



How to... grow classroom-based practitioner enquiry and research

Tom Carter and his school colleagues, Stephen Ham, Doug Johnson, Janet Pearson, Frédérique Midroit, Emma Barton and David Greenwood, provide practitioner insights into how to go about classroom-based research.

'It is through reflection that the teacher harmonizes, integrates and transcends the necessary classroom management skills and the personal aspects of her/his teaching into a strategy that has meaning for her/his students.' (Hopkins, 2007)

■ ■ Background

King Edward VI Grammar School (KEGS), Chelmsford, Essex has fostered teacher research for some years, under the Leading Edge banner, and supported by the Local Authority's Forum for Learning and Research/Enquiry (FLARE). Many individual examples of the school's research engaged school activity have been published in "Learning Lessons" – the research publication of King Edward VI Grammar School. All previous editions can be seen at www.kegs.org.uk.

This contribution brings together just a few examples of reflective practice and innovation that has been carried out at KEGS in recent times.

■ ■ Classroom-based Practitioner Research & Enquiry: The KEGS approach

Simply, during the academic year, all teachers are given 4-5 hours of 'directed staff development time' to focus on an idea or curriculum project of their choice. This time is a mixture of after school meeting time, and time on an INSET Day. Teachers very much value this trust, flexibility and freedom to spend time working towards an idea that they personally feel is important to develop their classroom practice, rather than being told what is important

for them to focus on by the Senior Leadership Team! This can have a profound impact on professional learning and the mindset, identity and confidence of teachers, which in turn leads to better teaching and learning for students.

Furthermore, teachers are able to request a more substantial amount of 'Leading Edge time' (e.g. 2 hours per week throughout the academic year). This opportunity is given to a small number of teachers each year who wish to carry out more substantial practitioner research in an area of their choice. This work can be linked to Masters' level research if appropriate for individual teachers. Teachers with extended 'Leading Edge time' also have an opportunity to discuss their work with a lecturer and researcher from the University of Cambridge on a regular basis. This provides a secure opportunity to gain support with their practitioner research from a highly respected researcher who has worked closely with the school for a number of years. The Dialogic Teaching work carried out by Emma Barton and David Greenwood is an example of this.

Example 1: Big ideas: cross-curricular work on evolution

Stephen Ham, Jo Moore and Doug Johnson

2009 is the bicentenary of Darwin's birth and the 150th birthday of 'On the Origin of Species', and it was thus an ideal opportunity for colleagues in RE, English and Science to work together on a unit of cross-curricular work, enabling students to enjoy scientific writing, debating and an ICT webquest. The unit was designed to complement

the work already done in English and RE, and use this to devise a unit for Year 9 Biology.

For 3-4 weeks students followed a programme in English, drawing on *'The Faber Book of Science'*, and aimed at analysing scientific writing.

Key issues were:

- Discussion around factual/ fictional barriers and different voices in texts
- How science writers attempt to convey complex information in an exciting and accessible manner
- Note making in response to lexis, tone, images, layout and structure
- Note making / observation of animals
- Writing in the style of scientists such as Faraday and Leeuwenhoek.

In RE, the programme dealt with the conflict between Science and Religion, how Darwin attempted to explain how humans came into existence, and it included:

- An introduction to Darwin's Life
- A study of the old beliefs
- Darwin's theory of evolution
- Darwin and religion
- Evidence for evolution
- Problems with the theory of evolution.

The final part of the unit, in Biology lessons, involved students designing a poster for Year 6 students, followed by a small group webquest. This allowed students to review several sites on evolution and address their own misconceptions about the theory by creating a worksheet to help the Year 6 students.

In conclusion, the project enabled students to link up diverse areas of the curriculum and to gain research skills, besides covering areas of different GCSE syllabuses.

Example 2: No hands up, but plenty of lollipop sticks (Doug Johnson)

Doug Johnson has been experimenting with having a rule that prevented students from putting up their hands during class discussions or question and answer sessions, although students are still allowed to put their hands up when they

are working and are stuck. Each student was allocated a number and then, whenever a question was posed, a lollipop stick was pulled out of a mug – each stick has a different number on it. If a student is 'chosen' by the sticks then they have to answer. The stick is then returned to the mug in order to prevent that student from switching off. The two main motivations for trialling this system were: (1) some students like to dominate discussions, and (2) other students try to hide during discussions. A hands-up routine allows students to opt out of discussions, whereas in this system participation is non-negotiable. Doug thinks that the system has made a positive difference to class discussions this year and the effect is particularly noticeable with classes that he started teaching this year for the first time. To be continued!

Example 3: Chemistry and French: Antoine Lavoisier

(Janet Pearson and Frédérique Midroit)

Lavoisier was an important 18th century French Chemist whose research included some of the first quantitative experiments; his results supported the law of conservation of mass which is studied in Year 9. The project involved linking lessons to cover the scientific material and also appreciate that French is not just restricted to the French classroom. The programme was as follows:

A. Research homework set: students were asked to carry out some internet research in groups of four, to find out about Lavoisier and his experiments. They were asked to prepare one or two sentences in French to report back to the rest of the class something interesting that they had found out about Lavoisier.

B. Chemistry lesson 1: Students reported back their findings, which were summarised on the board in French. A French worksheet was distributed and the key features of the experiment were explained to them in (simple!) French, using a French-labelled display of the apparatus at the front. Important safety points and key experimental details were then explained in English. Students carried out the experiment and recorded results on the sheet provided. Relevant French vocabulary was projected for reference during the lesson and they were encouraged to record

their observations in French (e.g. colour change). Results and conclusions were discussed by the class, focusing on the questions on the sheet. Homework was to write up and print out details of their research on Lavoisier, their experiment and their explanation of why chemical equations need to be balanced.

C. Chemistry lesson 2: After the students had assembled their posters, they followed up with work on balancing equations in the computer room. Posters were assessed by the teacher and, at the start of the next lesson, written feedback was given; homework on balancing equations was marked in class.

D. French lesson: Each group presented their poster in a French lesson. There was a wide variety of target language used and it was clear that all enjoyed the activity. Some started in French and then used English, but others managed just in French. The rest of the class acted as active listeners, and were asked to give feedback.

Evaluation: This proved to be an excellent chance to incorporate French into Science, and let students realise that what they had covered in French was probably what a group of French students somewhere were doing in Science. Perhaps an extra single French lesson was needed for students to report back their research findings and get some additional help on the French content of their posters.

Example 4: Dialogic Teaching - Extended teacher-student dialogues in the Secondary English classroom (Emma Barton and David Greenwood)

Reading Alexander's *Towards Dialogic Teaching: Rethinking Classroom talk* and watching a video recording used by Alexander himself, during a conference attended by the Head of English, David Greenwood, for teachers from different disciplines (run by the Cambridge Faculty of Education) was inspiring. It led to focused reflection upon the way in which dialogue is used to enhance teaching and learning within English lessons, with specific consideration of Alexander's ideas of the importance of

questioning as well as engaging with student response to extend learning.

It was acknowledged that many forms of effective 'dialogue' take place during English lessons including:

- student paired discussions
- group work
- individual, paired and group presentations
- teacher-led whole-class discussion
- active performance work
- debating

All of which are underpinned with various Assessment for Learning procedures. Many of these existing forms of dialogue are orientated toward appropriate assessment

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objectives, at all ability levels and in all year groups. Students understand that during English lessons there is an expectation of engagement through dialogue of some form, and they respond very well to this 'learning through interaction'. But identifying the different types of dialogue used in English lessons was simply not enough; focus had to be given not just to the content, but to the quality of talk. As a consequence of this

focus upon quality, it was questioned whether the more recent emphasis upon 'pace' in the classroom had led to a restriction of genuinely open dialogue. The term pace, found frequently within Ofsted inspection reports but not explicitly defined, is an important factor within any discussion of dialogue as the need for teachers to ensure its presence within lessons, coupled with the desire to engage students in different learning-style activities, can lead to an understanding of 'pace' as 'speed'. (Eke & Lee, 2004). It is argued that the encouragement of pace can lead to rapidity of interaction, leading to a loss of quality of interaction, potentially even restricting open and collaborative dialogue.

Therefore, despite the existing level of a range of dialogic methods in the classroom, hard questions were asked: had too much of an emphasis been put on pace with the encouragement of multi-strategy lessons? Had there



been a danger of a shift towards the monologic approach because of these multi-strategies? Had dialogue lost its meaning with an increase of IRF (Initiation, Response, Feedback), when rapid student answering and minimal teacher feedback becomes too much of the norm? Were student voices really being heard? All of these questions led to a consideration of a change in the way dialogue was used in order to create more meaningful critical interaction within the classroom.

The decision was made that extended teacher-students dialogues were to be added to the department's teaching and learning repertoire which, as a consequence, would potentially reduce the number of strategies used during certain lessons, and possibly lead to less pace in general. It was important to concentrate upon the quality and the content of classroom talk, and to give space for increased opportunities for more dialogue to become 'cumulative' – the notion of teachers and students working together to build upon their own and each other's ideas – arguably the most important, and the most challenging, of Alexander's 5 'principles' of Dialogic Teaching:

- Collective
- Reciprocal
- Supportive
- Cumulative
- Purposeful

Cumulation is the most difficult principle as it relies upon a variety of skills: to receive and review what has been said; to think laterally; to judge what to offer by way of individually-tailored responses to students; to progress students learning with appropriately challenging questions. It offers opportunities for different levels of learning, particularly those at the top, synthesis and evaluation according to Bloom's Taxonomy (1956), to be successfully blended through dialogue. This combination of skills is challenging even for the most experienced of teachers, but when achieved, it is potentially a very powerful teaching and learning tool.

It was strongly felt that cumulation would be most successfully achieved through the use of extended teacher-student dialogue as it offers a variety of positive

outcomes through which student ideas can be developed. This extended dialogue, of course, reaches far beyond a simple yes/no dialogue (although it is recognised that this type of 'closed' exchange does have its place in the classroom). It allows for more in-depth responses that build upon student ideas; it involves reasoning, hypothesizing and 'thinking aloud'; it results in lengthier exchanges during which challenging questions are posed and considered; and it encourages 'wait time' in which the student feels comfortable enough not to feel hurried to give a superficial response.

■ ■ ■ Putting Extended Dialogue into Practice

The pilot of this new method of dialogue took place with a shared AS/A2 class of 14 students with 6 boys and girls new to the Sixth Form. Extended teacher-student dialogues occurred numerous times with the same class, choosing different students each time (Emma was completing AS work on Donne's Songs and Sonnets before moving to Shakespeare's Measure for Measure for A2, and David was finishing AS work on Miller's Death of a Salesman before turning to Coleridge's The Rime of the Ancient Mariner). Both teachers had several lessons filmed, using teacher-student dialogues alongside other strategies, enjoying the opportunity to engage in far more meaningful talk with students. The recordings were watched and evaluated together, with specific focus upon questioning as well as on the students' responses and how successfully these were built upon during the extended dialogues in order to move students' learning forward.

Typically the following types of 'open' prompts and questions were used:

- 'Talk to us about ...'
- 'Why...?'
- 'What do you think ...?'
- 'Help us to evaluate ...'
- 'How is this shown ...?'
- Can you explain ...?'
- What questions do you now have ...?'

Observations of each others' lessons also took place, using adjusted criteria, to concentrate either on questioning or the development of student response.

■ ■ ■ Capturing the Results

A total of 7 of the students involved were interviewed, in two different focus groups, on different days, with recordings made – a total of 30-35 minutes' feedback. Several DVD recordings were also shared and discussed with the rest of the English Department, as well as teachers involved with a cross-school Dialogic Teaching Group, meeting under the auspices of the Cambridge Faculty of Education. Interim conclusions were identified, notably, that these extended dialogues:

- had to involve reasoning, hypothesising and 'thinking aloud';
- needed to last for long enough to make a difference;
- had to include more 'wait time' (for both students and teachers);
- were perhaps best done with 3-5 students overall in the middle of a longer lesson, e.g. following pair or group discussions; presentations; prior to writing;
- prior to a whole class 'plenary'.

■ ■ ■ Student Feedback

From the student feedback received so far, the following have been among the positive responses to the uses of extended student-teacher dialogues:

- Questions allow for any answer on a particular theme or idea.
- Develops one person's ideas respectfully.
- It's nice to see quiet students being coaxed along almost by the questions that the teacher has asked.
- Encourages individual interpretations of literary texts.
- Promotes confidence.
- Encourages 'deeper' learning and recall, particularly helpful for exams.

■ ■ ■ Ongoing considerations/issues

As part of the subsequent reflection process, the following issues are continuing to be considered:

- Does the order of students matter?
- How long to (dare to) sustain the extended dialogues?
- When to interject?

- Where to position within lesson – “in medias res”?
- Recognising (teacher and student) that ‘wait time’ does not mean ‘failure’.
- Find the ‘still point of the turning world’ – go with the ‘flow’.

It was also acknowledged that some students were simply not used to sharing their ideas in a more sustained way in the classroom and so confidence would need to be built over time in order for them to feel comfortable with extended dialogue.

■ ■ The benefits of dialogic teaching

Our exploration of the benefits of extended dialogue has been exciting. An opening up of classroom theory and practice to reveal a potentially new and powerful teaching and learning strategy can be a challenge, regardless of age or experience, but the very positive response from those involved has encouraged progression, to build upon the learning of the student as well as that of the teacher. Dialogic Teaching encourages sharing of ideas, respecting differences, moving forward collectively and therefore it should be acknowledged here that teacher-teacher dialogue is just as vital as teacher-student dialogue. As practitioners, engagement will continue during critical, reflective and active discussion, to explore both positive and negative experience in order for our own learning to be furthered. The voice of the student within this development in classroom practice continues to be heard but takes on even more importance as teachers and students engage together in cumulative and meaningful dialogue.

■ ■ Some final reflections

How to develop classroom-based enquiry in your school is first and foremost a matter of commitment to fostering a culture of enquiry within the school. This typically involves leadership support for creating

bespoke time for enquiry activity, and encouraging an open approach in which teachers themselves can determine the focus of their projects. Support from school-based mentors and from higher education partners can also be a powerful feature. Above all, we have found that the most crucial element is to ensure that teachers’ enquiries are part of a whole school learning culture (Sharp and Handscomb, 2008). They are grounded in the classroom and are a blended part of teaching and learning outlook and practice.

Questions

- What practitioner research opportunities are available for teachers in your school?
- How can you best meet the diverse needs of your colleagues?
- What are the pressing classroom-based teaching and learning issues in your school? How can you use enquiry activity to address these?
- How can you re-organise your school’s professional development time and meetings schedule to create devoted time for teacher enquiry activity?
- How can flexibility be given to colleagues within your staff development programme to empower your teachers?

We would be delighted to speak to readers interested in our approach to practitioner research at KEGS, and to hear from readers engaged in practitioner research in their settings.

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