

Reducing in-school variation

Making effective practice standard practice



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1. Introduction

- 1.1 Schools have made many successful improvements in recent years, resulting in increased effectiveness and higher levels of achievement. This guide provides an approach. That encourages schools to 'learn from within', to ask questions about how and why practice differs within the school and explore ways of identifying and spreading the best possible practice.
- 1.2 A key aim of learning from within is to reduce the level of internal, or in-school, variation (ISV) across areas of organisation, teaching and learning that have a direct impact on student achievement. Reducing ISV is not an end in itself and shouldn't result in inflexible uniform practice regardless of a school's culture, traditions and existing improvement plans. Rather, it is intended to ensure that practices the school has identified as effective for improving learning and raising student achievement are adopted as widely as possible across all subjects. In short, to help ensure that effective practice becomes everyday practice for all.
- 1.3 Some schools have made considerable advances in this area, comparing and analysing differing levels of achievement across subjects and establishing links between baseline measures, such as key stage 2 and cognitive ability test (CAT) scores, and public examination results. Findings have been used to demonstrate good practice and raise expectations of both teachers and students. In many cases, this work has resulted in a change in the school's culture and the benefits of sharing good ideas and effective ways of teaching are clear. In others, a change of attitude towards working collaboratively may be required before effective learning from within can begin.
- 1.4 Learning from the exploration of ISV helps schools integrate improvement initiatives. For example, positive developments made in one subject area, that might otherwise remain discrete, can be disseminated and benefit the whole school. If staff are aware of ISV, it encourages them to share their most effective approaches to teaching and learning and consider using practices that have worked well elsewhere in school. This means the exploration of ISV and learning from within can potentially foster an environment where analysis, innovation and sharing result in higher levels of professional satisfaction and student achievement. ISV in the context of the wider school improvement picture is discussed in [section six](#).
- 1.5 This guide has been jointly produced by the Training and Development Agency for Schools (TDA) and the National College for School Leadership (NCSL)^a as part of the national drive to raise levels of achievement. The guide is intended for head teachers and senior leadership team in the first instance, but we recommend that all staff have access to it. This will ensure the nature of ISV is widely understood and provide a sound basis for school-wide collaboration. Staff with middle leadership responsibilities will find that the guide has particular relevance to them. Overall the guide provides:

^a The key purpose of the TDA is to raise children's standards of achievement and promote their well-being by improving the training and development of the whole school workforce. The NCSL works to make a difference to children's lives through excellent school leadership, supporting current and future school leaders so that they can have a positive impact within and beyond their schools.

- Direction for thinking and planning on ISV
 - Practical advice on identifying, analysing and reducing ISV
 - A framework for sharing and embedding effective practice across the school
 - A foundation for the continuing professional development (CPD) of individual teachers
- 1.6 Sections [three](#) to [five](#) form the core of the guide and offer advice and practical techniques on addressing and tackling ISV. The tables in [appendix III](#) are working tools designed to facilitate investigation into ISV and support the planning, initiation, implementation and evaluation of an ISV programme.
- 1.7 In time, action to reduce ISV should be an everyday process for any school. The 'How it works' examples presented throughout the guide are intended to give an insight into how some schools have already approached ISV reduction and achieved positive outcomes. They demonstrate the value of having manageable stages and clear cut goals within a well-defined overall strategy for tackling ISV.
- 1.8 The guide is principally aimed at secondary schools and has a subject/department-based orientation. A companion guide for primary schools is scheduled to follow.

2. Background

- 2.1 The UK education system has one of the highest levels of variation in student outcomes within the Organisation for Economic Cooperation and Development (OECD). Results from the Programme for International Student Assessment (published in 2002) showed that as much as 80 per cent of the variation in achievement among UK students lay within schools – four times more than that which occurred between different schools.
- 2.2 The high level of variation within UK schools has a number of causes. In secondary schools one of the causes of in-school variation (ISV) is differences in practices across subject departments. Recent research and development projects have demonstrated that tackling this ‘between department’ component of ISV offers an important driver for improvement¹.
- 2.3 In 2003, the Department for Children, Schools and Families (DCSF) (then the Department for Education and Skills) worked in partnership with the NCSL to support a project exploring how the reduction of ‘within school’ variation might form an important element of a school’s improvement strategy. The project was largely practitioner-led in the form of research by schools for schools. Schools participated in two phases from 2003 to 2007 with encouraging results.² There was sound evidence of a reduction in variation between subjects, and of a value-added improvement in students’ results at key stages 3 and 4. Crucially, the secondary schools that reduced the extent of variation lifted their overall results. Extensive evaluation of both phases of the project was undertaken³ with the aim of establishing the most effective means of reducing ISV and increasing overall performance.
- 2.4 The work carried out with schools between 2003 and 2007 provided the foundation for further school-based developmental work by the TDA and the NCSL – working with 20 secondary schools in 2009. This work was supported by PricewaterhouseCoopers and the University of Manchester who also evaluated the trial and an initial version of this guide. This version of the guide has been produced largely in the light of the findings from that trial.

3. Planning and working to reduce in-school variation

- 3.1 Taking a fresh approach to school improvement, in the context of ISV, requires a good strategy to ensure anticipated outcomes are realised. To date, schemes that have focused on a limited number of goals have been most successful in their initial impact and – the literature suggests – stand a better chance of being sustainable in the longer term. Similarly, programmes with clear and reportable progress indicators are more likely to sustain their momentum. The head teacher and senior leadership team will need to play a central role in the leadership of ISV work (see [section five](#)).
- 3.2 All schools have the potential to address ISV at some level, taking into account individual circumstances, school culture, and experience of trying new approaches. It's important for schools to ensure they have sufficient capacity to introduce and maintain a successful ISV reduction strategy. A strategy which attempts to address the issue on all fronts simultaneously will be difficult to manage and sustain. Initially, most staff members will need to gain a common understanding of the nature of ISV, where it most commonly occurs and how it is identified. [Appendix I](#) provides some guidance on securing a common understanding of the concept of ISV and signposts areas where action may be needed.
- 3.3 The diagram in [appendix I](#) provides a general framework for identifying and tackling ISV and parts of it could be expanded to create a working strategy document. Early work, reinforced by the TDA/NCSL trial, indicated that there are five key areas where steps taken to reduce variation are likely to be most effective. They are:
- The collection and use of data
 - The role and effectiveness of middle leadership
 - The quality of teaching and learning
 - Listening and responding to student voice
 - Standardising procedures
- 3.4 [Section four](#) of this guide explores how variation in these areas can be addressed. The trial schools that successfully addressed ISV began by investing significant time in building a clear picture of its nature and scale, and formulating specific strategies to reduce it.

How it works: making a successful start to reducing ISV

A school that successfully develops an ISV reduction strategy invests significant time in identifying and understanding its ISV pattern and deciding priorities for action. This allows the school to build a clear vision of its goals before going on to identify specific activities that will help achieve those goals. Attention may focus on a small range of strategies so that action can be taken sooner rather than later. Staff engagement is secured early on, probably through a project launch, and most of the activity involves staff working collaboratively to identify and implement strategies that strengthen teaching and learning. These can include observing each other in the classroom, and sharing skills and experience through collaborative CPD. The focus should not be so narrow that individual staff feel threatened or singled out.

Students are recognised as learning partners and their contribution to improving teaching and learning is valued and actively sought. To achieve quick wins, the school considers how to standardise procedures that are associated with ISV; changes here can have an immediate and powerful effect.

3.5 Planning at the start

- Conduct a data audit (see appendix II) to identify and prioritise a strategy for reducing ISV
- Decide on a limited number of focused ISV-related goals and stick to them
- Be consistent with the school's priorities, presenting ISV work as an opportunity to move things forward in new ways
- Be clear on the school's capacity to manage ISV work and scale it accordingly
- Build in sufficient planning and monitoring time for key members of staff
- Ensure all staff realise that reducing ISV is a new approach and that they properly understand what is involved

How it works: spreading effective teaching practice – a clear goal

A large, specialist secondary school in an inner city location has recently achieved excellent student attainment results in its specialism. The senior leadership team decides to run an ISV programme to identify effective teaching practices associated with the specialism and spread them more widely.

To identify the scope and focus of the project, the deputy head (who has responsibility for assessment) is asked to analyse attainment data at key stage 4. Student outcomes in the specialism are compared with results for the same students in other subjects. Two other departments are identified with patterns of significantly lower student attainment and they agree to participate in the project, which is launched at a whole staff meeting. It is agreed that the programme will focus on identifying and sharing effective classroom practice and have the clear goal of increasing student attainment in all three subjects.

The programme results in large numbers of staff becoming involved across the three departments, including a significant number of newly qualified teachers (NQTs). The assistant head with responsibility for NQT induction suggests that peer-to-peer observation of classroom practice should begin with the NQTs observing more experienced staff – as this is already an accepted form of CPD in the school. A team comprised of one member of staff from each department develops a lesson observation pro forma, focusing on the identification of particularly effective classroom techniques.

As confidence grows in the value of the observation programme, teachers begin inviting more experienced colleagues into their classrooms and the programme gains momentum. At the same time, a member of staff working towards a masters qualification volunteers to coordinate a student questionnaire on effective teaching techniques as part of her course. She feeds back the results at a staff workshop. In discussion groups staff are encouraged to analyse and interpret the feedback in relation to their own practice.

As the first round of the observation programme draws to a close, each department is given a half day to summarise the key findings from the peer and student feedback and draw up a good practice checklist for the staff team to follow in planning and delivering lessons. The team volunteers for a further round of observations and student questionnaires to identify and confirm the impact of the changes in practice. The team also volunteers to present its findings at a whole-school development day.

3.6 Finding good people

- To maximise the chances of success, use aspirant, well respected and able staff to implement and lead ISV work from the beginning
- Ensure the implementation of activities linked to reducing ISV is supportive and non-threatening, to protect and motivate individuals

How it works: meeting the planning and management challenge

A successful ISV programme is assertively sponsored by the head teacher who is symbolically and directly associated with introducing the concept and the programme to staff. Senior staff have no doubt that the programme deserves priority and is important to the school's development and progress.

The programme has diligent day-to-day management, provided by a member of the senior leadership team and actively supported by the head teacher. The day-to-day manager provides momentum, keeping participants to deadlines and commitments, securing attention to detail and using relevant data to focus on agreed activities and goals.

3.7 Bringing everyone on board

- Aim for 'quick wins' that demonstrate the power of the initiative, eg standardise procedures within the school that bring rapid and obvious changes
- Engage colleagues with enthusiasm and sensitivity when dealing with issues relating to differences in performance
- Ensure that those managing the project know how and when to bring different groups of staff on board
- Use the national and international significance of ISV to build support, and build staff self-esteem by encouraging them to make presentations at conferences etc
- Use high quality 'off-site' celebratory and training events to ensure staff can focus away from the routine and demands of their schools
- Ensure that staff understand how they will personally benefit from the process of learning from others, i.e. ensure staff members are clear about 'what's in it for them'
- Use symbols of change to build momentum, eg rename departments as 'attainment teams'
- Consider how students might be brought on-side to contribute to the process – what can you learn from them?

How it works: school culture

School culture is important in determining the nature of what can be achieved by an ISV-reduction programme. A high degree of collaboration and openness that draws people together and enables the ready sharing of best practice across the school will most effectively secure benefits. Schools are likely to gain the most from designing ISV programmes that reflect the extent of trusting relationships and collaboration within their existing culture. Where trust is at lower levels and collaboration is not well-developed, smaller steps will be required during the initial stages.

3.8 Evaluating and reviewing progress

- Collect relevant and accurate data from the beginning to show how working to reduce ISV is having positive effects
- Ensure the data are relevant to measuring the achievement of goals
- Ensure ISV reduction is a significant focus in your school development plan
- Use the data to build a coalition of support for ISV work
- Recognise that your goals will take time; ISV reduction may be ‘a slow burn but big bonfire’
- Follow the cycle of: ‘identify – analyse – plan – act – evaluate – review’ for all ISV-related activities

3.9 Making things last

- Learn from your own best people in the short term, and use other schools and networks to bring in new ideas
- Use high quality CPD to ensure that effective practice in some parts of your school is spread and becomes regular practice everywhere

How it works: linking with continuing professional development

An Ofsted inspection of a rural secondary school with a large and diverse student population identified significant variation in teacher performance. A small group of teachers were delivering outstanding lessons, in stark contrast with a majority delivering satisfactory (or in a small number of cases, unsatisfactory) lessons.

The head teacher and senior leadership team takes the opportunity provided by the introduction of a new management information system to analyse attainment and value-added data by both subject and student cohort, with the aim of identifying the range and nature of variation. The head shares the results at a departmental leaders’ conference, engaging them in reviewing the data themselves then seeking their support and ideas for tackling the challenge.

The outcome of this session is two-fold. Firstly, a plan is prepared to challenge and support two teachers from each department (as part of the annual performance management process) and pair them in a mentoring relationship with high performing colleagues in other departments as part of their professional development programme. This builds on a cross-departmental observation programme that ran in preparation for Ofsted.

Secondly, the deputy head is asked to coordinate an internal peer-to-peer CPD programme on aspects of teaching and learning and student engagement. This draws on the skills and experience of the school’s four advanced skills teachers (ASTs) and on highly experienced colleagues from the federation primary schools. As the value of the programme becomes evident, volunteers from the wider staff group begin leading sessions.

4. Taking action on in-school variation

4.1 As discussed, there are five key areas where action taken to reduce ISV is likely to be most effective:

- The collection and use of data
- The role and effectiveness of middle leadership
- The quality of teaching and learning
- Listening and responding to student voice
- Standardising procedures

This list is not intended to cover all the areas where significant levels of ISV may be found, simply to provide some initial signposts. There are several 'Making it work in your school' sub-sections later in this guide that pose questions designed to give direction, generate ideas and maintain focus.

The collection and use of data

4.2 Evidence suggests that effective school improvement projects make good use of data. Data collection and analysis at departmental and individual student level are key tools for identifying where ISV occurs and prioritising the areas where a reduction in ISV is most significant. The 20-school trial demonstrated the value of sound data and tracking systems in identifying areas of variation. Using data in the context of reducing ISV helps schools focus their work and gives purpose. The trial schools found that developing the use of data as a tool was one of the easiest areas in which to make progress. The Ofsted publication 'Using Data, Improving Schools'⁴ gives guidance on work in this area.

Quantitative data

4.3 Variation between the results of different departments is, at one level, easy to measure – by looking at exam performance. In the case of English, maths and science, where virtually all students are assessed, any differences are most likely to reflect the teaching and organisation that students receive. For other subjects, value-added data that 'controls out' differences between subjects in the characteristics of the students studying them are essential if true comparisons are to be made.

4.4 Data processing services such as 4Matrix Developments^b and RAISEonline^c provide some straightforward ways of identifying the variation that exists within schools. The charts and commentary presented in [appendix II](#) show raw data on the performance of each department from Lawrence Sheriff School, Rugby (one of the trial schools). Other sources of numerical data such as cognitive ability test scores and internal test results can be used to provide additional ways in which variation can be explored. [Appendix II](#) also includes some questions on how quantitative data might be interrogated.

^b www.4matrix.org

^c www.RAISEonline.org

Qualitative data

4.5 Numerical/statistical data are not the only sources of information that may be used to identify ISV. Student feedback data, attendance and behaviour measures, assessment for learning (AfL) outcomes and wider well-being indicators can all play roles in gauging the success of the ISV-reduction process. Qualitative information has an important part to play and can come from recorded observations of lessons, an analysis of schemes of work, differences in approach to individualised learning, the use of formative assessment, the use of resources etc. It will also help to develop criteria for measuring how effective ISV work has been in creating changes in working practices, attitudes and professional standards across the school as a whole.

Using data

4.6 Data are a valuable tool for teachers and provides an information foundation for a wide variety of other work – lesson observation, team teaching, coaching, cross departmental working, work sampling, and student voice material. All teachers need to understand and feel competent in the use of data; the knowledge it creates helps them to be more effective and define their teaching objectives more precisely. Using data to think rationally about the school is crucial and schools may need expert support to ensure all staff become competent in this area.

4.7 Long term benefits are realised when staff are keen to make their performance data openly available to all colleagues. Arranging for feeder schools to see, and use, this data is also useful, as is collecting and using data from new sources such as parent surveys and student voice. All activities aimed at reducing ISV rest on a foundation of generating and using data at departmental, class and individual student level.

4.8 Staff must be clear about the purposes that data can serve. The aim is for all staff to:

- Have a common understanding of the language of data and what data ‘means’ and ‘is’
- Be comfortable with using and sharing data as a part of their normal responsibilities
- Set realistic and achievable expectations for student attainment, based on high quality data
- Analyse patterns and trends for different groups of students throughout the school year
- Have high quality data at student, subject and whole school level to facilitate comparisons

How it works: staff understanding of data

Schools that have improved their use of statistical information have coached staff in analysing and interpreting student data and have achieved improved consistency across departments in terms of raising understanding and giving feedback to students. Staff collaboration in analysing data has been given a new impetus and confidence has increased, especially where efforts have been made to make it visual.

4.9 Data analysis has two essential functions:

- The initial identification of ISV and the measurement of its extent
- The subsequent monitoring of the success of measures taken to reduce ISV

Analyses of data should focus on:

- Identifying variation on a departmental/individual teacher level, based on value added scores (this generates 'the best' to benchmark against)
- Comparing the performance – value added – of students in different subjects
- Comparing the expectations and predictions of student performance for those of similar levels of ability in different subjects as an ongoing process
- Thoroughly analysing key stage 3, 4 and 5 performance early in each academic year
- Using data to identify and track underachieving students, with departments being required to intervene with all underachieving students
- Analysing the year group as a unit of analysis as well as the department

4.10 **Making it work in your school**

- What will you need to do to ensure all staff have a basic knowledge of data analysis and statistical measures? [Many of the problems that school staff have with data revolve around the use of technical terms and concepts such as 'significance' or 'residuals'.]
- What outcome measures for academic achievement and student attitudes are appropriate for your school? [The more outcome measures a school has, the greater the chance of a department or individual doing well on something; however, be aware of the resource implications of data collection.]
- What balance between quantitative and qualitative data do you think is appropriate for your school? [Collecting and using quantitative and qualitative data are both useful. Quantifiable data can help schools clearly convey messages to the Government and parents. Qualitative data can be vital to staff for understanding their school.]
- How can you encourage teachers to see data as a professional tool, a way of improving their teaching, rather than a threat? [Examples drawn from simple and familiar situations, eg making it routine to work out and plot the mean scores of homework marks, offer a secure start to this work.]

How it works: examples of best practice in data usage

- Data generated centrally by the school that provides regular evidence of each student's performance, progress and potential
- Staff training and regular focused discussion at all levels about the significance of data and what it reveals, including an understanding of terminology
- Use by subject leaders of performance comparisons such as coursework against examination results by class, or other subjects, to reveal inconsistencies between teachers at an early stage
- Subject leaders and teachers using school-generated data to raise the expectations of individuals in their classes
- Support and monitoring of individuals at risk of under-performance through the use of regular structured interviews or tutorials
- Pastoral systems that have freed up experts (through workforce reforms) to act as performance monitors and student motivators
- Students who can explain, with confidence, what their current and anticipated subject levels mean and how they will reach potential grades
- Teachers with sufficient levels of expertise to enable them to predict student outcomes accurately so school leaders have no surprises when year end results are published
- Regular access to attainment data for parents, using secure access learning gateways with password protection; the information should be live and immediate with parents as familiar with the material as they would be with going online to look at their bank statements
- Systematic and regular training in data access as a feature of parental consultations; parents are key partners and motivators and we should aim to take the school into the home electronically, maximising parents' understanding and use of information; raising levels of pupil engagement and enjoyment should also be considered in this

Middle leadership

4.11 This area is pivotal to success in reducing ISV. Schools in the TDA/NCSL trial found it necessary to ensure that middle leaders had student and teacher performance as their main focus and that they could maintain momentum in driving ISV work forward. In addition to being competent users of data, middle leaders need skills in:

- Self evaluation – to be aware of ISV in their own department and to measure progress against others
- Collaborating with other departments, to learn from one another
- Devising robust and well-targeted strategies for improving results
- Recognising and disseminating effective practice
- Identifying CPD needs among staff

4.12 Middle leaders should be given opportunities to reflect on data about student performance in their subject with senior staff, other subject leaders and colleagues in their departments. Reduction in variation requires the recognition and understanding of any under-performance as well as awareness of the characteristics of best practice in their school. Meetings between senior and middle leaders should focus on data analysis and the strategies to be used to share or improve practice.

- 4.13 Middle leader involvement in the performance management of teachers in their departments allows them to focus on classroom practice and grade lessons. Training in observation techniques and the development of an understanding of what constitutes both 'good' and 'outstanding' practice are essential in fostering consistency. Training could take the form of double observations, perhaps with an external trainer to ensure that all leaders are secure in their judgements.
- 4.14 All teachers need the ability to recognise the features of good and outstanding lessons and to differentiate reliably between them. Middle leaders can establish coaching pairs or triads in their subject, allowing time for colleagues to plan a lesson together and take turns in delivering and observing the session. Coaching teachers in the techniques necessary to move from good to outstanding can be highly rewarding and empowering for staff.
- 4.15 Feedback of individual teacher grades – awarded during performance management observations – to the central system enables subject leaders to make evidence-based judgements about their departments for the school self evaluation form (SEF) and provide school leaders with evidence of standards in their school, checking for consistency across subjects.
- 4.16 Senior and middle leaders should encourage all departmental colleagues to observe within, and across, departments. Agreed videoing of lessons of the same students being taught by different teachers can be immensely powerful. Alternatively, a teacher might be encouraged to watch another colleague working with the same class. Observation at this level should be developmental rather than judgemental. It is important that observations focus on students' learning and the progress they make.
- 4.17 Transferring knowledge of effective practices at departmental level within school is a decisive step in reducing ISV. The transfer of knowledge across different subject areas can then be supplemented by subject enrichment, perhaps through the exchange of information and experience by middle leaders with their counterparts in other schools. Arranging for subjects/departments to work together is a crucial early move.

How it works: middle leadership

Middle leaders reflect on their departmental data and identify priorities for development. They draw on the experience and practice of successful departments and work together to develop approaches to tackling inter-departmental variations. They may establish a teaching and learning forum where teachers explore specific areas and establish a system of peer observation with the aim of identifying and replicating best practice across the school. These steps will have involved significant investment in lesson observations and whole school training sessions, with dissemination strategies planned for the future. The work to support the reduction of ISV builds on the expertise, understanding and, perhaps most importantly, the collaborative culture within the school. Middle leaders are a conduit for increased collaboration between departments.

4.18 **Making it work in your school**

- How will you approach the pairing and sharing of departments in your school and which approach would work best for you? [There have been a variety of strategies for pairing departments, some on performance criteria and some on relationships.]
- How could you start with something simple for middle leaders? [What might this be in your school and what would more complex activities consist of?]
- Which departments in your school are best placed to start with an enhanced ISV-related role for middle leaders? [What do your quantitative and qualitative data have to offer in guiding your decision?]
- How many departments do you think you could link? [Some schools have linked three departments, others two. What rationale would you use?]
- What could be the role of the departments that are not at the extreme of ISV performance in your school? [Again you might refer to what your quantitative and qualitative data have to suggest in this regard.]
- What part might be played by ASTs in coaching staff to raise their lessons from 'satisfactory' to 'good' and increasing the understanding and use of assessment for learning strategies? [What is the scope for introducing leadership coaching?]

Teaching and learning

4.19 The personalisation of teaching and learning offers a rich means of improving school and student performance. ISV work is similarly located close to the classroom because of its focus on students and teachers, especially middle leaders. In practice, reducing ISV through changes in teaching and learning will require effective mechanisms and channels for action, such as:

- Relating departmental discussions to teaching/curriculum related issues
- Developing a common language and setting to describe 'teaching' to support peer observation and collaboration
- Promoting 'core' teaching behaviours across departments
- Using students to feed back their views on teaching
- Using 'lead' departments that are renowned for their expertise
- Ending 'academic' and 'pastoral' distinctions, by reorganising into a unified, holistic, achievement orientated structure
- Employing observation systems to permit high quality peer-to-peer professional development
- Encouraging innovation to enable effective practice to flower, perhaps by using visits between schools

How it works: coaching to improve teaching and learning

As part of an ongoing whole school development programme designed to improve the quality of teaching and learning, the school is developing coaching among its staff. The approach is based on the Centre for the Use of Research and Evidence in Education (CUREE) model of mentoring, co-coaching and specialist coaching. The aim is to develop a learning community of reflective teachers, whose collective practice underpins the raising standards agenda.

A successful pilot of four co-coaching partnerships initially focused on aspects of cross-curricular pedagogic practice. In the next phase, specialist coaching was introduced to complement the co-coaching. Specialist coaching has involved school-based staff and external consultants working, by invitation, as specialists alongside teachers. The specialist coach offers an area of expertise in response to CPD needs identified by the teacher (the professional learner). At the same time, 10 more teachers embarked on co-coaching, this time focusing on AfL.

4.20 The overall aim of ensuring consistency of standards in teaching and learning will require:

- Running systems which monitor and record the quality of observations across departments and the whole school
- Ensuring all staff who observe lessons as part of performance management are trained and secure in their judgements
- Making the qualities that typify good and outstanding lessons explicit to all staff
- Offering coaching to teachers in strategies for developing good and outstanding lessons
- Providing opportunities for systematic, regular 'learning observations' in which teachers watch sections of lessons by invitation and negotiation, formally reporting back to the school leadership on what they have learned (these peer observations are non-judgemental, the observer is the learner not the assessor); material compiled from these observations is shared widely within the spirit of the school's learning culture
- Reflecting on teachers' performance, as evidenced in observations by middle leaders or line managers, a feature of CPD discussions and the training annex within the performance management cycle
- Setting up teaching and learning forums and online bulletins to give staff a conduit for sharing practice

4.21 Making it work in your school

- How will you approach the need for changes to teaching and learning? [Is it best to start ISV work by looking at variations within the student group (eg by gender) to build competence to move on to departmental variation, or is it best' just to go for it?]
- Are some of the techniques or instruments used in your existing school improvement work useful building blocks for ISV exploration? [If so, which are they and what are the characteristics that lend them to ISV work?]

- To what extent, if at all, will a focus on teaching and learning require you to develop observation systems that relate to professional learning needs? [What forms might observation take and how will the outcomes be communicated and acted upon?]
- What steps are needed to encourage peer observation work? [Is there any provision for staff to try out new ideas, share experiences and discuss issues? Would the creation of a teaching and learning forum be beneficial?]
- To what extent might cross-curricular themes such as literacy and numeracy be used as inter-departmental vehicles for improving teaching and learning?
- How will you avoid a narrow focus on individual teacher performance? [Managing sensitivities is challenging; maintaining a focus on data rather than 'finger-pointing' may be the solution.]

Listening and responding to student voice

4.22 Listening to the views of students and acting on their ideas is an area that evolved as the first ISV project developed. Students are sometimes better than teachers at making comparisons across departments because it is something they do informally every day. In one trial school, groups of students were asked to list things that different departments could learn from one another. Students suggested that, for example, English could learn from science by making greater use of practical work. Science, on the other hand, could learn from English by making greater use of speaking and listening activities.

4.23 Innovative ways of engaging students are worth developing. Student voice promises much:

- Some students will be motivated better if they feel they are being heard
- Students are discerning about teachers and teaching and learning activities because they experience a broad range of them in relatively short periods of time and, consequently, are well-placed to make back-to-back comparisons and judgements

How it works: developing student voice

There is now established practice which demonstrates how to train students in understanding classroom processes and then reporting on their findings. One school uses members of the Student Learning Council, once suitably trained, to provide subject reports which are commissioned by middle leaders on a voluntary basis. The reports are designed to raise awareness of students' perspectives on what learning 'looks like' and their perceptions of the learning environment. The reports focus only on learning and can be kept confidential to the department, though one purpose is to provide evidence for the SEF.

4.24 Making it work in your school

- Are there some staff members or departments who would respond better to student voice than hard data?
- What are the obstacles in asking students for their views? How can they be overcome?
- What are the most effective systems for capturing student views of teaching and learning in particular subjects?
- Could groups of students be given training in observation and evaluation, to enable them to make supportive comments that help subjects improve?
- Could case studies of effective student evaluations be developed as examples for all staff?
- What early steps could you take to initiate the involvement of students in school improvement activities?

How it works: listening to student voice

To monitor the effectiveness of new standardised procedures intended to secure strong teaching, a community college has developed a sophisticated system of student observation. An agreed model of observation has been developed with staff, using the following headings:

- Start of lesson
- Observations about the way in which students are learning
- Observations about the way in which the teacher is organising the learning
- The end of the lesson
- In what ways does the lesson differ from those you were taught in key stage 3?

Three key stage 4 students have been trained as observers and have visited 10 lessons in all, some in performing arts and some in either science or mathematics. Whilst students carry out their own observations, a teacher is also in the room carrying out an independent observation to provide a 'base line'. Students are encouraged to record what they see rather than to make judgements.

The college has drawn up a list of student comments to date. These observations show clear evidence of the impact of standardising procedures. Performing arts lessons are perceived by students as significantly improved, and significantly changed, from their earlier experience in key stage 3.

Standardising procedures

4.25 Using standardised procedures is a way of driving out variation within a department or a school. Their use also helps to embed ISV work as part of everyday school running. Examples include:

- Common use and application of a standardised data system which is essential to the identification and support of individual students; the same terminology needs to be used by all staff so it is familiar to, and understood by, both students and parents
- Sharing and enforcing, as policy, effective practice in core school procedures
- Standardised procedures for lessons which, while allowing opportunities for creativity and variety, ensure a systematic approach that includes objectives, assessment of learning opportunities and a rigorous focus on student learning, engagement and the measurement of individual progress
- All staff knowing and understanding the criteria by which lessons are judged
- Standardised approaches, which should be discussed and agreed across departments, to the collection of student views for SEF reports.

4.26 Making it work in your school

- What steps are needed to ensure that the benefits of standardised procedures do not stifle creativity? [Have the purposes and benefits of these procedures been made clear and when were they last evaluated and reviewed?]
- Is there one agreed ISV measure that your school could make use of as a standard operating procedure? [For example is the relative performance indicator measure good enough?]
- Are there any departments, perhaps small ones, which would benefit from the consistency provided by standard operating procedures in your school? [What are reasons for non-conformity and are they valid or not?]

How it works: developing a standardised procedure

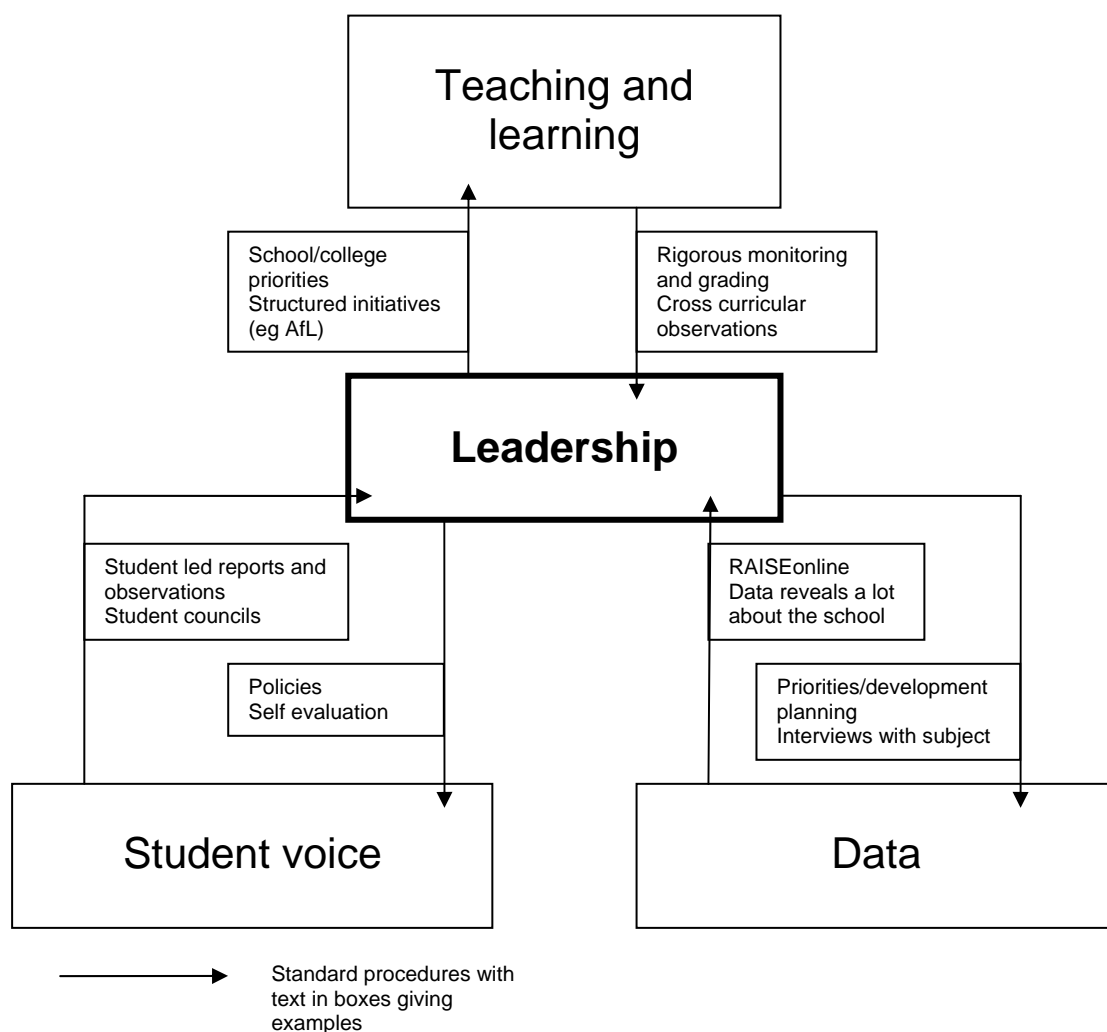
The school brought middle leaders together to produce a lesson observation form to be used as an agreed 'bottom line' expectation for all teaching across the school.

		MUST INCLUDE		COULD INCLUDE	
THROUGHOUT THE LESSON	<ul style="list-style-type: none"> • Good classroom & behaviour management in line with behaviour policy. • Use of praise and reward. • Pace and challenge • Minimum of 1 opportunity to use each of VAK learning styles at least once every 3 lessons. • Homework <u>set</u> - relevant to learning objective at most relevant part of the lesson. <u>Taken in</u> at most relevant point. • Assessment For Learning (AFL) to be used at appropriate points to check learning. Types can include, self, peer, spoken, written, Q&A, observation. 	PRE-LESSON	<ul style="list-style-type: none"> • Clear lesson objectives • Knowledge of pupil prior attainment & preferred learning styles. • Follow scheme of work • Thorough planning of activities, assessment opportunities & homework 		<ul style="list-style-type: none"> • Resources • Brief TA on lesson role • Literacy, numeracy, + ICTAC opportunities
		STARTER	<ul style="list-style-type: none"> • Quiet, orderly entrance to lesson with clear expectations - students greeted at the door. • Starter activity for immediate engagement in learning, relevant to learning objectives. • Learning objectives - shared, explained (including context) displayed throughout the lesson. 		<ul style="list-style-type: none"> • Differentiated learning outcomes. • VAK opportunities • Register taken whilst student engaged.
		MAIN COURSE/ DEVELOPMENT	<ul style="list-style-type: none"> • Learning activities/tasks relevant to Learning Objectives • Differentiation & knowledge of prior attainment • Student active engagement in learning/ guided learning. • Variety of Activity types within lesson and from lesson to lesson. 		<ul style="list-style-type: none"> • Modelling • Thinking skills • Variety of whole group, paired, small group + independent work. • VAK opportunities • Mid-Session plenary
		PLENARY	<ul style="list-style-type: none"> • Summarise /solidify learning. • Check progress against learning objectives (AFL) • Orderly dismissal from lesson. 		<ul style="list-style-type: none"> • VAK opportunities • Next steps • Return to context of lesson

5. Leading the way on in-school variation

5.1 Work on reducing ISV is primarily a school leadership responsibility. Heads and leadership teams are in a position to draw on the views and experiences of all concerned and challenge prevailing assumptions, values and beliefs. They also have the capacity to initiate and sustain change so the most effective practice becomes regular practice for all. Change can only happen through effective leadership, defining, highlighting and prioritising how a school can learn and improve from investigations into variation. The diagram below illustrates the central role of leadership by putting it at the centre to demonstrate its influence on teaching and learning, data and student voice.

The connecting arrows outline examples of the structural processes that give rise to change. For example, annual interviews with middle and subject leaders form part of the leadership development process; these are informed by identified priorities and performance data. This process of discussing data, making honest comparisons between subjects and holding middle leaders to account will help drive changes in standards.



- 5.2 Within all schools there are significant areas of expertise and it's the leader's role to develop systems that allow regular and natural sharing and transfer. CPD based on best practice will help ensure that teachers learn from each other, that the school is a learning organisation and that the focus on improvement is positive.

How it works: using the 'learning hub' model

One school uses the model of 'learning hubs'. Leaders invite all staff to analyse personal areas for development which are then grouped by theme. Staff are asked to consider personal expertise and then provide 90 minute learning conversations, structured, chaired and evaluated, for colleagues. Staff have a personalised choice of sessions into which they opt. Group sizes are small. The hub approach creates on-going knowledge transfer as well as promoting team dialogue and teacher research and reflection.

- 5.3 Key leadership actions that are likely to be necessary will include:

- Encouraging staff to learn from each other as the route to solving problems, rather than relying principally on external advice
- Making the extent of ISV clear and having a target figure for its reduction
- Creating a supportive environment in which self analysis, evaluation and reflective practice can take place and are regarded as constructive activities
- Ensuring senior leaders support middle leaders with the interpretation of data and analysis of trends
- Stressing the importance of aspiring to good or outstanding grades for teaching and learning, with clear criteria and training opportunities to ensure realisation
- Encouraging acceptance of student evaluations by middle leaders, based on agreed student training, to develop practice and inform improvement plans
- Mainstreaming the reduction of ISV across all areas of school life as an 'agenda item' for all meetings (leadership team, faculty/departments, governors, parents, students) and making it a cultural/organisational concern everywhere
- Clearly linking the reduction of ISV with CPD policy and practice; ISV work has the potential to be a powerful vehicle for promoting outcome-focused CPD

How it works: maximising involvement

A school that is successful in tackling ISV is clear about its aims and the benefits it is seeking and will share them with all staff, perhaps as part of a school improvement conference or strategic planning event. Subsequently, the member of staff responsible for driving and ensuring involvement in the ISV programme will provide short updates to all staff through regular briefings. Departments or groups of staff directly involved with the targeted ISV activity are identified and, together, are introduced to the purpose and nature of the exercise, including the baseline data underpinning their selection. They will participate in shaping the ongoing work.

Student engagement is secured through existing channels such as teaching and learning forums or student focus groups. Where these channels don't exist, consideration is given to establishing a route through which students may provide input into the development of teaching and learning practice. Others who will be affected by the continuing work (for example, those whose lessons or timetable may be disrupted, the parents of students participating in involvement training, and those whose specific support is required, such as administrative staff) are informed at the outset and at key points in the process. The language and messages associated with ISV reduction are clear and consistent throughout.

5.4 Making it work in your school

- Is there an awareness of the ISV issue in the school, and can it be talked about at middle leader level?
- To what extent do the five areas of ISV discussed in this guide appear relevant to your school, and what order of priority would you assign to them? [Are there any other areas which you sense should be investigated before deciding on how best to proceed?]
- Do you have a clear data system in place which is well led and understood, and which enables middle leaders to support their colleagues?
- In what ways do the pastoral leaders contribute to the standards agenda, and how might their work be developed to play a positive role in ISV reduction?
- How will the ISV concept be conveyed to staff and their understanding of it brought to a common level? [Will there be sufficient opportunities for training, discussion and policy creation to reduce ISV in your school? Is the school's commitment to CPD sufficiently robust to underpin a programme of ISV reduction?]
- How will you ensure there is a systematic approach to the sharing of professional learning which will empower staff to spread knowledge and practice?
- What external input may help your ISV work, eg input from higher education, consultants, or another source?

6. In-school variation and the wider school improvement picture

- 6.1 Learning from within with a view to reducing ISV is not a 'bolt on' activity. It can help schools link with, and deliver, a range of school improvement initiatives that are currently part of national and local education policies.
- 6.2 Of key importance is the School Self-Evaluation Form (SEF) where there are sections dealing with 'within school variation' and the actions being taken to reduce it. Work on ISV can be used directly in this instance.
- 6.3 For Ofsted inspections the mechanisms for reviewing, learning from and promoting best practice are very relevant to the assessment of a school's capacity to conduct self-review. For national challenge schools, the advice and guidance offered in this guide is directly relevant to the material on generating stronger school management systems.
- 6.4 A number of educational developments are now important in current policy terms and any action taken on ISV is likely to be relevant to these. For example, personalisation of education is leading to the creation of more individually-tailored curriculum packages. These define support and outcomes much more specifically than the more generalised model of the past. This means schools will be much more varied within themselves, and need data systems that can detect variation across an increasing number of aspects of school functioning. ISV work opens the door to this area.
- 6.5 In future, the use of multiple locations or organisations where learning will take place (eg schools, colleges, private providers, third sector organisations and informal learning situations) will mean the student learning experience is more varied, particularly if little or nothing is done to make different pathways consistent and coherent. The approach to exploring and reducing ISV across policies and practices outlined in this guide can be used to learn from variation, not just within one organisation but also across the student learning experience as a whole.
- 6.6 The broader range of outcomes arising from the Every Child Matters (ECM) agenda takes everyone in the education system into new areas. This means new goals, a more affective/social emphasis than the historical one of academic achievement, and the need for fresh organisational processes to help achieve these goals. In the absence, as yet, of clear guidance about how to achieve these outcomes, the ISV approach provides an effective mechanism to help schools identify the best 'tools' and practices to use.
- 6.7 Many other national policy areas relate to the ISV work outlined in this guide. The development of middle leaders is being emphasised – ISV is a way of doing that. Improving school capacity to be 'information rich' is another – ISV has data analysis and interpretation at its heart. The concept of transforming teaching through improved CPD opportunities is accepted across the sector – ISV provides a framework within which professional development can be undertaken with clear purpose and direction.

7. Further support

7.1 The NSCL has published the following reports on ISV:

- Narrowing the Gap (reducing within school variation in pupil outcomes) – NCSL 2006
- ‘Schools Learning From Their Best’ (the within school variation project) Professor David Reynolds – NCSL 2007

They can be accessed via the NSCL website at: www.ncsl.org.uk/publications

7.2 Relevant press articles on ISV include:

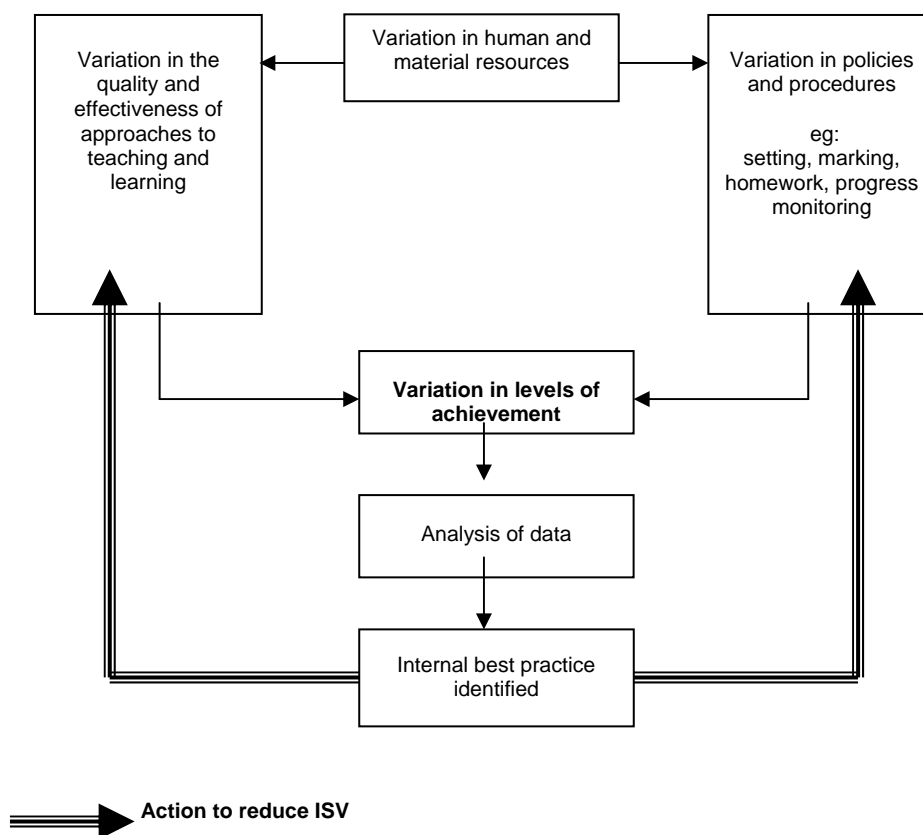
- ‘Answers that Lie Within’: David Reynolds, Peter Kent and Ray Tarleton, TES 27 June 2008
- ‘A Varied Approach’: Ray Tarleton and Dr Peter Kent, SecEd 19 June 2008 – available on the SecEd website at: www.sec-ed.co.uk/cgi-bin/go.pl/article/article.html?uid=35931;type_uid=2
- ‘Why it’s Good to be Grilled by Year 8’: TESconnect website article on student voice, available at: <http://www.tes.co.uk/article.aspx?storycode=2106108>

7.3 The TDA and the NCSL have produced some tools and resources that can help support ISV projects:

- The TDA’s CPD zone offers a range of resources to support schools in making CPD more effective; find out more on the TDA website at: www.tda.gov.uk/cpd
- The TDA impact evaluation toolkit may help schools evaluate CPD activities related to the ISV project. The toolkit is available via the TDA website at: http://www.tda.gov.uk/teachers/continuingprofessionaldevelopment/cpdleadership/evaluate_impact.aspx
- The NCSL leadership for personalising learning framework provides an overview and summary of our current understanding of the issues and implications for leadership of the movement towards personalising learning. It places in-school variation into the wider context of personalising learning and ECM to ensure that ISV does not become a narrow strategy for raising results, but rather that it encourages learning that is relevant, exciting and possible for all. Read more about the framework on the NCSL website: <http://www.ncsl.org.uk/personalisinglearning-index/personalisinglearning-why/personalisinglearning-why-framework-howto.htm>

Appendix I: conveying the concept

- (i) This guide is based on the idea that an effective way of raising levels of achievement in schools is to analyse the variation in performance that exists between subjects and then use the findings as a basis for improving standards in the less successful areas. The concept of ISV is therefore different from the more familiar practice of comparing one school with another and then using the differences between them to develop a generic programme of support and enhancement. The key focus of the TDA/NCSL trial was for schools to progress by "...learning from their own best people and practices".
- (ii) While the existence of ISV is now more generally acknowledged – eg, through the publication of achievement data and the opening up of classrooms to observers – its scale is not widely recognised and organised approaches to tackling it are in their infancy. Identifying and tackling ISV will engage many, if not all, staff, creating the need for a clear and common understanding of what is involved. While it is self-evident that variations of one sort or another are bound to occur, it is highly unlikely that everyone will fully perceive their extent, and impact on levels of achievement.
- (iii) The diagram below can be used to help achieve a common basic understanding among staff of where significant ISV is likely to occur and how it can be identified and tackled.



A structural framework for reducing ISV

- (iv) Although the diagram includes material resources, the prime focus of ISV work is on the naturally occurring variation between people – staff and students – and between units such as departments and faculties. Students and staff are clearly the key human resource with variations to be found in ability among students, and differences in experience and professional development needs among staff. Where variation among students and staff is understood at an early point in the ISV-reduction process, prompt steps can be taken to limit its potential for creating greater variation later on. For example, knowledge of variation in the students' social class, gender, ethnicity, ability and special educational needs provides much of the basis for effectively meeting their different learning needs. However, variation will not occur in these areas alone, as the following example suggests.

How it works: variation in student attitude

In one trial school, an attitudinal survey of key stage 3 students revealed variation between boys and girls in their commitment to learning in terms of both class work and homework. In response to this finding, the school's ISV programme focused, in part, on attitudes of boys within the key stage 2–3 transition and how best to prepare them for this move.

- (v) The rest of the diagram emphasises the influence of teaching and learning and of policies and procedures on levels of achievement. It is within these areas that most ISV work has been focused and where levers designed to reduce ISV are most likely to yield the best results. It is through the analysis of differences in achievement, and the identification of the causes, that best practice is first distilled and then disseminated to raise the quality of the educational process as a whole.

Appendix II: using data to identify and measure in-school variation

Variation in performance

In the following table, particularly strong performance is highlighted in green and helps identify the high performing departments within the school. For example, the performance of design and technology is highlighted in green at A/A* and A*–C because statistical tests show it to be significantly above the national average for the subject. Hence one area of focus might be to ask those departments with a performance that is statistically above the national average to work with those departments where performance is either in line with or below the national average.

Table 3.1.25: Attainment, Summary of full GCSE results for all pupils - 2008

This section summarises the attainment of students at the end of Key Stage 4 across a range of GCSE subject groups. The list of subjects has been updated for 2008 to best reflect the range of GCSEs being taken. Significance tests compare school data against the corresponding national data. Where Sig+ or Sig- is shown, the difference between the school value and the national value is statistically significant, with a 95% confidence interval.

Subject		Number of entries	Entry as a percentage of cohort	% A*-A	% A*-C	% A*-G	% Fail	Average Point Score
ART & DESIGN	School	16	4.4	62.5	100.0	100.0	0.0	50.5
	National	168,366	25.7	19.4	71.7	98.8	1.2	40.6
BIOLOGY	School	88	24.4	76.1	100.0	100.0	0.0	51.9
	National	60,922	9.3	44.6	88.6	99.2	0.8	46.6
CHEMISTRY	School	88	24.4	64.8	97.7	100.0	0.0	50.9
	National	53,795	8.2	48.6	93.7	99.8	0.2	48.1
CLASSICAL STUDIES	School	4	1.1	50.0	75.0	100.0	0.0	44.5
	National	5,488	0.8	40.0	76.7	96.2	3.7	43.6
DESIGN AND TECHNOLOGY	School	35	8.9	57.1	85.7	100.0	0.0	47.0
	National	300,724	45.8	17.3	60.0	96.7	3.3	38.1
ENGLISH LITERATURE	School	89	24.7	69.7	100.0	100.0	0.0	51.7
	National	471,879	71.9	18.2	68.0	98.0	2.0	40.0
ENGLISH/ENGLISH LANGUAGE - SINGLE	School	89	24.7	56.2	100.0	100.0	0.0	49.8
	National	567,606	86.5	14.1	62.5	98.6	1.4	38.9
FRENCH	School	58	16.1	60.3	98.3	100.0	0.0	49.6
	National	148,546	22.6	19.1	63.8	99.3	0.7	39.9
GENERAL STUDIES	School	1	0.3	0.0	100.0	100.0	0.0	46.0
	National	6,408	1.0	9.5	43.3	93.0	7.0	33.6
GEOGRAPHY	School	54	15.0	55.6	100.0	100.0	0.0	49.4
	National	155,300	23.7	22.6	64.9	97.7	2.3	39.8
GERMAN	School	43	11.9	55.8	90.7	100.0	0.0	48.7
	National	63,733	9.7	20.0	69.5	99.6	0.4	40.9
HISTORY	School	19	5.3	42.1	89.5	100.0	0.0	47.3

Other measures within this table, such as variations in average points score, might provide a useful area of focus, though this would only be relevant if departments teach the same groups of students. Hence, core departments could be paired together, given the information in this table and asked to discuss why there are variations in their average points score despite the fact that they teach the same groups of students. In the table above, such a conversation might usefully take place between English language (average point score of 49.8) and biology (average point score of 51.9).

Using the relative performance indicator

A more sophisticated measure of departmental variation is provided by the relative performance indicator. This chart shows departments that are performing significantly above the national average (in green) and those who are significantly below (in blue). Whilst the data has to be interpreted carefully (there may be good reasons why the school difference is out of line with the national difference for a specific subject) it provides a useful starting point for looking at potential areas of variation. Hence in the table below, there is further evidence that English and biology might benefit from sharing ideas, since the performance in biology is shown as being 1.7 above what would be expected, whilst the performance of English Language is shown as being 1.5 below what might be expected.

Table 3.1.27: Attainment, Relative Performance Indicators for full GCSEs, all pupils - 2008

This analysis shows the relative performance in 2008 of GCSE subjects in your school at Key Stage 4 for all pupils. For information about how this indicator is calculated, please see the Help article.

Subject	Entries	School Average	Average In All Other Subjects	School Difference	National Difference	Relative Performance Indicator
ART & DESIGN	16	50.5	48.0	2.5	2.3	0.2
BIOLOGY	88	51.9	49.8	2.1	0.4	1.7
CHEMISTRY	88	50.9	50.0	0.9	0.5	0.4
CLASSICAL STUDIES	4	44.5	53.9	-9.4	-5.5	-3.9
DESIGN AND TECHNOLOGY	35	46.6	49.5	-2.9	0.1	-3.0
ENGLISH LITERATURE	89	51.7	49.7	2.0	0.4	1.6
ENGLISH/ENGLISH LANGUAGE - SINGLE	89	49.8	50.0	-0.2	1.3	-1.5
FRENCH	58	49.6	50.7	-1.1	-3.5	2.4
GENERAL STUDIES	1	46.0	38.5	7.5	-3.9	11.4
GEOGRAPHY	54	49.4	51.4	-2.0	-1.5	-0.5
GERMAN	43	48.7	50.4	-1.7	-3.3	1.6
HISTORY	19	47.3	49.4	-2.1	-2.2	0.1
MATHEMATICS	89	52.2	49.7	2.5	-0.2	2.7
MUSIC	18	48.3	50.6	-2.2	-1.2	-1.0
OTHER LANGUAGES	6	54.0	50.7	3.3	7.2	-3.9
OTHER SCIENCES	2	40.0	39.3	0.8	0.2	0.6
OTHER SOCIAL STUDIES	18	31.6	51.6	-19.9	-6.4	-13.5
PHYSICAL EDUCATION	16	49.0	49.8	-0.8	1.5	-2.3
PHYSICS	88	51.8	49.9	1.9	0.4	1.5
RELIGIOUS STUDIES/EDUCATION	34	49.0	50.9	-1.9	0.3	-2.2
STATISTICS	54	47.8	48.2	-0.4	-2.2	1.8

Contextual value added

A final way in which data processing can be used to identify ISV is through the detailed information it can provide on contextual value-added (CVA). Information is provided on differing performance relating to gender, ethnicity, special educational needs and a variety of other factors. The chart below also illustrates how CVA can be used to explore how the performance of core departments varies from the rest of the school. In this example the English CVA score of 998.7 in 2008 appears to be significantly below the whole school

CVA score of 1023.3. At first sight, this data would appear to suggest some variation within the performance of one core department.

Table 2.1.1: Contextual Value Added Key Stage 2 to 4 : Overall and Subjects

This section provides the overall and subject contextual value added scores for the school relative to the national mean of 1000. Significance tests have been performed on the data using a 95% confidence interval, and where the school value differs significantly from the corresponding national value, sig+ or sig- is shown. Where a school figure is significantly above or below that of the previous year an up or down arrow is displayed to the right of the figure. Note that students for whom prior attainment could not be matched are excluded from all value added analyses.

		2006	2007	2008
All Subjects	Cohort for CVA	84	91	88
	CVA School score	1,018.0	1,028.1	1,023.3
	95% confidence interval +/-	13.0	12.4	12.2
	Significance	Sig+	Sig+	Sig+
	Percentile rank	13	6	8
	Coverage	97%	98%	99%
	English / English Language	Cohort for CVA	84	91
	CVA School score	1,000.0	999.8	998.7
	95% confidence interval +/-	1.3	1.5	1.5
	Significance			
	Percentile rank	52	57	79
	Coverage	97%	98%	99%
Mathematics	Cohort for CVA	84	91	88
	CVA School score	1,000.1	1,000.6	1,000.7
	95% confidence interval +/-	1.4	1.5	1.5
	Significance			
	Percentile rank	50	37	42
	Coverage	97%	98%	99%

Interrogating the data

Once the data has been assembled the 'putting into practice' identification phase can begin. The following questions are examples of how the data might be interrogated. The answers will point to where the search for the causes of variation should begin.

- Consider the raw data for departments in your school. Do any areas of particular strength or weakness emerge?
- Look at your school's relative performance index. What areas of variation between departments does it point towards?
- Is there a difference between the value-added achieved by core departments and the rest of the school?
- Are there significant variations in value-added outcomes based upon gender, ethnicity or any other significant factor?
- Do any of the points above suggest particular areas that you should be addressing through an ISV investigation?
- To what extent does the data lend itself to setting targets for student performance?

Appendix III: tools for implementing an in-school variation programme

The tables provided below are intended as working tools to guide the investigation of ISV and support the planning, initiation, implementation and evaluation of an ISV reduction programme. The questions posed in the tables are intended to be used in conjunction with those posed in sections [three](#) to [five](#) of this guide. They should be treated as signposts, directing the process of developing and implementing an ISV programme, but not limiting it. Greater specificity should be aimed for as the work proceeds. There are four stages which encompass the 'identify – analyse – plan – act – evaluate – review' sequence.

Stage one: identifying the extent and nature of in-school variation	
If you have previously started work on ISV, then you may already have the answers to all or some of these questions and could proceed to stage two.	
How will you identify the nature and extent of in-school variation? What data will you use? What sort of analyses will be required?	
Where is variation most apparent across the school? Is there a clear pattern and are there any seemingly obvious factors that might account for it?	
Which departments/subjects have the highest and lowest levels of achievement?	
Can you be more specific? Does variation exist in student attainment across the school, eg between classes of the same students in different subjects, between teachers in the same subject, across genders or student demographics etc?	
Are you clear that the data analysis will provide valid answers to the above questions?	
What work has already been started by way of addressing in-school variation and, if any, how should the outcomes from it now be taken into account?	
To what difficulties and sensitivities will you need to be alert in carrying out an investigation into ISV?	
Is any special training likely to be necessary before you proceed to setting goals and preparing an ISV-reduction plan?	
Use this area to record any further baseline information that should be gathered to help identify ISV and gauge its nature and extent.	

Stage two: setting your goals

Use the following table to decide and record the goals for your ISV-reduction programme. Remember that ISV programmes with clearly focused aims and defined goals stand a better chance of long-term success.

Now that you have a clear picture of ISV in your school, what specific goals should be pursued in order to reduce it? Record them here in priority order.	
How many goals are there? What size programme could the school implement and see through to a conclusion? Is there sufficient capacity to pursue more than one goal at a time?	
How, and to whom, will you reveal the findings of these initial investigative steps?	
Will you need to secure the support of any particular members of staff before proceeding further?	
How widely will these goals be shared-when and with whom?	
What measures do you intend to use to assess how well your goals have been achieved? Will you need any additional data for this purpose?	
Use this area to record any further considerations regarding the setting and dissemination of your goals.	

Stage three: planning and implementing an in-school variation reduction programme

<p>In the light of your thinking so far, are there any aspects of ISV that should receive priority? Will it be possible to address more than one aspect at a time while still maintaining sufficient focus and momentum, or would a staged approach over a longer but less intensive time span be a sensible option?</p>	
<p>What will be the relationship between the ISV work and the school's existing priorities and improvement plans? Can the ISV work be integrated with other initiatives or be used to integrate them?</p>	
<p>Section four of the guide highlights five key areas where action to reduce ISV is likely to be most effective; please refer to that section when you consider the following questions.</p>	
<p>Which of the five areas seem to be most appropriate to your findings so far? Use the rows below to record what action, if any, is necessary within each area. Note any matters that will need either special preparation or sensitive handling.</p>	
<p>Data usage</p>	
<p>Middle leadership</p>	
<p>Teaching and learning</p>	
<p>Student voice</p>	
<p>Standardising procedures</p>	
<p>Do any of these areas stand out as likely to yield the most beneficial outcomes? Should your programme focus on just one area as a matter of urgency? Is there another area which also warrants prompt attention?</p>	
<p>Who are the key staff to be engaged if the goals are to be met? What agreements and arrangements will be necessary to ensure they are able to participate fully?</p>	
<p>How will other staff be engaged and what incentives will be needed to encourage their active involvement?</p>	
<p>Who will lead the way and maintain the programme momentum?</p>	
<p>Will any special training or external help be necessary in order to get the programme off the ground?</p>	
<p>How will the hoped-for outcomes of the programme be communicated to other staff? Who will explain the potential benefits?</p>	

What is the timeframe for your ISV programme and what are the milestones?	
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Stage four: evaluation, follow-up and making things last

What differences has the ISV reduction programme made? Could you measure any changes and were the achievement measures you planned to use suitable?	
Did action taken within any of the five areas prove to be effective? Did action in one area stand out as especially effective and, if so, why?	
Have there been any unexpected outcomes?	
Did some parts of the programme run more smoothly than others? What are the reasons?	
How will the outcomes of the programme be presented to the staff as a whole?	
Has awareness of ISV reached all staff or is there more to be done in this regard?	
Have any particular practices and procedures emerged that should be standardised across the school?	
Has best use been made of the best staff?	
Did staff with a leadership role effectively discharge their responsibilities?	
Have any particular CPD needs been revealed?	
Will ISV work require any changes to the way CPD is linked to school improvement?	
Is there now a stronger culture of discussing and sharing good practice in the school?	
What happens next? Would another programme with a different focus be appropriate or could a wider-ranging programme be established?	
What concrete steps are needed to ensure that the reduction of ISV becomes a routine part of your school's normal functioning?	

References

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 - ² <http://www.ncsl.org.uk/publications-index/publications-display.htm?id=21360&idnum=30>
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 - ⁴ Ofsted 2008 'Using Data, Improving Schools' (reference: 070260)

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