PROGRAMMED
for change...

For Thornaby Academy, Michael Gove's 2012 announcement regarding the future of ICT in schools was a real spur to improving its own curriculum, as Paul Martin explains

At Thornaby Academy we aim to create an environment where students are excited by learning and can develop the confidence to prepare them for their future life. If we are going to give them the skills and expertise to operate effectively in their future lives, we have to at least keep up with the evolution of technological excellence within our teaching.

In my view, therefore, Michael Gove was right in his belief that the previous ICT curriculum was failing to meet all the needs of the employers of the future. However his announcement in January 2012, putting it 'on hold', left many concerned; few schools knew what to cover, and many were unsure of the correct to which they should be teaching.

At that time, we had a wide assortment of different schemes of work in use. Some had been brought by new teachers from previous schools, while others had been created by staff within the school. They were all very good and effective but our curriculum lacked focus and structure.

Left to our own devices this would have continued. It would have certainly been an improvement on the previous curriculum, but looking back, it wouldn't have given us the flexibility that we needed to adapt to the ever-changing world of ICT, which can no longer be a standalone subject; it is present in every aspect of our lives and therefore should be embedded across the curriculum.

So our journey began to create a computer science curriculum that took into account our specific needs, encompassed the effective schemes of work that we were already using, and enabled us to weave the use of technology and ICT throughout the curriculum.

It was at Bett 2012 that we found what we wanted: a programme of study from publisher Rising Stars called 'Switched on ICT', which brought the level of structure and support we needed to help us achieve our objectives.

However our concerns were twofold. First, if we were going to embed computer science across the curriculum, how would we support all our teachers to deliver the learning? Secondly, how would we manage the levelling of learning; how could we know what standards to teach to and how would we assess progress?

Getting started

We started by trialling a unit at a time, before progressively rolling the programme of study out across the school. Each topic within the system is linked to themes such as 'get programming', 'making a difference', 'we're in business', and 'looking after the world'.

At a departmental meeting, each teacher appeared to take an interest in different themes and therefore it was agreed that they would be shared out so that each individual could develop the schemes of work in his or her specific theme. This process took into account using the activities that we already had, and where possible used the ICT resources already owned by the school. Sharing the work out in this way resulted in minimal effort for everyone and gave the staff a feeling of ownership.

The flexibility of Switched on ICT meant that very soon we had built up schemes of work that could be rolled out in a coordinated way with a consistent approach to future planning and assessment. The programme blended with the

way we work and ensured we'd achieve the standards we wanted. We don't have ICT mentors to give us feedback so this assurance was fundamental.

Assessment

As the government had removed the vital element of assessment, we used the programme, which is clearly linked to the National Curriculum levels, to devise our own. Within this we have started using peer-to-peer assessment. The system provides all the necessary templates, so after each activity the children carry out a skills audit and then their peers evaluate this. We expect to experience great results from giving the students this level of autonomy.

As we began rolling out our new computer science curriculum across the school, it was clear that what we were doing was actually bridging the gap between the old national strategies and the draft of the new Key Stage 3 computer science curriculum requirements, which will be introduced in September. Added to this, the fact that we were able to use our existing hardware and software ensured that the costs of our new curriculum were minimal.

In action

It seems likely that much of the government's new computing curriculum will be based on programming skills, and we've certainly taken this on board at Thornaby. A wide range of innovative programming based activities has really inspired students to start enjoying the subject, as well as helping to prepare them for their future careers.

Thinking up new activities and appropriate, engaging extension tasks can be time consuming, but an advantage of Switched on ICT is that it naturally lends itself to suitable opportunities to make links across the curriculum, such as collecting video footage and experimenting with camera angles in P.E. as part of the 'make a film' unit. We are currently looking at how we use the students' programming skills to embed the 'create shapes that tessellate' unit into maths lessons to build upon the work that learners have been doing with shapes and angles.

One very popular activity we have done is the creation of a range of eBooks by the students, which can be brought into any subject lesson. To see their ideas move from concept, through planning, to something tangible that is now published on our website for everyone to read gave our young people a huge sense of achievement and renewed their excitement about computer science. It brings the learning to life; the students understand the purpose of the activity and are committed to doing well.

Looking ahead

Our new curriculum is innovative and can be built on as new technologies and processes arrive. It offers consistency across the school and, in our view, is the ideal platform to start preparing our Key Stage 3 students for the new, rigorous curriculum that is set to arrive in September. While no one is sure of exactly what this will look like – and I am sure we may have to make some minor alterations to what we are doing – we are comfortable that we are a lot further ahead than we would have had we not had this time to make our own changes first.

ABOUT THE AUTHOR

PAUL MARTIN SPENT 13 YEARS WORKING AS A BUSINESS ANALYST AND PROJECT MANAGER IN THE ICT INDUSTRY BEFORE TRAINING TO BE A TEACHER. HE JOINED THORNABY ACADEMY, STOCKTON ON TEES, IN 2010 TEACHING A WIDE RANGE OF COURSES AT KS3 AND KS4, RANGING FROM GCSE ICT TO CREATIVE IMEDIA

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