Brushing up on assessment

Making the most of assessment data

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One of ten guides for school practitioners and those looking to brush up on their assessment knowledge

While it is relatively easy to collect assessment data, interpreting it can be harder. Schools have a large amount of data, some they've collected themselves, and some provided by other agencies. In order to make the most of it, teachers need to know what data they have, how to interpret it and how to use it to promote further learning. This guide outlines the types of data schools collect, and offers guidance on how to record, handle and use it appropriately.

What data are schools likely to have?

Common types of data held by schools include:

- raw scores / standardised scores / scaled scores from tests (e.g. published or national curriculum tests)
- question-level analysis of tests
- teacher assessment data
- background data, which can be used to analyse data about particular groups of pupils

Why is assessment data useful?

Data is useful on different levels, for monitoring individuals in order to guide future teaching and learning. It is also used for whole school accountability and reporting.

Data from on-entry assessments can provide a useful measure from which to monitor progress, and can be used to develop learning objectives and inform ability grouping. Data from early or mid-year assessments is particularly useful for identifying areas for development / further consolidation, since there is time following these assessments to respond to identified needs. End of year assessment data is valuable in summarising attainment after a learning period so that progress can be monitored year-on-year and within a school year, and inform school improvement objectives. National test data can also help school development by highlighting patterns of achievement.

Data management

Recording and tracking assessment data makes it easier to identify patterns and make comparisons. For example, comparing pupils' standardised scores over time can identify pupils making more, the same or less progress than the national average. However data collection practices should be carefully considered to ensure they have a clear and necessary purpose which positively impacts pupil outcomes, and doesn't cause unnecessary workload for teachers.

> The government's **Teacher Workload Advisory Group** published the following principles for evaluating data use in schools in October 2018:
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> - The purpose and use of data is clear, is relevant to the intended audience and is in line with school values and aims.
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> - The precision and limitations of data, and what can be inferred from it, are well understood.
>
> - The amount of data collected and the frequency with which it is collected is proportionate.
>
> - School and trust leaders review processes for both collecting data and for making use of the data once gathered.

The **Teacher Workload Advisory Group** also encourages the 'effective use of education technology to improve the efficiency of attainment data collection, monitoring and analysis'. Although most schools have computer-based data-handling systems, some teachers prefer paper records for ease of reference and updating. It is common for both to coexist, with computer systems being updated at intervals from the paper records. One advantage of computer systems is that data can be imported and manipulated, and graphical summaries (e.g. tables, stacked bar charts, scatter plots, etc.) can be generated easily and swiftly. It is useful to have a member of staff responsible for the chosen system as familiarity allows the system to be used to its full advantage.

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National systems like **Analyse School Performance (ASP)** in England or data analysis tools such as those produced by the Fischer Family Trust are useful for comparisons, for evaluating progress over time (now out of favour) and for using data as a starting point for further analysis. Your school / local authority / academy chain will be able to tell you whether they use such a tool or have developed other useful recording systems. They may also know of developments in other authorities and be able to advise on relevant training. For Wales, the nearest equivalent is the **Academic Achievement by Pupil Characteristics** dataset.

If your school uses commercial assessment materials, it is worth checking if accompanying analysis tools are available to help you make the most of your data. Some providers have online tools available (often at no additional charge) that enable you to enter pupil and test data on which to to carry out analyses and to generate reports that you can share with governors, parents and Ofsted. However, be wary of tracking systems which reduce the curriculum to a series of points, which claim to help teachers track termly and half-termly progress through detailed recording of curriculum content coverage and what has been taught.

REMEMBER:

Data recording / tracking should not be burdensome. All data recorded should have a useful purpose and unnecessary recording (e.g. recording every aspect of formative assessment) should be avoided.

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Things to consider when handling data:

- Ensure that you comply with legal requirements such as those in the General Data Protection Regulation (GDPR).

- If paper records are used for reference, or those derived from an electronic system are kept, be aware of confidentiality and data protection issues.

- Consider centralising responsibility for managing the school's database and entering data, to make the process more efficient and to minimise the risk of errors or lost data. Seek out training and keep skills up-to-date.

- Allow the data manager/team to invest time in working with the system, increasing familiarity. This time will be repaid in what they can then achieve with it.

- When passing data to other schools, consider what will be most useful (and most likely to be used). Minimise the transfer of data that will be ignored and try to hand over data in a useful format. You will need to ensure you have the appropriate permissions in place to share data in this way.

- If using graphs, think about what it is you want to communicate and to whom, then choose an appropriate format. It's possible to provide too much data as well as too little. You can find more on how to communicate with stakeholders in 'Sharing assessment information with different audiences' (guide number 10) in the 'Brushing up on assessment' series.

Using assessment data to improve outcomes

Schools should aim for a culture of using data constructively for positive, supportive change. Data can be most powerful in its potential for raising questions or stimulating discussion and should therefore be used to this effect, with the ultimate aim of improving outcomes for pupils.

When analysing assessment data, look not only at present attainment, but at pupils' rates of development as they move through the school and use what you learn to shape future teaching. You can refer to assessment data regularly throughout the year to guide evaluations of progress but remember that all data has limitations and pupils may appear not to progress at some times (e.g. while consolidating learning) and may progress more rapidly at others. Pupils in the same year group with different rates of progress may need different next steps.

Don't be afraid to ask critical questions and draw conclusions with care. If data for a particular pupil or class is not what you expected, think about contextual factors that may explain the differences. For example, the impact of age relative to their peers is particularly relevant for young children. When analysing cohort data, such as a whole class or a particular group of pupils, bear in mind that, in a small school/class/year group, individual pupils can have a disproportionate effect on percentages.

Remember: the purpose of using an assessment needs to be clear in order to ensure inferences from the data are valid. More on how schools can ensure the validity of assessment outcomes in '*Understanding tests*'.

Found this useful?

This guide is part of NFER Classroom's '*Brushing up on assessment*' series, a collection of free guides providing those looking to build their knowledge with an overview of key elements in assessment.

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