

Teachers have always known that teaching assistants (TAs) are a valuable resource. In 2003, the National Agreement provided a clear message highlighting that.

Although teachers have the key role in relation to pupils' learning, TAs' roles can be important in supporting the core teaching and learning outcomes of a school.

In this issue of Inside Information, we've selected summaries of research studies carried out by teachers which we think offer some useful insights into some of the issues as well as strategies that work.

I hope that you find these summaries useful. They set out to show you some of the benefits for schools and pupils of becoming engaged in, and with, research. All the summaries feature teachers who are using research to address the issue of 'inclusive' classrooms whether in a secondary, special or primary setting. They show how research can be used to move practice forward.

There are many ways TAs can support pupil learning. As a TA, you may work with specific individual children, with small groups or the whole class. In her study of TAs in

## Teaching assistants – crucial partners in children's learning



Plymouth, Marion found that whatever your involvement, one vital way of supporting learning is through the feedback TAs give – to the pupils themselves as well as their teachers.

TAs also give much needed support in devising and carrying through approaches that promote the kind of behaviour that encourages learning. Such learning behaviours range from helping pupils to explore their thinking and reasoning when

working on problem-solving tasks in groups, to motivating disengaged, disaffected, underachieving students, and increasing their confidence.

We've interviewed all the teachers to find out what prompted them to carry out these studies – and what happened next! I hope you find our summaries help and inspire you.

**Jill Martin**  
Chair of the National Teacher Research Panel

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

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

The Panel is sponsored by the Innovation Unit, General Teaching Council, the Department for Education and Skills, and the National College for School Leadership.

# How can teaching assistants contribute to teaching and learning effectively? **Marion Thornton**

Marion was aware that there was plenty of good practice within her local authority – schools where teachers and teaching assistants (TAs) had formed effective working partnerships. She wanted to find out how these relationships worked – the teachers' expectations of TAs, the responsibilities they gave them and the contributions made by the TAs. She

collected data about the teacher/TA partnerships in her area from questionnaires completed by staff from six schools. She found that

“Essential elements to building a good relationship appeared to be clear expectations from the teacher and the teacher's desire to be proactive in building the working relationship.”

TAs were deployed in a variety of ways, but their main role was providing feedback to teachers and students about the students' progress. They also played a valuable role in developing and implementing behavioural strategies.

## How were TAs deployed?

TAs were deployed in a variety of ways, including:

- being class based and/or curriculum specific;
- working with individual children with specific special needs including behaviour;
- working with small groups; and
- developing curriculum resources and/or working in school libraries.

All schools involved TAs in planning activities. They used a variety of ways, such as:

- giving TAs access to the weekly, and long term planning for each class they were working in;
- giving TAs information about the materials needed to adapt work for students with special needs; and
- setting aside assembly time to enable teachers to share planning with TAs.

## What were the hallmarks of effective partnerships between teachers and TAs?

Marion found many examples of good working relationships between teachers and TAs. These consisted of respect and gratitude for the TAs' work and support, and good teamwork that fostered a feeling of mutual support and confidence. This was especially the case when TAs were class-based and in a long-term situation. One teacher explained:

“My relationship with my teaching assistant has developed into one of mutual confidence and respect. This helps me to focus on matching teaching styles to individual student needs. I recognise the value of support that my TA provides to students and encourage her to take part in the lessons.”

## How did TAs provide feedback?

All the schools said that TAs provided teachers with valuable insights about students and their learning activities. Typically, feedback linked to whether and how a learning objective was

achieved by the students, and what the next step in the learning process for the students could be.

TAs also gave students feedback. One TA used a simple grading system that related to the degree of support a student had needed from the TA, and completed a simple statement of reflection on the student's learning progress, involvement, interest and motivation in the activity. The TA used this opportunity to provide positive encouragement and to praise achievement.

## How did TAs get involved with developing behavioural strategies?

Teachers often worked closely with TAs to develop behavioural strategies. In most cases, this involved devising approaches that encouraged positive behaviour, and agreeing on sanctions in line with the school's behavioural policy.

“Time was regarded as a barrier to more thorough joint planning between teachers and TAs. Most primary schools suggested the need for non-contact time to be built into the school week, for teachers and TAs to discuss planning and classroom issues.”

TAs also supported students with specific behavioural needs who spent time out of the classroom, but consulted closely with the teacher on how this time should be managed. TAs often provided insights gained from their experience in other lessons that teachers could act upon, which helped to establish and maintain continuity.

## How was the study designed?

Marion analysed questionnaire data from headteachers, teachers and teaching assistants at two primary and four secondary schools. She looked at the individual responses and at the patterns in the responses across all of the schools.

## Finding out more

- Teaching assistants in Schools: the current state of play (NFER, 2002)
- A survey of working life in teachers (NFER, 2003)
- The Employment and Deployment of Teaching assistants (NFER, 2004)

All available from the National Foundation for Educational Research web site: [www.nfer.ac.uk](http://www.nfer.ac.uk)

## Panel member Lou Harrison asks ... How could teachers and teaching assistants put this research to work?

This study showed the need for ensuring TAs and teachers have time to meet together, to help them build good relationships and plan effectively for their classes. Teachers need to be aware of the ways in which TAs can support teaching and learning effectively (such as, providing teachers and pupils with feedback or working with groups). TAs need to be aware of appropriate strategies to use with pupils (such as approaches to encouraging positive behaviour or ways of adapting materials for specific pupils).

- How could you create time to build good working relationships with teachers or teaching assistants in your school?
- Could you use the ideas in this research as a basis for continuing professional development? For example, could you develop skills such as giving effective feedback, managing small group work, encouraging positive behaviour and adapting materials for pupils with special needs?



- How could you demonstrate the value you place on the role and contribution of your partner in your working relationships?

## An interview with Marion Thornton

When Marion became an Advanced Skills Teacher in 2003 with a specific brief to work with support staff, she wanted “to highlight good practice in primaries in building strong teacher/TA partnerships”. She was fortunate in being based in a school where such partnerships were successfully established. “My colleagues were keen to support what I was doing. The vibe within school was very much driven by close working relationships between teachers and TAs, which are vital in meeting the wide range of children's needs and supporting their learning.” Marion built on this link with her own school when investigating practice in other settings. There have been “lots of different threads and spin-offs” from this original piece of research, and Marion often uses the findings in the training that she provides.

Since completing this research, Marion has become involved in a number of different initiatives and training opportunities to emphasise the vital importance of strong teacher/TA partnerships – for example, through initial teacher training courses and working with returning teachers. At the same time, Marion works with TAs who are studying for Foundation degrees and she is excited by the growing number of opportunities for TAs to further their training and confidence.

Marion is also an enthusiastic member of the Plymouth Network Learning Community (PNLC). It organised a conference recently called ‘TAs Empowering Learning’, which brought together 80 enthusiastic TAs for a rare and very valuable networking opportunity. Marion hopes very much that the PNLC will encourage TAs to engage in research too:

“I wish we could present research by a TA – I look forward to that as the next powerful step. I feel sure that we're not far away from that happening.”

Marion Thornton is an Advanced Skills Teacher at Langley Infant School, Plymouth.

Lou Harrison is an Advanced Skills Teacher based in a Leicestershire community primary school. She supports schools working on broad learning and teaching issues, as well as focusing on early years, creativity and thinking skills, and challenging behaviour.



# How can we encourage effective discussion between students during group work?

Corina Seal

## Why focus on talking?

Staff in the mathematics department of an 11-16 comprehensive school had noticed how many students found it hard to communicate their thinking and reasoning when they were doing extended investigative tasks and GCSE coursework. They were aware of research which showed how getting pupils to talk with each other about tasks enhanced their thinking. They were keen to see how they could use such talk to encourage effective discussion between pupils.

The mathematics staff planned several 'research lessons' for their Year 8 and Year 10 classes to help them explore strategies for encouraging effective discussion between students when working collaboratively on problem solving tasks. They used information which their colleagues gathered about one lesson to help them with planning the next. Strategies which encouraged effective talk between students included establishing ground rules for working in groups and sharing assessment criteria.

**"There is now increased staff willingness to be involved in joint planning and peer observation, both within and across subject departments."**

## What strategies did staff use to promote effective discussion during the mathematics lessons?

For the first lesson in one series of lessons, the teacher simply put the students into groups and asked them to work together on an investigation. When they analysed the audio and video recordings of the lesson, the staff found that most of the students' talk was 'cumulative' – that is, they simply agreed with what each other said. Some of the students' talk was 'disputational' – they argued unproductively, did not listen to what each other said and reached their own, as opposed to joint decisions. The staff found little evidence of 'exploratory' talk, the most educationally effective kind of talk, which involves students explaining and justifying their ideas before reaching an agreement.

To encourage more exploratory talk, the teacher started the second lesson with a class discussion about working in groups. The class devised some ground rules for working in groups, for example 'give reasons to back up anything you say'. The teacher also restructured some of the groups so that the students worked with others of the same gender and similar ability to their own.

In the third lesson of the set, the teacher arranged the students into single-sex, similar-ability friendship groups as before and reminded the students of the ground rules for group work. The teacher then gave the students 'discussion rich' problems. All values in the problems had been replaced by nonsense words. For example:

**"Sam has baba packets of sweets. Each packet has gaga sweets in it. Sam gives away nana sweets from each pack, then he eats a total of lala sweets himself. How many sweets does he have left?"**

For another set of lessons, the students worked on a mathematical problem with a partner of the same gender, again using the ground rules. The students were also given open-ended marking criteria and challenged to earn as many points as possible. Each pair of students then gave their solution to another pair to mark. In the following lesson, the students were also allowed to 'buy' information using tokens, but for each token used, 5 marks were deducted from their final total.

## What did Corina learn from her study?

Corina found that working collaboratively helped the students feel more confident about solving mathematical problems. She also found that arranging the students into groupings based on their gender, ability or level of communication skill helped to encourage greater collaboration and constructive talk. Strategies that supported learning through dialogue (dialogic learning) included:

- ground rules for working in groups;
- sharing assessment criteria;
- peer assessment;
- using tokens or points to buy information.

## How was the study designed?

The staff used a research lesson study protocol. Whilst the class teacher taught the lesson, two colleagues observed and made audio and video recordings of the discussions that took place between the students. The students were also asked to

complete questionnaires. Afterwards, the staff met together to analyse the data they had collected and used the information to plan further lessons designed to address the issues that had been revealed.

## Finding out more

Mercer, N. (2000) Words and minds: How we use language to think together. London: RoutledgeFalmer 'Raising achievement through collaborative group work'. Research of the Month summary on the GTC website. Available at: <http://www.gtc.org.uk>

Details about research lessons are available on the National College of School Leadership website: <http://www.ncsl.org.uk/>

# Panel member Justin Coad asks ... How could teachers and teaching assistants put this research to work?

This study found a number of strategies that successfully supported dialogic learning, including establishing ground rules for working in groups, sharing assessment criteria, encouraging peer assessment and carefully structuring the groups.

- Could you do more to promote exploratory talk with pupils in your classes? Would classifying your children's talk into disputational, cumulative and exploratory types help you to develop your thinking about the way the children interact with each other?
- Would you find it helpful to explore the impact of different ways of grouping pupils, maybe in a different subject or setting (such as primary, for example) and research with your colleagues how the groupings work?
- Is there a 'burning issue' in your department or school and a body of research evidence which you could use as a starting point for your own 'action-based' research that would help you to make a difference?

# An interview with Corina Seal

Much of the impetus for Corina's study evolved from her school's ethic which promotes teacher-led research. It meant that the leadership team made time for Corina and her colleagues to carry out their research. Part of Corina's brief as an AST was to develop research across the school. Her work led to teams researching specific areas, such as assessment.

Corina's research increased her awareness of the importance of gathering pupil feedback and incorporating it into her practice. She believes that using pupil feedback can be really effective and should be part of the fabric of the school. It has also encouraged her to punctuate and structure class discussion time with phrases such as, "Take two minutes to talk to each other."

Corina considers Research Lesson Study as advocated by the National College of School Leadership (NCSL), to be "an excellent form of professional development" which she highly recommends. She describes Research Lesson Study as a 'good protocol, with a focus on pupils'. Other departments in her school, including Modern Foreign Languages, PE and

Design and Technology are now using the research lesson tool. Her own study was, in fact, a 'research lesson guinea pig', which was guided by Pete Dudley at the NCSL. On a personal level, Corina stresses the importance of avoiding working in isolation.

**Corina Seal** is a mathematics teacher and Advanced Skills Teacher at Sweyne Park School, Essex.

**Justin Coad** has taught in three schools in Hampshire and Surrey spanning a ten-year career. Currently, he is curriculum leader of mathematics at Weydon School in Farnham, Surrey.



# How might we encourage mainstream pupils to develop positive attitudes towards children with disabilities?

**Teresa Whitehurst and Bev Cockbill**

In this project, staff and pupils from a mainstream middle school worked with children and staff from a residential Special school and professionals from a theatre company for two years on a musical production of 'The Monkey King' – an

ancient story from Ceylon. Teresa and Bev used the project to explore mainstream children's perceptions of children who have severe and complex learning difficulties, such as autism. Their interviews during and after the project revealed how they developed more positive attitudes towards the children with

learning difficulties through getting to know them as individuals and by observing strategies used by the Special school staff.

## What did the theatre project involve?

Staff chose drama as a medium for this inclusion project because it provided opportunities for non-verbal communication which meant that all the pupils could participate in some way. Twenty-three Year 8 mainstream pupils and six children from the special school met for rehearsals each week. The children worked in groups of four (three mainstream pupils and one from the special

school). During the sessions, the mainstream pupils were encouraged to watch how staff from the Special school interacted with the children with disabilities to help them learn how to communicate effectively with the Special school children. For example, the Special school staff encouraged their pupils to use their own calming strategies.

## How did the mainstream pupils' attitudes towards children with disabilities change?

Before the project, most of the mainstream pupils had had little experience of children with severe disabilities and little or no knowledge of their conditions. They viewed children with disabilities in a dehumanised way and were uncertain how to communicate with them:

**"I thought they were strange and different."**

**"I was frightened because I didn't know how they would react."**

Their views reflected a lack of understanding about disabilities:

**"I was scared to touch them...I thought I may get what they get if I touch them."**

By the end of the project, the mainstream pupils no longer saw the Special school pupils as different:

**"They're normal – you see past the disability and don't just judge them by that."**

They also felt more confident about working and communicating with them. Strategies they had learned included for example:

**"Start off friendly – get to know them – don't ignore them because it will make it harder later".**

## What helped to make the mainstream pupils feel more positive towards children with disabilities?

The mainstream pupils felt that the process of getting to know the children with disabilities as individuals gradually over a long period of time helped to change the way they viewed them:

**"I think knowing more about them helps – like knowing what they can and can't do."**

They also felt empowered by the knowledge of the staff who worked with the special needs' children and felt that using them as role models helped. Gaining practical knowledge of how to deal with special needs' children was more important than gaining knowledge of their disabilities. One pupil commented:

**"It helped working with 'X' ... if there were problems, then you looked at staff for the way they worked with him."**

## What did the staff conclude about the project?

The Special school staff concluded that a number of factors could help mainstream pupils develop positive attitudes towards children with disabilities, including that mainstream teachers and teaching assistants:

- prepared themselves and their pupils before working on an inclusion project;
- encouraged mainstream pupils to work collaboratively with children with disabilities;
- worked alongside their pupils during the project; and
- provided good role models when working with children with disabilities.

## How was the study designed?

Teresa and Bev carried out semi-structured interviews with each of the mainstream pupils 14 months into the project and again six months after project completion. The questions distinguished between the pupils' perception of disabilities and knowledge of disabilities. Teresa and Bev grouped the pupils' answers thematically and looked for patterns.

## Finding out more

The Sunfield website at:

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

Whitehurst, T. & Howells, A. (2006) When something is different people fear it – children's perceptions of an arts-based inclusion project. Support for learning 21 (1) pp. 40-44

## Panel member Eileen Allpress asks ... How could teachers and teaching assistants put this research to work?

This study showed how getting mainstream pupils to work collaboratively with special needs' children on an arts-based inclusion project helped to change their attitudes towards children with disabilities. The value of the project was that it gave the mainstream children opportunities to get to know the special needs children as individuals and observe the strategies used by the staff.

- Could you be more explicit about modelling effective ways of relating to children with disabilities so that all the pupils in your school become more confident about relating to them as individuals?
- Would you find it helpful to get involved in a project with a Special school in your area which involves mainstream pupils collaborating with children with disabilities? For example could one of the classes you teach involve children from a Special school in a class production?
- How could you find out and monitor the perceptions of disability held by pupils in your school and explore with them how they could find out more?

## An interview with Teresa Whitehurst & Bev Cockbill

Sunfield school, where Teresa and Bev are based, likes to maintain a close working relationship with local mainstream schools. Staff at the school found that when mainstream school staff visited, they didn't seem to understand special needs' children sufficiently to work with them effectively. Teresa and Bev used this art-based project as an opportunity to get robust feedback from mainstream pupils about how to work with children with very complex learning needs.

Teresa and Bev found that whilst their mainstream colleagues were supportive of the research, and were happy for them to interview the mainstream children, they were less supportive of the inclusion project itself. Teresa and Bev think that this may be due to a lack of understanding of the learning needs of pupils with complex disabilities on the part of mainstream teachers.

Both Teresa and Bev have shared the knowledge they gained from this project with colleagues embarking on similar inclusion projects. They produced guidelines to provide a framework for engaging pupils from mainstream and special school settings in a learning context. They give the following advice to colleagues who are thinking of setting up small-scale research projects:

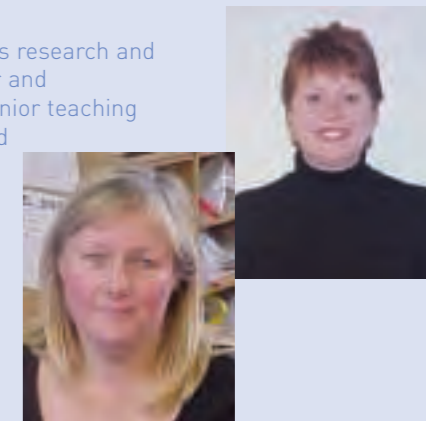
- be clear about the focus of your study;
- be realistic about what is manageable;
- have a clear understanding of ethical guidelines;

- obtain relevant consents;
- stick to a timescale;
- ensure you have the support of colleagues and supervisors; and
- make it a collaborative team activity with realistic goals and practical advice.

Teresa and Bev think it very important that special schools work collaboratively with mainstream schools because it can facilitate effective inclusion and give guidance to colleagues who want support while working with a pupil with complex learning needs:

"Special schools have a role to play in providing mainstream staff with the grounded and practical support they need to ensure all children enjoy the same opportunities to learn."

Teresa Whitehurst is research and development officer and Bev Cockbill is a senior teaching assistant at Sunfield school in the West Midlands.



6 **After working collaboratively it was clear that a shift in understanding had occurred. Mainstream pupils were able to interact with children with disabilities, and communicate and work alongside them with an increased level of confidence.**

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## What can we learn from disengaged students about the way they learn? **Martin Sawyer**

Martin had noticed that many students who did not engage in lessons also had poor non-verbal reasoning skills. He decided to introduce them to a brand new challenge – circus skills – because he wanted to test the theory that helping students to think about their problem-solving skills might help them to engage with other learning opportunities. His project focused on 40 Year 8 students who showed significant difficulties with non-verbal problem solving skills. The project not only helped him to investigate strategies that would help them to learn, but also showed him how students did and didn't cope with frustration.

### How did the students react to the challenge of learning circus skills?

The students were given the opportunity to learn circus skills over five sessions, each lasting 90 minutes. The first four sessions concentrated mostly on the skills they were likely to find more difficult – juggling and walking a 3m tight-rope 0.5m above the ground. When they had developed these skills they were allowed to progress to any of the remaining tasks on the list – plate spinning, diabolo, rolla bolla and flower stick.

Martin had thought that the circus skill activities would engage the students on the basis of novelty alone. But the students' responses to the circus activities were much like their usual responses to classroom tasks – when they found an activity difficult, they wanted to avoid doing it. One student said:

**“When are we going to do the diabolo, I can do that, I am good at that, when are we going to do something different? This is boring; I never wanted to do this anyway.”**

He noticed that when the students found something difficult they tended to dwell on their failures rather than their successes, and many felt frustrated by them. When faced with frustration, the students reacted in one of three ways:

- around 40% of the students quietly disengaged from the activity;
- around 40% of them disengaged aggressively; and
- the rest persevered.

What helped the students to persevere and succeed with the tasks?

Martin found that the students who became disengaged when they felt frustrated with a task needed support from either their peers or the adults present to develop strategies that helped them to feel successful. One effective strategy was to ask the student to think why s/he had not succeeded and encourage him/her to think about what s/he needed to do, in order to succeed. Another effective strategy was getting the students to keep a diary, and steering them to use it to record their successes and ways they could build on their current achievement.

The students recorded both general strategies (such as, “concentrate and practice more”) and specific strategies (such as, “walk more slowly on the tightrope”). When they eventually found success, the quiet and undemanding students expressed their emotions in an equally measured and deliberate way. Their responses ranged from smiling to themselves to recording comments in their diaries:

**“I felt really determined and more successful this week because I am more confident, being able to do it is fun, it was so brilliant when I did it, it was really sudden.”**

The students who disengaged loudly and aggressively when frustrated drew a large amount of attention from adults. They became very agitated, swore and behaved in a defiant and oppositional way. But the strategies were effective even with these students. And when they experienced success, they let everyone know:

**“Take a picture of me, look, look, I can do it now, watch me, I've got it sussed.”**

### How was the study designed?

Martin collected data from several sources including the students' reflective diaries, interviews with the students and observations. The diaries focused on the students' successes and the students' own evaluation of what had helped. Martin felt he had spent too much time at the beginning of his study looking for 'magic moments' and recording them haphazardly. Moving to a more focused method of data collection helped him to both analyse and highlight patterns in the data.

### Finding out more

On the creative partnerships website <http://www.creative-partnerships.com/> you will find examples of other creative projects that have helped practitioners to explore aspects of student learning.

Panel member Lou Harrison asks ...

## How could teachers and teaching assistants put this research to work?

This study showed the value of actively working to engage students with learning. It also showed the importance of recognising and managing students' frustration at their lack of success at the earliest opportunity.

- How do you identify disengaged students? Are you as aware of the students in the class who disengage quietly as you are of the students who get aggressive when they're frustrated?
- How could you and your partner teacher/TA work together to help break the cycle of frustration and disengagement in your own setting?
- Would encouraging children to keep reflective diaries in which they record personal targets and successful strategies help any of the children you work with?



## An Interview with: **Martin Sawyer**

Martin's research grew from his personal reflections on the student group he worked with. It has since developed from a “very small research project, into something that's informing the whole school”.

Martin's research showed “just how much you can learn from students when they don't learn – students who do learn easily make it hard to observe the process”. His main focus became investigating ways of overcoming their barriers to learning, “which should be at the heart of everything we do.” The impact of the research is increasingly being felt throughout the school. But whilst for Martin, the research helped him to think about what actually made students engage with learning, it has helped the school come to recognise the need to work with disengaged students, and of the importance of making sure everyone achieves success.

This study was funded through The Creative Action Research Award (CARA) Scheme and this gave him access to a learning mentor. Martin felt his mentor played a crucial role in helping him to identify clear questions to structure his research. Martin recommends that any practitioner interested in research should make sure they have access to a mentor – “someone who can step back slightly, look at the bigger picture, and make sure that what you want to do is achievable”. He also thinks it's important to share your enthusiasm with colleagues, “Communication is the key... make sure everyone knows what's going on.”

In fact, communication is a theme that runs throughout Martin's thinking about research:

**“Sometimes, working in education, you get so tied up with the hoops you have to jump through... your reasons for going into education become increasingly dormant. If you meet someone you can work well with and learn from, you'll find their enthusiasm starts to invigorate and have an impact on the quality of your practice.”**

Martin has plans for doing further research and is confident about the benefits of this for everyone:

**“What I hope is that we'll be able to create a culture where we're a learning community, with investigations informing practice. I really do believe it will be successful in terms of developing us as a learning community throughout the whole school.”**

Martin Sawyer is KS3 Inclusion based coordinator and Professional Tutor at the City of Norwich school.

Lou Harrison is an Advanced Skills Teacher based in a Leicestershire community primary school. She supports schools working on broad learning and teaching issues, as well as focusing on early years, creativity and thinking skills, and challenging behaviour.



## How might we support disaffected and underachieving students? **Eimear Holland**

Eimear wanted to find an effective way of supporting a group of twelve Year 10 students who were at risk of failing to meet their predicted grades in PE at GCSE. She aimed to change the

**75% of students completing the questionnaire stated that they enjoyed working with their team in their PE lessons.**

students' behaviour, attitude and attainment by making them responsible and accountable for their actions, enjoyment and learning. She put the students into teams and each student took on a specific responsibility, such as captain or equipment monitor. Each week, the teams collected points for attendance and punctuality etc. Eimear found that over the year, the students became more focused and engaged during lessons and most reported that they enjoyed PE lessons more. Their attainment improved too – nearly all the students either achieved or exceeded their predicted grade in the end of year exams.

**Punctuality improved. One student commented that, 'people were running to the lesson'.**

### How did Eimear organise her PE lessons?

Eimear used three main strategies to give the students a clear sense of direction and make her lessons run smoothly:

- working in teams with a specific role for each student;
- a points system; and
- a punctuality revision quiz.

At the start of each lesson, the equipment monitor from each team collected a 'team sheet'.

Eimear awarded each student points for

attendance, punctuality, correct kit and completed homework, which the team recorder recorded on the team sheet. Students with incorrect kits lost points for their team. Eimear also awarded three discretionary points for exceptional effort, 'champagne moment' (outstanding performance) and sports personship which were also recorded on the team sheet. The team with the most points at the end of the week won and the results were placed on the sport education notice board. Recording such indicators of success helped the students to evaluate their own performance in the lesson, and identify target areas for improvement.

With the punctuality revision quiz, Eimear aimed to encourage the students to arrive early, help them with their revision and create a more focused start to the lesson. As the students arrived at the lesson she gave them a numbered card, which the team recorder noted on their team sheet. Whilst they waited for the other students to arrive, the students revised their notes from the previous lesson. When all the students had arrived, Eimear asked them quiz style questions, giving the students who had arrived first the easiest questions. The team recorder noted those students who answered their question successfully and added a point for each correct answer to their lesson total.

### What effect did the approach have on the students' behaviour and attainment?

Eimear noted fewer incidents of poor behaviour and that student attainment improved over the year:

- detentions decreased from 18 in the first term, to two in term three;

- incorrect kits for lessons decreased from 15 in the first term, to two in term three;
- failure to hand in homework decreased from 24 in the first term, to six in term three; and
- five of the target group of students achieved their target grade, and four students exceeded their predicted grade in the end of year exams.

The students clearly enjoyed the lessons and showed a greater sense of responsibility and accountability:

**"It makes you feel like you belong, like you're needed."**

**"People were more mature instead of just messing about and it makes your team more well behaved."**

**"You have a part to play. You have your own role. So everyone played a part. You had to stand up for your own role and you want to present it well."**

### How was the study designed?

Eimear asked all the target students to complete a questionnaire at the end of the academic year. She also interviewed the students in groups to give her a greater understanding of the issues. The groups included both target (underachieving) and non-target students, but she only reported the comments made by the target students.

### Finding out more

Siedentop, D. (1994) 'The sport education model', in D. Siedentop (ed.) Sport education: quality PE through positive sport experiences, pp. 3-16. Champaign, IL: Human Kinetics.

Panel member Eileen Allpress asks ...

## How could teachers and teaching assistants put this research to work?



This study showed one effective way of making students feel responsible and accountable for their own learning and actions. The team model helped the students become more focused and engaged during lessons and improve their attainment.

- Do you think supporting this democratic approach to learning would help you to improve students' engagement in your school?
- Could teaching assistants help their colleague teachers to set up the team framework and monitor and if necessary support target students in the early stages of coming to terms with their roles?
- Can you think of ways you might adapt this model for different areas of the curriculum and for other key stages?
- How could you adapt the main principles of the approach described in this study to improve aspects of your practice?

Eileen Allpress is a deputy head at an infant school in Ipswich. She is currently studying for a PhD. Her areas of interest are writing and exercise. She has been a panel member for three years and is the internal vice chair.

## An Interview with: Eimear Holland

Eimear was already involved in a research project in school that targeted disaffected and underachieving students. She used the objectives of the whole school project to develop her own research around the sport education model. She hoped the model would help her to transform the students' behaviour, attitude and attainment through channelling their energy more productively.

Eimear received immense guidance and support from university mentors throughout her research project. "They struck a fine balance between leading with great expertise and promoting high standards." Carrying out the research has had an impact on the way that Eimear now teaches. She feels she is a more reflective practitioner now and that being more reflective has enhanced her professional judgement and helped her to adapt her practice to meet the diverse needs of students.

The research project has had an impact on the approaches her colleagues use too. Eimear mentors trainee teachers and has given them the chance to see the model implemented within their classes. The trainee teachers noticed that the students were less unsettled by a change of teacher. Several of Eimear's colleagues have also implemented elements of the model into their teaching, particularly when students have shown signs of active or passive disaffection.

Eimear gives the following advice to colleagues thinking of undertaking a research project themselves:

- choose the challenge, issue or interest with care – consider what you hope to achieve from the research (e.g. support, reflect, refine or reform);
- read existing research and make connections with your own practice; and
- be prepared to disseminate – cascading what you have learned multiplies the value of the learning experience and can provoke thought for other practitioners.

**63% of students felt that the team sheets helped them to focus on the task in hand.**

Eimear Holland is a PE teacher at Bishop Challoner Sports College & Sixth Form Centre, Birmingham.

# How might we increase students' confidence and raise their achievement in design and technology? **Natalie Griffiths**

Natalie wanted to investigate an issue she had noticed with students in her classes – that girls and less-confident boys appeared to underachieve in a design and technology workshop environment. She found out more about the problem by observing a group of Year 7 students in a workshop, devised a range of strategies to help overcome the problem then observed another group of Year 7 students with the strategies in place. She found that girls were not confident about using the larger pieces of equipment because they thought they were dangerous. They preferred to work on safer tasks, such as painting. Some of the boys preferred the safer tasks too. Introducing strategies such as a 'tally' system helped these students to make greater use of the larger equipment and raise their level of achievement.

**"Academic research into biological, neurological and psychological gender differences found that girls and boys do learn differently and gave reasons as to why."**

## What gender differences did Natalie find in the design and technology workshop?

When Natalie analysed questionnaire responses and video footage of a group of 120 Year 7 students, she found that the girls and some of the boys:

- preferred painting and other finishing tasks;
- avoided using machinery if they could;
- rarely used machinery or hand tools on their own;
- tended to work in same sex groups;
- disliked the dust and noise found in the workshop; and
- made limited use of the workshop space and available equipment.

Most boys, on the other hand:

- preferred tasks involving hand tools;
- made full use of the workshop space and available equipment;
- took tools from other workbenches without asking for permission; and
- tended to want more teacher attention.

## How did Natalie set about boosting the students' confidence levels?

Natalie devised eight strategies to overcome the problems she found. These were:

1. Ensure that the workshop environment is clean, tidy and stimulating.
2. Be enthusiastic about the curriculum and manufacture products that appeal to both sexes.
3. Present curriculum materials in a form that will appeal to both boys and girls.
4. Use physical and computer modelling within projects to make the designing stage more appealing to boys and stop them from rushing into the making activities.
5. Distribute teacher attention equally between boys and girls.
6. Arrange students around workbenches in mixed sex groups to improve the quality of interaction between boys and girls.
7. Limit students to working within an allocated space and allocate tools to specific workbenches to prevent boys from hogging the tools.
8. Employ a 'chit' system of numbered cards to ensure the students take turns at using the machinery.

**"It is not just girls who have the need for strategies to improve confidence, there are many boys who also lose out to those with more confidence in the workshop."**

## What difference did the strategies make?

To judge the effectiveness of the strategies, Natalie filmed another group of Year 7 students with some of the key strategies in place. She asked their teacher to:

- put the students into mixed sex groups;
- allocate specific tools and equipment to the students;
- remind the students of safe working practices frequently;
- try to spend an equal amount of time with both sexes; and
- issue the students with chits when they needed to use the machinery.

Natalie felt the intervention strategies worked well. The girls and boys spent a more equal amount of time on each type of activity. She concluded:

**"The results of my research study provide evidence that employing key strategies will benefit pupils of both sexes by ensuring that their achievement within practical workshop sessions is not hindered by gender difference issues."**

## How was the study designed?

Natalie used three approaches for her research. She:

- read academic research about gender differences;
- surveyed 120 Year 7 students (60 girls and 60 boys) about their confidence in using hand tools, the pillar drill, bench sander and finishing; and
- videoed Year 7 students working on practical activities in a workshop environment.

## Finding out more

Stanworth, M. (1983) *Gender and Schooling*. London: Hutchinson  
For up to date information regarding education and gender issues you could visit:

[www.standards.dfes.gov.uk/genderandachievement](http://www.standards.dfes.gov.uk/genderandachievement)

## Panel member Justin Coad asks ... How could teachers and teaching assistants put this research to work?

Natalie's study showed how boys and girls can prefer different ways of working and how their preferences can impact on their learning and achievement. Her study found that the girls' lack of confidence limited them to doing the tasks they viewed as safe. The boys tended to make much greater use of the available resources. Exploring the issue with her students helped Natalie to devise strategies that would help.

- Does your partnership with a teacher or teacher researcher give you an opportunity to observe the different ways that boys and girls approach learning so that together you can plan to maximise opportunities for everyone?
- Would you find it helpful to adapt the strategies that Natalie devised for students in other practical lessons?
- Natalie used video to explore learning patterns before and after she tried something new. Do you have a strategy that you would like to integrate into your practice? Would using video before and after research design help you to work out how effective it is?

# An interview with Natalie Griffiths

One of the driving forces behind Natalie's research was her own (good and bad) experiences of being a female in a series of male dominated environments. These ranged from being the only woman on her B.Ed course to the only female teacher in the 'hard' area of a design and technology department.

Carrying out research has helped Natalie to create a stimulating environment. This includes acquiring a Dalek from the BBC's last Dr Who series and using it as a resource in her classroom! Her research also transferred across to other departments. Currently, her school's science department is researching effective teaching and learning using the National Strategy.

Natalie found that filming lessons provided a very rich database of evidence for her study. Her key research tip is to be absolutely clear about the protocol of filming lessons. Natalie suggests that 'it is interesting watching yourself, once you get over the self criticism.'

Natalie is a real advocate of practitioner research. She advises colleagues to keep enthusiastic, whilst retaining a focused and realistic research question. She also advises making a thorough reading of previous relevant research. University libraries and the internet house a huge evidence base, and once relevant work has been found it is worth contacting the authors to find out more. Natalie discovered that "people are flattered if advice is sought as a result of their research."

On a personal note (as if all the benefits above were not enough!) Natalie has gained a lot of enjoyment, personal satisfaction and pride from undertaking her study.

Natalie Griffiths is head of technology at Cottingham High School, East Riding of Yorkshire.

Justin Coad has taught in three schools in Hampshire and Surrey spanning a ten-year career. Currently, he is curriculum leader of mathematics at Weydon School in Farnham, Surrey.



# What do young children gain from listening to stories?

Miranda Dodd

## Why focus on story time?

Miranda's study grew out of a concern she shared with other staff at her rural primary school that story time was being squeezed out of the school day. The staff felt that although shared reading of 'big books' allowed children to become aware of the nature of print, listening to stories exposed children to a richer variety of language and text structure, which could have an impact on their writing.

"Some children clearly did not like interruptions, including questioning by the storyteller: they preferred to become absorbed."

She decided to test their view by looking for 'echoes' of stories staff had read to the children in the children's own writing. She also set out to identify effective techniques for reading aloud and any impact they had on

"Frequently rereading stories gave the children plenty of opportunity to absorb literary techniques and reflect them in their writing."

the development of children's vocabulary. Her research was inspired by a study in which Year 5 children were introduced to challenging literature. For many of these children, listening to

'powerful' texts played an important part in developing the richness and variety of their own writing.

## How did staff structure story time?

The staff collected together a range of high-quality literature and set up regular story time sessions. Many of the books had powerful illustrations as is often the case with books for this age group. But they chose some books, such as *The Adventures of Robin Hood* and *Marian* because they were long texts, with few illustrations and a demanding level of language.

Staff experimented with a range of different approaches for presenting the stories. Sometimes, they read the story without interrupting it and at other times they broke off to discuss the story with the children. Sometimes, they showed the children the pictures (usually after the page had been read, to give the children time and space to picture the ideas in their head). They read many of the stories several times, but some only once.

## What effect did the story sessions have on the children's writing skills?

When Miranda analysed the children's own stories, she found echoes of the stories they had listened to in nearly all of them. There were echoes in their:

- plots (in the openings, the characters and settings, development of time, the complication, resolution and ending); and
- use of language (vocabulary and sentence structure).

The children mostly transformed, rather than copied the models they had heard and discussed. One girl, for instance added a fairy tale element to her story of *Robin Hood*, whereby he found a diamond which granted him wishes.

The children tended to borrow ideas from the stories they had heard many times. For example, one child used ideas from *Wildsmith's Bear's* adventure. Her central character, a deer, had similar adventures, including being rescued by a bulldozer instead of a fire engine.

## How was the study designed?

Miranda interviewed 15 Year 2 children individually to find out their views of story time and writing, and collected six samples of writing from each child. She coded the 'echoes' she found in the children's writing from the stories they had heard, according to common themes and ideas. She also videoed three story time sessions which she analysed according to the story teller's facial expression, gaze, gesture, body movements, vocal pace, pitch and volume, and she kept ongoing observation notes to record classroom activities.

## Finding out more

Barrs, M. and Cork, C. (2001), *The Reader in the Writer: the links between the study of literature and writing development at Key Stage 2*. London: CLPE  
Fox, C. (1993), *At the Very Edge of the Forest: The Influence of Literature on Storytelling by Children*. London: Cassell  
Meek, M. (1988), *How Texts Teach What Readers Learn*. Stroud: The Thimble Press

# An interview with Miranda Dodd

Miranda started thinking about her investigation after talking with her colleagues about their shared concerns that curriculum pressure was squeezing out story reading and that this was having a knock-on effect on writing. Miranda undertook the study as a Best Practice Research Scholarship (BPRS) project. She was supported by Southampton University, especially Jill Bourne.

Miranda found it invaluable to have someone to talk with. "Jill always seemed to ask the right question at the right time or tell me when to try a wider perspective". Although no one else was involved in the research, her colleagues have continued to be supportive and she is now working on a PhD. To overcome the isolation of living in a rural area, Miranda has set up an educational research group in Dorset.

Miranda is now investigating ways of helping children to make their own links and connections. She started with a literacy focus and plans to investigate how children might transfer their learning to other areas of the curriculum. Her school has an ethos of investigating classroom practice. She has helped design a questionnaire for parents with other teachers and the results will feed into the school action plan.

Miranda's advice to teachers or teaching assistants who want to undertake small-scale research projects in their own classrooms is:

"Go for it, it's well worth doing. It's all a matter of investigating, gaining evidence, and not jumping to conclusions. Explore an area in depth. I've found this evidence gives confidence in teaching. It also helps in structuring thinking. As educators we need to be involved in research so that it has relevance for us."

Miranda Dodd is a class teacher at The Dunbury School, Dorset.



Sue Dobbing is a reception class teacher in an East London primary school. During her fifteen years in the school she has coordinated humanities, mathematics and literacy and been involved in school-based research in literacy and mathematics.



## Panel member Sue Dobbing asks ... How could teachers and teaching assistants put this research to work?

This study showed how listening to stories had a powerful effect on the children's writing. When stories were well presented, the children enjoyed listening to them again and again, and it was the stories which they heard repeatedly, that had the most effect on their writing. Few children were still being read to at home.

- Would you find it helpful to work with your colleagues to put together a collection of high quality story books for your classroom?
- Would you find it helpful to observe the techniques your colleagues use when reading stories to groups of children, and how they impact on the children's enjoyment?
- Could you find opportunities to discuss the impact of listening to stories on the children's writing with parents and encourage them to continue reading to, as well as with, their children?

## What did the children think of the story sessions?

The children clearly enjoyed having story time again. They valued the story sessions too. Many were no longer read to at home and they described the calming effect that story time had on them:

"Sometimes there are really funny things in there and they make you smile. It takes your mind round for a walk and it settles you down."

(Matthew)

When the storyteller presented the stories well, using a range of techniques (such as using different voices for different characters), the children enjoyed hearing the stories over and over again. The children found that listening to stories helped them with their own writing:

"I get ideas from the story and when I write some stories I can really concentrate."

(Caroline)

"When I listen to a story I listen and then I hear a bit and it reminds me of something. When I'm writing stories I sometimes put it in."

(Nick)



# Keeping up-to-date with research

## Research Informed Practice Site (TRIPS)

<http://www.standards.dfes.gov.uk/research/>



In the last issue of Inside Information we reviewed The Research Informed Practice Site (TRIPS). Since then, many more digests have been added to the website so we recommend you make a return visit.

The digests are grouped by themes including Behaviour, Learning Support Staff and Inclusion.

## TLRP Practitioner Applications

<http://www.tlrp.org/pa/>



The Practitioner Applications website contains 'tasters' from the Teaching and Learning Research Projects (TLRP) as well as from other sources. Each taster begins with a nugget of evidence, followed by reflective activities which practitioners can carry out in their classrooms. There are follow up activities too, which TAs and teachers can either do on their own or with the help of their colleagues.

## Neighbourhood Renewal Unit (NRU)

<http://www.renewal.net/>



You'll find the documents on the renewal.net site are aimed not only at teachers, but at all public sector and voluntary workers in neighbourhood renewal areas. They are designed to help practitioners work together to tackle the problems faced in the most deprived neighbourhoods in the country. In education, the issues include truancy, children in care, teenage pregnancy, underachievement at school and bullying. The resources use research-based approaches to solving such problems, and case studies that illustrate successful examples of joint working between children's services.

## NTRP – National Teacher Research Panel

<http://www.standards.dfes.gov.uk/ntrp/>



You can find out more about the work of the NTRP on this website. You can also find summaries of the research presented at the 2006 NTRP conference including summaries of the research featured in this issue of Inside Information.

These summaries are free to download

