

How do schools in Scotland measure their own progress?

1. Tracking the progress of individual pupils

In recent years, the Scottish education system has had an increasing focus on the measurement and management of performance by schools. As part of AERS, we are investigating the ways in which performance data are used by schools. Six schools in different areas of Scotland provide case studies, and demonstrate how they are using different types of data to inform practice and school improvement, and for accountability purposes. In this AERS Feedback we compare their different approaches to tracking the progress of individual pupils.

- Paper-based systems for recording each pupil's attainment are the main method used by teachers in five of the six case study schools.
- Paper-based recording systems do not facilitate the linkage of pastoral with attainment data, or the tracking of pupil progress over a range of subjects, or over time.
- Some teachers keep their class attainment records on computers so that they can calculate statistics, but lack an appropriate electronic system to track progress over different stages and subjects
- An electronic tracking system for pupil referrals is being used in two of the secondary schools for communicating information between teachers, pastoral staff and management. It ensures that teachers are kept informed of the outcome of each referral.
- In one of these schools the same electronic tracking system is used for tracking pupil attainment and progress, setting and monitoring individual targets, and producing reports for departments and parents. In this school information about pupil behaviour informs the monitoring of their progress towards their academic targets.
- Schools need to develop a shared understanding among their staff of the capabilities of pupil tracking, with continuing training to ensure effective and sustainable systems.

Introduction

The purpose of a pupil tracking system is to provide a systematic record of each pupil's progress through a number of school stages, and to share the information among teaching staff in order to promote the child's learning. Each pupil's learning and skills develop over time, and are influenced by a wide range of factors including the style and quality of teaching and the classroom context as well as pupil characteristics and behaviour. Systematic tracking of individual pupils can be used to identify specific problems where there is lack of progress, and to intervene where necessary.

Paper-based tracking systems

All teachers like to record information about their pupils at regular intervals - how well each pupil has performed in a class test, whether they have handed in their homework on time etc. These records give a picture of the progress made by each child in the class during the school year.

In five of the six school cases the main approach to recording the progress of individual pupils depends on paper-based systems. Teachers described their own systems of recording information in mark books or folders.

I have an actual progress monitoring sheet for each individual in my 3rd year class. On that sheet, it has the test they sat, the date of the test, how many marks there were available, what mark they got. It's quite useful because there's also a box for pupil comments so they get to have their say about how they felt they got on...

When it comes to the 3rd year exam, I can take that out and have maybe a 10 minute block with each of them and go through and look at strengths and weaknesses and look at what they need to concentrate on more.

In another school a group of teachers felt they needed to systematise the process of record keeping, and they had developed a template for tracking pupil progress, including attitude and behaviour.

We've just introduced that in the last couple of years - a sort of tracking proforma thing for 3rd and 4th year. ... We look at their overall performance and their attitude in class and small things like turning up on time, being prepared for your work.... and then looking at homework and how regularly they're handing in homework. So you would speak to them about how I think they're doing based on ...and it's a better indication of how they've performed over that year and how they think they're going to perform for the next one.

Disadvantages of paper-based system

Paper-based recording systems have the disadvantage that they do not facilitate the sharing of information about pupils among staff. Pastoral data and information on attendance and behavioural issues are recorded separately from attainment data. Each class or subject department keeps its own records, and although in theory teachers from other departments could ask about a pupil's progress, they are unlikely to do so. Although paper folders may be passed on to the next teacher at the start of the school year, paper systems do not assist with the tracking of pupil progress over time.

A further limitation of paper-based systems is that they do not enable analysis of relative progress by different categories of pupils – such as girls compared with boys, or pupils with low prior attainment compared with other pupils, – and thus do not help with the identification of systematic problems.

Computerised records

In some cases computers are used to store information on pupil attainment. For example, in one primary school the date and level at which a National Assessment has been passed is recorded in the management

information system (MIS). This enables the headteacher to keep an eye on overall progress and intervene if s/he feels pupils are taking too long to move to the next level.

I can track it very clearly, and I know the areas that children – the class as a whole or individual children – have particular strengths in, particular successes or indeed specific weaknesses that perhaps need picking up or addressing.

Similarly, staff keep a close eye on attendance/absence records, and contact parents if problems appear.

A different approach is taken in another primary school where the MIS has fewer facilities for tracking pupil attainment and, in addition, staff are sceptical about the value of National Assessments. In this school standardised tests (purchased from a supplier in England) are carried out at regular intervals to track pupil progress and identify pupil support needs.

With the individuals... we will track at different times just to see the progress that they are making – that may be calling in information about specific children, and looking at individual progress that they are making. Our designated DHT for support for learning role would look at that in more detail ... or we track through if we were looking at a specific group of children, such as children with English as an additional language.

Currently, spreadsheets provide some facilities for analysis of test results but practice varies between teachers. The management team hope that more can be done with these data when a suitable MIS is in place.

Electronic system for tracking pupil referrals

Teachers in two of the secondary case studies are enthusiastic about their electronic communication system for tracking pupil referrals.

Well, we have a system ... if there is an incident in a classroom or a referral that needs to be made, the class teacher makes that referral electronically and it is referred on to whoever the appropriate person is whether it's principal teacher of the subject or the guidance teacher or the duty manager... So at any point the teacher who's raised the referral can have a look at that referral and see who it's reached and what action they've taken and what the final conclusion is. And from that we can create reports at certain triggers... So it's a way of tracking the referrals and also of analysing them so that it's perceived to be fair.

Electronic system for tracking pupil progress

In one of the schools the electronic communication system is used for tracking pupil attainment, progress towards individual targets and as a mechanism for reporting to parents – in addition to its facility for tracking pupil referrals. The system is customised for the needs of this large secondary school. One of the staff described the system as an electronic extension of the paper-based tracking system that was in use before.

We were always recording and monitoring what was going on. It was less formal than it is now and there'd be less of it... and every child had a file, a folder in a filing cabinet, instead of what's now a folder electronically. It was the same sort of thing and so you could go along and say "what's the gen on such and such a person?" and they would need to go and get their folder. They still have those folders for storing all the bits of information.

In addition, the tracking system supports the process of setting targets for individual pupils in each subject and monitoring their progress towards those targets:

We're using the data from the baseline testing, and from the S4 data into S5, for very detailed personalised target-setting. So targets are set for individual children; it's posted home; it's negotiated with them; their parents have been informed about those targets; we've held target-setting assemblies to talk, not just about the targets, but what you've got to do to work towards those targets and achieve those targets

The tracking system makes it easier for teachers to check the progress of individual pupils and ensure they don't fall behind.

It's very good for the individual teachers in terms of monitoring their own classes The best will in the world, 30 pupils in your class. ... doing the folio pieces and someone can slip under the radar. The target data and the CAT data makes it much less easy for that to happen, because you're looking at it and you're thinking wait a minute he hasn't got all his folio pieces and his actual target is a 2 – he's not where he should be, and then you can look into it. So it's quite good for flagging these concerns up.

Providing a holistic picture

The range of information about individual pupils held by this system provides the potential for middle managers or guidance staff to have an overview of the "whole

child", and to evaluate their progress over time – but the extent to which the school currently makes use of this facility is not clear. The system also enables teachers to see information about the progress made by individual pupils in all the subjects they are doing – in some cases this could be beneficial in raising expectations or flagging-up under-achievement (at pupil or department level).

You don't just get on the screen your subject, you can look across the board and you get the grade point average, so again you can spot anomalies. Right away you can see "so and so is going to get 1s everywhere but they're down as a 3 for us", or whatever. It's quite good for the teacher to see that. It's also quite good for the teacher to see target grades in other areas – "maybe I've misjudged this pupil he seems to be getting higher everywhere else – if everybody else thinks this about this pupil" – you can alter the grades.

In this large school, the tracking system provides a means of communication between teaching staff, pastoral care staff, and administrative staff, and is in constant use.

It's not just a mechanism for recording how people are doing – it's a communication system as well. The reporting system is there too. So when we come to record classes, we would all be going into [tracking system] and we'd be putting things in. Any items of concern, for instance ... homework or maybe someone's not been attending and a member of staff wants to raise that concern they would go into [tracking system], do a referral ...or if they've got attainment concerns again they've got appropriate boxes. It's very wide reaching and ...also if something happens – it's linked to ... our email system, so if somebody was having a problem [eg bereavement] it would go round as many folk as the person writing it wanted. So it's very good for giving us an overview of how a pupil is doing.

A notable feature of this school is the relative youth of the staff following recent replacement of a number of middle managers and classroom teachers. One young teacher mentioned that for her/his generation digital technology is the norm while an older member of staff has a distinct preference for the paper system to which s/he is accustomed.

Discussion

In all schools there is a desire to track the progress of pupils at an individual level. Although Scottish Government and local authorities tend to focus on overall aggregate data such as that provided by Standard Tables and Charts (STACS) teachers in the

case study schools tend to be more interested in pupil-level data to inform their practice.

Paper-based record-keeping systems are used in all schools, and may be more appropriate for primary schools where teachers can have a more personal overview of individual pupils. In larger schools, especially secondary schools where each pupil is taught by a number of different subject specialists, the need for a more systematic approach is more urgent. Many teachers that we interviewed are frustrated by the lack of computerised approaches.

Indeed, changes have undoubtedly occurred since we carried out the case studies in spring 2007. At that time new electronic tracking systems had been ordered - but not yet implemented - in two of the secondary schools we visited, and in a further secondary school this was on the wish-list of senior management. One of the local authorities was moving to a new MIS that will provide more facilities for tracking progress in its primary schools.

A number of electronic systems have been developed to provide the capability for tracking pupil progress in Scottish schools – often through partnership between schools and IT experts and “enthusiastic amateurs” – and we witnessed the use of just one of these. Implementation of any system requires considerable investment of resources – especially the time of teachers to learn how to use such as system.

I would like to see a system that was simple to use but actually effective.... we wouldn't actually really gain anything through the amount of time that's spent on it. ... if it's not going to actually help us or it's going to become so cumbersome that nobody's going to really use it or it's just going to be used for 6 months and then folk are going to say don't bother with that. Then it's not really worth the time and effort and money, usually, that's spent on it. It tends to be you work with what's there and I think you get yourself so immersed in it that you never actually think about how they could improve it

We were struck by the extent to which current use of electronic tracking systems are dependent on an enthusiast – often a deputy head or principal teacher – while many other teachers are unaware of the capability such systems could provide. If tracking systems are to be effective and sustainable, schools (and local authorities) need to develop a strategic vision and shared understanding of the data and systems they use for pupil tracking. There needs to be continuing training in the use of data so that all staff are aware of the scope for pupil tracking to inform learning and teaching – and can build capacity for greater understanding.

We suggest that tracking systems have the potential to provide an overview of the “whole child”, so

that managers and guidance staff can ensure that individual needs are being met. However, at present such potential is not being realised.

In coming years new policies, such as a Curriculum for Excellence, will shift the emphasis from measuring attainment to wider achievement. Whereas tools such as STACS are designed to evaluate overall performance of the whole age group sitting Standard Grade exams in S4, we believe that the greater diversification and personalisation of the curriculum will necessitate the use of pupil-level tracking systems by schools in order to monitor pupil progress.

Findings of this research

AERS Feedbacks to case-study schools will comprise:

1. Tracking systems
2. Evaluating data to identify issues
3. Formal accountability processes
4. Issues relating to the use of assessment data

CES Briefings 37 and 43 report other findings of this AERS study and can be downloaded from:

www.ces.ed.ac.uk/publications/briefings.htm

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The case studies were undertaken by Adela Baird, Tony Bragg, Joanne Burns, Mike Cowie, Linda Croxford, Cathy Howieson, Luoana Santarossa, Joan Stead and Dave Taylor.

For further information please contact:

Dr Linda Croxford

Phone: 0131 651 6283

Email: L.Croxford@ed.ac.uk

Dr Michael Cowie

Phone: 0131 651 4190

Email: Michael.Cowie@ed.ac.uk

University of Edinburgh, Moray House School of Education, St John's Land, Holyrood Road, Edinburgh EH8 8AQ