

# WHAT'S ANOTHER YEAR?

12 months have passed since Michael Gove described ICT in schools as 'a mess' at BETT 2012. And according to **Peter Twining**, the conversation about how best to address this has barely begun...

**T**here has been extensive criticism of the teaching of ICT in schools over the years, particularly from industry. For example, in August 2011 Eric Schmidt, chairman of Google, condemned the British education system and said Britain was "throwing away your great computer heritage ... I was flabbergasted to learn that today computer science isn't even taught as standard in UK schools". In January 2012, Michael Gove made his infamous BETT speech in which he declared, "ICT in schools is a mess". This was rapidly followed by the publication of the Royal Society's report on computing in schools, which highlighted the need for a greater focus on the teaching of computer science.

On the 18th January the DfE launched a consultation on the disapplication of the National Curriculum Programmes of Study (curriculum) and Attainment Targets (assessment criteria) for ICT. Many respondents to that consultation raised concerns that disapplying the ICT PoS and ATs would result in many schools reducing the emphasis they placed on ICT; totally the opposite impact that Gove claimed to be seeking. Nonetheless, on the 11th of June, Gove confirmed that they would be disappplied from September 2012. Somewhat counter-intuitively he also stated that schools were still legally required to teach ICT, and that ICT would be included in the new National Curriculum from September 2014.

There was considerable confusion in schools about how to respond to the disapplication. This was further exacerbated by the announcement in September 2012 that the British Computer Society (BCS) and Royal Academy of Engineering (RAEng) had been asked by the DfE to lead the writing of a draft PoS for ICT. The draft developed by the BCS and RAEng was submitted to the DfE in late 2012, for revision by the DfE prior to a national consultation in early 2013.

## The science bit

It is clear that ICT in the new National Curriculum will cover the areas of Digital Literacy, Information Technology (IT) and Computer Science (CS). From the constituency of the group(s) who worked on the drafts it is hardly surprising that the PoS are weighted towards Computer Science.

At the same time as the ICT PoS were being drafted the Teaching Agency announced a change to the allocation of places for initial teacher education (ITE). All places for specialist ICT routes were being cut from September 2013,



FIND OUT IN MORE  
DETAIL ABOUT THE  
DEVELOPMENT OF  
THE ICT POS AT  
[TINYURL.COM/  
C5VB2J5!](http://TINYURL.COM/C5VB2J5!)



and replaced with funding for specialist Computer Science provision.

All of these developments exacerbated the confusion in schools about what they should be doing in relation to ICT, focused attention on Computer Science, and raised concerns about schools ability to deliver the new ICT curriculum.

In this context, perhaps it is not surprising that the focus of press coverage and educational debate since

Gove's BETT speech has been on ICT in schools being a mess and the need to introduce rigorous Computer Science teaching to solve this problem. However, this is not a fair reflection of the actual situation in schools or of the criticisms by industry. Nor does it fully reflect the content of Gove's BETT speech or the Royal Society report.



important, it is a specialism and as such its importance pales into insignificance compared with the broader issue of all pupils being digitally competent citizens. This requires much more than changes to the teaching of one subject (ICT) in schools.

### Add your voice

As Gove acknowledged in his BETT speech, digital technology has changed the nature of almost all aspects of our lives outside school. It alters the nature of subjects; it changes the sorts of questions you can investigate, the ways in which you can investigate them, and the possibilities for presenting and communicating your answers. Whether you are an athlete, historian, chemist or mathematician, digital technology has changed what you do and how you do it (in the world outside school). Surely these changes should be reflected in what is taught in school? Digital technology should change the content of the curriculum for all subjects. This view was unanimously endorsed by representatives from industry, commercial and professional associations, and educators at a roundtable hosted by the DfE and BIS (UK Department of Business, Innovation and Skills) in October 2012. Indeed they recognised that the development of digitally competent citizens was even more important than provision for those people who wanted to specialise in Computer Science.

Digital technology also provides new ways in which to support learning; it extends the pedagogical repertoire available to teachers. As a competent professional it is incumbent on every teacher to be able to draw upon the full range of possible teaching strategies in order to meet the needs of his or her learners.

Developing all of our teachers so that they understand how digital technology has changed the nature of their subject and how it extends their possible strategies for supporting learners is a much larger challenge than providing sufficient ICT (or Computer Science) teachers.

If our education system is going to live up to Eric Schmidt's aspirations, or even those espoused by Gove at BETT 2012, then we need to ensure that schools embed digital technology across the curriculum – reflecting the ways in which digital technology changes the nature of subjects, and the additional approaches to supporting learning that it makes possible.

You can help to make this a reality by responding to the national consultation on the new National Curriculum and demanding that the Programmes of Study for every subject make explicit reference to digital technology and the need for teachers to update both what they teach and how they teach it in the light of the changing impacts and possibilities offered by digital technology.

A quick examination of Ofsted's report on ICT in English schools between 2008 and 2011 suggests that ICT in primary schools is far from problematic, with nearly two thirds being rated as good or outstanding in their ICT provision. Ofsted identified some issues, particularly with the quality of ICT provision at Key Stage 4, which is when schools start to focus on GCSEs (high stakes national examinations) rather than the National Curriculum.

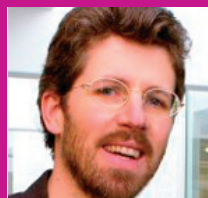
Criticism from industry tends to focus on the failure of the education system to develop a wide range of what might be labeled 'Knowledge Age skills' such as communication, collaboration, team-work, real problem solving, digital literacy, creativity, and learning to learn. Indeed, Eric Schmidt's criticism of the UK education system was focused on our failure to develop polymaths, and the need to strengthen art and science, and the links between them.

The Royal Society's report does highlight the need to enhance the teaching of computer science in schools. However, it also concluded that "Every child should be expected to be 'digitally literate' by the end of compulsory education, ... Given the lack of specialist teachers, we recommend that only the teaching of digital literacy is made statutory at this point.

Much of Gove's speech focused on the impact of digital technology on society and the need for our education system to change so that it prepares children for this new world.

"Every day we work in environments which are completely different to those of twenty-five or a hundred years ago. ... But there is one notable exception. Education has barely changed. The fundamental model of school education is still a teacher talking to a group of pupils. ... But that model won't be the same in twenty years' time. It may well be extinct in ten. ... It's clear that technology is going to bring profound changes to how and what we teach."

This highlights a major problem with our current focus on Computer Science. Whilst Computer Science is



### ABOUT THE AUTHOR

DR PETER TWINING IS A SENIOR LECTURER AT THE OPEN UNIVERSITY AND THE DIRECTOR OF VITAL, A £9.4 MILLION DfE FUNDED PROGRAMME THAT IS SUPPORTING PRACTITIONERS IN ENHANCING THEIR TEACHING OF ICT AND COMPUTER SCIENCE, AND THE USE OF DIGITAL TECHNOLOGY ACROSS THE CURRICULUM. PETER WAS THE HEAD OF DEPARTMENT OF EDUCATION AT THE OPEN UNIVERSITY AND THE CO-DIRECTOR OF THE CENTRE FOR RESEARCH IN EDUCATIONAL TECHNOLOGY.

### USEFUL LINKS

THE VITAL PROGRAMME:  
+VITAL.AC.UK  
+EDFUTURES.NET