leading change

What does OFSTED say?

Tara Lievesley discusses the challenges and development points offered by the 2014 triennial report from Ofsted

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CPD
Nature of science

In 2011, Ofsted produced its triennial report, *Successful science* (Ofsted, 2011), celebrating the successes of science in English schools over the previous three years and informing us of what things needed to be addressed, such as:

- lack of specialist expertise among teachers, both in subject knowledge, particularly physical processes, and in skills, which has the knock-on effect of limiting the progress of more-able pupils;
- lack of continuing professional development (CPD) for teachers, particularly for subject leaders;
- practical lessons that develop skills;
- pupils not being aware of the next steps they need to make in order to progress, particularly in skills where assessment is not well developed.

The Primary Science Quality Mark (PSQM, www.psqm.org.uk) was highlighted as helping to address many of these challenges. Ofsted noted the impact the PSQM was having on raising the profile of science in schools and providing a clear framework to bring about change and improvements. It was also helping with the increased focus on enquiry in those schools taking part in the scheme.

Now, three years on, have the challenges changed? Have we cracked these issues and has Ofsted noticed other areas we need to work on? The latest report, *Maintaining curiosity* (Ofsted, 2014), raises some similar and some new concerns, such as:

- ensuring that enough time is provided to teach the science curriculum and that the curriculum is covered in full;
- ensuring that the provision of science increases;
- providing pupils with opportunities to plan and carry out their own ideas;
- making relevant links to real life, particularly bringing clear links to literacy or numeracy as pupils make more progress in both subjects when this happens;
- providing CPD for subject leaders and teachers;
- making more rigorous assessment judgements;
- providing enough challenge for more-able pupils;
- bringing assessment into line between schools, as there is disparity between schools and the time and focus on it.

In fact, the report's title says a lot about science: *Maintaining curiosity*. We need to work hard to make science increasingly more enquiry based and to allow time for our pupils to be curious, to explore and to try things as they go through their lives. Once children are given these opportunities, it is often 'maintaining energy' that is required, as one colleague put it!

Status of science

Science is a core subject in England. Full stop. It has been since the National Curriculum was set out in 1988 and is still a core subject in the new curriculum about to become statutory in September 2014. But senior leadership teams (SLTs) in schools are not ensuring it is covered fully or with enquiry at the heart of planning and teaching. Is this the 'fault' of the new wave of cross-curricular or thematic planning (often called creative, but you don't need to be cross-curricular to be creative!)? SLTs need to encourage teachers to allow time for children to be curious. This often looks like 'not doing much' but thinking time is so important if you are going to make sense of the world around you – consider your own actions when faced with a new mobile phone: do you use it competently straight away, or do you 'play' and explore first?

However, it was noted in the report that meaningful links, particularly to literacy, enhance the learning and progress in both subjects, perhaps helping to dispel the myth that some pupils and teachers have about science being about writing up reports. Indeed, the writing should be focused, particularly on the analysis and evaluation, not just an instruction-writing exercise.

Science has lost out in terms of provision, particularly since the demise of the standard tests in 2009. While it is good to be able to focus on skills rather than jumping through the testing hoop, this has allowed literacy and numeracy to become even stronger, with science sometimes relegated to a poor slot somewhere in the thematic curriculum and, when it doesn't fit a theme, being sidelined even further. Obviously this is a worst-case scenario and is not the case everywhere.

Ofsted is also concerned about an over-reliance on published texts, where the planning for enquiry has disappeared as the 'activity' is taken from the scheme of work – planning has become perfunctory. This leads to pupils not being able to be more independent, thinking and doing for themselves.

A further point made in the report relates to the use of 'fair testing' and how some experiments and activities should be about elicitation of knowledge through exploration, rather than formulaic practicals. More time needs to be given to pupils to practise their enquiry skills, particularly in evaluation and analysis, in order to learn from mistakes.

Continuing professional development

CPD is still an issue and what is concerning is that it is the subject leaders who are not receiving training in order to improve leadership of their subject. This may be linked to SLTs not giving science the focus it deserves, but also to local authorities cutting back on staff, be it consultants or advisers, or their leading teacher programmes. Does this mean that this will continue to be an issue in future reports?

There is the added complication that in many schools the role of subject leader for science is not constant, hampering development of the leader and their impact. So what can we do for ourselves? The simplest thing is to make links with other subject leaders. Email colleagues and have an informal 'tea party' type meeting – it doesn't even have to be in school if the local café is more convenient. PSQM continues to develop science leaders, with its hubs and hub leaders, and there are independent consultants out there who can help. The Science Learning Centres are still in operation, although they have undergone cutbacks as well. Then there is the PSTT (Primary Science Teaching Trust, www.pstt.org.uk), which runs a series of clusters designed to bring like-minded teachers together to support each other with the help of professionals, working on a project that the trust funds.

What about assessment?

This is the six-million-dollar question, particular for the new curriculum. The report states that, while attainment has risen marginally, there is an issue with the 'levelling' of pupils, with some published materials meaning that the 'levels' awarded are too high, particularly when compared to secondary school expectations.

Assessment is such an issue because, if enquiry is not built into the heart of it, then progression is hard for pupils and teachers alike. Ensuring pupils know what they need to do next in order to achieve is paramount; otherwise attainment will be low. However, not only do the tools need to be provided for teachers to make judgements and provide feedback to pupils, but there needs to be CPD for teachers to help them apply these rigorously and consistently, so avoiding the disparity between schools.

It seems that England is not alone in having this problem. Judging from the ASE conference talks, workshops and events focusing on enquiry rather than knowledge, and on ways to assess these skills and help pupils make progress, these are also key issues in many other countries.

Comparison to the Estyn report

It may feel from reading the Ofsted report that England has a long way to go to get science 'right', but when compared to one of our sister countries, Wales, it makes for interesting reading. Wales has already changed its curriculum, but some of the same points for development are made in the recent Welsh inspection report (Estyn, 2013) as in the Ofsted one, such as the amount of teaching time. For Wales this links to thematic planning – is this the same for England? We will need to ensure that, with our new curriculum, we make any cross-curricular planning rigorous for all subjects involved, but particularly for science.

With the increased focus on literacy and numeracy, both reports also note that science has lost status. Both England and Wales have a hard task ahead in tackling science in the face of trying to raise attainment in these other two subject areas that dominate the curriculum. No government, it seems, wants to be bottom of the international PISA 'results tables'!

References

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Ofsted (2014) *Maintaining curiosity: a survey into science education in schools*. Available at: www.ofsted.gov.uk/resources/maintaining-curiosity-survey-science-education-schools

PISA (Programme for International Student Assessment), a triennial international survey of over 70 economies, which aims to evaluate education systems worldwide. Available at: www.oecd.org/pisa/home/

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