteria or learning standards.

Criterion-referenced outcomes are generally based on expert opinion about what a pupil might be expected to know and do at a particular age in a particular subject. Using rigorous standard-setting methods that evaluate each item in the test, cut scores (the marks indicative of each grade boundary) are determined that best differentiate pupils who have met the required standard from those working below or above.

- Are scaled scores, standardised scores and/or age standardised scores included?
- Is information provided that explains how you can track pupil progress?
- Are additional outcomes available, e.g. whether pupils are working below, at or above age-related expectations? Were these criterion-referenced outcomes developed in an appropriate way?

Finally, consider what optional extras (performance analyses, marking packages, or advice about identifying strengths and weaknesses) the test publisher provides and how important they are to your school.

It might surprise you to learn that some published tests have never been trialled in schools. Check sample materials or the test publisher's website for information before buying, or ask questions via email/telephone. If they are unable to give you satisfactory responses, look elsewhere.

• Catherine Kirkup is a research director at NFER's Centre for Assessment. For information on NFER tests for assessment, visit www.nfer.ac.uk/nt7



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Summer-born pupils: What's the evidence?



The government recently decided to give the parents of summer-born children the right to delay their child's entry to reception. [Jack Worth](#) considers the implications of this policy, its potential impact on disadvantaged families, and other possible alternatives

For decades, research has found large differences in test scores between autumn-born and summer-born pupils in attainment at school (1).

The differences are evident at the earliest ages and remain (though are smaller) at GCSE and A level, and in further and higher education too (2).

The artificial advantage given to autumn-born pupils in tests of educational attainment can have an impact on their wellbeing at school, and matters for pupils' later outcomes.

There are, of course, other characteristics which affect attainment – in particular, coming from a disadvantaged background (which has a much larger effect on attainment than month of birth), having an SEN, and gender. However, many consider the lottery of birth date to be particularly unfair, and one which has not been properly addressed in our education system.

On average, the oldest in the class outperform the youngest in tests of attainment because they are older when they are tested (3). Even when all pupils have had the same amount of schooling at the time of any test, the oldest have been alive for longer, giving their brain longer to develop and having more time interacting with their parents, their family and the world. Which children are the youngest in the class and which are the oldest is determined almost completely at random because it is difficult to manipulate.

So the government's willingness to solve the problem that arises from within-year age differences should be welcomed. A new policy announced recently proposes to allow parents of summer-born pupils (covering those born between April 1 and August 31) to have the option of delaying their child's entry into reception class (see panel, opposite).

For years, some parents have campaigned for the right to delay their summer-born child's entry to reception. Their motivation is understandable and clear: if their child was allowed to wait another year they would benefit from becoming the oldest in the class rather than the youngest.

“Even when all pupils have had the same amount of schooling at the time of any test, the oldest have been alive for longer, giving their brain longer to develop and having more time interacting with their parents, their family and the world”

“If pupils from disadvantaged backgrounds are less likely to delay entry to primary school, then the already large attainment gap between disadvantaged pupils and their peers will widen”

Let's follow the incentives presented to parents by the new policy to their extreme logical conclusion. Being among the oldest pupils in the class is best and being the youngest the worst, so all parents of summer-born children could potentially choose to delay their child's entry to primary school.

This will, of course, depend on what the alternatives are – what kind of free entitlement to another year of pre-school will be on offer to children who don't start reception class at age 4? Peer effects will also come into play – children will want to do what their friends are doing, whether that means staying in pre-school or starting in reception class.

Year groups would then be made up of summer-born pupils as the oldest in the year and spring-born the youngest in the year. This would simply shift the oldest/youngest threshold from September 1 to April 1 and fail to solve the underlying problem that relatively older children will perform better, on average, in tests than younger children.

In practice, however, we know that parents from different backgrounds tend to behave differently. Our recent research, entitled *School Choice: The parent view* (4), showed that parents with higher incomes tend to value examination results in their choice of school more than lower-income parents.

American research from 2013 (5) suggests that it is likely that the parents who choose to exercise their opportunity to delay school entry will disproportionately come from more advantaged backgrounds (this hypothesis will be easy to test using future School Census data).

If pupils from disadvantaged backgrounds are less likely to delay entry to primary school, then the already large attainment gap between disadvantaged pupils and their peers will widen, undermining one of the government's key commitments.

So, what are the alternatives? Part of the answer could be to make greater use of age-standardised test scores (6). Age standardisation is used in many tests of educational attainment to overcome the problem of within-year age. Because within-year age is randomly determined we can accurately predict what attainment level younger pupils would have achieved if they had been older, and vice-versa. Age standardisation scores pupils on a common scale and removes the effect of their age on raw marks on a test.

Age standardised scores are already used widely: for example, the NFER Baseline assessment provides schools with age-standardised scores (as well as scores not adjusted for age) for pupils in their first few weeks of primary school (7). They allow teachers to assess whether children are achieving

effectively, given their age, and give a better indication of children's potential than looking at raw scores alone.

Some have argued that high-stakes GCSEs and A levels that influence pupils' progression into further and higher education should also be age-adjusted. However, as the Institute of Fiscal Studies has argued, “when pupils leave school, they should take with them their non-age-adjusted grades, to ensure that employers can be confident that pupils have achieved a particular absolute standard”.

This perennial question is a difficult one with no straightforward solution. A greater focus on children's progress, and ensuring that those who are struggling (for whatever reason) get high-quality teaching, will help address month of birth effects.

• Jack Worth is a research manager at NFER.

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- 7: Baseline Assessment, NFER: www.nfer.ac.uk/schools/baseline-assessment/


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The DfE's summer-born policy

In September, schools minister Nick Gibb said the current system for handling summer-born admissions was “flawed”. In an open letter to parents, local authorities, schools and admission authorities, he said that while parents could request that their child begin school in reception class rather than year 1, they often found themselves unable to agree with admissions authorities on what was best for the child.

He was concerned that some parents felt “forced to send their child to school before they are ready and before they are required to do so, or else miss out on their reception year at school”.

He was also worried about stories of some children being admitted outside of the normal age group but then later being required to miss a year and move up against their wishes.

The letter states: “We have, therefore, decided that it is necessary to amend the School Admissions Code further to ensure that summer-born children can be admitted to the reception class at the age of five if it is in line with their parents' wishes, and to ensure that those children are able to remain with that cohort as they progress through school.”

You can read Mr Gibb's letter at <http://bit.ly/1hS7oKp>

The building blocks of Pupil Premium success

Drawing on the work of more than 1,300 schools, new research into the Pupil Premium has identified common successful strategies and the key 'building blocks' for their implementation.

Dorothy Lepkowska reports

How to break down the cycle of underachievement by pupils from disadvantaged backgrounds and narrow the achievement gap has been an issue of debate for years. However, with the Pupil Premium funding came an element of accountability and an expectation that schools will use the money effectively to achieve the best outcomes possible for those most in need. But, with limited time and resources, how can schools be sure that a certain strategy or approach will work?

The National Foundation for Educational Research (NFER) has published a research report entitled *Supporting the Attainment of Disadvantaged Pupils: Articulating success and good practice*.

Commissioned by the Department for Education last year, the report found that schools had adopted an average of 18 different methods of trying to narrow this gap. It also identified common ground between schools on what strategies are effective, and highlights the experiences of the more successful schools.

The report draws on the responses to a questionnaire sent out to school leaders about the strategies they had used. The most commonly used strategies were also viewed as the most effective and included:

- Paired or group teaching.
- Improving feedback between teachers and pupils.
- One-to-one tuition.
- Initiatives introduced earlier, allowing them to bed in to the ethos of the school.

“More successful schools had designated staff to offer pastoral support and had employed strategies to ensure children attended school – such as calling home in the event of an absence, funding or sending out transport, and working with families”

Compared with less successful schools, more successful schools had introduced their most effective strategy earlier. More and less successful schools also differed in their implementation of similar strategies.

For example, when it came to small group teaching, one more successful school took pupils of similar ability out of non-core subjects for additional support. This contrasted with a less successful school which removed pupils from English lessons to use an online tool, supervised by teaching assistants who had no specific training.

Furthermore, as part of their feedback to pupils, the more successful schools had implemented detailed consistent marking schemes to recognise pupils' achievements and identify the next steps in their learning and time was set aside specifically for discussion between the pupil and teacher. The researchers found that the more successful schools emphasised teaching and learning alongside emotional and social support, too. They also had highly effective assessment for learning systems which were straightforward to administer, provided clear feedback for pupils and contributed to each pupil's tracking and monitoring.

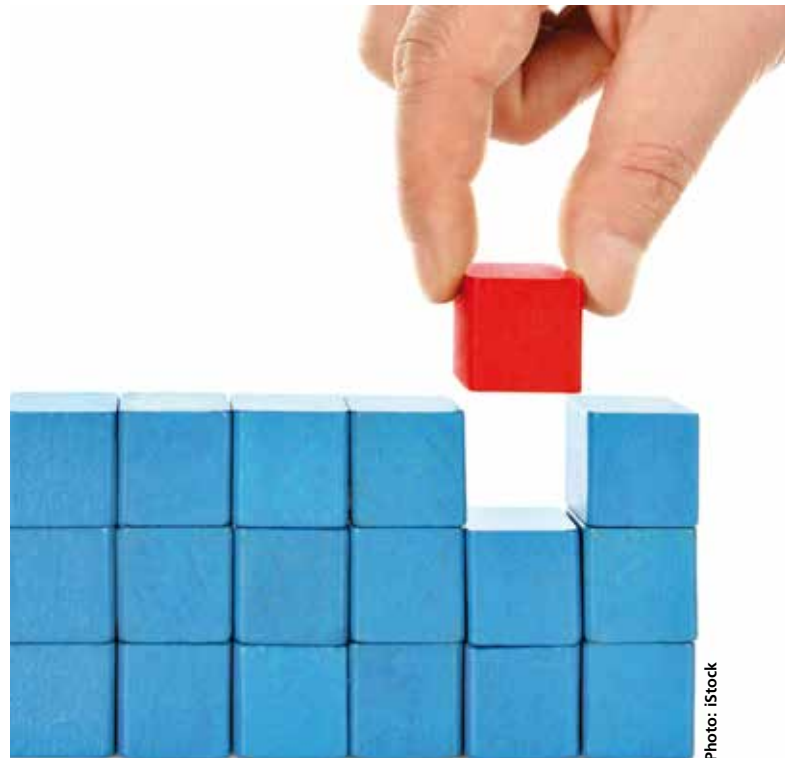


Photo: iStock

Tailoring strategies by responding to the needs of pupils was another characteristic of more successful schools. The study found that heads from more successful schools “had adapted interventions or developed new ones based on their experience and understanding of what they were trying to achieve”.

It continues: “Their adaptations and developments were based on clear use of evidence, direct experience and observations of the initiative in practice. Less successful schools were more likely to be using ‘off the shelf’ interventions and less likely to be deviating from the prescribed approach.”

The effectiveness of approaches used by different schools was not, therefore, simply a matter of implementing targeted strategies but relied on them being “embedded in a whole-school ethos of aspiration and attainment”.

Crucially, the study identified seven “building blocks” that are common in schools that have achieved more success in raising standards among disadvantaged pupils.

The first aspect the schools had in common was a whole-school ethos of attainment for all, which meant the avoidance of stereotyping disadvantaged pupils as having less potential to succeed or as having similar barriers in the way of learning.

The head of one less successful school said: “Whatever we throw at these disadvantaged children, some of them are still struggling to make that progress. They just haven’t got it. That sounds awful, but it’s a fact of life. So we don’t throw loads at these children. They make the progress that I think they are capable of.”

The leader of a more successful school, however, said: “When I am talking about our disadvantaged students I am absolutely determined that I see each of them as an individual rather than generalising them and moulding them together.”

The second common element was a clear strategy relating to behaviour and attendance, incorporating strong pastoral care in the form of social and emotional support and a quick response to non-attendance, as well as working closely with families.

The report found that “the features associated with less successful schools offer some potential insight into opportunities to improve outcomes for disadvantaged pupils: in particular, the finding that higher levels of pupil absence were associated with poorer outcomes for disadvantaged pupils in both primary and secondary schools”.

More successful schools had designated staff to offer pastoral support and had employed strategies to ensure children attended school – such as calling home in the event of an absence, funding or sending out transport, and working with families, often in the home, to address the barriers they face in getting their children to school. They also understood the link between behaviour and absence and emotional support, and had put extensive social and emotional support strategies in place including strong links with local mental health services.

“When I am talking about our disadvantaged students I am absolutely determined that I see each of them as an individual rather than generalising them and moulding them together”

Another building block was a commitment to high-quality teaching for all alongside consistently high standards and expectations of teachers and pupils, monitoring performance and sharing best practice in the school.

In the more successful schools, staff were able to meet the learning needs of individual pupils, which required them to know every child’s challenges and interests, and to look closely at ways of supporting them to achieve their very best.

Rather than bolt-on strategies and activities outside school hours, in some more successful schools, pupils had bespoke timetables based on their needs. Children with specific learning needs were given the appropriate support, which might include group support for pupils with similar needs.

The effective deployment of teaching staff was seen as vital in raising standards among disadvantaged pupils, with the best teachers working with those who needed most support, and using teaching assistants to support pupils’ learning.

Appropriate training was deemed vital by the more successful schools, many of whom had trained a teaching assistant in pedagogy so they understood the drivers for educational practice, how to provide quality questioning and give appropriate feedback.

One school leader said: “Before, teaching assistants would simply follow around students on the SEN register from lesson to lesson. They were as transient as the students. What we did instead was we made every teaching assistant a subject-specific teaching assistant, so they only worked within one subject. They became deployed by the subject leaders and had high-level knowledge.”

Effective use of data by staff and responding to evidence was a hallmark of more successful schools and enabled teachers to identify individual children’s needs, review progress regularly and swiftly address underperformance. Such schools were those with manageable assessment for learning systems, allowing teachers to give pupils clear feedback. Where schools used evidence to support their strategies they were able to make effective decisions about what worked best.

The seven ‘building blocks’

The NFER research identified seven “building blocks” for interventions to raise the attainment of disadvantaged children. They are:

- Whole-school ethos of attainment for all
- Addressing behaviour and attendance
- High quality teaching for all
- Meeting individual learning needs
- Deploying staff effectively
- Data-driven and responding to evidence
- Clear, responsive leadership

The schools that were found to be more effective in raising disadvantaged pupils’ performance monitored children regularly and scrutinised their progress. They also scrutinised the effectiveness of their strategies.

Finally, the most effective schools benefited from strong and clear leadership from headteachers who lead by example and set high aspirations. Senior leaders held their staff accountable, rather than accepting low attainment and variable performance. They shared their thinking and invested in staff training.

The report said: “Senior leaders in more successful schools said that deciding to alter or stop strategies that were proving ineffective was as important as deciding to adopt them in the first place.”

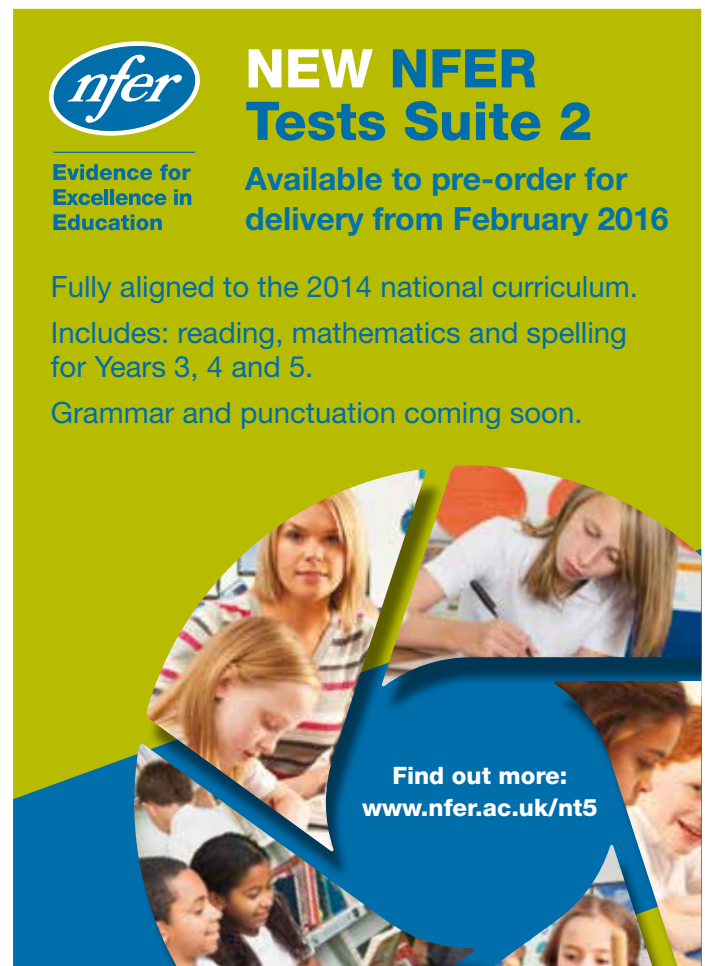
Overall, the report concludes that schools are able to improve disadvantaged pupils’ performance and make a positive difference to their life chances. There is no single strategy that will make this difference and achieving better results for disadvantaged pupils does take time. Schools need to select the strategies that work best for their pupils and their school’s circumstances.

In doing so, they need to bear in mind that the quality of their implementation of strategies is as important as their choice of strategies. Even with all of these building blocks, implementing change and reaping the benefits takes time. More successful schools reported that it took “around three to five years for changes to ‘bed in’ and lead to a sustained change in pupils’ attainment”.

• *Dorothy Lepkowska is an education writer who has written this article on behalf of the NFER.*

Further information

To download the final report, *Supporting the Attainment of Disadvantaged Pupils: Articulating success and good practice* (NFER, November 2015), www.nfer.ac.uk/hpp



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The recipe for effective assessment



Image: iStock

In the uncertain world of assessment without levels, it is paramount that schools opt for solutions founded on experience and research. **Dorothy Lepkowska** looks at how NFER puts together its pupil assessments

Ask any teacher what the chief challenges are in their working life these days and they will probably mention work/life balance, the impact of curriculum reforms and the lingering fear of Ofsted.

But among the major concerns remains the brave new world of assessment without levels. Some headteachers have claimed that the final report of the government's Commission into Assessment Without Levels, published last autumn and focusing on the future of assessment in primary schools, has proffered little in the form of clarification about what should happen next. Schools say they remain unclear on what needs to be tracked, and how.

What is evident from the exercise, however, is that there is to be no replacement for levels, nor was the government's Commission willing to recommend any one system of assessment over another.

Schools are pretty much on their own in deciding how they are going to test, track, monitor and record pupil progress and those who had waited to see what was going to happen next will now have to make some decisions.

For some, the removal of levels was welcome news. Some teachers believed they were unhelpful and a distraction. Others had come to rely on them. Levels, they said, offered some sort of uniformity across the board, which had now been removed.

Crucially, they were concerned at how the lack of levels might affect the evidence required by Ofsted in making its judgements. In short, will schools be left alone to develop systems that meet their needs unhindered by the inspector looking over their shoulder?

Developing any sort of successful approach to assessment requires some understanding of the principles and purpose of assessment. NFER has many years of expertise in designing and developing reliable and robust assessment systems, and is able to support schools facing the daunting task of what lies ahead. It works with teachers to find out what is required and what works best.

So, how does NFER develop its assessments?

First, its researchers identify schools' needs. Working with heads and teachers, they find out what needs to be tested, the age of the pupils and what the assessment is intended to achieve. A small expert group then begins to develop the assessment in conjunction with schools, which help the group to identify priorities and features.

Every NFER assessment is carefully developed to ensure it is fit-for-purpose, valid and robust. The expert panel will consider existing evidence and research, which will help to inform and develop their work before it is trialled in a minimum of 10 schools to see how the materials or package actually perform in the classroom. As part of this process, they will conduct a cultural review, when an expert considers whether the test under development is suitably worded and presented to take into account aspects such as religion, ethnicity, gender and the school environment generally. The tests are then trialled on a more formal basis with a selection of schools and pupils.

A crucial element of assessment is standardisation. This reflects the extensive and robust trialling and analysis that is undertaken in test development. A robust standardisation allows teachers to compare the performance of individual children or a larger group, such as a class, with that of a nationally representative sample of pupils.

Now in NFER reading and maths tests, assessments can be linked both across and between years to show the progress of individual children or classes. This is important for monitoring pupil progress.

DEVELOPING AN NFER ASSESSMENT



A statistical analysis is carried out by NFER experts, in which the performance of all parts of the tests are compared and this allows standardisation to take place. At this stage, the NFER team will meet with teachers who scrutinise the tests and provide another perspective on the level of demand of the assessment. Once these have been agreed, the NFER produces teacher guides, software and any necessary resources.

NFER regularly engages with around half of all schools in England and 55 per cent of all state-funded schools, plus around 46 per cent of state schools in Wales in any one year. Overall, that means around 280,000 pupils and 8,000 teachers have an input into the work of NFER.

Its experts – in such varied fields as curriculum, assessment and qualifications, test development, reducing attainment gaps and supporting education – have a reputation for being professional, reliable, trusted and rigorous, and the Foundation is recognised as a leading independent education research organisation with its evidence frequently cited in government reports and used to inform policy-making.

In-depth: The illustration shows the extensive process that is completed in order to create an NFER assessment

She continued: “This expertise enables us to support schools in developing the best approach to assessment for their particular context, their curriculum, pupils and staff.”

• *Dorothy Lepkowska is a freelance education writer.*

Further information

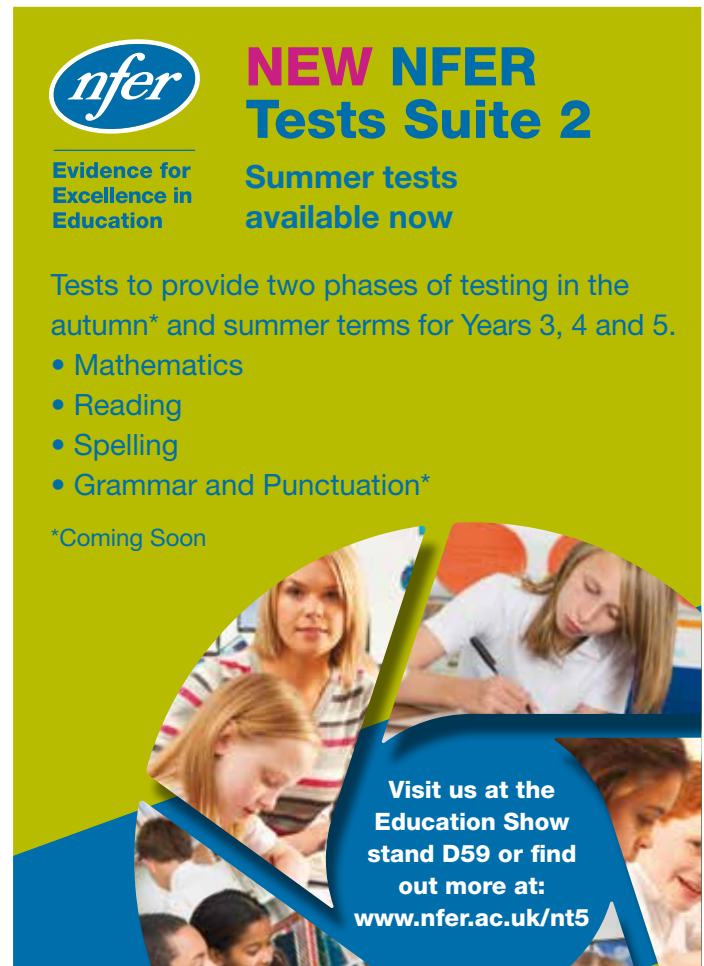
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“The NFER team will meet with teachers who scrutinise the tests and provide another perspective on the level of demand of the assessment. Once these have been agreed, the NFER produces teacher guides, software and any necessary resources”

But it is NFER’s Centre for Assessment that continues to be one of the areas of highest demand. To support schools facing the challenges ahead, NFER devised a series of practical guides to areas of the new curriculum and assessment of pupils at key stage 2. It updated its tests to reflect the new requirements and talked to teachers about how they envisage the future without national curriculum levels.

The team at the centre has also been developing NFER’s Reception Baseline Assessment and the organisation was one of three chosen by the Department for Education as an approved provider of these assessments. NFER experts also work closely with the Standards and Testing Agency as it delivers national assessment from early years to the end of key stage 2 in England. This has involved the development of questions and large-scale trialling of national assessment.

Liz Twist, head of the NFER Centre for Assessment, said: “Developing a successful approach to assessment in these changing times depends on a clear understanding of the purpose and principles of assessment. NFER has many years’ experience designing robust and reliable tests across the primary phase.”



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The tests are fully aligned to the 2014 curriculum and have been standardised with more than 18,000 pupils taught this curriculum.

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- Standardisation means data is consistent, reliable and robust
- Age-standardised scores and standardised scores* show how pupils perform against a large nationally representative sample
- Shows whether pupils are reaching age-related expectations
- Question level information shows how pupils perform on questions requiring different skills, highlighting strengths and weaknesses
- Linked tests enables pupil progress to be monitored (see below)
- Provides evidence to support teacher assessment

*standardised scores available from June 2016

Monitoring pupil progress with NFER Tests Suite 2

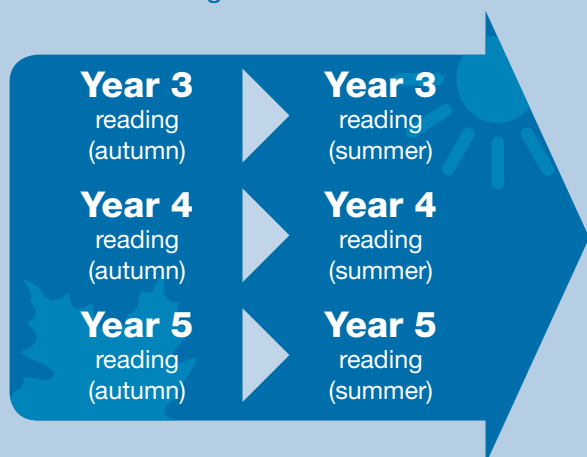
As a result of extensive trialling, NFER Tests are now on a single scale allowing pupil progress to be measured.

Progress within a school year

When used at two points in the school year, the tests can be used to evidence progress made in the year. For example, if a pupil takes the Year 3 autumn reading test in September of Year 3 and the Year 3 summer reading test in May of Year 3, then the amount of progress made in these eight months can be calculated.

Progress year on year

When used together, summer tests will enable progress to be measured from one year to the next. For example, teachers will be able to look at the amount of progress made by a pupil who took the Year 3 summer reading test and then the following year took the year 4 summer reading test.



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- In the 2016 to 2017 academic year, the outcomes will not be used by the DfE for accountability purposes.

Feedback on the NFER Reception Baseline Assessment has been extremely positive. Early Years practitioners using our assessment in 2015 observed it as a very useful tool for:

- informing planning at class, group and individual level
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Effective school-to-school partnerships



Image: Adobe Stock

Enabling the teaching profession to instigate, develop and lead school improvement is increasingly viewed as the most effective way forward in embedding educational reforms.

Robert Smith explains how this has worked in Wales through school-to-school partnerships

In Wales, policy-makers have been keen for the most successful schools to take a lead in transformation and school improvement through partnership and collaboration with colleagues in other primaries and secondaries.

For the past three years, the National Foundation for Educational Research (NFER) has been analysing the impact of the Lead and Emerging Practitioner Pathfinder Project, or “The Pathfinder”, which was carried out in two tranches, the first in 2014 and a second in 2015.

The Pathfinder aimed to raise the standards within primary and secondary schools in Wales by facilitating school-to-school support to accelerate improvement. Lead Practitioner Schools are high-performing primary and secondary schools with a proven leadership track record that has resulted in high levels of performance and/or improvement over a sustained period.

Emerging Practitioner Schools have already shown an early improvement in pupil outcomes but some of these schools have a mixed record of in-school variability over the last two to three years and the support of the Lead Practitioner School is designed to assist with stabilising this variability.

A report into Tranche 2 of the project examined how school-to-school support raises the standards of educational practice and attainment. Overall, researchers looked at 20 schools in all – four matched pairs of secondary schools and six of primary schools.

The analysis found that most schools believed their partnerships improved standards of teaching and learning, and had raised pupil performance in maths and numeracy. There was also evidence that leadership at senior and

middle leader level had been enhanced and that schools’ data tracking and assessment systems had been strengthened.

The headteacher of one Emerging Practitioner School said he felt he “could really benefit from having a critical friend in an experienced, successful headteacher who I could learn from and who could support me to address the improvements I wanted in my school”.

Most of the pairings of schools decided to work on a small number of priorities, the report said, so they were not over-stretched and were able to devote the resources, time and effort needed to make positive changes.

Most of the staff noted the positive impact of the partnerships, with “mutual trust, willingness and respect between the schools which had facilitated effective collaboration”. However, there were some factors which might have constrained the relationships, including proximity and differences in pupils cohorts and characteristics.

One Lead Practitioner School headteacher told researchers: “The key for us in the beginning was trust and we are now in the situation where we are very open with each other, friendly ... it was about developing relationships, going slowly, getting to know each other and having the confidence to be open and honest.”

Teachers who were involved in the project reported that they had refined approaches to teaching and learning, which had had a big impact on the work done. Teachers felt more confident to try different approaches and to experiment with techniques they may not have used previously.

As a result, lessons become more dynamic and interactive, inviting students to become active participants. Quality of feedback was improved and teachers changed the way they asked questions, allowing them to elicit answers which delved into how well learners understood concepts and issues.

Some schools had also used the Pathfinder to look at how they might deliver the curriculum more effectively, including focusing on the National Literacy and Numeracy Framework.

Teachers told the NFER researchers that being involved in a partnership made them more reflective of their own practice, and they had looked at different ways of learning. This included examining how they used data

as part of teaching and learning to suit the individual needs of classes of individual pupils.

In primary schools, one of the chief benefits of participation in the Pathfinder was that it helped teachers to develop a better understanding of what made an excellent lesson. This was achieved through joint training sessions and classroom observations of best practice with partner schools – a process one teacher described as “stepping out of the comfort zone”.

Another found there was a transformation in professional dialogue: “It has raised the conversation about lessons – ‘this has worked really well’ or ‘have you tried this?’”

Teachers became more aware of different teaching methods, including varying the pace of lessons, gaining deeper understanding of the theory and practice of using phonics, and developing more differentiated approaches to teaching maths. They also became better at implementing interventions to stop pupils from falling behind.

At whole-school level, NFER found that what happened in one primary or secondary school in the partnership often influenced how things were done in the other. Headteachers became more reflective of their own leadership styles and in some cases, leadership teams were restructured as a result of the partnership. There were also changes among some middle leadership teams, with some middle leaders taking on new responsibilities.

“Most of the pairings of schools decided to work on a small number of priorities, the report said, so they were not over-stretched and were able to devote the resources, time and effort needed to make positive changes”

The use of data was also strengthened, with schools changing how they collected data and how they then used this to support teaching and learning, in particular in supporting individual pupils. NFER researchers noted that in some partnerships the staff at the Emerging Practitioner School raised their expectations of what learners could achieve.

At the same time, the report said, pupils were made more aware of their targets and the level at which they should be working. This had the knock-on effect of making them reflect on their own needs, even setting down their own success criteria. Partnership schools used pupils’ work from both settings to standardise judgements for assessment and moderation. In some cases, work from the Lead Practitioner School was adapted for use in the Emerging Practitioner School. However, what did not work was an approach based on transferring practice directly from one school to another, or where school leaders assumed that what worked in their school would be effective practice elsewhere.

As a result of all this, NFER found that: “Learners’ motivation improved and they were more engaged with teachers and the learning process. All of these changes were related to work to strengthen learners’ voices, through formal processes for them to make their views known about their own learning and other work to nurture their independence and their enjoyment of their work.”

The most lasting changes, researchers found, came about when there was a shift in attitude and culture, and this was needed alongside structural and procedural changes if reforms were to work. The Pathfinder appears to have helped schools to make sustained improvements.

The study concluded that the partnerships had been effective in supporting and speeding up changes in participating schools. This was achieved partly through matching up schools effectively, the support that was given by the Welsh government and the Project Champion, and the “emotional intelligence” shown by senior leaders in getting their staff on board with the project while being mindful of their emotions and sensibilities. ¹⁹

• Robert Smith is a research manager at NFER and has extensive experience of designing and leading a range of research and evaluation projects, mostly in Wales.

Further information

- *Mid-point Evaluation of the Lead and Emerging Practitioner School Tranche 1 Pathfinder Project*, NFER, July 2014: www.nfer.ac.uk/path1h
- *Evaluation of Tranche 2 of the Lead and Emerging Practitioner School Pathfinder Project*, NFER, March 2016: www.nfer.ac.uk/path2h
- NFER Self-Evaluation Toolkit: This free tool was developed to help schools evaluate and evidence the work they had been doing as part of the Lead and Emerging Practitioner Schools Pathfinder Project. Visit www.nfer.ac.uk/seh
- Case studies of schools involved in Tranche 1 of the Pathfinder that showed signs of developing and sharing good practice. Visit: www.nfer.ac.uk/csih

Recommendations

NFER researchers recommend the following actions to enable sustained improvement in school-to-school collaborations. Schools should:

- **Ensure there is a coordinated strategy for school improvements that responds to the needs of schools, but that different initiatives should be mutually supportive and not lead to overload or duplication.**
- **Embed CPD across Wales to build on the success of the Pathfinder. In particular, school leaders should develop the skills needed to work with other schools.**
- **Facilitate the sharing of good practice identified in the Pathfinder so it has the maximum impact in Welsh schools.**
- **Encourage further collaboration between schools as the Pioneer Schools start reforms to the curriculum and professional development arrangements across Wales.**
- **Ensure that any specific improvement work forms part of a joined-up approach to their overall school improvement plans.**
- **Continue to gather and share evidence on what works locally and nationally.**



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Academisation: To change, or not to change?

Recent research into primary academisation, led by NFER, has looked at whether academy conversion has a notable impact on pupil outcomes. [Jack Worth](#) looks at the findings

More than 5,000 local authority-maintained schools in England have become academies over the last 15 years, most since 2010, in the largest structural change to the school system in decades. Academies are now an established part of the English school landscape, and the government announced an ambition for every school to become an academy in its 2015 *Educational Excellence Everywhere* White Paper.

Measures to encourage more schools to become academies are expected to be included in the Education for All Bill expected later this term. More than half of secondary schools are already academies compared to only one in five primary schools, so the vast majority of new academies are likely to be primary schools. But what impact has academy status had on the attainment of pupils in the primary schools that have become academies so far?

All of the existing evidence on the effect that academy status has had on pupil attainment is based on the experience of secondary schools.

However, a new piece of research by NFER – entitled *Analysis of Academy School Performance in 2015* and published earlier this year – is one of the first to look at the attainment of primary schools and answer this question. We analysed the 2015 key stage 2 results of sponsored and converter academies that have been open for at least two years, and compared them with groups of similar local authority-maintained schools that have not become academies.

Converter academies are schools with “good” or “outstanding” Ofsted ratings that chose to convert to academy status, while sponsored academies are mostly underperforming schools that converted to academy status and are run by sponsors such as businesses, universities, other schools, faith groups or voluntary groups, who have majority control of the academy trust.

Comparing attainment between schools to tease out what difference the school structure makes is challenging because of the many other things that make those schools different.

Converter academies tend to have higher attainment on average than the typical maintained school, but as their attainment was higher before they became an academy it is difficult to identify what effect becoming an academy had on attainment. On the other hand, sponsored academies tend to have lower levels of attainment, but also had lower levels of attainment before converting. Comparing the average attainment in schools of different types does not compare like with like.

We carefully selected maintained schools that we could use to make comparisons with academies that are as fair as possible: schools that had the same level of attainment, Ofsted rating, proportion of free school meal pupils, and number of pupils at the time that the academies converted.

We also took account of the intake ability of pupils sitting key stage 2 tests in 2015, measuring the amount of “value-added” progress they

made between key stage 1 and key stage 2. The results of our comparisons showed that attainment tends to be slightly higher in academies than in similar maintained schools.

However, the differences are small and are not statistically significant, which means we cannot confidently say that attainment in academies is higher than in similar maintained schools rather than the difference being down to chance.

For example, the proportion of pupils who achieved national curriculum Level 4 in reading, maths and writing was one percentage point higher in sponsored academies than in similar local authority-maintained schools, and in converter academies compared to similar maintained schools. This means that one extra pupil out of every 100 in academy schools reached the government's Level 4 target threshold.

What do these findings imply for policy?

Based on the performance of existing academies, this evidence suggests that making all remaining local authority-maintained schools into academies is likely to make little difference to pupil performance, at least in the first few years.

We found no compelling evidence that academy status in primary schools is associated with improved pupil performance in the short-term. This raises questions about whether all schools becoming academies is the best use of government resources.

However, this conclusion comes from comparing the performance of different school types at the same point in time. We are not able to measure what the system-wide impact of more schools becoming academies has been on attainment, either in the short-term or what it is likely to be in the longer term.

What should my school do?

The average differences in attainment between academies and similar maintained schools are very small when compared with how much attainment varies between all schools. Academy status explains very little of the variation in pupil progress between schools. Each school's experience of academy status is likely to be quite different to that of others, and little research has so far been conducted to determine which schools are making academy status work best for them, and how.

“We found no compelling evidence that academy status in primary schools is associated with improved pupil performance in the short-term. This raises questions about whether all schools becoming academies is the best use of government resources”

Each school's own decision of whether or not to become an academy encompasses a wide set of considerations and will depend on its context (if indeed it has the choice – measures in the Education and Adoption Bill mean that all schools rated as “inadequate” by Ofsted will become academies, and Regional Schools Commissioners have the discretionary power to impose an academy order on schools defined as “coasting”).

Governors and school leaders should carefully consider the pros and cons of how being an academy might affect how the school operates, and thereby enable it to, or hinder it from, delivering the best quality education for its pupils.

Schools that are already academies may have further structural decisions to make as well. The 2015 White Paper made clear that the government expects “most schools will form or join multi-academy trusts (MATs)”.

Joining a MAT has been described by many as like a marriage with no prospect of divorce. The Department for Education (DfE) describes MATs as “the best long-term formal arrangement for stronger schools to support the improvement of weaker schools”.

Schools considering joining a MAT should assess what benefits might

come from a formal grouping, alongside carefully considering whether they share the same vision of education as the other schools. A formal grouping of schools also needs a leader with the right skills and a remit and responsibilities that match the schools' strategic priorities (See panel below for more information on executive headteachers).

• Jack Worth is a research manager at NFER's Centre for Statistics.

Further information

- You can download the full NFER research report, entitled Analysis of Academy School Performance in 2015 (June 2016), at www.nfer.ac.uk/publications/LGGG01/LGGG01.pdf
- The NFER's academies webpages can be accessed via www.nfer.ac.uk/research/academies/

Executive headteachers: What's in a name?

A NFER report released in July 2016 found that the number of executive headteachers (EHTs) in England is rapidly increasing even though their responsibilities are largely undefined. Key findings from the report are:

- As schools continue to form groups, demand for EHTs is likely to increase.
- There is currently no legal definition for EHTs, leading to multiple sector interpretations of the role.
- EHTs need high levels of strategic thinking, and skills in coaching and delegating. They need to ensure consistency and collaboration across their schools, and have a strong capacity to look outward.

You can view the full report – *Executive Headteachers: What's in a name?* – at www.nfer.ac.uk/publications/EXEC01/EXEC01_home.cfm



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How to keep hold of your teachers

New research into teacher 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 breaks down the key findings

Recruiting 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 to teacher retention

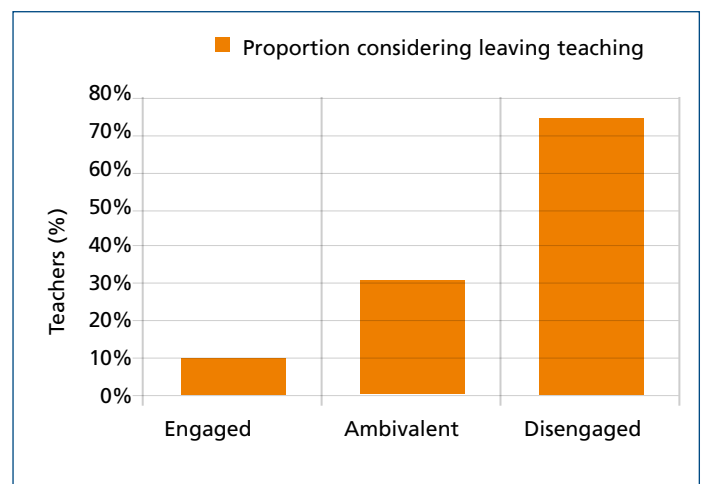
Teachers were asked about the extent to which they agreed with 16 statements about school leadership, reward and recognition, resources, school culture and ethos, and their own professional development. Their responses were used to derive a measure of overall teacher engagement.

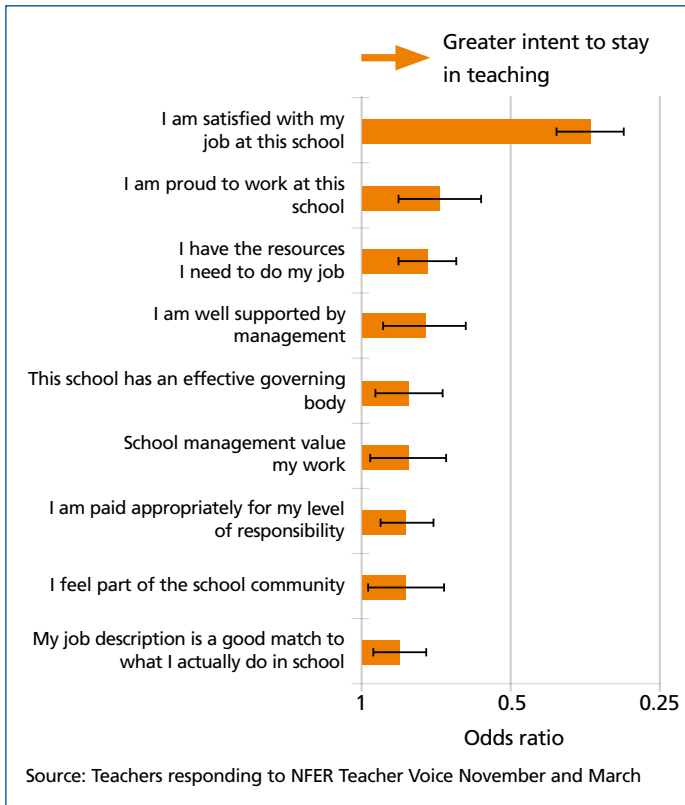
The research found a relationship between teacher engagement and retention. Around half of teachers were engaged in their role, and the more engaged they were, the less likely they were to consider leaving teaching. While most (90 per cent) of the engaged teachers were not considering leaving, 10 per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





Should I stay or should I go? The relationship between teacher disengagement and their desire to leave the profession (below) and the 'protective factors' that lead to teachers remaining in the profession (above) as discovered in NFER's research

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 associated with retention

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 in your school

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 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.

• Sarah Lynch is a senior research manager at the National Foundation for Educational Research 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/

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An evaluation of In Harmony

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The In Harmony project has received £3 million in government funding to bring music opportunities to primary pupils in six disadvantaged areas.

Dorothy Lepkowska looks at a new evaluation of the scheme's impact so far

Music is said to be a great leveller, through which children and young people find expression, creativity and joy. But opportunities must be available for all children to experience it, regardless of social disadvantage, parental income or ability.

With that in mind, In Harmony was founded as a programme to offer structured music tuition and orchestral and ensemble music-making opportunities to children in six disadvantaged areas – starting with Liverpool and Lambeth in 2008 and with Nottingham, Telford and Stoke, Newcastle and Leeds in 2013.

In Harmony was funded by the Department for Education and Arts Council England to the tune of more than £3 million so far, and each area led its own version of the programme according to local needs and resources.

The aims of the programme are to inspire and transform the lives of children, offering opportunities that might not otherwise have been available to youngsters from disadvantaged families. Pupils are immersed in musical activities, playing instruments several times a week from an early age in school or community-based activities under the guidance of high-quality music educators. They are also involved in orchestral and high-profile performance opportunities.

Over the years the scheme has become well-established in the areas it serves and by 2016 involved around 2,500 pupils. By September 2016, 13 primary schools, two secondary schools and two nurseries/family

centres were engaged with In Harmony, with an additional 14 schools in Nottingham operating at a less intensive level. Expansion to out-of-school provision, neighbouring schools and secondary school transition work means that In Harmony is reaching substantially more children than before, a new report, *Evaluation of In Harmony*, published by the National Foundation for Educational Research. The NFER evaluation of the scheme is for the three years up to 2015 and looks in particular at its impact on pupils, both academically and socially, as well as the implications for families.

It found, not surprisingly, that the strongest impact was related to music education. The attitudes of children who had participated in the scheme, which devoted between three and four hours a week to musical activities, were more positive towards music than their peers in a comparison group who had not taken part. The longer the child had been involved, the greater their self-reported musical outcomes. In particular, the programme was enhancing their musicianship, technical skills and love of music.

One headteacher said: “The programme is able to deliver a quality that we just wouldn’t be able to do without the professionals – the technical language, the playing, the musical knowledge, the musical skill, playing with an orchestra, playing in an ensemble, the teaching expertise, all of the things we wouldn’t be able to deliver at whole-class level.

“Our children leave in year 6 with a very sophisticated musical knowledge and skill base. In a musical sense the impact is tremendous and the progress that the children make is tremendous.”

Some parents noticed that the skills picked up as part of the programme transferred to other parts of a child’s life. One said: “My daughter has a lot of respect for her instrument – it’s not a toy. It’s given her a sense of pride and responsibility. I’ve noticed she treats things differently at home as well – she recognises the cost and value of things.”

For some children, involvement had led to increased confidence and better communication, though when the two groups were compared there

was little difference in academic attainment and attendance generally. However, the programme was broadening horizons as one teaching assistant observed: “In Harmony is a fantastic opportunity that I feel these children would never get (otherwise). Certain children are stuck in (the locality) but I feel In Harmony has opened their eyes to the bigger, wider world ... and it let them know that they can go and play the trumpet or be a doctor when they’re older.”

While the scheme targeted children in disadvantaged areas, some of which had multicultural populations, where involvement in the arts was generally low and many participants were eligible for free school meals, there were some variations in engagement.

Girls were found to have more positive attitudes towards music than boys and were more likely to participate in ensembles and tuition which took place after school.

Similarly, children with special needs were under-represented in extra-curricular activities across the programme as a whole, though they benefited from lessons and events taking place during school time. The study found this was in keeping with patterns reported by the Music Education Hubs generally and were not confined to the In Harmony programme.

“Schools reported that engagement with parents had improved, in particular through performances, and that parents were proud and encouraging of their children’s progress and musical development. For some families it had been their first experience of visiting cultural venues or listening to different types of music”

Researchers also found a wider social impact of the In Harmony scheme. Schools reported that engagement with parents had improved, in particular through performances, and that parents were proud and encouraging of their children’s progress and musical development. For some families it had been their first experience of visiting cultural venues or listening to different types of music. Parents had opportunities to engage with other parents, and their children with pupils of other ages and from different schools.

In Liverpool, for example, families displayed “unqualified and active support of their children and the project on a daily basis” and said In Harmony had transformed their children’s lives by teaching them new skills and offering opportunities. In Telford and Stoke the scheme had offered accessibility and inclusivity for pupils with additional needs.

The report found that “the programme provided alternative opportunities for self-expression and social communication for children who find verbal expression challenging ... this included the structure and predictability of orchestral music and the individual attention provided by In Harmony staff, who helped children with SEN to find a positive role in the ensemble and integrate socially”.

However, researchers warned against an assumption that parental aspirations started from a low base. This was not necessarily the case, but it was acknowledged that the scheme offered opportunities that might not otherwise have been realised.

While the programme was found to be “popular and inspiring” and worthy of further funding on “musical and social grounds”, the cost per primary child was high and would rise as children progressed to secondary education and as more primary pupils were admitted.

The researchers recommended that pupils’ outcomes should be monitored as they move through their education to see whether the public investment had paid off. It also suggested that different models of funding and delivery be investigated to expand the scheme to more schools and to enable pupils to participate for longer.

In at least one of the areas, Pupil Premium money – government funding allocated to schools for every child on free school meals to narrow the

attainment gap – was used in part to support provision. The report also suggested schools and providers of music services engage more with the 20 per cent of children who admitted they didn’t like playing an instrument or singing in class. Similarly, more work was needed to find out why boys and children with special needs were engaging less with the programme outside of school – possibly through identifying and sharing good practice of inclusive participation where this was evident. Furthermore, good in-service training for music educators will be important to support further development or expansion of the In Harmony programme.

The report said there was a need for a career structure to “develop high-quality versatile music educators dedicated to improving social justice through working with children from deprived areas. They need to access to relevant, high-quality opportunities for professional learning and development”.

Although the report found no quantitative evidence for the scheme affecting the wider wellbeing and learning of children, the longer-term effects may not yet be apparent, it said. But there was scope for In Harmony to identify and share best practice in relation to pedagogy and inclusion, both in how the programme works nationally and in conjunction with outside agencies and sectors, “in the interest of achieving a higher standard of music education for all”.

Among its conclusions, the report said: “In Harmony appears to be making a difference to children’s musical outcomes. It is a popular programme among schools and parents who are convinced of its contribution and social outcomes for children attending schools in disadvantaged areas.”

• Dorothy Lepkowska is a freelance education journalist.

Further information

■ The NFER report *Evaluation of In Harmony* can be found at www.nfer.ac.uk/publications/ACII04



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Analysing our TIMSS results

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International comparison studies make regular headlines, but their findings must be interpreted with caution. **Dorothy Lepkowska** looks at two recent reports analysing science and maths performance in England and Northern Ireland

International studies of academic performance are sometimes seen as controversial when education systems, teaching methods and compulsory education starting ages vary so much between different countries. But these studies can also provide useful information to inform policy-making and classroom practice.

For example, the Trends in International Mathematics and Science Study (TIMSS) provides insights into a range of factors that can affect performance, such as pupils' home backgrounds and learning environments, and the quality and content of teaching.

The involvement of NFER in TIMSS goes back to its inception in 1995. Since then, NFER has been analysing the outcomes to find out what educators and policy-makers can learn.

TIMSS focuses on the performance of pupils aged 9 to 10 (year 5) and 13 to 14 (year 9), but here we will concentrate on the outcomes for primary pupils in England.

The most recent study, published for the year 2015, shows that year 5s in England scored 546 for maths. Although this is slightly higher than the previous two scores in 2011 and 2007 (542 and 541 respectively), it cannot be taken as evidence that standards have improved.

Researchers at NFER urge caution when analysing international performance because comparisons, such as this trend over time, often don't stand up to scrutiny.

Their latest briefing report, entitled *Twenty Years of TIMSS in*

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

"It is crucial to consider whether a score is statistically significantly different – in other words, the differences have not arisen solely by chance."

The authors also say that while it might be tempting to focus on country rankings, these can be misleading because they might be affected by small changes in pupils' scores that are not in themselves statistically significant.

Furthermore, rankings can be volatile and may vary according to which countries are participating. The position of one country in the tables is not just based on its own performance, but that of all the others taking part, and how they had fared in that cycle. For example, even though performance among year 5s in England had not changed significantly in 2015 from 2011, it was outperformed by three additional countries during this period.

Even where differences are statistically significant (considering for example high-performers such as Hong Kong and Singapore), caution is needed in interpreting the results. We cannot know for sure whether these results are due to teaching practices and aspects of the education system or whether they are due to other environmental or cultural factors. So it is important to consider TIMSS alongside other sources of evidence.

One of the important pieces of information that the TIMSS results provide is the range of scores among the highest and lowest achieving pupils. Merely taking an average score for a country doesn't necessarily tell us everything we need to know.

For example, Singapore is the highest achieving country for both subjects but it has a wide spread of achievement (of 280 scale points) in year 5.

England's performance

So how did year 5s in England fare in the TIMSS rankings in 2015? An analysis of outcomes shows that primary pupils in England have maintained similar levels of performance since 2007. The proportion of youngsters achieving at the highest international level has been stable for nearly a decade and, since 2003, the proportion of year 5s reaching this level has been greater than in year 9.

England was ranked 10th in maths in year 5 in 2015 and was only significantly outperformed by seven countries. The TIMSS surveys found no gender differences in maths achievement for year 5 for the previous 20 years, though in 2015, boys outperformed girls significantly.

In science, England was ranked 15th overall in year 5. However, the performance of year 5s has fluctuated, having improving slightly between 1995 and 2003 but declined significantly between 2007 and 2011. Since 2011, it has remained largely stable.

The proportion of year 5s achieving the highest international benchmark in 2015 was significantly lower than in previous surveys, but similar to 2011. Researchers found no significant differences in the performance of boys and girls in science at this age.

Looking at the contextual evidence, the teachers of year 5 pupils were, generally speaking, satisfied with their job, though the number of teachers who were "very satisfied" was lower than in other countries. In maths, levels of participation in professional development were slightly higher for primary teachers compared with secondary teachers in England, though in science the reverse was true.

Around three-quarters of primary pupils attended schools with few discipline challenges and considered "very safe and orderly", which was above the international average. Pupils in England also experienced bullying less frequently than in several other TIMSS-participating countries.

"England was ranked 10th in maths in year 5 in 2015 and was only significantly outperformed by seven countries. The TIMSS surveys found no gender differences in maths achievement for year 5 for the previous 20 years, though in 2015, boys outperformed girls significantly"

Primary pupils in England were also more likely to be engaged in science and maths learning than secondary pupils, with more than 80 per cent of year 5 pupils reporting a positive attitude towards those subjects, which is similar to the international average. Year 5 pupils also felt more confident with maths than they did about science.

The NFER briefing paper highlights how TIMSS enables policy-makers to examine how past policies relate to achievement over time. It also offers insights into how the most successful and most improved countries achieved their successes. It might also inform how changes in curricula in different countries had affected achievement.

Northern Ireland's performance

In Northern Ireland, the NFER's TIMSS analysis looked at year 6 pupils and their achievements over a four-year cycle. Northern Ireland took part in TIMSS for the second time in 2015 so comparisons can only be made with 2011.

An analysis of the country's performance shows that, in maths, pupils in Northern Ireland out-performed 42 out of 50 participating countries but was significantly out-performed by five of those. Overall, science scores were lower than in maths, and Northern Ireland is outperformed in this subject by 22 countries, though it is in a group with seven others scoring similar results.

However, scores in both maths and science have remained stable

and were not significantly different in 2015 than in 2011. There were also no significant gender differences. More than a quarter of year 6 pupils in Northern Ireland reached the TIMSS Advanced International Benchmark in maths, the sixth highest percentage overall. Over the four-year period there was an increase from 24 per cent in 2011 to 27 per cent in 2015.

In science, however, only five per cent of year 6s reached the Advanced International Benchmark. There was a wide spread of attainment in maths but a smaller gap between the best and worst achievers in science.

When it came to content, Northern Ireland pupils did better on numbers than on geometric shapes and measures and, in cognitive domains, better on knowing and applying than reasoning.

Researchers found that youngsters who most liked maths and science, or were confident in them, were more likely to excel in the subjects. This was also true of children whose parents had positive attitudes towards those subjects. Where pupils found teaching engaging this was also associated with their likelihood to succeed. Generally speaking, year 6s were more likely to be taught by a subject specialist in maths, than in science.

More teaching time was devoted to maths in Northern Ireland than in other countries, but for science this was the reverse. Classrooms in the country were also described as well-resourced, and where children had access to good home resources, this was also positively associated with achievement.

• *Dorothy Lepkowska is a freelance education journalist.*

Further information

- *NFER Education Briefings: Twenty years of TIMSS in England*, 2016: www.nfer.ac.uk/publications/99958/99958.pdf
- *TIMSS 2015 in Northern Ireland: Mathematics and science*: NFER, November 2016: www.nfer.ac.uk/publications/TMSS01/



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