

ICT and the Future of Education

A consensus report from SecEd's latest education symposium



SecEd

ICT and the Future

Pete Henshaw
 Editor, SecEd

What does the future of ICT hold for education? What a question that is. The depth and breadth of this topic is almost without bounds and so it might seem a daunting task for *SecEd* and Dell to have tackled this in a mere three-hour debate.

But tackle it we did and what came out of our education symposium, held in London in March, was both fascinating and inspiring.

As you can see from the biographies below, we had 14 experienced and innovative practitioners and ICT in education experts around the table.

Over the next four pages, we break down this debate and report on what our panellists raised as the key issues in each area, and what solutions they discussed from their own schools and their own experiences.

We launched the debate with a discussion on best practice in classroom technology application, asking how ICT can be used to inspire and engage students, how we can ensure we are teaching the right skills for tomorrow's workplace, and perhaps the ultimate of questions: what does effective use of ICT in (or out of) the classroom look like?

Second came another big debate: outcomes. How can we know that use of ICT is having



an impact on educational attainment and achievement?

From here we moved on to budgets, and our discussions centred on the challenges of achieving effective ICT procurement in these times of tighter finances. Finally, we tackled CPD and the particular importance of this aspect when it comes to ICT, and how schools can cope with the massive demand for training.

I want to take this opportunity to thank Dell for partnering with *SecEd* to host this event,

and also the British Council, whose London offices hosted the debate.

This supplement is now available as a resource to all and can be downloaded from our website. We have also worked with Dell to produce a short video of the proceedings which will be available soon and *SecEd* intends to pick up these topics and discussions again during the summer term 2010 – do get in touch if you want to have your say (see further information on page 3).

Chairperson:

Nina Woodcock, Head of Capital Programmes; Children's Services and Local Government, Becta



Nina has worked at Becta since 2003 in a range of roles. For three years she led Becta's support to the academies programme and has now expanded this role to include Building Schools for the Future and the Primary Capital Programme. Originally a science teacher, Nina is also a parent-governor at a Leicestershire school.

Delegates:

Chris Baker, Leader of e-Learning, John Cabot Academy, Bristol



Originally a PE teacher with a passion for ICT, Chris's interest and knowledge grew to a level where he became an ICT in PE Advisor for South Gloucestershire, and then Deputy Leader of e-Learning at John Cabot. He won the Becta Next Generation Learning Teaching Award in 2009 for the South West region.

Kevin Bennett, Assistant Principal, Belvoir High School, Leicestershire



One of Kevin's responsibilities is the development of e-Learning. The school's ICT

vision is for pupils to decide when it is an appropriate tool to use to support their learning. The school now has devices available in the majority of lessons and a developed managed learning environment.

Kester Brewin, Deputy Head of Maths, Sydenham High School, London



Kester has long used ICT in different areas of classroom practice. He uses a suite of wirelessly enabled laptops with classes and slideshows to present material, which is then uploaded to the departmental blog where students can download resources.

Mark Creasy, Head, Arrow Vale High School, Redditch, Worcestershire



Arrow Vale is a National Challenge school that has invested heavily in ICT, moving from a 1:7 computer-student ratio to almost 1:1, to support curriculum development, especially for BTECs and Diplomas. Mark has been in teaching since 1997.

Dave Ford, Acting Deputy Head, Castle View School, Essex and ICT Change Champion for BSF in Essex
 Dave has been at Castle View since 1986. Three years ago



he was asked to be ICT Change Champion for the school when they found themselves in Wave 4 of the BSF programme. He has been actively involved with the production of the authority's ICT output spec and all issues ICT-related.

Chris Foreman, Vice Principal, Learning Systems, Homewood School and Sixth Form Centre, Tenterden, Kent



For the past five years, Chris has been leading the creation of a project-based key stage 3 curriculum in Kent's largest secondary school. This curriculum develops 21st century learners in technology-rich learning environments, promoting collaboration and creativity. In 2005, he founded one of the largest school based e-Learning Foundations in the UK.

Allie Hack, Head of ICT Across the Curriculum, The Mountbatten School, Romsey, Hampshire



Allie has been a secondary school teacher for 12 years. Currently, she is developing a Learning Gateway and virtual learning environment which enables interaction between teachers, students, parent and governors, as well as interactive teaching and learning. She leads an ICT Drive Team of staff who are inspiring teachers to embrace the use of ICT.

of Education

A SecEd Symposium
March 2010, London

James Quarles

Director of Public Sector Marketing in Europe, Middle East and Africa, Dell

"Don't limit a child to your own learning, for he was born in another time." Rabbinical saying.

Education for another time couldn't be a truer characterisation of classrooms and schools today. Presently, our children are growing up in a digital age with more available technology than ever before. They are digital natives – the connected generation. They communicate and learn differently than previous generations but are in classrooms that are disconnected.

Educators in many schools are rectifying this situation by embracing technology as a way to enhance the teaching and learning experience in general and education overall.

During the *SecEd* and Dell symposium, it was exciting to hear example after example from educators of their best practices; where technology is making a big difference in the lives of students and teachers. Their reports match with research showing that by infusing technologies into the classroom environment, teachers have an opportunity to engage students in new ways and enhance learning.

Yet, around the table, there was lots of discussion about ensuring that schools strike the right balance of technology use

– how to maintain subject rigour when using technology, how to invest in teacher training to get the best out of technology, and ensuring that teaching and learning quality is not compromised by an over-reliance on ICT.

The educators at the symposium made clear that many areas successfully deploy ICT into classrooms and schools and that there are many more opportunities for ICT to help teachers move towards being innovators, collaborators and moderators.

As such, ICT enables instructional approaches that help inspire children to achieve their potential, unleash their creativity, learn at their own pace, and expand their horizons. ICT also enables parents to be more involved and informed in their child's learning experience. And at a time when resources are increasingly scarce, ICT helps school administrators and teachers to be more successful.

Education leaders are under immense pressure to improve the quality of education students receive while also reconciling severe budgetary constraints. They know that simply adding more computers is not the right approach to transform education, nor is it even feasible. This is why Dell is working in collaboration with schools to understand their focus, their vision on student learning, and unite the entire school community.

Most educators agree that in the 21st century, real world success necessitates that students have an additional set of skills and knowledge beyond core understanding in maths, languages, and science.

Students also need to be proficient in ICT literacy, global awareness, critical thinking, problem-solving, collaboration, effective digital communication, creation and use of multimedia documents, and data analysis/interpretation.

Critical thinking and problem-solving skills are key elements of any 21st century skills agenda. Proficiency in these areas is essential to creating the kind of highly skilled workforce that fuels national competitiveness in the global economy. The key thing is that 21st century skills are all about young people becoming lifelong learners.

Schools should be increasingly giving students the propensity to learn new things. Content is key, but it should also become the means by which the skills are developed rather than an end in itself. Children must be tested on having these skills, not how they acquire them. This is where ICT can deliver tangible results.

With this in mind, how can ICT be used to this end; to truly inspire and engage students? How can ICT most effectively enhance learning and teaching? How can technology aid students in achieving the 21st century skills required for today's – and tomorrow's – workforce?

ICT must be used to transform learning, we know that. But it must also be used to engage the disaffected and ensure inclusion. It must be used to drive forward the personalised learning agenda.

There is broad agreement among schools, local authorities and government that ICT holds a key to transformation. However, ICT has had a much bigger impact on other professions and industries than on teaching in the last 20 years.

I have huge admiration and respect for teachers and administrators, and for the myriad challenges they face in educating our children today. Certainly discussions continue, but the message at the symposium was clear: education policies, practices and strategies must change to effectively prepare our children for the world that awaits them.

Further information

This symposium consensus report has been produced by *SecEd* in association with Dell.

This document was published alongside the April 15, 2010, edition of *SecEd* and is also available as a digital edition and PDF download from www.sec-ed.co.uk. Video highlights of the discussions will be made available in due course and promoted in *SecEd* and on our website. For more information about *SecEd*, contact the editor, Pete Henshaw, on pete.h@markallengroup.com. For more information about Dell, see the Corporate Profile on page 8.

Katie Leeper, Head Girl and student of Maths, Chemistry and Philosophy, Sydenham High School, London

Katie is in year 13 and is an avid film-maker, with 12 short films under her belt already. She currently uses Final Cut Pro and Adobe Premier for digital editing, and also uses Adobe InDesign and Photoshop to produce a student magazine. Katie uses a departmental blog regularly.



Matt Valentine, BSF Programme Manager, Dell

Matt has 15 years' post-graduate experience within the ICT industry, and is managing the development and market engagement of the BSF programme within Dell. To date, Matt has led successful engagements to deliver ICT managed services to the Derbyshire and Cambridgeshire BSF schemes.



Chris Mackintosh, Head of Information, Communications and e-Learning, Bristol Brunel Academy

At Bristol Brunel, students in key stage 3 learn through a project-based learning curriculum supported with a 1:1 laptop programme. In the past, Chris has taught in secondary schools, including posts as head of curriculum ICT in two schools.



Mark Weston, Education Strategist, Dell

Profound change in education – educating all students to dramatically higher levels of learning – is the enduring theme of Mark's work. He has been a teacher in the US and is an associate professor in the Graduate School of Education and Human Development at the University of Colorado.



James Quarles, Director of Public Sector Marketing in Europe, Middle East and Africa, Dell

James leads the Dell team responsible for understanding and crafting solutions to advance the mission of schools, hospitals, government, defence and research institutions. He has a Bachelor of Science in Mechanical Engineering.



Tony Wilson, Principal Consultant, 4Thought Consulting

After 14 years of teaching and management in UK schools, Tony worked extensively across all areas of the BSF programme. As a consultant, Tony works to join up educational outcomes with the built environment, learning technologies, and change management.





Best practice in classroom technology application

The ICT symposium got off to a lively start with a debate about how technology can be used to inspire and engage today's secondary students.

The delegates who took part were in broad agreement that ICT has the power to transform learning. But when it came to the questions of how to ensure that the right ICT skills are being taught and how teachers can best embed new technologies into their pedagogy, there was a wide range of views.

Chris Baker, leader of e-learning at Bristol's John Cabot Academy and winner of the 2009 Becta Next Generation Learning Teaching Award for the South West of England told the forum that his school has an open policy on technology.

From getting PE students waiting their turn to perform the high jump to watch videos of the exercise on their own PSPs, to asking year 8 pupils in a cover lesson to find an interesting website and simply "create something", he firmly believes that technology has huge potential in teaching and learning. "Some pupils took photos, some made a website and others collaborated on a mindmap," he explained. "Their teacher couldn't believe the results. Since then he has come back and said 'I want to take more risks like that'."

Similarly, Kevin Bennett, assistant principal at Belvoir High School in Leicestershire, said his school now has more ICT devices than pupils, and teachers positively encourage students to choose "when and where" it is appropriate to use technology.

Tony Wilson, principal consultant for 4Thought Consulting and a former secondary teacher himself, said schools are moving away from "the teacher as a mediator of ICT resources", to a world where the students are able to make their own decisions about the

most appropriate technology to use for a given task.

But other teachers urged a more cautious approach. Kester Brewin, deputy head of mathematics at Sydenham High School in London, reckoned that technology amounts to "no more than tools" and it is how schools use these tools that counts. "Rather than saying more technology is better, we should be saying that more thoughtful use of technology is better," he said.

Allie Hack, who as well as being head of humanities at The Mountbatten School in Hampshire, is also responsible for ICT across the curriculum, took a similar stance.

"Technology excites and enthralls," she said, "but we need to harness it to higher-order thinking. ICT for ICT's sake isn't that great."

Meanwhile Chris Foreman, vice principal, learning systems at Homewood School and Sixth Form Centre, a foundation school in Kent, agreed that it is the quality of teaching and learning in schools that matters, not the technology itself or the number of devices students happen to carry.

"All of this technology is irrelevant if you can't raise standards of achievement," he said, before going on to stress the importance of retaining subject rigour alongside excellent use of technology and learning environments.

The role of student voice was not forgotten in the discussion either. "A lot of children have their own ideas about how they want to use ICT in their learning," said Dave Ford, acting deputy headteacher at Castle View School in Canvey Island and ICT change champion for Wave 4 of Building Schools for the Future in Essex. "Sometimes we as adults stymie that. But pupils have great ideas and as teachers we must release a bit of control."

Representing the voice of young people was

Katie Leeper, 18, a year 13 pupil at Sydenham High who is taking A levels in mathematics, chemistry and philosophy this summer. She was keen to add her views on the subject of assessment and testing in 21st century schools.

Mark Creasy, headteacher of Arrow Vale High School in Worcestershire, had mentioned a pilot scheme in Denmark which is allowing children to use the internet in exams.

Listening intently, Katie said: "I strongly believe that we should be testing in a way that will develop my skills. Learning the periodic table isn't going to help me in later life. Teachers are trying to broaden our horizons in the way we think – but the way they mark doesn't do that."

The debate also touched on the contentious subject of social networking. Traditionally banned and blocked by schools, it is increasingly being seen as a useful educational tool. Many of the participants around the table were interested in its potential, but a few were more sceptical.

Mr Brewin quoted a warning sounded by eminent scientist Susan Greenfield in 2009. "Children's experiences in social networking sites are devoid of cohesive, narrative and long-term significance," Baroness Greenfield had told the House of Lords. "As a consequence, the mid-21st century mind might almost be infantilised, characterised by short attention spans, sensationalism, inability to empathise, and a shaky sense of identity."

But Ms Hack insisted that it was a matter of balance: "In many ways social networking can bring forward the views of students who would hate to speak out in the classroom," she said. "We are preparing students for the 21st century workforce and it's important that we interact with each other on an individual basis too."

Technology has undoubtedly changed all of our lives. But how can we measure its impact on raising standards, attainment and achievement?

That was the question posed by the symposium's chairperson, Nina Woodcock, during the second part of the symposium discussion.

Right from the outset, most participants agreed that even though it is difficult to provide hard evidence of its impact, ICT in the classroom is making a difference to pupil outcomes.

Chris Mackintosh, head of information, communications and e-learning at Bristol Brunel Academy, admitted that the evidence is elusive, but added: "I think we can justify it on the grounds that technology allows students to be more creative, allows them more opportunities and makes learning richer."

Kester Brewin, deputy head of mathematics at Sydenham High School in London, said that one of the key differences the use of technology has made to teaching is the "immediacy of access" it offers. Whether teachers are turning to a YouTube video to illustrate something or downloading past papers for students preparing for exams, questions can be explored straight away, rather than putting them to one side and waiting until the next lesson.

But others in the room cited examples of high-achieving schools where teachers make little use of ICT. Dave Ford, acting deputy headteacher at Castle View School in Canvey Island, Essex, said one of the best-performing mathematics teachers he knows does not turn on the interactive whiteboard.

Mark Creasy, headteacher of Arrow Vale High, a National Challenge school in Worcestershire, warned that in some instances technology could form a barrier. He related how one year 11 parent had said to him: "It is stopping my child asking me for help."

Many of the delegates concurred with this, although others were concerned that schools where technology is not used extensively may not be preparing their students sufficiently for higher education, the workplace or future life.

Allie Hack, who is responsible for ICT across the curriculum at The Mountbatten School in Hampshire, made a pertinent point about teachers' own confidence in their ICT skills.

"Using technology enlivens my teaching but for others it isn't necessarily the answer," she said. "There is no point in saying to teachers that they have to use it if it is going to cramp their style."

This clearly struck a chord with year 13 student Katie Leeper from Sydenham High, who observed that while some of her teachers preferred to use board markers, others used technology "too much". She added: "But I don't know how the right balance can be achieved. How much is too much and how little is too little?"

The connections between pedagogy and technology can be tightened in ways that provide a clearer link between investments in ICT and learning and teaching outcomes such as scores on achievement tests. Certain instructional practices – feedback about performance, differentiated instruction – have



been shown to positively affect learning and it is these practices that Mark Weston, an education strategist for Dell, said can be embedded in technology.

He explained: "With technology, we have the ability to have very tight feedback loops that lead to real-time adaptation of instruction in ways that enhance learning and foster continuous improvement of instruction and schooling. When pedagogy and ICT are linked in this manner, measuring the impact of ICT on student learning is possible."

Mr Weston's comments prompted several delegates to discuss the ways in which they are using ICT to measure their pupils' attainment and achievement.

Mr Creasy flagged up "the importance of technology in tracking, monitoring and setting targets", while Chris Foreman, vice principal, learning systems at Homewood School and Sixth Form Centre in Kent, said it is particularly useful in both Assessment for Learning (AfL) and Assessing Pupils' Progress (APP), the approach which enables teachers to use diagnostic information about pupils' strengths and weaknesses.

Their comments led to a fascinating debate on the ways in which individual schools are using technology to assess pupils' progress.

At The Mountbatten School, students are given feedback on their work via their learning portal. Parents also have access to this, enabling a "three-way discussion" between staff, students and parents. "Sharing information with students has an incredible impact," said Ms Hack. "One of the best things is that they can see where they are and where they need to get to."

Chris Baker, leader of e-learning at Bristol's John Cabot Academy, uses a high-tech approach to gauge his students' progress.

"At the end of a task, I say 'colour your screens' – red, amber or green – to show whether they have got it," he explained. "It is very quick and effective. If students finish their tasks early and their screens are green, they walk round the class and help others. We have bought glitzy bowler hats and they wear them as they walk round."

This idea clearly captured some people's imagination but Mr Creasy reminded everyone that at the end of the day the impact of technology still depended on the quality of teaching. "Whatever the technology, whether it is 'hands-up' or red, amber and green cards, it is down to the teaching," he said. "Give a duff teacher the most interactive classroom and they will still get duff results."



Managing the budget

The issue of how schools can manage today's financial pressures while keeping up-to-date with the fast-moving world of technology is a tricky one.

For many schools up and down the country, the squeeze on their budgets has resulted in teachers struggling with insufficient or poorly performing ICT equipment. Another problem arises when lack of technological expertise leads to schools spending too much money on the wrong things. The delegates were keen to exchange ideas about how schools can get the best value for money and buy systems that are both effective and reliable.

"There has been any amount of infantile spending in schools," said Kester Brewin, deputy head of mathematics at Sydenham High School in London. "Schools need to think very carefully before they throw huge amounts on technology about how they are going to get the best out of it."

Several senior leaders stressed the importance of making sure that the procurement process is efficiently managed right from the outset. They also advised that schools should ask tough questions about how individual bidders' technology will impact on learners and help schools' Contextual Value-Added (CVA) scores.

Dave Ford, acting deputy headteacher at Castle View School in Canvey Island, Essex, said that schools should be very clear about their priorities and make sure that the protocol is established at the start with companies bidding for contracts.

Castle View will be re-opened in 2012 on a new site as part of the Building Schools for the Future programme and there will be

significant ICT investment. Mr Ford said that he had been impressed by the successful bidder's clear understanding of the school's ethos and mission statement and the way in which its advice was aimed at enhancing Castle View's CVA.

Mark Creasy, headteacher of Arrow Vale High School in Worcestershire, agreed with this approach. "ICT can't be a separate entity or bolt-on," he said. "When you look at ICT, you need to start off with: what are our priorities, our ethos and our vision?"

A common theme expressed by delegates was how to find the money needed to pay servicing costs and make improvements in technology, and, for newly built schools, to sustain the equipment they have. They agreed, however, that it was "embarrassing" when schools asked for expensive ICT equipment for nothing.

Chris Foreman, vice principal, learning systems at Homewood School and Sixth Form Centre in Kent, outlined a list of innovative strategies that his school has successfully used. By appealing for voluntary donations, the school has been able to spend £1.5 million on ICT since 2005.

Another approach has been to engage with technology companies to explore partnership potential. The school has also applied to become a technology repair centre, enabling it to carry out its own repairs.

Kevin Bennett, assistant principal at Belvoir High School in Leicestershire, said that his school had done a lot of its procurement in partnership with local primary schools, while Mr Ford added that his school had been able to fix apprenticeships, work experience, job

shadowing and CPD for staff through the procurement process.

Another way to reduce the cost of ICT is to encourage pupils to bring their own devices into schools. As Mr Bennett said, this not only removes the initial outlay and servicing costs, but it means that youngsters are using devices that they find "almost second nature".

Mr Foreman was concerned, though, that using devices that were sometimes linked to school networks and sometimes linked to outside networks might raise difficulties in terms of safeguarding children online. Other delegates, however, said that technical solutions were available to deal with this issue.

Meanwhile, Chris Mackintosh, head of information, communications and e-learning at Bristol Brunel Academy, wondered whether the advent of technology might spark new staffing structures in schools.

"We spent a lot on technology and someone said 'that's almost the cost of two teachers'," he explained. "I don't think we should sack teachers to fund technology but don't we need a different staffing structure, a different set of skills? There are people who don't need to be teachers who can run two-hour learning sessions in the evenings, for instance."

Another suggestion to help schools fund the cost of ICT resources and systems is to share them with the wider community.

"A school is a very resource-rich place," said Mr Brewin. "We take children from the community and educate them – so why isn't the community using the school's ICT facilities too? Then it isn't about the schools finding the money for ICT, but communities finding the money."

Teacher CPD and the future direction of ICT

As well as bringing lessons to life and engaging students in their learning, ICT is having a major impact on teachers' own CPD and changing the way they work in the classroom.

From working through online training modules to attending after-school workshops, CPD is a key part of every teacher's life these days. With technology constantly evolving and developing, schools are well aware that it is crucial for teachers to stay up-to-date.

The fourth and final part of the ICT symposium focused on how schools can equip and train teachers so they keep up with advances in technology. The delegates also discussed the cost implications of this and what "good ICT CPD" looks like.

Dave Ford, acting deputy headteacher at Castle View School in Canvey Island, Essex, said that in his view one of the cheapest and most effective ways of delivering ICT CPD is for schools to use the expertise of their own staff.

"Using your peers is crucial," he said. "We have got some excellent ICT practitioners at our school and rather than pay someone else to come in we ask our staff to engage with each other in talking about the good practice they see in classes."

Kevin Bennett, assistant principal at Belvoir High School in Leicestershire, agreed that "CPD doesn't have to be a costly process". His school makes a point of getting its team of IT technicians involved in teachers' CPD. Not only that, staff meetings usually begin with five to 10 minutes of CPD, where "someone gives a quick demo and then people go away and try it out".

Mr Bennett also spoke about the importance of getting technology providers to engage in and help with staff CPD and explain the way their kit can enhance teaching and learning.

Arrow Vale High School in Worcestershire takes a similar approach. "CPD needs to be embedded in department meetings," said headteacher Mark Creasy. "We do an audit of what staff need and want in terms of CPD and go from there."

While Tony Wilson, principal consultant for 4Thought Consulting, suggested using buddy systems to help deliver CPD, Allie Hack, who is responsible for ICT across the curriculum at The Mountbatten School in Hampshire, said the best ICT training she had been involved in was a staff up-skilling day. "We could decide which course we needed to go on and it is still talked about now," she said.

Ms Hack also emphasised the need for "constant reinforcement and support" and said schools needed to allow time during and after the school day to hold training workshops.

Meanwhile, Bristol's John Cabot Academy has taken a highly original approach to CPD, which clearly caught the interest of many of the symposium delegates.

Chris Baker, John Cabot's leader of e-learning, told the symposium that the school had introduced a staff e-learning "star" of the week. "I keep my ears close to the ground and we announce the star of the week on Friday mornings," he said. "We hand out chocolate coins and it has really caught on."

Another innovation has been to use the school's virtual learning environment to provide online CPD for staff. Certificates are attached to each module and "people are clawing to get these certificates", said Mr Baker.

Some of the delegates were keen to talk about the way in which students themselves can play a vital role in teachers' CPD. Youngsters often have a more sophisticated and expert knowledge of ICT than their teachers and this is something that can be harnessed by staff. Katie Leeper, a year 13 student at Sydenham High School in London, said teachers often rely on students for ICT help. "It happens a lot and the class happily gets involved," she said.

Homewood School and Sixth Form Centre in Kent has taken this idea one step further and

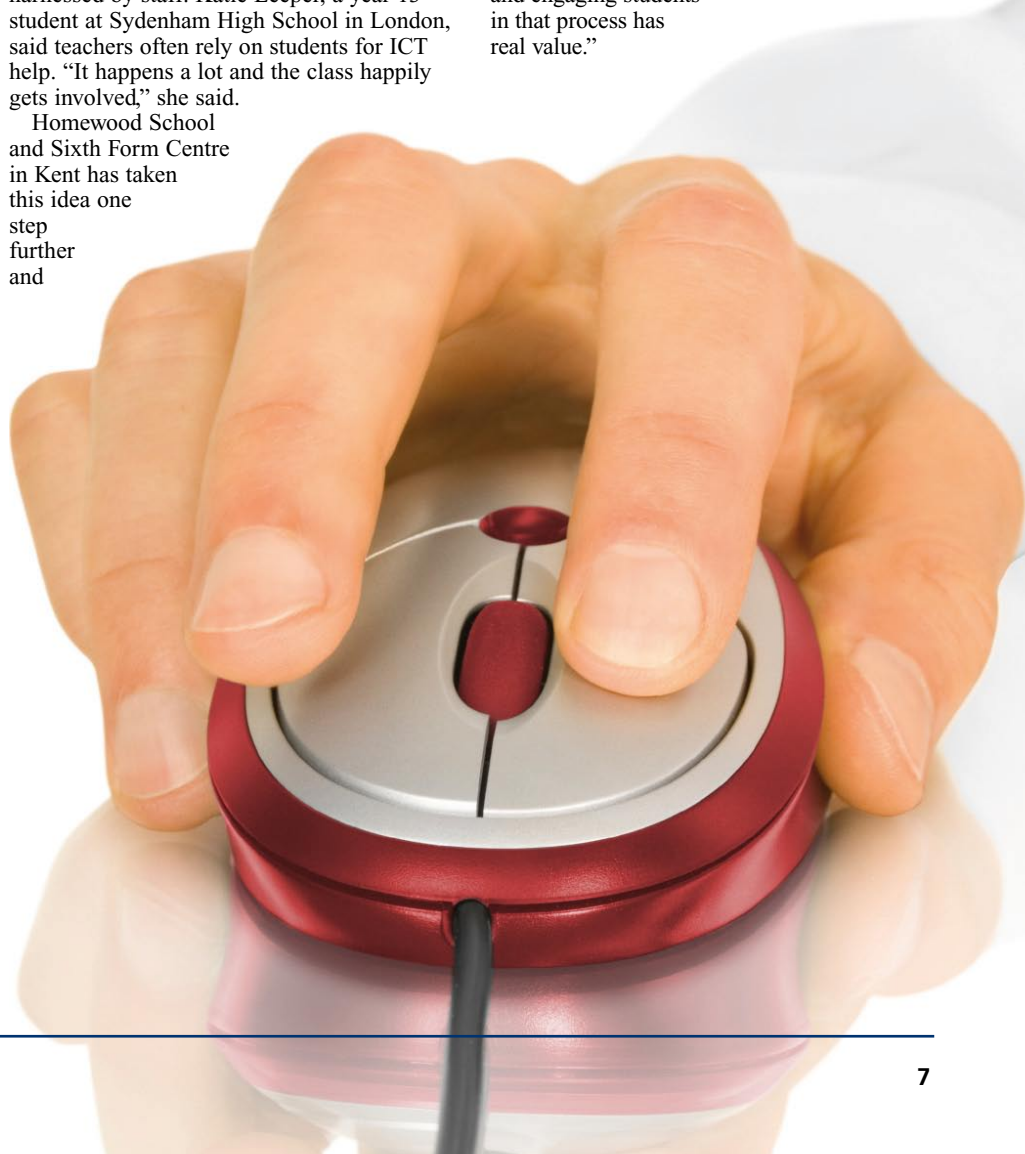
is involving students in planning and "co-constructing" lessons.

The school has appointed a team of lead learners and lead ICT students in the classroom and students have been involved in CPD, lesson planning, observations, and interviewing staff.

"The students have remodelled lessons they have had and looked at how they might have been," said Chris Foreman, vice principal, learning systems. "We have got this culture now where at lunchtimes staff are planning lessons with students.

"Learning should be done with students, rather than being something that is done to them. What is going on with students is mind-blowing. It's like working with 2,000 colleagues rather than 2,000 students."

This clearly resonated with James Quarles, Dell's director of public sector marketing in Europe, Middle East and Africa. "CPD can't be done in one day," he said as he summed up the debate. "It has to be ongoing, and engaging students in that process has real value."



Connecting education

Students today are growing up in a digital age, communicating and learning via technology now more than ever before. To prepare students for future success, schools are embracing technology to enhance the teaching and learning experience and transform education.

Educators, policy-makers, and IT leaders agree, however, that simply adding computers to the classroom in order to achieve this is not enough. To truly transform learning for the digital natives, schools must integrate technology tools that can broaden the education experience and connect the classroom with the 21st century.

While technology is a tool used by educators, it is not a replacement for the influence every member of the education system has on student achievement. Technology must facilitate these relationships. An entire learning environment is needed in which students, teachers, administrators, and parents can easily communicate and collaborate with each other, share secure information around the clock, and, ultimately, access a world of knowledge beyond classroom walls.

Students are more engaged

ICT empowers students to engage in the learning process, giving them a vested interest in their personal education. By integrating ICT into the classroom, students have the ability to learn more effectively, collaborate with each other, and explore the world around them. Anytime, anywhere access to internet-based tools is necessary to encourage learning inside the classroom and beyond.

Teachers are more interactive

ICT gives educators the opportunity to transform the way learning happens, and enable student development. Up-to-date training, tools and resources to help educators interact with students and engage them in a more meaningful way are critical to this process.

Parents are more involved

ICT opens the door for parents to become an integral part of their children's education, turning the home into an extension of the classroom. Communication tools that help parents interact with teachers, monitor student performance, and become more actively involved in class projects will have positive knock-on effects for every child's education experience.

Technology professionals are more efficient

Enabling ICT change can be a complex



challenge – technology professionals must balance the needs of students, teachers, administrators, and parents within realistic budgetary constraints.

IT professionals have to deliver the right technology at the right time and manage infrastructure proactively and efficiently. Applying useful tools to help IT professionals streamline this process and improve efficiency is important.

Administrators are more effective

ICT empowers school administrators to transform the teaching experience by connecting the learning community internally and externally to critical information resources. Specific ICT tools are necessary in order to build schools for the future, and enhance education by successfully integrating technology into every aspect of the learning environment.

The Dell ethos

Dell is committed to helping schools transform education for the digital age by addressing needs across the entire school system – from the classroom to the data centre and into the home, an extension of the classroom itself. Dell's approach provides the right technology needed to connect

each member of the education environment to effectively transform teaching and the learning experience, positively impacting student achievement in the global community.

Dell designs solutions specifically for schools, with technology tools and services that address the ICT needs of the learning community.

Dell's Connected Classroom solution addresses the needs of schools with a set of integrated capabilities that blend Dell hardware, software and services providing a purpose-built ICT solution for education.

The mission is simple: to help learning organisations improve the quality of education delivery through technology and innovation.

As technology can help all students reach their highest potential, a dedicated team of Dell specialists works closely with practitioners to play an active role in programmes such as Building Schools for the Future.

For more than 25 years, educators have viewed Dell as a long-term technology partner who understands the needs of their local schools.



Fact file

Company name: Dell

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Contact: www.dell.co.uk/schools