National Teacher Research Panel
engaging teacher expertise

inSide information
research for teachers, by teachers

Collaborative teacher research: making a difference to CPD

Welcome to the fifth edition of Inside Information, the periodical publication of the National Teacher Research Panel (NTRP). Inside Information gathers together summaries of research undertaken by practitioners around themes of interest to schools. This edition focuses on the important contribution of research to continuing professional development (CPD) for practitioners.

There is now a wealth of research evidence demonstrating the link between CPD and benefits for participating teachers and their students. Four international reviews of evaluations of CPD over a ten-year period have consistently shown that CPD that makes a difference is collaborative, sustained, draws on evidence from research and practice and involves participants in experimenting with new approaches and observing their effects.

Members of the NTRP have been working hard this year to draw out and illustrate the key findings from this evidence in ways that are interesting and useful for practitioners and school leaders. We have identified two sets of claims that we think this evidence makes:
1. the 'how' claims which describe CPD processes that work, and
2. the 'why' claims which set out the benefits of research based and collaborative CPD.

The links between the two sets of claims are represented by the tree diagram overleaf. CPD processes are revealed in the root system, providing nourishment, structure and support with the benefits bursting from these as the lush, tree-top foliage or outcomes. This issue of Inside Information sets out to explore these claims, illustrating and exemplifying them through a rich variety of practitioner research summaries.

For instance, on pages 8-9 you will hear how, whilst exploring the creation of a professional learning community based on thinking skills, Helen Pinnington *experimented with the application* of new knowledge while on pages 4-5 you can find out how three practitoners (Emily Walters, Julie McPartland and Victoria Lichfield) used a collaborative approach to investigate inclusion in their classrooms using peer *observation*. The processes required in *sustaining* teacher-led CPD and the *motivation* behind it are investigated by Judy Arrowsmith and Sue Hay on pages 10-11 as they share their research on how a research culture can be created in school. This is also explored further by John Westwell who, on pages 14-15, argues the case for *specialist support* being an *efficient* method to sustain teacher research.

These represent just a few excellent examples of work and learning of this kind. On the NTRP website you will find more detailed summaries of these and many other projects. Visit www.standards.dcsf.gov.uk/ntrp/ to find out more.

Finally, and on a more personal note, I am thrilled to be able to introduce myself as the new Chair of the NTRP and very proud to take on the role in this special year as we celebrate the Panel's 10th birthday. As a practising geography teacher and AST, I can testify to the difference collaborative teacher research can make to CPD. I hope you enjoy reading about the work of your colleagues around the country.

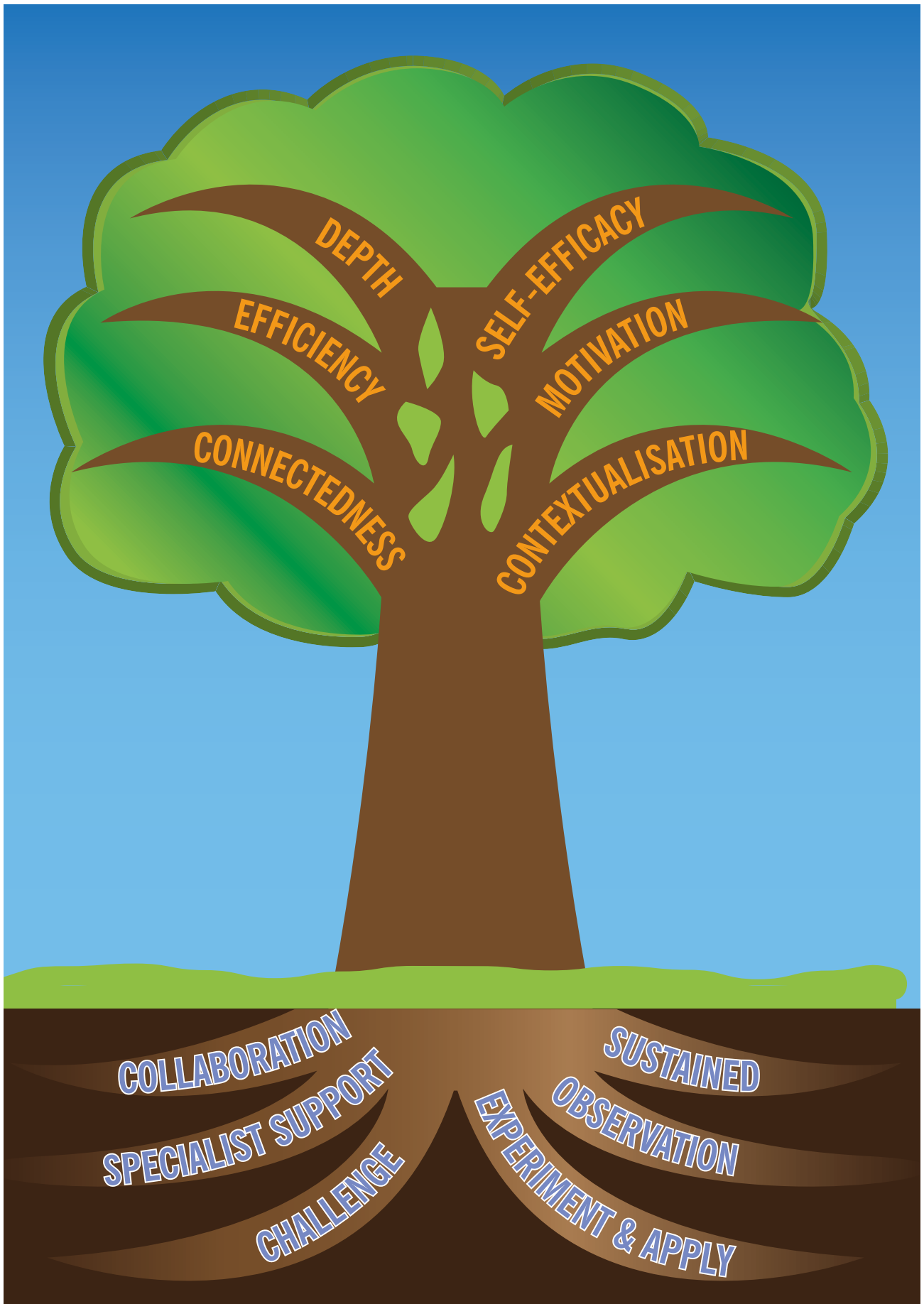**Angela Hardman**, Chair, National Teacher Research Panel

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 Department for Education and the General Teaching Council for England.

GTC General Teaching Council for England

Department for Education

Claims from the evidence: Benefits and Processes

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DEPTH
SELF-EFFICACY
EFFICIENCY
MOTIVATION
CONNECTEDNESS
CONTEXTUALISATION

COLLABORATION
SPECIALIST SUPPORT
CHALLENGE
SUSTAINED
OBSERVATION
EXPERIMENT & APPLY

Claims from the evidence:

Benefits

Maximising our potential as teachers:
By engaging in and with research findings
and tools collaboratively we can:

Make explicit and review our beliefs about
learning, the curriculum and our subject or
area of expertise.
Connectedness

Renew our interest in learning about and
developing our teaching, and strengthen
our belief that we have the power to make
a difference to our students' learning.
Self-efficacy

Develop our understanding of what works
and does not work for our pupils, and why
that is so.
Depth

Increase our commitment to changing our
practice and trying out new ideas.
Motivation

Ensure our development efforts have a
good chance of success for our students.
Efficiency

Learn in the context of concrete evidence
about how our pupils experience teaching
and learning activities and from trying
things out in our classrooms.
Contextualisation

Processes

Teachers engage effectively in and with
research when we:

Connect with and draw support from
peers, working in pairs, small groups,
or communities of practice to explore
together the effects on learners of trying
new approaches.
Collaboration

Sustain CPD over time so we have the
opportunity to embed and evaluate new
practices in our own classroom settings.
Sustained

Draw on specialist support to structure
CPD and identify and access relevant
expertise, knowledge and skills.
Specialist support

Carry out observation of others' practice
and are observed ourselves in relation to
the focus of our development/enquiry
based learning (EPPI).
Observation

Apply and refine new knowledge and skills
and experiment with ways of integrating
them in our day-to-day practice,
identifying our personal starting points
and managing the detail and pace of the
CPD
Experiment and apply

Challenge assumptions that affect and
limit our behaviour as teachers, eg around
whether some groups of learners can learn
as well as others (BES).
Challenge

How inclusive are our classrooms? Emily Walters, Julie McPartland and Victoria Lichfield

The claims illustrated on these pages are: | Connectedness | | Observation |

Following a review of inclusion in the Special Needs Unit at their primary school, Emily and two of her colleagues set out to evaluate their existing strategies for inclusion. They aimed to identify good practice as well as areas that could be improved to inform their approach to inclusion. To do this they observed English and mathematics lessons to find out what was happening already, and interviewed 12 pupils to gauge their attitudes towards how they learn. They found that children with Special Educational Needs (SEN) relied quite heavily on staff for help and had limited opportunities for working independently. They also found that praise had a big impact on the children, but that it was important to provide pupils with constructive feedback about next steps too.

> It was important that teachers learned when to 'back off' and give children the self-confidence to 'have a go'

How did they go about their study?

The study involved three mainstream groups of pupils from Years 3-6 and two classes from within the special needs unit of statemented pupils – a Year 4/5 class of 13 pupils and a Year 5/6 class of 15 pupils. The teachers delivered their lessons as usual. Emily and her colleagues observed the classes for 15 minute periods, focusing on the working situation; teachers' use of praise; and pupils' responsibility for their own learning. They

> Many of the teachers observed praised the children for their ideas, participation in discussions, and for using new strategies

also carried out semi-structured interviews with eight SEN children that included questions such as, what helps you learn in English/mathematics and what makes it difficult for you to learn? The four younger pupils' interviews were less structured.

What did the classroom observations reveal?

The SEN children were mainly supported by an adult or worked in a group situation, with limited opportunity for individual work. Where the classroom situation allowed, the children were independent (e.g. collecting their own resources), however this didn't extend to independence in terms of tackling tasks. The observed teachers made highly positive comments. Many praised the children for their ideas, participation in discussions, recording, staying on task, and for using new strategies.

What did the pupil interviews reveal?

In English, the pupils identified staff as being the only resource that could help them with their learning. But in mathematics, the children were aware of different resources they could access, and also had a good understanding of the strategies they could use to help them solve

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Panel member Miranda Dodd asks...

Miranda Dodd teaches Year 2 at St Andrew's Primary School, Fontmell Magna in Dorset. She is learning leader for Early Years and Key Stage 1 and is responsible for research, enquiry and innovation across the school.

What could this research mean for CPD in your organisation?

The success of Emily's research can help us reflect on a number of points:

- Is there something you and other colleagues are keen to investigate where observations would be helpful? At Shelthorpe they found it useful to involve support staff as well as teachers. Who could be involved in your setting? How can you make sure everyone is clear about the focus? How can you help people work together collaboratively?

- Emily and her colleagues also used semi-structured interviews to find out their pupils' views. Can you think of a few questions related to a key issue that would be useful to ask your pupils?

- Emily found that investigating her key beliefs about independence and inclusion whilst monitoring the effect of changes was important. How could you investigate pupils' independence in lessons or your inclusive practice? What could you try to help develop this and to monitor what is happening? What other key beliefs are you interested in exploring and who might be interested in working with you on this?

- Working on a school issue with specialist support from CUREE was important to the success of this project. What issues are important to you and your colleagues? Are you looking for help with subject knowledge, methodology or something else? Who could you approach for support?

problems. When asked what would make it easier for them to learn, one pupil requested resources such as counters, and another child asked to be able to do things in little steps. All of the children liked receiving praise for effort and being rewarded for working well.

What did Emily and her colleagues learn from their project?

- On the basis of their findings, Emily and her colleagues felt it was important to: provide children with more opportunities for independent work, such as asking a pair of children to do a mathematics activity with money and a till without help from an adult. They thought it was important that teachers learned when to 'back off' and give children the self-confidence to 'have a go'.

- Build in opportunities for developing independence into lesson planning. This might include, for example asking SEN children to do things that they are capable of doing on their own, such as taking the register or putting out equipment.

- Provide constructive feedback as well as praise to promote independent learning, e.g. identifying something specific that pupils can keep doing or do next, such as 'That's great, you've got the first sound of every word right'.

- Ensure support staff also understand the importance of providing constructive feedback as well as praise to further encourage independent working.

How was the study designed?

Data collection included lesson observations in English and mathematics using a coded transcript, and interviews with the 12 pupils. Five of the pupils interviewed had statements of special educational needs, and seven were on the school's own special needs register.

Find out more

GTC Research for Teachers summary *Special Educational Needs and Inclusion*: www.gtce.org.uk/teachers/rft/sen_inc1105/

Dweck, C. (2000) Self-theories: *Their role in motivation, personality and development* Philadelphia: Taylor and Francis. GTC Research for Teachers summary of this work *Promoting students' persistence in meeting learning challenges*. Available at: www.gtce.org.uk/teachers/rft/challenge1007/

An interview with

Emily Walters

Emily believes that "both children and staff at Shelthorpe Community Primary School benefited from this project and will continue to do so in the future". She feels that observing each other was a key part of the process. It helped colleagues to work together collaboratively, especially when feedback was shared with all staff: "It worked well because we took the time to really clarify what we were observing, devised a method for recording this and observed each other several times". Emily says, "This, along with semi-structured interviews, shows how effective CPD can help us develop our understanding about pupils' learning".

Emily and her colleagues were provided with invaluable support from CUREE in accessing relevant research and in developing their approach – an example of outside expertise helping the process. They also drew powerful support from each other throughout, demonstrating the benefit from collaborating together. Emily says "working on a joint project allows you to engage more with staff members who you may not necessarily work with on a daily basis".

The project has had clear benefits for the staff and children, for example in improving the ways in which staff give pupils praise. From their interviews and observations they noted that the children really appreciated praise but that this needed to be well focused to be most effective. Emily found that colleagues found it relatively easy to improve the way they praised, following feedback.

If you are interested in doing something similar Emily's advice would be to "make sure that you choose something that is relevant to what you are doing now". The time invested is very worthwhile; in her experience using research to help them reflect on both the positives and elements to improve in their practice was very motivating.

Emily is a class teacher within a MLD unit at Shelthorpe Community Primary School. She teaches in Key Stage 2 and is responsible for teaching assistants across the school.

Using research as a stimulus for developing classroom teaching Robin Bevan

The claims illustrated on these pages are: | Depth | | Challenge |

Conscious that the teaching in his department tended to be according to 'personal style', Robin decided to introduce his colleagues to relevant research literature to try to make their lesson planning more evidence informed. Since Robin was the head of mathematics in a boys' secondary school, he decided to focus on whether there were particular classroom approaches shown to be more effective with boys. He found substantial literature already existed in this area. After carrying out a thorough review of research and interviews with colleagues about gender and learning in mathematics, Robin identified research evidence that both confirms and contradicts the intuitive judgments of experienced teachers and used this to effectively promote professional dialogue and bring about changes in classroom practice.

> **Robin's colleagues developed a greater awareness of how to manage lessons more effectively for boys**

What did Robin's literature review show?

Robin's literature review produced the following evidence:

- Up to the beginning of A-Level, girls outperform boys in mathematics, but this difference is small and is not constant across all aspects of the subject.
- The attitude of pupils towards mathematics differs according to gender.
- Pupils' expectations of their own performance

> **The evidence led Robin's colleagues to appreciate that ability grouping does not necessarily create sets of students with similar learning needs**

differ significantly depending upon whether they are a boy or girl.

- Boys and girls typically differ in the way they learn.
- Ability grouping impacts differently on boys and girls.

What did Robin's interviews with his colleagues reveal?

Robin interviewed his colleagues without first informing them of his literature review findings. Each interview focused primarily on what colleagues would expect to find if boys' and girls' approaches to learning mathematics were compared. Interestingly, although they had no knowledge of the research evidence, his colleagues provided answers that closely matched the evidence from the literature review. Their views were based solely on classroom observation over years of teaching.

How did engaging with research findings help to change classroom practice?

Once Robin had compiled a commentary from the interviews, he combined it with the findings of his literature review and produced a report which he used as a focal point for discussion in his department. He encouraged his colleagues to discuss the implications of the gender differences

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Panel member Paul Walsh asks...

Paul Walsh is Assistant Headteacher at The Park School

What could this research mean for CPD in your organisation?

- Narrowing the achievement gap is an important issue in education. Does Robin's study help us in identifying teaching and learning strategies that have the potential to narrow the gap? For example, at the start of key lessons it could be helpful to identify why a particular topic is important, giving a holistic overview of the subject matter in context, and its personal relevance for pupils.

- Robin found that just because teachers group pupils by ability, particularly in mathematics, that doesn't mean that there is uniformity in the learning needs of the group. Do you have a class or group of pupils that would benefit from you increasing variety in the approach and activities you use?

- As a subject leader could you identify an area of common interest within your team's practice that may be an area of research? An example might be to investigate whether there are gender differences in the way that pupils learn in other subjects.

- Robin's study used previously published research evidence as a starting point for the professional development of a team. Could you use a similar process as a professional learning tool in the development of teacher expertise?

- Can we use research to challenge the assumptions we make about what good teaching looks like?

for their own teaching. Ultimately, this resulted in a number of practical modifications to the department's teaching strategies.

Of all the evidence collected, Robin felt the finding concerning the relative proportions of boys and girls who are either 'holist' or 'serialist' learners was the most significant. The realisation that boys typically need the 'big picture' provided by lesson objectives, whereas girls typically want instructions sequenced one at a time, resulted in greater awareness of how to manage lesson introductions more effectively for boys by giving them an overview of the whole topic first.

The same evidence-informed perspective also helped Robin's colleagues to appreciate that ability grouping does not necessarily create sets with homogenous learning needs and that they therefore needed to remain attuned to the learning needs of each individual student. Robin's colleagues had already shown they were familiar with the importance of identifying pupils' individual learning needs because they had emphasised that 'typical' boys or girls do not exist during their interviews with him.

Finally, the research also led Robin's colleagues to the new understanding that since boys tend to over-estimate their understanding of, and performance with, mathematics topics, and may communicate that they are ready to move on when actually they are not, they needed to be careful about advancing to a new subject based solely on pupils' self-reports. The careful use of diagnostic question and answer activities emerged as a more suitable strategy.

How was the study designed?

Robin sourced a range of research focused on boys' and girls' learning mathematics from Cambridge University's library, by cross-referencing an Ofsted review of research and from looking at a range of government statistical publications.

Robin then conducted informal semi-structured interviews with seven colleagues from his department, asking them to comment in particular on relative attainment, pupil attitudes and expectations, different approaches to learning according to gender and the impact of pupil grouping on boys and girls.

Robin concluded his project by reporting how the findings from his literature review compared with those from his interviews. This report was made available to Robin's colleagues as a tool to inform their teaching practice.

Find out more

Gorard, S., Rees, G. & Salisbury, J. (2001) *Investigating the patterns of differential attainment of boys and girls at school*.

Lindsay, G. & Muijs, D. (2006) *Challenging underachievement in boys*.

Both of the above practitioner summaries are available to download here:
http://www.education.gov.uk/schools/toolsandinitiatives/tripsresearchdigests/a0013247/themes-gender

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An interview with

Robin Bevan

When Robin was working as a mathematics coordinator several years ago, he needed to find an area of inquiry to stimulate in-depth discussion about effective teaching with his colleagues. After a chance conversation with a research colleague he realised that within the mathematics department they didn't have an evidenced-based view about gender in teaching mathematics, so he used this as a focus for challenging his own and his department's professional development.

Robin began his research through conversations with colleagues about gender differences in teaching maths. He discovered that they all had a well developed, but incomplete, practice-based view. He then conducted a literature review which he used as the starting point for evidence-based departmental discussions that would support, challenge and then create a departmental development plan.

When asked what difference his research had made to his practice and beliefs, Robin said, "boys in particular overestimate what they know and have understood". He noticed that the flow of the lesson is often determined by verbal feedback from individual pupils rather than fuller diagnostic feedback. He also found that grouping pupils by ability is not necessarily the same as grouping by learning need: "we have broad methods of grouping pupils, but we need to fine tune the ways that we teach in order to match the styles through which our pupils learn".

Robin believes, "we can challenge the assumptions we make about the ways pupils learn through reading and engaging in research in education". Robin's advice to anyone wanting to explore a similar idea was refreshingly simple. He said, "just do it, be ready to be surprised about how much there is always to learn about teaching. It's worth doing it no matter how small it is, even small projects can give you one or two insights that really change the way you teach for the rest of your career!"

Robin Bevan is Headteacher at Southend High School for Boys

Creating a professional learning community through thinking skills Helen Pinnington

The claims illustrated on these pages are: I **Self-efficacy** I I **Experiment and apply** I

As a newly appointed head of geography at an 11-18 catholic comprehensive school, Helen wanted to develop the use her colleagues made of thinking skills activities to improve the learning diet for the pupils. She involved them in creating a range of thinking skills resources to deliver a three-part lesson effectively. As a result, department meetings became a forum for sharing ideas and good practice, and discussing teaching and learning, which her colleagues enjoyed. They also felt that the new approach was having a positive impact on pupil learning.

How did Helen start?

Helen carried out an initial audit which showed the teachers lacked knowledge of thinking skills and the skills to deliver them in the classroom. She also found there was little continuity across the department due to a lack of schemes of work at all key stages. Consequently, Helen, with guidance from a consultant, wrote some schemes of work related to the 'Thinking Through Geography' series of books. The schemes immediately established a basis of continuity in the department through shared objective-led teaching.

How did Helen develop her colleagues' use of thinking skills?

A consultant ran a twilight training session on

> **Department meetings became a forum for sharing ideas and good practice, and discussing teaching and learning**

> **Helen's colleagues tried different thinking skills activities with their classes, and shared their successes and failures**

starters and plenary debriefing sessions for all staff in the department. Staff were then tasked with including a starter activity in every lesson they taught and recording it, so it could be included in the revised schemes of work at the end of the year. This encouraged staff to share resources and ideas both formally, through department meetings, and informally.

During this time, the consultant also began to work with the two NQTs in the department on how to teach using thinking skills activities. This was achieved through team teaching one class over half a term. The NQTs then shared what they had learned with the more experienced staff in the department, again both formally and informally. The consultant used some funding that was available to buy copies of 'Thinking Through Geography' and 'More Thinking Through Geography' for all the staff in the department so that they could begin to read about thinking skills for themselves, and try some of the ideas in the books.

How did Helen consolidate her colleagues' learning?

At the start of the following academic year, the geography staff made a collective decision to abandon assessing pupils' ability to retain geographical information and to start to determine pupils' levels based on a specific thinking skills activity

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Panel member Colin Hill asks ...

Colin Hill teaches at Birkdale Primary School in Southport. He teaches Year 2 and is responsible for ICT and whole school assessment, and is currently working towards an Educational Doctorate at the University of Glasgow.

What could this research mean for CPD in your organisation?

Helen's research demonstrates the power of working collaboratively with external support to bring improvements to departments for the benefit of staff and pupils' learning experiences.

■ Have you just begun a new post or taken on a new position of responsibility? Could research oriented CPD help you embed best practice in your new situation?

■ External support resources from a specialist were important for Helen's work. What other people or organisations could you link up with? What local and ICT resources are available to help you explore your ideas? What Personal Learning Networks are available to you?

■ Helen found that a collaborative group working together and supporting each other in research was vital. Could you set up a group like this within your department or school, or through bringing people together from different places? What kind of question would allow different people to find their own starting points, but also provide some common ground to work on together?

■ Helen felt it important to involve students as well as staff in her research. 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?

during each unit of work. This was implemented throughout Key Stage 3 using the thinking skills resources the staff had already put together. At the same time, staff were tasked with including a plenary activity in all their lessons and recording the activity for use in revised schemes of work. Over the year, they continued to try different thinking skills activities with their classes and share their successes as well as failures.

What impact did the CPD have on staff?

Helen found that her colleagues:
- regularly used thinking skills activities to deliver the aims, objectives and outcomes of their lessons, as their knowledge and experience of delivering these activities increased
- were more focused on facilitating learning rather than delivering information
- regularly used a variety of kinaesthetic and visual activities in their classrooms
- created a range of resources to effectively deliver a three-part lesson, and
- started to focus on teaching literacy skills through geography in order to improve pupils' ability to communicate their geographical findings.

What impact did the teachers' CPD have on pupils?

Staff felt that pupils were:
- more challenged
- able to express themselves in a variety of ways
- achieving higher levels
- aware of what they had to do to reach their target levels
- more aware of their own ability
- more confident about their roles and responsibilities, and
- found geography a more accessible subject.

How was the study designed?

Helen analysed departmental records including schemes of work, personal resource banks and departmental review and target setting documents. She also collected teacher data through reflective narrative and interviews. Helen asked her colleagues, '*Can you describe the changes that have been influential in the way we teach and facilitate learning in the geography department?*' They were asked to respond under the headings 'the beginning', 'where we are now', and 'the future'.

Find out more

Leat, D. (1998) *Thinking through geography*. Cambridge: Chris Kington Publishing.

Nichols, A. & Kinninment, D. (eds) (2001) *More thinking through geography*. Cambridge: Chris Kington Publishing.

Thinking through geography resources: www.geoworld.co.uk/

Thinking through geography resources: http://www.sln.org.uk/geography/excel.htm

An interview with

Helen Pinnington

Helen was faced with a tough challenge when she was given the post of head of the geography department within her school, as various staffing issues ended up with her leading a team which included two NQTs, a SENCO teacher, as well as a history teacher! The research project supported the team to grow into an effective, coherent group.

The main focus and outcome of this research was self-reflection, which was important to the success of the project, but needed to include her colleagues, as well as the pupils. The focus was around changing learning behaviours, and re-defining departmental documents, including medium term plans.

As part of the self-reflection process, the team challenged behaviours (both pedagogical and pupil behaviour), and challenged obstacles in developing the department to deliver a more coherent, relevant, engaging and demanding curriculum in an effective manner which would benefit all concerned. Pupils were invited to support the process by taking part in interviews and focus groups. At the same time, staff were also interviewed to ensure there were no conflicts within the department and the process could progress further.

Helen's advice to others wanting to be involved in research of a similar nature is to combine it with wider reading. Helen benefitted from the support provided by local authority consultants, however further support was provided by reading the work of David Leat and this was pivotal in the self-reflection aspect of this project. Helen has continued her interest in research and developing her own teaching practice by using the evidence within her Masters in Education qualification.

Helen Pinnington was at a secondary school in Kirkby when she undertook this research. She moved to work within the Local Authority, but now has returned to the classroom, working in a secondary school in Maghull, Sefton.

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Creating a research culture in school

Sue Hay and Judy Arrowsmith

The claims illustrated on these pages are: **| Motivation |** **| Sustained |**

Senior staff at Sue's school (an independent girls' school for 18 months – 18 years) wanted to improve teaching and learning through enabling staff to see research as an essential part of professional practice. To kick-start the initiative and support the necessary change in attitude, understanding and skills, the school took the unusual and bold step of appointing a part-time Research Fellow. A series of research seminars was also established and anyone interested in doing research was offered the chance of participating in guided whole-school research projects. The change towards a research-based culture that was created also resulted in students raising questions and undertaking research enquiries themselves.

How did staff initially view research?

Before the project, some staff regarded research with suspicion due to:
- its association with academics who were thought to lack a sense of classroom complexities
- a nagging fear that extra time might be required to conduct research when teachers already faced many other pressing demands, and
- teachers' lack of confidence about carrying out their own research.

How did the school get staff on board the project?

The school appointed a part-time Research Fellow who acted as a critical friend. This ensured that any teacher's plans (or even vague thoughts) would be met with a listening ear, suggestions and constructive debate. At an initial staff meeting, the Research Fellow reminded everyone of the integral part research plays in teachers' everyday work and explored some widely held misconceptions about research. Together, they contrasted examples of research currently operating within school. Some studies were heavily statistically based while others involved interviews with children or parents, but what they all had in common was that they had involved a systematic and controlled approach to evidence combined with careful and cautious analysis and reflection.

> **Staff were reminded of the integral part research plays in their everyday work**

> **A series of seminars was established where presenters shared their findings and discussed implications**

Active systems of communication were also seen as important networking for generating interest, within and beyond the school, and disseminating findings. Approaches used included:
- research and development notice boards in the staffrooms which displayed courses, research summaries, websites, agencies offering grants, news cuttings of interest, conferences and awards etc
- the production on an in-house CPD leaflet focused on research, and
- the inclusion of research articles written by staff members in an occasional in-house journal.

How did the school develop teachers' own research skills?

Staff were encouraged to participate in guided, whole-school

Panel member Emma Speziale asks …

Emma Speziale is Assistant Head of English and subject leader for English language at Winstanley College in Wigan.

What could this research mean for CPD in your organisation?

- Sue's school made a conscious move towards becoming a more research-led organisation. One of the steps involved peer observation. How might this be useful for your own practice?

- The appointment of a Research Fellow was a significant move forward for the culture of the school. If you were to explore an area of your practice, who might you like support from either within or outside of your organisation?

- Much of the inspiration for research projects was stimulated through connecting with colleagues. Is there an area of your practice that you would like to explore with the support of a colleague?

- Much of the learning that took place in Sue's school came from sharing the findings of research at CPD sessions. Are you currently engaged with a project that you would like to share with others in your organisation? How would you like to do this?

- One of the ways CPD was sustained in Sue's school was making available someone with experience in research to offer a listening ear at the start and stimulate debate about research. Who, in your organisation can perform these two roles? Could different people come together to offer such support?

research projects. These included a parents' consultation exercise, a study of students', staff and parents' perceptions of single-sex education, and research into the delivery of ICT skills through peer-tutoring. Practical workshops were offered to support teachers' research skills, such as questionnaire design and conducting structured interviews. A series of seminars was established where presenters shared their findings and discussed implications.

As numbers of projects grew, the school produced a research proposal form to help teachers clarify exactly what they wanted to do and to ensure that the same students were not being over-targeted with research. At the same time, a research committee of staff and students was set up to offer quality control and check proposals both from within school and also requests to use students in external research. A list of ethical guidelines was compiled based on those produced by the British Psychological Society Ethical Guidelines. The guidelines were also used by staff when supporting students in planning their investigations.

What impact did the project have on the pupils?

The change to a research-based culture resulted in student research as well as staff studies, and these were also celebrated.

The school began by inviting sixth formers and their parents to an evening where examples of student investigations were critically explored. Presenters were asked to highlight two strengths and two areas for improvement and to point out an issue or area for debate from their study. Parents were fascinated. They could see the progression from early curiosity to the ability to tackle a piece of independent research carried out in a disciplined way. An important part of the process was that teachers became aware of the need to comment on the process of investigation whilst working with learners, and encourage them to ask questions, collect evidence and make sure their interpretation matched the facts.

Find out more

Campbell, A. (2002) *Becoming an evidence-based practitioner; a framework for teacher researchers*. London: RoutledgeFalmer.

MacBeath, J. (1999) *Schools must speak for themselves: the case for school self-evaluation*. London: Routledge.

An interview with
Sue Hay

The appointment of a Research Fellow was the first step towards creating a cultural shift in Sue's school that motivated other teachers to undertake research and inspired her own research. The aim was to encourage staff to work collaboratively. Support from the Research Fellow was vital, particularly for members of staff whose training on a sustained basis involved 'no action research component'.

Sue's own research focused on giving greater learner ownership to her pupils. She gave them group projects focused around the questions:
- What do I already know?
- What do I need to find out?
- How will I find out?
- How will I present my findings?

The quality of work produced by this group of pupils in comparison to previous years represented just one of the many rewards of the approach. Pupils expressed the enjoyment they felt in engaging in active learning during the focus groups that took place afterwards. Sue comments that "these were exactly the same questions that I asked myself during research". The fact that teacher and pupils were sharing the experience brought about further unanticipated gains: "Engaging in research really made us take notice of the research process and its benefits".

Colleagues were encouraged to take part in working parties and peer observations and also to adopt collaborative working practices. This generated interest in projects, the results of which were fed back to the whole school in CPD sessions. "As a consequence staff are now no longer scared of examining their own practice".

On an organisational level, the culture of openness and support has given staff much more confidence regarding their own practice and a desire to refine their skills, whatever their stage of career. Staff are now much happier to experiment and evaluate in this stimulating environment.

On a personal level Sue comments, "The research journey has added another professional dimension to my teaching. It made me look outside the four walls of my classroom. Along the way I have learned:
- it is important for a new researcher to have the opportunity to talk with someone 'in the know', in order to maintain a focus
- the importance of time-management, as the natural busyness of teaching can be all-consuming
- working alongside other members of staff is stimulating and very worthwhile as it brings together others' pertinent views, and
- that this valuable field of work can have a real impact on teaching and learning".

Sue Hay is Head of P1-5 in the Junior School at St George's School for Girls, Edinburgh.

The leadership of enquiry: learning internationally

Elizabeth Rogers and Nicola Theobald

The claims illustrated on these pages are: **| Contextualisation | | Collaboration |**

The Excellence through Collaboration and Enabling Leadership (EXCEL) community (which comprised two secondary and four primary schools from two local authorities) was interested in finding out how learning could be enhanced by cross-phase, cross-local authority and cross-national collaboration. The aim was to generate a culture of school-based research, by engaging teachers and pupils in innovative school-based enquiry to encourage teachers to lead on their own learning.

How did the project work internationally?

In partnership with the International Learning and Research Centre (a self-funded innovation and development centre promoting school-based research and enquiry), EXCEL joined together with similar schools in Malta to work collaboratively on school-based enquiries in order to strengthen the outcomes and international relationships. The two communities worked together to develop research questions for the project and investigate key teaching and learning strategies. ICT was vital in maintaining the link between the two sets of teacher-researchers. A forum-like area enabled teachers to discuss progress and exchange ideas. Results and outcomes were also shared electronically. Working with an international partner enabled teachers from both countries to see the similarities and differences in educational practices and learn from each other.

How did the teachers embrace research?

The International Learning and Research Centre, in conjunction with DCSF developed a story-making project designed to engage children with literature and to improve

> **Pupil focus groups were used to gain valuable insights into the most effective story-making teaching and learning strategies**

> **The two communities worked together to develop research questions and investigate key teaching and learning strategies**

literacy achievement. The project was designed to try to promote the link between speaking and writing including how, through the oral learning of stories, a repertoire of language is developed by children for future use in writing. The EXCEL community drew on this research and initiated their own story-making methodology to use in multiple settings.

In order to develop and sustain the impact of the story-making project, teacher-researchers took on mentoring roles, team-teaching alongside colleagues and leading staff meetings and INSET training sessions. In this way, the enquiry work built capacity within and across schools and developed a critical mass of leaders who advocated school-based enquiry as an effective strategy for CPD. A project headteacher said, "It is so important to keep the flame and purpose going in order that practice becomes embedded".

What impact did the research have?

Pupil focus groups were used to gain valuable insights into the most effective story-making teaching and learning strategies. Some of the most popular and successful were using actions (which helped the pupils to internalise stories) and re-enactment through role-play. Collaborative learning through the use of talk partners was also seen by pupils as an effective learning strategy. One pupil commented, "It felt comfortable trying out our stories with a talk partner. It was OK to make mistakes". Involving pupils in this way enabled them to see how their views could shape their learning and the nature of their learning environment.

Panel member Lou Harrison asks …

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What could this research mean for CPD in your organisation?

- This study shows how teacher-enquiry is a powerful mechanism for improving teaching and learning in this study. Which aspect of your practice would you find it interesting to investigate and develop further?

- Networks were both extensive and highly effective in this project – would you enjoy investigating links with other professionals at different levels, locally, regionally and even internationally?

- There was impact in this study from critical challenge between professional colleagues and from the use of journals for individual reflection. Which would you find most useful in developing your practice?

Lou Harrison is Headteacher of Heather primary school in Leicestershire

For headteachers, the project placed greater emphasis on the importance of school-based enquiry in building capacity for improvement. One headteacher commented how "the school-based enquiry provided a strong sense of ownership and a powerful strategy for improving areas of weakness in our school". The teacher-researchers particularly valued the internationalism they encountered, which gave them an opportunity to exchange ideas and practices with teachers from another country. Their observations, reflections and analyses of successful teaching and learning strategies in another country deepened their insights into their own teaching and led to marked shifts in practice.

How was the study designed?

EXCEL and the International Learning and Research Centre worked together to establish an international learning community to generate a culture of school-based enquiry which empowered teachers and pupils to lead their own learning. The teacher-researchers who worked on the story-

making project piloted a number of teaching and learning strategies and used varying methods to measure their impact on learning. They also kept learning journals to record and reflect on their findings. They used the journals to record their thoughts, capture significant moments, make a note of things to do differently next time and gather project evidence, such as photographs and transcripts of children's talk and annotated writing samples.

Find out more

Rogers, E. (2003) *'Getting the words back': Languages and literacy, the story making strand*. International Learning and Research Centre: www.ellnet.org/ilrc/media/archive_reports/getting_the_words_back.pdf

Theobald, N. (2005) *Implementing story making: Insights from school leaders*. International Learning and Research Centre: www.ellnet.org/ilrc/media/archive_reports/story_making.pdf

An interview with

Nicola Theobald

This research project began with a focus on teacher/researcher enquiry as a model for teacher learning, building a networked learning community. Nicola says, "finding out how to scale this up and make effective peer/researcher partnerships international" was crucial. As a result, in order to develop the project, peer research partnerships were formed across different countries to address shared questions, relying on phone calls and emails, and drawing on learning journals to share thinking. Nicola comments that "the face-to-face meetings at the start of the enquiry were crucial. It was important to establish the peer partnerships, but also to involve school leaders, giving permission, support and status to the work we were doing". Ultimately, a supportive professional research culture was crucial to making the project work, and it was also an important outcome of the project itself.

Nicola is convinced that the shared research made a huge difference to the beliefs and practice of the practitioners involved. For example, "the international and cultural element of the project and the rich cultural exchange involved in the Story Making has had a significant impact on my thinking and practice ever since". Everything about the project broadened the research base for further development and innovation. As Nicola says, "It wasn't just about teachers communicating, but the international networked learning communities made a significant difference to everyone. This was a

project that was all about opening doors. By sharing our voices with those from different countries and cultures, we learned so much together and it was an extremely effective form of triangulation as part of the research methodology". It's clear that the learning journals and the sharing of them were a very important part of this.

In terms of the pupils' involvement, the process was firmly based on pupil voice; "teachers modelled the process of rich professional dialogue but pupil voice led the project". The teacher researchers engaged their pupils as researchers, with children moving towards full ownership throughout – teachers modelled the research process for pupils, which refined the process of teacher learning. Nicola comments that "the benefits of learning partnerships throughout the project are clear from the wealth of qualitative data. We were particularly impressed by the children's use of language – the quality of their reflection and thinking about their own learning. They participated in every aspect of the dialogue that this project represents".

Nicola Theobald
was the facilitator for this project from an independent International Learning and Research Centre

Sustaining teacher researchers – what support really makes a difference? John Westwell

The claims illustrated on these pages are: | **Efficiency** | | **Specialist support** |

In this project, teacher researchers were supported by John, a Local Authority (LA) secondary mathematics consultant. John set out to explore how practitioner research could be established as an effective and sustainable form of CPD for both participating teacher researchers and other teachers. This led him to focus on finding out what motivated teachers to engage in research, what support they needed, and how their learning could be shared with others. The idea came from wanting to create a professional learning culture, whereby all teachers worked together to support each others' learning. To explore this, two teacher researcher groups were set up involving 25 mathematics teachers from nine different secondary schools.

The teachers were supported in their research by John and another mathematics consultant from the LA, who held regular seminars, offered one-to-one support, and supported teachers in sharing their work with other teachers. John found that teachers were more motivated to sustain their engagement with research when their work made a positive difference to both their teaching and their pupils' learning and when they felt part of a supportive group. He concluded that practitioner research can play an important part in helping networks

> **Teachers felt it important that their research made a positive difference to both their teaching and their pupils' learning**

> **Teachers were encouraged to identify a supporter within their school who would take an active interest in their work**

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and schools to become professional learning communities.

How were the teachers supported in their research?

Seminars
As conducting research was new to the teachers, seminars were held to enable them to discuss their research, share resources they had found useful, and support them in using appropriate research models and tools. Initially, the seminars were held once a term, but it became clear that the groups needed to meet more regularly and so a new framework of one full day, two half days, and three twilight sessions was introduced. This meant the teachers could meet once every half term.

One-to-one support
John and the other mathematics consultant established themselves as the main points of contact and support. They provided one-to-one support between the seminars, which involved visiting the schools for discussion, classroom observation and help in evidence collection. The teachers were also encouraged to identify a supporter within their school who would take an active interest in their work.

Panel member Miranda Dodd asks...

Miranda Dodd teaches at The Dunbury Primary School in Dorset.

She teaches Year 1 and 2 and is responsible for Key Stage 1, English and 'Enquiry and Research' across the school.

What could this research mean for CPD in your organisation?

- John's research demonstrates the power of working collaboratively, with external support and over time, in improving learning for teachers and their pupils.

- Would it be helpful to develop a collaborative group working together and supporting each other in research? Will this be within your department or school, or would you like to bring people together from different places? What broad question could you ask to allow different people to find their own starting points, but also provide some common ground to work on together?

- What existing links could you build on and develop to bring in external support? What other people or organisations could you link up with? What local and ICT resources are available to help you explore your ideas?

- Teachers found it important to have a supporter in school and to be able to feed back within their settings throughout the project, as well as working towards an end product. Whether you are already involved or about to start some research, could you do more to develop your arrangements for ongoing support and feedback?

- Learning about different ways of collecting evidence provided a link between participants and focus for discussion. Could you arrange some sessions based around this for colleagues? Could you plan and carry out observations related to a research focus?

Sharing their work with others

The teachers were given a writing framework developed by John and the other consultant, in order to help them produce a written report of their project. John wanted the teachers to feel confident that they could produce a final product from their research work, so that they could share the results with colleagues both within their schools, as well as across the network. Emphasis was also placed on the teachers communicating with others in the group about their research.

What helped sustain the teachers in carrying out research?

John found it was important to all the teachers that their research made a positive difference to both their teaching and their pupils' learning; the teachers could become discouraged if their research did not seem to be making an impact on practice. They also valued being treated as professionals and being part of a research group, as it enabled them to think deeply about their practice and engage in supportive yet challenging professional dialogue with colleagues. Giving the research professional status via a well-designed end report was also valued by the teachers, although communication through regular updates on progress was important too.

What forms of support were most important?

Three conditions needed to be in place to ensure teachers were successful in their research.
- **Access to external support** – Momentum could be easily lost if teachers missed a seminar and were not visited individually in between meetings.
- **Time** – when time was pressured, the research work was often the first thing to be squeezed.
- **Internal support** – feeling their work was valued by colleagues, their line manager and senior leadership, gave the research more status and boosted the teachers' confidence in what they were doing.

Interestingly, the absence of just one of these conditions made it harder for teachers to sustain their research.

What data did John collect?

John collected a variety of data including his own reflections following discussions with the teachers, observations during the seminars, questionnaires, and semi-structured interviews. He used this data to trial and adapt the strategies used to support the practitioner research.

Find out more

CUREE & NCSL (2004)*Writing research and enquiry summaries*. Available at http://tinyurl.com/35pqt53

McClaughlin, C. & Black Hawkins, K. (2005) *Practitioner Research and Enquiry in Networked Learning Communities*. University of Cambridge.

An interview with

John Westwell

John's investigation resonates with a number of the NTRP claims about CPD processes and research, especially about effective and specialist support. It arose from a desire to find more effective ways of helping teachers improve the learning for their pupils through developing a 'professional learning culture'. At the heart of it was the power of a group working together on a common endeavour. Teachers were given flexibility within a framework to explore ideas that were relevant to them and their school, but with support from others, not in isolation. Key elements in making this effective were:
- flexibly responding to the particular research group's needs
- helping each person establish a clear research focus, and
- developing their reflective practice so that they understood a wider range of tools for collecting evidence.

Time was a critical factor, both having time to work collaboratively and for discussion with others and having time to implement ideas, collect evidence and evaluate it. This was not a question of 'quick fixes'; the teachers involved felt their professionalism was being valued and really appreciated the opportunity to enquire more deeply. Driven by wanting to make a difference to their pupils' learning, their own thinking and learning was taken seriously and they had the space to explore this together, with corresponding benefits for their pupils. The teachers appreciated this different approach to CPD and using techniques such as observation related to a research focus.

John's advice to anyone wanting to start working in this way is "Don't be too ambitious. Be ambitious about the learning culture, but not necessarily about polished products or research methods." Developing links with universities and other organisations is helpful. John valued the support from an expert in the field who acted as a 'critical friend'. This helped him facilitate the discussion and development of the group.

At the time of the project John was a secondary mathematics consultant for Blackburn with Darwen. He is now the lead for professional development strategy for the TDA.

CPD tools and resources

DfE Research Bites

http://www.teachernet.gov.uk/docbank/index.
cfm?id=13558.

These are web based powerpoint presentations that take 2.5 minutes to view and offer a speedy introduction to the summaries of research in the "TRIPS digests" – 4-5 web page summaries of the latest and most practical research papers from referenced education research journals:

TLRP Practitioner Applications

www.tlrp.org/pa/ and www.tlrp.org/ls/

The Teaching and Learning Research Programme practitioner applications websites contain tasters for the school sector and for the learning and skills sector. Each taster begins with a nugget of evidence, followed by reflective activities which practitioners can carry out in their classrooms. There are also links to other resources to support teachers and Teaching Assistants in their practice.

NCETM CPD Resources

www.ncetm.org.uk/cpd/off-the-shelf-pd-materials

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. Here you will find a range of structured CPD activities that you can print off and use – either individually or with your department.

TDA CPD Resources

www.tda.gov.uk/cpd-leader/effective-cpd/guidance.aspx

You'll find guidance, support and resources related to CPD for school leaders on the TDA website supporting staff development, equipping the school workforce with the skills to effectively support pupils and help them reach their full potential.

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To find out more about the NTRP and view a range of resources developed specifically for teachers, please visit www.curee.co.uk/NTRP. Here you will find research summaries that exemplify research of the highest quality being undertaken by practitioners around the country; and previous editions of Inside Information that pull together practitioner research focused on a particular theme.