



Welcome to another issue of Inside Information. More and more teachers in all phases are using action research to develop and improve their practice – something we as the National Teacher Research Panel (NTRP) are delighted about.

In this issue we have featured teacher research which has made an impact on students in the 14 to 19 age range. Whether based in schools or colleges, studying for GCSEs, A levels or vocational qualifications, this is the age when a whole lot of factors – such as disengagement, boredom or lack of confidence can derail young people’s education and severely disrupt or diminish their life chances. But it is also an age which teachers can make a real difference too. Excellent and innovative teaching can and does inspire young people, enhance their aspirations and raise levels of achievement for all.

Quality teaching and learning is at the heart of all our work. Frank Coffield was widely applauded by practitioners at an AoC conference when he called for the FE sector to refocus its strategic priorities on teaching and learning. I believe that the features of excellent teaching endure across sectoral boundaries and, with a strong focus on individual learning needs, can be adapted to different contexts and different learners. We have some examples in this issue which will resonate with teachers whatever their backgrounds.

On p.10 you will see how one teacher killed two birds with one stone: he trained a group of older students in research methods which they used to investigate improvements in teaching for year 7s. The older students’ confidence, motivation and learning improved at the same time as their work made a difference to teachers and students lower down in the school. Another teacher in a specialist technology college (p.8) developed lots of new teaching resources for use with A level classes which improved the experience of pupils studying A level Maths and in turn increased the uptake of the subject in sixth form. On p.14 we feature a project which shows how schools and colleges worked together to develop a partnership-based approach to the delivery of personalised learning. One London teacher worked with her local art gallery and used innovative technology (Personal Digital Computers) to create an interactive teaching resource in the gallery. Her work helped to change the students’ attitudes towards learning and enabled them to develop into confident, independent learners.

There’s lots more in this issue. As chair of the NTRP and a secondary head teacher myself I can testify to the difference which teacher research can make to practice. I hope you enjoy reading about the work of your colleagues around the country.

**Jill Martin**, Chair, National Teacher Research Panel

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The National Teacher Research Panel is an independent group of practising teachers and tutors who work to:

- ensure that all research in education takes account of the teacher and tutor perspective;
- ensure a higher profile for research and evidence informed practice in government, academic and practitioner communities; and
- increase the number of teachers and tutors engaged in and with the full spectrum of research activity.

The Panel is sponsored by the Learning and Skills Improvement Service, the Department for Children, Schools and Families, the General Teaching Council for England, and the National College for School Leadership.

# Making school less 'schooly': what's the impact on student attitudes?

Geoff Barton

There is plenty of evidence that school students who attend college for part of their time after the age of 14 find it a stimulating and supportive learning environment. But what happens when a school sets out for itself to change the environment to one in which 14+ students can flourish?

In this project, Geoff set out to transform the ethos of his upper secondary, 14-18 school, where – if John West-Burnham's estimate of the national picture is right – as many as 60% of students would not have had a conversation with an adult during the previous week. His aim was to raise students' aspirations and attainment by changing the learning environment. Geoff and his team argued that there was no reason why "...schools have to feel 'schooly' – with no toilet paper and graffiti ..." They aimed to create a school where teachers knew students by name and where adults had regular conversations with youngsters.

Over a period of six years, a number of structural and cultural changes took place, including a modified timetable for the school day, alterations in the school's physical environment, newly developed assessment and reporting structures, and the employment of new personnel. Lessons dominated by teacher talk were modified by changing the duration of the lesson, introducing a whole-school emphasis on lesson planning and supporting individual pupils in a mentoring framework. Student perceptions and attainment developed significantly; following the changes 90% said they had pride in their school and more

We aimed to create a culture in which students were not embarrassed to do well, and would be celebrated in assemblies with a "... real sense of razzamatazz ..."

than 60% showed an improvement over their target grades.

## What changes took place in the school?

### Structural

Structural changes to the operation of the school were designed to reflect, communicate and shape the values of the institution. For example, Geoff and his team implemented a 3 x 100 minute session structure. They wanted to focus teachers' attention on the benefits of planning for extended periods of study. They also put in place a policy of flexible breaks between each lesson.

### Creating a Focus on Learning

Choosing a new approach to teaching and learning allowed teachers to focus on lesson preparation and to rethink their classroom strategies, offering pace, variety and challenge. Teachers talked in terms of being "jolted out of doing the same" endlessly. Geoff found evidence that schools must sometimes change structures in order to change *behaviour* for teaching and learning.

### Cultural

Cultural changes included a new emphasis on promoting student achievement. Geoff aimed to create a culture in which pupils were not embarrassed to do well, and would be celebrated in assemblies with a "... real sense of *razzamatazz* ..." Changes in the visual environment included the display of large photos celebrating individuals and teams around school, and the addition of

Students stopped their mentor in the corridor saying "When are we next meeting to review my progress?"

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## Panel member Eileen Allpress asks...



and how could these be used or developed to implement changes that give value to student opinions? What other opportunities are there to help improve students' sense of 'belonging' within your institution?

## What could this research mean for CPD in your organisation?

- Have you just begun a new post or taken on a new position of responsibility? What changes do you feel would benefit students and staff?
- Are there other institutions which you could visit which might help you to review the ethos of your own institution or area of work? Could you use this information to help lead and motivate staff or colleagues to adapt or change current approaches?
- Is there a network of fellow professionals or an external improvement programme which would provide a forum for discussing ideas for change? Could you organise a CPD programme for staff members to visit other institutions and share excellent practice? Could you invite the opinion of other professionals or stakeholders and use their ideas as a springboard for change?
- What 'student voice' activities are already in place in your institution and how could these be used or developed to implement changes that give value to student opinions? What other opportunities are there to help improve students' sense of 'belonging' within your institution?

### Eileen Allpress

Eileen Allpress is a Deputy Headteacher in Castle Hill Infant School in Ipswich. She teaches a Year 2 class and has responsibility for managing Special Educational Needs and CPD throughout the school.

potted plants to create an environment that was civilised and "unschooly".

### Mentoring

Geoff noted that boys at the top end of the attainment scales appeared to lack motivation and were under-achieving. The staff introduced a mentoring programme to combat this issue. They identified fifty students in the previous academic year who were the most significant underachievers around the C/D GCSE borderline and paired each one with a member of the senior leadership team (SLT), so that every SLT mentored around six students. Together they regularly looked at data, homework, grades, called parents in to tell them what they were doing, and then telephoned the parents with updates.

### What impact did the changes have on the students?

At the outset, only 45% of students reported that they had pride in the school, whereas surveys now consistently return figures of up to 90%. There were also significant improvements in students' attitudes towards school and towards learning. After the first year of the mentoring scheme, there was also a considerable improvement in the attainment of groups of pupils who had typically under-performed, as results showed a rise from 62% A-C to 74% A-C at GCSE level. 94% of the students said that the scheme had helped them to focus on their studies and wished the intervention had begun earlier. Students stopped their mentor in the corridor saying 'When are we next meeting to review my progress?'

In early surveys, 20% of students also revealed that they had felt bullied prior to the programme. Changing the deployment of staff at lunchtime meant the students felt more secure in all areas and bullying was no longer perceived to be an issue in the school by the end of the project. Geoff found that the values of a school, as they are made clearer, can make a very big difference to students' behaviour and attitudes.

### How was the study designed?

Termly evaluations were carried out throughout the project (over 6 years), and the results were published on the school website and in assemblies. Progress was also assessed via 'student-voice' questionnaires, which usually involved 100-150 students across year groups. Questions included 'Have you been bullied during term? Whose assembly was best? Which teachers have helped you to learn better?' The teachers made a point of talking with the students about their views and any changes that they made as a result. Separate termly surveys were also carried out with teachers.

### Finding out more

Fullan, M. & Hargreaves, A. (1992) *What's Worth Fighting For in Your School?* Buckingham: Open University Press

Hughes, M. & Vass, A. (2001) *Strategies for Closing the Learning Gap*. Stafford: Network Educational

## An interview with

# Geoff Barton

Geoff has been the headteacher at his school for seven years, "When you become a head you make an initial impact which paves the way to make further impact later". When he started to make changes staff seemed to watch with bemused interest and the school had an 'Under New Management' label.

Geoff's initial question was, 'How do you make your own memory of school less awful?' He then worked with the staff to improve the environment of the school. Geoff describes this as, "Not a grand philosophy, but an approach to improve the basic experience of students at school".

Geoff was keen to share with staff how a change of culture can impact on a wide range of aspects of school life. Students now choose to wear a customised school logo – even the boys' dance group – "something which would have been unheard of before".

Geoff advises other senior leaders who would be interested in leading change to:

- try to get out of the bunker of your own school and visit other schools
- buy into the philosophy, not just the cosmetic changes
- make the environment of learning an integral focus for students
- have the courage of your convictions and always ask for advice not only from fellow practitioners, but external specialists. For example, Geoff worked with a designer to help him improve the environment of the school.



**Geoff Barton** is the Headteacher at King Edward VI School in Suffolk.

# How can we improve the independent learning skills of Year 12 male students? Kate Sida-Nicholls

Kate had noticed that male students seemed to find the transition from GCSE to AS/A level challenging – despite their previous good performances at GCSE. She tried to help by developing their problem solving, planning and decision making skills and by introducing them to relevant approaches and techniques.

Kate designed two 'Bridging' projects that were directly connected to the skills that the students would need in Year 13, each resulting in either a group or an individual presentation. Kate found that she first needed to model or explicitly teach the independent learning skills and then the students needed to have an opportunity to practise the skills. She also found the students were better motivated when they were given more choice over what they worked on.

## What did the Bridging projects involve?

In the 'Bridging Coursework Project' students were asked to create an outline for an investigation that they might like to develop into Year 13. They had two general topics to choose from, and 'success criteria' were generated by the whole class. Each student had to produce their own hypothesis, method, data and possible conclusion. They then presented these to a small group, who in turn presented the best one to the whole class. The class then voted on the best presentation, depending on how well it fitted the 'success criteria'.

For the 'Bridging Editorial Project' students had to

**Boys realised that they should put more effort into their schoolwork, but found this difficult if they were not interested in the topic**

create an anthology of texts that could act as pre-release material for an exam paper. They also had to come up with two typical questions that might be on an exam paper and a model answer for one of these. Kate chose the groupings of students but encouraged the students to generate their own planning and thinking for the task, including choosing the topic. They presented their products as a group to the whole class.

## How did Kate encourage independent working during the projects?

Kate introduced several activities to engage the students. These included a 'Where will you be in 5 years time?' activity to help motivate the students, by asking questions such as *Which three things can you do now that you couldn't five years ago?* To encourage peer assessment, she used a coloured cups activity during the presentations. Each student showed their understanding of the talk by changing their cups from green to yellow or red or *vice versa*. Kate also drew upon the *Thinking Actively in a Social Context* (TASC) model to generate group discussions and the organisation of roles within a group.

TASC is designed to help students develop the necessary skills to become independent learners. It also helps to develop personalised learning by encouraging students to make decisions themselves. For example, in this study students used the 'problem solving wheel', where activities are arranged in a wheel divided into eight aspects of independent learning, including:

**Teachers' use of probing questions helped students work out the next stages of their learning**

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## Panel member Eileen Allpress asks...



## What could this research mean for CPD in your organisation?

- Could you identify an area of interest within your practice that may be a rewarding area of research? For example, are there any individual students who show interesting changes in attainment level or change in performance after transition?
- Of the strategies to support learning you have used recently within your groups, are some of the strategies more effective with particular age groups or gender? Could you consider experimenting with strategies that you may have considered more appropriate for older or younger students?
- Would you find it useful to plan 'Bridging projects' which straddle the transition from one curriculum year to the next? Do you think it might be a practical way to bolster any perceived 'dip' in attainment? Are there any opportunities for you to work with feeder institutions to set up a 'Bridging project' to help support students?

- gather/organise
- decide
- implement
- evaluate
- communicate
- learn from the experience

#### What effect did Kate's approach have on the students?

Kate found that giving students a choice about what they worked on improved their motivation to succeed. The boys realised that they should put more effort into their schoolwork, but found this difficult to do if the topic was not interesting to them. They worked better when given prompts by Kate – for example, helping them to generate success criteria and using probing questions to help them work out the next steps of their learning.

The students responded well to having clear guidelines and deadlines for smaller sections of a task, as this enabled them to concentrate on shorter chunks at a time. Kate also found that it was important for the students to be made aware of the relevance and reasons behind the various tasks set in A level teaching and learning, which should include modelling the quality of outcomes that are expected of them.

To begin with the students tended to work independently even when in a group, but when Kate helped to organise roles, i.e. 'captain' or 'supporter', their conversations were more constructive and they thought more collaboratively about the next steps of the activity.

#### What did Kate learn from her project?

Kate learnt that teaching independent learning skills is a complex process that requires time and effort from both the teacher and the student. The students needed to be given more control over their learning, but teachers needed to provide enough support to enable them to progress and remain motivated and engaged in a task.

#### How was the study designed?

Kate collected data from several sources including group interviews, observations of the groups and teacher records. The teacher records focused on the students' level of participation and the outcomes of the final tasks for the bridging projects.

#### Finding out more

Gilbert, I. Ed (2006) *The Big Book of Independent Learning*. Crown House Publishing.

Belle Wallace, *Thinking Actively in a Social Context* (TASC), available at: [www.nace.co.uk](http://www.nace.co.uk)

## An interview with

# Kate Sida-Nicholls

Kate's investigation was prompted by an apparent gender imbalance in English results, especially three students whose results were at variance with their abilities. The other members of the English team were supportive of her project and keen to use the outcomes.

Kate describes herself as a 'book and research geek'. She has found her research has not only made an impact on her own practice but others too – for example, the Business Studies department is now using the TASC wheel. Although she views her investigation as 'a snippet' she hopes it will encourage others to try something new and also to try approaches that are usually used with younger students.

Kate is a keen advocate for contextualisation of subject matter for the post-16 student. She urges colleagues to remember that all age groups need a variety of teaching and learning methods and that the post-16 age group still need support and scaffolds – especially boys!

Kate advises any practitioner who would like to undertake research to start with an issue of direct concern to you, listen to what the research is telling you and roll out the findings.



**Kate Sida-Nicholls** is the Head of English and subject leader for A Level English Language and A Level English Literature and Language at King Edwards VI School in Suffolk.

# How can we improve students' motivation for, and skills in, analysing works of art? **Ellie Burkett**

Knowing that young people, particularly those living in areas of social disadvantage, can feel intimidated by, and disinterested in going to art galleries and museums, Ellie was keen to find a way of enthusing her GCSE and A level Art and Design students. She was fortunate that her local authority (the London Borough of Barking and Dagenham) was involved in the UK DfES/Becta ICT Test Bed project.

The Test Bed project provided funding for ten PDAs (Personal Digital Computers) and the installation of wireless hubs at the Dulwich Picture Gallery. Ellie used the innovative technology to create an interactive teaching resource called 'trails', each relating to three or four paintings in the gallery. The approach helped to change the students' attitudes towards learning and enabled them to develop into confident, independent learners able to construct their own knowledge and create personal understandings.

## What did the trails consist of?

A trail consisted of a series of structured, interactive prompts combined with thumbnail images of particular paintings in the gallery. These were designed to engage students in critically analysing the works of art. A set of prompts related to one painting, for example, started as follows:

The artist Poussin was French, but lived in Rome for most of his career. He sketched out of doors in the countryside outside Rome. Notice how closely he observes and records nature in the foreground of the picture.

What details of nature do you think are especially well depicted?

"Before we just used to go to a gallery and look at paintings and we would stand there silently, looking blank"

Ignore the main characters and concentrate on the atmospheric effects of light in the background. How would you describe the atmosphere of the landscape?

- peaceful
- stormy
- hazy
- sunny
- gloomy

The students examined the paintings, recorded their answers on the PDA and when back at school, downloaded their notes to use in their coursework.

## What impact did the new approach have on the students?

The project met with a very positive response from the students. They felt that the trail questions made them more curious about the paintings rather than just seeing them as pieces of art. They were curious to know why and how an artist had chosen to paint in a particular way and they liked recording their own thoughts and information about the paintings.

The learning experience, though private and personal, also made the students want to share their views with each other – a quite different

"The interactive trail helped us to consider the vital elements of the painting which I would not have considered in such depth otherwise"

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## Panel member Katherine Hall asks...



## What could this research mean for CPD in your organisation?

Ellie's study highlights how working in partnership with an art gallery and the innovative use of digital technology developed active and independent learners.

- Are there any opportunities within your curriculum area for creating these kinds of personalised trails through using mobile technology?
- Given that the availability of handheld computers may be restricted could mobile phones or other technology be used for creating such trails?
- As a result of the trails it was found that less able students were more willing to contribute to group discussion. Could this strategy be adapted to support any students like this in your lessons?
- Would trying a project like this offer more opportunities to learn and in this way help you to become more aware of how your students learn?

### Katherine Hall

Katherine Hall is in her fifth year of teaching and is currently Subject Leader of Psychology at Tadcaster Grammar School, North Yorkshire.

experience to gallery talks where students felt passive and 'talked at'. The students appreciated not being overtly directed as to how to view the paintings. They began to value their own opinions and increasingly engaged in constructive dialogue with peers, teachers and gallery staff.

Ellie noticed how the approach encouraged less able students to participate in group discussion because they knew their opinions were valid. She was also struck by the way they pointed out interesting features of the paintings to her as well as each other, when previously they had assumed the role of a 'novice' learning from the expert.

The students' awareness of their deepening understanding and knowledge led to a desire to share their experiences and learning with others. One student designed a trail for primary school visitors to the gallery, whilst another designed a website on Baroque art for fellow teenagers.

The richness of the experience also enabled the students to make meaningful connections between the work they had seen and their own practice. Many of the students paid greater consideration to the vital elements of paintings – the use of colour, line, light and drama etc – in their own work. One student felt encouraged and inspired to create her own paints in the way the 'Old Masters' had. She used a variety of organic sources, such as egg, stone and shells to create her own paints.

### What did Ellie learn from her project?

The project helped Ellie focus on *how* students learn rather than *what* they learn. Reflecting on practice was a significant feature for both students and staff and played a crucial part in developing a vibrant learning community and changing students' perceptions of themselves as learners.

### How did Ellie collect her data?

Ellie used a number of methods, including observation of the students in the gallery (including video footage), students' evaluation sheets, focus group discussions with students (recorded and transcribed), practical artwork they produced after the visit and their critical studies submissions.

### Finding out more

Streetaccess i-guide trails can be viewed at:  
[www.streetaccess.co.uk/](http://www.streetaccess.co.uk/)

Find out more about the Barking & Dagenham PDA Project at:  
[www.barking-dagenham.gov.uk/9-cias/ict-team/ict-team-pda.html](http://www.barking-dagenham.gov.uk/9-cias/ict-team/ict-team-pda.html)

## An interview with

# Ellie Burkett

Ellie's project started with a chance conversation with the Borough Art adviser who was looking for someone prepared to try something a little bit different – using handheld computers. Both saw their potential for critical studies in art. Dulwich picture gallery was also prepared to collaborate on this new venture and offered a member of staff who worked with Ellie to write a trail based on one the adviser had written as a model. "The project just snowballed from there. I found that I liked writing the materials and I was so overwhelmed by the students' response, I set about writing more trails".

Her experience of the project has made Ellie feel more confident about using mobile technology to link remote learning with the classroom. Recently, she was involved in another project in which students devised questions for their peers based on the Egyptian gallery in the British Museum. "I have loved working with the galleries – unlocking the treasures and making them exciting to students". Ellie found that involving the students in scripting learning material really helped to foster engagement. "It seemed to engage even hard to reach students".

Ellie is currently devising a trail called 'underfoot' which will involve a group of pupils scripting learning material for their peers, and capturing photos and information from the school environment which will help with project work in class. She feels there is much scope for using technology to link with other subject areas and aims to start doing this with the underfoot trail by linking art with mathematics.

Ellie's advice to anyone else thinking of carrying out an enquiry themselves is "not to try to do it by yourself – find a supportive group of people to work with". She adds, "Start small and reflect constantly on what you're doing".



**Ellie Burkett** is currently head of Art & Design at Abbs Cross School and Arts College in Havering, Essex.

# How can we raise achievement in A level Mathematics? Sarah Callender

Sarah had noticed that too often in A level mathematics, teaching tended towards a lecture style of delivery. This seemed to adversely affect students' motivation and have a negative effect on their achievement. In this project, Sarah and her colleagues in a specialist Technology College, researched students' experiences of A level teaching in mathematics as well as other subject areas. They developed a wide range of teaching resources for use with A level classes which improved the experience of students studying A level mathematics and in turn increased the uptake of the subject in sixth form.

"I used to prefer working on my own, but now I enjoy talking in pairs and group work more"  
Student

input of their LSP was invaluable; she observed their lessons, gave feedback and taught demonstration lessons which the staff videoed and discussed.

The teachers developed a range of game-based activities in their INSET time (roughly one and a half hours per half-term). These included pairs games and sequencing activities. They aimed to use one of these resources at least once per fortnight with their A level classes and discussed their effectiveness in departmental meetings. Although these activities were not always central to a lesson they found them a particularly effective method of introducing a topic.

## How did teachers enhance the students' learning experience?

Throughout Key Stage 3 and 4, students enjoyed a wide variety of teaching and learning experiences in mathematics. There were many types of activities, such as class discussion, research tasks and maps from memory used in mathematics up to GCSE. But there were very few such resources available for A level mathematics. Students responding to a survey said that they liked lessons where they worked independently, or in groups, undertaking tasks which moved away from simply answering questions from a text.

The teachers also organised a 'revision retreat'. During a weekend's stay at a youth hostel the students completed a variety of activities ranging from floor jigsaws to treasure hunts. As well as the benefits for the students' revision, the informal setting gave staff the opportunity to get to know the students on a more personal level.

## What impact did the change of approach have on students?

"Initially it was more confident ones dominating – now there is more trust and openness so everyone takes part"  
Student

The project had clear effects in the department. The retention of students between Year 12 and Year 13 increased (60% completed the 2 year course in 2008 compared with only 25% in 2006). The uptake of A level mathematics in Year 12 improved. In addition, Further Maths ran in both Year 12 and Year 13 for the first time, possibly due to the greater number of students from two partnership schools electing to study mathematics

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The nine specialist teachers (six full-time and three part-time) in the mathematics department worked collaboratively to develop new activities. The Lead Subject Professional (LSP) for mathematics also delivered INSET and showed them some high quality A level teaching methods. Sarah felt the

## Panel member Lou Harrison asks ...



## What could this research mean for CPD in your organisation?

Teamwork had a lot of impact in this study – teamwork between professional colleagues and teamwork between teachers and students. Which of the methods used here might help you to develop teamwork further in your setting?

Sarah suggests that her students now expect interactive and enjoyable lessons to be normal practice; what do you think students would identify as 'normal practice' in your teaching?

The team in this study created, collected and shared resources to support different parts of teaching sessions. In following this example, in which element of your practice would you invest the greatest energy to gain the greatest impact?

### Lou Harrison

Lou Harrison is the headteacher at Heather Primary School in Leicestershire. Her own research usually centres on pupil voice – particularly for very young children – and on CPD and adult learning in schools.

at Sarah's college. The project also had an impact beyond the college. Several students chose to continue studying mathematics in some form at University.

Students' motivation and enjoyment also noticeably increased throughout the study. They particularly liked the interactive materials and the revision retreat. But Sarah felt the 'revision retreat' was perhaps the most influential part of the project as it proved so popular when they offered it the following year. The project led to more purposeful relationships between students and teachers. Students got to know all the staff and were prepared to seek help from teachers other than their own.

### What did Sarah learn from her project?

Sarah learned the value of increased collaboration between teachers – they shared resources and good ideas much more than before. During the first few months of the project they decided to set up a central area in the department to catalogue and store materials which they had found to be successful. They set aside time at each departmental meeting to share new ideas. They extended the development of new materials to Key Stage 3 and Key Stage 4 and also shared resources with other departments in the region.

### How was the study designed?

The college employed a researcher from outside the school who carried out a written survey (put together by the teachers) amongst all students and a videoed interview with a sample of students from each class. Following increased INSET time, with input from the Lead Subject Professional, staff developed game-based activities and implemented them once a fortnight. Sarah gathered staff and students' views about the different approaches. She also analysed statistics of students' retention, achievement and uptake.

### Finding out more

The NCETM website contains more information on the research at:

[www.ncetm.org.uk](http://www.ncetm.org.uk)

The Association of Teachers of Mathematics:

[www.atm.org.uk](http://www.atm.org.uk)

Free download of Tarsia which allows jigsaws to be produced easily:

[www.mathsnet.net/jigsaw/index](http://www.mathsnet.net/jigsaw/index)

## An interview with

# Sarah Callender

The students in Sarah's school were among the first to identify the need for the changes explored in this research. In KS3 they had become used to very interactive lessons that challenged and motivated them, but the constraints of A level coverage seemed to be forcing everyone into a dry and much more formal mode of learning. Even though students had elected to study at this level, they clearly weren't enjoying the experience.

In introducing changes, the department was initially supported by a lead subject professional in the LA, while an external researcher offered guidance about methodology. The greatest source of support for this team of colleagues has been each other, and Sarah speaks of the impact of working together to create their constantly expanding and shared central bank of resources, for example. Of the research as a whole she says that "It has massively altered my teaching – it helped me to share ideas and to recognize and benefit from the strengths of my colleagues".

A surprising measure of the impact of the research has been the number of students keen to take part in the maths residential – "I would never have imagined that a student would spend a Friday night doing maths!"

For anyone considering undertaking small scale research of their own, Sarah's advice is "Definitely give it a go and get involved. I started my research as an NQT and although it would never have entered my head to engage in educational research beforehand, I thoroughly enjoyed doing it".



**Sarah Callender** is Assistant Curriculum Leader in Mathematics at Longbenton Community College.

# How can involvement in research raise students' confidence and aspirations?

Shah Muhammed Wahiduzzaman

Most of the students at Wahid's secondary school and sixth form college came from poor socioeconomic backgrounds, with a majority being of Bangladeshi origin. Wahid felt that the biggest challenge in the school was raising students' aspirations, motivation, self-esteem and confidence. He believed that this was key to improving his students' achievement. His was a research project with a difference because the students themselves, aged 14 to 16 were trained as researchers (STARs). The students were taught to collect data from other students and staff about their perceptions of the school and the results were used to form strategies that were effective in enhancing classroom challenges in the core subjects. In this way 14-16 students became pivotal to unlocking learning for students across all age groups. For example, the students' research helped identify strategies for enhancing challenge for year 7 lessons. At the same time, their research project encouraged the 14-16 students' motivation and confidence and their involvement in and understanding about their own educational experience.

**"It was refreshing to receive feedback from the students' perspective"**

Teacher

*evaluate and improve their own teaching, putting the students' needs above everything else. I would advise teachers to get involved as much as they can and try and get the most out of the students."*

## How did the students conduct their research?

To conduct the interviews, six students from years 11 and 9 were selected to take part in a one-day training course for student-researchers. The six STARs designed an interview schedule and devised a set of questions to find out about students' perceptions of classroom challenge, their reflections on their experiences in learning

the core subjects (including enjoyment) and their teachers' expectations of them. They shared discussions with the younger students about effective teaching strategies that they believed could enhance classroom challenge. The 14-19 STARs then analysed and presented the data to the lead teachers for the core subjects.

To conduct the lesson observations, a further six students were selected from Year 11 and Year 9 and were trained in lesson observations and feedback. In pairs, the STARs met with the teachers individually to discuss how the teacher planned to challenge Year 7 pupils in the lesson. They then observed that lesson and met together afterwards to collate their findings and feed back to the teachers they had observed.

The same three teachers who had been observed went with the same STARs to observe a lesson in their own subject area. The three teachers and the STARs met together to collate their observations and recommended strategies to enhance classroom challenge. All 12 STARs also collected data from one another about the impact which taking part in the research had had on them. The students were also shown how to design, conduct, analyse and present their findings.

## What did the teachers think of student-led research?

The teachers whose lessons featured in the study had to be willing to be engaged in this process of critical reflection about their classroom teaching, and they also had to be comfortable when it came to students observing their practice. Wahid overcame these concerns by involving only those colleagues who were enthusiastic about changing their practice. Through discussions, he emphasised practice and student engagement. On the whole teachers observed in the study enjoyed and valued the experience:

*"It was refreshing to receive feedback from the students' perspective... I hope to see this type of project continue and develop in the years to come. I think it allows teachers to*

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Panel member  
Lou Harrison asks ...



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## What could this research mean for CPD in your organisation?

- Wahid explored the knowledge of his students about how they learn best. In what ways might you use the understanding of learning and teaching by students in your setting to develop your own practice?
- Which elements of challenge identified within Wahid's study would you enjoy exploring further in your own setting?
- This study identified the important role of motivation and student involvement in promoting behaviour for learning – is this a link you can build on to make a difference in your own practice?
- Wahid and his colleagues took a brave step in inviting student feedback on their professional performance but the benefits of this for everyone were huge. How could you take your next 'brave step' in reflecting on your own practice?

## What did the students find out?

Further opportunities for developing and enhancing their engagement and their confidence came when the STARS students presented their findings to staff, at a governors meeting and to members of the DCSF Innovation Unit. The student researchers also led a training session with the PGCE students at London Metropolitan University and with the trainee teachers in their own school.

The students' research elicited various reasons for why the Year 7 students didn't feel that they were challenged enough. For example, students were chatty and disruptive sometimes, there were no fun activities, the work wasn't interesting or was work they had done already, they had difficulty understanding questions, they couldn't make any links between their learning and real life.

Drawing from their findings, STARS and the teachers recommended strategies that were effective in enhancing classroom challenges in the core subjects in four areas: learning activities (e.g. constructive fun activities or more group work); questioning (e.g. questions to generate ideas or asking students to generate questions); assessment and monitoring progress (eg mini tests, quizzes etc); and motivation and behaviour for learning (e.g. feedback that promotes thinking, realistic target setting shared between teachers and students). As a result of these findings, the STARS produced a three-part written action plan for class teacher, departmental and whole-school actions. The school and the students are hoping to expand the research: the students are keen to investigate how teachers and departments are planning to implement their findings.

The STARS' research gave them insights into the teaching and learning processes and these were helpful in enhancing their own learning experiences. STARS also developed their skills as researchers as they learned how to observe lessons and give constructive feedback, devise interview questionnaires, collect and analyse data (both quantitative and qualitative), and make recommendations based on their analysis. Involving the students in this research also encouraged motivation and involvement in their own learning.

## Finding out more

Fielding, M. & Rudduck, J. (2002) The transformative potential of student voice: confronting the power issues. *Paper presented at the BERA Annual Conference*. University of Exeter, September 12-14, 2002.

Macbeath, J. Demetriou, H. Rudduck, J. & Myers, K. (2003) *Consulting pupils: a toolkit for teachers*. Cambridge: Pearson Publishing.

## An interview with

# Shah Muhammed Wahiduzzaman

Wahid was passionate about exploring the obstacles to learning for many of the students at his school – he wanted to challenge their low self-belief, low motivation and low achievement and to help them to raise their aspirations. He had the strong professional support of his school colleagues and headteacher, as well as training in research methods from a university colleague, and recognised that this was crucial in order to guide his students' own research most effectively.

Wahid's research has had an enormous impact. In terms of his own practice, he now routinely invites feedback from students about their perceptions of successful learning and teaching methods in his lessons. He says that "I understand that my teaching has changed – I can feel it. I now think my way into the place of my students whenever I plan... it's hard work, but it has huge benefits". With more challenging groups of students, Wahid has found that this approach has turned the learning around, inspiring classes to become eager to learn with him again.

His colleagues have been inspired by the project and are now taking up other STARS projects and research opportunities within school, while his 14-19 students are hungry for new research projects to work on. Wahid says that he is very aware of the importance of finding further opportunities to 'feed' them with new material to investigate.

For everyone – practitioners and students alike – intending to embark on research projects, Wahid's advice is clear: "Make it simple and straightforward, because small and simple always turn out to be really big. Stay precise and focused and keep a careful track of time, planning your timeline down to the last detail at the start".

**Shah Muhammed Wahiduzzaman** is the 'Aim Higher' coordinator and a science teacher at the Central Foundation Girls' School in London.



# How can peer coaching inspire creativity in teaching for work in the Early Years? Karen Morgan

Karen and her team felt a strong responsibility for modelling good practice in teaching and learning when training students to work with young children. In this project, Karen and her colleagues in the Early Years Section of a tertiary college explored working collaboratively to produce and use active learning approaches and materials. They also explored the effectiveness of peer coaching on team development and CPD; and leadership behaviour and learning. Karen's interviews, staff records and college statistics revealed a marked increase in retention, achievement and progression across learner groups, and an increase in confidence and enthusiasm amongst college teachers.

## How did teachers collaborate?

Twelve of the staff team took part in the study, including full-time and part-time teachers, the section leader and a member of the Resource Based Learning team. They used active learning approaches with a variety of learners who were training in child care and education at a range of levels from pre-GCSE (level 1) to A level equivalent (level 3) and HE (levels 4 and 5).

Building on Karen's initial findings, staff worked in groups of three to discuss Standards Unit/QIA resources and then to adapt them to suit their own subject areas and learners' individual needs. Activities included card sorting exercises, dominoes, board games, online activities, as well as lesson plans and video clips of teachers and learners carrying out and reflecting on the activities.

"I thought that everyone knew what they were doing except me. Now I realise that we all had ideas and that I could contribute as much as the more experienced teachers."  
Teacher

"I always try to play it safe in observations because I don't know how it will go. Peer coaching gave me the confidence to experiment with the learners and take risks"  
Teacher.

Peer coaching in these small groups gave teachers the opportunity to work through and refine their ideas with support from colleagues. Teachers observed each other implementing the active learning approaches they had developed together. The focus for peer observation was 'What can I gain from observing you?' Teachers devised a *proforma* that asked about:

- 'Three things I would try in my teaching'
- 'One thing I might do differently', and
- 'How did you find it being observed?'

The team reflected on progress after six weeks which Karen felt generated a huge wave of enthusiasm. During the following six weeks teachers developed more academic activities to encourage students' reflective and analytical skills.

## What did teachers learn about their students and themselves?

The teachers noticed an increase in learner engagement as learners and teachers developed and learners used resources. The learners found the activities fun and interesting and they helped them to remember the topic content. One teacher said, "I was surprised they enjoyed it so much. The learners really got involved". They also noticed a marked increase in retention, achievement and progression across the learner groups involved in the study.

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## Karen Morgan suggests a number of implications for CPD from her study



## What could this research mean for CPD in your organisation?

- Could you identify a development need that your team could collaborate on? Would your teaching team learn more from each other than from 'going on a course'? If they would how can you ensure they can still access any specialist knowledge they need?
- Where might peer observation be used in your college or school?
- Would increased teacher confidence, enthusiasm and creativity inspire learners in your organisation? How could you generate this within your teaching team?
- How could your learners become more actively involved in their own learning? Are your teachers and managers modelling lifelong learning?
- Do you make the time to reflect and discuss good practice within your organisation?

Teachers became more confident and active in improving, adapting and developing their ideas. Experimenting with and developing materials helped the teachers become more aware of the resources available and their value in stimulating creativity. Peer observations helped broaden the teachers' understanding of the curriculum for working in the Early Years and the links between subjects.

The teachers valued peer observation and coaching as a way of supporting and learning from each other. Their observations were non-judgemental and positive. Several teachers used the feedback from observations to inform their formal appraisal observations.

### What did Karen learn?

Karen developed as a leader. She learned the value of pursuing a common goal and the impact of working together in developing the team ethos. The time spent reflecting and sharing work as a team enabled her to identify and utilise the strengths of individual teachers in the team more effectively. She felt more empowered to promote team work and to form a more cohesive team.

### How was the study designed?

Karen collected data using learner group interviews and evaluations; staff reflections before, during and after the study; minutes and video recordings of staff team meetings and discussions; college statistics on retention and achievement; and peer observation records. Karen facilitated discussion during team meetings about how the project had changed their teaching and the impact on the learners.

### Finding out more

The Subject Learning Coaching programme site has a variety of case studies on quality improvement; enthusing staff and learners and coaching, supporting and developing staff: [www.subjectlearningcoach.net](http://www.subjectlearningcoach.net)

The Excellence Gateway aims to help transform delivery across the learning and skills sector by becoming *the* recognised web channel where practitioners *at all levels* can access high quality resources and information, inspire innovation and share best practice. Among other things it contains the original material Karen's team used when first developing their activities: <http://excellence.qia.org.uk/>

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## An interview with

# Karen Morgan

After completing her Subject Learning Coaching training Karen wanted to use her new skills to develop the Early Years team she worked with. She wanted to encourage them to use peer coaching methods as well as some of the active learning materials and approaches that had been developed by QIA (now LSIS) to improve teaching and learning in FE.

Karen was thrilled that the Early Years team were so supportive and excited about the research on the whole. The research was a team effort from the very beginning and this collaborative approach meant that every person involved had someone else to turn to for help, support and encouragement. Her experience of the project has helped develop her leadership skills: "It has reinforced my belief in the value of peer observation and coaching and has increased my awareness of the value of each member of the teaching team".

In the longer term the research has made Karen more aware of the way that different approaches suit different learners. She tries to involve teachers and learners in more creative activities and in producing learning materials. On a very practical level it has also provided the whole team with a useful and very innovative resource bank of activities which they use regularly.

Karen's advice to others wanting to be involved in action research is to do something that you feel passionate about, keep the project small and focused, and keep a reflective log as you go along. Karen benefitted from the support provided by QIA (now LSIS), who sponsored the research and would advise anyone new to practitioner research "to seek a mentor to help you look at your work in different ways". She also recommends sharing the responsibility for reading the "wealth of research that's out there on teaching and learning, then you can feed back to each other on the really useful bits".

**Karen Morgan** is Section Leader for Early Years at Bridgwater College.

# What can we learn from collaborative approaches to personalisation? Derek People

In this project, a group of four diverse schools (a specialist sports college, a specialist performing arts college, a special school, a grammar school for the deaf) and a FE college in West Berkshire collaborated to develop a partnership-based approach to the delivery of personalised learning. Derek explored the impact of the experience on the leaders, the teachers, and the students. Staff designed personalised learning programmes around individual students' learning needs and preferences. Teaching groups involved students from different schools and different year groups working together, within and beyond the classroom, and in different locations. Derek's interviews, focus groups and surveys revealed that teachers used a greater range of teaching and learning strategies and students were more confident. Leaders looked for further means of building capacity within the partnership.

**"We now have new ways of looking at the value added by partnership work across the institutions. This is itself an incentive for more collaboration".**  
Head teacher

the barriers to learning, raising expectations and self-esteem. The partnership developed a range of adapted courses in PE, Dance, Design Technology, Drama and Humanities. Vocational programmes were also developed at Key Stage 4 to include a GCSE in Leisure and Tourism, BTEC First in Sport and NVQ level 1 courses in Beauty, Catering and Construction.

## What did everyone in the partnership learn?

Leaders developed a broader vision to extend and enhance the partnership. Two head teachers planned joint leadership team development programmes, based on their experience of the partnership. The partnership established a practitioners' steering group, where teachers delivering the programme across the partnership met to discuss curriculum delivery. Flexibility and forward planning were key to organising timetabling and transport.

Students reported that the courses were more motivating than their other options choices, largely because of the variety of learning approaches employed by teachers. They felt more confident as learners; for example, they asked more questions to clarify their understanding and followed their studies further than they otherwise would have. They had better relationships with their teachers and peers.

The special school teachers noted a particularly wide range of benefits for the MLD students on the programme including

## What did the partnership project involve?

Staff identified students to take part in the programmes from within their 'home' school. Those participating included: MLD students from the special school; students in the mainstream setting assessed as being vulnerable and/or at risk of exclusion; SEN students in the mainstream setting experiencing difficulties in accessing all curriculum areas; and mainstream students with specific interests in sport and recreation/leisure. All students took part in a motivational programme and team-building activity aimed at breaking down

**"I come here and I mix with the sports college students and that's good fun - and I'm making new friends. And now my confidence has gone up and I want to go on to college, once I've finished my BTEC, and do carpentry".**  
Special school student

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## Panel member Katherine Hall asks...



## What could this research mean for CPD in your organisation?

Derek's study shows how working in partnership with colleagues and other institutions can bring about a range of positive changes for students, teachers and school leaders. This research particularly focuses on how these partnerships can be utilised in the area of personalised learning programmes.

- Can you identify students that would benefit from more personalised approaches to learning? Are there any opportunities available that might allow this to be provided?
- Is there a way you could look more closely at your students' personal needs and preferences that might help you to plan your lessons?
- What opportunities might be available for you to work in partnership with other institutions or colleagues?

improvements in behaviour, levels of attendance, reading age, and the development of leadership skills. For example, one of the Year 11 students on the BTEC First in Sport programme voluntarily ran a lunchtime basketball club for students at the school.

Both mainstream and special school teachers noted significant learning gains for all the students that went beyond the course-specific elements of the programme, leading to greater self-confidence and enhanced independence. The special school teachers reported a wide range of benefits for students with multiple learning difficulties, which led to improved attainment in other curriculum areas. They identified improvements in behaviour, levels of attendance, reading ages and leadership skills.

Mainstream teachers reported that they used learning support assistants more widely to support students' learning. They also developed their own teaching repertoire, particularly in relation to differentiation and communication of learning objectives. They became more aware of students' preferred learning styles as part of the lesson planning and review process. One head teacher commented: "The real benefit of this programme is that it provides real opportunities at grassroots levels to break down the barriers that exist between the teaching of those children who are 'special' and of those who are 'normal' or 'ordinary'".

### What did Derek learn?

Derek identified three key learning outcomes from the partnership:

- Start with a clear focus within a shared vision for longer-term growth
- Allow collaboration to grow organically and move in new directions
- Creating time and opportunity for collaborative groups to meet is essential

### How was the project designed?

Derek drew on the participants' direct experience of the programme and their records of planning and delivering the programmes. He also conducted semi-structured individual interviews with partnership leaders; a focus group interview with teachers; a focus group interview with a cross-section of students; and pre- and post-course attitudinal surveys of students.

### Finding out more:

Hargreaves, D. (2004) *Personalising Learning: next steps in working laterally*. London Specialist Schools Trust

## An interview with

# Derek People

Derek's action research came out of existing Leading Edge collaborative partnership work. The partnership members knew their approach to delivering personalised learning was having a positive impact, and Derek wanted to find out more about why it was being so effective and how it could be rolled out. Derek found the research methodology sessions run by NCSL really helpful for initial advice and guidance. He also accessed international support through e-based mentoring from Professor Michael Fullan at the University of Toronto. He is a real advocate of peer collaboration and gained the greatest support from fellow researchers.

Derek found the personalised programme led to significant learning gains for students beyond the course-specific content. He wanted this personalised agenda to be generally accessible for everyone which has led to significant curriculum changes in his own school. Key Stage 3 now lasts for two years and Key Stage 4 is extended to three years, allowing greater flexibility for students. Derek discovered that not only teachers' expectations and aspirations developed, but also students'. Derek found that teachers now deploy teaching assistants more effectively.

Derek now wants to look at the teaching and learning aspects of the programme to ensure it is of the highest standard to address the needs of a wider range of students. Derek is delighted that the research has inspired another member of staff in his school to undertake a Masters to evaluate the impact of the new structure on standards and student experience. His advice to anyone setting up a research project would be to ensure it is grounded in school-based practice and to establish opportunities for outcomes to have an impact.



**Derek People** is the headteacher of Park House School and Sports College, Newbury

# Support for carrying out your own research enquiries

## TLRP Tasters

[www.rtweb.info/ls](http://www.rtweb.info/ls)

'Research Tasters' are designed to support practitioners working in further education in carrying out evidence-informed enquiries into key aspects of professional practice – helping them to weave findings from academic research on effective practice into their own teaching.

Each Research Taster:

- highlights a research finding or insight of practical relevance
- suggests a reflective activity for gathering evidence
- suggests implications for further exploration
- provides selected web-links to further information

There are around 100 Research Tasters to choose from, clustered around three key themes: curriculum, assessment



and pedagogic strategies.

They were specially created by CUREE, drawing on the work of the Teaching and Learning Research Programme and other relevant sources and are freely downloadable.



[www.ncetm.org.uk](http://www.ncetm.org.uk)

The National Centre for Excellence in the Teaching of Mathematics aims to raise the professional status of all those engaged in the teaching of mathematics to enable the mathematical potential of learners to be fully realised. This website hosts a number of blogs, resources, news, events alerts and reports. You'll also find the Maths4Life collection with discussions on implications for post-16 numeracy and details of a number of action research projects carried out by mathematics teachers of all age ranges as part of NCETM's Grants Scheme. Some of these projects also appear in NCETM's Teacher Enquiry Bulletin together with interviews with the teacher researchers. The bulletin is freely downloadable from NCETM's website.

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## The National Centre for Excellence in the Teaching of Mathematics (NCETM)

## LSIS Excellence Gateway

<http://www.excellencegateway.org.uk/>

With quality improvement at its core, the Excellence Gateway offers support and advice within the learning and skills sector in England. Here you will find 'Inside Evidence' – an innovative publication, bringing relevant research and developments in teaching and learning to the attention of practitioners, curriculum leaders, subject learning coaches, and senior leaders working in a wide range of settings from general FE colleges to adult and community provision. Themes covered include assessment, thinking skills, group discussion, embedding functional skills, literacy, numeracy and ICT.



## BECTA

<http://partners.becta.org.uk/>

Becta's website provides helpful advice and downloadable resources for conducting practitioner research. The guide on how to start an action research project covers:

- using photography, audio and video recording equipment to gather data
- interviewing
- questionnaires

- using classroom materials as evidence
- observation
- analysing your data
- writing up

Here you'll also find case studies carried out in all phases related to the ICT Test Bed evaluation. Further case studies on whole-class teaching technologies and resources were carried out in ICT Test Bed schools, including wireless interactive slates, and interactive voting systems.

