

SecEd

Guide to...

Using data for school improvement

Key content

- A focus on the three core strands of school data collection and how to triangulate this information to improve standards
- Advice on involving all staff in the intelligent use of data to improve pupil performance
- What to look out for when disseminating data to the wider teaching team
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- Case study: Keeping data use simple

In association with

ASCL Association
of School and
College Leaders

GUIDE TO... Using data for school improvement

The collection and use of data in schools have increased in recent years. They are a tool for self-evaluating a school's overall performance, and to track and monitor individual pupil's progress.

A school will be held accountable and judged by its data, so it is important that the appropriate records are collected, analysed and kept up-to-date. It has been customary in many schools for headteachers to have overall control of data management, but increasingly this is information that they will need to share with colleagues as part of accountability and performance management procedures.

This guide examines the main processes for gathering data, how this information should be triangulated, and who should be using it.

Schools need to ensure that their teacher assessment data is robust, accurate and that it has been moderated across departments

How to use data

There are three main strands of data and statistical collection and management, and these three methods should be used together. They are:

- Data provided by central sources, such as the Department for Education and Ofsted, and which tends to be retrospective.
- Private companies which offer testing, assessment and analysis of results, enabling schools to predict how well their pupils may perform in the future.
- Teacher assessment which shows where pupils' progress lies at any given time of the year.

Strand 1: Central sources of data

Centrally provided resources such as RAISEonline, the Level 3 Value-Added Tool for post-16 education and the recently launched School Data Dashboard, aimed at governors, offer schools interactive but retrospective information on how they have performed.

There has been a tendency in some schools for information from these sources to be disseminated only to senior leaders, but there is a strong case for the data to be cascaded further down the staffing hierarchy.

These tools help schools to determine their strengths and challenges, and may reveal differentiation in performance between departments, allowing all staff to see the "bigger picture" of where the school currently stands and their role in its progress.

RAISEonline, particularly, provides a very detailed and informative image and some schools may benefit from developing a narrative around it, rather than presenting it as raw data and figures.

Staff may require training to understand the statistical significance of the data and this should be provided by the school wherever possible.

The new School Data Dashboard from Ofsted is a simplified version of RAISEonline and is intended to help governing bodies hold senior leaders to account and challenge them about the school's performance.

However, the Association of School and College Leaders (ASCL) is concerned that the information in the Dashboard may be presented in too simplified a fashion and therefore could be misleading. ASCL advises that the Dashboard should be considered as a starting point for diagnosis and dialogue – before governors then engage with staff.

Level 3 Value-Added, meanwhile, is a measure showing the progression of students from the end of key stage 4 through to graded Level 3

qualifications. It was previously known as the Learner Achievement Tracker and was produced by the Young People's Learning Agency.

The methodology estimates how a student will perform in a given Level 3 qualification by taking the national average of all students' results in the same qualification who had the same level of prior achievement at the end of key stage 4.

A student's value-added score is calculated by finding the difference between this estimate and how the student actually performed.

Data needs to make a difference to teaching and learning, and it is more important to have a little that everyone understands and can act upon, than too much which is meaningless and incomprehensible

Strand 2: Commercial testing, assessment and analysis

Most schools are familiar with, and use, private providers for some of their assessment and testing needs. The value of this strand lies in tried and tested, quality-assured methods offering not only results but an analysis of the findings.

Among the most frequently used is the Fischer Family Trust (FFT) measure, which takes into account socio-economic factors, ethnicity and gender.

While ministers want to do away with contextual value-added measurements on the grounds that social disadvantage may be used as an excuse for poor performance, it is nevertheless useful and important for schools to know their pupils and how and where to best target support.

The Cognitive Ability Test (CAT), offered by the National Foundation for Educational Research, is used by most schools and tests human thinking,

providing an indication of a child's potential, rather than prior learning.

Meanwhile, Durham University's Advanced Level Information System (ALIS) provides performance indicators for post-16 students using GCSE data and its own alternative baseline tests as a measure of ability against which to forward-plan. This provides predictive data and a value-added analysis for each student in each subject they take.

There are many other testing and assessment tools available and schools can use whichever suits them best. However, while there is some value in gathering information from different perspectives, there is a danger of being "bogged down" in too much data and a risk of some of it becoming contradictory.

Strand 3: Teacher assessment

Teacher assessment is the crucial contribution to "triangulating" the aforementioned data because it looks at what is happening at the moment. It is important for teachers to know at what level their pupils were performing previously, where they are now, and what has happened in terms of the trajectory of their progress.

Schools need to ensure that their teacher assessment data is robust, accurate and that it has been moderated across departments, so that an accurate picture emerges of a child's overall performance.

Dr Annabel Kay, head at The Warriner School in Oxfordshire, told *SecEd* that staff are given special training once a year to help them use RAISEonline. This training includes a focus on maths and English performance. The school is clear that non-teaching data is also vital.

Dr Kay explained: "Teachers have targets in their class based on FFT but there is also a push for accountability through the pastoral system, so heads of house have accountability data as well and look out for the overall performance of pupils, and not just by subject."

A case study of The Warriner School's approach can be found over the page.

Disseminating data and statistics

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that everyone understands and can act upon, rather than too much which is meaningless and incomprehensible.

All staff, from the NQT upwards, need to know about the school's data so they know where they fit into the bigger picture for the school, what their contribution needs to be, which subjects the school excels in, and which require more work.

David Blow, head of Ashbourne School in Surrey, said collection of data was "absolutely vital to ensure that you maintain a momentum on progress and communicate your expectations".

He continued: "Schools gather and manage a huge amount of data on all sorts of aspects, and managing that in the right way is an important part of managing the school.

"Examination results and grade predictions need to be set against other important aspects, such as attendance and punctuality."

Mr Blow added: "The different bits of data will be shared in a variety of ways depending on who is to receive it, but what is key is making sure the data is accurate and accountable – taking into account different contexts and meanings – and people need to be clear about how they should act on it."

There is no hard and fast rules as to when to use the three types of data together, but school leaders should be clear that these are the three methods that "triangulate" to give schools a good idea of where their students have come from and where they are going.

Back at The Warriner School, Dr Kay emphasises that it does not really matter what systems a school uses for data collection, as long as it isn't over-complicated and doesn't over-burden the school with information.

It is clear that schools should carry out assessment as they go and heads disseminating data need to make sure that:

- The person reading it knows what it means and how to react to it.
- The data is valid and reliable and has real meaning.
- There is a clear data management plan and structure.
- The school is not dependent on just one person being able to understand and analyse

the information. Others also need to be able to interpret it, too, and to flag up any discrepancies and problems.

- They understand that data needs management and planning and should not be about jumping to conclusions.

What is key is making sure the data is accurate and accountable, taking into account different contexts and meanings, and people need to be clear about how they should act on it

Using data in Ofsted inspections

Inspectors will expect to see statistical evidence of performance and progress in a school but will not have time to read reams of information.

They will want to see data about the performance of groups of students, including in terms of ethnicity and free school meals, and will expect there to be a focus on achievement and attainment in English and mathematics.

Schools should get into the habit of producing an accessible summary that inspectors can analyse and understand at a glance, and which links performance and progress to behaviour and attendance.

Ofsted also takes a keen interest in the Pupil Premium and has said that proper monitoring of how schools spend this funding will involve a wide range of data being looked at as a whole. This includes achievement data, pupils' work, observations, case studies and the views of pupils and staff.

In a recent report, inspectors said that effective monitoring means that Pupil Premium interventions and approaches can be changed or adapted quickly if they are not working. The effective evaluation of pastoral Pupil Premium interventions for issues such as behaviour or attendance is also seen as vital.

Keeping data simple

Case study: The Warriner School

Dr Annabel Kay believes Ofsted inspectors had expected to put her school “into a category” before an inspection last May. In fact, the school was judged good in four categories.

The head of Warriner School in Oxfordshire said she “kept it simple” when persuading inspectors that the school was on the right track: “We convinced them that our data was robust and we were able to show that we had done a lot of work on accurately predicting modular data and that interventions had been put in place to raise standards.

“When I arrived at the school 18 months ago, I decided to have a big push on teaching and learning. We were able to show Ofsted that in the classroom it was not just about keeping data, but actually using it to raise standards. We were very honest about where we thought there were challenges, but we could also demonstrate where progress had been made.

“We felt it was more important to have a conversation with the lead inspector than to present them with reams of data. So we just showed them predictive data which we could prove was accurate and pointed to where improvements had occurred.”

The 1,124-pupil school admits a wide range of pupils, from the affluent to children living in socially deprived areas.

“We work hard at keeping it simple,” Dr Kay said. “We collect data six times a year looking at grades the pupil is working at and what level they should be. We use RAISEonline, Fischer Family Trust (FFT) and teacher assessment. So if we know from FFT that the child is working at a C when they should be working at a B, we want to know why, and we put in the appropriate interventions.

“Data is analysed not just by class, but by groups too – in terms of gender, ethnicity, free school meals (FSM) and SEN. We have a high level of FSM pupils.

“Everything now is about three levels of progress, so we have been doing a lot of work educating children on what this means and what the transition

matrices are for teachers, which has involved some training for them,” she said. “We do a lot of work on accountability and training so staff really understand what that means. Parents, too, know where the child is and what they are working towards at that given time. Parents are kept informed three times a year.

“To notify them six times would be too much as there can be blips in their children’s performance, such as one poor piece of work that can skew results, and this ends up worrying them when we can iron out those problems quite easily.”

Staff are given training once a year on using RAISEonline, rising to three times a year for subject leaders: “We have a constant problem with boys who work at a lower level than girls and come to us with lower key stage 3 levels than girls,” Dr Kay said.

“Teachers have targets in their class based on FFT but there is also a push for accountability through the pastoral system. Subject leaders and heads of house will constantly be looking at the performance – if they see the child is underperforming in a number of subjects, for example, we would expect them to liaise with the parents.

“The data has always been quite robust here. Staff training is all about accountability and everyone knowing what the big picture is in the school. We wanted to see what lessons could be learned from previous results but colleagues had to be clear that there was nowhere to hide.

“Accountability is the key thing – every teacher needs to know what is expected of them and what impact they need to have. If we don’t tell them then they won’t know – children know what their targets are, and so should teachers.

“Data should not be hidden away, but it needs to be kept simple and consistent. If I kept valuable information like this from my staff I could not possibly hold them accountable. They need to see the bigger picture and we need to know that, for example, we are working towards 70 per cent of pupils gaining five or more A* to C including English and maths. Teachers must know and understand their role in that process.”

An open data culture



Brian Lightman
General secretary, ASCL

“Data is an important tool for any school and for anyone involved in the school improvement process – particularly those in leadership

positions. However, data on its own does not always give the answers. It should ideally prompt more questions and detailed analysis rather than lead to immediate conclusions.

We would encourage headteachers to be open with data and would not want them to withhold it from staff or parents. However, there are several ways of presenting data.

Because of this, it is important that every school has someone with the expertise to really understand the data, analyse it accurately, and present it in different ways so that it is accessible to various groups of people. For instance, information that parents will want to see on the school website will be different than the detail that staff will examine in a more technical way.

I am concerned about the continuing emphasis from the Department for Education on publishing more and more data in a raw state, which does not always provide answers or offer context.

Accountability is important and data has a large role to play in holding schools to account, but the real value is in how data is used to support processes of school improvement.

For example, the current consultation on accountability suggests that parents can use performance data on specific subjects in the league tables to choose a school. But as we know the data may well change by the time that child is choosing GCSEs. It could be that the school doesn't have a particularly good group in the current year and so the information proves to be very misleading.

The issue parents need to consider is whether the school is well-managed and led, and whether it is using the data in context to ensure it makes sustainable improvement.

One of the jobs of schools is to provide an analysis of the data. Parents should be encouraged to come in and talk about the data for their child and to ask if they don't understand.

There needs to be a culture in schools that promotes openness. Sometimes schools can be defensive about data, but the best schools use the data to uncover those areas where there are issues, to understand why – and to put effective strategies in place.

Resources and further information

- ASCL is running training in the summer and autumn terms 2013 on Using Data Better, Using Level 3 Value-Added, Leadership of Data, and RAISEonline: www.ascl.org.uk/usingdata
- The RAISEonline document library is a useful resource for school leaders: www.raiseonline.org/documentlibrary/ViewDocumentLibrary.aspx
- Ofsted's Pupil Premium report includes best practice on effective monitoring and evaluation of this funding and documents to help schools analyse gaps in achievement: <http://bit.ly/YBiYs8>
- Ofsted's Data Dashboard is aimed at helping governors to hold heads to account, and its DataView website is for parents: <http://dashboard.ofsted.gov.uk/> & <http://dataview.ofsted.gov.uk/>
- Details of the Department for Education's proposals to reform school accountability measures are online alongside the consultation documents: <http://bit.ly/168IJc5>

This Guide To... has been produced by SecEd with support from the Association of School and College Leaders, the only professional association and trade union to speak exclusively for secondary school and college senior leaders. ASCL membership is now more than 17,000 and growing. Its members receive legal cover and support, an advice hotline, guidance and resource materials, updates on the latest education news and commercial discounts. Visit www.ascl.org.uk