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Narrowing the gap

Reducing within-school variation in pupil outcomes

Contents

Why is within-school variation important?

Successfully reducing within-school variation (WSV) has been described as both an educational 'holy grail'[1] and 'the greatest educational challenge of our time'[2] as its focus on reducing difference in pupil outcomes within schools also impacts upon reducing the difference between schools. Yet it can remain a hidden and persistent problem.

According to the Organisation for Economic Co-operation and Development (OECD) variation in performance within schools is four times as great as variation in performance between schools. The result is that the UK has one of the biggest class divides in education in the industrialised world.[3]

In comprehensive school systems, within-school variation in pupil attainment seems to be much greater than between school variation … a recent DfES study of 2003 data showed that in value-added terms, Key Stage 2 (KS2) within-school variation is five times greater than between school variance, for KS3 it's 11 times greater and for KS4 it's 14 times greater.[4]

Teachers make the difference …our findings suggest that, taken together, teaching skills, professional characteristics and classroom climate will predict well over 30 per cent variance in pupil progress.[5]

Through tackling WSV schools take positive steps towards:

- improving standards through identifying, benchmarking against and understanding the best, and therefore raising the bar and closing the gap

- developing more widespread, effective practices across the school that impact on the effectiveness of learning and teaching and are pupil-centred

- achieving outcomes embedded within *Every Child Matters* (DfES, 2003)[6]

- informing improvement measures through clear school self-evaluation processes

Why publish this guide?

Tackling WSV has helped us to develop an understanding and an acceptance that the success of a school is a shared responsibility. In order to add value to children's learning there needs to be effective teaching and learning of a consistently high quality, year-on-year, class by class and not just in the year groups where the accountability stakes are higher.
Headteacher

Many of the school leaders who have worked on reducing WSV in collaboration with NCSL, as members of its Leadership Network, are contributors to this guide; it is the lessons they have learnt and the impact that their schools' actions have had that are represented here.

In sharing their work and outcomes, it is intended that other school leaders will be able to use this guide to identify specific aspects of their own school's variation and how these might be best addressed. The potential for schools to raise the bar and close the gap through applying its learning, tools, processes and recommendations is evident from the successes these schools have themselves realised.

The guide includes:

- an initial outline of what WSV is

- case study illustrations from primary, secondary and special schools

- a synthesis of the case studies highlighting recommendations for developing strategies

- a description of how to measure WSV

- an audit proforma for schools to use

Through reading the introductory sections, case study material and the synthesis of these, school leaders will be able to:

- draw on the learning from a number of the project schools, including how they have attempted to address WSV, to uncover
    - what their issue was
    - what strategies they chose to employ
    - what the impact was
- gain an appreciation of how they might identify their own within-school variation, what measures they might use to tackle it, and how they might measure success
- consider how they might move forward and take the first step

What is within-school variation?

The first thing to realise is that it starts from a positive base. Although it sets out to reduce variation in, for example, the effective use of performance data or consistency of teachers' teaching practices, it does so from the starting point that all schools have practitioners from whom others can learn; that solutions can be derived from existing effective practice.

Every school, no matter how well it is doing overall, has practitioners relatively better than others, many schools will have excellent teachers defined in national terms.[7]

This project has highlighted the need for leadership to come from the profession itself, so that every school can find, benchmark against and understand its best.[8]

Within-school variation relates, therefore, to the differences in pupil achievement between similar groups, classes or subjects in a school, rather than comparisons between schools. The factors to look at are variation by teacher and year group in primary schools and by year group and department in secondary schools.

If there is little variation in your school it is likely to be because you have some or all of the following components:

- a system of coaching and peer support for teachers
- a strong theory of teaching and learning underpinning your practice
- a clear specification of varied teaching strategies that teachers can use
- a solid body of data about teacher and pupil performance, carefully analysed and used to improve practice
- arrangements for pupils to contribute their views about teaching methods and their effectiveness
- a school culture of support, trust and challenge
- time for teachers to undertake developmental work on issues of this kind

Similarly, if you believe that there is significant variation in the school it is likely to be because the practice of some is not the practice of all. The application of an appropriate number of the points listed above can help redress this imbalance.

WSV is consequently about the transference of effective practice from one or more class bases or departments to all so that there is parity of experience for pupils: that individuals and groups are advantaged not disadvantaged. As Ruth Kelly, Secretary of State, confirms:

We need the tools inside classrooms that spread excellence to all children.[9]

To do this, schools have to ask questions of their existing practice and outcomes achieved. Integral to tackling WSV is using data effectively as part of self-evaluation:

It is through the clever use of data now available that schools…can ask pertinent questions about the achievement of pupils and identify any variation found within the school. For example, are results better in some subjects than others? Are some groups of pupils doing better than others?[10]

The questions the project schools asked can be found in the audit tools section of this guide so that these can be used by readers in the context of their own school.

Who were the project schools and what did they do?

All of the schools' headteachers were members of NCSL's Leadership Network and, in this guide, are mostly drawn from the first cohort of schools embarking on the project (phase one). They have therefore been tackling WSV since an initial conference in September 2003. They have done this through:

- identifying an area in which variation existed within their school

- considering and implementing strategies to reduce this variation

- using data to effectively benchmark progress and establish evidence of impact

Support for this process has included:

- a small number of conferences and seminars to develop thinking, raise awareness of the issues and discuss findings, led by members of NCSL's research group and Professor David Reynolds

- individual contact with Leadership Network regional co-ordinators

The schools found that four key themes emerged from their work in reducing variation, these were:

- a specific focus on the collection, analysis, interpretation and use of data

- the development of strategies that focus on teacher learning through, for example, the focused observation of specific aspects of practice

- proposals for curriculum reform, with innovative suggestions for restructuring the curriculum so that it relates more to the interests of learners and their learning preferences

- a focus on the development of middle leaders and learning from the innovative practice of others in the school

As the project progressed, a further two themes were identified:

- consistent application of standard operating procedures (agreed approaches applied accross the school eg in relation to teaching and learning)

- the central importance of creating opportunities for children and students to offer their ideas about how teaching and learning could be improved (referred to, as shorthand in this guide, as pupil or student voice)

These themes are illustrated in the case studies found within the next four sections of this guide. Each illustrates key areas through which within-school variation was addressed:

- the role of middle leaders

- use of data

- pupil or student voice

- standard operating procedures

It is important to recognise however, that although case studies have been organised around the main areas listed above, in reality there is usually a combination of these areas at play within each case. A school focusing on a more effective use of data may do this primarily through using its middle leaders, and make such use a standard operating procedure.

Additional case studies and information relating to WSV can be accessed on the project's web pages: www.ncsl.org.uk/research/leadership_network

Introduction

At first sight it might seem strange that so many schools have decided to centre their efforts upon middle leaders. Surely, it could be argued, within-school variation is the responsibility of the headteacher and the senior leadership team. Why not put our efforts into empowering them to tackle the problem?

A brief consideration of the case studies in the next few pages reveals the answer to this question. Project schools have highlighted the huge potential for changing practice and outcomes that lies within the role of middle leaders. Very often they are the true custodians of school culture, since their role at the centre of the school gives them a profound sense of what makes the place tick. If there is to be an attempt to change the culture of an institution, middle leaders often represent the best place to start.

This section focuses upon the approaches taken within a number of secondary schools. This does not mean that middle leaders are not similarly important within primary schools' efforts to reduce within-school variation, but this is highlighted in other sections within this publication.

Schools in these case studies have employed a range of strategies to unlock the potential of middle leadership. However, in every situation the starting point has emerged through enabling middle leaders to identify the issues facing their departments. The case studies emphasise the relatively isolated situation of many middle leaders. Being at the centre of the school may make them powerful, but it can also mean that they lack the broad, whole-school perspective available to senior leaders. Rather than ignoring the good practice of others, in most cases middle leaders seem to have been simply unaware of it. For this reason, some of the most impressive outcomes in the project have been experienced when middle leaders have been given the chance to collaborate, in order to unlock the powerful practice of those working alongside them.

For a long period we have tended to assume that if there is a problem we should look outside the school for a solution. These case studies suggest that for many middle leaders the most profound source of help is to be found not outside the school, but in the next chair in the staff room. By allowing previously isolated colleagues to share practical ideas that have worked for them, project schools have been able to release the potential of middle leadership within their institutions.

As teachers we often bemoan our students' inability to transfer their learning between subjects. New curriculum projects are looking at ways in which students can work in a manner that is less compartmentalised, emphasising the connections between subjects so that a deeper form of learning can take place. However, what is true for students is also true for teachers. For too long we have failed to transfer what one department has learnt to another. If our students need to see the connections between subjects, then the same is true for those of us who teach them. The following case studies demonstrate the deep learning that has taken place when middle leaders become less isolated and instead begin to put together the connecting pieces that run across departments.

Thomas Sumpter School

Context

Thomas Sumpter School is a 870 student specialist college in English and media arts located in the East Midlands. Until two years ago the school had suffered a long and serious decline.

Key levers: coaching and mentoring

Project focus

The within-school variation (WSV) project at Thomas Sumpter was undertaken with the support of local authority (LA) consultants and has become a central part of the LA strategy. The main element of the WSV activity was to work intensively to develop middle leaders in the school so that they could effectively coach and mentor their colleagues.

Strategies used

- Administrative support and a no-cover deal were provided to allow middle leaders to focus more of their attention on leadership rather than management.
- An eight-week coaching and mentoring scheme was provided for heads of department by LA consultants. This provided them with the skills to coach colleagues within their departments, a process initially overseen by these consultants.

Other strategies running alongside and supporting these included:

- the development of lesson observations
- departmental reviews and the production of action plans from these, with time lines and the identification of clear success criteria
- increased rigour in the analysis of performance data
- the application of assessment for learning processes
- a more rigorous use of student tracking
- the use of student attitude surveys

Impact

The impact on practice has resulted in more rigorous approaches to data analysis, improved teaching and a reduction in staff turnover.

Standards of achievement are beginning to improve:

- 30 per cent five A*–C in 2003 has now improved to 37 per cent in 2005. These results were above value-added predictions in 2004 and only two per cent below Fischer Family Trust band B in 2005.
- Particularly impressive gains were made in history. In 2003, two per cent achieved A*–C; this increased to 19 per cent in 2004 and 39 per cent in 2005.
- Similar progress was made in geography, which has improved from 26 per cent in 2004 to 32 per cent in 2005.
- There has been a consistent improvement of half a grade a year, and the variation between history and other subjects is reducing.

There is evidence that the strategy is travelling effectively to other contexts. North Axholme is another North Lincolnshire secondary school in phase 2 of the project. It had identified a range of within-school variation between Key Stages 3 and 4 and between subject departments. Its main strategy has been to adopt the 'Thomas Sumpter model'. In particular it has involved external consultants to develop middle leadership through coaching. There is a stronger emphasis on self-evaluation, data analysis and interpretation, and the school has introduced a process of departmental review. It has linked strong and less effective departments, in order that they can learn with and from each other, and a range of other achievement-raising strategies, including work sampling and student attitude surveys.

Focusing on improving the quality of teaching and learning through the development of middle leaders engages the 'engine room' of the school. Middle leaders are closest to the students and have the greatest potential to make a difference for them.

Lawrence Sheriff School

Context

Lawrence Sheriff School in the East Midlands is an 11–18 voluntary-aided boys school of 780 with a sixth form of 300 students. It is also a specialist college for mathematics and computing.

Key levers: opportunities for cross-departmental collaboration, including paired observations

"Those scientists talk a surprising amount of sense."

Middle Leader

Project focus

The school had noticed a significant variation in A and A* GCSE grades between different subject areas. The project sought to address this issue by putting together two or three subject areas in a departmental partnership. Groupings were based either upon faculty links (hence French and German worked together, as did history and geography) or the fact that departments taught similar groups of students (hence English and science were paired). Each group was set the target of reducing the gap in A and A* grades at GCSE to no more than 10 per cent. The philosophy behind the project was that all departments could learn from one another and that from this process a profound set of lessons would emerge that would transcend mere examination results. Hence the key lever for reducing variation was the creation of a mechanism that allowed teams of teachers to work together and to put into action one another's good practice.

Strategies used

- For part of every training day, departments were asked to meet in their partnership groups and to discuss issues of common interest such as teaching styles.

- Paired observations were established within the partnership groups. Hence members of the science department were observed by the English department and vice versa. The school then published a series of good practice guides emerging from these observations.

- Every staff meeting began with a five-minute presentation which highlighted a particular aspect of good practice that had been identified by the partnership process. For example, the history department nominated the method of coursework supervision adopted by the geography department as something that should be shared with the whole staff.

- Within staff meetings, partnership groups focused upon issues that were emerging as potential causes of variance between departments. Discussions over syllabus choice led a number of departments to change their examination strategy. For example, after discussions with the French department, the German department decided to adopt a modular course approach. Other departments, such as science, history and PE, also decided to change their examination syllabus after reviews with partner departments.

The tables below demonstrate the impact of the project upon the four main departmental partnerships.

French and German: percentage A or A* grades at GCSE

Year	French	German	% gap
2003	61	15	46
2004	68	30	38
2005	82	70	12

History and geography: percentage A or A* grades at GCSE

Year	History	Geography	% gap
2003	34	46	12
2004	28	44	16
2005	72	58	-14

PE, design technology (DT) and art: percentage A or A* grades at GCSE

Year	DT	Art	PE
2003	25	58	11
2004	36	57	13
2005	37	56	54

English and science: percentage A or A* grades at GCSE

Year	English	Science	% gap
2003	45	22	23
2004	49	22	27
2005	46	25	21

Year	Science modular results to date (completed June 2006)
2005	55

In all four groups, there has been a reduction in the gap between departments. Just as importantly, this reduction has been achieved whilst the trend of results for partner departments has continued to improve.

"I thought I was too old to learn new tricks, until I saw some of the approaches to revision that the newly qualified teachers were trying out with the kids."

Middle Leader

Jack Hunt School

Context

Jack Hunt School is an 11–18 school in the east of England with 1,450 students. It has Leading Edge status and is also both a Language College and Training School.

Key levers: middle leader training, peer mentoring, self-evaluation, lesson observations, use of data

Project focus

Having noted variations in performance at GCSE, the project sought to explore ways in which certain agreed standardised operating procedures could be used to reduce variations across departments. The project has developed from a focus upon middle leaders to also include a focus upon the work of teams of year group tutors.

Strategies used

- Nine heads of department and some heads of year completed the National College for School Leadership (NCSL) Leading from the Middle programme.

- Those completing the Leading from the Middle programme then established a network of peer mentoring and mutual support.

- All departments were asked to make use of the High Sights self-evaluation tool developed by Liverpool Local Authority. As well as middle leaders, heads of year were also asked to complete the self-evaluation tool and to apply it to their particular year groups.

- A focus upon consistency in the standard of lesson observations across all departments was established. An advanced skills teacher was used to work with departments through paired lesson observation.

- A common database was established. Assessment Manager 6 was used to record, store and share all core student data, allowing all staff to have access to the relevant information.

Jack Hunt School tackled this issue by providing a 'common language' to its middle leaders through the completion of the Leading from the Middle programme. Completion of the course provided a focus upon teaching and learning for its middle managers that then spilled over into a network of peer coaching and support.

Impact

The introduction of the standard operating procedures outlined above does seem to have had a significant effect upon the school's results at GCSE level.

- In 2003, when the school began the project, its five A*–C rate was 52 per cent. By the summer of 2005 this had improved to 59 per cent.

- The school's average point score at GCSE also shows a year-on-year improvement, moving from 37.3 in 2003 to 39.1 in 2005.

- The variation between the option and core subjects has reduced.

- Fischer Family Trust data also points towards a sharply rising trend for GCSE results for English and mathematics.

Houghton Kepier School

Context

Houghton Kepier school is an urban specialist sports college in the north east with approximately 1,400 students.

Key levers: whole-school staff development; action research; subject leaders' shared practice meetings

Impact

Subject leader meetings had an immediate impact. A number of departments spontaneously linked together in order to share ideas and good practice. This process of working together helped some departments to realise that they needed to develop their practice in areas such as use of assessment data, targets and assessment for learning. Evaluations of the staff conference were uniformly positive and the day continues to impact upon whole-school culture.

In terms of hard data, the process has led to a significant improvement in the school's results. The headline 5A*–C figure increased from 43 per cent in 2003, when the project started, to 57 per cent in 2005. Average points score improved from 32.2 in 2003 to 35.2 in 2005.

Participation in the project reduced variation between subjects and also led to some impressive improvements in standards:

- English literature improved to 56 per cent (13 per cent improvement)
- geography 50 per cent (seven per cent improvement)
- ICT 62 per cent (seven per cent improvement)
- science 51 per cent (10 per cent improvement)

Project focus

The project looked at Key Stage 4 performance. The school noted that, even when prior attainment was taken into account, over the past three years there was a difference of approximately one grade between the highest and lowest performing departments. The aim of the project was to reduce the variation in performance between individual staff members in order to improve overall performance.

Strategies used

- Half-termly meetings of subject leaders were held, focusing upon sharing good practice. Each meeting was centred upon a particular aspect of teaching and learning, eg target-setting or strategies for gifted and talented students. Previously, meetings were a vehicle for the relaying of information and the completion of business. Under the new scheme they became an opportunity for the sharing of good practice, with a particular focus upon teaching and learning.

- A whole-staff conference was held, targeting 10 areas for improvement that had been identified by subject leaders. Each member of staff was directed to three workshops during the course of the day. As a follow-up activity, every participant had to undertake an action research project centred upon one of the workshops that they had attended and produce a project report. Copies of these reports were then fed back through departmental meetings. Establishing action research projects following the conference ensured that staff continued to reflect upon the themes it explored.

- Departments worked together on a common approach to analysing and interpreting data.

A celebration of best practice, rather than a focus upon the negative, would appear to be a recipe for genuine school improvement.

Using data to raise standards

In order to tackle the issue of within-school variation, school leaders need to be secure in their judgements about the performance of pupils, teachers, year groups and, in secondary schools, departments as well.

Data should now be regarded by teachers as a tool to raise standards, rather than as a weapon of accountability – the stethoscope and not the gun. However, because every school has its own system for the generation and analysis of data, there are still numerous opportunities for variability, inaccuracy and professional uncertainty.

The schools featured in the following case studies have spent considerable time creating data systems with human faces: not simply more numbers, graphs or charts, but accurate definitions of terminology, transparent ways of describing attainment for all users and receivers, and processes that become part of normal classroom practices rather than one-off grade-gathering events.

At their best, these systems reflect considerable thought by the middle leaders who developed them. Instead of hastily agreed definitions, teachers have considered the link between work done in class, the data submitted and the targets set for pupils, ensuring that these then inform future teaching. At an early stage in the project, David Reynolds argued that: 'the analysis of data should apply to all year groups. What is done with data is as important as what generates it.'[11]

Rather than looking only at performance data once a cohort has moved on, an effective data system should provide an early-warning system, flagging up dips in pupil performance to alert staff to potential problems or the need to tailor provision more effectively. One of the key conclusions of the WSV project is that the data journey, the move towards a culture where the use of data becomes an integral part of the teaching and learning process, is long and complex but, with its rich rewards at every step, is essential for every school.

Equipping staff with the skills to interpret and take action based on data is essential. Useful data has to be available for middle leaders at appropriate times. One project secondary school, King Edward VII in the East Midlands, has developed a systematic instructional tool – Quality Assured Dialogue – which is used to allow triads of teachers to discuss data, pushing their thinking towards informed judgements. External consultants have also worked with these triads, critiquing their analysis of data and their actions.

Training in the use of data takes time: there are no quick fixes, but accurate and understood data provides clarity to conversations between pupils, parents and teachers. High-performing departments or classes can be identified more accurately, enabling a school to: 'find, benchmark against and understand its best.'[12]

West Oaks Special School

Context

West Oaks is a special school with technology college status in the north of England. The school serves pupils with a wide range of severe and complex learning difficulties. Currently, 20 of these pupils are placed with the local high school for the majority of their time. There is separate provision for primary-aged pupils with emotional, social and behavioural difficulties. This provision is located in the inner city of Leeds, some distance away from the severe learning difficulties (SLD) provision.

The school uses a range of measures for pupil progress, mainly national curriculum (where appropriate) and the Qualifications and Curriculum Authority P scales.

Key levers reorganisation of leadership roles; collaborative working on observation, planning and assessing.

Project focus

The school identified inconsistencies in achievement rooted in variation in teacher expertise and experience.

Inconsistency among teacher judgements in assessing pupil progress was also a prime issue.

The aim was to create a shift of emphasis towards learner outcomes in teacher planning and thinking and in so doing to begin to define and exemplify the characteristics of successful teaching of pupils with SLD. The project aimed to produce a moderated portfolio of work – video-and paper-based – to reduce the variation in assessment. The levelled evidence would then be used to create a 'live' teaching and learning policy.

Strategies used

- A director of teaching and learning was appointed to headline the shift in process and culture. This is due to extend to the appointment of faculty managers to widen the focus on quality of teaching.

- Teachers worked collaboratively to plan, teach and observe with a specific focus on learner outcomes. Pupil outcomes were recorded (written or video) and then levelled.

- A moderation process was established, thereby honing the accuracy of judgements and creating staff development opportunities.

- Analysis of video footage by staff enabled the recording of descriptions focused on the fine detail of teaching strategies specific to key groups of pupils, especially those with complex SLDs and profound and multiple learning difficulties.

- Coaching became a key strategy via advanced skills teachers and the director of teaching and learning.

- The process of observation itself became the driver for much professional development and was a key aspect of the coaching.

- Revision of the teaching and learning policy in the light of the project used video footage to create a live section to the policy. This will support future staff development and induction of new staff by giving windows of live footage into the needs, levels and strategies best used.

Impact

Practices

- The review of the individual education plan (IEP) target-setting process has led to improved clarity in setting achievement criteria.

- Moderation is becoming embedded to support assessment practice.

- Every teacher has a pupil progress tracking file with all tracking data for their own pupils, enabling them to take ownership of the information and process.

- A new short-term planning format was developed to focus on planning for the learning outcomes of pupils and linked to the relevant P scale.

Standards in the Every Child Matters context

- There is growing understanding from all teachers that expectations for some pupils can be higher and that teaching quality can make a difference to this.

- In terms of goals achieved, 76 per cent of all IEP targets were met.

- All additional statutory targets based on the Performance Indicators for Value Added Target Setting (PIVATS) scheme (P scales-based scheme developed by Lancashire Local Authority) have been exceeded in maths, English, science and PHSCE for the ends of Key Stage 2, Key Stage 3 and Key Stage 4.

Transfer

- Moderation issues and practices have been shared with other Leeds Specialist Inclusive Learning Centres (SILCs).

- The school works with a phase 2 within-school variation project school in a neighbouring authority.

Teachers working as researchers in their own class or school extend their own development by engaging in the process of finding answers to their own questions. Using the skills and expertise of those within school offers important coaching opportunities as well as raising confidence.

St Vincents RC Primary School

Context

St Vincents is a medium-sized primary school in the north-west with a one and a half form entry.

Key levers: use of data, pupil voice, peer sharing of practice

The data was almost too powerful and meant that hearts and minds had to be won.

Project focus

Variation at St Vincents centred around a dip in performance in Years 3 and 4 compared to the 'sprint finish' taking place in Years 5 and 6. Although the problem might have been to do with the format of SATs tests or the different ways in which children learn in particular year groups, the headteacher decided to develop a scheme which would engage staff into a process of mutual accountability. There were three key levers.

- Value-added progress would become the responsibility of every teacher. The philosophy of the project was to ensure that all staff understood and could use data well.

- The generation of team working as a coherent and systematic process.

- Consistency of approach ensured across the year teams and vertically throughout the key stage.

Strategies used

- A SATs tracker was devised by the headteacher in collaboration with the local authority (LA) link adviser. This clearly showed the dip in performance. The identification of the strengths and weaknesses of individual teachers was both powerful and challenging. Colour coding meant that even when all the data was removed, there was total transparency of results. Individual teachers could see whether their classes were performing well.

- The school needed a common language of learning, which would translate into consistency of practice. To be successful, work had to operate at the classroom level. A proven model of successful teaching was adopted: the Accelerated Learning Cycle (Alistair Smith, 1998, Network Educational Press). Linked to this was the introduction of guidance on supportive learning environments and ideas about how every classroom could be managed. The key to the success of this work was the emphasis on developing levels of understanding amongst teachers.

- A teaching and learning policy was the next stage and developed from the Accelerated Learning Cycle. Again the policy was shared with, and understood and agreed by, staff. It has recently been published in *Personalising Learning: Transforming Education for Every Child* (John West Burnham and Max Coates, 2005, Network Educational Press). An important element of the learning policy is the understanding of classroom observation. A detailed format outlines each level of the Accelerated Learning Cycle, translated into daily practice.

- Consistency of practice has been achieved through team approaches and the fact that the school was one and a half form entry meant that there were parallel classes organised as follows:
  - Years 1 and 2: three teachers
  - Years 3 and 4: three teachers
  - Years 5 and 6: three teachers
- The phase teams, each containing three teachers, provided horizontal continuity. Good practice had previously been locked in individual classrooms. This organisation made for collaborative working.
- Quality Improvement Teams (QITs), made up of the headteacher or another member of the senior leadership team, a curriculum leader, a member from each phase team and, possibly, a designated governor, are used to ensure developments are implemented, monitored and evaluated effectively.
- Collaborative peer coaching and support has been established. This is used to ensure staff development activities lead to long-term improvements in classroom practice.

Impact

- **Practices**
  - There is now a rolling programme of team meetings on a weekly basis, rotating over a three-week period: key stage teachers; phase teams; whole school.
  - There has been a detailed review of the monitoring and evaluation policy, with set formats to provide consistency of observation and evaluation of children's work.

- **Standards**

  End of Key Stage 2 results:

Year	English	Mathematics	Science
2003	87%	92%	95%
2004	93%	93%	93%
2005	84%	89%	97%

As can be seen standards improved in the first year of the project and variation between subjects reduced. Cohort differences contributed to the 2005 figures

- **Transfer**
  - The following elements have been adopted by schools attending conferences at which this material has been presented:
    - SATs tracker
    - teaching and learning policy
    - monitoring and evaluation policy
    - lesson observation format

  The feedback from schools which are using these systems has been highly positive. The networked learning community in which the school has been a participant has also taken on a number of the strategies outlined.

The success of the scheme lies in the vision of responsibility for performance being a shared one and the translation of this philosophy into practical ways of working.
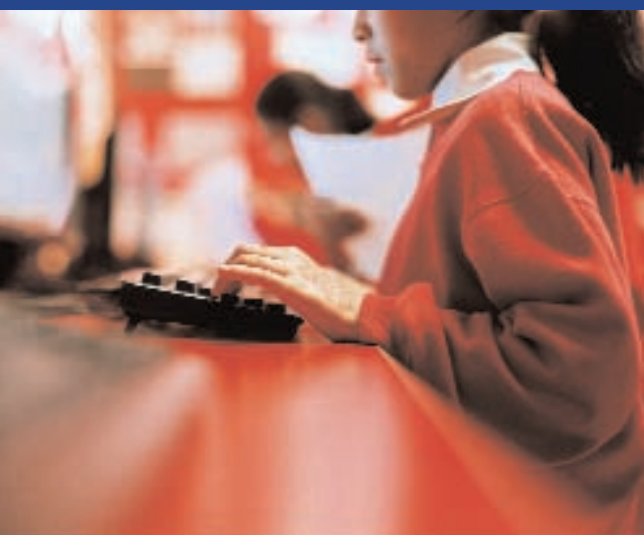
South Dartmoor College

Context

South Dartmoor is an 11–18 sports college in the south west of England with Training School and Leading Edge status.

Key levers: use of data, subject leader monitoring

The work has resulted in a much sharper focus on the role of the subject leader in judging standards.

Project focus

The school noticed a significant variation in A*–C grades between the option subjects and core subjects. This had been long running but was regarded as inevitable in a culture of choice. At the same time, results in 2003 indicated a disturbing degree of inaccuracy in staff predictions. Underperforming students had not been identified and given the necessary support for improvement. Often staff had been overgenerous with grades and there was also confusion over the language that was used. They decided to redesign their assessment and reporting policy, giving staff enough training time to gain ownership of the new system.

Strategies used

- Two separate data days were held where heads of department were taken off timetable. Initially, the process meant sharing the concept of within-school variation. They needed to acknowledge that it existed and that they had identified an area where there was clear variation.

- They deliberately chose collecting, analysing and reporting of data since the issue was seen as separate from that of departmental management.

- As they looked further, there was a natural development into the role of subject leader in monitoring students' attainment.

- They created a safe framework in which people could share their views and reflect on the state of play within their own departments. Each data day began with a variety of exercises that allowed subject leaders to engage with the issue and recognise for themselves the need for a radical policy reorganisation. For example:

  - subject leaders were asked to confirm the meanings of terminology offered: there was not a shared and agreed understanding of any of the terms such as predicted grade and target grade

  - subject-leader discussion sessions where colleagues were asked to speak from the viewpoint of a parent, student, personal tutor or subject tutor: subject leaders were arranged in groups to ensure that core and foundation subjects were able to talk with each other

- Instead of asking: "What system do you want to introduce?" they asked: "What kind of conversation do you want to have with a student as a result of this system?"
- SIMS technology developments administered by the school's data manager underpinned the project and created a more robust single point of entry inputting process, rather than a range of personnel doing this.

Impact

- **Processes**

  - Senior middle leaders are responsible for ensuring that any data gathered or reported tells a story. They have moved from a policy that was characterised by data collection periods, seen as divorced from normal classroom practices, to one that requires subject leaders to ensure a clear link between work carried out in the classroom, the data submitted and the targets set for students as a result, ensuring that these inform future classroom experience.

  - They introduced a key stage indicator, a grade generated centrally, based on external data that indicates what a student should achieve by the end of the key stage.

- **Results**

They have also created new roles for heads of house who will be retitled student performance leaders.

	2003	2005
Reliability of prediction	Predicted five A*- C: 47% Achieved five A* - C: 58%	Predicted five A*–C: 63.6% Achieved five A*–C: 64%
Variation between core and option subject	Core A*–C: 61.2% Options A*–C: 83.4% Variation 22.2 percentage points	Core A*–C: 70.8% Option A*–C: 82%* Variation 11.2 percentage points

* Note the reduction in variation is achieved without a lowering of option performance. Core subjects developed practices from option subjects.

Introduction

In January 2006, Lloyds TSB announced that its call centre staff would no longer be working to a script as their customers found this too rigid and inflexible. Instead, they would have a series of templates to help them personalise conversations. This is a prime example of the issues at the heart of using standard operating procedures (SOPs): aiming for consistency without killing individual flexibility and creativity?

In schools, teachers have always valued their autonomy within the classroom. They have been adept at undermining nationally imposed SOPs where they felt these were unhelpful, such as the original national curriculum ring binders or aspects of the national literacy and numeracy strategies. The early Ofsted models produced filing cabinets full of policies and schemes of work that ended up in skips without having affected actual practice very much at all. These were also a form of half-hearted SOPs that floated like flotsam on the surface whilst school life went on as normal below.

Practice varies because teachers and students vary as individuals, yet we need some level of standard procedure to achieve consistency and avoid unacceptable variation in outcome. The project schools have been exploring these questions.

- What kind of standard operating procedures stimulate rather than stifle creativity?
- How do such SOPs have to be created for this to happen?
- How can the procedures be sustained and renewed?

The project schools have shown how the issues surrounding SOPs can be tackled.

- The procedures need to meet an important and perceived need. This need has to be identified and clarified through extensive exploration and research using pupil voice in all its forms as well as staff and parental opinion.
- Having identified the issues, staff and students must be fully involved in drawing up the procedures in order to give them a sense of ownership.
- The school must commit whatever resources are needed to provide the in-service training necessary for staff to deliver the procedures.
- School leaders have to be committed to sustaining the procedures with ongoing monitoring and evaluation to ensure that SOPs are not just being used but amended and improved for successive cohorts. Involving new groups of staff and students in this process is a way of renewing ownership.

Brighouse High School

Context

Brighouse High School is an urban, 11–18 high school of 1,280 students in the north of England. It has Business and Enterprise Specialist School status for business studies, mathematics and ICT

Key levers: use of data, pupil voice, peer sharing of practice

Project focus

The project developed two distinct areas of focus.

- Phase one (2003 onwards): aiming to develop greater consistency of coursework across departments. The issue arose as the result of vocational options at Key Stage 4 plus variations in coursework performance from different subjects and in different cohorts.

- Phase two (2004 onwards): working with individual departments where teacher predictions for 2005 at Key Stage 4 varied compared to predictions based upon data from the Department for Education and Skills (DfES) autumn package.

Strategies used

- In phase one of the project, a working group from four departmental areas, encompassing a range of subjects, was established to develop a coursework guide for parents, pupils and staff. This outlined common approaches to be used across all departments in relation to issues such as deadlines and strategies for coursework completion. This exemplar booklet was presented to all curriculum leaders so that they could ensure it was used consistently within their departments.

- In phase two of the project, departments were targeted that showed the greatest variation between teacher predictions and DfES data. Each department met with members of the senior management team and were then asked to produce a raising achievement action plan. This plan included, for example, revision approaches to be used and arrangements for pupil mentoring.

- Other pupil-oriented strategies, such as additional revision sessions and a focus upon study skills, were also employed.

Impact

Whole school GCSE results in 2005 showed an impressive improvement:

- When Brighouse began the project in 2003, their five A*–C rate was 57 per cent. In 2005 that rose to 73 per cent.

- Similarly, their average points score rose from 35.9 in 2003 to 38.5 in 2005.

- Fischer Family Trust statistics showed their adjusted percentile rank, allowing for student prior attainment, rising from the top 20 per cent of schools in 2003 to the top five per cent of schools in 2005. Over the same period, Key Stage 3 levels rose in all three core subjects.

An upward movement in examination results for individual departments was also noted. The departments that were targeted as showing the greatest variation between teacher prediction and DfES data all saw an improvement in results reflected in the following increases:

- English seven per cent
- English literature seven per cent
- business studies nine per cent
- business GNVQ 10 per cent
- science five per cent
- drama three per cent

Although it is too soon to evaluate the full impact of the project upon boys' PE, initial results are encouraging, with mock examination results indicating a significant improvement in results in the boys' PE GCSE theory paper.

By involving a wide range of subject areas in the production of their coursework booklet, they ensured that the new arrangements for coursework had credibility and that they were accepted across the school.

Grangefield School

Context

Grangefield is a secondary school in the north east of England with 1,310 pupils on roll. The school is in an urban context and is a specialist technology college.

Key levers: revision of course provision, target setting, data analysis

Project focus

The school noted at one point that the results gained by one of the core subjects at GCSE was below those achieved by other core departments. The school also noticed that coursework marks were low, with large numbers of students handing in projects that were below grade C standard. The department was found to be doing little to analyse its own results and did not monitor the results gained by individual teachers with their own classes. Many science teachers commented that their classes "had done OK". Hence the project involved a very specific focus upon strategies that could be employed to raise the results of one underperforming department.

Strategies used

- Course selection was reviewed. All students previously followed co-ordinated science or three separate sciences. A new strategy was adopted, with the majority of students following a modular science, double award course. However, a small number of students were also identified who would follow a modified single award course. One teacher was given specific responsibility for introducing and monitoring the new course.

- Targets were set for coursework grades, involving a 10 per cent increase in coursework grades each year. A member of staff was given one management point for overseeing coursework and a software package was introduced that enabled everyone in the department to monitor each student's progress. Catch-up sessions were also introduced for students who were struggling.

- Under the new arrangements, data for each group was analysed and fed back to staff. Key Stage 4 results from the previous year were then used to help determine staffing for the next academic year.

- Year 11 students were found to have a lack of focus and motivation. Hence a member of staff was awarded a management point in order to work specifically with the year group in science. Targets were set for improved performance by the year group. As part of this process, a much more systematic process of examination revision was introduced. Students were provided with revision guides and 'Master Blaster' exam revision courses were offered before each module test. Parents were invited to special evening events, which explained the revision process and what the school was hoping to achieve.

Impact

The combined impact of these different initiatives upon results has been most impressive. In 2005, science results improved from 31 per cent in 2003, when the programme was first introduced, to 49 per cent. This progress was reflected in coursework marks in science, which improved from 33 per cent grade C or above in 2003 to 57 per cent in 2005. The school hopes that as modular science becomes more fully integrated into their departmental structures, further improvements will be evident in 2006.

Effectively the school provided the science department with a set of standardised operational procedures taken from the best practice of other departments.

It would seem very strange in the business world if the customer was seen as a recipient of goods or services that the manufacturer or provider thought would suit them best without engaging in any dialogue around needs. Indeed, the demise of any company that failed to take account of market needs would be the subject of a knowing analyst's comment along the lines of: "Well, what did they expect?"

Introduction

For many years in education pupils' needs and preferences have been subordinate to the arguably flawed premise that only 'teacher knows best'. Pupil voice was in many quarters dismissed as superfluous, potentially troublesome or ill-informed. However, the rise of student councils reflected a recognition that pupils/students are powerful partners in their own education. Many schools are seeking to explore its potential through a range of innovative practices and the revised Ofsted framework will raise its status further with its expectations of consultation.

In a number of the project schools, pupil voice has played an integral part in tackling within-school variation. After all, pupils know what does and does not work for them. If a curriculum leaves them cold or teaching does not tempt them to engage, they are uniquely placed to offer comment. The following example from Lawrence Sheriff School, highlights one such approach.

The model employed for reducing variation involved pairing groups of departments and asking them to work together and share good practice. Students were asked to contribute to this by suggesting three things that each departmental pairing could learn from one another. Early fears that students would provide only negative feedback proved to be entirely groundless. Instead they demonstrated a remarkably clear perception of the good practice in teaching and learning that each department could take from one another.

Three things that the history department could learn from geography:

- more practical work
- more computer projects
- more project work (presentations etc)

Three things that the geography department could learn from history:

- more discussions
- more case studies
- greater use of information videos

Three things that the science department could learn from English:

- use of drama and other creative activities
- use of projects based around ICT
- using the interactive whiteboard in a more imaginative way

Three things that the English department could learn from science:

- developing projects based around practical activities
- group investigations
- more opportunities for group discussion

Each department was presented with these findings and asked to discuss them. Observations around the school have shown them to have a significant impact upon practice within the classroom. Early experiments in this area suggest the existence of a significant resource of constructive feedback from students that all of us in education need to do more to tap into.

Each of the following case studies includes a strong element of pupil voice in the way in which within-school variation has been tackled. Case study 12, Manor Fields Primary School and Birchwood High School, is an emerging study in terms of its impact but demonstrates how within-school variation can be extended across phases and schools.

Case study 11:

Pownall Green Primary School

Context

Pownall Green Primary School has 443 pupils and is located in the north west of England.

Key levers: use of qualitative and quantitative data, pupil voice, standard operating procedures and professional development

Project focus

The project addresses within-school variation by developing a more consistent whole-school approach to raising effort and motivation, as part of a drive to raise standards. The school has identified effort and motivation as areas influenced by teacher effects. The focus has been on how such effects can be based on the most effective practice so that this becomes more widespread.

The way forward was through pupil voice, listening to what they had to say about themselves, their attitudes and their academic progress.

Strategies used

- Inset for staff focused on identifying indicators of underachievement, possible reasons and a list of possibly underachieving children identified by teachers – the teacher-identified group (TIG).

- Questionnaires to children to identify academic self-concept and whether the children themselves felt they were underachieving – self-identified group (SIG).

- Analysis of TIG and SIG data to see where there might be similarities and patterns.

- The school's learning and teaching policy was reviewed and some common practices introduced, including:

  - a practical resource bank

  - learning logs for all children in which they can reflect upon their own learning

  - wider provision for differing learning styles and abilities, including gifted and talented pupils

  - opportunities for pupil voice to be heard, eg focus group discussions around areas such as their attitude towards their learning, ways they like to learn and the school's provision

- In-service training days were held to address staff needs arising from this new programme, including learning styles, brain gym, identification of gifted and talented pupils, and teacher assessment and moderation.

Context

There have been increases in the percentages of Level 4+ and Level 5+ in mathematics (2004-05) and an increase in Level 5+ in reading, writing and science (2005), with pupils in the SIG making particularly good progress. When the initial questionnaires that focused on academic self-concept, effort and motivation were repeated, scores relating to effort and motivation showed significant increases. The number of pupils identified as underachieving, either by themselves or their teachers, was markedly reduced.

'Teachers are highly self-critical, constantly looking for ways to make lessons better and to learn from each other. They are very receptive to pupils' ideas and insights into what makes the best lessons.' (Ofsted, 2005)

Manor Fields Primary School and Birchwood High School

Context

Manor Fields Primary School is a 3–11 primary school in the east of England. It has a low percentage of children entitled to free school meals and a low percentage with English as an additional language.

Birchwood High School is an 11–18 Sports and Technology College located near to Manor Fields Primary School. It has a similar socio-economic context.

Key levers: use of data, peer observation, pupil voice

Project focus

The project focuses on addressing the dip in pupils' performance from when they leave Key Stage 2 to the start of Key Stage 3. The strategies employed build on the existing partnership between the two schools. The project informs across school variation and is intended to feed within-school variation.

Strategies used

- The schools have developed collaborative approaches to gaining an increased understanding of each other's practices and what these have meant to pupils. They have achieved this through the following.

  - A selected cross section of pupils from Year 6 is tracked through towards the end of Key Stage 3. The pupils discuss their perceptions of their progress both socially and academically in the three core subjects, alongside core subject leaders in a particular subject from the primary and secondary school. Outside this meeting the subject leaders also use data, including Fischer Family Trust data, to track how the pupil has progressed and match this against their perceptions of progress. This approach informs the respective subject leaders as to what has worked well and not so well so that adaptations to practice can be planned for.

  - Peer observations are employed. Secondary staff have observed primary teachers in the core areas and this has been reciprocated with primary staff observing secondary teachers. This informs consideration of the teaching and learning strategies and styles employed and the curriculum coverage.

Impact

Although, it is too early to offer evidence related to standards of achievement, the following have outcomes have emerged:

- Recognition of the potential of children and young people has altered and is expected to produce a step change in standards, curriculum provision and teaching and learning strategies.
- Partnership working between the two schools has increased the standardisation of policies within each.
- The social dimension of pupil tracking has informed pastoral support developments that might help with issues such as attendance.

Transfer potential

The transfer potential of the work is considerable. Many schools work to limit the effect of KS2 to KS3 transfer to provide a more seemless experience for pupils. The specific activities adopted in this case study might be easily adopted by other schools wishing to do the same.

The way in which pupil voice has been used to develop a dialogue around their experience across the two key stages is an innovative approach. The secondary school has, in particular, realised the extent to which it can learn from primary practice.

Kingsbridge Community College

Context

Kingsbridge is a rural mixed 11–18 comprehensive school in the south west of England. It has 1,200 students on roll, including students in Years 12 and 13, and is a specialist science college.

Project focus

The school had noted considerable variation in boys' and girls' achievements at AS and A2 level studies. The project sought to identify the various factors which were affecting boys' attitudes and approaches to their studies and introduce strategies which could be applied across subject and tutoring areas.

A core principle behind the project, which was led by the head and deputy head of sixth form, was that students should be central to both the uncovering of these factors and to addressing any issues that emerged.

Key levers: student voice, use of data, standard operating procedures

Impact

Teachers send a form to the Head of Sixth Form referring any student who is underperforming or not meeting expectations. In the six months since the start of the project, there were five referrals compared with 50 for the same period the previous year. Furthermore, the disproportionately high level of boys within this figure of 50 was not reflected in the five referrals.

Strategies used

- A staff working party was formed, which, in the light of relatively little literature on boys' underperformance at Key Stage 5, decided that a thorough investigation of first-hand evidence of what was going on was essential.

- Students and staff were both surveyed about factors which helped and hindered in lessons and in preparing coursework. These surveys were followed up with separate focus groups of boys, girls and parents. Facilitated discussions followed these focus groups.

- Focused lesson observations were developed and undertaken. The aspects observed included dimensions taken from the survey and focus group work, eg explicit use of objectives and expectations, practical, real-life context of work, oracy preceding literacy, competition and challenge etc.

- One of the key findings of this early work was that the personal tutoring and target-setting system, in which the school took some pride, was exposed as being very variable in practice and of dubious value. Critically, targets were exposed as being too high level and generic to be of practical use to students who were struggling to come to terms with independent learning. This finding led to two important developments: the development of an entirely new set of targets and procedures for setting them, together with professional development for staff.

- The targets, created through joint work between students and staff, were far more specific and detailed than previously. For example, the target headed 'Organise files' had over a dozen steps or tips for students to follow if needed. Thus targets moved from being generic and aspirational to becoming a set of standard operating procedures (SOPs) which could guide and support the work of, in particular, boys who had found that the open-ended nature of sixth form had left them without the necessary scaffolds.

- The school has continued to promote the new SOPs; track the implementation, particularly in respect of the staff tutoring which sits alongside the SOPs; is evaluating the impact and is considering extending approaches into Key Stage 4 and below.

Hatfield Primary School

Context

Hatfield Primary is a 380 pupil urban school located in the north of England.

Key levers: student voice, use of data, standard operating procedures

Project focus

The project focused on reducing the level of exclusions and improving consistency in the application of behavioural systems. These were seen as major barriers to pupils' achievement and consequently the standards achieved by individual pupils and the school.

Strategies used

- An Oasis Group was established on nurture group principles for the school's most vulnerable pupils and/or those identified as at risk of exclusion. A self-esteem audit enabled the school to benchmark pupils' levels of self-esteem prior to their commencement of work in this group with eight pupils comprising each group. An inclusion co-ordinator worked with these pupils.

- A new behavioural policy was introduced which aimed to reduce the variation in potential interpretation by staff.

- A structured support and seclusion system was introduced.

- In the second year, pupils who were not accessing the curriculum for a variety of reasons were targeted or inclusion within the Oasis Group. Coping strategies were taught and alternative curriculum offer developed.

Impact

- In 2003/4 the school had the highest number of exclusions in the city. In 2004/5 this had reduced to zero with twelve internal seclusions.

- All pupils improved their self-esteem scores using the audit over a seven month period

- Improved curriculum access for pupils and evidence of using taught coping strategies for when learning difficulties encountered

- All IEP targets met

- 100 per cent of parents attended all reviews and achieved home targets

- Two parents attended courses to enable them to help manage their children's behaviour

Lessons for leaders

The strongest lesson for the headteachers involved in the project was that tackling within-school variation (WSV) was a leadership issue. It was the headteachers who prioritised it as an issue to address as they were in a position to:

- take the overview and see where variation lay within their schools
- invest personal attention in deciding upon steps required in narrowing the gap

These steps required resolve as, although from a positive base, they did also relate to tackling underperformance. However, involvement of senior leaders and middle leaders led to a distributed approach in making measures work. The key drivers used by schools in addition to the use of middle leaders themselves, which we have seen has been a crucial element in many cases, were:

- raising awareness and responsibility
- using data
- learning from peers
- reviewing curricular provision
- developing consistency, using standard operating procedures
- continuing professional development
- developing pastoral links
- developing pupil voice
- school-to-school networking

The importance of each of these will be summarised in the following sub-sections.

Raising awareness and responsibility

A key strategy throughout has been to raise teacher awareness of the issues. Whichever approach has been adopted by the school's leadership to achieve this, the purpose has been to:

- develop a sense of individual and collective responsibility towards, and accountability for, pupil achievement
- increase awareness of effective practice and how this can be transferred within the school to better serve learner needs

Whilst this does challenge the status quo and requires some teachers and middle leaders to ask questions of their existing practice, the underlying premise is that it is not about blame, as in a deficit model, but:

- spreading the most effective practice that already exists within the school
- developing consistency in this best practice to increase pupil achievement
- providing professional dialogue around practice that supports change

A major strategy in the project schools has been giving the data to the staff so that they can better understand and take charge of it, and that they self-audit, benchmark and self-evaluate progress.

Using data

School leaders have sought to make the most of the available pupil data to help teaching staff to focus on where their pupils are and where they might be. This means:

- developing a culture where pupil performance data is perceived as a tool to inform strategy
- providing middle leaders and teaching staff with the tools, eg assessment packages such as PAT or Assessment Manager 6, and the training, so that they are able to evaluate, track and target pupil performance effectively

Although strategies have varied, the result in successful projects has been the same: making departments, year groups or teachers aware that there is an issue to confront. It does seem that an investigative approach that makes data accessible and allows, for example, departments to discover for themselves that the performance of others is relatively strong and that they can learn from them, is particularly powerful. In response, they are then much more likely to be proactive and motivated in seeking to resolve the problem.

Learning from peers

Projects which involve partnership and peer coaching appear to be particularly effective. It is often tempting to dismiss external inputs from providers on the basis that they do not know the school or that they are remote from experience 'at the chalk face'. However, the same cannot be stated about one's peers. Projects that have brought teachers, year groups or departments together to learn from one another appear to have experienced significant improvement. This has worked particularly well when, for example, departments have not been labelled as 'weak' or 'strong'. Promoting a culture where everyone learns from one another seems to be a particularly powerful way in which within-school variation can be reduced. St Vincents, Lawrence Sheriff, Thomas Sumpter and Houghton Kepier all use aspects of peer coaching as drivers for their projects. Evidence from these schools suggests that:

- An environment needs to be created within which peers feel able to discuss and openly share ideas. One finding emerging from the projects is that departments within secondary schools are often balkanised, surprisingly isolated and unaware of what is going on elsewhere within the school. Simple initiatives such as pairing departments for discussion groups during staff meetings can have a positive impact upon departmental and whole school culture.

- Peer lesson observations can make a huge contribution to this atmosphere of greater openness between class teachers in primary schools or departments in secondary schools. An observation by someone from another teaching department, for example, is more likely to focus upon generic teaching and learning skills, rather than issues relating to subject content. This places teaching and learning at the centre of staff debate. Staff at Lawrence Sheriff reported that observing a teacher from another department had been amongst the most rewarding professional development that they had ever experienced. The case study for Thomas Sumpter also demonstrates the power of such an approach.

Reviewing curricular provision

It is wrong to assume that, in secondary schools, all examination specifications are equally appropriate to students in every school. Changes of specification, particularly those centred on modular courses, have produced significant improvements in examination results in several of the project schools. In some schools, these changes have been linked to the sharing of good practice between departments, with those who have used modular courses discussing positive experiences with those who have not. The case study for Grangefield demonstrates the power of reviewing course selection in this way.

Developing consistency, using standard operating procedures

Class teachers and year groups in primary schools and departments in secondary schools can benefit from being offered a standard set of operating procedures – effectively a checklist of good practice that is likely to have been common in the most effective settings within the school for some time. In primary examples, this has included:

- using a common approach to teaching and learning clearly stated in the school's policy statement and supported by creating consistency in learning environments

- team-based approaches that promote shared application and learning

- consistency of behavioural approaches

In secondary and special schools, examples of this have included:

- reviewing coursework processes

- analysing results gained by individual teachers

- ensuring that effective revision strategies are in place

- ensuring assessment of pupil outcomes is based on shared and understood criteria

Continuing professional development

Continuing professional development in its broadest sense is integral to reducing within-school variation. Houghton Kepier's one-day conference for staff on issues relating to within-school variation appears to have had a profound impact upon whole school culture, especially as this was followed up with the use of action research projects to support staff investigation into related issues. This again reminds us that if staff can investigate the problem for themselves, they are more likely to discuss a set of solutions that can be sustainably embedded within the culture of the school.

In-house development was also seen in St Vincents Primary's application of the accelerated learning cycle, adopted across the school to provide a shared language of learning, and at Pownall Green Primary where a range of professional development opportunities were offered, focused upon improving pupil learning.

The use of peers within the school however, has been the most extensively used approach to spreading excellence across an organisation. Project schools have, between them, exemplified how developing peer observation, peer mentoring and peer coaching opportunities has contributed to the consistency of effective practice. These, of course, hold professional benefits for both parties, developing individuals' skills and attributes that increase school capacity.

Developing pastoral links

Several schools have investigated the role that pastoral leaders can play in reducing within-school variation. The case studies from Jack Hunt and Walton demonstrate the benefits of involving pastoral leaders in the overall project. Hatfield Primary School also demonstrates that pastoral issues such as behaviour have a part to play in reducing within-school variation.

Developing pupil voice

A number of the project schools have sought to use pupil voice actively in reducing within-school variation. With a national emphasis in developing more personalised approaches to learning, this would appear timely and necessary. In seeking, as the project schools intend, to narrow the gap between the experience and subsequent outcomes of pupils within a school, engaging the pupils in informing this would again appear a useful strategy.

Pupil voice has been used in the following ways within the project schools:

- focus group discussions relating to attitudes to learning (Pownall Green Primary)

- pupil interviews in relation to their progress from Year 6 to Year 9 (Manor Fields Primary and Birchwood High School)

- student attitude surveys (Pownall Green Primary, Thomas Sumpter School, Kingsbridge Community College)

- student lesson observations (Thorns Community College, phase 2)

- student focus group – what can a specific department learn from another? (Lawrence Sheriff School)

School-to-school networking

Although the focus of the project has been upon looking inwards, the projects have also demonstrated the way in which groups of schools can work together and support one another through the sharing of ideas that have worked. Jack Hunt School and Walton Community School have shared ideas on recording and communicating data, also drawing on the experience of Kingsbridge Community College and South Dartmoor Community College. Hence it may well be existing networks or federations of schools can support one another in the common aim of resolving variation within their schools.

Despite the commonality of approaches outlined above, it does have to be emphasised once again that there is no one approach that will work in all schools, regardless of circumstances. All of the case studies have been successful precisely because they have taken account of local circumstances and specific features of school culture. Without this sensitivity to school culture, WSV projects are likely to struggle. Hence it is possible to offer a tool kit of measures that can be considered, but not a magic wand. Thought and careful consideration of the issues facing individual schools are required before within-school variation can successfully be tackled.

"It all began with an uneasy feeling. Why should our science department achieve lower results at GCSE than our English department?...Perhaps it was time to take within-school variation out of my mental in-tray."
Headteacher

"It all began with an uneasy feeling. Why should our science department achieve lower results at GCSE than our English department? Granted, the two subjects were very different, but the departments taught the same groups of students and so surely should be achieving similar outcomes. I had read a short piece in the Times Educational Supplement which asked a range of educational thinkers to identify the most significant issues facing the government. David Reynolds had argued that we needed to shift our focus from the variations between schools, and instead look at the variations that existed within schools. As with many of the things that I read, I filed it under 'must do something about this one day' and proceeded to ignore the issue.

The catalyst for action was reading that the National College was looking for schools willing to explore the problem of within-school variation. The information prompted me to look more closely at our latest set of GCSE results. German results were well below those for French, geography was outperforming history, PE lagged behind art and technology. Perhaps it was time to take within-school variation out of my mental in-tray."
Headteacher

These sentiments will echo those of most leaders from the schools involved in this project. To make a start requires a commitment to taking variation in performance, whether between departments, subjects or class groups, out of the mental in-tray and seeking to understand why it exists and considering what can be done about it.

Drawing on the case studies

The reasons why the case study schools sought to address within-school variation have been highlighted in the previous sections. The strategies they employed are wide-ranging but nevertheless focus on similar themes, eg use of data and finding ways of sharing staff expertise.

Reading these case studies is intended to enable readers to consider how such approaches might inform those strategies they might themselves develop. The next stage is to establish where your own school's variation exists and how you might seek to address it. A good starting point for this is using the audit tools that each school within the project also used as a springboard.

Using the audit tools

The proforma overleaf is deliberately simple. It allows the reader to consider the questions below in the context of their own school.

- What might be the variation in your own school, and how do you know?

- Drawing on the reading from this guide, what might be the key lever or levers that will help you make a start in addressing this variation? The following questions might serve as useful starting points before completing the proforma.

  - Do middle leaders take charge of the data available to them to inform:

    - targeting of pupil progress and performance

    - curricular provision?

  - Are middle leaders currently equipped with the skills, tools and systems with which they can use this data effectively?

  - Is the use of data by middle leaders stronger in some year groups or departments than in others, and if so, how might consistency be developed?

  - Are there systems in place, eg coaching or peer observation, that allow teaching staff to learn from the most effective practice within their year group or department and across year groups or departments? How effective are these?

  - Are effective approaches to curriculum design and delivery consistently applied across the school?

  - Are the most effective teaching and learning approaches found within the school commonly and consistently applied?

  - Are the most effective systems for pupils, including behavioural support, consistently applied across year groups and departments?

  - Do professional development opportunities allow consistent approaches to be developed that are based on the most effective practice?

- Do pupils contribute in a structured way to evaluation that centres on the:

  - identification and meeting of their needs

  - identification of the effective practice within the school?

It is evident that such questions relate to the school's existing self-evaluation processes and should therefore be followed up with these subsidiary questions.

- How do you know?

- What could you do to improve consistency across the school to reduce variation?

The key is to be able to identify where a practice is working most effectively and seek ways to share and transfer it throughout.

School action plan

Focus	Actions – next steps
What is the issue and how do you know?	**Actions**
	Who involved
Which levers(s), based on your reading of the publication, do you consider will help address this issue?	**Anticipated outcomes and measures**
	Timescales

What will you need to support the developments and make sure they are manageable and measurable?

Further examples of audit tools used by individual schools, along with further case study materials can be found on the dedicated WSV web pages at **www.ncsl.org.uk/research/leadership_network**

Conclusion

The Department for Education and Skills Five Year Strategy for Children and Learners (DfES, 2004)[13] sets out an ambitious agenda for reform. The lessons learnt from the Within School Variation Project have the potential to play a significant role in contributing to this agenda through improving outcomes for children and young people. Its importance as a project for both practice and policy lies in the following facts.

- Its practice is already making, or has the clear potential to make, a difference to narrowing the gap between pupils' achievements and, through drawing on the best practice within school, raising the bar for others. A recent Ofsted inspection report for one of the featured schools states that the project: 'enables departments to find ways of raising achievement by sharing good practice'. The report also suggested that the reciprocal lesson observation had ensured that: 'there has been an increase in the proportion of teaching which was at least good, and the proportion which was very good or excellent. This was attributed in part to 'the close partnership working between pairs of departments in the inner [sic] school variation project.'(Ofsted, 2005).[14]

- It highlights how the schools, through engaging in action-oriented research of this nature, are taking a proactive approach to school self-evaluation, reviewing what they do well and using this to inform what they can do better.

- It clearly links both with the five outcomes described in *Every Child Matters* (DfES, 2003)[6] in enabling more pupils to achieve and, in the case studies that we have seen, has evident links also to each of the DfES's five components of personalised learning.

- It raises questions and learning that will potentially hold significant resonance for those secondary schools with weaker English or maths departments, or both, anticipating the revised arrangements for the publication of GCSE data relating to five or more A* to C grades, as it promotes the sharing of effective departmental practice.

As Steve Munby, NCSL Chief Executive, recently commented: "The only way we can reduce the large gap between those who achieve highly and those who do not is by ensuring outstanding teaching and learning in every school."

Working to reduce within-school variation has enabled project school leaders to focus on ensuring that it is outstanding not only in every school, but in every class.

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Further reading

The Within School Variation web pages contain additional case study materials alongside some of the audit tools used in, and products produced for use by, the project schools. These can be accessed at www.ncsl.org.uk/research/leadership_network

Measuring within-school variation

As part of the project, development work has focused upon whether it is possible to provide a within-school variation measure.

In order to measure within-school variation (WSV), one first has to decide the most appropriate measure for the aspect under scrutiny. If variation is being measured between the performance of, for example, pupils eligible for free school meals compared with those who are not, then the target data needs to reflect that. Similarly, if the reduction of pupil exclusion rates is being targeted then this also needs to be brought into the equation when measuring performance.

In terms of measuring academic performance data, the basic principle is to determine the difference between the average progress made by pupils in the most successful subject or group compared with that made in the least successful subject or group within a school. In primary schools, this will likely be restricted to the core subjects of English, maths and science, and might extend to comparisons between average progress made by pupils taught in different classes, or groups.

The term successful in this instance is used to describe how well pupils achieve compared with how well they would be expected to achieve: the value-added within a subject. A subject within which pupils progress well compared with realistic expectations of their achievement, would constitute a successful subject, whilst in contrast, a subject within which able pupils progress poorly compared with realistic expectations would constitute a less successful subject.

It is perfectly feasible for a school to improve over time, in terms of its academic results, with the difference between the success rates of subjects remaining static or the gap between them widening. The purpose of a within-school variation measure is to provide an indicator of these differences. A school that is judged to be performing well but that has a large within-school variation could improve its performance further by improving its less successful subjects: narrowing the gap.

Key Stage 2 and Key Stage 3 details

At Key Stage 2 (KS2) and Key Stage 2 KS3, national test results are only available for the core subjects English, mathematics and science. Fischer Family Trust (FFT) provides estimates of fine-grade levels for each of these subjects (including reading and writing at KS2) based on prior attainment, pupil age, sex and a number of contextual factors. This is the FFT school-extended model. It also provides fine-grade levels based on actual individual test scores. In this analysis, individual progress has been measured as the difference between the actual fine-grade and the school-extended fine-grade expectation.

- A pupil making expected progress would have a value-added score of zero.
- A pupil making better than expected progress would have a positive value-added score.
- A pupil making less than expected progress would have a negative value-added score.

The average value-added score for a subject within a school is the average of these pupils' value-added scores for the subject. A successful subject would have a positive value-added score.

KS4 details

The situation at KS4 is somewhat more complex since many subjects are studied. National Consortium for Examination Results (NCER) provides value-added data for the progress from average KS3 points score to GCSE grade in many subjects. These are single, national lines taking no account of sex, pupil age or any contextual factors. However, prior attainment is by far the most important single indicator of likely future performance and NCER value-added data has formed the basis of the KS4 analysis.

The actual attainment of a pupil in a subject is the grade achieved converted into a points score using the Section 96 points score definitions. The expectation in a subject has been taken as the median score nationally for pupils starting with the same KS3 points score as provided by NCER. The individual pupil value-added score in a subject is the difference between the actual and expected attainment. The school value-added score for a subject is the average of the individual pupil scores in that subject.

There are two significant issues associated with this approach. Firstly, NCER does not provide value-added data for all subjects at KS4. In many cases, a sensible equivalent can be substituted. For example, performance studies can be substituted for drama. However, it is often not possible to make a substitution. For example, which subject national data should be substituted for Russian? Secondly, the cohort size for subjects at KS4 within a school varies enormously. It is possible that the value-added score for small cohorts could be heavily influenced by one or two pupils. Subjects matching either of these criteria within a school should be discounted when determining the WSV measure.

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