

Embedding *Getting Practical* & ASE Improving Practical Work in Triple Science LSN Network

Kay Stephenson Georgina Chapman

Embedding Getting Practical *Kay Stephenson*

With the two-year pilot of Getting Practical drawing to a close, new ways to embed the key messages into existing CPD programmes are being sought. Kay Stephenson describes how she has been able to do this with the courses she is involved with.

'Today's been great...we got to do a bit of networking...picked up loads of ideas...but now we'll go back to school and it's back to the same old same old. You know what the problem is...we use, you know, these courses, and you just click on the practical that goes with that lesson and...that's what you do. Just never seem to find the time to do anything with new ideas.'

With apologies for editorial licence and an incomplete memory, the above is a fairly accurate recollection of a comment made by a departing teacher at the end of a 2-hour hands-on practical chemistry workshop. I appreciated the compliment but began packing my boxes feeling a bit down, and not just because what had come out of the boxes didn't seem to be fitting back into them...*again*!

Anyone who has been involved (either as a delegate or as a facilitator) with continuing professional development will appreciate the frustrations that the opening 'quote' illustrates. However, I think this is where *Getting Practical* can make a difference. The messages from *Getting Practical* and the associated materials provide teachers with that 'something' they can (relatively easily) try out in their own classrooms.

However, as exemplified by one Head of Science who wrote, after a half-day *Getting Practical* workshop for his department:

'Excellent session on setting the context for practical work and why we do it (and why we should do it!), I liked the way the session facilitated discussion and sharing of ideas within the department...' I know that: 'the impact of Getting Practical arises from the way that the key ideas are introduced and developed during the [six-hour training] course.' (School Science Review, September 2010) but I am convinced that the key ideas from *Getting Practical* can, and should, be an explicit and integral part of any CPD event that focuses on practical work in science.

Over the last 12 months, I have had the opportunity to try out a few ideas and report here on just a small selection of sessions and the responses from delegates.

Early in 2010, as part of a pilot collaboration between the Science Learning Centre East of England and the Gatsby Science Enhancement Programme (SEP), I ran a bespoke version of the oneday *Effective Practical Approaches in Chemistry* course for a whole science department (teachers and technicians). The intended learning outcomes of the course were that participants would:

 understand the nature, purpose and importance of practical work in science lessons;

be able to use materials from SEP and elsewhere as appropriate;

develop new and established practical ideas and techniques to teach the chemistry topics described (including 'How Science Works'); and

plan how to incorporate the ideas and techniques into Schemes of Work (SoWs).

The course content was adapted to focus on the school's chosen Key Stage 4 (age 14-16) chemistry topics.

It was a large department and a busy day, but all the staff joined in and, impressively, seemed very open and willing to discuss and share problems and ideas. In addition to comments about having more confidence to use some of the experiments, several of the teachers referred to *Getting Practical* ideas in their feedback:

"...use practical activity tick sheet to help me revise my lesson plans & objectives"

'[Key learning point 1] Easy to 'mislead' students so they end up concentrating on task rather than the required outcomes. [Will] make objectives of practical clear & how they will develop ideas after practical.'

Sadly, whole-day CPD sessions with whole science departments are rare and the vast majority of the CPD sessions I have been involved with over the last year have been short workshops and twilight sessions. Although more limited in terms of the scope of what can be achieved, short practical-focused sessions based on the key *Getting Practical* messages can have quite an impact.

A 90-minute combined presentation and workshop (*Effective Practical Work*) held at a science conference organised and hosted by a community science school in Essex was well attended (over 25 delegates) and drew several positive responses, including:

'Asking the question: are our practicals effective? It got me thinking.'

'It made me re-evaluate the importance of practical work in teaching science and that I need to consider this more in planning lessons.'

In outline:

Session	Note
What is effective practical work?	Discussion of recent experiences in own classrooms. Introduction to 'Getting Practical' and audit of review tools.
Chemical quantities Electrolysis Water	Common problems and possible teaching tactics & strategies. Explore a range of experiments and demonstrations & assess how to integrate into SoWs.

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'I have always felt very strongly that many teachers carry out practicals just for the sake of doing a practical. It was really nice to see a presentation that addressed this issue, and gave solid advice on how to improve the effectiveness of practicals within teaching.'

In a follow-up session, one teacher succinctly commented on the evaluation form:

"... reminding of good practice forgotten."

I have also had the good fortune to work with groups of trainee teachers (e.g. those on Graduate Teacher Programmes (GTP) or School-Centred Initial Teacher Training (SCITT) courses). As has been commented on elsewhere (SSR, September 2010), trainee teachers seem to especially appreciate the focus and structure that the Getting Practical tools provide. In these sessions, I have been able to incorporate some of the other materials that support the development of effective use of practical work in science teaching, including several CLEAPSS documents as well as some of the National Strategy Guides.

More recently, the Royal Society of Chemistry (RSC) has worked with Kirstie Hampson, Programme Manager: Professional Development for the *Getting Practical* programme, to develop a summary overview presentation (with linked *Getting Practical* materials) for integration into the RSC's *Chemistry for Non-Specialists* (CFNS) training programme.

The CFNS training programme is designed to provide teachers with the confidence, flair and enthusiasm to teach chemistry at Key Stage 3 (age 11-14) or Key Stage 4. The courses (organised in collaboration with the National Network of Science Learning Centres) comprise a two-day residential and two one-day follow-up events at approximately one term intervals.

The RSC is a contributing partner in the *Getting Practical* programme and, as Amanda Middleton, Project Manager for CFNS comments:

'The messages from the [Getting Practical] programme fit very clearly with the aims of the CFNS courses.'

Although the main focus of the CFNS training (especially in the first sessions) is to develop confidence in 'how to', the CFNS tutors are all experienced teachers and can, and already do, discuss 'why to' with the participants. The summary *Getting Practical* presentation and materials can be adapted by CFNS tutors to use in a way that most appropriately fits with their own style of delivery and the make-up of their CFNS group.

Even when there is insufficient time to explore all the ideas in great depth, I still think that, with care, the key ideas from *Getting Practical* can be integrated into other practical-focused CPD sessions and that the 'tools' provide that certain 'something' that can quickly lead to a small but significant shift in a teacher's approach to practical work in their classroom.

References/resources

- Ingram, N. (2010) 'An update on *Getting Practical*, summer 2010', *School Science Review*, **92**, (338), 24–25
- G30 Successful Science Practicals, CLEAPSS, June 2009
- Interactive Practicals, Science Study Guide, The National Strategies Secondary, DCSF Ref. 00094-2008DVD-EN (date of issue: 02-2008)
- *Effective Demonstrations, Science Study Guide,* The National Strategies Secondary, DCSF Ref 00094-2008DVD-EN (date of issue: 02-2008)

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